



REVISED AGENDA
CITY OF WAUPUN PLAN COMMISSION
Waupun City Hall – 201 E. Main Street, Waupun WI
Wednesday, September 18, 2024 at 4:30 PM

The City of Waupun Plan Commission will meet in-person, virtually and teleconference. Instructions to join the meeting are provided below:

Virtual: <https://us02web.zoom.us/j/82624763823?pwd=QS9XZUpxK0pWeEdTdDNTTDlwQjRaZz09>

Meeting ID: 826 2476 3823

Phone: 312 626 6799 US (Chicago)

CALL TO ORDER

ROLL CALL

PERSONS WISHING TO ADDRESS THE PLAN COMMISSION--*State name, address, and subject of comments. (2 Minutes)*

No Public Participation after this point.

FUTURE MEETINGS AND GATHERING INVOLVING THE PLAN COMMISSION

1. Next Regularly Schedule Meeting of Plan Commission is October 16, 2024 at 4:30 pm, Waupun City Hall, Council Chambers

CONSIDERATION - ACTION

- [2.](#) Approve Minutes from August 21, 2024 Plan Commission Meeting
- [3.](#) Certified Survey Map for 414 W Jefferson and 416 W Jefferson Street
- [4.](#) Certified Survey Map for 223, 227 and 231 Woodland Drive and 506, 510, and 514 Hoard Road
- [5.](#) Approve Site Plan for 401 Industrial Drive, Waupun (Tenneco Facility)
- [6.](#) Public Hearing City of Waupun Floodplain Ordinance

ADJOURNMENT

Upon reasonable notice, efforts will be made to accommodate disabled individuals through appropriate aids and services. For additional information, contact the City Clerk at 920-324-7915.



MINUTES
CITY OF WAUPUN PLAN COMMISSION
Waupun City Hall – 201 E. Main Street, Waupun WI
Wednesday, August 21, 2024 at 4:30 PM

Chairman Bishop called the meeting to order at 4:30 pm.

Members Present: Chairman Bishop, Jason Whitford, Elton TerBeest, Jeff Daane, Gary DeJager, Jerry Medema, Mike Matoushek; Staff Present: Sue Leahy, Administrator Schlieve

Public members present: Niki Hill; Seth Waddell, Kwik Trip; Troy Mleziva, Kwik Trip; John Scheuers, United Cooperative; Jeremy Noll, Keller; Tony Evola, Tony's Pizza

No one present to speak during public comment time. Public participation is closed.

Next Regularly Scheduled Meeting is September 18, 2024, 4:30 p.m.

Motion Whitford, second Matoushek to approve minutes from June 19, 2024 Plan Commission Meeting as presented. Carries unanimously.

Motion Matoushek, second Whitford to open a public hearing for a conditional use permit for Nicole Hill at 650 W Main Street to operate a Rage room business per Municipal Code Section 16.04(2)(d)(ix). Carried unanimously.

Under Waupun Municipal Code 16.12, the Plan Commission has authority to grant a conditional use if it finds that the proposed use is not detrimental to adjacent land because it is an inappropriate use, would create traffic hazards, would hinder future development in the area, would create undesirable levels of noise and light in the immediate area, and would cause property values to measurably decline. Waupun Municipal Code 16.12 (4) outlines that the approval may be subject to conditions related to landscaping, architectural design, type of construction, construction commencement and completion dates, sureties, lighting, fencing, hours of operation, traffic circulation, deed restrictions, access restrictions, increased yards, and parking requirements if the Plan Commission finds that such conditions are necessary to fulfill the purpose and intent of this Ordinance. If an operating element of a business can be shown to affect the health, safety, or welfare of inhabitants of neighboring properties, the Plan Commission may exert such operational controls as may be necessary.

Nicole Hill is present and outlines her business plan. Staff ask for additional information not presented specific to noise, whether concealed carry is allowed within the business, and types of items to be smashed.

Fire Chief DeMaa speaks, stating that based on the research the biggest concern from a fire/ems standpoint is the breaking/smashing of items that would typically fall under the category of e-waste. Some of these items are regulated in an effort to control them from being released into the environment. Old televisions, flat screen monitors, and laptops can have leaded glass. Others can have rows of mercury tubes. These are items that are supposed to be recycled at facilities that have equipment to separate out the hazardous elements. Devices that are operated by lithium batteries, especially if the battery is still with the device, are also a concern. A phenomenon known as thermal runaway can cause the device to start burning many hours after the fact, especially if they are damaged. DeMaa recommends that business develop a list of items that fall within these areas of concern that they will not accept to be destroyed and that whatever trash requirements are put in place, that a requirement be to place trash as far away from structures as possible in case of fire.

Staff notes that no surrounding property owners have contacted the city with questions or concerns. Conditions are recommended by staff that include restrictions on hours of operation; site plan being approved that shows garbage enclosure and no open storage of raw material; safety plan review by police and fire; no smashing of

hazardous e-waste; and monitoring of noise complaints. Staff recommends review of any approved conditions within one year's time or sooner if needed based on complaints.

Motion Matoushek, second Whitford to close the public hearing. Carries unanimously.

Motion Whitford, second Matoushek to approve the conditional use permit with the conditions for Nicole Hill, operating a rage room business at 650 W Main Street in Waupun.

1. Hours of operation are between 1 to 11 p.m. during the summer months, Sunday through Saturday; Winter month hours of operation are from 3 to 9 pm Sunday through Thursday, with an extension to 11 pm on Friday and Saturday.
2. Review of safety plan by Waupun Public Safety officials prior to opening that includes a list of items not accepted, such as old televisions, computer monitors, refrigerators, etc.
3. No open storage on the property, including enclosure of dumpsters and raw materials. Dumpsters to be stored adequate distance from building per fire code to prevent damage resulting from fire.
4. Evidence submitted to the zoning administrator relative to a routine waste disposal contract.
5. Required appearance of business owner at the February 19, 2025 Plan Commission meeting to review conditions of permit. City staff will report on any resident complaints relative to noise or safety reported specific to operation of a rage room, operated by Niki Hill at 650 W Main Street.

Motion is supported unanimously and permit is approved with the above stated conditions.

Motion Whitford, second Matoushek to open the public hearing for a conditional use permit application for Kwik Trip at 1001 E Main St. to operate a service station with car wash and for high rise sign per Municipal Code 16.04 and 16.11. Carries unanimously.

Troy Mleziva, Kwik Trip, is present and explains the project. The current Subway and Stop and Go buildings will be demolished and a new, larger Kwik Trip with car wash will be built in their place. Business will be open 24/7. Discussion specific to driveway entrance on Main Street and concern for traffic backing up. Pete Kaczmarek is present and expresses concern about this. Discussion to add right turn only signage at the entrance. Jeff Daane notes that storm water review is pending and any approvals should include a contingency to address any requirements identified during that review.

Motion DeJager, second TerBeest to close public hearing. Carries unanimously.

Motion Matoushek, second Whitford to approve conditional use permit with requirement for adequate signage at the Main Street entrance requiring right turn only. Carries unanimously.

Motion Daane, second Matoushek to approve a Certified Survey map for 1001 E Main Street to combine with the southern abutting lot as presented. Carries unanimously.

Troy Mleziva, Kwik Trip, presents site plan for new Kwik Trip at 1001 E Main Street. Jeff Daane notes that storm water review is pending and approval should state contingency to meet storm water requirements. Motion Matoushek, second DeJager to approve the site plan as presented, contingent on meeting final storm water requirements. Carried unanimously.

John Scheuers is present to present site plan for third and final phase of United Cooperative project located at 1236 Wilson Drive in the Waupun Industrial Park. Daane notes that stormwater review is pending and should remain a contingency. Fire Chief DeMaa discusses placement of hydrant and drainage swale, expressing concern that the site allow for crossing of swale by fire trucks to access hydrant and/or that the hydrant be moved. Jeremy Noll, Keller indicates that the hydrant is being moved to accommodate this need. Motion Whitford, second TerBeest to approve the site plan as presented, contingent on meeting final storm water requirements. Carried unanimously.

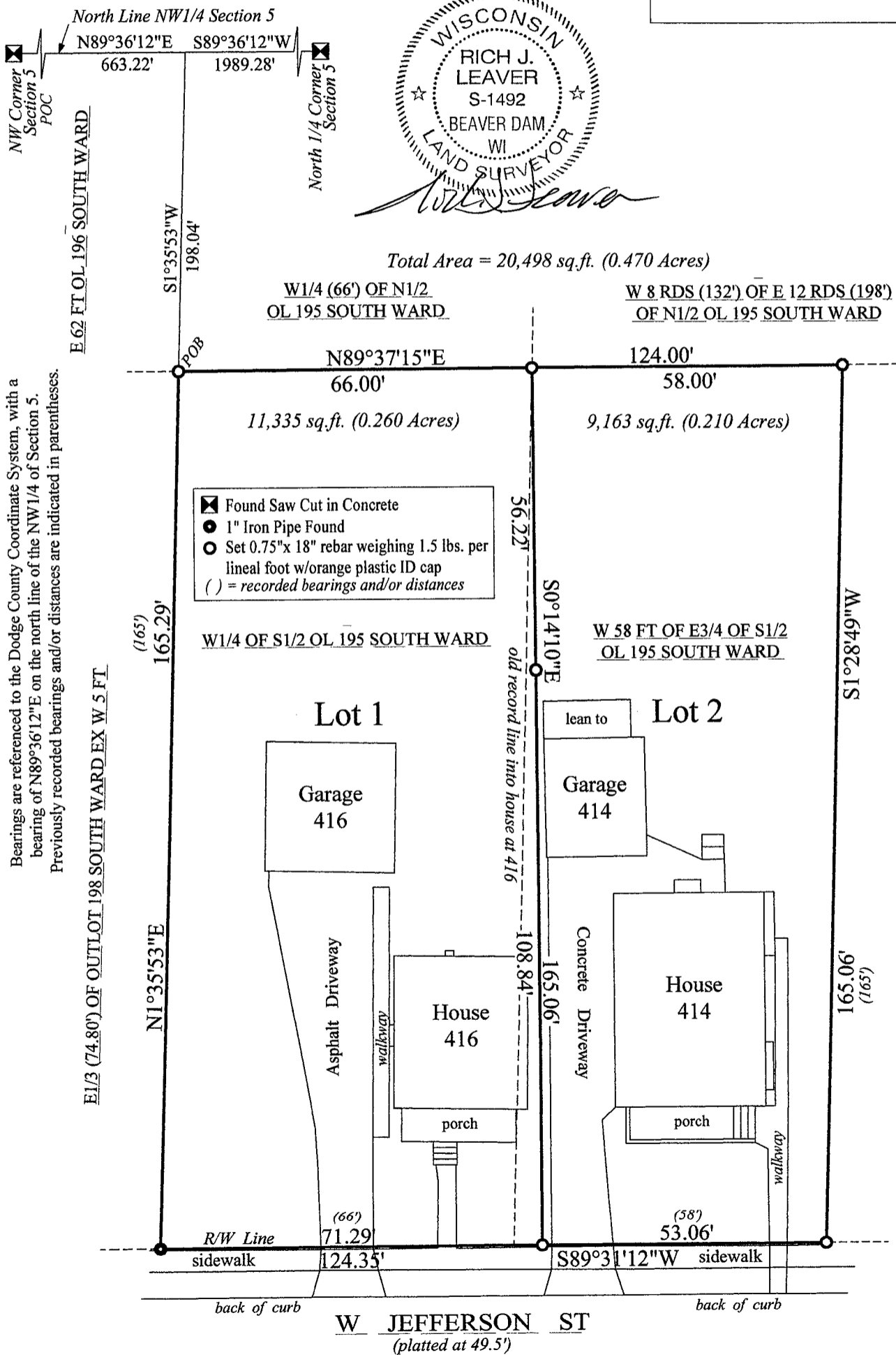
Tony Evola is present to discuss the site plan for an expansion to Tony's Pizza, 420 Fond du Lac Street. After general discussion about the business plan, motion DeJager, second Matoushek to approve the site plan as presented. Carries unanimously.

Zoning Administrator Leahy provides a brief overview of new WI-DNR requirements to update Waupun Municipal Code Chapter 19 Floodplain Ordinance to bring the ordinance into compliance with new FEMA requirements. General discussion with direction given to bring back for a public hearing at next Plan Commission meeting.

Motion Medema, second Whitford to adjourn meeting at 5:46 pm. Carries unanimously.

CERTIFIED SURVEY MAP

For Jordan Strong and Heidi J. Mach
 Part of Outlot 195 of the South Ward
 Located in the NW1/4-NW1/4 of Section 5, T13N-R15E
 City of Waupun, Dodge County, Wisconsin



Bearings are referenced to the Dodge County Coordinate System, with a bearing of N89°36'12"E on the north line of the NW1/4 of Section 5. Previously recorded bearings and/or distances are indicated in parentheses.

CERTIFIED SURVEY MAP

For Jordan Strong and Heidi J. Mach
Part of Outlot 195 of the South Ward
Located in the NW1/4-NW1/4 of Section 5, T13N-R15E
City of Waupun, Dodge County, Wisconsin

SURVEYOR'S CERTIFICATE

I, Rich J. Leaver, Wisconsin Professional Land Surveyor, hereby certify that I have surveyed, re-divided and mapped a parcel of land by the direction of Jordan Strong and Heidi J. Mach, who are representing the owners. This parcel is located and described as indicated above, and more particularly described as the following:

Commencing at the NW Corner of Section 5, T13N-R15E,
thence N89°36'12"E, 663.22 feet along the north line of the NW1/4 of Section 5;
thence S1°35'53"W, 198.04 feet to the point of beginning;
thence N89°37'15"E, 124.00 feet;
thence S1°28'49"W, 165.06 feet to the north right-of-way line of West Jefferson Street;
thence S89°31'12"W, 124.35 feet along said right-of-way line;
thence N1°35'53"E, 165.29 feet to the point of beginning.

Bearings are referenced to the Dodge County Coordinate System.
The above-described parcel contains 20,498 square feet (0.470 acres) of land, and is subject to all easements, including utility easements, setbacks and restrictions, either recorded or unrecorded, if any.

I further certify that the information contained herein is a correct representation of the boundaries of the land surveyed and mapped, and that I have fully complied with the provisions of Chapter 236.34 of the revised Wisconsin State Statutes and the City of Waupun Subdivision Ordinances in surveying and mapping the same, to the best of my knowledge and belief.



Rich J. Leaver, WI_LS-1492
Leaver Land Surveying LLC
W8871 Gossfeld Ln.
Beaver Dam, WI 53916
920-887-2401



CERTIFIED SURVEY MAP NO. _____

For Jordan Strong and Heidi J. Mach
Part of Outlot 195 of the South Ward
Located in the NW1/4-NW1/4 of Section 5, T13N-R15E
City of Waupun, Dodge County, Wisconsin

OWNERS' CERTIFICATE

New Parcel Re-Division

We, Jordan Strong and Stephen Strong, hereby certify that we have caused this certified survey map to be created, and that we consent to the creation of the new division line between Lots 1 and 2 of this Certified Survey Map as represented.

The purpose of this new parcel division line is to clear the improvements located at 414 W. Jefferson St. and 416 W. Jefferson St.

We also certify that this map is required by s.236.10 or s.236.12 of the Wisconsin statutes to be submitted to the following for approval or objection: the City of Waupun.

WITNESS the hand and seal of said owners this _____ day of _____, 2024.

In presence of:

Jordan Strong
416 W. Jefferson St.
Waupun, WI 53963

Stephen Strong
416 W. Jefferson St.
Waupun, WI 53963

OWNERS' NOTARY CERTIFICATE

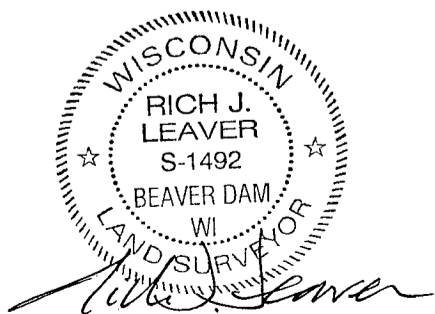
STATE OF WISCONSIN)

_____ COUNTY) ^{SS}

Personally came before me this _____ day of _____, 2024, the above named Jordan Strong and Stephen Strong, to me known to be the same persons who executed the foregoing instrument and acknowledged the same.

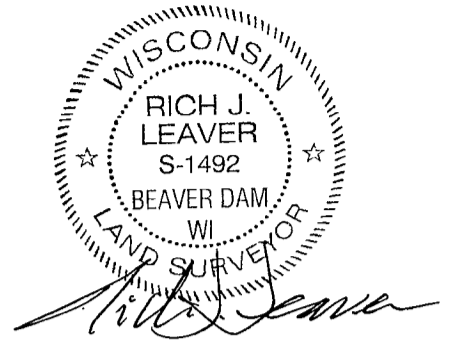
Notary Public, _____, Wisconsin

My commission expires _____.



CERTIFIED SURVEY MAP NO. _____

For Jordan Strong and Heidi J. Mach
Part of Outlot 195 of the South Ward
Located in the NW1/4-NW1/4 of Section 5, T13N-R15E
City of Waupun, Dodge County, Wisconsin



OWNERS' CERTIFICATE

New Parcel Re-Division

We, Brian L. Mach and Heidi J. Mach, hereby certify that we have caused this certified survey map to be created, and that we consent to the creation of the new division line between Lots 1 and 2 of this Certified Survey Map as represented.

The purpose of this new parcel division line is to clear the improvements located at 414 W. Jefferson St. and 416 W. Jefferson St.

We also certify that this map is required by s.236.10 or s.236.12 of the Wisconsin statutes to be submitted to the following for approval or objection: the City of Waupun.

WITNESS the hand and seal of said owners this _____ day of _____, 2024.

In presence of:

Brian L. Mach
414 W. Jefferson St.
Waupun, WI 53963

Heidi J. Mach
414 W. Jefferson St.
Waupun, WI 53963

OWNERS' NOTARY CERTIFICATE

STATE OF WISCONSIN)

_____ COUNTY) ^{SS}

Personally came before me this _____ day of _____, 2024, the above named Brian L. Mach and Heidi J. Mach, to me known to be the same persons who executed the foregoing instrument and acknowledged the same.

Notary Public, _____, Wisconsin

My commission expires _____.

CITY OF WAUPUN CERTIFICATE

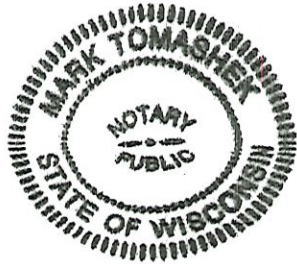
Approved by the City of Waupun this _____ day of _____ 2024,

Rohn W. Bishop, Mayor

Angela Hull, City Clerk/Treasurer and
Director of Human Resources

ORIGINAL BONDED SURVEY

HANDLE WITH CARE



NEW FRONTIER
LAND SURVEYING, LLC
P.O. BOX 576
BEAVER DAM, WISCONSIN 53916
PH ~~920-296-3904~~ FAX 920-885-3905

920-296-3904

PETITION FOR A 4 LOT CERTIFIED SURVEY MAP

To the Mayor, Plan Commission and Common Council of the City of Waupun:

New Frontier Land Surveying, as agent for owners, hereby petitions your honorable body as follows:

For the adjustment of property lines and creation of a 4th Lot from an existing 3 Lot CSM in the City of Waupun as shown on this Certified Survey Map;

A survey of Lots 3,4 and 5 Certified Survey Map Number 6768, being a part of the Southwest 1/4 of the Northeast 1/4 of Section 32, Town 14 North, Range 15 East, City of Waupun, Fond du Lac County, Wisconsin.

Site located at 223, 227 & 231 Woodland Drive and 506, 510 & 514 Hoard Road, Waupun, WI


City Tax Parcel No's. WPN-14-15-32-03-018-00 ; WPN-14-15-32-03-019-00 ; WPN-14-15-32-03-020-00

Owner: Donald Kehrmeier, 223 Woodland Drive, Waupun, WI 53963

Current use: Vacant lot ; Current house/shop lot and Mobile home lots

Agents: Mark Tomashek New Frontier Land Surveying, Beaver Dam, WI
Don Kehrmeier , owner

We respectfully submit this petition to be brought before the City of Waupun for the action of approval of this land division survey by the authority of the city of Waupun.

 Dated this 4 day of SEPT, 2024
Mark Tomashek, WI RLS 2340
New Frontier Land Surveying P.O.Box 576 Beaver Dam, Wisconsin (920)296-3904

24-2686 Petition Waupun
Sheet 1 of 1

newfrontier@powercom.net

EXHIBIT "A"
EXIST CSM IN PLACE.

DOC# 834922
 834922
 Filed
 NOV. 11, 2004 AT 12:41PM

Sally Barbeau

SALLY BARBEAU
 REGISTER OF DEEDS
 FOND DU LAC COUNTY
 Fee Amount: \$13.00

FOND DU LAC COUNTY CERTIFIED SURVEY MAP

LOT 1 OF C.S.M. NO. 6602 AND LOT 2 OF
 C.S.M. NO. 3997, BEING A PART OF THE
 SW 1/4 OF THE NE 1/4 OF SECTION 32,
 T. 14 N., R. 15 E., CITY OF WAUPUN,
 FOND DU LAC COUNTY, WISCONSIN.

VOLUME 47 CERTIFIED SURVEY MAPS
 PAGES 65 - 65A



BEARINGS ARE ORIENTED TO THE WEST LINE OF THE
 NE 1/4 OF SECTION 32, T. 14 N., R. 15 E., ASSUMED
 BEARING, SOUTH 01° 32' 35" WEST, ACCORDING TO
 THE FOND DU LAC COUNTY COORDINATE SYSTEM.

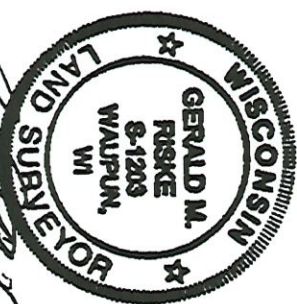
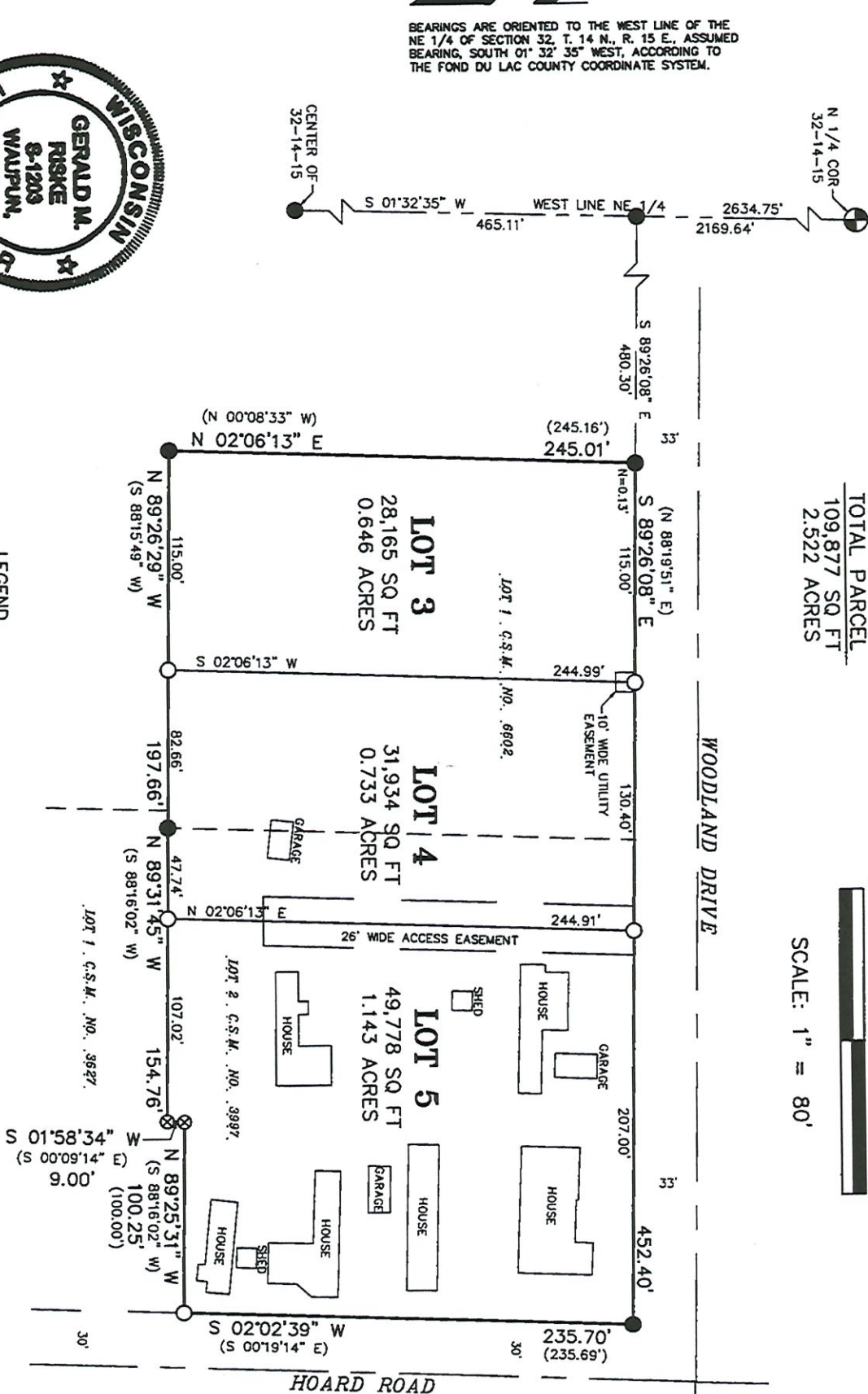
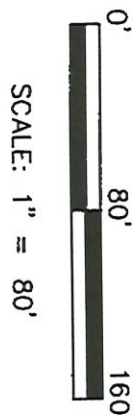
CERTIFIED SURVEY MAP NO. 6768

VOLUME 47

PAGE 65

SHEET 1 OF 2

TOTAL PARCEL
 109,877 SQ FT
 2.522 ACRES



GERALD M. RISKE

10/28/04

- LEGEND**
- 1.25" X 18" IRON PIPE SET
 - 1" IRON PIPE FOUND
 - ⊗ REBAR FOUND
 - ⊕ BCAM FOUND
 - () RECORDED AS

OWNER
 MARY DOCTER
 210 PLEASANT STREET
 WAUPUN, WI 53983

TRI-COUNTY LAND SURVEYING, LLC
 YEAR ROUND SURVEYING

GERALD M. RISKE

REGISTERED LAND SURVEYOR, S-1203

N6687 WRIGHTWAY DR. STE. F FOND DU LAC, WI 54937

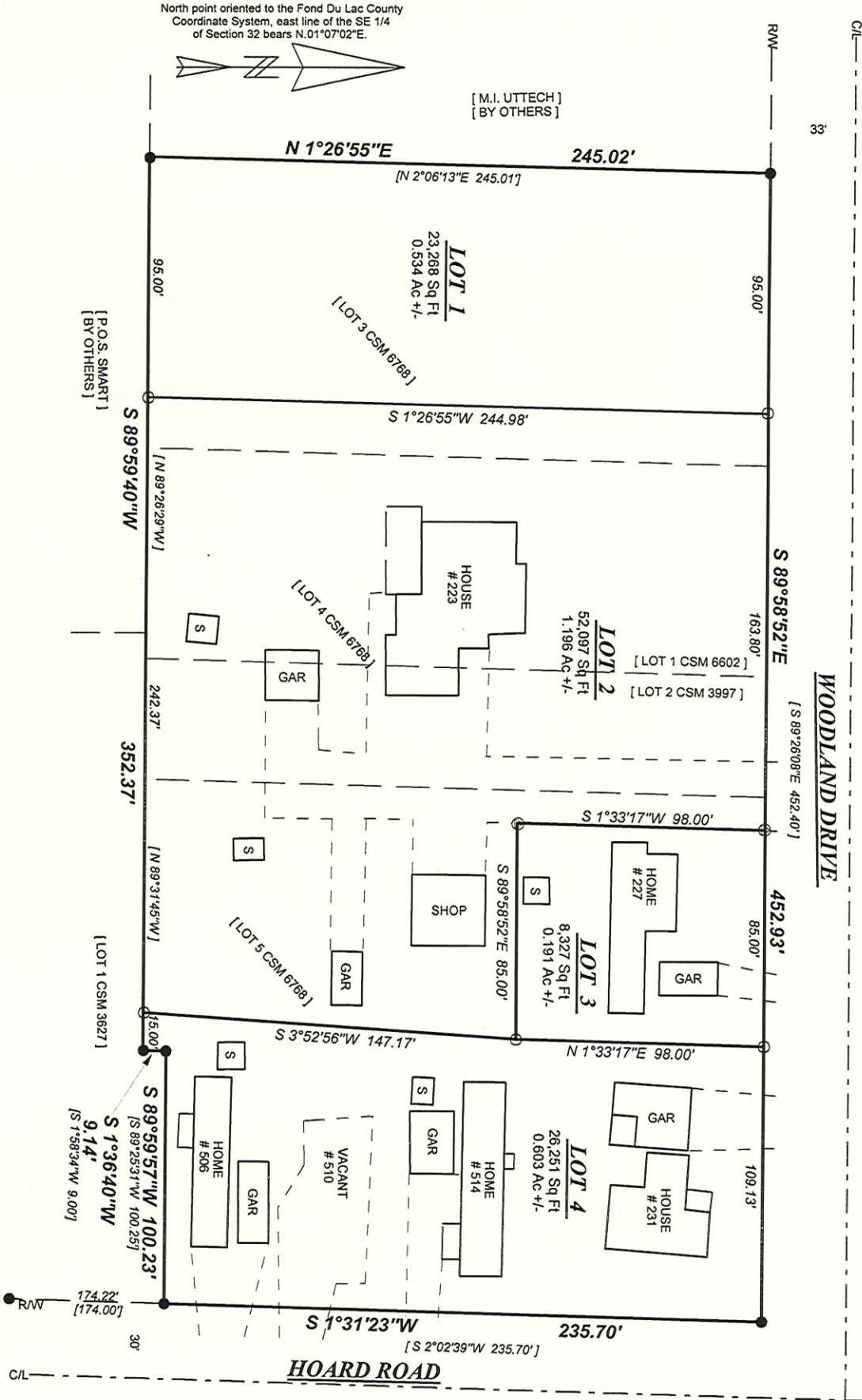
PHONE: (920)906-3704 FAX: (920)906-3705

JOB NO. 04147 FILE: 32-14150.TXT FILE: 32-1415A.DWG

C:BAJE R:GATD O:RW

FOND DU LAC COUNTY CERTIFIED SURVEY MAP

A RESURVEY OF LOTS 3, 4 AND 5 OF CERTIFIED SURVEY MAP NUMBER 6768 AS RECORDED IN VOLUME 47 OF SURVEYS ON PAGE 65 AS DOCUMENT NUMBER 834922, BEING A PART OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 32, TOWN 14 NORTH, RANGE 15 EAST, CITY OF WAUPUN, FOND DU LAC COUNTY, WISCONSIN.



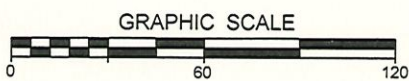
- LEGEND**
- 1" x 18" Iron Pipe Set weighing 1.13 lbs/ft
 - 3/4" x 18" Iron Rod Set weighing 1.50 lbs/ft
 - △ Masonry Nail Set
 - FondDuLac Co. Survey Monument as shown
 - [R] Recorded value
 - Rebar Found
 - 1" Iron Pipe Found
 - 2" Iron Pipe Found
 - ▲ Masonry Nail Found
 - ◀ DW Driveway Access
 - Well
 - Septic Tank
 - Septic Vent
 - * * Fenceline

TOTAL AREA
109,942 SQ FT OR 2.524 AC +/-

OWNER
Donald R Kehmeyer
223 Woodland Drive
Waupun, WI 53963
SITE ADDRESS:
219, 223, 227 & 231 Woodland Dr.
506, 510 & 514 Hoard Road
Waupun, WI 53963
[WPN-14-15-32-03-018-00]
[WPN-14-15-32-03-019-00]
[WPN-14-15-32-03-020-00]



New Frontier Land Surveying
P.O. Box 576 - Beaver Dam, WI 53916
p(920)296-3904 f(920)885-3905
email: newfrontier@powercom.net



Dated this 30 day of August, 2024

Mark R. Tomashek

Mark R Tomashek WI RLS - 2340 at Beaver Dam WI

⊕ **New Frontier Land Surveying llc.** ⊕

P.O. Box 576 - Beaver Dam, WI 53916
PH (920-296-3904) FAX (920-885-3905)
Email : newfrontier@powercom.net

FOND DU LAC COUNTY CERTIFIED SURVEY MAP

SURVEYOR'S CERTIFICATE:

I, Mark R. Tomashek, Professional Land Surveyor of the State of Wisconsin, do hereby certify that I have made a resurvey for Don Kehrmeyer, owner, of Lots 3, 4 and 5 of Certified Survey Map Number 6768 as recorded in Volume 47 of Survey's on Pages 65 as Document Number 834922, being a part of the Southwest 1/4 of the Northeast 1/4 of Section 32, Town 14 North, Range 15 East, City of Waupun, Fond du Lac County, Wisconsin, being more particularly described as follows:

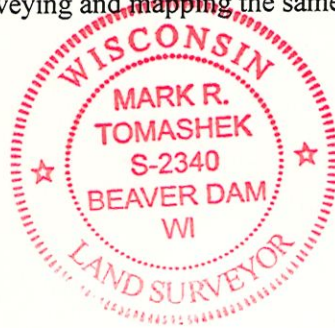
Lots 3 , 4 and 5 of Certified Survey Map Number 6768 as recorded in Volume 47 of Survey's on Pages 65 as Document Number 834922.

Said parcel contains 109,942 square feet or 2.524 acres more or less.
This survey is subject to any easements or restrictions of record.

I further certify that this map is a correct representation of all exterior boundaries and interior divisions thereof according to official records and that I have complied with the provisions of Chapter 236.34 of the Wisconsin State Statutes and the Subdivision Ordinance for the City of Waupun, Wisconsin in surveying and mapping the same to the best of my knowledge and belief.

Dated this 30 day of August, 2024

Mark R. Tomashek
Mark R. Tomashek WI PLS S-2340 at Beaver Dam, Wisconsin



CITY OF WAUPUN CERTIFICATE:

Approved by the City of Waupun on this _____ day of _____, 2024

Authorized representative

attest

OWNER'S CERTIFICATE:

As owner(s) of the land represented on this survey, we hereby certify that we caused the lands to be surveyed, divided and the easements dedicated and described, in accordance with the provisions of Chapter 236 of the Wisconsin State Statutes and the City of Waupun Subdivision Ordinance.

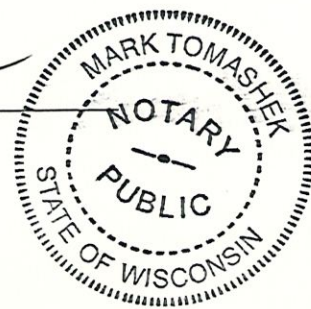
Donald Kehrmeyer
Donald Kehrmeyer

State of Wisconsin)ss
Fond du Lac County)ss

Personally came before me this 5 day of SEPTEMBER 2024 the above named owners known to me to be the persons who executed the foregoing instrument and acknowledge the same.

My commission expires JULY 15, 2027

Mark R. Tomashek
Notary Public





The data used to create this map is a compilation of records, information, and data from various city, county and state offices, and other sources. This map is only advisory, does not replace a survey, and may not be used for any legal purpose. Dodge County assumes no liability for any use or misuse of this information.

Date created: 9/5/2024

Last Data Uploaded: 9/5/2024 6:30:06 AM

COVER SHEET AND LIST OF DRAWINGS

CIVIL CONSTRUCTION PACKAGE

NITRON 1300 - WAUPUN, WI.

GENERAL				REFERENCE ELECTRICAL DRAWINGS																								
TITLE	SHEET	DRAWING NUMBER	ALT	TITLE	SHEET	DRAWING NUMBER	ALT																					
COVER SHEET AND LIST OF DRAWINGS CIVIL/STRUCTURAL DESIGN CRITERIA	1 of 1 1 of 1	&CT-1410A7U5-C-ZA 001 &CT-1410A7U5-C-ZA 002	2 2																									
SITE WORK DRAWINGS																												
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SITE PLAN EQUIPMENT LOCATION PLAN - SKID & BACKUP SYSTEM SITE FENCE DEFINITION AND DETAILS TYPICAL FENCE AND GATE DETAILS	1 of 2 2 of 2 1 of 2 2 of 2	&CT-1410A7U5-C-ZA 080 &CT-1410A7U5-C-ZA 080 &CT-1410A7U5-C-ZA 081 &CT-1410A7U5-C-ZA 081	2 2 2 2																									
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FOUNDATION DRAWINGS				SCOPE OF WORK (CONTRACTOR AND PERMITTING)																								
TITLE	SHEET	DRAWING NUMBER	ALT	(1) ALL WORK SHOWN ON DRAWINGS UNLESS INDICATED BY OTHERS.																								
FOUNDATION LOCATION PLAN FOUNDATION SECTION DETAILS "A-A" & "B-B"	1 of 2 2 of 2	&CT-1410A7U5-C-ZB 200 &CT-1410A7U5-C-ZB 200	2 2																									
COLD BOX CAST-IN-PLACE ANCHOR BOLT LOCATIONS & DETAIL LIQUID TANK CAST-IN-PLACE ANCHOR BOLT LOCATIONS & DETAIL VAPORIZER FEET PLAN VIEW & DETAILS HOLD DOWN CLIP DETAILS HOLD DOWN CLIP LAYOUTS	1 of 5 2 of 5 3 of 5 4 of 5 5 of 5	&CT-1410A7U5-C-ZB 240 &CT-1410A7U5-C-ZB 240 &CT-1410A7U5-C-ZB 240 &CT-1410A7U5-C-ZB 240 &CT-1410A7U5-C-ZB 240	2 2 2 2 2																									
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>IFC</th> <th>2</th> <th>8/1/24</th> <th>ISSUED FOR CONSTRUCTION</th> <th>AJS</th> <th>LJ</th> <th>LJ</th> </tr> </thead> <tbody> <tr> <td>IFB</td> <td>1</td> <td>2/26/24</td> <td>ISSUED FOR BID</td> <td>AJS</td> <td>-</td> <td>-</td> </tr> <tr> <td>STATUS</td> <td>ISSUE</td> <td>DATE</td> <td>DESCRIPTION</td> <td>PREPARED</td> <td>CHECKED</td> <td>APPROVED</td> </tr> </tbody> </table>								IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ	IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-	STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION					AJS	LJ	LJ																		
IFB	1	2/26/24	ISSUED FOR BID					AJS	-	-																		
STATUS	ISSUE	DATE	DESCRIPTION					PREPARED	CHECKED	APPROVED																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Client Drawing No.</td> <td style="width: 30%;"></td> <td style="width: 20%;">Client Project No. :</td> <td style="width: 20%;"></td> </tr> <tr> <td></td> <td></td> <td>Client Job Code :</td> <td></td> </tr> </table>								Client Drawing No.		Client Project No. :				Client Job Code :														
Client Drawing No.		Client Project No. :																										
		Client Job Code :																										
LINDE ENGINEERING AMERICAS TONAWANDA, NEW YORK																												
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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300																												
Title: CIVIL AND UNDERGROUND UTILITIES COVER SHEET & LIST OF DRAWINGS FEDERAL MOGUL - WAUPUN, WI																												
Linde Drawing No. : &CT-1410A7U5-C-ZA 001 Sheet 1 OF 1 Size D																												

CIVIL/STRUCTURAL DESIGN CRITERIA

REV. 7/13 (01060-000)

OWNER ADDRESS	FEDERAL-MOGUL CORP. 401 INDUSTRIAL AVE WAUPUN, WI 53963		
ENGINEER ADDRESS	Linde, Inc. 175 East Park Drive Tonawanda, N.Y. 14150		
Tract	-		
Block	-		
Lot	-		
Zone	-		
Existing/ Proposed Use	Air Separation Facility		
Description of Work	Equipment Foundations and Underground Utilities		
CODES AND STANDARDS			
CODE / STANDARD	Type	Name	Abbreviations
International Code Council (2003) (2006)	Building	International Building Code	ICC IBC
	Fire Prevention	International Fire Prevention Code	IFC
	Mechanical	International Mechanical Code	IMC
	Plumbing	International Plumbing Code	IPC
	American Society of Civil Engineers (2005)	Design Loads	Min. Design Loads for Bldgs. & Other Structures
American Concrete Institute			ACI
Concrete	Building	Building Code Requirements for Reinf. Concrete	ACI-318
		Specs. for Structural Concrete for Buildings	ACI-301
		Design Handbooks - Volume 1 & 2	ACI SP-17
		Field Reference Manual (For ACI-301)	ACI SP-18
Many topics	Selected standards & specifications	ACI-XXX	
Masonry	Building	Building Code & Specs. for Masonry Structures	ACI-530
American Institute of Steel Construction, Inc.			AISC
	Steel Construction	Manual of Steel Construction - ASD	AISC Manual
Department of Navy Naval Facilities Engineering Command			NAVFAC
Soils		Soil Mechanics	NAVFAC DM-7.1
		Foundations and Earth Structures	NAVFAC DM-7.2
		Soil Dynamics, Deep Stabilization, & Special Geotechnical Construction	NAVFAC DM-7.3

CODE DESIGN CRITERIA		CODE SEC./TABLE/FIG.	SPECIAL INSPECTIONS
	PROJECT SPECIFIC	ASCE-22	
BUILDING CODE:			
State Code or Technical Basis =	IBC 2021		
If above code/basis NOT used, indicate national code used =			
UNIFORM AND CONCENTRATED LIVE LOADS			
		Table 4-1	
SNOW GROUND LOAD			
	54 Psf	Fig. 7	
WIND DESIGN CRITERIA:			
Basic Wind Speed =	106 Mph	Figure 6	
Exposure Category =	C	6.5.6	
Importance Factor = I =	1.00	6.5.5	
Gust Factor = G =	0.85	6.5.8	
Design Pressure = q =	25.9 Psf	6.5.10	
Is resistance to lateral forces by friction allowed?	Yes	-	
For miscellaneous factors, see individual calculations.			
SEISMIC/EARTHQUAKE DESIGN CRITERIA:			
Spectral Response Acceleration (%g), short S _s , long S ₁ =	7.7 - 4.8	11.4.1	
Importance Factor = I =	1.00	Table 11.5-1	
Seismic Occupancy Category	Group II	Table 1-1	
Seismic Design Category -or- Performance Category	B	11.6	
Site Class -or- Site Soil Profile Type	D	11.4.2	
Site Soil Type Coefficient = S =	1.6 & 2.4	-	
Response Modification Factor, (for equipment typical)= R =	3	Table 15.4	
Is resistance to lateral forces by friction allowed?	No	-	
For miscellaneous factors, see individual calculations.			
FOUNDATION DESIGN CRITERIA:			
Allowable Soil Bearing:	3000 Psf	-	
Per Soil Investigation/Engineering Report.	Yes	-	
Is report synopsis attached?	Yes	-	
Per Code Table	(1-5)	-	
Per Customer - Unverified - No Report	No	-	
Allowable Soil Stress Increase (for lateral wind/seismic)=	N/A	9.7.3.2	IBC 1704.7
Factor of Safety Against Overturning=	1.5	6.1.2	
Compressor Foundations:			
Centrifugal designed per "Rule-of-Thumb (previous experience)	-	-	
Reciprocating designed per NAVFAC "Dynamic Elastic-Half-Space Theory"	-	-	
Sonotubes (concrete filled fiber forms)	-	-	
Depth of footings and edge of mat foundation for frost/erosion control	-	-	
CONCRETE DESIGN:			
	4500 Psi		
REINFORCEMENT: Per ASTM A615 Grade 60.			
	-	-	
CAST-IN-PLACE BOLTS:			
Design per ACI-318 Appendix D	Yes	-	IBC 1704.4
CHEMICAL ADHESIVE / WEDGE / STUD ANCHOR SYSTEMS:			
Design per ICC evaluation service ES report	Yes	-	
Anchors must meet ICC-ESR seismic design categories A-F for cracked concrete.			

SOIL SYNOPSIS

The foundation designs are based on a subsurface geotechnical investigation and report by Intertek PSI dated November 7th, 2023.

The existing Tenneco facility is located at 401 Industrial Avenue in Waupun, Wisconsin. The project area consists of a grassy area south of the main building of the existing Federal-Mogul Corporation facility and about 65 feet west of Wilson Drive. Existing silos are currently present west of the proposed slab, and an asphalt driveway is present to the north followed by the main building. Directly south of the project area is a gravel driveway followed by a cornfield and a commercial building. To the east is a grassy area followed by Wilson Drive.

The soils report indicated that the in-situ soil conditions at the site consist of a 6 inch gravel layer of organic topsoil underlain by clay to approximately 6 feet. The clay is underlain by gravel classified as possible weathered bedrock.

The natural cohesive soils encountered in the borings were generally medium stiff to stiff, with unconfined compressive strengths of 0.82 to 1.25 tons per square foot (tsf) and Standard Penetration Resistances (N-values) generally between about 5 and 6 bpf.

The natural granular soils encountered in the borings were very dense in relative density, with N-values typically between about 50 blows for 2 to 4 inches of penetration.

After stripping the topsoil and cutting high areas of the site to the planned finished grade, and prior to the placement of new fill which may be placed to raise grades, the subgrade must be thoroughly proofrolled to detect unstable, yielding soils. Proofrolling should consist of overlapping passes in a perpendicular grid pattern, such as with a fully-loaded tandem-axle dump truck, or other equipment of similar size and weight suitable for the surface conditions.

If unsuitable existing soil is present, it must be removed throughout a zone extending one foot laterally for each foot removed below the foundation, on either side of the planned footing. The over-excavated area must be backfilled with structural compacted fill.

Where the removal of unsuitable bearing material is preformed, the excavation must extend laterally beyond the perimeter of the foundation for a distance at least equal to the thickness of the fill below the footing bottom.


Any new fill should be a clean granular soil, such as those meeting the gradations outlined in Section 209 or 305 of the State of Wisconsin Specification for Highway & Structure Construction.

Fill must be placed in lifts not exceeding 9 inches, at moisture contents near optimum, and be compacted to a minimum of 95% maximum dry density as determined by a Standard Proctor Test (ASTM D-698).

All foundations must be placed at a depth of at least 4 feet (or deeper as required by local code) for frost heave protection.

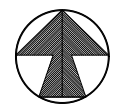
A mat foundation bearing upon suitable materials or compacted fill may be designed for an allowable bearing pressure of 3,000 psf.

STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-

Client Drawing No.		Client Project No. :	
		Client Job Code :	
		LINDE ENGINEERING AMERICAS TONAWANDA, NEW YORK	
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Linde Project No. : 1410A7U5		Linde Job Code. : NITRON 1300	
Title: CIVIL AND UNDERGROUND UTILITIES CIVIL / STRUCTURAL DESIGN CRITERIA FEDERAL-MOGUL - WAUPUN, WI			Scale NONE
Linde Drawing No.	&CT-1410A7U5-C-ZA 002	Sheet	1 OF 1
		Size	D

EXISTING BUILDING

NORTH



EXISTING CONCRETE

NITRON 1300
PLANT TARGET POINT

NEW NITROGEN
BACKUP SYSTEM

NEW NITROGEN
1300 PLANT

EXISTING
PLANT

TM-13 000
LIQUID NITROGEN
STORAGE TANK
#1

TM-13 000
LIQUID NITROGEN
STORAGE TANK
#2

EXISTING ROAD

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

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 Client Job Code : _____



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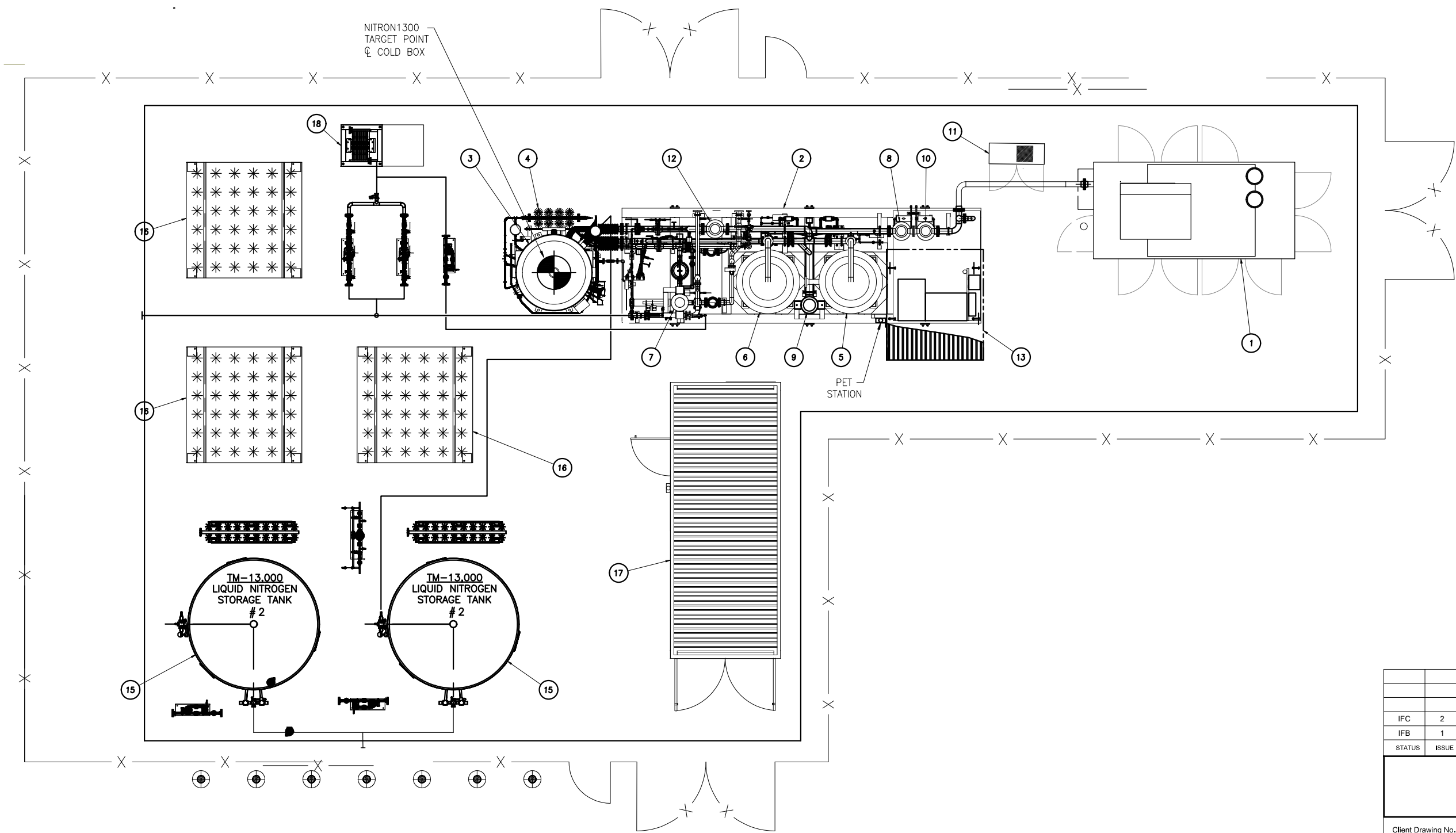
Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300

Title: CIVIL AND UNDERGROUND UTILITIES
 OVERALL SITE PLAN
 FEDERAL MOGUL - WAUPUN, WI
 Scale 1/8"=1'-0"

Linde Drawing No. : &CT-1410A7U5-C-ZA 080 Sheet 1 OF 2 Size D



NITRON 1300 EQUIPMENT LAYOUT - WAUPUN, WI



EQUIPMENT LIST

EQ. NO.	DESCRIPTION
1	R2000 MAC
2	SK-0550 PROCESS SKID
3	CB-0100 COLD BOX
4	HV-0360 DRAIN VAPORIZER
5	AV-0550 PREPURIFIER
6	AV-0560 PREPURIFIER
7	AS-0511 VENT SILENCER
8	AF-0511B DUST FILTER
9	AS-0560 BLOWDOWN SILENCER
10	AF-0511A DUST FILTER
11	---
12	AF-0570A PARTICULATE FILTER
13	---
14	---
15	TM-13,000 LN2 TANK
16	10-LWS-12M-IM VAPORIZER
17	---
18	---

STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-

Client Drawing No. _____ Client Project No. : _____
 Client Job Code : _____

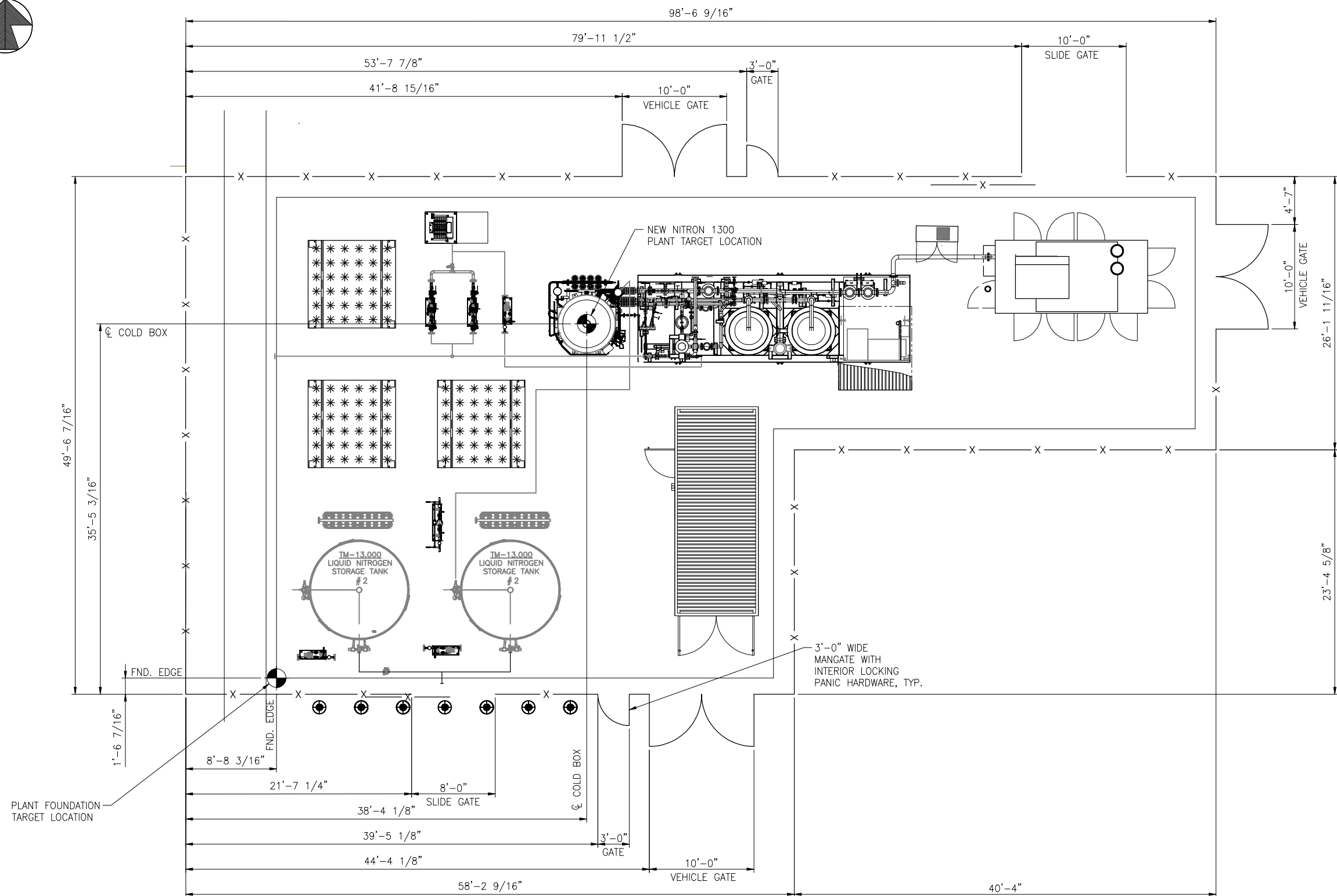
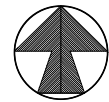


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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300
 Title: CIVIL AND UNDERGROUND UTILITIES
 OVERALL EQUIPMENT LAYOUT
 FEDERAL MOGUL - WAUPUN, WI
 Scale 1/8"=1'-0"
 Linde Drawing No. : &CT-1410A7U5-C-ZA 080 Sheet 2 OF 2 Size D



NORTH



SWING GATE POSTS

MINIMUM GATE POST (SCH. 40)	SINGLE GATE OPENING	DOUBLE GATE OPENING
1 1/2" NPS	TO 3'	---
2 1/2" NPS	OVER 3' TO 6'	---
3 1/2" NPS	OVER 6' TO 13'	UP TO 12'
6" NPS	OVER 13' TO 18'	OVER 12' TO 26'
8" NPS	OVER 18' TO 30'	OVER 26' TO 36'
		OVER 36' TO 64'

CANTILEVER SLIDING GATE POSTS

PROVIDE MANUFACTURERS STANDARD HEAVY DUTY POSTS
(02800-004)
REVISED 12/09

ADDITIONAL FENCE DETAIL NOTES

- BRACING: END, CORNER, FULL AND GATE POST SHALL BE SUITABLY BRACED TO FIRST ADJACENT LINE POST WITH MIN. 1 1/4" NPS SCHEDULE 40 GALV. (PLACED HORIZONTALLY AT MIDPOINT BETWEEN TOP RAIL AND GROUND) AND THEN TRUSS BACK DIAGONALLY FROM LINE POST TO END, CORNER, PULL AND GATE POSTS WITH MIN. 3/8" O.D. GALVANIZED STEEL ROD.
- BARBED WIRE: SHALL CONSIST OF TWO 12 1/2 GA. STRANDED LINE WIRES WITH 14 GA., 4 POINT ROUND BARBS, GALV., SPACED APPROXIMATELY 5" O.C. GALVANIZED PER ASTM A121 CLASS 3.
- GATES: PROVIDE ADDITIONAL GALV. HORIZONTAL AND VERTICAL MEMBERS TO ENSURE PROPER GATE OPERATION AND FOR ATTACHMENT OF WIRE MESH, HARDWARE AND ACCESSORIES.

USE SAME WIRE MESH AS FOR FENCE.

PROVIDE DIAGONAL CROSS BRACING CONSISTING OF 3/8" O.D. ADJUSTABLE LENGTH TRUSS RODS, ON GATES WHERE NECESSARY TO PROVIDE RIGIDITY WITHOUT SAG OR TWIST.

PROVIDE THE FOLLOWING GALV. HARDWARE AND ACCEDORIES FOR EACH GATE:

HINGES: PRESSED STEEL OR MALLEABLE IRON, NON-LIFT-OFF TYPE HINGES TO SUIT GATE SIZE, OFFSET TO PERMIT 180 DEGREE GATE OPENING.

LATCHES: OF TYPE TO PERMIT ENTERING THE FENCED AREA WITH PADLOCK EYE, OF TYPE TO PERMIT EXITING THE FENCED AREA WITH PANIC PLATE.

KEEPER: TO AUTOMATICALLY ENGAGE GATE LEAF AND HOLD IN OPEN POSITION UNTIL MANUALLY RELEASED.

SWING DOUBLE GATES: PROVIDE GATE STOPS FOR ALL DOUBLE GATES, CONSISTING OF MUSHROOM TYPE OR FLUSH PLATE WITH ANCHORS. SET IN CONCRETE TO ENGAGE CENTER DROP ROD OR PLUNGER BAR. PROVIDE LOCKING DEVICE, AND PADLOCK EYES AS INTEGRAL PART OF THE LATCH, REQUIRING ONE PADLOCK FOR LOCKING BOTH GATE LEAVES.

CANTILEVER SLIDING GATES: PROVIDE MANUFACTURERS' STANDARD HEAVY-DUTY ROLLERS, STAYS, BRACING AND ACCESSORIES AS REQUIRED. NOTE: TO 30' SINGLE GATE; 30'-60' DOUBLE GATE.
- CHECK IN FIELD WITH OWNER FOR LOCATION OF POSSIBLE EXISTING CONDUITS AND/OR PIPING, ETC. BEFORE EXCAVATING FOR ANY POST HOLES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
- FINISH: GALVANIZED, ALUMINIZED STEEL.
- NOT ACCEPTABLE: USED, REGALVANIZED, OR OPEN-SEAM POST.

TYPICAL FENCE NOTES

(02800-005)
REVISED 3/01

STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-

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Client Job Code : _____

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TONAWANDA, NEW YORK

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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300
Title: CIVIL AND UNDERGROUND UTILITIES
SITE FENCE DEFINITION AND DETAILS
FEDERAL MOGUL - WAUPUN, WI Scale 3/16"=1'-0"
Linde Drawing No. : &CT-1410A7U5-C-ZA 081 Sheet 1 OF 2 Size D

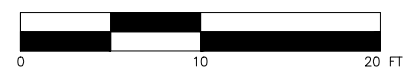
GATES (HARDWARE/SECURITY)	
TYPE	HARDWARE
EXIT ONLY	PANIC HARDWARE WITH MOUNTING PLATE TO PREVENT TAMPERING
ENTRY/EXIT	PANIC HARDWARE WITH MOUNTING PLATE TO PREVENT TAMPERING AND KEYED PADLOCK LOCK BOX
PADLOCK	HARDWARE PROVIDED TO ALLOW FOR A LINDE PROVIDED PADLOCK
SEE SHEET 2 FOR DETAILS AND NOTES	

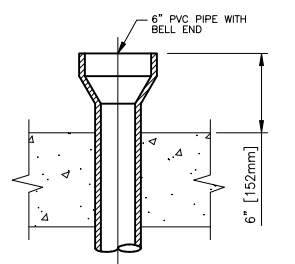
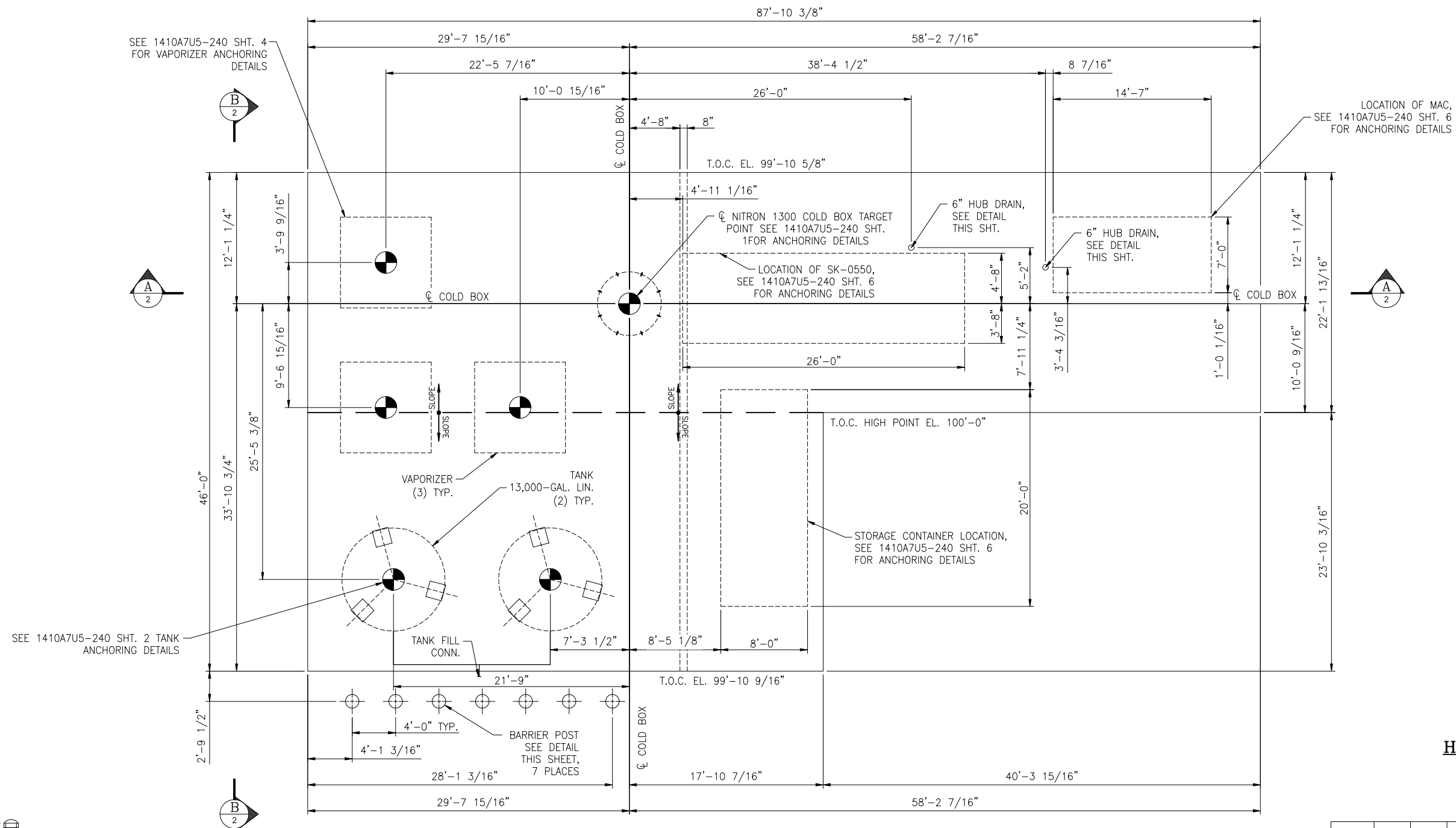
NOTES:

- NEW FENCING TO BE SUPPLIED AND INSTALLED BY CUSTOMER ONCE MECHANICAL INSTALLATION HAS BEEN COMPLETED.
- SEE SHEET 2 FOR STANDARD FENCE DETAILS AND SPECIFICATIONS.

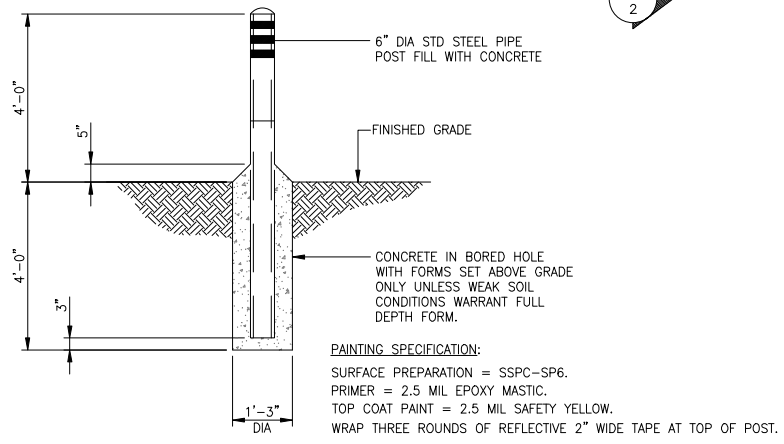
LEGEND:

— x — DENOTES NEW FENCE





HUB DRAIN DETAIL
SCALE: NONE
SEE NOTE 5



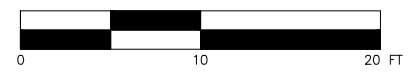
TYPICAL BARRIER POST (B.P.) DETAIL
(02800-002)
REVISED 9/10

CONSULT WITH ELECTRICAL AND OTHER CONTRACTORS FOR EMBEDDED ITEMS ETC. BEFORE PLACING ANY CONCRETE. DO NOT PLACE ANY CONCRETE UNTIL ALL UNDERGROUND UTILITIES AND ALL WORK TO BE PLACED IN CONCRETE HAS BEEN INSTALLED AND APPROVED.

LEGEND:
 DENOTES FOUNDATION WORK POINTS

PLAN VIEW
SCALE: 3/16"=1'-0"

- NOTES:**
- 1.) T.O.C. REF. ELEVATION 100'-0".
 - 2.) COMPACTED GRAVEL MUST BE PLACED AROUND CONCRETE FOUNDATION BEFORE EQUIPMENT IS SET. SEE TYPICAL GRADE DETAIL DWG. 1410A7US-C-ZB 0250, SHEET 1.
 - 3.) ENTIRE CONCRETE PAD TO HAVE A NON-SKID SURFACE.
 - 4.) MINIMUM SLOPE (OUTSIDE FLAT AREA) = 1/16" PER FT.
 - 5.) HUB DRAIN USED FOR COMPRESSOR CONDENSATE DRAIN.



IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Client Drawing No. :
Client Project No. :
Client Job Code :

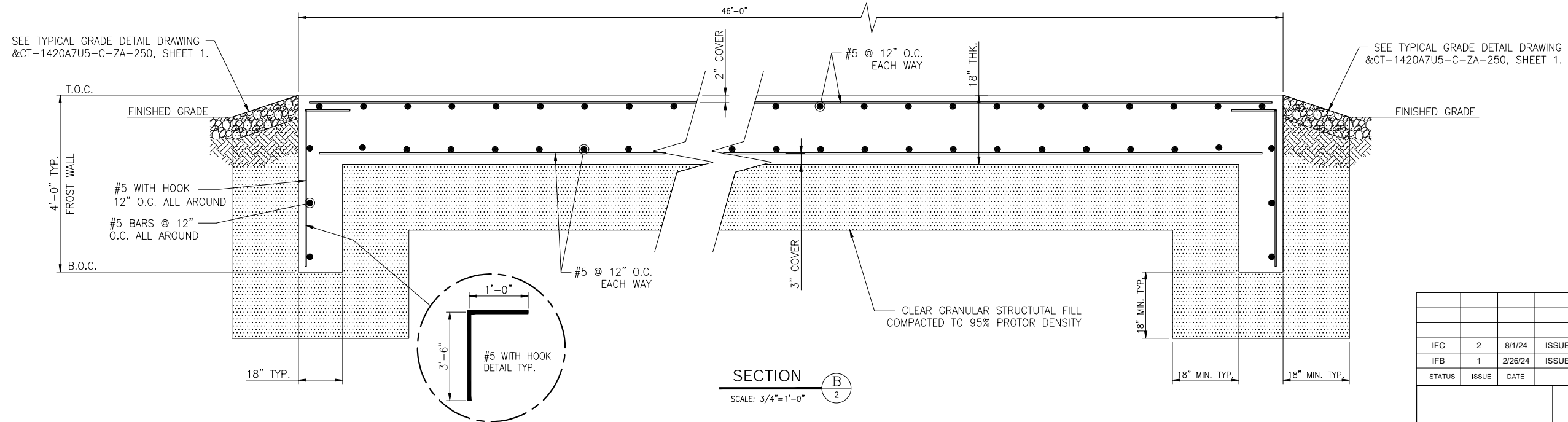
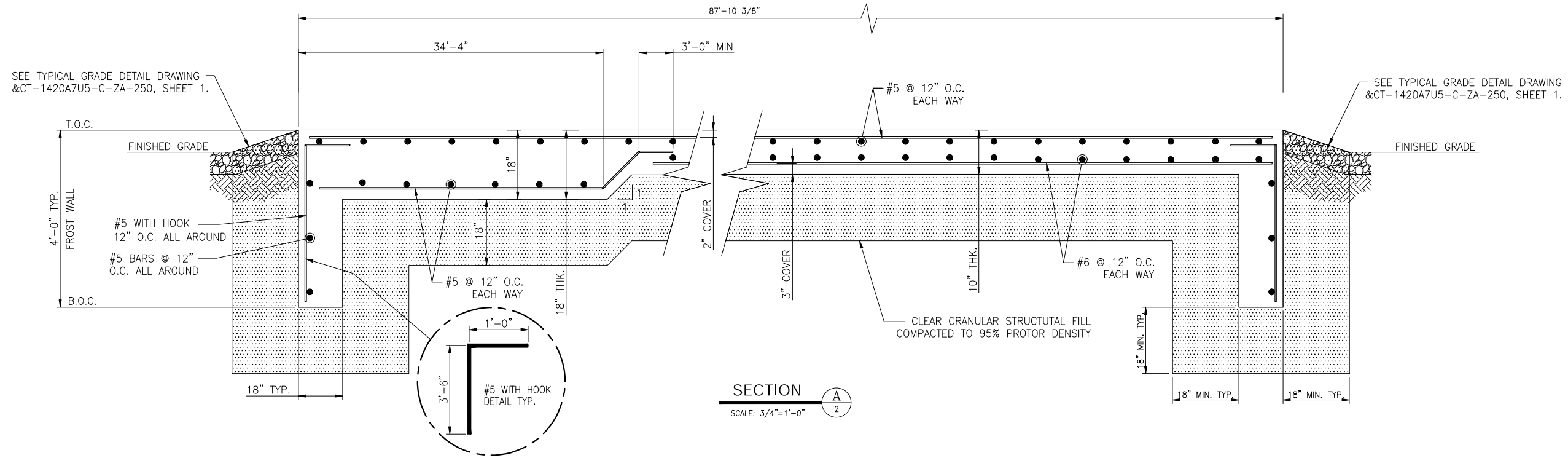
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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300

Title: CIVIL AND UNDERGROUND UTILITIES
FOUNDATION LOCATION PLAN
FEDERAL MOGUL - WAUPUN, WI Scale AS SHOWN

Linde Drawing No. : &CT-1410A7U5-C-ZB 200 Sheet 1 OF 2 Size D



STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-

Client Drawing No. _____ Client Project No. : _____
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Linde ENGINEERING AMERICAS
 TONAWANDA, NEW YORK

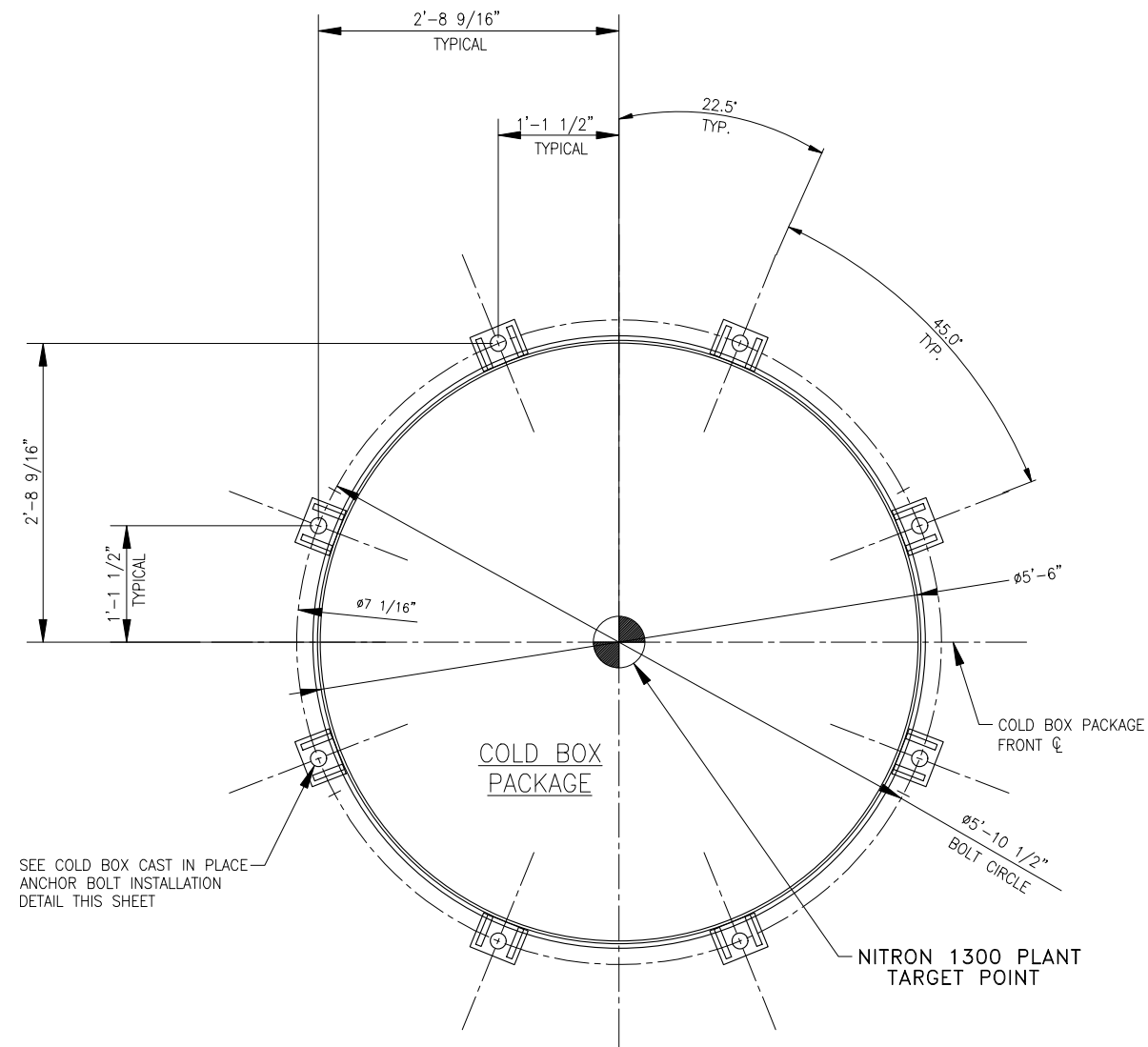
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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300

Title: CIVIL AND UNDERGROUND UTILITIES
 FOUNDATION SECTION DETAILS "A-A" THRU "B-B"
 FEDERAL MOGUL - WAUPUN, WI

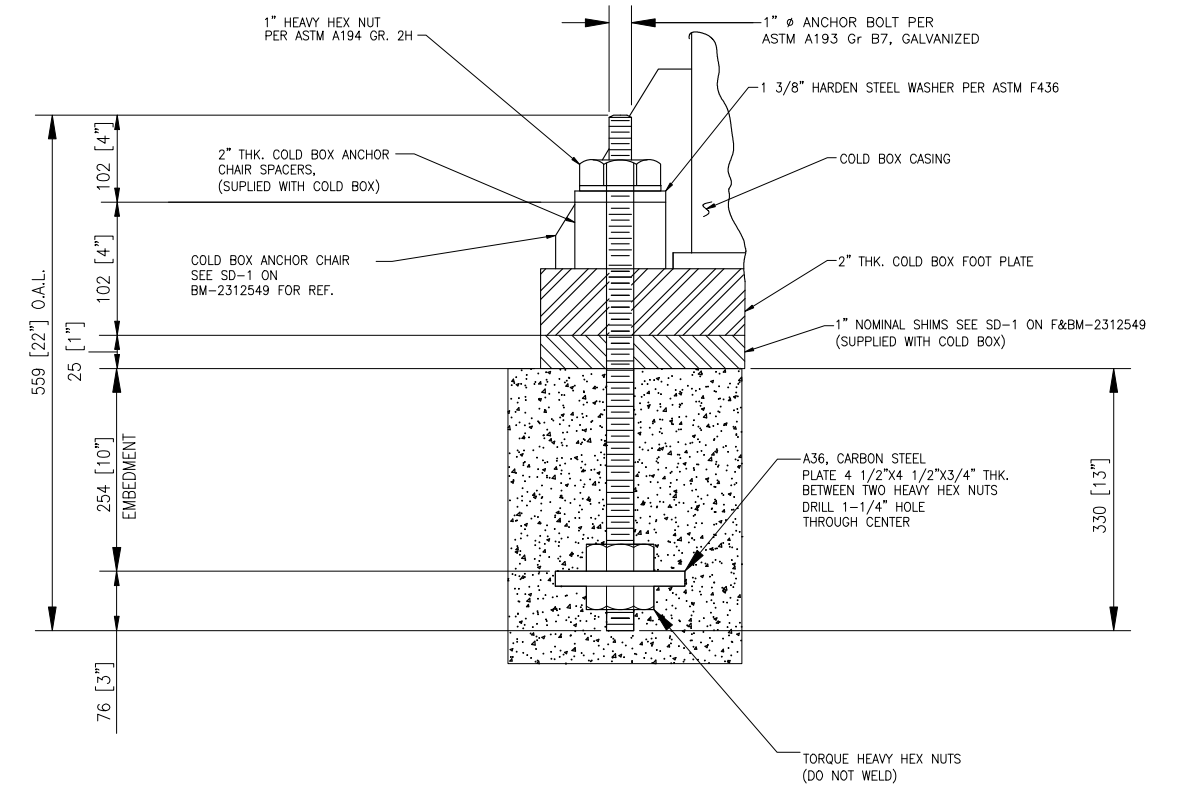
Linde Drawing No. : &CT-1410A7U5-C-ZB 200 Sheet 2 OF 2 Size D

- NOTES:**
- 1.) T.O.C. REF. ELEVATION 100'-0".
 - 2.) COMPACTED GRAVEL MUST BE PLACED AROUND CONCRETE FOUNDATION BEFORE EQUIPMENT IS SET. SEE TYPICAL GRADE DETAIL DWG. 1410A7U5-C-ZB 0250, SHEET 1.
 - 3.) ENTIRE CONCRETE PAD TO HAVE A NON-SKID SURFACE
 - 4.) MINIMUM SLOPE (OUTSIDE FLAT AREA) = 1/16" PER FT.



COLD BOX ANCHOR BOLT LAYOUT
NOT TO SCALE

ANCHOR BOLT TOLERANCES:	
PROJECTION	+1/4 INCH, -0 INCH
BOLTS WITHOUT SLEEVES	±1/8 INCH



COLD BOX CAST IN PLACE ANCHOR BOLT INSTALLATION DETAIL
NOT TO SCALE

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

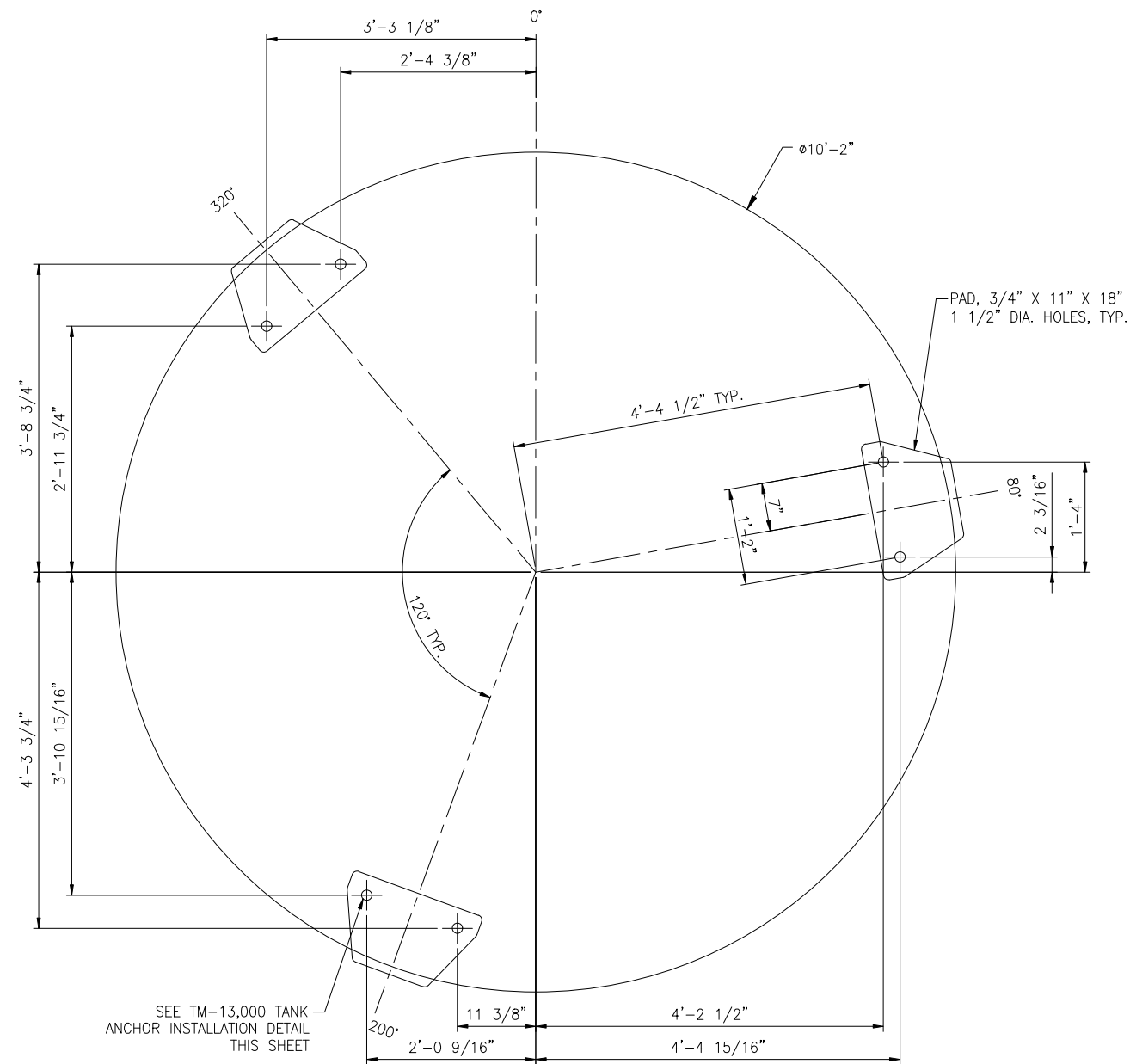
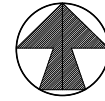
Client Drawing No.		Client Project No.	:
		Client Job Code	:



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Linde Project No. : 1410A7US	Linde Job Code. : NITRON 1300
Title: CIVIL AND UNDERGROUND UTILITIES COLD BOX CAST-IN-PLACE ANCHOR BOLT LOCATIONS & DETAIL FEDERAL MOGUL - WAUPUN, WI	Scale NONE
Linde Drawing No. : &CT-1410A7U5-C-ZB 240	Sheet 1 OF 5 Size D

NORTH

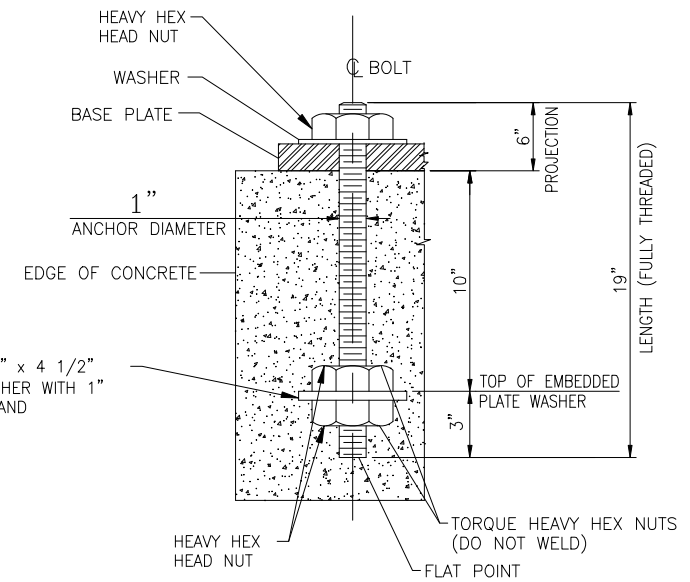


TM-13,000 TANK CAST-IN ANCHOR LAYOUT

SCALE: 1"=1'-0"
2 REQ.

NOTES:

- 1.) THIS DETAIL SHOWS THE POSITION OF THE ANCHORS RELATIVELY TO THE EQUIPMENT LAYOUT.
- 2.) THIS DETAIL MAY BE ROTATED ABOUT THE TANK CENTER TO MATCH THE EQUIPMENT LAYOUT.
- 3.) THIS DETAIL IS BASED ON THE CUT SHEET OF THE TANK AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- 4.) PRIOR TO POUR, VERIFY THE EXACT LOCATION OF THE ANCHOR LOCATIONS AGAINST THE ACTUAL FOOTPRINT OR RIGID TEMPLATE, DO NOT SCALE PLATE DRAWING FROM THIS DRAWING.



**TM-13,000 TANK CAST IN
PLACE ANCHOR BOLT
INSTALLATION DETAIL**

(WITH HOLE IN BASEPLATE)
SCALE: NONE
6 REQ.


NOTES:

- 1.) CONTRACTOR TO ENSURE THE ANCHORAGE SYSTEM (NEW BASEPLATE, RODS, NUTS, WASHERS) IS ASSEMBLED PRIOR TO CONCRETE POUR.
- 2.) FILL TANK BASEPLATE HOLES WITH NON-SHRINK GROUT AFTER INSTALLATION OF TANK.

ANCHOR BOLT TOLERANCES:	
PROJECTION	+1/4 INCH, -0 INCH
BOLTS WITHOUT SLEEVES	±1/8 INCH

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Client Drawing No.	Client Project No. :
	Client Job Code :



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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300

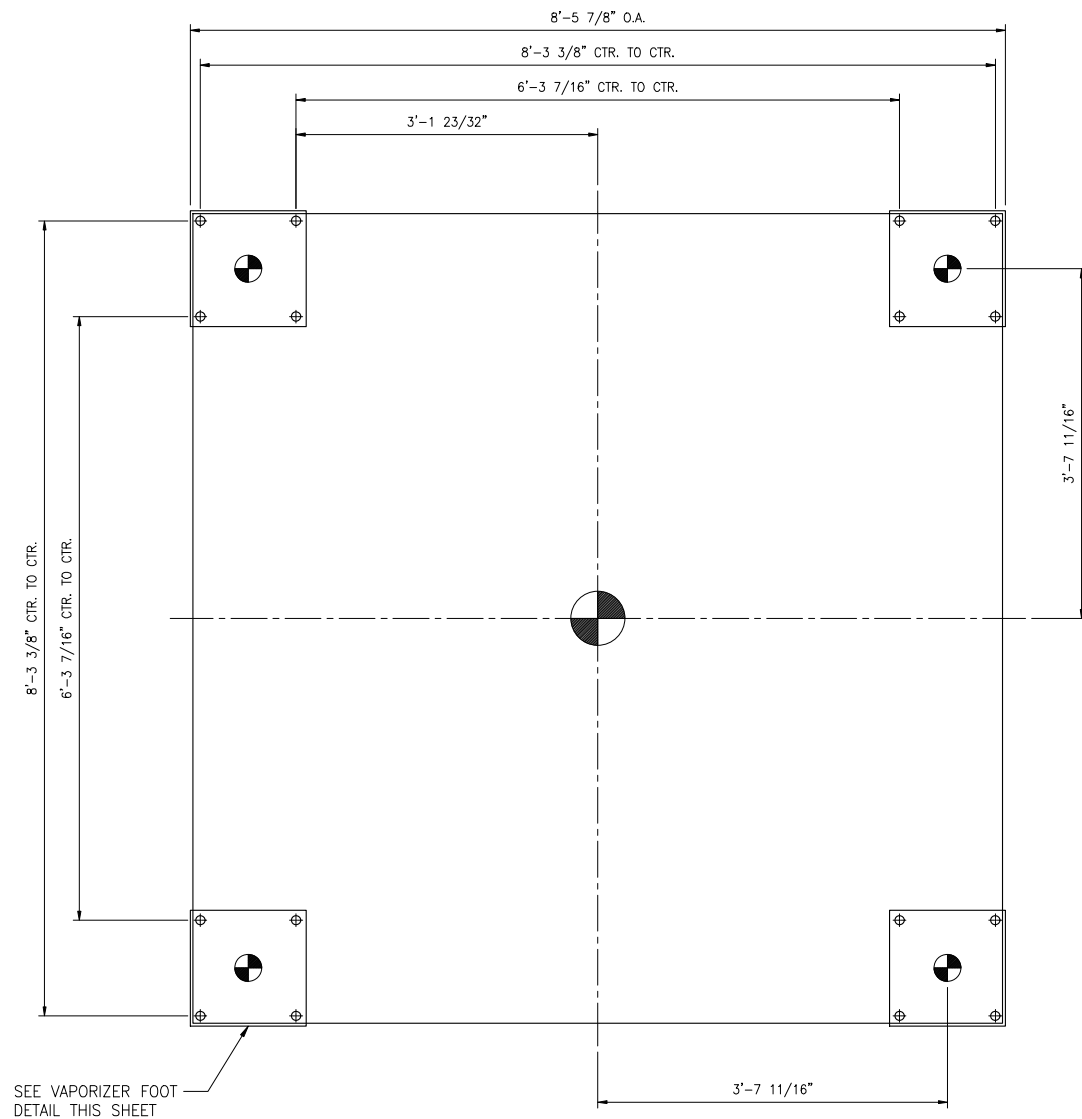
Title: CIVIL AND UNDERGROUND UTILITIES
TANK CAST-IN-PLACE ANCHOR BOLT LOCATIONS
FEDERAL MOGUL - WAUPUN, WI

Scale: AS NOTED

Linde Drawing No. : &CT-1410A7U5-C-ZB 240 Sheet 2 OF 5 Size D

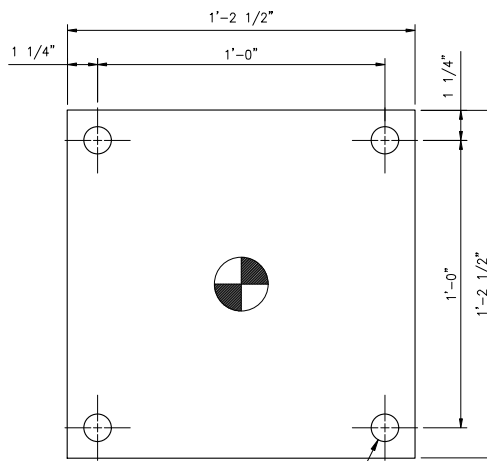
ANCHOR BOLT TOLERANCES:

PROJECTION	+1/4 INCH, -0 INCH
BOLTS WITHOUT SLEEVES	±1/8 INCH



VAPORIZER FEET PLAN VIEW

SCALE: 1"=1'-0"
3 REQ.



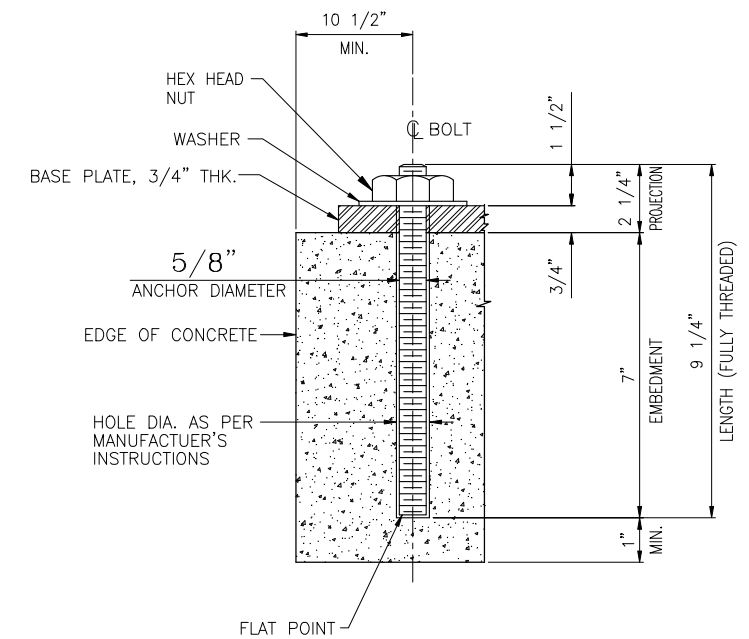
Ø1 1/8 MTG. HOLE (TYP.)
(4) PLACES, SEE VAPORIZER CAST IN PLACE ANCHOR DETAIL THIS SHEET

VAPORIZER FOOT DETAIL

SCALE: 3"=1'-0"
4 REQ. PER VAPORIZER

ANCHOR BOLT TOLERANCES:

PROJECTION	+1/4 INCH, -0 INCH
BOLTS WITHOUT SLEEVES	±1/8 INCH



VAPORIZER CHEMICAL ADHESIVE ANCHOR BOLT INSTALLATION DETAIL

(WITH HOLE IN BASEPLATE)
SCALE: NONE
16 REQ. PER VAPORIZER

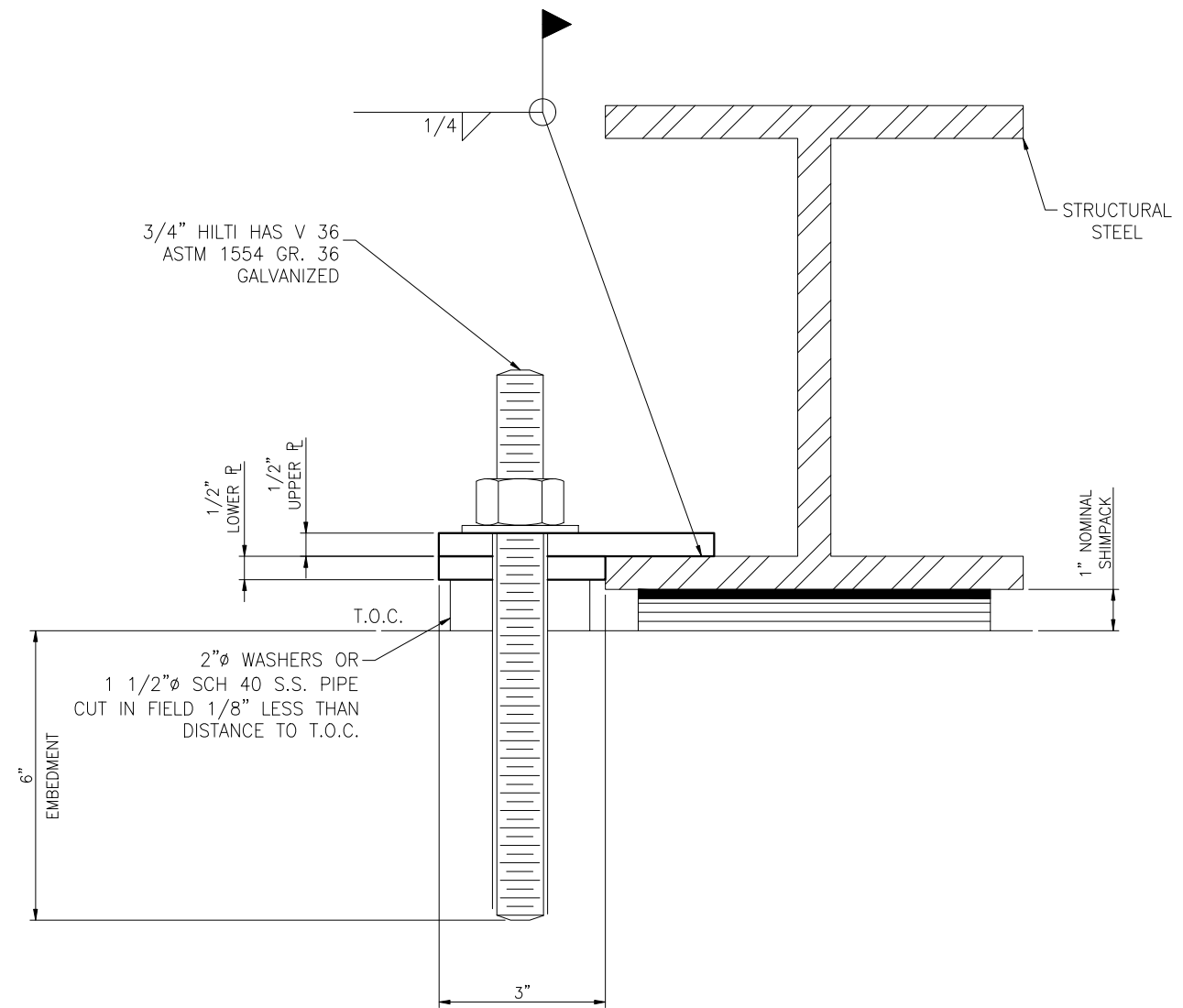
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-

Client Drawing No.	Client Project No. :
	Client Job Code :



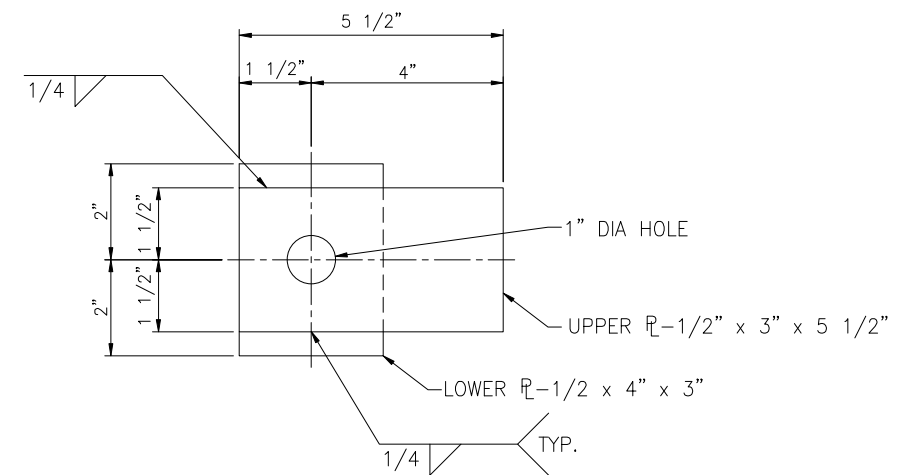
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Linde Project No. : 1410A7U5	Linde Job Code. : NITRON 1300
Title: CIVIL AND UNDERGROUND UTILITIES VAPORIZER FEET PLAN VIEW & DETAILS FEDERAL MOGUL - WAUPUN, WI	Scale: AS NOTED
Linde Drawing No. : &CT-1410A7U5-C-ZB 240	Sheet 3 OF 5 Size D



HOLD DOWN CLIP SECTION DETAIL

SCALE: NOT TO SCALE
NOTE: WELD CLIP TO BEAM AFTER INSTALLATION



HOLD DOWN CLIP DETAIL

CLIPS TO BE PROVIDED BY OTHERS
SCALE: 6"=1'-0"

TOTAL ANCHORS REQUIRED:
PREPURIFIER SKID: (8)
CONTROL/STORAGE ROOM: (8)
MAC: (8)

ANCHOR BOLT TOLERANCES:	
PROJECTION	+1/4 INCH, -0 INCH
BOLTS WITHOUT SLEEVES	±1/8 INCH

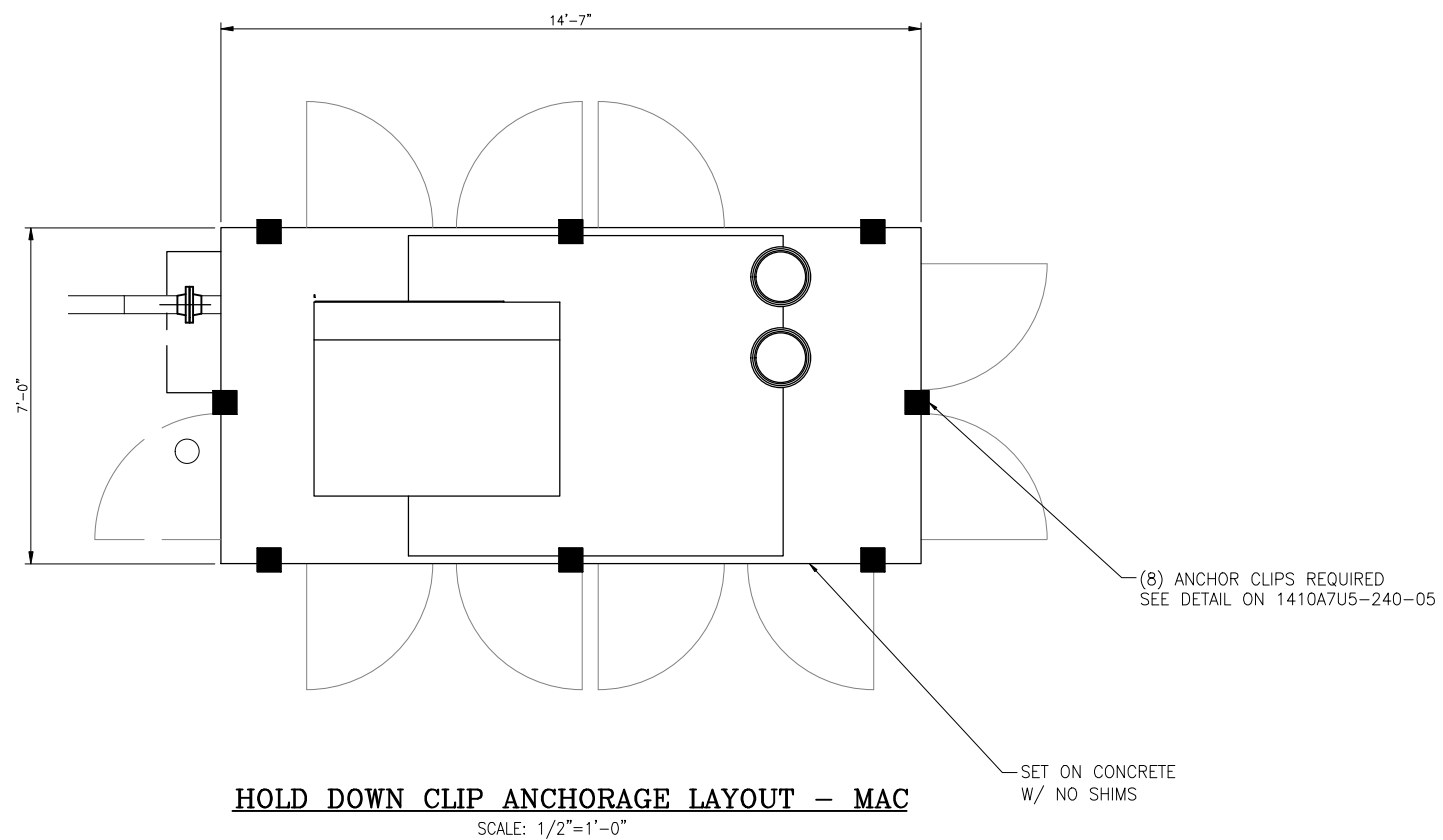
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-

Client Drawing No. : _____ Client Project No. : _____
Client Job Code : _____

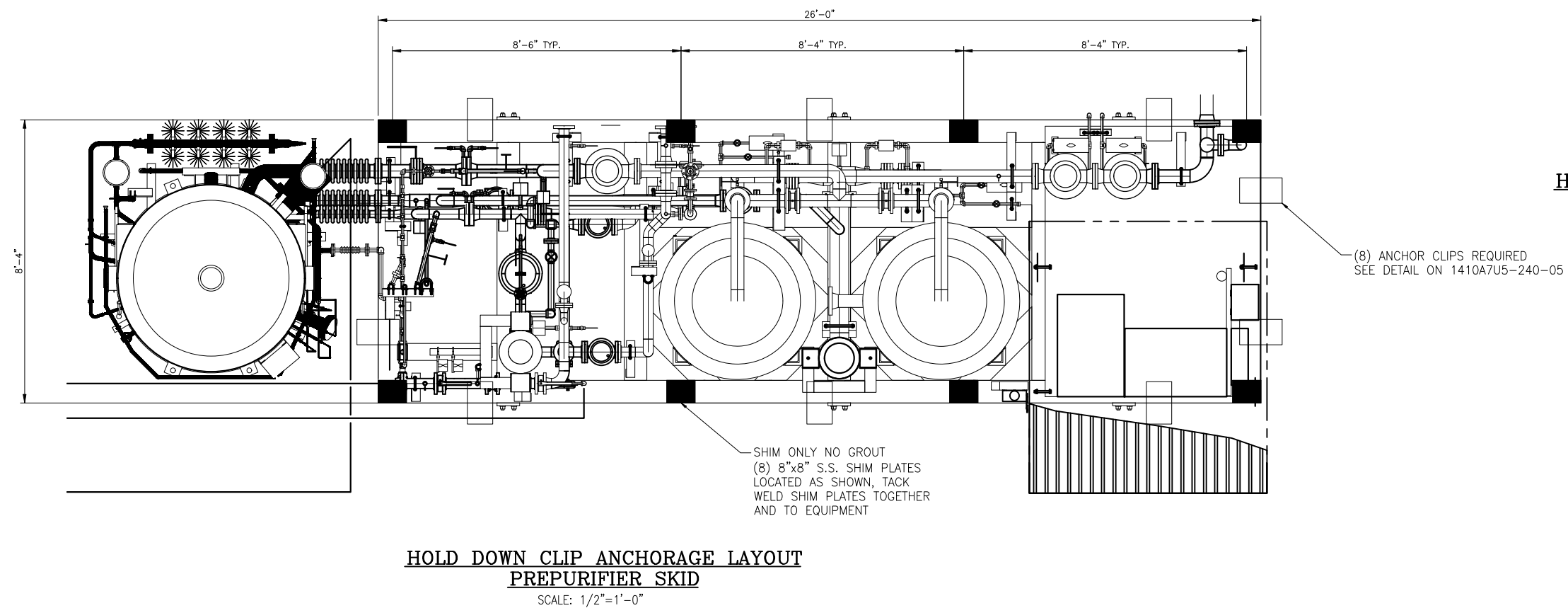
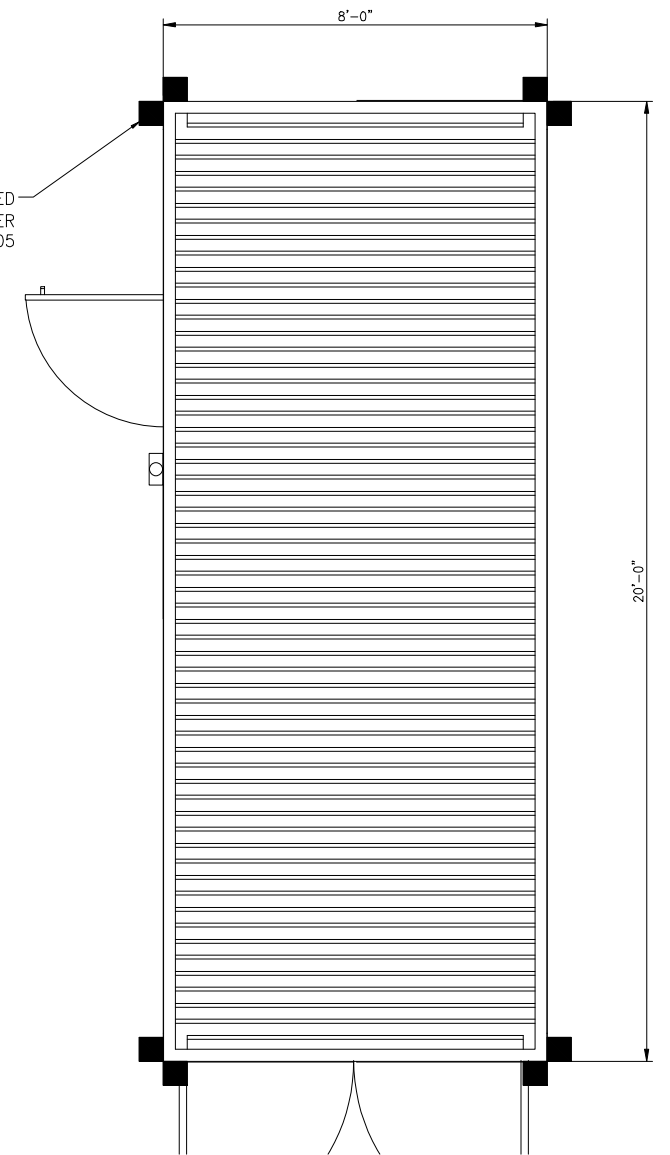


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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300
Title: CIVIL AND UNDERGROUND UTILITIES HOLD DOWN CLIP DETAILS Scale: AS NOTED
FEDERAL MOGUL - WAUPUN, WI
Linde Drawing No. : &CT-1410A7U5-C-ZB 240 Sheet 4 OF 5 Size D




(8) ANCHOR CLIPS REQUIRED
(2) EACH CORNER
SEE DETAIL ON 1410A7U5-240-05



STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-

Client Drawing No. : _____ Client Project No. : _____
Client Job Code : _____



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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300
Title: CIVIL AND UNDERGROUND UTILITIES
HOLD DOWN CLIP LAYOUTS
FEDERAL MOGUL - WAUPUN, WI
Scale: AS NOTED

Linde Drawing No. : &CT-1410A7U5-C-ZB 240 Sheet 5 OF 5 Size D

FOUNDATION SPECIFICATION CRITERIA

EXCAVATING, FILLING, GRADING, YARDWORK

(Short Form--Small Projects)
(02201)

- 1.0 Furnish labor, supervision, equipment, and materials to complete excavating, filling, backfilling, grading, yardwork and other items indicated or specified on the construction drawings.
- 2.0 Provide necessary/required decking, guards, railing, fences, barricades, planking, lights, warning signals, signs and the like to maintain safe pedestrian and vehicular traffic.
- 3.0 When utilities are encountered in work or as indicated, support, shore, and protect existing services and structures. If existing services are not indicated but are encountered and require protection or relocation, request Owner in writing for determination and decision. Do not proceed until written instructions are obtained.
- 4.0 Provide, maintain, and operate pumps or other equipment necessary to drain and keep excavations, pits, trenches and entire subgrade area free of water under any and all circumstances or contingencies that may arise.
- 5.0 For backfilling, unless otherwise indicated, use earth free from waste and objectionable matter. Do not use stones over 1/2 cubic foot. Place backfill in uniform horizontal layers 12" deep and compact thoroughly with earth compacting machine, preferably vibrator.
- 6.0 Unless otherwise indicated, excavated material may be used for backfilling, provided it is suitable. If sufficient sound materials are not on hand to complete filling operations to required grades, furnish same.
- 7.0 Unless otherwise indicated or directed by Owner, remove excess excavated materials, topsoil, etc. and legally dispose of away from Owner's property.
- 8.0 THIS CONTRACTOR SHALL OBEY ALL O.S.H.A. RULES AND REGULATIONS FOR ANY EXCAVATIONS.

SUBGRADE PREPARATION FOR FOUNDATIONS

1.0 MAT. CONTINUOUS AND SPREAD FOOTER FOUNDATIONS

- 1.1 Site shall be stripped of topsoil and proof rolled. Any areas of soft, wet or otherwise unsuitable material shall be removed and placed with structural fill. All fill shall conform to Section 209 or 305 of the State of Wisconsin Standard Specification for Highway and Structure Construction.
- 1.2 Areas where natural soils or site compacted fill are not present at the design bearing level shall either have the foundation deepened or structural fill consisting of lean concrete or new compacted fill placed after removing the existing fill. Soils at the bearing elevation shall be proof rolled and inspection by site soil consultant.
- 1.3 Any loose or disturbed material at the bearing level as well as any water shall be removed prior to placing concrete or structural fill.
- 1.4 Any lean concrete necessary to establish the bearing level shall have a specified strength of concrete of 1500 psi at 28 days.
- 1.5 Any fill necessary to establish the bearing level shall be free of organic matter and debris placed in lifts not exceeding 9 inches in loose thickness and compacted to at least 95% Modified Proctor maximum density per ASTM D-698.
- 1.6 Fill shall extend a minimum of 18" below and laterally from the slab and frost walls. Any additional depth of fill required below the bearing level shall also be provided laterally at a 1:1 ratio.
- 1.7 Frost wall depth shall be at least 48" or deeper as required per local codes.

STRUCTURAL CONCRETE

(Short Form)

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301-96 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE", PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE, EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.

(Per ACI 301: "Individual sections, articles, or paragraphs shall not be copied into the Project Specifications, since taking them out of context may change their meaning")

ACI 301 as well as referenced non ACI 301 document, as indicated with **, are also found in ACI Field Reference Manual SP-15. Per ACI 301 1.4.3, it is mandatory that ACI SP-15 be kept in Contractor's field office.

MANDATORY REQUIREMENTS CHECKLIST

Required Strength (4.2.2.8)	Minimum Concrete Strength fc' (psi) at 28 Days	Suggested (Negotiable with Praxair Engineer)			
		Type	Minimum Cement		
			Pound per Cubic Yard	Maximum Water-Cement Ratio (6)	
General Application	4500	II or III (2)	550	5.9	0.45

- NOTES: (1) Air entrainment is required.
 (2) Type III high early strength when shown on drawings or increase cement content and decrease water cement ratio such that specified strength reached at 7 days.
 (3) ACI 302.1** Table 1.1 Floor Class 3
 (4) ACI 302.1** Table 1.1 Floor Class 5
 (5) See ACI 301 Table 4.4.2.1. (same in ACI 302.1** Table 5.2.4)
 (6) Water-cement ratio = 0.40 for concrete exposed to deicing salts, brackish water seawater, including areas in the splash or spray zones.

3.2.1.1. Reinforcing steel shall be ASTM A615 Grade 60

5.3.1.4 For in-place density of subgrade soils for slabs on grade, see sheet 2 of this dwg.

5.3.1.4 Indoor floor slabs shall not be placed directly on vapor barriers. A 4 to 6 inch granular sand layer shall separate the slab from the vapor barrier.
(Non ACI 301 requirement.)

6.3.7 Architectural concrete provisions are not applicable.

OPTIONAL REQUIREMENTS CHECKLIST

- 1.6.4 Testing responsibilities by?: Owner (per ACI 301) Contractor
- 1.6.5.2 Nondestructive testing on hardened concrete permitted not permitted
- 2.1.2.1 Submit data for form release agent only for surfaces to receive waterproofing, dampproofing, or protective coatings, verifying compatibility with adhesion of such coatings.
- 2.1.2.2 Formwork shop drawing submittals?: required not required
- 2.2.1.2 At water basins, walls require form ties with water barrier plates.
- 2.2.2.3 Earth cuts as forms for vertical or sloping surfaces?: permitted not permitted
- 2.2.3.2 Chamfer strips on exterior corners?: required not required
 Bevels on re-entrant corners, formed edges?: required not required
- 3.1.1 Rebar detail shop drawings?: required not required
- 3.2.1.5 Welded wire fabric?: plain or deformed
- 3.2.2.2 Rebar welds?: permitted not permitted
- 3.3.2.8 Rebar bending or straightening permitted not permitted
- 3.3.2.9 Rebar field cutting permitted not permitted
- 4.2.1.1.2 Blast Furnace Slag Cement and Slag permitted not permitted

4.2.1.4 and 4.2.2.5 Admixture types:

Designation	Type	Typical Amount (per 100 lbs. cement)
4.2.1.4	ASTM C260	Air Entraining
"	ASTM C494 Type A	Water Reducing (Normal Set)
"	ASTM C494 Type B	Retarding (typical hot weather)
"	ASTM C494 Type C	Accelerating (typically cold weather)
"	ASTM C494 Type D	Water Reducing and Retarding
"	ASTM C494 Type E	Water Reducing and Accelerating
"	ASTM C494 Type F	Water Reducing, High Range
"	ASTM C494 Type G	Water Reducing, High Range and Retarding
4.2.2.8	ASTM C618	Flyash and pozzolan
4.2.2.6	ASTM D98	Calcium Chloride (See Note 1)

* Amount shall be in accordance with manufacturer's recommendations and used in accordance to manufacturer's instructions.
 Note1: Do not use for concrete subject to severe or very severe sulfate exposure.

4.2.1.4 Admixture certification of conformance?: required not required

4.2.2.2 Slump of 4 inches. For pumped concrete, measure at point of placement, not point of delivery.

4.2.2.4 Air-entrained, general?: required not required
 Air-entrained, for water basins and vapor. pit?: required not required
 Type of exposure?: severe moderate mild

5.1.2.2. For handling, placing and constructing:

- a. Shop drawings?: required not required
 b. Advance notification of placement?: required not required
 c. Request for acceptance of preplacement plan?: required not required
 d. Request for acceptance of wet weather plan?: required not required
 e. Request for acceptance of hot weather plan?: required not required

5.3.2.6 Bond at construction joints?: required not required

5.3.4.2 Finishes for horizontal walkable surfaces:

Broom: Outdoor: foundations, fill pads, storage areas

REFERENCES

The Contractor shall keep in field office at all times at least one copy of the latest revision of each of the references (per ACI 301 1.4.3.):

- 1.) ACI Field Reference Manual, SP-15, "Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References"
- 2.) Concrete Reinforcing Steel Institute (CRSI) "Manual of Standard Practice", MSP-1.

The following table is for Contractor and Praxair Field Construction Management information. This information provides additional specification and standard practice details found in SP-15.

Table of Contents of ACI Field Reference Manual SP-15

ACI No.	Title
301	Standard (Std.) Specifications (Spec.) for Structural Concrete.
117	Std. Specs. for Tolerances for Concrete Construction and Materials
212.3	Chemical Admixtures for Concrete
302.1	Guide for Concrete Floor and Slab Construction.
304	Guide for Measuring, Mixing, Transporting, and Placing Concrete
304.2	Placing Concrete by Pumping Methods
305	Hot Weather Concreting
306	Cold Weather Concreting
306.1	Std. Spec. for Cold Weather Concreting
308	Std. Spec. for Curing Concrete
309	Guide for Consolidation of Concrete
347	Guide to Formwork for Concrete
C31	Std. Practice for Making and Curing Concrete Test Specimens in the Field
C94	Std. Spec. for Ready-Mixed Concrete.
C138	Std. Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete
C143	Std. Test Method for Slump of Hydraulic Cement Concrete
C172	Std. Practice for Sampling Freshly Mixed Concrete
	Std. Test Method for Air Content of Freshly Mixed Concrete by the:
C173	Volume Method
C231	Pressure Method
C567	Std. Test Method for Unit Weight of Structural Lightweight Concrete
C1064	Std. Test Method for Temperature of Freshly Mixed Portland Cement Concrete

DISPOSAL OF MATERIALS

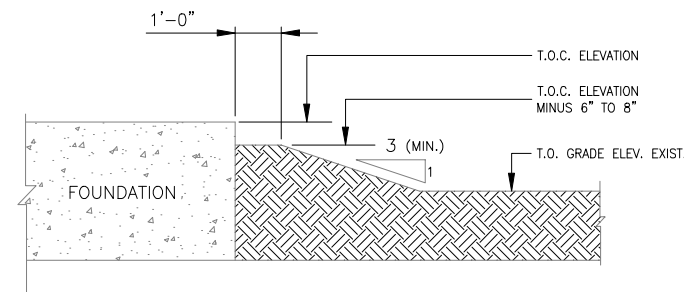
Federal Mogul is responsible for disposal of on-site generated waste material(s).

WATER REMOVAL

- Contractor is responsible for removal of incidental rain water by portable pumps.
 Dewatering:
 -----Major dewatering system(s) required by Owner will be accomplished as an extra by a Field Change Notice (FCN).
 -----Major dewatering system(s) is required by Owner:
 -----Include pricing in base bid.
 -----Include pricing as an alternate.

FOUNDATION SUBGRADES

-----If checked, then the following is mandatory.
 If unchecked, then the following is optional:
 All foundations are to have a minimum three (3) to four (4) inch thick lean concrete mudmat.
 Foundations subgrades shall not be left exposed overnight unless no rainfall is anticipated.



TYPICAL GRADE DETAIL AT ALL FOUNDATIONS

REV. 3/99 (03300-001)

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	AJS	LJ	LJ
IFB	1	2/26/24	ISSUED FOR BID	AJS	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

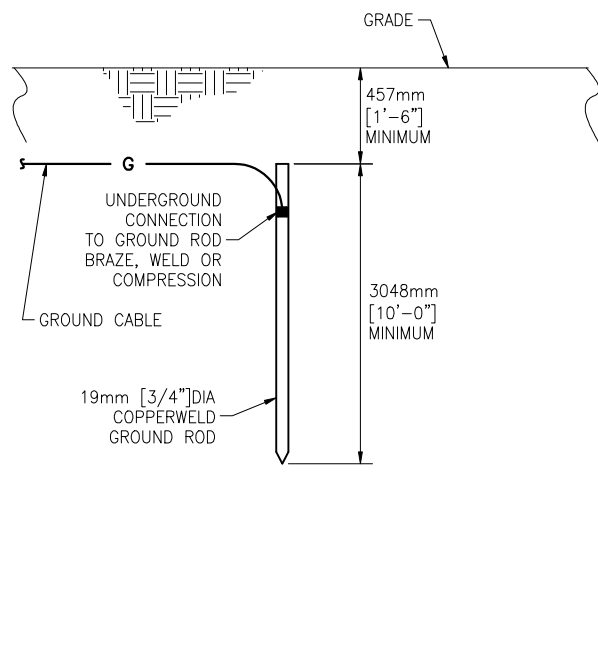
Client Drawing No.	Client Project No. :
	Client Job Code :

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Linde Project No. : 1410A7U5	Linde Job Code. : NITRON 1300
Title: CIVIL AND UNDERGROUND UTILITIES FOUNDATION SPECIFICATION CRITERIA FEDERAL MOGUL - WAUPUN, WI	Scale NONE
Linde Drawing No. : &CT-1410A7U5-C-ZB 250	Sheet 1 OF 2 Size D

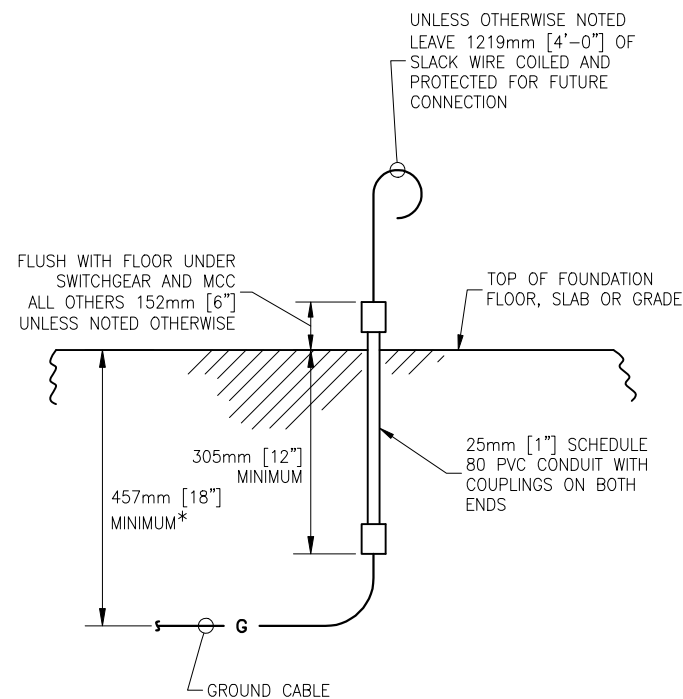
Drawing name: G:\Projects\K-04-1410A7U5 Wapun - WI NITRON 1300\050 Engineering\057 - Plant Design\Electrical\UG\1410A7U5-152-01.dwg



DETAIL NO. E302

GROUND ROD INSTALLATION

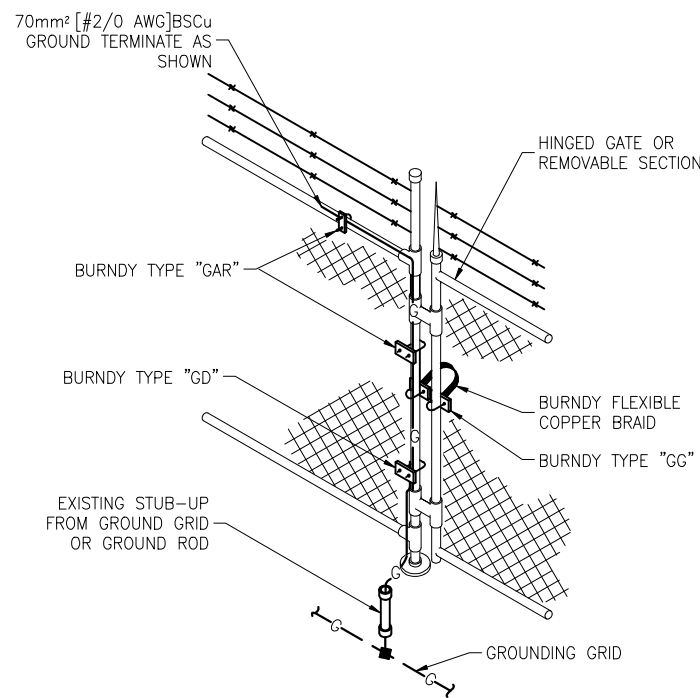
SYMBOL USED ON DRAWINGS



DETAIL NO. E303

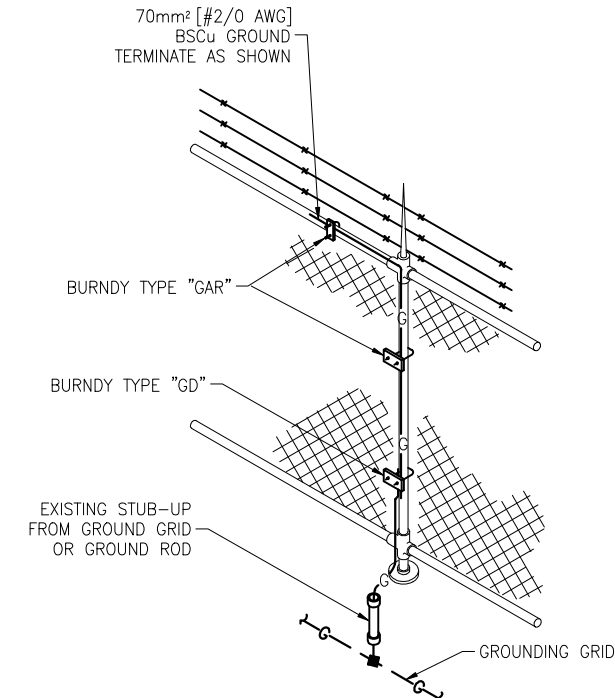
* GROUND WIRE STUB-UP INSTALLATION
610mm [24"] UNDER STREETS, ROADS,
DRIVEWAYS AND PARKING LOTS

SYMBOL USED ON DRAWINGS



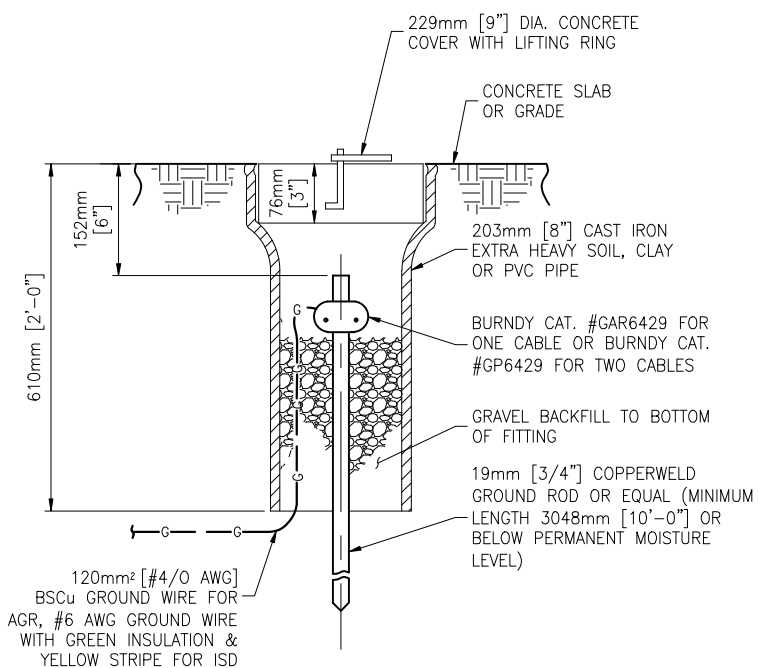
DETAIL NO. E312

GROUNDING OF HINGED GATE OR
REMOVABLE FENCE SECTION



DETAIL NO. E313

TYPICAL FENCE GROUNDING



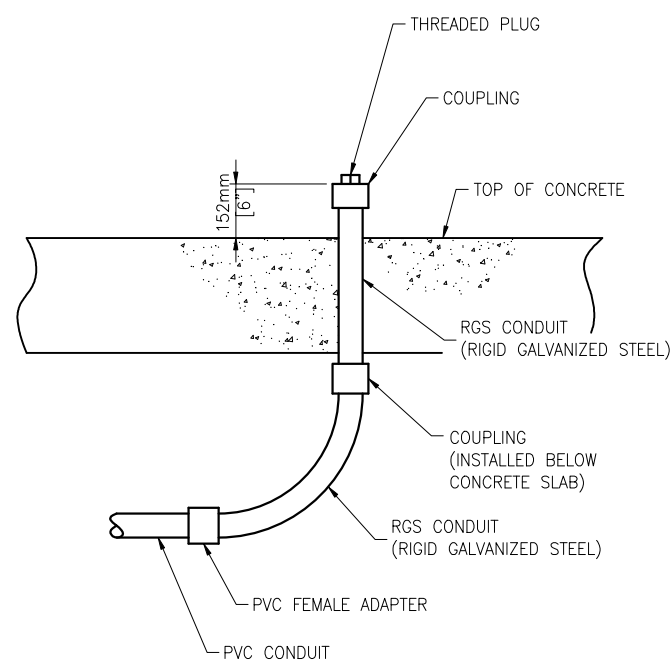
DETAIL NO. E318

ACCESSIBLE GROUND ROD AND
INSTRUMENT SHIELD DRAIN INSTALLATION

SYMBOL USED ON DRAWINGS

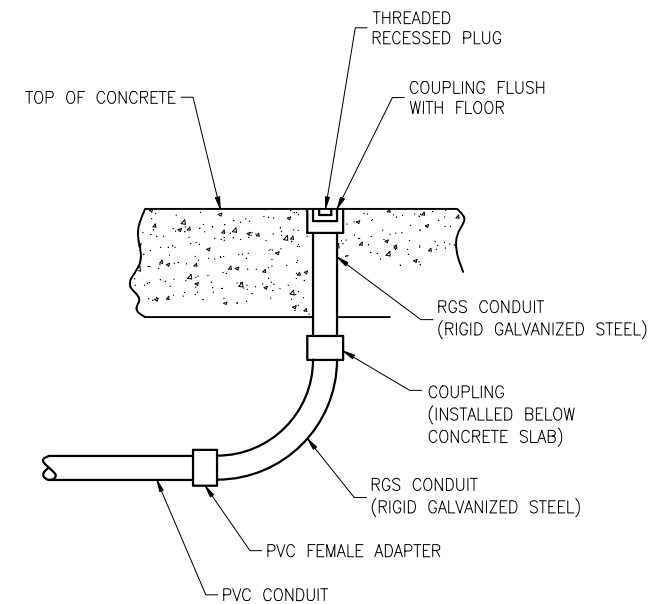


AGR OR ISD



DETAIL NO. E400

CONDUIT TERMINATION



DETAIL NO. E401

CONDUIT TERMINATION UNDER ELECTRICAL EQUIPMENT
AND CONTROL PANELS

FOR LIST OF DRAWINGS
SEE DRAWING #001

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	JPY	JJR	JJR
IFB	1	3/11/24	ISSUED FOR BIDS	JPY	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Client Drawing No.	Client Project No. :
	Client Job Code :



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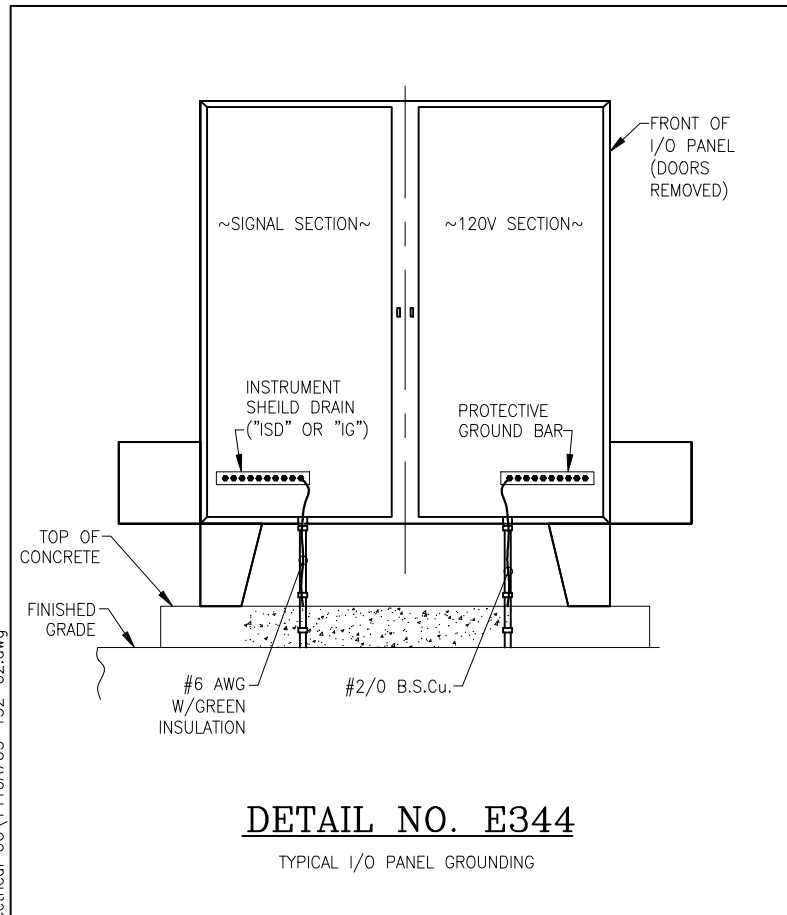
Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300

Title: ELECTRICAL UNDERGROUND
STANDARD INSTALLATION DETAILS
FEDERAL MOGUL - WAUPUN, WI

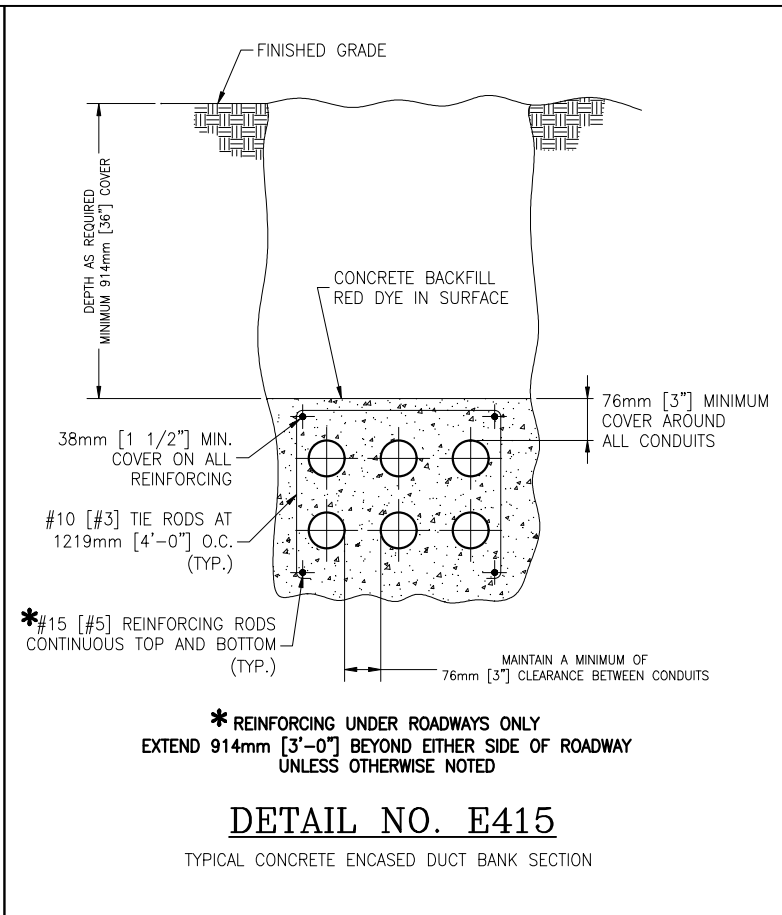
Scale NONE

Linde Drawing No. : &CT (1410A7U5) E-ZC 152 Sheet 1 OF 2 Size D

Drawing name: G:\Projects\K-04-1410A7U5 Wapun - WI\NITRON 1300\050 Engineering\057 - Plant Design\Electrical\Design\Electrical UG\1410A7U5-152-02.dwg




DETAIL NO. E344
TYPICAL I/O PANEL GROUNDING



DETAIL NO. E415
TYPICAL CONCRETE ENCASED DUCT BANK SECTION

FOR LIST OF DRAWINGS
SEE DRAWING #001

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	JPY	JJR	JJR
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
Client Drawing No.				Client Project No.		
				Client Job Code		
			LINDE ENGINEERING AMERICAS TONAWANDA, NEW YORK			
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Linde Project No. : 1410A7U5			Linde Job Code. : NITRON 1300			
Title: ELECTRICAL UNDERGROUND STANDARD INSTALLATION DETAILS FEDERAL MOGUL - WAUPUN, WI				Scale NONE		
Linde Drawing No.	-&CT (1410A7U5) E-ZC 152		Sheet	2 OF 2		Size D

Drawing name: G:\Projects\K-04-1410A7U5 Wapun - WI NITRON 1300\050 Engineering\057 - Plant Design\Electrical\Design\1410A7U5-153-01.dwg

CONDUIT NO.	CONDUIT SIZE	COND. TYPE		REFER TO DETAIL NO. SHOWN		FROM	DWG NO.	TO	DWG NO.	REMARKS
		PVC	ST'L	FROM	TO					
-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	E401	(CUSTOMER)	-	"ICP" PANEL AREA	-	CUSTOMER INCOMING 480V POWER SUPPLY
-	-	-	-	-	-	-	-	-	-	-
101	(2) 3"	X	-	E400	E400	"ICP" PANEL AREA	-	AIR COMPRESSOR (MAC) AREA	-	MAC INCOMING 480V POWER
103	1 1/2"	X	-	E401	E400	"ICP" PANEL AREA	-	AIR COMPRESSOR (MAC) AREA	-	480V PWR TO MAC CONTROL PNL/MAC CONTROLS (600V RATED CABLES)
-	-	-	-	-	-	-	-	-	-	-
105	1 1/2"	X	-	E401	E400	"ICP" PANEL AREA	-	PROCESS SKID ("LP" PANEL) AREA	-	480V POWER TO "LP" PANEL VIA DISC. SWITCH
107	1 1/2"	X	-	E401	E400	"ICP" PANEL AREA	-	TRIM HEATER AREA	-	480V POWER TO TRIM HEATER
150	1 1/2"	X	-	E401	E401	PROCESS SKID ("BA" PANEL) AREA	-	"ICP" PANEL AREA	-	"ICP" CONTROLS (600V RATED CABLES)
151	1 1/2"	X	-	E401	E401	PROCESS SKID ("BA" PANEL) AREA	-	"ICP" PANEL AREA	-	"ICP" SIGNALS (300V RATED CABLES)
152	1 1/2"	X	-	E401	E401	PROCESS SKID ("BA" PANEL) AREA	-	"ICP" PANEL AREA	-	SPARE
-	-	-	-	-	-	-	-	-	-	-
155	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	AIR COMPRESSOR (MAC) AREA	-	MAC CONTROLS/AUXILIARIES (600V RATED CABLES)
156	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	AIR COMPRESSOR (MAC) AREA	-	MAC SIGNALS (300V RATED CABLES)
157	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	AIR COMPRESSOR (MAC) AREA	-	SPARE (600V RATED CABLES)
158	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	AIR COMPRESSOR (MAC) AREA	-	SPARE (300V RATED CABLES)
-	-	-	-	-	-	-	-	-	-	-
160	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	CONTROL ROOM/STORAGE SHED AREA	-	P.E.T. STATION #2 (600V RATED CABLES)
161	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	CONTROL ROOM/STORAGE SHED AREA	-	SPARE
162	1 1/2"	X	-	E400	E400	PROCESS SKID ("LP" PANEL) AREA	-	CONTROL ROOM/STORAGE SHED AREA	-	AIR CONDITIONER AND/OR UTILITIES (600V RATED CABLES)
-	-	-	-	-	-	-	-	-	-	-
165	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	REGULATOR MODULES AREA	-	REGULATOR MODULE CONTROLS (600V RATED CABLES)
166	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	REGULATOR MODULES AREA	-	FLOW METER (300V RATED CABLES)
-	-	-	-	-	-	-	-	-	-	-
170	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	BACKUP SYSTEM AREA (LN2 TANKS)	-	TRACKER PANEL POWER/CONTROLS (600V RATED CABLES)
171	1 1/2"	X	-	E401	E400	PROCESS SKID ("BA" PANEL) AREA	-	BACKUP SYSTEM AREA (LN2 TANKS)	-	TRACKER/LN2 TANK SIGNALS (300V RATED CABLES)
172	1 1/2"	X	-	E400	E400	BACKUP SYSTEM AREA (LN2 TANKS)	-	BACKUP SYSTEM AREA (LN2 TANKS)	-	TRACKER/LN2 TANK SIGNALS (300V RATED CABLES)
-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	E401	(CUSTOMER)	-	PROCESS SKID ("BA" PANEL) AREA	-	PLANT STATUS TO CUSTOMER
201	-	-	-	-	E401	(CUSTOMER)	-	PROCESS SKID ("BA" PANEL) AREA	-	PLANT STATUS TO CUSTOMER
202	-	-	-	-	E401	(CUSTOMER)	-	PROCESS SKID ("BA" PANEL) AREA	-	CUSTOMER SUPPLIED INTERNET
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
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FOR LIST OF DRAWINGS
SEE DRAWING #001

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	JPY	JJR	JJR
IFB	1	3/11/24	ISSUED FOR BIDS	JPY	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Client Drawing No. _____ Client Project No. : _____
 Client Job Code : _____

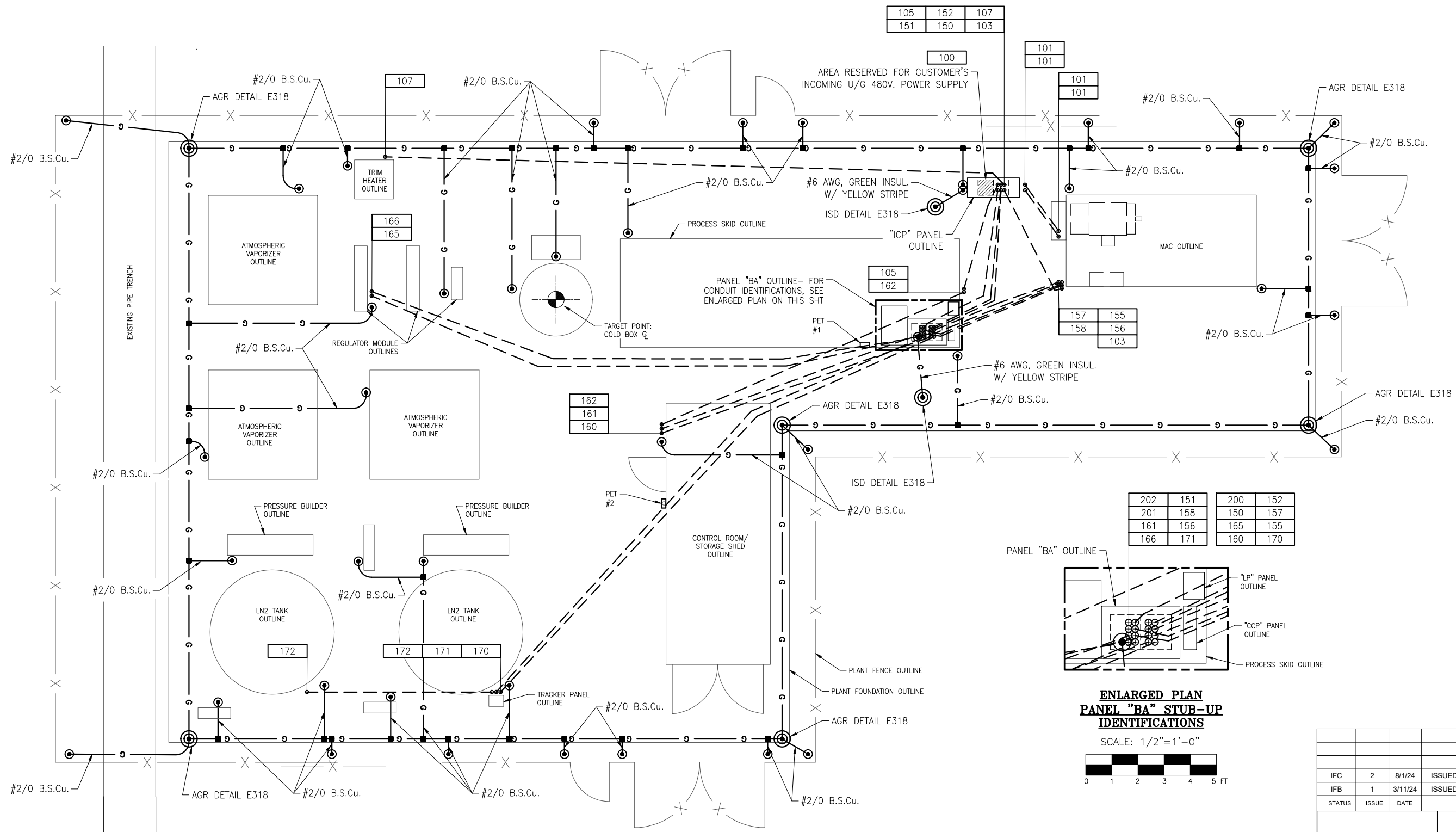
Linde
LINDE ENGINEERING AMERICAS
TONAWANDA, NEW YORK

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Linde Project No. : 1410A7U5 Linde Job Code. : NITRON 1300

Title: **ELECTRICAL UNDERGROUND
 CONDUIT SCHEDULE
 FEDERAL MOGUL - WAUPUN, WI** Scale NONE

Linde Drawing No. &CT (1410A7U5) E-ZC 153 Sheet 1 OF 1 Size D



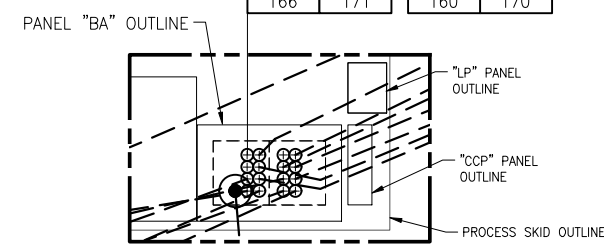
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151	150	103

101
101

157	155
158	156
	103

162
161
160

202	151	200	152
201	158	150	157
161	156	165	155
166	171	160	170



**ENLARGED PLAN
PANEL "BA" STUB-UP
IDENTIFICATIONS**

SCALE: 1/2"=1'-0"



FOR LIST OF DRAWINGS
SEE DRAWING #001

OVERALL PLAN

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



NOTES:

1. ALL GROUND WIRES TO BE #4/0 B.S.Cu. UNLESS OTHERWISE SPECIFIED.
2. FOR ELECTRICAL UNDERGROUND SPECIFICATIONS AND LEGEND, SEE DWG. #151.
3. FOR ELECTRICAL UNDERGROUND STANDARD INSTALLATION DETAILS, SEE DWG. #152.
4. FOR ELECTRICAL UNDERGROUND CONDUIT SCHEDULE, SEE DWG. #153.
5. FOR ELECTRICAL UNDERGROUND CONDUIT AND GROUNDING STUB-UP LOCATION PLAN, SEE DWG. #155.

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	JPY	JJR	JJR
IFB	1	3/11/24	ISSUED FOR BIDS	JPY	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Client Drawing No.	Client Project No. :
	Client Job Code :

**LINDE ENGINEERING AMERICAS
TONAWANDA, NEW YORK**

Linde Project No. : 1410A7U5	Linde Job Code. : NITRON 1300
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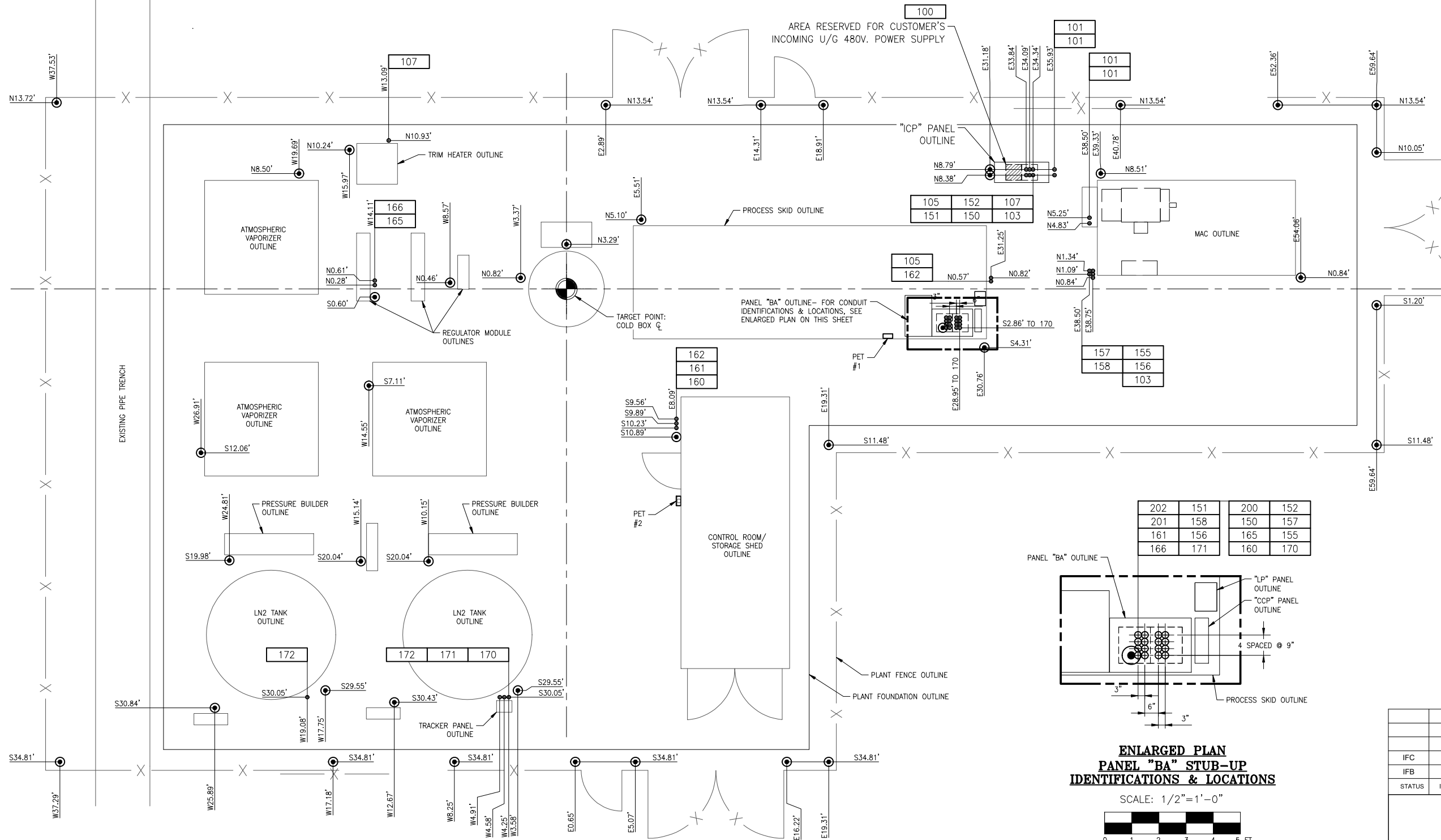
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Linde Drawing No. : &CT (1410A7U5) E-ZC 154	Sheet 1 OF 1	Size D
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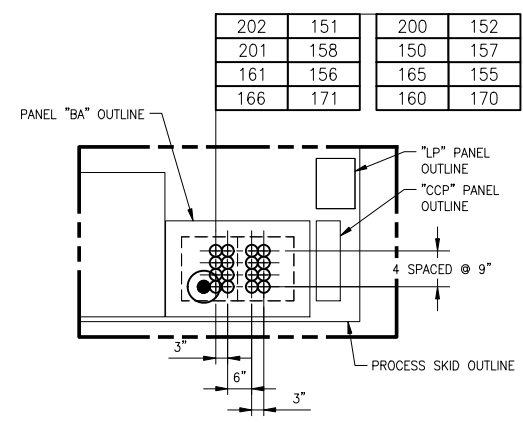
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OVERALL PLAN
SCALE: 1/4"=1'-0"



ENLARGED PLAN
PANEL "BA" STUB-UP
IDENTIFICATIONS & LOCATIONS
SCALE: 1/2"=1'-0"

- NOTES:
- CONDUITS ARE TO BE LOCATED WITHIN 1" OF DIMENSION SHOWN.
 - FOR ELECTRICAL UNDERGROUND SPECIFICATIONS AND LEGEND, SEE DWG. #151.
 - FOR ELECTRICAL UNDERGROUND STANDARD INSTALLATION DETAILS, SEE DWG. #152.
 - FOR ELECTRICAL UNDERGROUND CONDUIT SCHEDULE, SEE DWG. #153.
 - FOR ELECTRICAL UNDERGROUND CONDUIT AND GROUNDING ROUTING PLAN, SEE DWG. #154.

FOR LIST OF DRAWINGS
SEE DRAWING #001

IFC	2	8/1/24	ISSUED FOR CONSTRUCTION	JPY	JJR	JJR
IFB	1	3/11/24	ISSUED FOR BIDS	JPY	-	-
STATUS	ISSUE	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED


Client Drawing No.	Client Project No. : Client Job Code :
 LINDE ENGINEERING AMERICAS TONAWANDA, NEW YORK	
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Linde Project No. : 1410A7U5	Linde Job Code. : NITRON 1300
Title: ELECTRICAL UNDERGROUND CONDUIT & GROUNDING STUB-UP LOCATION PLAN FEDERAL MOGUL - WAUPUN, WI	
Linde Drawing No. : &CT (1410A7U5) E-ZC 155	Sheet 1 OF 1
Scale 1/4"=1'	Size D

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1.0 STATUTORY AUTHORIZATION, FINDING OF FACT, STATEMENT OF PURPOSE, TITLE, AND GENERAL PROVISIONS

1.1 STATUTORY AUTHORIZATION

This ordinance is adopted pursuant to the authorization in s. 61.35 and 62.23, for villages and cities; and the requirements in s. 87.30, Stats.

1.2 FINDING OF FACT

Uncontrolled development and use of the floodplains and rivers of this municipality would impair the public health, safety, convenience, general welfare, and tax base.

1.3 STATEMENT OF PURPOSE

This ordinance is intended to regulate floodplain development to:

- (1) Protect life, health and property;
- (2) Minimize expenditures of public funds for flood control projects;
- (3) Minimize rescue and relief efforts undertaken at the expense of the taxpayers;
- (4) Minimize business interruptions and other economic disruptions;
- (5) Minimize damage to public facilities in the floodplain;
- (6) Minimize the occurrence of future flood blight areas in the floodplain;
- (7) Discourage the victimization of unwary land and homebuyers;
- (8) Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners; and
- (9) Discourage development in a floodplain if there is any practicable alternative to locate the activity, use or structure outside of the floodplain.

1.4 TITLE

This ordinance shall be known as the Floodplain Zoning Ordinance for City of Waupun, Fond du Lac County and Dodge County, Wisconsin.

1.5 GENERAL PROVISIONS

(1) **AREAS TO BE REGULATED**

This ordinance regulates all areas of special flood hazard identified as zones A, AO, AH, A1-30, AE on the Flood Insurance Rate Map. Additional areas identified on maps approved by the Department of Natural Resources (DNR) and local community may also be regulated under the provisions of this ordinance, where applicable.

(2) **OFFICIAL MAPS & REVISIONS**

Special Flood Hazard Areas (SFHA) are designated as zones A, A1-30, AE, AH, AO on the Flood Insurance Rate Maps (FIRMs) based on flood hazard analyses summarized in the Flood Insurance Study (FIS) listed in subd. (a) below. Additional flood hazard areas subject to regulation under this ordinance are identified on maps based on studies approved by the DNR and listed in subd. (b) below. These maps and revisions are on file in the office of the City Clerk, City of Waupun

(a) **OFFICIAL MAPS**: Based on the Flood Insurance Study (FIS):

1. Fond du Lac County Flood Insurance Rate Map (FIRM), panel number 55039C0394F, 55039C0413F, 55039C0414F, dated 11/04/2009
2. Flood Insurance Study (FIS) for Fond du Lac County volumes 55039CV001B, 55039CV002B dated 12/20/2024

3. Dodge County Flood Insurance Rate Map (FIRM), panel numbers 55027C0069G and 55027C0207G, dated 05/19/2014.
4. Dodge County Flood Insurance Rate Map (FIRM), panel numbers 55027C0100F, 55027C0227F, and 55027C0230F. dated 04/19/2010.
5. Flood Insurance Study (FIS) for Dodge County volume 55027CV000C dated 05/19/2014
6. Letter of Map Revision: LOMR 13-05-8521P effective 04/02/2014

Approved by: The DNR and FEMA

(3) ESTABLISHMENT OF FLOODPLAIN ZONING DISTRICTS

The flood hazard areas regulated by this ordinance are divided into districts as follows:

- a) The Floodway District (FW), is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional floodwaters, within AE Zones as shown on the FIRM, or within A Zones shown on the FIRM when determined according to s. 5.1(5).
- b) The Floodfringe District (FF) is that portion of a riverine special flood hazard area outside the floodway within AE Zones on the FIRM, or, when floodway limits have been determined according to s. 5.1(5), within A Zones shown on the FIRM.
- c) The General Floodplain District (GFP) is those riverine areas that may be covered by floodwater during the regional flood in which a floodway boundary has not been delineated on the FIRM and also includes shallow flooding areas identified as AH and AO zones on the FIRM.

(4) LOCATING FLOODPLAIN BOUNDARIES

Discrepancies between the exterior boundaries of zones A1-30, AE, AH, or A on the official floodplain zoning map and actual field conditions may be resolved using the criteria in subd (a) or (b) below. If a significant difference exists, the map shall be amended according to s. 8.0 *Amendments*. The zoning administrator can rely on a boundary derived from a profile elevation to grant or deny a land use permit, whether or not a map amendment is required. The zoning administrator shall be responsible for documenting actual pre-development field conditions and the basis upon which the district boundary was determined. Disputes between the zoning administrator and an applicant over the district boundary line shall be settled according to s. 7.3(3) and the criteria in (a) and (b) below. Where the flood profiles are based on established base flood elevations from a FIRM, FEMA must approve any map amendment or revision pursuant to s. 8.0 *Amendments*.

- a) If flood profiles exist, the map scale and the profile elevations shall determine the district boundary. The regional or base flood elevations shall govern if there are any discrepancies.
- b) Where flood profiles do not exist for projects, including any boundary of zone A, AO, the location of the boundary shall be determined by the map scale.

(5) REMOVAL OF LANDS FROM FLOODPLAIN

- a) Compliance with the provisions of this ordinance shall not be grounds for removing land from the floodplain unless it is filled at least two feet above the regional or base flood elevation, the

fill is contiguous to land outside the floodplain, and the map is amended pursuant to s. 8.0 *Amendments*.

- b) The delineation of any of the Floodplain Districts may be revised by the community where natural or man-made changes have occurred and/or where more detailed studies have been conducted. However, prior to any such change, approval must be obtained from the Wisconsin Department of Natural Resources and Federal Emergency Management Agency. A completed Letter of Map Revision is a record of this approval. The floodplain administrator shall not sign a community acknowledgement form unless all criteria set forth in the following paragraphs are met:
 - 1. The land and/or land around the structure must be filled at least two feet above the regional or base flood elevation;
 - 2. The fill must be contiguous to land outside the floodplain; Applicant shall obtain floodplain development permit before applying for a LOMR or LOMR-F;
- c) Removal of lands from the floodplain may also occur by operation of §87.30(1)(e), Wis. Stat. if a property owner has obtained a letter of map amendment from the federal emergency management agency under 44 C.F.R. 70.

(6) COMPLIANCE

- a) No structure or use within areas regulated by this ordinance shall hereafter be located, erected, constructed, reconstructed, repaired, extended, converted, enlarged, or altered without full compliance with the terms of these regulations and all other applicable regulations that apply to uses within the jurisdiction of these regulations.
- b) Failure to obtain a floodplain development permit shall be a violation of these regulations and shall be punishable in accordance with s. 9.0.
- c) Floodplain development permits issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the use, and arrangement, set forth in such approved plans and applications, or amendments thereto if approved by the Floodplain Administrator. Use, arrangement, or construction contrary to that authorized shall be deemed a violation of these regulations and punishable in accordance with s. 9.0.

(7) MUNICIPALITIES AND STATE AGENCIES REGULATED

Unless specifically exempted by law, all cities, villages, towns, and counties are required to comply with this ordinance and obtain all necessary permits. State agencies are required to comply if s. 13.48(13), Stats., applies. The construction, reconstruction, maintenance and repair of state highways and bridges by the Wisconsin Department of Transportation is exempt when s. 30.2022, Stats., applies. Although exempt from a local zoning permit and permit fees, DOT must provide sufficient project documentation and analysis to ensure that the community is in compliance with Federal, State, and local floodplain standards. If a local transportation project is located within a Zone A floodplain and is not a WisDOT project under s. 30.2022, then the road project design documents (including appropriate detailed plans and profiles) may be sufficient to meet the requirements for issuance of a local floodplain permit if the following apply: The applicant provides documentation to the Floodplain Administrator that the proposed project is a culvert replacement or bridge replacement under 20' span at the same location, the project is exempt from a DNR permit under s. 30.123(6)(d), the capacity is not decreased, the top road grade is not raised, and no floodway data is available from a federal, state, or other source. If floodway data is available in the impacted area from a federal, state, or other source that existing data must be utilized by the applicant in the analysis of the project site.

(8) ABROGATION AND GREATER RESTRICTIONS

- a) This ordinance supersedes all the provisions of any municipal zoning ordinance enacted under s. 62.23 for cities; or s. 87.30, Stats., which relate to floodplains. A more restrictive ordinance shall continue in full force and effect to the extent of the greater restrictions, but not otherwise.
- b) This ordinance is not intended to repeal, abrogate, or impair any existing deed restrictions, covenants, or easements. If this ordinance imposes greater restrictions, the provisions of this ordinance shall prevail.

(9) INTERPRETATION

In their interpretation and application, the provisions of this ordinance are the minimum requirements liberally construed in favor of the governing body and are not a limitation on or repeal of any other powers granted by the Wisconsin Statutes. If a provision of this ordinance, required by ch. NR 116, Wis. Adm. Code, is unclear, the provision shall be interpreted in light of the standards in effect on the date of the adoption of this ordinance or in effect on the date of the most recent text amendment to this ordinance.

(10) WARNING AND DISCLAIMER OF LIABILITY

The flood protection standards in this ordinance are based on engineering experience and research. Larger floods may occur, or the flood height may be increased by man-made or natural causes. This ordinance does not imply or guarantee that non-floodplain areas or permitted floodplain uses will be free from flooding and flood damages. This ordinance does not create liability on the part of, or a cause of action against, the municipality or any officer or employee thereof for any flood damage that may result from reliance on this ordinance.

(11) SEVERABILITY

Should any portion of this ordinance be declared unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected.

(12) ANNEXED AREAS FOR CITIES AND VILLAGES

The Fond du Lac and Dodge County floodplain zoning provisions in effect on the date of annexation shall remain in effect and shall be enforced by the municipality for all annexed areas until the municipality adopts and enforces an ordinance which meets the requirements of ch. NR 116, Wis. Adm. Code and 44 CFR 59-72, *National Flood Insurance Program* (NFIP). These annexed lands are described on the municipality's official zoning map. County floodplain zoning provisions are incorporated by reference for the purpose of administering this section and are on file in the office of the municipal zoning administrator. All plats or maps of annexation shall show the regional flood elevation and the floodway location.

2.0 GENERAL STANDARDS APPLICABLE TO ALL FLOODPLAIN DISTRICTS

The community shall review all permit applications to determine whether proposed building sites will be reasonably safe from flooding and assure that all necessary permits have been received from those governmental agencies whose approval is required by federal or state law.

- 1) If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall:
 - a. be designed and anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - b. be constructed with flood-resistant materials;
 - c. be constructed by methods and practices that minimize flood damages; and

- d. Mechanical and utility equipment must be elevated to or above the flood protection elevation.
- 2) If a subdivision or other proposed new development is in a flood-prone area, the community shall assure that:
- a. such proposed subdivision or other proposed new development is consistent with the need to minimize flood damage within the flood-prone area;
 - b. public utilities and facilities such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and
 - c. adequate drainage is provided to reduce exposure to flood hazards.

All subdivision proposals (including manufactured home parks) shall include regional flood elevation and floodway data for any development that meets the subdivision definition of this ordinance and all other requirements in s. 7.1(2).

2.1 HYDRAULIC AND HYDROLOGIC ANALYSES

- 1) No floodplain development shall:
- a. Obstruct flow, defined as development which blocks the conveyance of floodwaters by itself or with other development, causing any increase in the regional flood height; or
 - b. Cause any increase in the regional flood height due to floodplain storage area lost.
- 2) The zoning administrator shall deny permits if it is determined the proposed development will obstruct flow or cause any increase in the regional flood height, based on the officially adopted FIRM or other adopted map, unless the provisions of s. 8.0 *Amendments* are met.

2.2 WATERCOURSE ALTERATIONS

No land use permit to alter or relocate a watercourse in a mapped floodplain shall be issued until the local official has notified in writing all adjacent municipalities, the Department and FEMA regional offices, and required the applicant to secure all necessary state and federal permits. The standards of s. 2.1 must be met and the flood carrying capacity of any altered or relocated watercourse shall be maintained.

As soon as is practicable, but not later than six months after the date of the watercourse alteration or relocation and pursuant to s. 8.0 *Amendments*, the community shall apply for a Letter of Map Revision (LOMR) from FEMA. Any such alterations must be reviewed and approved by FEMA and the DNR through the LOMC process.

2.3 CHAPTER 30, 31, WIS. STATS., DEVELOPMENT

Development which requires a permit from the Department, under chs. 30 and 31, Stats., such as docks, piers, wharves, bridges, culverts, dams, and navigational aids, may be allowed if the necessary permits are obtained and amendments to the floodplain zoning ordinance are made according to s. 8.0 *Amendments*.

2.4 PUBLIC OR PRIVATE CAMPGROUNDS

Public or private campgrounds shall have a low flood damage potential and shall meet the following provisions:

- 1) The campground is approved by the Department of Agriculture, Trade and Consumer Protection;
- 2) A land use permit for the campground is issued by the zoning administrator;
- 3) The character of the river system and the campground elevation are such that a 72-hour warning of an impending flood can be given to all campground occupants;
- 4) There is an adequate flood warning procedure for the campground that offers the minimum notice required under this section to all persons in the campground. This procedure shall include a written agreement between the campground owner, the floodplain zoning agency or zoning administrator, the municipal emergency government coordinator and the chief law enforcement official which specifies the flood elevation at which evacuation shall occur, personnel responsible for monitoring flood elevations, types of warning systems to be used and the procedures for notifying at-risk parties, and the methods and personnel responsible for conducting the evacuation;
- 5) This agreement shall be for no more than one calendar year, at which time the agreement shall be reviewed and updated - by the officials identified in sub. (4) - to remain in compliance with all applicable regulations, including those of the state Department of Agriculture, Trade and Consumer Protection and all other applicable regulations;
- 6) All mobile recreational vehicles placed on site must meet one of the following:
 - a. Be fully licensed, if required, and ready for highway use; or
 - b. Not occupy any site in the campground for more than 180 consecutive days, at which time the recreational vehicle must be removed from the floodplain for a minimum of 24 hours; or
 - c. Meet the requirements in either s. 3.0, 4.0, or 5.1 for the floodplain district in which the structure is located;

A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.
- 7) All camping units that remain on site for more than 30 days shall be issued a limited authorization by the campground operator, a written copy of which is kept on file at the campground. Such authorization shall allow placement of a camping unit consistent with 2.4(6) and shall ensure compliance with all the provisions of this section;
- 8) The municipality shall monitor the limited authorizations issued by the campground operator to assure compliance with the terms of this section;
- 9) The campground shall have signs clearly posted at all entrances warning of the flood hazard and the procedures for evacuation when a flood warning is issued; and
- 10) All service facilities, including but not limited to refuse collection, electrical service, gas lines, propane tanks, sewage systems and wells shall be properly anchored and placed at or floodproofed to the flood protection elevation; and
- 11) Standards for structures in a campground:
 - a. All structures must comply with section 2.4 or meet the applicable requirements in ss. 3.0, 4.0, or 5.1 for the floodplain district in which the structure is located;

- b. Deck/landing-a portable landing may be allowed for a camping unit for each entry provided that the landing is not permanently attached to the ground or camping unit, is no more than 200 square feet in size, shall be portable, contain no walls or roof, and can be removed from the campground by a truck and/or trailer. Sections of such portable landings may be placed together to form a single deck not greater than 200 square feet at one entry point. Provisions for the removal of these temporary landings during flood events must be addressed within the written agreement with the municipality compliant with section 2.4(4). Any such deck/landing structure may be constructed at elevations lower than the flood protection elevation but must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.
 - c. Decks/patios that are constructed completely at grade may be allowed but must also comply with applicable shoreland zoning standards.
 - d. Camping equipment and appurtenant equipment in the campground may be allowed provided that the equipment is not permanently attached to the ground or camping unit, is not used as a habitable structure, and must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood. Provisions for the removal of this equipment during flooding events shall be addressed within the written agreement with the municipality compliant with section 2.4(4).
 - e. Once a flood warning in the written agreement has been issued for the campground, the campground owner or the designated operator shall ensure that all persons, camping units, decks, camping equipment and appurtenant equipment in the campground shall be evacuated within the timelines specified within the written agreement with the municipality compliant with section 2.4(4).
- 12) A land use permit shall be obtained as provided under 7.1(2) before any development; repair, modification, or addition to an existing structure; or change in the use of a building or structure, including sewer and water facilities, may be initiated.

3.0 FLOODWAY DISTRICT (FW)

3.1 APPLICABILITY

This section applies to all floodway areas on the floodplain zoning maps and those identified pursuant to s. 5.1(5).

3.2 PERMITTED USES

The following open space uses are allowed in the Floodway District and the floodway areas of the General Floodplain District, if:

- they are not prohibited by any other ordinance;
 - they meet the standards in s. 3.3 and 3.4; and
 - all permits or certificates have been issued according to s. 7.1.
- 1) Agricultural uses, such as: farming, outdoor plant nurseries, horticulture, viticulture, and wild crop harvesting.
 - 2) Nonstructural industrial and commercial uses, such as loading areas, parking areas and airport landing strips.

- 3) Nonstructural recreational uses, such as golf courses, tennis courts, archery ranges, picnic grounds, boat ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting, trap, and skeet activities, hunting and fishing areas and hiking and horseback riding trails, subject to the fill limitations of s. 3.3(4).
- 4) Uses or structures accessory to open space uses or classified as historic structures that comply with s. 3.3 and 3.4.
- 5) Extraction of sand, gravel or other materials that comply with s. 3.3(4).
- 6) Functionally water-dependent uses, such as docks, piers or wharves, dams, flowage areas, culverts, navigational aids and river crossings of transmission lines, and pipelines that comply with chs. 30 and 31, Stats.
- 7) Public utilities, streets and bridges that comply with s. 3.3(3).
- 8) Portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and Ch. SPS 383, Wis. Adm. Code.
- 9) Public or private wells used to obtain potable water for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code.
- 10) Wastewater treatment ponds or facilities permitted under s. NR 110.15(3)(b), Wis. Adm. Code.
- 11) Sanitary sewer or water supply lines to service existing or proposed development located outside the floodway that complies with the regulations for the floodplain area occupied.

3.3 STANDARDS FOR DEVELOPMENT IN THE FLOODWAY

1) GENERAL

- a. Any development in the floodway shall comply with s. 2.0 and have a low flood damage potential.
- b. Applicants shall provide an analysis calculating the effects of this proposal on the regional flood height to determine the effects of the proposal according to s. 2.1 and 7.1(2)(c). The analysis must be completed by a registered professional engineer in the state of Wisconsin.
- c. Any encroachment in the regulatory floodway is prohibited unless the data submitted for subd. 3.3(1)(b) above demonstrates that the encroachment will cause no increase in flood elevations in flood events up to the base flood at any location or removes the encroached area from the regulatory floodway as provided in s. 1.5(5).

2) STRUCTURES

Structures accessory to permanent open space uses, including utility and sanitary facilities, or functionally dependent on a waterfront location may be allowed by permit if the structures comply with the following criteria:

- a. Not designed for human habitation, does not have a high flood damage potential and is constructed to minimize flood damage;
- b. Shall either have the lowest floor elevated to or above the flood protection elevation or shall meet all the following standards:

1. Have the lowest floor elevated to or above the regional flood elevation and be dry floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water and completely dry to the flood protection elevation without human intervention during flooding;
 2. Have structural components capable of meeting all provisions of Section 3.3(2)(g) and;
 3. Be certified by a registered professional engineer or architect, through the use of a Federal Emergency Management Agency Floodproofing Certificate, that the design and methods of construction are in accordance with Section 3.3(2)(g).
- c. Must be anchored to resist flotation, collapse, and lateral movement;
- d. Mechanical and utility equipment must be elevated to or above the flood protection elevation; and
- e. Must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.
- f. For a structure designed to allow the automatic entry of floodwaters below the Regional Flood Elevation, the applicant shall submit a plan that meets s. 3.3(2)(a) through 3.3(2)(e) and meets or exceeds the following standards:
1. The lowest floor must be elevated to or above the regional flood elevation;
 2. a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 3. the bottom of all openings shall be no higher than one foot above the lowest adjacent grade; openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters, otherwise must remain open.
 4. The use must be limited to parking, building access or limited storage.
- g. Certification: Whenever floodproofing measures are required, a registered professional engineer or architect shall certify that the following floodproofing measures will be utilized, where appropriate, and are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the regional flood:
1. Reinforcement of floors and walls to resist rupture, collapse, or lateral movement caused by water pressures or debris buildup;
 2. Construction of wells, water supply systems and waste treatment systems so as to prevent the entrance of flood waters in such systems and must be in accordance with provisions in Sections 3.4(4) and 3.4(5);
 3. Subsurface drainage systems to relieve external pressures on foundation walls and basement floors;
 4. Cutoff valves on sewer lines or the elimination of gravity flow basement drains; and
 5. Placement of utilities to or above the flood protection elevation.

3) **PUBLIC UTILITIES, STREETS AND BRIDGES**

Public utilities, streets and bridges may be allowed by permit, if:

- a. Adequate floodproofing measures are provided to the flood protection elevation; and
- b. Construction meets the development standards of s. 2.1.

4) **FILLS OR DEPOSITION OF MATERIALS**

Fills or deposition of materials may be allowed by permit, if:

- a. The requirements of s. 2.1 are met;
- b. No material is deposited in navigable waters unless a permit is issued by the Department pursuant to ch. 30, Stats., and a permit pursuant to s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344 has been issued, if applicable, and all other requirements have been met;
- c. The fill or other materials will be protected against erosion by riprap, vegetative cover, sheet piling or bulkheading; and
- d. The fill is not classified as a solid or hazardous material.

3.4 PROHIBITED USES

All uses not listed as permitted uses in s. 3.2 are prohibited, including the following uses:

- 1) Habitable structures, structures with high flood damage potential, or those not associated with permanent open-space uses;
- 2) Storing materials that are buoyant, flammable, explosive, injurious to property, water quality, or human, animal, plant, fish or other aquatic life;
- 3) Uses not in harmony with or detrimental to uses permitted in the adjoining districts;
- 4) Any private or public sewage systems, except portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and ch. SPS 383, Wis. Adm. Code;
- 5) Any public or private wells which are used to obtain potable water, except those for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code;
- 6) Any solid or hazardous waste disposal sites;
- 7) Any wastewater treatment ponds or facilities, except those permitted under s. NR 110.15(3)(b), Wis. Adm. Code; and
- 8) Any sanitary sewer or water supply lines, except those to service existing or proposed development located outside the floodway which complies with the regulations for the floodplain area occupied.

4.0 FLOODFRINGE DISTRICT (FF)

4.1 APPLICABILITY

This section applies to all floodfringe areas shown on the floodplain zoning maps and those identified

pursuant to s. 5.1(5).

4.2 PERMITTED USES

Any structure, land use, or development is allowed in the Floodfringe District if the standards in s. 4.3 are met, the use is not prohibited by this, or any other ordinance or regulation and all permits or certificates specified in s. 7.1 have been issued.

4.3 STANDARDS FOR DEVELOPMENT IN THE FLOODFRINGE

Section 2.0 shall apply in addition to the following requirements according to the use requested. Any existing structure in the floodfringe must meet the requirements of s. 6.0 *Nonconforming Uses*;

(1) RESIDENTIAL USES

Any structure, including a manufactured home, which is to be newly constructed or moved into the floodfringe, shall meet or exceed the following standards;

- a) All new construction, including placement of manufactured homes, and substantial improvement of residential structures, shall have the lowest floor elevated to or above the flood protection elevation on fill. The fill around the structure shall be one foot or more above the regional flood elevation extending at least 15 feet beyond the limits of the structure. No area may be removed from the floodfringe district unless it can be shown to meet s. 1.5(5).
- b) Notwithstanding s. 4.3 (1)(a), a basement or crawlspace floor may be placed one foot above the regional flood elevation if the basement or crawlspace is designed to make all portions of the structure below the flood protection elevation watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. No floor of any kind is allowed below the regional flood elevation;
- c) Contiguous dryland access shall be provided from a structure to land outside of the floodplain, except as provided in subd. (d).
- d) In developments where existing street or sewer line elevations make compliance with subd. (c) impractical, the municipality may permit new development and substantial improvements where roads are below the regional flood elevation, if:
 1. The municipality has written assurance from police, fire and emergency services that rescue, and relief will be provided to the structure(s) by wheeled vehicles during a regional flood event; or
 2. The municipality has a DNR-approved emergency evacuation plan that follows acceptable hazard mitigation planning guidelines.

(2) ACCESSORY STRUCTURES OR USES

In addition to s. 2.0, new construction and substantial improvements of Accessory structures shall be constructed on fill with the lowest floor at or above the regional flood elevation.

(3) COMMERCIAL USES

In addition to s. 2.0, any commercial structure which is erected, altered, or moved into the floodfringe shall meet the requirements of s. 4.3(1). Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

(4) MANUFACTURING AND INDUSTRIAL USES

In addition to s. 2.0, any manufacturing or industrial structure which is erected, altered, or moved into the floodfringe shall have the lowest floor elevated to or above the flood protection elevation or meet the floodproofing standards in s 7.5. Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

(5) STORAGE OF MATERIALS

Materials that are buoyant, flammable, explosive, or injurious to property, water quality or human, animal, plant, fish, or aquatic life shall be stored at or above the flood protection elevation or floodproofed in compliance with s. 7.5. Adequate measures shall be taken to ensure that such materials will not enter the water body during flooding.

(6) PUBLIC UTILITIES, STREETS AND BRIDGES

All utilities, streets and bridges shall be designed to be compatible with comprehensive floodplain development plans; and

- a) When failure of public utilities, streets and bridges would endanger public health or safety, or where such facilities are deemed essential, construction or repair of such facilities shall only be permitted if they are designed to comply with s. 7.5.
- b) Minor roads or non-essential utilities may be constructed at lower elevations if they are designed to withstand flood forces to the regional flood elevation.

(7) SEWAGE SYSTEMS

All sewage disposal systems shall be designed to minimize or eliminate infiltration of flood water into the system, pursuant to s. 7.5(3), to the flood protection elevation and meet the provisions of all local ordinances and ch. SPS 383, Wis. Adm. Code.

(8) WELLS

All wells shall be designed to minimize or eliminate infiltration of flood waters into the system, pursuant to s. 7.5(3), to the flood protection elevation and shall meet the provisions of chs. NR 811 and NR 812, Wis. Adm. Code.

(9) SOLID WASTE DISPOSAL SITES

Disposal of solid or hazardous waste is prohibited in floodfringe areas.

(10) DEPOSITION OF MATERIALS

Any deposited material must meet all the provisions of this ordinance.

(11) MANUFACTURED HOMES

- a) Owners or operators of all manufactured home parks and subdivisions shall provide adequate surface drainage to minimize flood damage, and prepare, secure approval, and file an evacuation plan, indicating vehicular access and escape routes, with local emergency management authorities.
- b) In existing manufactured home parks, all new homes, replacement homes on existing pads, and substantially improved homes shall:
 1. have the lowest floor elevated to the flood protection elevation; and
 2. be anchored so they do not float, collapse, or move laterally during a flood;
- c) Outside of existing manufactured home parks, including new manufactured home parks and all single units outside of existing parks, all new, replacement and substantially improved manufactured homes shall meet the residential development standards for the floodfringe in s. 4.3(1).

(12) MOBILE RECREATIONAL VEHICLES

All mobile recreational vehicles must be on site for less than 180 consecutive days and be either:

- a) fully licensed and ready for highway use; or
- b) shall meet the elevation and anchoring requirements in s. 4.3 (11)(b) and (c).

A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.

5.0 OTHER FLOODPLAIN DISTRICTS

5.1 GENERAL FLOODPLAIN DISTRICT (GFP)

1) APPLICABILITY

The provisions for the General Floodplain District shall apply to development in all floodplains mapped as A, AO, AH, and in AE zones within which a floodway is not delineated on the Flood Insurance Rate Maps identified in s. 1.5(2)(a).

2) FLOODWAY BOUNDARIES

For proposed development in zone A, or in zone AE within which a floodway is not delineated on the Flood Insurance Rate Map identified in s. 1.5(2)(a), the boundaries of the regulatory floodway shall be determined pursuant to s. 5.1(5). If the development is proposed to encroach upon the regulatory floodway, the development is subject to the standards of s 3.0. If the development is located entirely within the floodfringe, the development is subject to the standards of s. 4.0.

3) PERMITTED USES

Pursuant to s. 5.1(5) it shall be determined whether the proposed use is located within the floodway or floodfringe. Those uses permitted in the Floodway (s. 3.2) and Floodfringe (s. 4.2)

Districts are allowed within the General Floodplain District, according to the standards of s. 5.1(4) provided that all permits or certificates required under s. 7.1 have been issued.

4) **STANDARDS FOR DEVELOPMENT IN THE GENERAL FLOODPLAIN DISTRICT**

Section 3.0 applies to floodway areas, determined to pursuant to 5.1(5); Section 4.0 applies to floodfringe areas, determined to pursuant to 5.1(5).

- a) New construction and substantial improvement of structures in zone AO shall have the lowest floor, including basement, elevated:
 - 1. To or above the depth, in feet, as shown on the FIRM above the highest adjacent natural grade plus one additional foot of freeboard or
 - 2. If the depth is not specified on the FIRM, three (3) feet above the highest adjacent natural grade or higher.
- b) New Construction and substantial improvement of structures in zone AH shall have the lowest floor, including basement, elevated to or above the flood protection elevation.
- c) In AO/AH zones, provide adequate drainage paths to guide floodwaters around structures.
- d) All development in zones AO and zone AH shall meet the requirements of s. 4.0 applicable to flood fringe areas.

5) **DETERMINING FLOODWAY AND FLOODFRINGE LIMITS**

Upon receiving an application for development within zone A, or within zone AE where a floodway has not been delineated on the Flood Insurance Rate Maps, the zoning administrator shall:

- a) Require the applicant to submit two copies of an aerial photograph or a plan which shows the proposed development with respect to the general floodplain district limits, stream channel, and existing floodplain developments, along with a legal description of the property, fill limits and elevations, building floor elevations and flood proofing measures and the flood zone as shown on the FIRM.
- b) Require the applicant to furnish any of the following information deemed necessary by the Department to evaluate the effects of the proposal upon flood height and flood flows, regional flood elevation and to determine floodway boundaries.
 - 1. A Hydrologic and Hydraulic Study as specified in s. 7.1(2)(c).
 - 2. Plan (surface view) showing elevations or contours of the ground; pertinent structure, fill or storage elevations; size, location, and layout of all proposed and existing structures on the site; location and elevations of streets, water supply, and sanitary facilities; soil types and other pertinent information.
 - 3. Specifications for building construction and materials, floodproofing, filling, dredging, channel improvement, storage, water supply and sanitary facilities.

6.0 NONCONFORMING USES

6.1 GENERAL

- 1) Applicability

- a) The standards in this section shall apply to all uses and buildings that do not conform to the provisions contained within a floodplain zoning ordinance or with s. 87.30, Stats. and §§ NR 116.12-14, Wis. Adm. Code and 44 CFR 59-72., these standards shall apply to all modifications or additions to any nonconforming use or structure and to the use of any structure or premises which was lawful before the passage of this ordinance or any amendment thereto. A party asserting existence of a lawfully established nonconforming use or structure has the burden of proving that the use or structure was compliant with the floodplain zoning ordinance in effect at the time the use or structure was created.
 - b) As permit applications are received for additions, modifications, or substantial improvements to nonconforming buildings in the floodplain, municipalities shall develop a list of those nonconforming buildings, their present equalized assessed value, and a list of the costs of those activities associated with changes to those buildings.
- 2) The existing lawful use of a structure or its accessory use which is not in conformity with the provisions of this ordinance may continue subject to the following conditions:

- a) No modifications or additions to a nonconforming use or structure shall be permitted unless they comply with this ordinance. The words "modification" and "addition" include, but are not limited to, any alteration, addition, modification, structural repair, rebuilding or replacement of any such existing use, structure or accessory structure or use. Maintenance is not considered a modification; this includes painting, decorating, paneling and other nonstructural components and the maintenance, repair or replacement of existing private sewage or water supply systems or connections to public utilities. Any costs associated with the repair of a damaged structure are not considered maintenance.

The construction of a deck that does not exceed 200 square feet and that is adjacent to the exterior wall of a principal structure is not an extension, modification, or addition. The roof of the structure may extend over a portion of the deck in order to provide safe ingress and egress to the principal structure.

- b) If a nonconforming use or the use of a nonconforming structure is discontinued for 12 consecutive months, it is no longer permitted and any future use of the property, and any structure or building thereon, shall conform to the applicable requirements of this ordinance;
- c) The municipality shall keep a record which lists all nonconforming uses and nonconforming structures, their present equalized assessed value, the cost of all modifications or additions which have been permitted, and the percentage of the structure's total current value those modifications represent;
- d) No modification or addition to any nonconforming structure or any structure with a nonconforming use, which over the life of the structure would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1). The costs of elevating the lowest floor of a nonconforming building or a building with a nonconforming use to the flood protection elevation are excluded from the 50% provisions of this paragraph;
- e) No maintenance on a per event basis to any nonconforming structure or any structure with a nonconforming use, the cost of which would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1). Maintenance to any nonconforming structure, which does

not exceed 50% of its present equalized assessed value on a per event basis, does not count against the cumulative calculations over the life of the structure for substantial improvement calculations.

- f) If on a per event basis the total value of the work being done under (d) and (e) equals or exceeds 50% of the present equalized assessed value, the work shall not be permitted unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1).
- g) Except as provided in subd. (h), if any nonconforming structure or any structure with a nonconforming use is destroyed or is substantially damaged, it cannot be replaced, reconstructed, or rebuilt unless the use and the structure meet the current ordinance requirements. A structure is considered substantially damaged if the total cost to restore the structure to its pre-damaged condition equals or exceeds 50% of the structure's present equalized assessed value.
- h) For nonconforming buildings that are substantially damaged or destroyed by a nonflood disaster, the repair or reconstruction of any such nonconforming building shall be permitted in order to restore it to the size and use in effect prior to the damage event, provided that the following minimum requirements are met, and all required permits have been granted prior to the start of construction:

1. Residential Structures

- a. Shall have the lowest floor, including basement, elevated to one foot above the base flood elevation using fill, pilings, columns, posts, or perimeter walls. Perimeter walls must meet the requirements of s. 7.5(2).
- b. Shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, and shall be constructed with methods and materials resistant to flood damage.
- c. Shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are Elevated to 1 (one) foot above base flood elevation.
- d. In A Zones, obtain, review, and utilize any flood data available from a federal, state or other source.
- e. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.1(4).
- f. in AO Zones, shall have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.

2. Nonresidential Structures

- a. Shall meet the requirements of s. 6.1(2)(h)1 a-f.
- b. Shall either have the lowest floor, including basement, elevated to or above the regional flood elevation; or, together with attendant utility and sanitary facilities, shall meet the standards in s. 7.5 (1) or (2).
- c. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.1(4).

- 3) A nonconforming historic structure may be altered if the alteration will not preclude the structure's continued designation as a historic structure, the alteration will comply with s. 3.3 (1), flood resistant materials are used, and construction practices and floodproofing methods that comply with s. 7.5 are used. Repair or rehabilitation of historic structures shall be exempt from the development standards of s. 6.1 (2)(h)1 if it is determined that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure.
- 4) Notwithstanding anything in this chapter to the contrary, modifications, additions, maintenance, and repairs to a nonconforming building shall not be prohibited based on cost and the building's nonconforming use shall be permitted to continue if:
 - a) Any living quarters in the nonconforming building are elevated to be at or above the flood protection elevation;
 - b) The lowest floor of the nonconforming building, including the basement, is elevated to one foot above the regional flood elevation;
 - c) The nonconforming building is permanently changed to conform to the applicable requirements of 2.0;
 - d) If the nonconforming building is in the floodway, the building is permanently changed to conform to the applicable requirements of 3.3(1), 3.3(2)(b) through (e), 3.3(3), 3.3(4), and 6.2. Any development that adds additional fill or creates an encroachment in the floodplain from beyond the original nonconforming structure's 3-D building envelope must determine the floodway in accordance with section 5.1(5). If the encroachment is in the floodway, it must meet the standards in section 3.3(4);
 - e) If the nonconforming building is in the floodfringe, the building is permanently changed to conform to the applicable requirements of 4.3 and 6.3;
 - f) Repair or reconstruction of nonconforming structures and substantial improvements of residential buildings in zones A1-30, AE, and AH must have the lowest floor (including basement) elevated to one foot above the base flood elevation;
 - g) Repair or reconstruction of nonconforming structures and substantial improvements of non-residential buildings in zones A1-30, AE, and AH must have the lowest floor (including basement) elevated to or above the base flood elevation, or (together with attendant utility and sanitary facilities) be designed so that below the base flood elevation the building is watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy:
 - i. Where a non-residential structure is intended to be made watertight below the base flood elevation, a registered professional engineer or architect must develop and/or review structural design, specifications, and plans for the construction, and must certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of s. 6.1(4)(g) above.
 - ii. The community must maintain a record of such certification including the specific elevation to which each such structure is floodproofed;

- h) Fully enclosed areas below the lowest floor of repair or reconstruction of nonconforming structures and substantial improvements in zones A1-30, AE, and AH that are usable solely for parking of vehicles, building access, or storage, must be designed to adequately equalize hydrostatic forces on exterior walls by allowing for the entry and exit of floodwaters. Subsequent improvements to repaired or reconstructed nonconforming structures must not increase the degree of their nonconformity. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet the following criteria:
- i. A minimum of two openings into each enclosed area must be located below the base flood elevation and provide a total net area of not less than one square inch for every square foot of enclosed area.
 - ii. The bottom of all openings must be no higher than one foot above the adjacent grade.
 - iii. Openings may be equipped with screens, louvers, valves, or other coverings if they permit the automatic entry and exit of floodwaters;
- i) Manufactured homes that are placed or substantially improved within zones A1-30, AE, and AH outside of a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as a result of flood, must be elevated on a permanent foundation such that the lowest floor of the manufactured home is at one foot above the base flood elevation, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement;
- j) Manufactured homes that are placed or substantially improved within zones A1-30, AE, and AH on existing sites in an existing manufactured home park that is not undergoing expansion and on which a manufactured home has not incurred substantial damage as a result of flood must be elevated so that either the lowest floor of the manufactured home is at one foot above the base flood elevation, or the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement;
- k) Recreational vehicles placed on sites within zones A1-30, AH, and AE must either:
- i. Be on site for fewer than 180 consecutive days; or
 - ii. Be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions); or
 - iii. Meet the elevation and anchoring requirements for manufactured homes in s. 6.1(4)(i) above;
- l) In a regulatory floodway that has been delineated on the FIRM in zone A1-30 or AE, encroachments, including repair or reconstruction of nonconforming structures, substantial improvement, or other development (including fill) must be prohibited unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment will not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity;

- m) In zone A, the community must obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source as criteria for requiring repair or reconstruction of nonconforming structures, substantial improvement, and other development to meet ss. 6.1(4)(f) through (l) (inclusive) above. Any development that adds additional fill or creates an encroachment in the floodplain from beyond the original nonconforming structure's 3-D building envelope must determine the floodway in accordance with section 5.1(5). If the encroachment is in the floodway, it must meet the standards in section 3.3(4). Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity;
- n) In zones A1-30 or AE where a regulatory floodway has not been delineated on the FIRM, repair or reconstruction of nonconforming structures, substantial improvement, or any development that adds additional fill or creates an encroachment in the floodplain from beyond the original nonconforming structure's 3-D building envelope must determine the floodway in accordance with section 5.1(5). If the encroachment is in the floodway, it must meet the standards in section 3.3(4). Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity;
- o) In zone AO, repair or reconstruction of nonconforming structures and substantial improvements of residential structures must have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as one foot more than the depth number specified in feet on the FIRM (at least three feet if no depth number is specified). Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity; or
- p) In zone AO, repair or reconstruction of nonconforming structures and substantial improvements of nonresidential structures must have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM (at least two feet if no depth number is specified), or (together with attendant utility and sanitary facilities) be structurally dry-floodproofed to that level according to the standard specified in s. 6.1(4)(g) above. Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity.

6.2 FLOODWAY DISTRICT

- 1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in the Floodway District, unless such modification or addition:
 - a) Has been granted a permit or variance which meets all ordinance requirements;
 - b) Meets the requirements of s. 6.1;
 - c) Shall not increase the obstruction to flood flows or regional flood height;
 - d) Any addition to the existing structure shall be floodproofed, pursuant to s. 7.5, by means other than the use of fill, to the flood protection elevation; and,
 - e) If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:
 - 1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of two

openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;

2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;
3. Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and
4. The use must be limited to parking, building access or limited storage.

- 2) No new on-site sewage disposal system, or addition to an existing on-site sewage disposal system, except where an addition has been ordered by a government agency to correct a hazard to public health, shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing on-site sewage disposal system in a floodway area shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and Ch. SPS 383, Wis. Adm. Code.
- 3) No new well or modification to an existing well used to obtain potable water shall be allowed in the Floodway District. Any replacement, repair, or maintenance of an existing well in the Floodway District shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and chs. NR 811 and NR 812, Wis. Adm. Code.

6.3 FLOODFRINGE DISTRICT

- 1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use unless such modification or addition has been granted a permit or variance by the municipality and meets the requirements of s. 4.3 except where s. 6.3(2) is applicable.
- 2) Where compliance with the provisions of subd. (1) would result in unnecessary hardship and only where the structure will not be used for human habitation or be associated with a high flood damage potential, the Board of Appeals, using the procedures established in s. 7.3, may grant a variance from those provisions of subd. (1) for modifications or additions using the criteria listed below. Modifications or additions which are protected to elevations lower than the flood protection elevation may be permitted if:
 - a) No floor is allowed below the regional flood elevation for residential or commercial structures;
 - b) Human lives are not endangered;
 - c) Public facilities, such as water or sewer, shall not be installed;
 - d) Flood depths shall not exceed two feet;
 - e) Flood velocities shall not exceed two feet per second; and
 - f) The structure shall not be used for storage of materials as described in s. 4.3(5).
- 3) All new private sewage disposal systems, or addition to, replacement, repair or maintenance of a private sewage disposal system shall meet all the applicable provisions of all local ordinances, s. 7.5 (3) and ch. SPS 383, Wis. Adm. Code.
- 4) All new wells, or addition to, replacement, repair, or maintenance of a well shall meet the applicable provisions of this ordinance, s. 7.5 (3) and ch. NR 811 and NR 812, Wis. Adm. Code.

7.0 ADMINISTRATION

Where a zoning administrator, planning agency or a board of appeals has already been appointed to administer a zoning ordinance adopted under ss. 59.69, 59.692 or 62.23(7), Stats., these officials shall also administer this ordinance.

7.1 ZONING ADMINISTRATOR

1) DUTIES AND POWERS

The zoning administrator is authorized to administer this ordinance and shall have the following duties and powers:

- a) Advise applicants of the ordinance provisions, assist in preparing permit applications and appeals, and assure that the regional flood elevation for the proposed development is shown on all permit applications.
- b) Issue permits and inspect properties for compliance with provisions of this ordinance and issue certificates of compliance where appropriate
- c) Inspect and assess all damaged floodplain structures to determine if substantial damage to the structures has occurred.
- d) Keep records of all official actions such as:
 1. All permits issued, inspections made, and work approved;
 2. Documentation of certified lowest floor and regional flood elevations;
 3. Floodproofing certificates.
 4. Water surface profiles, floodplain zoning maps and ordinances, nonconforming uses and structures including changes, appeals, variances and amendments.
 5. All substantial damage assessment reports for floodplain structures.
 6. List of nonconforming structures and uses.
- e) Submit copies of the following items to the Department Regional office:
 1. Within 10 days of the decision, a copy of any decisions on variances, appeals for map or text interpretations, and map or text amendments;
 2. Copies of case-by-case analyses and other required information.
 3. Copies of substantial damage assessments performed and all related correspondence concerning the assessments.
- f) Investigate, prepare reports, and report violations of this ordinance to the municipal zoning agency and attorney for prosecution. Copies of the reports shall also be sent to the Department Regional office.
- g) Submit copies of amendments to the FEMA Regional office.

2) LAND USE PERMIT

A land use permit shall be obtained before any development; repair, modification, or addition to an existing structure; or change in the use of a building or structure, including sewer and water facilities, may be initiated. Application to the zoning administrator shall include:

a) GENERAL INFORMATION

1. Name and address of the applicant, property owner and contractor;

2. Legal description, proposed use, and whether it is new construction or a modification;

b) SITE DEVELOPMENT PLAN

A site plan drawn to scale shall be submitted with the permit application form and shall contain:

1. Location, dimensions, area and elevation of the lot;
2. Location of the ordinary highwater mark of any abutting navigable waterways;
3. Location of any structures with distances measured from the lot lines and street center lines;
4. Location of any existing or proposed on-site sewage systems or private water supply systems;
5. Location and elevation of existing or future access roads;
6. Location of floodplain and floodway limits as determined from the official floodplain zoning maps;
7. The elevation of the lowest floor of proposed buildings and any fill using the vertical datum from the adopted study – either National Geodetic Vertical Datum (NGVD) or North American Vertical Datum (NAVD);
8. Data sufficient to determine the regional flood elevation in NGVD or NAVD at the location of the development and to determine whether or not the requirements of s. 3.0 or 4.0 are met; and
9. Data to determine if the proposed development will cause an obstruction to flow or an increase in regional flood height or discharge according to s. 2.1. This may include any of the information noted in s. 3.3(1).

c) HYDRAULIC AND HYDROLOGIC STUDIES TO ANALYZE DEVELOPMENT

All hydraulic and hydrologic studies shall be completed under the direct supervision of a professional engineer registered in the State. The study contractor shall be responsible for the technical adequacy of the study. All studies shall be reviewed and approved by the Department.

1. Zone A floodplains and in AE zones within which a floodway is not delineated:

a. Hydrology

- i. The appropriate method shall be based on the standards in ch. NR 116.07(3), Wis. Admin. Code, *Hydrologic Analysis: Determination of Regional Flood Discharge*.

b. Hydraulic modeling

The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, *Hydraulic Analysis: Determination of Regional Flood Elevation* and the following:

- i. determination of the required limits of the hydraulic model shall be based on detailed study information for downstream structures (dam, bridge, culvert) to determine adequate starting WSEL for the study.

- ii. channel sections must be surveyed.
 - iii. minimum four-foot contour data in the overbanks shall be used for the development of cross section overbank and floodplain mapping.
 - iv. a maximum distance of 500 feet between cross sections is allowed in developed areas with additional intermediate cross sections required at transitions in channel bottom slope including a survey of the channel at each location.
 - v. the most current version of HEC-RAS shall be used.
 - vi. a survey of bridge and culvert openings and the top of road is required at each structure.
 - vii. additional cross sections are required at the downstream and upstream limits of the proposed development and any necessary intermediate locations based on the length of the reach if greater than 500 feet.
 - viii. standard accepted engineering practices shall be used when assigning parameters for the base model such as flow, Manning's N values, expansion and contraction coefficients or effective flow limits. The base model shall be calibrated to past flooding data such as high-water marks to determine the reasonableness of the model results. If no historical data is available, adequate justification shall be provided for any parameters outside standard accepted engineering practices.
 - ix. the model must extend past the upstream limit of the difference in the existing and proposed flood profiles in order to provide a tie-in to existing studies. The height difference between the proposed flood profile and the existing study profiles shall be no more than 0.00 feet.
- c. Mapping
- A work map of the reach studied shall be provided, showing all cross-section locations, floodway/floodplain limits based on best available topographic data, geographic limits of the proposed development and whether the proposed development is located in the floodway.
- i. If the proposed development is located outside of the floodway, then it is determined to have no impact on the regional flood elevation.
 - ii. If any part of the proposed development is in the floodway, it must be added to the base model to show the difference between existing and proposed conditions. The study must ensure that all coefficients remain the same as in the existing model, unless adequate justification based on standard accepted engineering practices is provided.

2. Zone AE Floodplains

- a. Hydrology

If the proposed hydrology will change the existing study, the appropriate method to be used shall be based on ch. NR 116.07(3), Wis. Admin. Code, *Hydrologic Analysis: Determination of Regional Flood Discharge*.
- b. Hydraulic model

The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, *Hydraulic Analysis: Determination of Regional Flood Elevation* and the following:

- i. Duplicate Effective Model
The effective model shall be reproduced to ensure correct transference of the model data and to allow integration of the revised data to provide a continuous FIS model upstream and downstream of the revised reach. If data from the effective model is available, models shall be generated that duplicate the FIS profiles and the elevations shown in the Floodway Data Table in the FIS report to within 0.1 foot.
 - ii. Corrected Effective Model.
The Corrected Effective Model shall not include any man-made physical changes since the effective model date but shall import the model into the most current version of HEC-RAS for Department review.
 - iii. Existing (Pre-Project Conditions) Model.
The Existing Model shall be required to support conclusions about the actual impacts of the project associated with the Revised (Post-Project) Model or to establish more up-to-date models on which to base the Revised (Post-Project) Model.
 - iv. Revised (Post-Project Conditions) Model.
The Revised (Post-Project Conditions) Model shall incorporate the Existing Model and any proposed changes to the topography caused by the proposed development. This model shall reflect proposed conditions.
 - v. All changes to the Duplicate Effective Model and subsequent models must be supported by certified topographic information, bridge plans, construction plans and survey notes.
 - vi. Changes to the hydraulic models shall be limited to the stream reach for which the revision is being requested. Cross sections upstream and downstream of the revised reach shall be identical to those in the effective model and result in water surface elevations and top widths computed by the revised models matching those in the effective models upstream and downstream of the revised reach as required. The Effective Model shall not be truncated.
- c. Mapping
Maps and associated engineering data shall be submitted to the Department for review which meet the following conditions:
- i. Consistency between the revised hydraulic models, the revised floodplain and floodway delineations, the revised flood profiles, topographic work map, annotated FIRMs and/or Flood Boundary Floodway Maps (FBFMs), construction plans, bridge plans.
 - ii. Certified topographic map of suitable scale, contour interval, and a planimetric map showing the applicable items. If a digital version of the map is available, it may be submitted in order that the FIRM may be more easily revised.
 - iii. Annotated FIRM panel showing the revised 1% and 0.2% annual chance floodplains and floodway boundaries.

- iv. If an annotated FIRM and/or FBFM and digital mapping data (GIS or CADD) are used, then all supporting documentation or metadata must be included with the data submission along with the Universal Transverse Mercator (UTM) projection and State Plane Coordinate System in accordance with FEMA mapping specifications.
- v. The revised floodplain boundaries shall tie into the effective floodplain boundaries.
- vi. All cross sections from the effective model shall be labeled in accordance with the effective map and a cross section lookup table shall be included to relate to the model input numbering scheme.
- vii. Both the current and proposed floodways shall be shown on the map.
- viii. The stream centerline, or profile baseline used to measure stream distances in the model shall be visible on the map.

d) EXPIRATION

All permits issued under the authority of this ordinance shall expire no more than 180 days after issuance. The permit may be extended for a maximum of 180 days for good and sufficient cause. If the permitted work has not started within 180 days of the permit date, the development must comply with any regulation, including any revision to the FIRM or FIS, that took effect after the permit date.

3) CERTIFICATE OF COMPLIANCE

No land shall be occupied or used, and no building which is hereafter constructed, altered, added to, modified, repaired, rebuilt, or replaced shall be occupied until a certificate of compliance is issued by the zoning administrator, except where no permit is required, subject to the following provisions:

- a) The certificate of compliance shall show that the building or premises or part thereof, and the proposed use, conform to the provisions of this ordinance;
- b) Application for such certificate shall be concurrent with the application for a permit;
- c) If all ordinance provisions are met, the certificate of compliance shall be issued within 10 days after written notification that the permitted work is completed;
- d) The applicant shall submit a certification signed by a registered professional engineer, architect, or land surveyor that the fill, lowest floor and floodproofing elevations are in compliance with the permit issued. Floodproofing measures also require certification by a registered professional engineer or architect that the requirements of s. 7.5 are met.
- e) Where applicable pursuant to s. 5.1(4), the applicant must submit a certification by a registered professional engineer or surveyor of the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor (excluding pilings or columns), and an indication of whether the structure contains a basement.
- f) Where applicable pursuant to s. 5.1(4), the applicant must submit certifications by a registered professional engineer or architect that the structural design and methods of construction meet accepted standards of practice as required by s. 5.1(4).

4) OTHER PERMITS

Prior to obtaining a floodplain development permit the applicant must secure all necessary permits from federal, state, and local agencies, including but not limited to those required by the U.S. Army Corps of Engineers under s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344.

7.2 ZONING AGENCY

- 1) The City Administrator shall:
 - a) oversee the functions of the office of the zoning administrator; and
 - b) review and advise the governing body on all proposed amendments to this ordinance, maps, and text.
 - c) publish adequate notice pursuant to Ch. 985, Stats., specifying the date, time, place, and subject of the public hearing.
- 2) The City Administrator shall not:
 - a) grant variances to the terms of the ordinance in place of action by the Board of Appeals; or
 - b) amend the text or zoning maps in place of official action by the governing body.

7.3 BOARD OF APPEALS

The Board of Appeals, created under s. 62.23(7)(e), Stats., for cities or villages, is hereby authorized or shall be appointed to act for the purposes of this ordinance. The Board shall exercise the powers conferred by Wisconsin Statutes and adopt rules for the conduct of business. The zoning administrator shall not be the secretary of the Board.

1) POWERS AND DUTIES

The Board of Appeals shall:

- a) Appeals - Hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by an administrative official in the enforcement or administration of this ordinance;
- b) Boundary Disputes - Hear and decide disputes concerning the district boundaries shown on the official floodplain zoning map; and
- c) Variances - Hear and decide, upon appeal, variances from the ordinance standards.

2) APPEALS TO THE BOARD

- a) Appeals to the board may be taken by any person aggrieved, or by any officer or department of the municipality affected by any decision of the zoning administrator or other administrative officer. Such appeal shall be taken within 30 days unless otherwise provided by the rules of the board, by filing with the official whose decision is in question, and with the board, a notice of appeal specifying the reasons for the appeal. The official whose decision is in question shall transmit to the board all records regarding the matter appealed.

b) NOTICE AND HEARING FOR APPEALS INCLUDING VARIANCES

1. Notice - The board shall:

- a. Fix a reasonable time for the hearing;
- b. Publish adequate notice pursuant to Wisconsin Statutes, specifying the date, time, place, and subject of the hearing; and

- c. Assure that notice shall be mailed to the parties in interest and the Department Regional office at least 10 days in advance of the hearing.

2. Hearing - Any party may appear in person or by agent. The board shall:

- a. Resolve boundary disputes according to s. 7.3(3);
- b. Decide variance applications according to s. 7.3(4); and
- c. Decide appeals of permit denials according to s. 7.4.

c) **DECISION:** The final decision regarding the appeal or variance application shall:

- 1. Be made within a reasonable time;
- 2. Be sent to the Department Regional office within 10 days of the decision;
- 3. Be a written determination signed by the chairman or secretary of the Board;
- 4. State the specific facts which are the basis for the Board's decision;
- 5. Either affirm, reverse, vary or modify the order, requirement, decision, or determination appealed, in whole or in part, dismiss the appeal for lack of jurisdiction or grant or deny the variance application; and
- 6. Include the reasons for granting an appeal, describing the hardship demonstrated by the applicant in the case of a variance, clearly stated in the recorded minutes of the Board proceedings.

3) **BOUNDARY DISPUTES**

The following procedure shall be used by the Board in hearing disputes concerning floodplain district boundaries:

- a) If a floodplain district boundary is established by approximate or detailed floodplain studies, the flood elevations or profiles shall prevail in locating the boundary.
- b) The person contesting the boundary location shall be given a reasonable opportunity to present arguments and technical evidence to the Board; and
- c) If the boundary is incorrectly mapped, the Board should inform the zoning committee or the person contesting the boundary location to petition the governing body for a map amendment according to s. 8.0 *Amendments*.

4) **VARIANCE**

- a) The Board may, upon appeal, grant a variance from the standards of this ordinance if an applicant convincingly demonstrates that:
 - 1. Literal enforcement of the ordinance will cause unnecessary hardship;
 - 2. The hardship is due to adoption of the floodplain ordinance and unique property conditions, not common to adjacent lots or premises. In such case the ordinance or map must be amended;
 - 3. The variance is not contrary to the public interest; and
 - 4. The variance is consistent with the purpose of this ordinance in s. 1.3.

- b) In addition to the criteria in subd. (a), to qualify for a variance under FEMA regulations, the Board must find that the following criteria have been met:
 - 1. The variance shall not cause any increase in the regional flood elevation;
 - 2. The applicant has shown good and sufficient cause for issuance of the variance;
 - 3. Failure to grant the variance would result in exceptional hardship;
 - 4. Granting the variance will not result in additional threats to public safety, extraordinary expense, create a nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;
 - 5. The variance granted is the minimum necessary, considering the flood hazard, to afford relief.
- c) A variance shall not:
 - 1. Grant, extend or increase any use prohibited in the zoning district;
 - 2. Be granted for a hardship based solely on an economic gain or loss;
 - 3. Be granted for a hardship which is self-created.
 - 4. Damage the rights or property values of other persons in the area;
 - 5. Allow actions without the amendments to this ordinance or map(s) required in s. 8.0 *Amendments*; and
 - 6. Allow any alteration of an historic structure, including its use, which would preclude its continued designation as an historic structure.
- d) When a floodplain variance is granted, the Board shall notify the applicant in writing that it may increase risks to life and property and flood insurance premiums could increase up to \$25.00 per \$100.00 of coverage. A copy shall be maintained with the variance record.

7.4 TO REVIEW APPEALS OF PERMIT DENIALS

- (1) The Zoning Agency (s. 7.2) or Board shall review all data related to the appeal. This may include:
 - a. Permit application data listed in s. 7.1(2);
 - b. Floodway/floodfringe determination data in s. 5.1(5);
 - c. Data listed in s. 3.3(1)(b) where the applicant has not submitted this information to the zoning administrator; and
 - d. Other data submitted with the application or submitted to the Board with the appeal.
- (2) For appeals of all denied permits the Board shall:
 - a. Follow the procedures of s. 7.3;
 - b. Consider zoning agency recommendations; and

- c. Either uphold the denial or grant the appeal.
- (3) For appeals concerning increases in regional flood elevation the Board shall:
- a. Uphold the denial where the Board agrees with the data showing an increase in flood elevation. Increases may only be allowed after amending the flood profile and map and all appropriate legal arrangements are made with all adversely affected property owners as per the requirements of s. 8.0 *Amendments*; and
 - b. Grant the appeal where the Board agrees that the data properly demonstrates that the project does not cause an increase provided no other reasons for denial exist.

7.5 FLOODPROOFING STANDARDS

- (1) No permit or variance shall be issued for a non-residential structure designed to be watertight below the regional flood elevation until the applicant submits a plan certified by a registered professional engineer or architect that the floodproofing measures will protect the structure or development to or above the flood protection elevation and submits a FEMA Floodproofing Certificate. Floodproofing is not an alternative to the development standards in ss. 2.0, 3.0, 4.0, or 5.1.
- (2) For a structure designed to allow the entry of floodwaters, no permit or variance shall be issued until the applicant submits a plan either:
- a. certified by a registered professional engineer or architect; or
 - b. meeting or exceeding the following standards:
 - 1. a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 - 2. the bottom of all openings shall be no higher than one foot above grade; and
 - 3. openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- (3) Floodproofing measures shall be designed, as appropriate, to:
- a. Withstand flood pressures, depths, velocities, uplift and impact forces and other regional flood factors;
 - b. Protect structures to the flood protection elevation;
 - c. Anchor structures to foundations to resist flotation and lateral movement;
 - d. Minimize or eliminate infiltration of flood waters;
 - e. Minimize or eliminate discharges into flood waters;
 - f. Placement of essential utilities to or above the flood protection elevation; and
 - g. If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:
 - 1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of two openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;

2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;
3. Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and
4. The use must be limited to parking, building access or limited storage.

7.6 PUBLIC INFORMATION

- (1) Place marks on structures to show the depth of inundation during the regional flood.
- (2) All maps, engineering data and regulations shall be available and widely distributed.
- (3) Real estate transfers should show what floodplain district any real property is in.

8.0 AMENDMENTS

Obstructions or increases may only be permitted if amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 8.1.

- (1) In AE Zones with a mapped floodway, no obstructions or increases shall be permitted unless the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 8.1. Any such alterations must be reviewed and approved by FEMA and the DNR.
- (2) In A Zones increases equal to or greater than 1.0 foot may only be permitted if the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain maps, floodway lines, and water surface profiles, in accordance with s. 8.1.

8.1 GENERAL

The governing body shall change or supplement the floodplain zoning district boundaries and this ordinance in the manner outlined in s. 8.2 below. Actions which require an amendment to the ordinance and/or submittal of a Letter of Map Change (LOMC) include, but are not limited to, the following:

- (1) Any fill or floodway encroachment that obstructs flow causing any increase in the regional flood height;
- (2) Any change to the floodplain boundaries and/or watercourse alterations on the FIRM;
- (3) Any changes to any other officially adopted floodplain maps listed in s. 1.5 (2)(b);
- (4) Any floodplain fill which raises the elevation of the filled area to a height at or above the flood protection elevation and is contiguous to land lying outside the floodplain;
- (5) Correction of discrepancies between the water surface profiles and floodplain maps;
- (6) Any upgrade to a floodplain zoning ordinance text required by s. NR 116.05, Wis. Adm. Code, or otherwise required by law, or for changes by the municipality; and

- (7) All channel relocations and changes to the maps to alter floodway lines or to remove an area from the floodway or the floodfringe that is based on a base flood elevation from a FIRM requires prior approval by FEMA.

8.2 PROCEDURES

Ordinance amendments may be made upon petition of any party according to the provisions of s. 62.23, Stats., for cities and villages. The petitions shall include all data required by s. 5.1(5) and 7.1(2). The Land Use Permit shall not be issued until a Letter of Map Revision is issued by FEMA for the proposed changes.

- (1) The proposed amendment shall be referred to the zoning agency for a public hearing and recommendation to the governing body. The amendment and notice of public hearing shall be submitted to the Department Regional office for review prior to the hearing. The amendment procedure shall comply with the provisions of s. 62.23, Stats., for cities and villages.
- (2) No amendments shall become effective until reviewed and approved by the Department.
- (3) All persons petitioning for a map amendment that obstructs flow causing any increase in the regional flood height, shall obtain flooding easements or other appropriate legal arrangements from all adversely affected property owners and notify local units of government before the amendment can be approved by the governing body.

9.0 ENFORCEMENT AND PENALTIES

Any violation of the provisions of this ordinance by any person shall be unlawful and shall be referred to the municipal attorney who shall expeditiously prosecute all such violators. A violator shall, upon conviction, forfeit to the municipality a penalty of not more than \$50.00 (fifty dollars), together with a taxable cost of such action. Each day of continued violation shall constitute a separate offense. Every violation of this ordinance is a public nuisance, and the creation may be enjoined, and the maintenance may be abated by action at suit of the municipality, the state, or any citizen thereof pursuant to s. 87.30, Stats.

10.0 DEFINITIONS

Unless specifically defined, words and phrases in this ordinance shall have their common law meaning and shall be applied in accordance with their common usage. Words used in the present tense include the future, the singular number includes the plural and the plural number includes the singular. The word "may" is permissive, "shall" is mandatory and is not discretionary.

1. A ZONES – Those areas shown on the Official Floodplain Zoning Map which would be inundated by the regional flood. These areas may be numbered or unnumbered A Zones. The A Zones may or may not be reflective of flood profiles, depending on the availability of data for a given area.
2. AH ZONE – See “AREA OF SHALLOW FLOODING”.
3. AO ZONE – See “AREA OF SHALLOW FLOODING”.
4. ACCESSORY STRUCTURE OR USE – A facility, structure, building or use which is accessory or incidental to the principal use of a property, structure or building. An accessory structure shall not be used for human habitation.
5. ALTERATION – An enhancement, upgrade or substantial change or modification other than an addition or repair to a dwelling or to electrical, plumbing, heating, ventilating, air conditioning and

other systems within a structure.

6. AREA OF SHALLOW FLOODING – A designated AO, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flood may be evident. Such flooding is characterized by ponding or sheet flow.
7. BASE FLOOD – Means the flood having a one percent chance of being equaled or exceeded in any given year, as published by FEMA as part of a FIS and depicted on a FIRM.
8. BASEMENT – Any enclosed area of a building having its floor sub-grade on all sides.
9. BUILDING – See STRUCTURE.
10. BULKHEAD LINE – A geographic line along a reach of navigable water that has been adopted by a municipal ordinance and approved by the Department pursuant to s. 30.11, Stats., and which allows limited filling between this bulkhead line and the original ordinary highwater mark, except where such filling is prohibited by the floodway provisions of this ordinance.
11. CAMPGROUND – Any parcel of land which is designed, maintained, intended, or used for the purpose of providing sites for nonpermanent overnight use by 4 or more camping units, or which is advertised or represented as a camping area.
12. CAMPING UNIT – Any portable device, no more than 400 square feet in area, used as a temporary shelter, including but not limited to a camping trailer, motor home, bus, van, pick-up truck, or tent that is fully licensed, if required, and ready for highway use.
13. CERTIFICATE OF COMPLIANCE – A certification that the construction and the use of land or a building, the elevation of fill or the lowest floor of a structure is in compliance with all of the provisions of this ordinance.
14. CHANNEL – A natural or artificial watercourse with definite bed and banks to confine and conduct normal flow of water.
15. CRAWLWAYS or CRAWL SPACE – An enclosed area below the first usable floor of a building, generally less than five feet in height, used for access to plumbing and electrical utilities.
16. DECK – An unenclosed exterior structure that has no roof or sides and has a permeable floor which allows the infiltration of precipitation.
17. DEPARTMENT – The Wisconsin Department of Natural Resources.
18. DEVELOPMENT – Any artificial change to improved or unimproved real estate, including, but not limited to, the construction of buildings, structures or accessory structures; the construction of additions or alterations to buildings, structures or accessory structures; the repair of any damaged structure or the improvement or renovation of any structure, regardless of percentage of damage or improvement; the placement of buildings or structures; subdivision layout and site preparation; mining, dredging, filling, grading, paving, excavation or drilling operations; the storage, deposition or extraction of materials or equipment; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities.
19. DRYLAND ACCESS – A vehicular access route which is above the regional flood elevation, and which connects land located in the floodplain to land outside the floodplain, such as a road with its surface above regional flood elevation and wide enough for wheeled rescue and relief vehicles.

20. ENCROACHMENT – Any fill, structure, equipment, use or development in the floodway.
21. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) – The federal agency that administers the National Flood Insurance Program.
22. FLOOD INSURANCE RATE MAP (FIRM) – A map of a community on which the Federal Insurance Administration has delineated both the floodplain and the risk premium zones applicable to the community. This map can only be amended by the Federal Emergency Management Agency.
23. FLOOD or FLOODING – A general and temporary condition of partial or complete inundation of normally dry land areas caused by one of the following conditions:
 - The overflow or rise of inland waters;
 - The rapid accumulation or runoff of surface waters from any source;
 - The inundation caused by waves or currents of water exceeding anticipated cyclical levels along the shore of Lake Michigan or Lake Superior; or
 - The sudden increase caused by an unusually high-water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a seiche, or by some similarly unusual event.
24. FLOOD FREQUENCY – The probability of a flood occurrence which is determined from statistical analyses. The frequency of a particular flood event is usually expressed as occurring, on the average once in a specified number of years or as a percent (%) chance of occurring in any given year.
25. FLOODFRINGE – That portion of the floodplain outside of the floodway which is covered by flood waters during the regional flood and associated with standing water rather than flowing water.
26. FLOOD HAZARD BOUNDARY MAP – A map designating approximate flood hazard areas. Flood hazard areas are designated as unnumbered A-Zones and do not contain floodway lines or regional flood elevations. This map forms the basis for both the regulatory and insurance aspects of the National Flood Insurance Program (NFIP) until superseded by a Flood Insurance Study and a Flood Insurance Rate Map.
27. FLOOD INSURANCE STUDY – A technical engineering examination, evaluation, and determination of the local flood hazard areas. It provides maps designating those areas affected by the regional flood and provides both flood insurance rate zones and base flood elevations and may provide floodway lines. The flood hazard areas are designated as numbered and unnumbered A-Zones. Flood Insurance Rate Maps, that accompany the Flood Insurance Study, form the basis for both the regulatory and the insurance aspects of the National Flood Insurance Program.
28. FLOODPLAIN – Land which has been or may be covered by flood water during the regional flood. It includes the floodway and the floodfringe and may include other designated floodplain areas for regulatory purposes.
29. FLOODPLAIN ISLAND – A natural geologic land formation within the floodplain that is surrounded, but not covered, by floodwater during the regional flood.
30. FLOODPLAIN MANAGEMENT – Policy and procedures to ensure wise use of floodplains, including mapping and engineering, mitigation, education, and administration and enforcement of floodplain regulations.
31. FLOOD PROFILE – A graph or a longitudinal profile line showing the relationship of the water surface elevation of a flood event to locations of land surface elevations along a stream or river.

32. FLOODPROOFING – Any combination of structural provisions, changes or adjustments to properties and structures, water and sanitary facilities and contents of buildings subject to flooding, for the purpose of reducing or eliminating flood damage.
33. FLOOD PROTECTION ELEVATION – An elevation of two feet of freeboard above the Regional Flood Elevation. (Also see: FREEBOARD.)
34. FLOOD STORAGE – Those floodplain areas where storage of floodwaters has been taken into account during analysis in reducing the regional flood discharge.
35. FLOODWAY – The channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.
36. FREEBOARD – A safety factor expressed in terms of a specified number of feet above a calculated flood level. Freeboard compensates for any factors that cause flood heights greater than those calculated, including ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways, the effects of watershed urbanization, loss of flood storage areas due to development and aggregation of the river or stream bed.
37. HABITABLE STRUCTURE – Any structure or portion thereof used or designed for human habitation.
38. HEARING NOTICE – Publication or posting meeting the requirements of Ch. 985, Stats. For appeals, a Class 1 notice, published once at least one week (7 days) before the hearing, is required. For all zoning ordinances and amendments, a Class 2 notice, published twice, once each week consecutively, the last at least a week (7 days) before the hearing. Local ordinances or bylaws may require additional notice, exceeding these minimums.
39. HIGH FLOOD DAMAGE POTENTIAL – Damage that could result from flooding that includes any danger to life or health or any significant economic loss to a structure or building and its contents.
40. HIGHEST ADJACENT GRADE – The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
41. HISTORIC STRUCTURE – Any structure that is either:
 - Listed individually in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
 - Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program, as determined by the Secretary of the Interior; or by the Secretary of the Interior in states without approved programs.
42. INCREASE IN REGIONAL FLOOD HEIGHT – A calculated upward rise in the regional flood elevation greater than 0.00 foot, based on a comparison of existing conditions and proposed conditions which is directly attributable to development in the floodplain but not attributable to manipulation of mathematical variables such as roughness factors, expansion and contraction coefficients and discharge.
43. LAND USE – Any nonstructural use made of unimproved or improved real estate. (Also see

DEVELOPMENT.)

44. LOWEST ADJACENT GRADE – Elevation of the lowest ground surface that touches any of the exterior walls of a building.
45. LOWEST FLOOR – The lowest floor of the lowest enclosed area (including basement).
46. MAINTENANCE – The act or process of ordinary upkeep and repairs, including redecorating, refinishing, nonstructural repairs, or the replacement of existing fixtures, systems or equipment with equivalent fixtures, systems, or structures.
47. MANUFACTURED HOME – A structure transportable in one or more sections, which is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities. The term "manufactured home" includes a mobile home but does not include a "mobile recreational vehicle."
48. MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION – A parcel (or contiguous parcels) of land, divided into two or more manufactured home lots for rent or sale.
49. MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION, EXISTING – A parcel of land, divided into two or more manufactured home lots for rent or sale, on which the construction of facilities for servicing the lots is completed before the effective date of this ordinance. At a minimum, this would include the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads.
50. MOBILE/MANUFACTURED HOME PARK, EXPANSION TO EXISTING – The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed. This includes installation of utilities, construction of streets and either final site grading, or the pouring of concrete pads.
51. MOBILE RECREATIONAL VEHICLE – A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled, carried or permanently towable by a licensed, light-duty vehicle, is licensed for highway use if registration is required and is designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel or seasonal use. Manufactured homes that are towed or carried onto a parcel of land, but do not remain capable of being towed or carried, including park model homes, do not fall within the definition of "mobile recreational vehicles."
52. MODEL, CORRECTED EFFECTIVE – A hydraulic engineering model that corrects any errors that occur in the Duplicate Effective Model, adds any additional cross sections to the Duplicate Effective Model, or incorporates more detailed topographic information than that used in the current effective model.
53. MODEL, DUPLICATE EFFECTIVE – A copy of the hydraulic analysis used in the effective FIS and referred to as the effective model.
54. MODEL, EFFECTIVE – The hydraulic engineering model that was used to produce the current effective Flood Insurance Study.
55. MODEL, EXISTING (PRE-PROJECT) – A modification of the Duplicate Effective Model or Corrected Effective Model to reflect any man-made modifications that have occurred within the floodplain since the date of the effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the Corrected Effective Model or Duplicate Effective Model.

56. MODEL, REVISED (POST-PROJECT) – A modification of the Existing or Pre-Project Conditions Model, Duplicate Effective Model or Corrected Effective Model to reflect revised or post-project conditions.
57. MUNICIPALITY or MUNICIPAL – The county, city or village governmental units enacting, administering, and enforcing this zoning ordinance.
58. NAVD or NORTH AMERICAN VERTICAL DATUM – Elevations referenced to mean sea level datum, 1988 adjustment.
59. NGVD or NATIONAL GEODETIC VERTICAL DATUM – Elevations referenced to mean sea level datum, 1929 adjustment.
60. NEW CONSTRUCTION – Structures for which the start of construction commenced on or after the effective date of a floodplain zoning regulation adopted by this community and includes any subsequent improvements to such structures.
61. NON-FLOOD DISASTER – A fire or an ice storm, tornado, windstorm, mudslide, or other destructive act of nature, but excludes a flood.
62. NONCONFORMING STRUCTURE – An existing lawful structure or building which is not in conformity with the dimensional or structural requirements of this ordinance for the area of the floodplain which it occupies. (For example, an existing residential structure in the floodfringe district is a conforming use. However, if the lowest floor is lower than the flood protection elevation, the structure is nonconforming.)
63. NONCONFORMING USE – An existing lawful use or accessory use of a structure or building which is not in conformity with the provisions of this ordinance for the area of the floodplain which it occupies. (Such as a residence in the floodway.)
64. OBSTRUCTION TO FLOW – Any development which blocks the conveyance of floodwaters such that this development alone or together with any future development will cause an increase in regional flood height.
65. OFFICIAL FLOODPLAIN ZONING MAP – That map, adopted and made part of this ordinance, as described in s. 1.5(2), which has been approved by the Department and FEMA.
66. OPEN SPACE USE – Those uses having a relatively low flood damage potential and not involving structures.
67. ORDINARY HIGHWATER MARK – The point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.
68. PERSON – An individual, or group of individuals, corporation, partnership, association, municipality, or state agency.
69. PRIVATE SEWAGE SYSTEM – A sewage treatment and disposal system serving one structure with a septic tank and soil absorption field located on the same parcel as the structure. It also means an alternative sewage system approved by the Department of Safety and Professional Services, including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure, or a system located on a different parcel than the structure.

70. PUBLIC UTILITIES – Those utilities using underground or overhead transmission lines such as electric, telephone and telegraph, and distribution and collection systems such as water, sanitary sewer, and storm sewer.
71. REASONABLY SAFE FROM FLOODING – Means base flood waters will not inundate the land or damage structures to be removed from the floodplain and that any subsurface waters related to the base flood will not damage existing or proposed buildings.
72. REGIONAL FLOOD – A flood determined to be representative of large floods known to have occurred in Wisconsin. A regional flood is a flood with a one percent chance of being equaled or exceeded in any given year, and if depicted on the FIRM, the RFE is equivalent to the BFE.
73. START OF CONSTRUCTION – The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond initial excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For an alteration, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
74. STRUCTURE – Any manmade object with form, shape and utility, either permanently or temporarily attached to, placed upon or set into the ground, stream bed or lakebed, including, but not limited to, roofed and walled buildings, gas or liquid storage tanks, bridges, dams and culverts.
75. SUBDIVISION – Has the meaning given in s. 236.02(12), Wis. Stats.
76. SUBSTANTIAL DAMAGE – Damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the equalized assessed value of the structure before the damage occurred.
77. SUBSTANTIAL IMPROVEMENT – Any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the equalized assessed value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the work performed. The term does not include either any project for the improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions; or any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.
78. UNNECESSARY HARDSHIP – Where special conditions affecting a particular property, which were not self-created, have made strict conformity with restrictions governing areas, setbacks, frontage, height, or density unnecessarily burdensome or unreasonable in light of the purposes of the ordinance.
79. VARIANCE – An authorization by the board of adjustment or appeals for the construction or maintenance of a building or structure in a manner which is inconsistent with dimensional standards (not uses) contained in the floodplain zoning ordinance.

80. VIOLATION – The failure of a structure or other development to be fully compliant with the floodplain zoning ordinance. A structure or other development without required permits, lowest floor elevation documentation, floodproofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.
81. WATERSHED – The entire region contributing runoff or surface water to a watercourse or body of water.
82. WATER SURFACE PROFILE – A graphical representation showing the elevation of the water surface of a watercourse for each position along a reach of river or stream at a certain flood flow. A water surface profile of the regional flood is used in regulating floodplain areas.
83. WELL – means an excavation opening in the ground made by digging, boring, drilling, driving or other methods, to obtain groundwater regardless of its intended use.

PUBLIC HEARING NOTICE

**NOTICE OF PUBLIC HEARING – CITY OF WAUPUN
FLOODPLAIN ORDINANCE**

CITY OF WAUPUN, WISCONSIN

PUBLIC NOTICE is given to all persons in the City of Waupun that a public hearing will be held on Wednesday, September 18, 2024 at 4:30 pm at the Waupun City Hall, 201 East Main Street, Waupun, WI to solicit comments on proposed floodplain zoning ordinance revisions that are required by state and federal law. These revisions govern development in mapped floodplain areas. The proposed ordinance revisions are on file in the office of the City Clerk.

The proposed regulations are intended to protect life, health and property in floodplain areas and will govern uses permitted in mapped floodplains. Activities such as dredging, filling, excavating and construction of buildings are generally allowed, but may be restricted according to which flood zone the property is in. A copy of the proposed ordinance will be on file and open for public inspection in the office of the City Clerk for a period of two weeks prior to this public hearing.

All persons interested are invited to attend this hearing and be heard. Written comments may be submitted to: Susan K. Leahy, Zoning & Floodplain Administrator City of Waupun, 201 East Main Street, Waupun, WI 53963.

Dated this 28th day of August 2024.

CITY OF WAUPUN
Angela J. Hull, Clerk/Treasurer

Publish: Daily Citizen: September 7 and September 10, 2024
Post: Waupun City Hall – 201 E Main St. Waupun; Waupun Library – 123 S. Forest St. Waupun;
Waupun Utilities – 817 S. Madison St., Waupun; City website www.cityofwaupun

COMMON COUNCIL
CITY OF WAUPUN, WISCONSIN

ORDINANCE #2024-_____

AN ORDINANCE TO REPEAL AND RECREATE CHAPTER NINETEEN
OF THE MUNICIPAL CODE OF THE CITY OF WAUPUN
ENTITLED "FLOODPLAIN ZONING."

THE COMMON COUNCIL OF THE CITY OF WAUPUN ORDAINS:

SECTION 1: Chapter Nineteen of the Municipal Code of the City of Waupun entitled "FLOODPLAIN ZONING" is repealed and recreated to provide as set forth below.

SECTION 2: All ordinances or portions of ordinances inconsistent with the provisions of this ordinance are repealed.

SECTION 3: This Ordinance shall be in full force and effect on its passage and publication as provided by law.

Adopted this ____ day of ____, 20__.

Rohn W. Bishop

Mayor

ATTEST:

Angela J. Hull

City Clerk/Treasurer