

# Landscape Summary

Greenbelt
Greenbelt Length 158 l.f. 3.95 Trees (158 / 40) 4 Trees Trees Required Trees Provided 15.8 Shrubs (158 / 40) x 4 16 Shrubs Shrubs Required Shrubs Provided Bufferyard 257 l.f. 12.85 Trees (257 / 20) East Frontage Trees Required 0 Trees 51.4 Shrubs (257 / 20) x 4 Trees Provided Shrubs Required 0 Shrubs Shrubs Provided

158 l.f. 5.3 Trees (158 / 30) South Frontage Trees Required 0 Trees 5.3 Trees (158 / 30) 15 Trees (15 Existing) Trees Provided Evergreens Required **Evergreens Provided** 21 Shrubs (158 / 30) x 4 5 Shrubs Shrubs Required Shrubs Provided

257 l.f. 12.85 Trees (257 / 20) West Frontage Trees Required 10 Trees 51.4 Shrubs (257 / 20) x 4 Trees Provided Shrubs Required Shrubs Provided 0 Shrubs

5 Trees

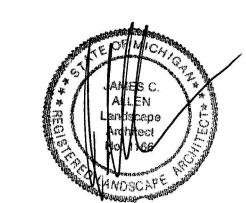
Parking Lot Parking Lot Area 9,859 s.f. 4.9 Trees (9,859 / 2,000) Trees Required

# Plant List

Trees Provided

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Greent							
<b>AFG</b>	4	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5"	as shown	B&B	
IGG	16	Ilex glabra 'Shamrock'	Inkberry		as shown	cont	24"
	4	Trees Provided					
	16	Shrubs Provided					
Buffery	/ard						
ASB	3	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
LTB	1	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
PAB	6	Picea abies	Norway Spruce		as shown	B&B	6'
POB	5	Physocarpus opulifolius 'Summer Wine'	Summer Wine Ninebark		as shown	cont	24"
	10	Trees Provided					
	5	Shrubs Provided					
Parking	Lot						
GTP	2	Gleditsia triacanthos var. Inermis	Honey Locust	2.5"	as shown	B&B	
UPP	3	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	5	Trees Provided					
Genera	al Land	dscaping					
SD	20	Chrysanthemym x superbum 'Alaska'	Alaska Shasta Daisy		as shown	cont	#2

Seal:



Title:

# Landscape Plan

Project:

7878 M-36

Hamburg Township, Michigan

Prepared for:

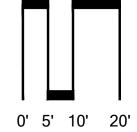
Greentech Enginerring 51147 Pontiac Trail Wixom, Michigan 48393 248.668.0700

Revision:	Issued:
Review	August 15, 2022
Review	September 16, 2022

Job Number:

22-058

Drawn By:

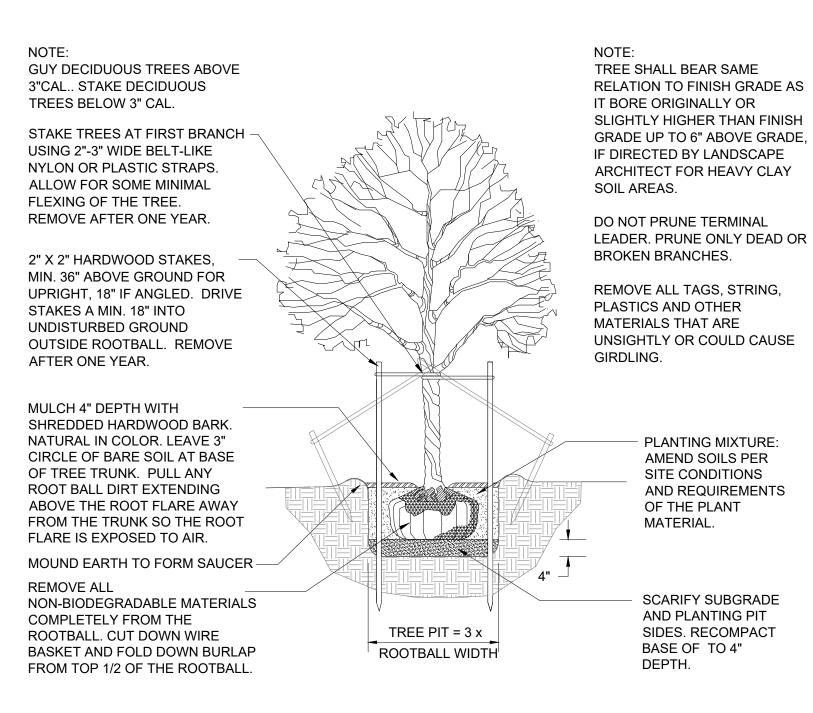


1"=20'

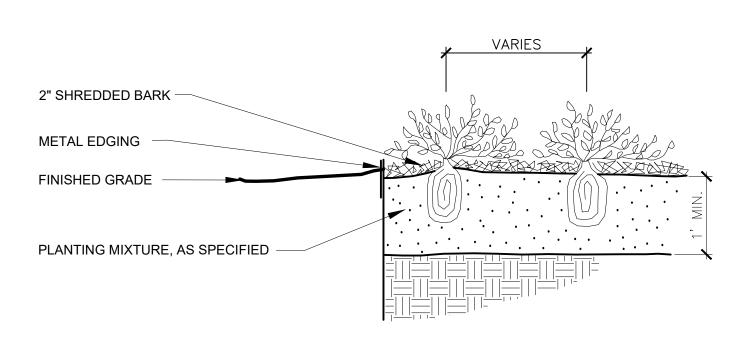
Checked By:

Sheet No.

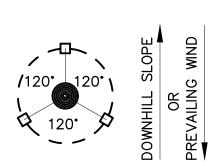
Know what's **below. Call** before you dig.



# DECIDUOUS TREE PLANTING DETAIL



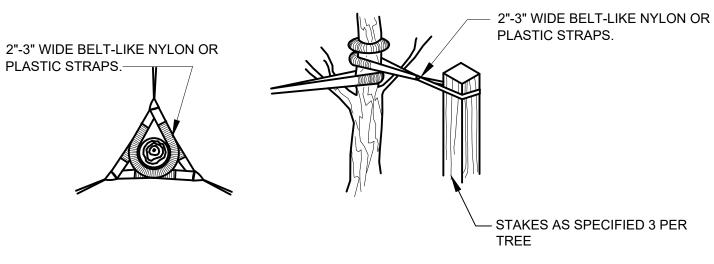
## PERENNIAL PLANTING DETAIL



ORIENT STAKING/GUYING TO PREVAILING WINDS, EXCEPT ON SLOPES GREATER THAN 3:1 ORIENT TO SLOPE. USE SAME STAKING/GUYING

ORIENTATION FOR ALL PLANTS WITHIN EACH GROUPING OR AREA

STAKING/GUYING LOCATION

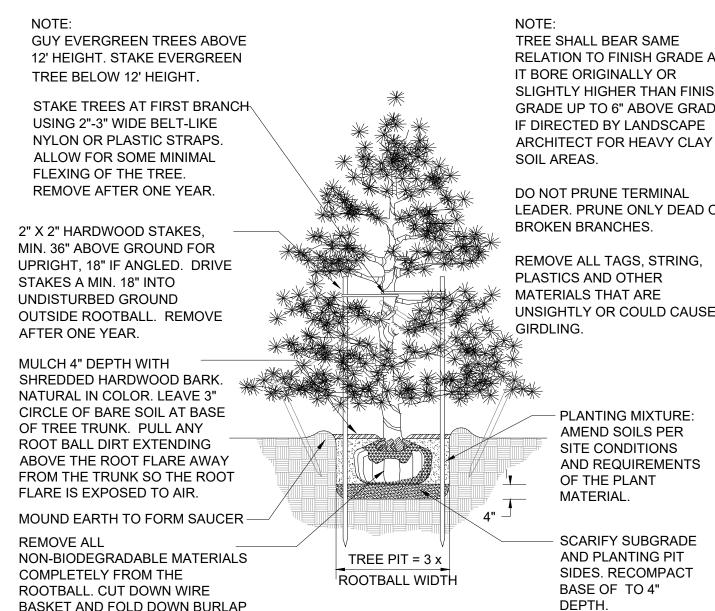


**GUYING DETAIL** 

STAKING DETAIL

# TREE STAKING DETAIL

Not to scale



## EVERGREEN TREE PLANTING DETAIL

BASKET AND FOLD DOWN BURLAP

FROM TOP 1/2 OF THE ROOTBALL.

RELATION TO FINISH GRADE AS SLIGHTLY HIGHER THAN FINISH GRADE UP TO 6" ABOVE GRADE, LEADER. PRUNE ONLY DEAD OR UNSIGHTLY OR COULD CAUSE

MULCH 3" DEPTH WITH BRANCHES. SHREDDED HARDWOOD BARK. NATURAL IN COLOR. PULL BACK 3" FROM TRUNK. PLANTING MIXTURE: AMEND SOILS PER GIRDLING. SITE CONDITIONS AND REQUIREMENTS OF THE PLANT MATERIAL. MOUND EARTH TO FORM SAUCER REMOVE COLLAR OF ALL FIBER -POTS. POTS SHALL BE CUT TO PROVIDE FOR ROOT GROWTH. REMOVE ALL NONORGANIC CONTAINERS COMPLETELY. SCARIFY SUBGRADE REMOVE ALL AND PLANTING PIT NON-BIODEGRADABLE MATERIALS SIDES. RECOMPACT COMPLETELY FROM THE BASE OF TO 4" ROOTBALL. FOLD DOWN BURLAP

# SHRUB PLANTING DETAIL

NOT TO SCALE

FROM TOP  $\frac{1}{3}$  OF THE ROOTBALL

### LANDSCAPE NOTES

- 1. All plants shall be north Midwest American region grown, No. 1 grade plant materials,
- and shall be true to name, free from physical damage and wind burn. 2. Plants shall be full, well-branched, and in healthy vigorous growing
- 3. Plants shall be watered before and after planting is complete.
- 4. All trees must be staked, fertilized and mulched and shall be guaranteed to exhibit a normal growth cycle for at least two (2) full years following
- Township approval. 5. All material shall conform to the guidelines established in the most recent
- edition of the American Standard for Nursery Stock.
- Provide clean backfill soil, using material stockpiled on site. Soil shall be screened and free of any debris, foreign material, and stone.
- 7. "Agriform" tabs or similar slow-release fertilizer shall be added to the planting pits before being backfilled.
- 8. Amended planting mix shall consist of 1/3 screened topsoil, 1/3 sand and 1/3 peat, mixed well and spread to the depth as indicated in planting details.
- 9. All plantings shall be mulched per planting details located on this sheet.
- 10. The Landscape Contractor shall be responsible for all work shown on the
- landscape drawings and specifications. 11. No substitutions or changes of location, or plant types shall be made
- without the approval of the Landscape Architect.
- 12. The Landscape Architect shall be notified of any discrepancies between the plans and field conditions prior to installation.
- 13. The Landscape Contractor shall be responsible for maintaining all plant material in a vertical condition throughout the guaranteed period.
- 14. The Landscape Architect shall have the right, at any stage of the installation, to reject any work or material that does not meet the requirements of the plans and specifications, if requested by owner.
- 15. Contractor shall be responsible for checking plant quantities to ensure quantities on drawings and plant list are the same. In the event of a
- discrepancy, the quantities on the plans shall prevail.
- 16. The Landscape Contractor shall seed and mulch or sod (as indicated on plans) all areas disturbed during construction, throughout the contract limits.
- 17. A pre-emergent weed control agent, "Preen" or equal, shall be applied
- uniformly on top of all mulching in all planting beds. 18. All landscape areas shall be provided with an underground automatic
- 19. Sod shall be two year old "Baron/Cheriadelphi" Kentucky Blue Grass grown in a sod

TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.

PRUNE ONLY DEAD OR BROKEN

REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS THAT ARE **UNSIGHTLY OR COULD CAUSE** 

DEPTH.

Seal:

# Landscape Details

LAND PLANNING / LANDSCAPE ARCHITECTURE

Northville, Michigan 48167

t. 248.467.4668

Project:

7878 M-36

Hamburg Township, Michigan

Prepared for:

Greentech Enginerring 51147 Pontiac Trail Wixom, Michigan 48393 248.668.0700

Revision:	Issued:
Review	August 15, 2022
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Job Number:

22-058

Checked By: Drawn By: jca

Know what's **below**. Call before you dig. Sheet No.



Schedule									
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage
	EXIST	3	EXIST	EXIST	EXIST	EXIST	1642	1	11.3583
	A	3	Lithonia Lighting	WDGE2 LED P3 40K 80CRI TFTM	WDGE2 LED WITH P3 - PERFORMANCE PACKAGE, 4000K, 80CRI, TYPE FORWARD THROW MEDIUM OPTIC	LED	3166	0.9	32.1375

FND. AXLE

Statistics											
Description	Symbol	Avg	Max	Min	Avg/Min	Max/Min					
Grade @ 0'	+	0.1 fc	4.3 fc	0.0 fc	N/A	N/A					
Parking and Drive	Ж	0.9 fc	4.3 fc	0.0 fc	N/A	N/A					
Property Line	+	0.0 fc	0.6 fc	0.0 fc	N/A	N/A					

#### **General Note**

- 1. LUMINAIRE MOUNTING HEIGHT 15' 0"
- 2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' 0"
- 3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

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Plan View Scale - 1" = 20ft

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Designer
DS
Date
08/09/2022
Scale
Not to Scale

**Drawing No.** #22-78764 V1 **1 of 2** 





WDGE2 LED
Architectural Wall Sconce
Precision Refractive Optic







#### Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

# Specifications Depth (D1): 11.5"

### WDGE LED Family Overview

Weight: (without options) 13.5 lbs

Luminaire	A. Carlo	Construction and	C-14 FM DAGE	Committee of the Commit	Approximate Lumens (4000K, 80CRI)							
	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	PO	P1	P2	P3	P4	P5	P6	
WDGE1 LED	Visual Comfort	4W		1774	750	1,200	2,000	677		-	8.553	
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight		1,200	2,000	3,000	4,500	6,000	-	
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200		-	
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight		7,500	8,500	10,000	12,000		-	
WDGE4 LED	Precision Refractive			Standalone / nLight		12,000	16,000	18,000	20,000	22,000	25,000	

#### EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting	
WDGE2 LED	P0 <sup>1</sup> P1 <sup>2</sup> P2 <sup>2</sup> P3 <sup>2</sup> P4 <sup>2</sup>	27K 2700K 30K 3000K 40K 4000K 50K 5000K AMB <sup>3</sup> Amber	70CRI <sup>a</sup> 80CRI LW <sup>3</sup> Limited Wavelength	T1S Type I Short T2M Type II Medium T3M Type II Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT 347 <sup>5</sup> 480 <sup>5</sup>	Shipped included  SRM Surface mounting bracket  ICW Indirect Canopy/Ceiling Washer bracket (dry/ damp locations only)*	Shipped separately  AWS 3/8inch Architectural wall spacer  PBBW S urface-mounted back box (top, let right conduit entry). Use when then is no junction box available.

Options				Finish	
E10WH E20WC PE' DMG <sup>1</sup>	Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C min) Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min) Photocell, Button Type 0-10V dimming wires pulled outside fixture (for use with	Standalone S PIR PIRH PIR1FG3V	Sensors/Controls  Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.  Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching  Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-	DDBXD DBLXD DNAXD DWHXD DSSXD DDBTXD	Dark bronze Black Natural aluminum White Sandstone Textured dark bronze
BCE	an external control, ordered separately)  Bottom conduit entry for back box (PBBW). Total of 4 entry points.	PIRH1FG3V	programmed for dusk to dawn operation.  Bi-level (100/35%) motion sensor for 15-30'mounting heights with photocell pre- programmed for dusk to dawn operation.	DBLBXD DNATXD	Textured black Textured natural aluminum
BAA	Buy America(n) Act Compliant	NLTAIR2 PIR NLTAIR2 PIRH	ensors/Controls  nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.  nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.  t of box functionality.	DSSTXD	Textured white Textured sandstone

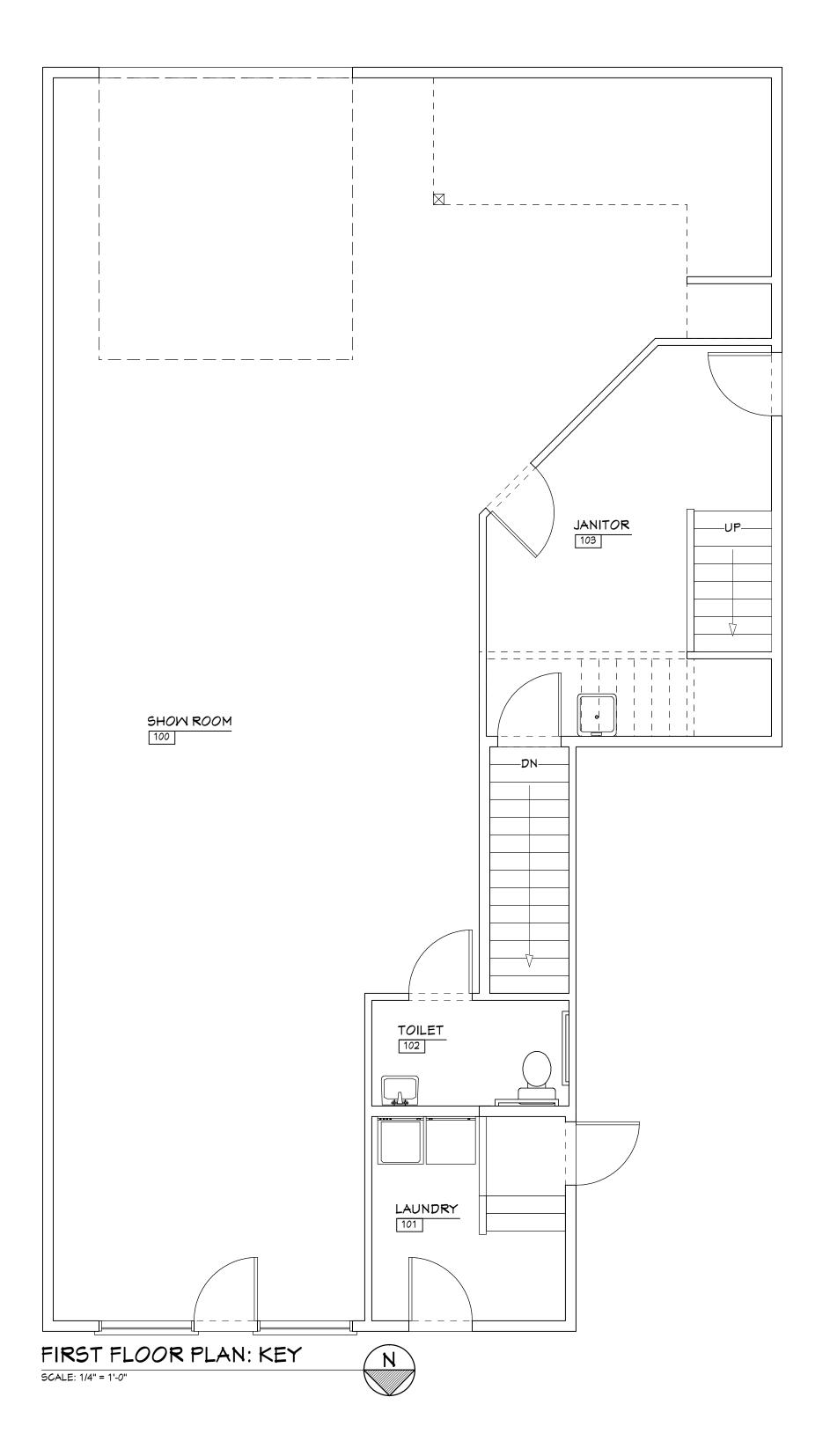


COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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Schedule									
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	IIIANTIACC	Wattage
	<b>EXIST</b>	3	EXIST	EXIST	EXIST	EXIST	1642	1	11.3583
	A	3	Lithonia Lighting	WDGE2 LED P3 40K 80CRI TFTM	WDGE2 LED WITH P3 - PERFORMANCE PACKAGE, 4000K, 80CRI, TYPE FORWARD THROW MEDIUM OPTIC	LED	3166	0.9	32.1375

08/09/2022 Scale Not to Scale Drawing No. #22-78764 V1 2 of 2



#### DRAWING INDEX

CO.1 TITLE SHEET, CODE DATA, DRAWING INDEX, SITE LOCATION, KEY PLAN

A1.1 FIRST LEVEL PLAN: EXISTING, FIRST LEVEL PLAN: DEMO, GENERAL DEMOLITION NOTES

A1.2 FIRST LEVEL PLAN: NEW, LEGENDS, TYPICAL WALL

SECTION, PLAN NOTES AND SPECS A1.3 DOOR AND FRAME SCHEDULE, ROOM FINISH SCHEDULE,

DOOR AND FRAME TYPES, STANDARD ADA MOUNTING HEIGHTS, PLUMBING DETAILS, TOILER ROOM PLAN, TOILET ROOM ELEVATIONS

P1.1 FIRST FLOOR PLAN: SANITARY, FIRST FLOOR PLAN: PLUMBING, GENERAL PLUMBING NOTES

E1.1 FIRST FLOOR PLAN: ELECTRICAL, ELECTRICAL PLAN NOTES, LEGEND

> NOTE: EXISTING HVAC TO REMAIN AS IS, SUB CONTRACTOR TO ADJUST AS NEEDED AND SUBMIT ANY REQUIRED SPECS TO THE BUILDING DEPARTMENT. HVAC PLAN IS NOT A PART OF THIS PLAN SET

The drawings listed above have been prepared under the supervision of Liz Harrow and constitute the full set of drawings that are the responsibility of Liz Harrow, Architect



ZONING

LOCAL AGENCY

MECHANICAL CODE,

PLUMBING CODE

SEAL AND SIGNATURE OF DESIGN PROFESSIONAL OF THIS PLAN SET

LIZ HARROW, ARCHITECT 1147 DAISY LANE EAST LANSING, MI. 48823 PH# 517-803-8874

### CODE AUTHORITIES HAVING JURISDICTION

Livingston County **Building Department** 517- 546- 3830 Livingston County

**Building Department** 517- 546- 3830 BARRIER FREE DESIGN Livingston County **Building Department** 517- 546- 3830 Livingston County

**Building Department** 517- 546- 3830 Livingston County **Building Department** 517- 546- 3830

ELECTRICAL CODE **Building Department** 517-546-3830 FIRE ALARM & FIRE Hamburg Township Fire Department PROTECTION 810- 222- 1105 Livingston County HEALTH DEPARTMENT

2015 Michigan Building Code, Chapter 11 ICC A117.1-2009 & 2010 ADA

Michigan Mechanical Code 2015

Michigan Plumbing Code 2015

NEC 2017 (State of Michigan Electrical Code) Livingston County ASHRAE 90.1: 2010: In Compliance

MBC 2015

### OTHER AUTHORITIES HAVING JURISDICTION

Health Department

517-546-9850

Mest Side Mater System MATER Water Department 517- 485- 5470 Consumers Energy ELECTRIC Electric Services 517-374-2320 GAS Consumers Energy Gas Engineering 517- 374- 2320 Ingham County Drain Commission STORM SEWERS 517-676-8395 Ingham County SANITARY SEMERS

Drain Commission 517-676-8395 ROADWAY Ingham County Road Commission 517-676-9722

#### GENERAL BUILDING REQUIREMENTS

Use Group: B
 Construction Type: 5B
 Square Footage: 1,776

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 www.missdig.org

### UTILITY WARNING

Underground utility locations, as shown on the plan, were obtained from utility owners and were not field located. A minimum of 3 working days prior to beginning construction, the contractor shall notify "MISS DIG" and have all underground utilities staked before any work may begin. The contractor shall be responsible for the protection of all utilities that may interfere with construction. Protection of



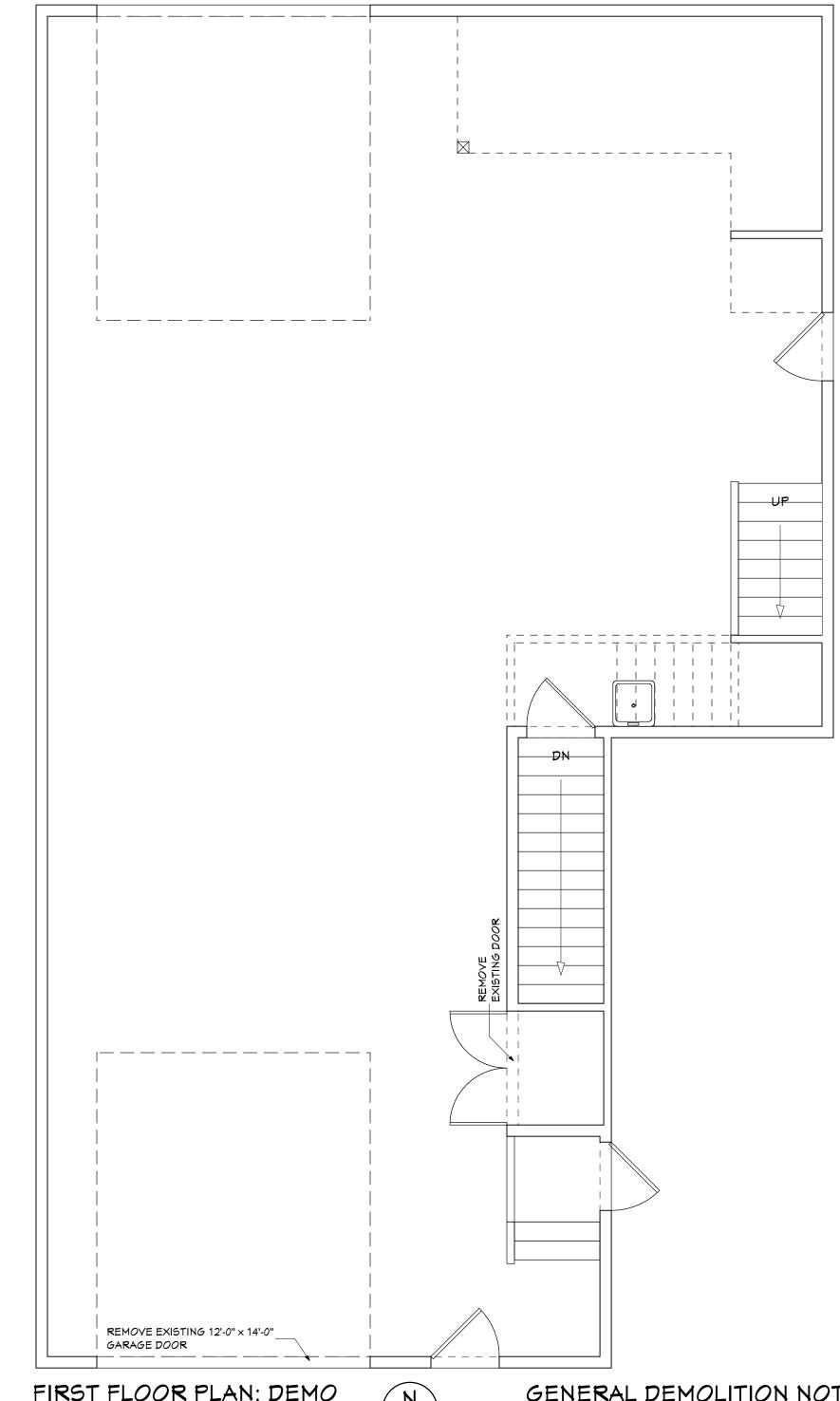
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ARCHITE

PLOT DATE: 06- 20- 2022 08-06-2022

PROJECT NUMBER:

FIRST FLOOR PLAN: EXISTING N
SCALE: 1/4" = 1'-0"



FIRST FLOOR PLAN: DEMO SCALE: 1/4" = 1'-0"

EXISTING DOOR (TO REMOVE)

EXISTING DOOR (TO REMAIN)

GENERAL DEMOLITION NOTES

1. All items of demolition with salvageable value shall be placed in owner's storage unless instructed otherwise.

2. Coordinate all demolition work with individual trades.

3. The structural integrity of the building shall not be altered.

4. The contractor shall field verify all conditions for removal of all components necessary for coordination with new installations. These drawings are for general demolition only and are not intended to be shop drawings or "as built" drawings. All work that interferes with new construction, whether shown or not shown, shall be removed or relocated as directed by the owner or owner's representative.

5. Provide dust protection to all occupied areas, especially those containing computer and/ or electronic systems.

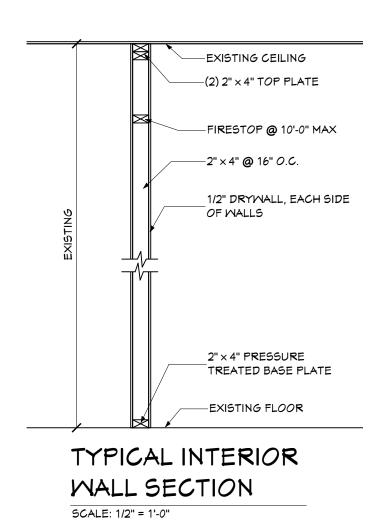
WALLS TO BE REMOVED

EXISTING WALLS TO REMAIN

PLOT DATE: 06-20-2022

PROJECT NUMBER:

08-06-2022



#### GENERAL FIRESTOPPING NOTES

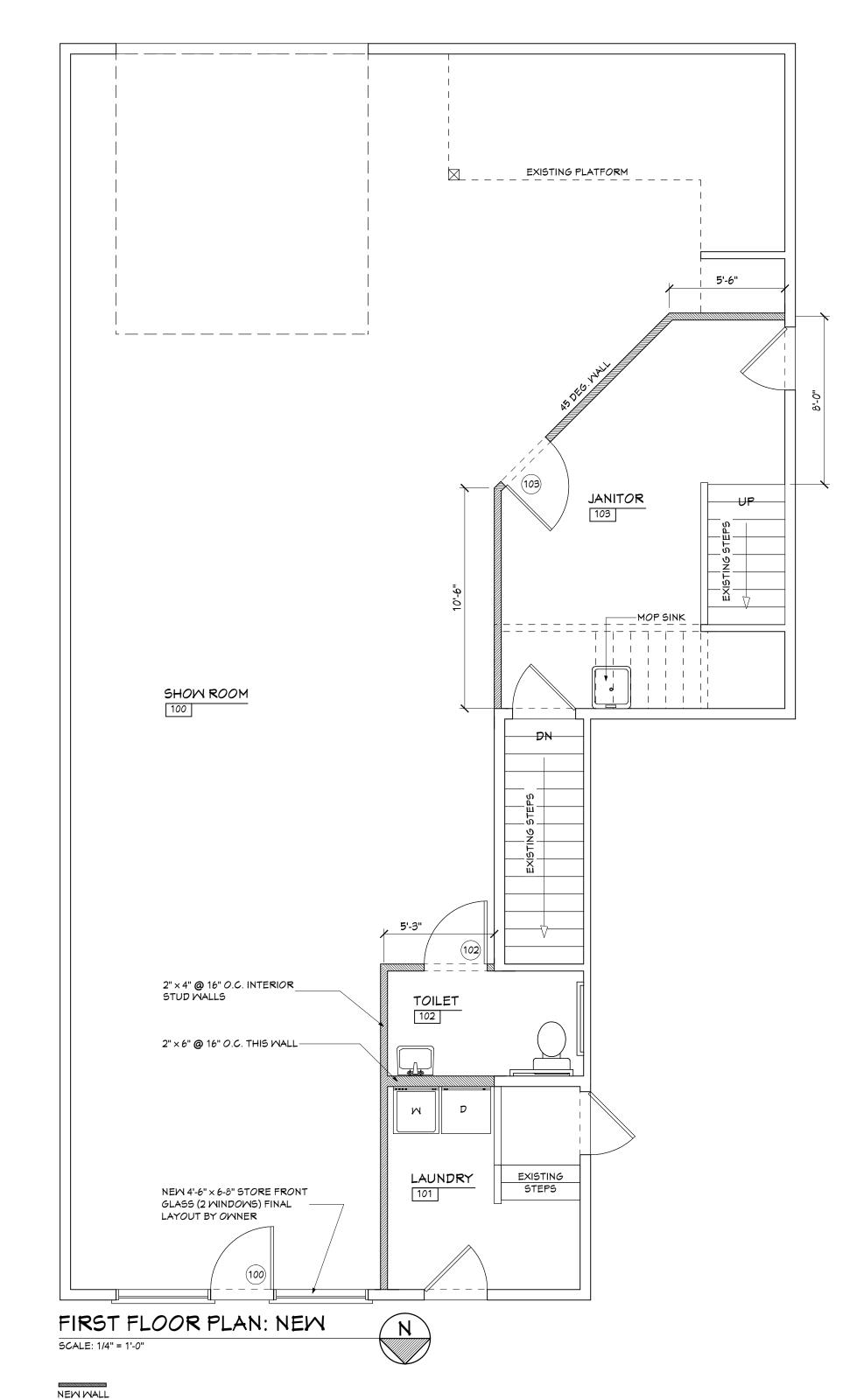
- Provide Firestopping systems at all membrane and through penetrations of rated wall of floor/ceiling systems. Contract with a single manufacturer for firestopping systems. Fire stopping manufacturer shall provide submittal of system(s), and provide for on site instruction and inspection of installation.
- 2. All assemblies shall have an "F" rating that matches the hourly fire rating.
- 3. Through Penetration Protection System = TPPS
- 4. For installations or configurations not covered by UL or FM design number, a recommendation shall be obtained from the manufacturer, in writing, for the specific application, signed by a certified engineer.
- 5. All materials shall be asbestos free and non-carcinogenic.
- 6. Firestop materials shall not contain flammable or toxic solvents and shall not produce toxic or flammable outgassing during the drying or curing process.
- 7. Firestopping materials and systems must be intumescent or be capable of filling through openings created by the burning or melting of combustible pipes, pipe insulation materials or cable jacketing and the deflection of sheet metal due to thermal expansion.
- 8. Firestop sealants must be elastomeric or flexible to allow for normal pipe movement.
- Do not proceed to enclose firestopping with other construction until local building inspectors have inspected the work and have given approval to close the work.
- 10. Holes cut for penetrations shall be within allowable limits for TTPS. Typically openings should allow for caulk or sealant beads around opening of at least 1/4" but no more than 1/2". Verify with each TTPS and manufacturer's technical representative.
- After installation, properly identify all firestop systems. Identification shall occur at location where system has been installed and shall include:
  A. Identify the firestopping system that has been installed as being a "Rated Penetration Firestop System Do Nor Disturb"
  B. Use label minimum 3" x 5", yellow and black OSHA colors with manufacturer, building owner representative and/or contractor clearly identified.
- 12. Penetrations of concrete or masonry wall assemblies by 6" maximum diameter, non-combustible pipe, conduit, or steel jacketed wires, in openings less than 144 square inches may be protected by filling the complete wall thickness, for the total perimeter of opening, with concrete, grout, or mortar.
- 13. All non rated full height walls shall have all voids firestopped to resist the passage of smoke.

#### SPECIFICATIONS

- All door openings shall be protected with 1¾" flush solid core wood doors or 20-minute labeled fire-rated doors in smoke-tight, substantial frames and equipped with approved self-closing devices and non-locking-against-egress positive latching hardware.
- 2 Exit doors and all egress doors shall be side-hinged and equipped with approved hardware.
- 3 Storage rooms larger than 100 square feet require 1-hour fire resistive construction, including a minimum of 45-minute rated fire doors and frame assemblies equipped with an approved self-closing device and positive latching hardware. "B" labeled doors are acceptable.
- 4 Storage rooms 100 square feet or smaller shall be of 1-hour fire resistive construction. All door openings shall be protected with a minimum of 1¾" flush solid core wood doors or 20-minute labeled fire doors and frame assemblies equipped with an approved self-closing device and positive latching hardware.
- Heating shall be by a central heating plant or an approved permanently installed electrical heating system. Heating plants located on the same floor as the children shall be in 1-hour fire resistive enclosures including a minimum of 45-minute rated fire doors and frame assemblies with approved self-closing devices and positive latching hardware in any interior openings. Door openings for heat plant enclosures not located on the same floor as the children may have 134" flush solid wood core doors or 20-minute labeled fire doors with positive latching hardware and approved self-closing devices. Air for proper combustion shall be provided directly from the outside at a minimum rate of 1 square inch per 4,000 BTUs input and through a permanently open louver or metal duct. "B" labeled doors are acceptable.

### PLAN NOTES

- Contractors shall review and verify all dimensions and shall notify Architect of any discrepencies.
- 2. The Owner is responsible for obtaining proper building permit from the local authorities.
- 3. Applicable federal, state or local acts, codes, laws, ordinances, and regulations, etc. shall be considered as part of the requirements for this project and shall take precendent over these drawings and specifications. Advise the Architect of potential conflicts between these drawings and possible interpretations of codes, ordinances and regulations.
- 4. All mechanical and electrical work shall be completed by licensed Contractors who shall obtain the proper permits from local authorities.
- 5. The contractor shall assume that he may be required to provide the highest quality of work and the greatest quantity of materials required for a complete project conforming to all noted codes, whether or not such materials required for such conformance are indicated in these plans.
- 6. CONSTRUCTION METHODS; The Architect is not responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions since these are solely the contractors responsibility.
- 7. OWNER- AUTHORIZED CHANGES; If the owner authorizes deviations/ recorded or unrecorded; from the documents prepared by the Architect and Consultants without written agreement of the Architect, the owner shall indemnify and hold harmless the Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys fees, arising out of or resulting in whole or in part from such deviations, regardless of whether or not such claim, damage, loss or expense is caused by a party indemnified hereunder.
- 8. INTERIOR WALL, TYPE I:
- Dimensioned at 5" nominal, 5/8" gypsum drywall each side of 2x4 wood studs at 1'-4" on center.
- 9. Provide nonabsorbant finish and backing at Toilet Room walls and floors. Provide 4" base and water resistant gypsum drywall on surfaces adjacent to water closets, lavatories, mop basin and drinking fountains.
- All wood in contact with earth, concrete, concrete masonry, clay masonry, or exposed to the weather shall be treated to resist decay.
- 11. Exit doors shall remain unlocked during normal occupancy.
- 12. The address (street number) location shall be shown on the building. Six-inch-tall numbers visible from the street shall be required. The address location is subject to approval of the





HARROM, ARCHITE

PLOT DATE: 06- 20- 2022 08- 06- 2022

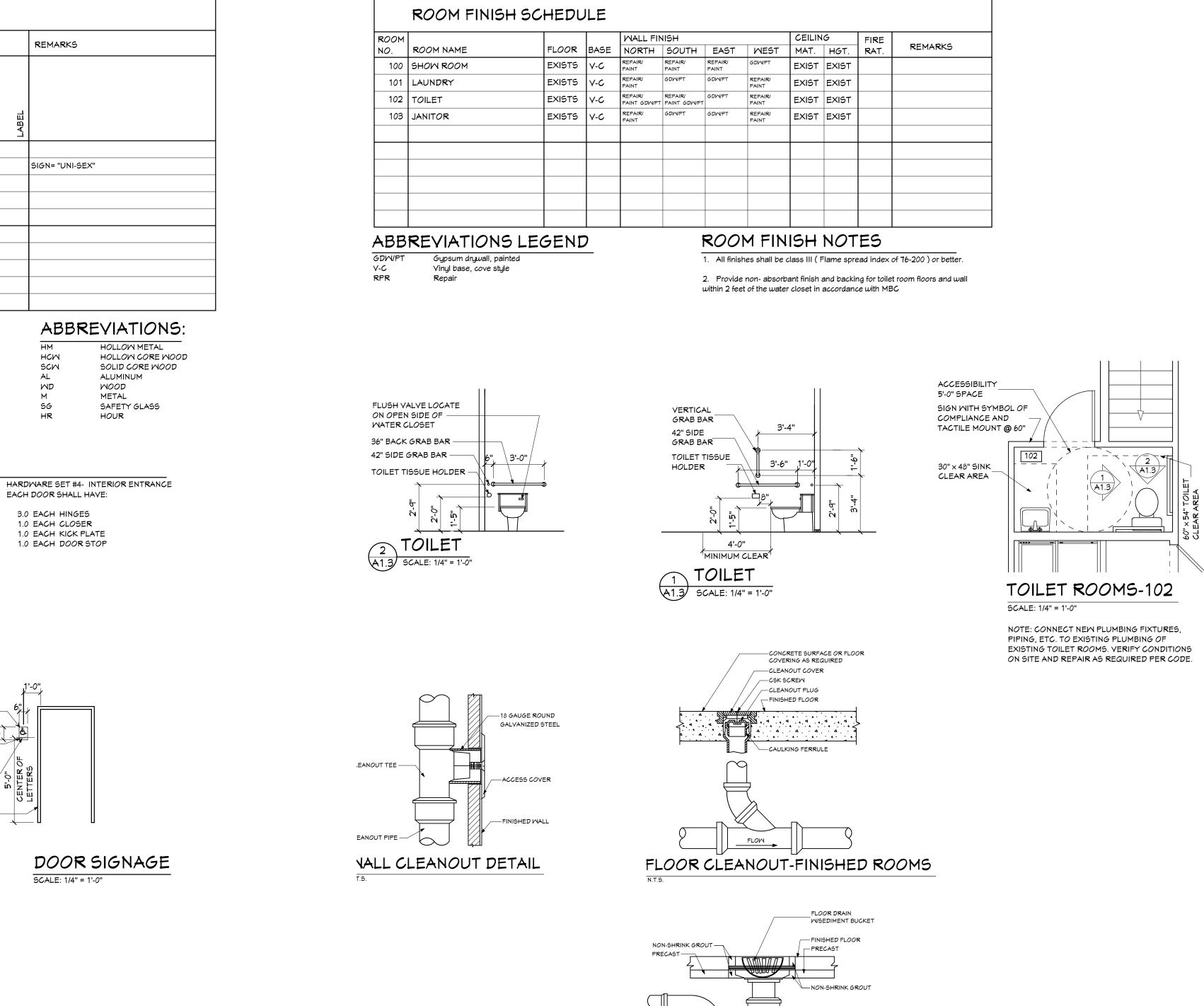
2283-22
PROJECT NUMBER

A1.2

PLOT DATE: 06-20-2022 08-06-2022

2283-22 PROJECT NUMBER:

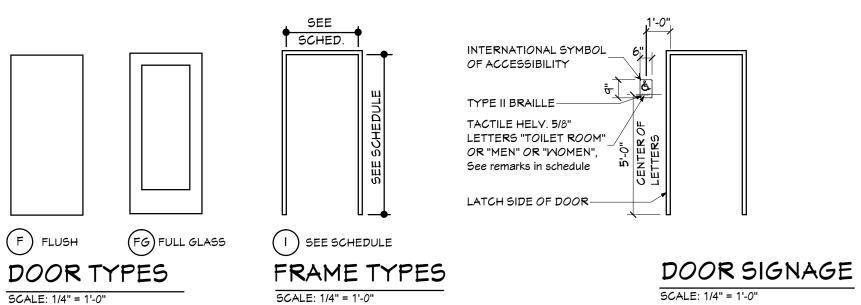
PAGE NUMBER:



- "P" TRAP

FLOOR DRAIN DETAIL

SEE PLANS FOR SIZES



HARDWARE SET #2- INTERIOR

1.0 EACH LOCKSET-LEVER HANDLE

1.0 EACH KICK PLATE (OWNER'S OPTION)

1.0 EACH PRIVACY LATCHSET- LEVER HANDLE

EACH DOOR SHALL HAVE:

3.0 EACH HINGES

1.0 EACH CLOSER

1.0 EACH DOOR STOP

EACH DOOR SHALL HAVE:

3.0 EACH HINGES

1.0 EACH CLOSER

1.0 EACH DOOR STOP

HARDWARE SET #3- TOILET ROOMS

FRAME

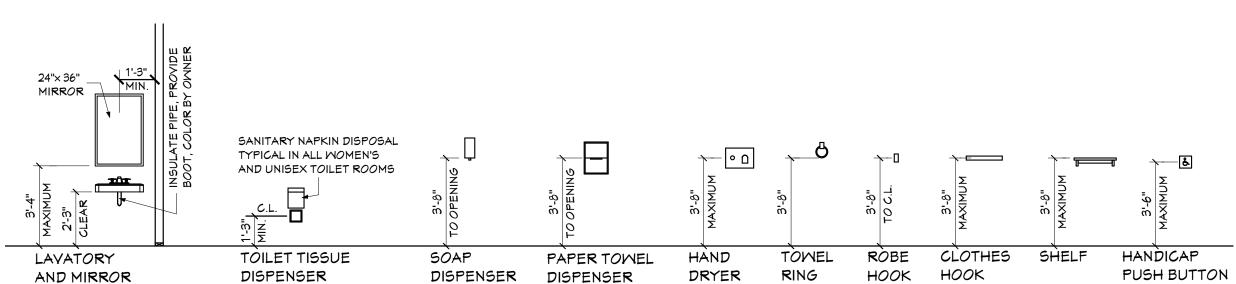
REMARKS

SIGN= "UNI-SEX"

HCM

SCM

3.0 EACH HINGES 1.0 EACH CLOSER



STANDARD ADA/BF MOUNTING HEIGHTS SCALE: 1/4" = 1'-0" IF APPLICABLE

DOOR & FRAME SCHEDULE

3068

3068

3068

DOOR SCHEDULE NOTES:

2. Door type column letter refers to door type drawings show.

4. Label indications refer to fire- resistive assembly

5. All doors are 1 3/4" thick unless noted otherwise

HARDWARE SET #1- EXTERIOR ENTRANCE

1.0 EACH LOCKSET - LEVER HANDLE

EACH DOOR SHALL HAVE:

3.0 EACH HINGES

1.0 EACH CLOSER

1.0 EACH WEATHERSEAL

1.0 EACH DOOR SWEEP

1.0 EACH THRESHOLD

1.0 EACH KICK PLATE

1.0 EACH DOOR STOP

HARDWARE SCHEDULE

1,0 EACH HANDICAP ELECTRIC DOOR OPENER

represents  $3'-0" \times 6'-8"$  high door.

1. The first two digits of the door size refers to the door width in feet and inches,

the second two digits refer to the door height in feet and inches. (i.e. 3068

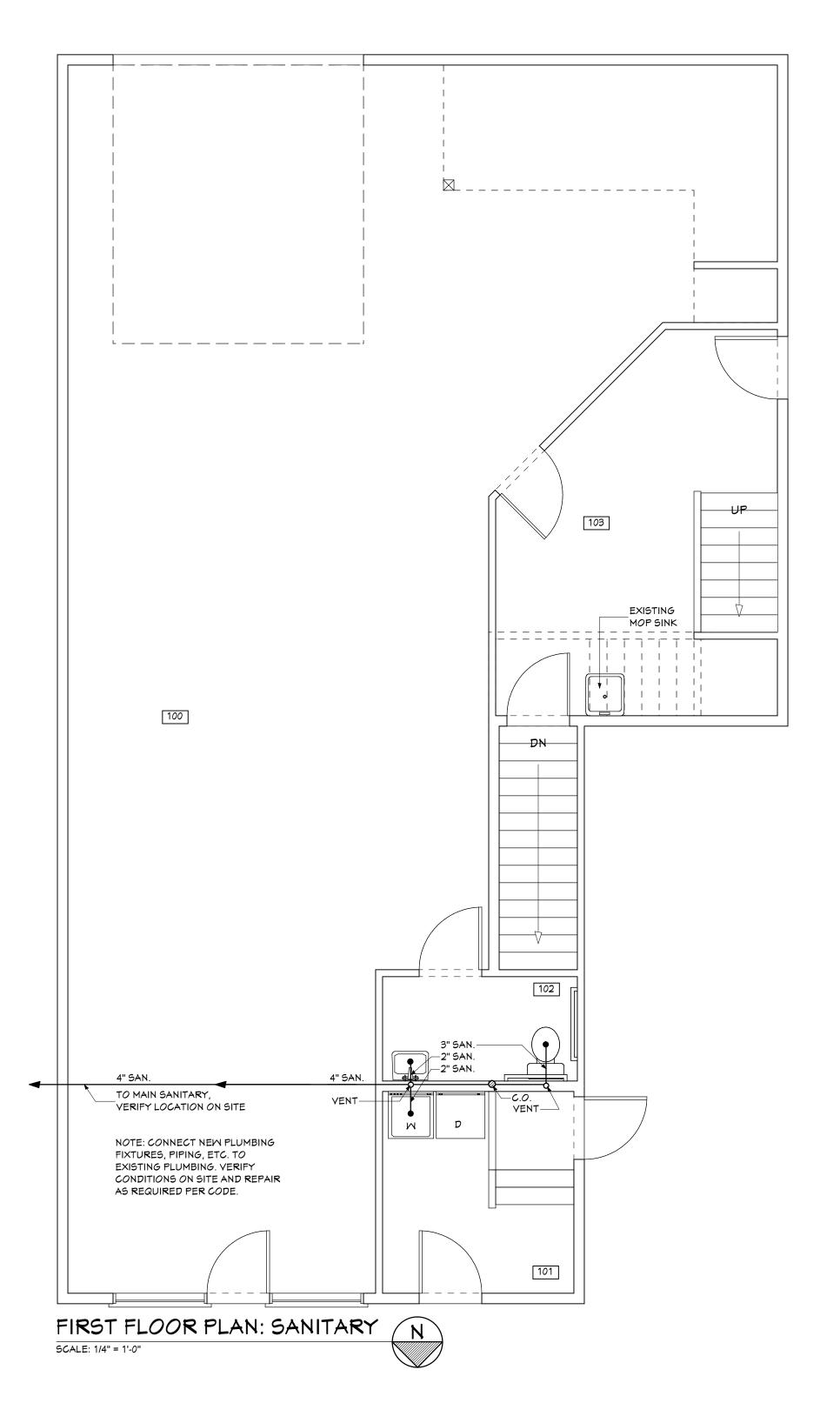
3. Frame type roman numerals refer to door frame types drawings shown.

FG M

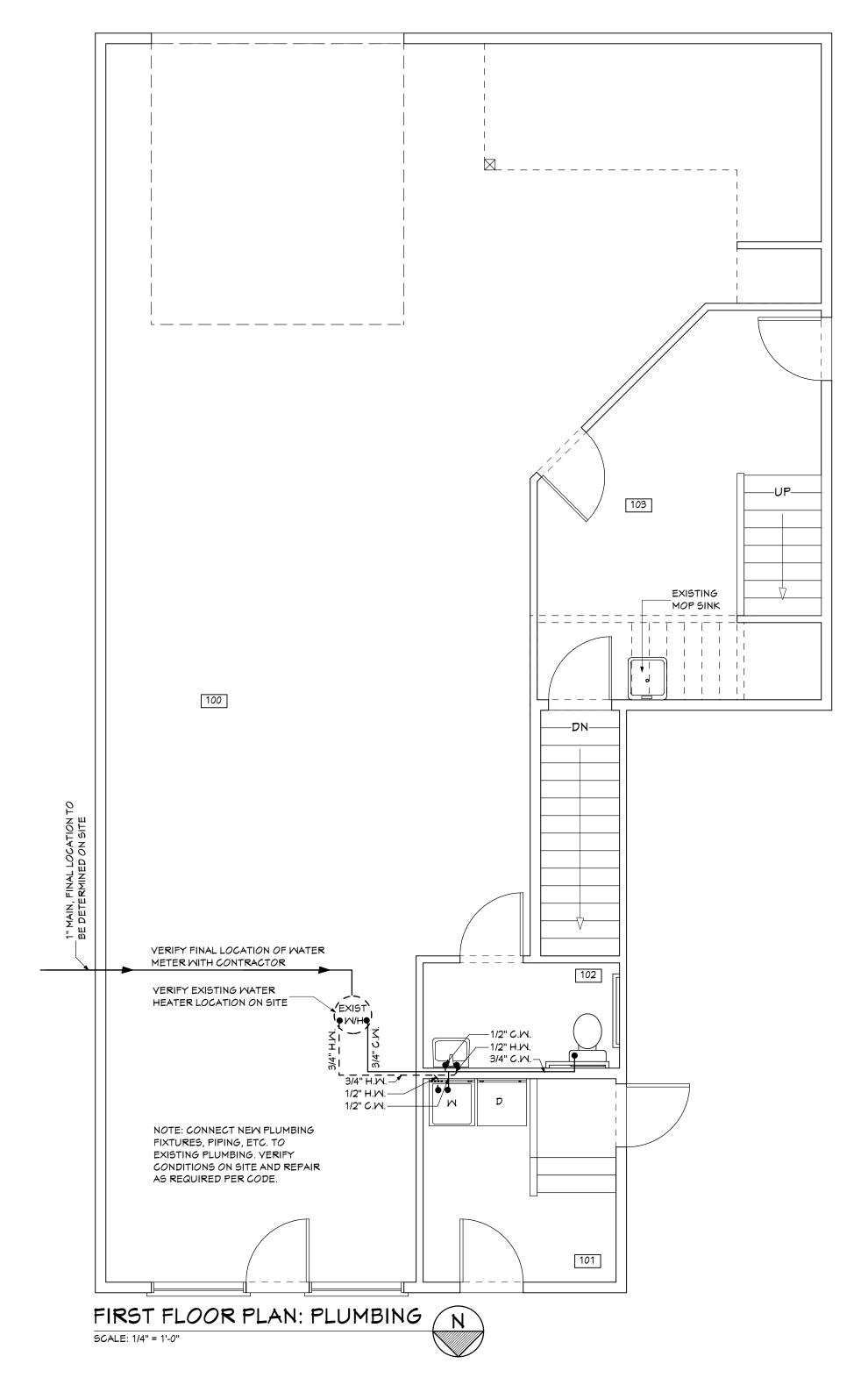
F SCM

F SCW

DOOR







#### GENERAL PLUMBING NOTES

- 1) Pipe specifications to be provided by plumbing contractor and are not a part of this plan set
- 2) The plumbing permit or a copy shall be kept on the site of work until the completion of the project
- 3) All water fed equipment shall be protected with an approved back flow preventor
- 5) Owner shall provide information for water heater sizing
- 6) Provide vents through ceiling if possible, provide AAV vents if required
- 7) Main vent shall be determined by plumbing contractor. Provide vent per code

TO 1 9

ARCHITEC

**REMODEL**1878 E MICHIGAN 36
HAMBURG, MICHIGAN 4813

PLOT DATE: 06- 20- 2022 08- 06- 2022

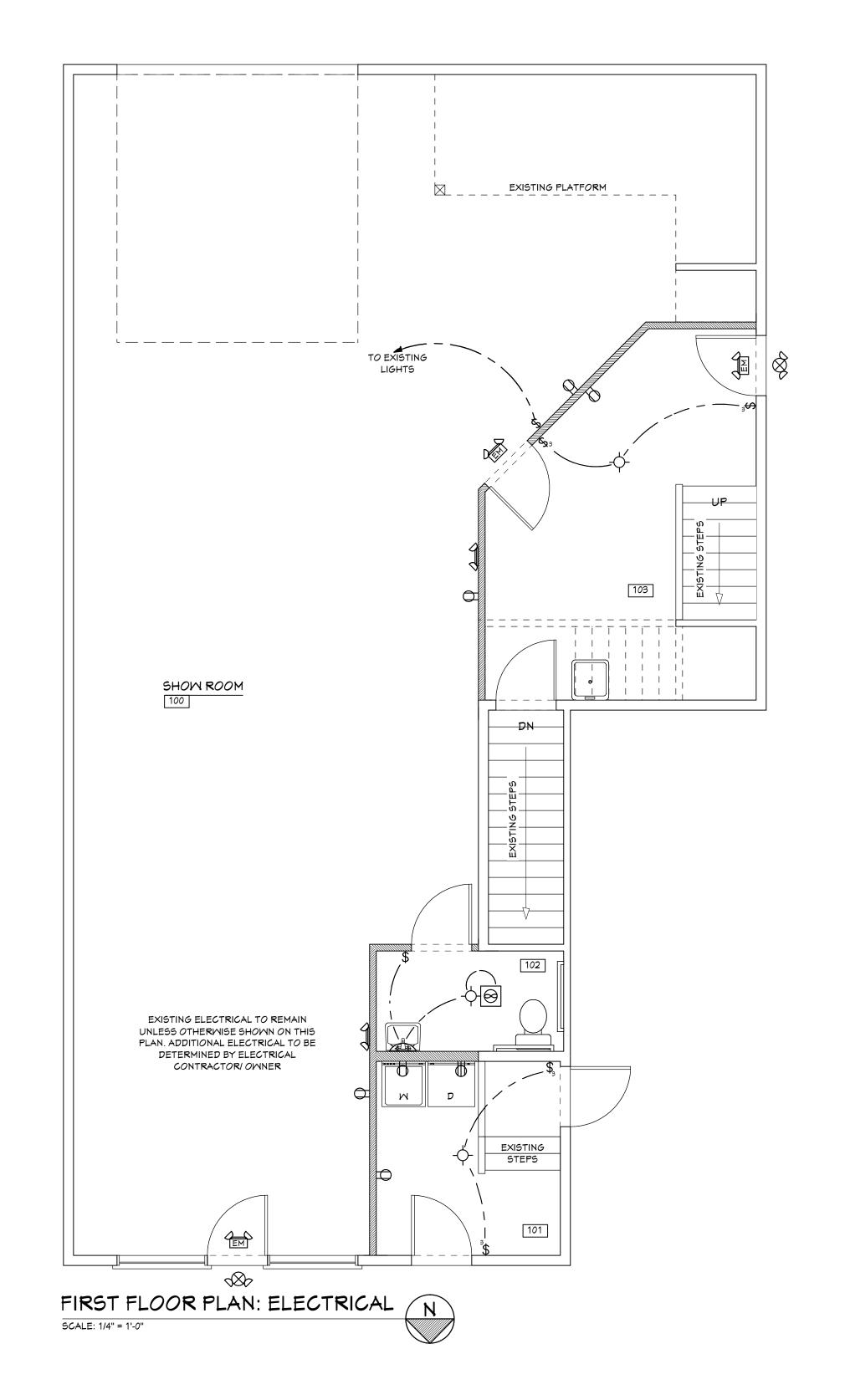
2283-22 PROJECT NUMBER:

P1.1

- All work shall be done in acordance with the latest edition of the National Electrical Code (NEC), and all state and local codes.
- Coordinate the installation of all electrical equipment and connections with architectural and mechanical plans and equipment drawings.
- All conductors shall be copper, aluminum conductors will not be acceptable.
- Motor loads which are less than 6.0 amps shall be protected by a
   15 amp circuit breaker.
- 5. Final connection to items subject to vibration shall be made with flexible metallic or liquidtite flexible metallic conduit. Install liquidtite flexible conduit in wet, damp, or corrosive atmosphere locations. Flexible metallic conduit or liquidtite flexible metallic conduit will not be approved for use as a grounding conductor. A seperate green ground wire shall be installed in all flexible metallic conduit and liquidtite flexible metallic conduit.
- All disconnect switches shall be standard duty type. Disconnect switches installed indoors shall be NEMA type I. Weatherproof disconnect switches shall be NEMA type 3R.
- 7. All circuit breakers controlling or switching light fixtures shall be "SMD" rated.
  All circuit breakers controlling HVAC equipment shall be "HACR" rated.
- All receptacles installed on 15 amp and 20 amp circuits shall be of the grounding type.
- 9. All fractional horsepower motor starters shall consist of a horsepower rated toggle switch, thermal overload and red pilot light in a common enclosure. Enclosure shall be NEMA type I for indoor locations and NEMA type 3R for outdoor locations.
- 10. Back to back or through wall boxes shall not be used. Boxes installed on opposite sides of a fire rated partition shall be separated by 24" min.
- All conduits run in floor slab shall be spaced a minimum of one conduit diameter apart except where they rise to a panel.
- 12. All device mountings heights shall comply with the State of Michigan barrier
- 13. Electrical and data lines to be verified with lessee before construction begins
- 14. Battery back-up exit and emergency lights shall be fed from the same circuit as normal lighting in their respective areas and be connected ahead of any local switches. Provide power for exterior signs
- 15. Exit signs shall be internally or externally illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment, or an on-site generator.
- All detectors shall be installed and maintained in operable condition per their manufacturer's recommendations.
- Multi-purpose fire extinguishers with a minimum 2A-10BC classification shall be installed in or adjacent to the door of the heat plant room.

### FIXTURE LEGEND

LIGHT SMITCH	\$ \$3	\$4
220 OUTLET	$\Phi$	
DUPLEX OUTLET	Ρ	
GROUND FAULT INTERUPT OUTLET	Perci	
EMERGENCY EXIT LIGHT	<i>4</i> ⊗¢	
EMERGENCY EGRESS LIGHT	EM	
EMERGENCY FLOOD LIGHT	<u></u>	
EXTERIOR FLOOD LIGHT	<b>@</b>	
LUMINATED EXIT SIGN	-♦→	
EXHAUST FAN	$\Theta$	
LED LIGHT FIXTURE	<b>-</b> ф-	



RROM, ARCHITEC 1147 Daisy Lane East Lansing, MI 48823

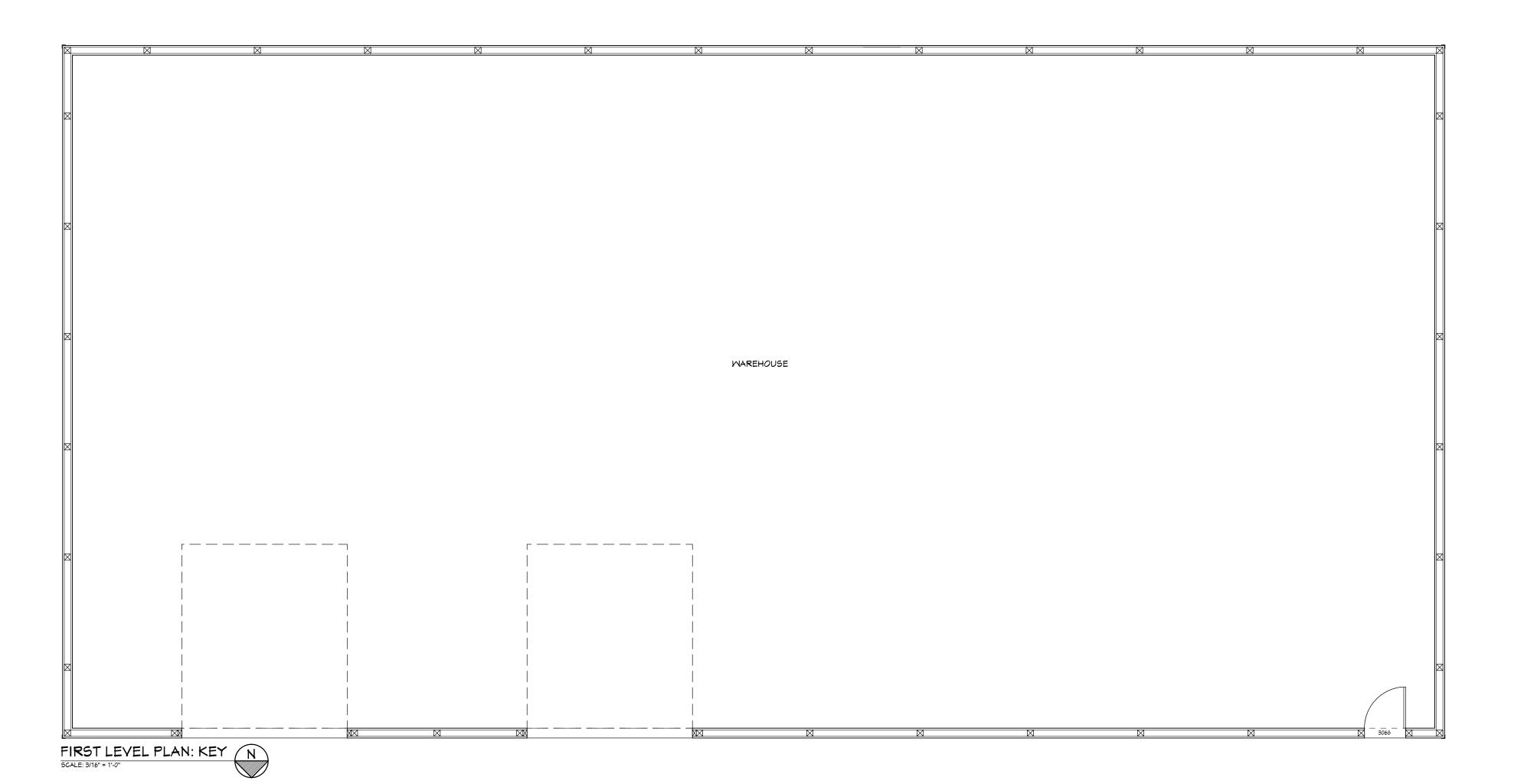
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PET DEPOT

PLOT DATE: 06- 20- 2022 08- 06- 2022

2283-22 PROJECT NUMBER:

E1.1



#### DRAWING INDEX

CO.1 TITLE SHEET, CODE DATA, DRAWING INDEX, SITE LOCATION, KEY PLAN

A1.1 FIRST LEVEL PLAN, PLAN NOTES, GENERAL

FIRESTOPPING NOTES, SPECS

51.1 FOUNDATION PLAN, GENERAL FOUNDATION PLAN NOTES

S1.2 EXTERIOR ELEVATIONS

51.3 EXTERIOR ELEVATIONS, 3D OVERHEAD VIEWS, MALL SECTION

S1.4 ROOF PLAN, GENERAL FRAMING NOTES, ROOF FRAMING NOTES

E1.1 FIRST LEVEL PLAN: ELECTRICAL/ MECHANICAL, FIXTURE LEGEND, GENERAL ELECTRICAL AND MECHANICAL PLAN NOTES

The drawings listed above have been prepared under the supervision of Liz Harrow and constitute the full set of drawings that are the responsibility of Liz Harrow, Architect



ZONING

LOCAL AGENCY

BARRIER FREE DESIGN

MECHANICAL CODE,

PLUMBING CODE

SEAL AND SIGNATURE OF DESIGN PROFESSIONAL OF THIS PLAN SET

LIZ HARROW, ARCHITECT 1147 DAISY LANE EAST LANSING, MI. 48823 PH# 517-803-8874

#### CODE AUTHORITIES HAVING JURISDICTION

Livingston County **Building Department** 517- 546- 3830

Livingston County **Building Department** 517- 546- 3830

Livingston County **Building Department** 517- 546- 3830 Livingston County **Building Department** 

517- 546- 3830 Livingston County **Building Department** 517- 546- 3830 Livingston County

517-546-9850

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2015 Michigan Building Code, Chapter 11 ICC A117.1-2009 & 2010 ADA Michigan Mechanical Code 2015

Michigan Plumbing Code 2015

NEC 2017 (State of Michigan Electrical Code) ASHRAE 90.1: 2010: In Compliance

MBC 2015

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West Side Water System MATER Water Department 517- 485- 5470 Consumers Energy ELECTRIC Electric Services 517-374-2320 GAS Consumers Energy Gas Engineering 517- 374- 2320 STORM SEWERS Ingham County

Drain Commission 517-676-8395 Ingham County SANITARY SEWERS Drain Commission 517-676-8395 Ingham County Road Commission 517- 676- 9722 ROADWAY

#### GENERAL BUILDING REQUIREMENTS

Use Group: S1
 Construction Type: 5B
 Square Footage: 5,000
 Occupancy: 200 S.F. per person = 25 Occupants max

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171

www.missdig.org

# UTILITY WARNING

Underground utility locations, as shown on the plan, were obtained from utility owners and were not field located. A minimum of 3 working days prior to beginning construction, the contractor shall notify "MISS DIG" and have all underground utilities staked before any work may begin. The contractor shall be responsible for the protection of all utilities that may interfere with construction. Protection of utilities shall be incidental to construction.



SITE LOCATION MAP

ARCHITE RROM,

<u>Z</u>

CARPET DEPOT
NAREHOUSE
1878 E MICHIGAN 36
HAMBURG, MICHIGAN 48139

PLOT DATE: 07- 20- 2022 07-21-2022 08-06-2022

PROJECT NUMBER:

#### PLAN NOTES

- 1. Contractors shall review and verify all dimensions and shall notify Architect of any discrepencies.
- 2. The Owner is responsible for obtaining proper building permit from the local authorities.
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- 6. CONSTRUCTION METHODS; The Architect is not responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions since these are solely the contractors responsibility.
- 7. OWNER- AUTHORIZED CHANGES; If the owner authorizes deviations/ recorded or unrecorded; from the documents prepared by the Architect and Consultants without written agreement of the Architect, the owner shall indemnify and hold harmless the Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys fees, arising out of or resulting in whole or in part from such deviations, regardless of whether or not such claim, damage, loss or expense is caused by a party indemnified hereunder.
- 8. INTERIOR WALL, TYPE I:
- Dimensioned at 5" nominal, 5/8" gypsum drywall each side of 2x4 wood studs at 1'-4" on center.
- 9. Provide nonabsorbant finish and backing at Toilet Room walls and floors. Provide 4" base and water resistant gypsum drywall on surfaces adjacent to water closets, lavatories, mop basin and drinking fountains.
- 10. All wood in contact with earth, concrete, concrete masonry, clay masonry, or exposed to the weather shall be treated to resist decay.
- 11. Exit doors shall remain unlocked during normal occupancy.
- 12. The address (street number) location shall be shown on the building. Six-inch-tall numbers visible from the street shall be required. The address location is subject to approval of the

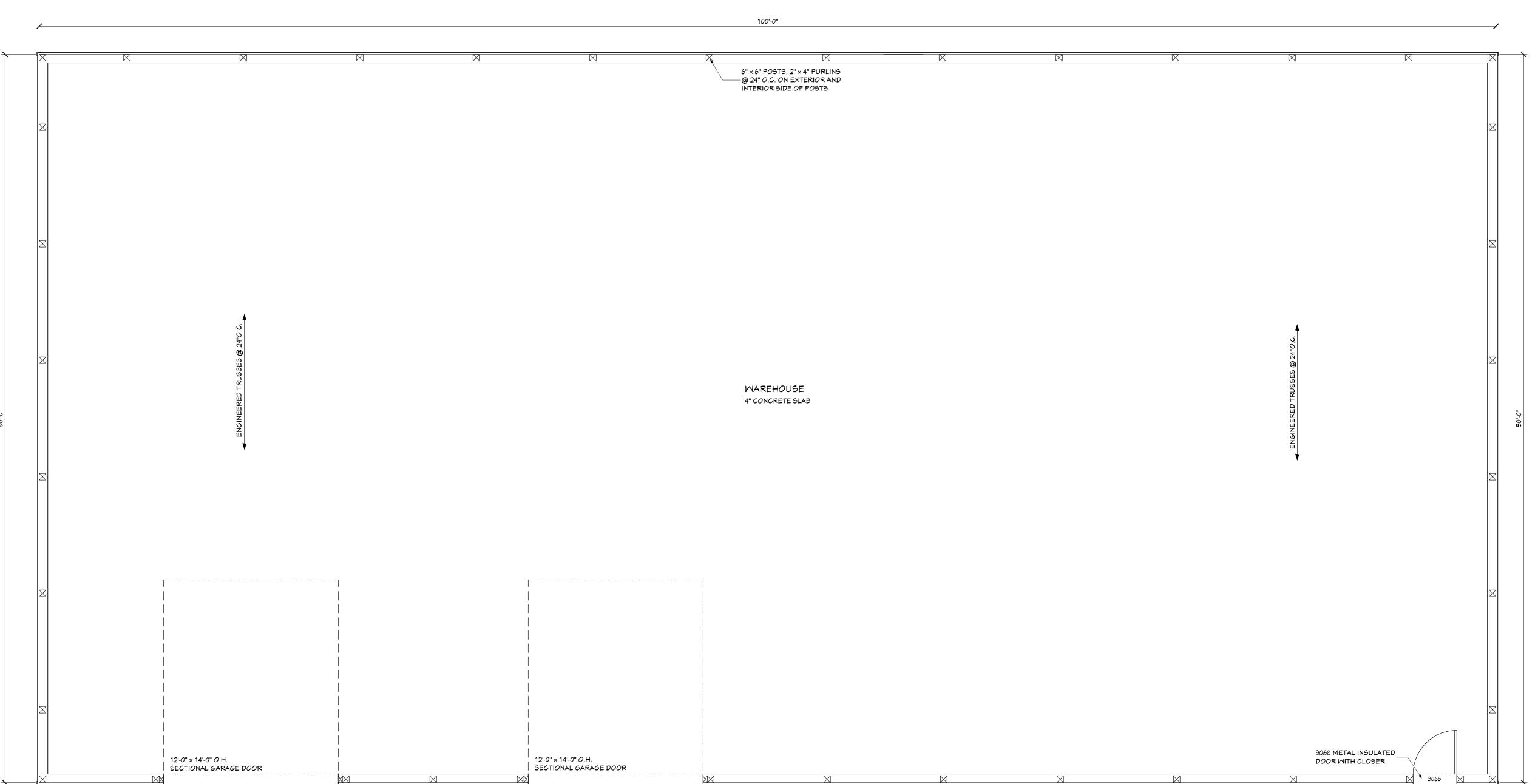
#### GENERAL FIRESTOPPING NOTES

- 1. Provide Firestopping systems at all membrane and through penetrations of rated wall of floor/ceiling systems. Contract with a single manufacturer for firestopping systems. Fire stopping manufacturer shall provide submittal of system(s), and provide for on site instruction and inspection of installation.
- 2. All assemblies shall have an "F" rating that matches the hourly fire rating.
- 3. Through Penetration Protection System = TPPS
- 4. For installations or configurations not covered by UL or FM design number, a recommendation shall be obtained from the manufacturer, in writing, for the specific application, signed by a certified engineer.
- 5. All materials shall be asbestos free and non-carcinogenic.
- 6. Firestop materials shall not contain flammable or toxic solvents and shall not produce toxic or flammable outgassing during the drying or curing process.
- Firestopping materials and systems must be intumescent or be capable of filling through openings created by the burning or melting of combustible pipes, pipe insulation materials or cable jacketing and the deflection of sheet metal due to thermal expansion.
- 8. Firestop sealants must be elastomeric or flexible to allow for normal pipe
- 9. Do not proceed to enclose firestopping with other construction until local building inspectors have inspected the work and have given approval to close the work.
- 10. Holes cut for penetrations shall be within allowable limits for TTPS. Typically openings should allow for caulk or sealant beads around opening of at least 1/4" but no more than 1/2". Verify with each TTPS and manufacturer's technical representative.
- 11. After installation, properly identify all firestop systems. Identification shall occur at location where system has been installed and shall include: A. Identify the firestopping system that has been installed as being a "Rated Penetration Firestop System - Do Nor Disturb" B. Use label minimum  $3" \times 5"$ , yellow and black OSHA colors with manufacturer, building owner representative and/or contractor clearly identified.
- 12. Penetrations of concrete or masonry wall assemblies by 6" maximum diameter, non-combustible pipe, conduit, or steel jacketed wires, in openings less than 144 square inches may be protected by filling the complete wall thickness, for the total perimeter of opening, with concrete, grout, or mortar.
- 13. All non rated full height walls shall have all voids firestopped to resist the passage

#### SPECIFICATIONS

- 1 All door openings shall be protected with 13/4" flush solid core wood doors or 20-minute labeled fire-rated doors in smoke-tight, substantial frames and equipped with approved self-closing devices and non-locking-against-egress positive latching hardware.
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- 5 Heating shall be by a central heating plant or an approved permanently installed electrical heating system. Heating plants located on the same floor as the children shall be in 1-hour fire resistive enclosures including a minimum of 45-minute rated fire doors and frame assemblies with approved self-closing devices and positive latching hardware in any interior openings. Door openings for heat plant enclosures not located on the same floor as the children may have 13/4" flush solid wood core doors or 20-minute labeled fire doors with positive latching hardware and approved self-closing devices. Air for proper combustion shall be provided directly from the outside at a minimum rate of 1 square inch per 4,000 BTUs input and through a permanently open louver or metal duct. "B" labeled doors are acceptable.

**56**'-3"



ARCHITE RROM,

07-20-2022 07-21-2022 08-06-2022

PROJECT NUMBER

4'-2 1/4"

FIRST LEVEL PLAN SCALE: 1/4" = 1'-0" 5,000 TOTAL SQ. FT.

14'-6 1/4"

25'-0 1/2"

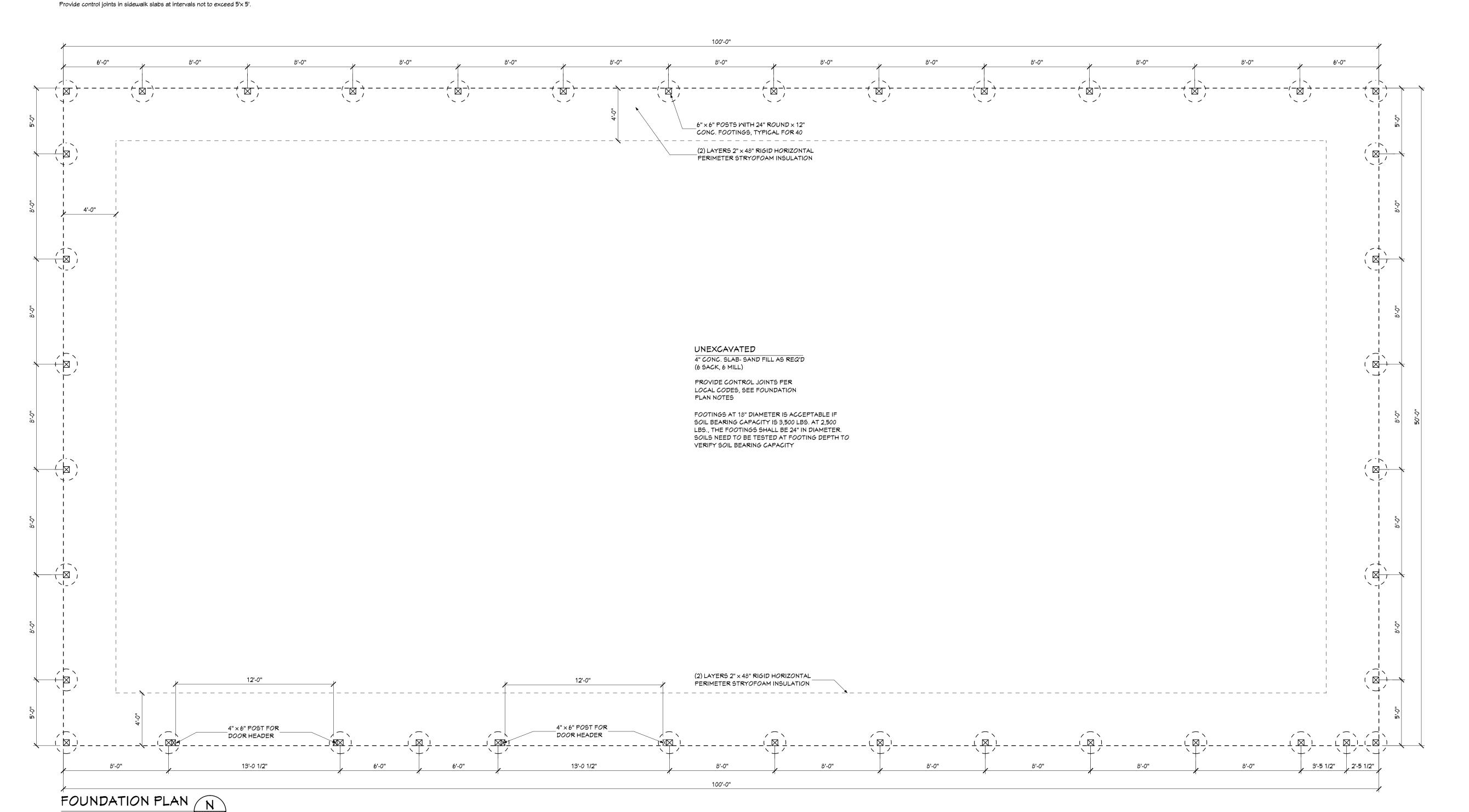
- Bottom of all footings exposed to frost shall be minimum of 3'-6" below grade. Verify grade with Civil Drawings.
- Footing sizes are based on a soil bearing capacity of 3,000 pounds per square foot.
   Any bad soils encountered on the site should be brought to the attention of the site engineer
- 4. During construction, the contractor shall provide for testing of soil capacity and ground water elevations at footing locations. Testing shall be performed by a Soils Engineer licensed in the State of Michigan. Engineer shall submit report of findings and recommendations for foundations and ground water impact on foundation
- Standard procedures of frost protection for footings and footing excavation shall be used for winter construction. Backfilling of footing excavations shall be done as soon as possible to protect footings from frost action.
- 6. Provide 1/2" Expansion material joint when concrete slabs and building foundations occur. All expansion joint material shall be premolded and installed per manufacturer's specification requirements. Isolation joints: Provide between slabs and vertical elements such as columns and strucural walls. Provide control joints in slabs on grade. Saw cuts must be made within 12 hours after slab pour. Joint depth shall be 1/4 depth of slab thickness.
- Slope floor slabs to exterior doors.
   Provide control joints in floor slab at intervals not to exceed 20' x 20'.
   Provide control joints in exterior slabs at intervals not to exceed 10' x 10'.

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

- Reiforcement:
   Bars: deformed steel, ASTM A15, Grade 60
   Mesh: welded steel wire fabric, ASTM A185
- Concrete Materials
   Cement: portland cement, ASTM C 150, Type 1
   Aggregate: normal weight aggregates, ASTM c 33.
   Water-reducing Type super plasticizer as required for workablity; euclid, sika, L&M or approved equal.
- Miscellaneous materials:
   Hardener: non-metallic, quartz-silica, interior/exterior type, euclid surflex or equal Grout: non-metallic, non shrink type.
- 11. Concrete mixes: Standards: comply with ACI 301, 304, 305, 306, 311, 318, 347, CRSI " Manual of Standard Practice", and ASTM C94. Do not change mix design without approval. Calcium chloride admixtures are not permitted. Maximum slump of poured-in-place concrete shall be 3" for slabs-on-grade and 4" for all other concrete.
- For slabs-on-grade minimum flexural strength at end of 28 days shall be 650psi Minimum compressive strength at end of 28 days shall be:

  3,500 PSI Concrete shall be used at all interior concrete applications.

  4,000 PSI Concrete shall be used at all porch and exterior locations.
- 12. Patch all concrete floors where removed for sub grade work with 4,000 PSI concrete.
- 13. Tolerance: plus 1/8" in 10' for grade, alignment, and straightness.
- 14. Provide 6 mil moisture barrier beneath all slabs. Lap edges a minimum of 2'-0".



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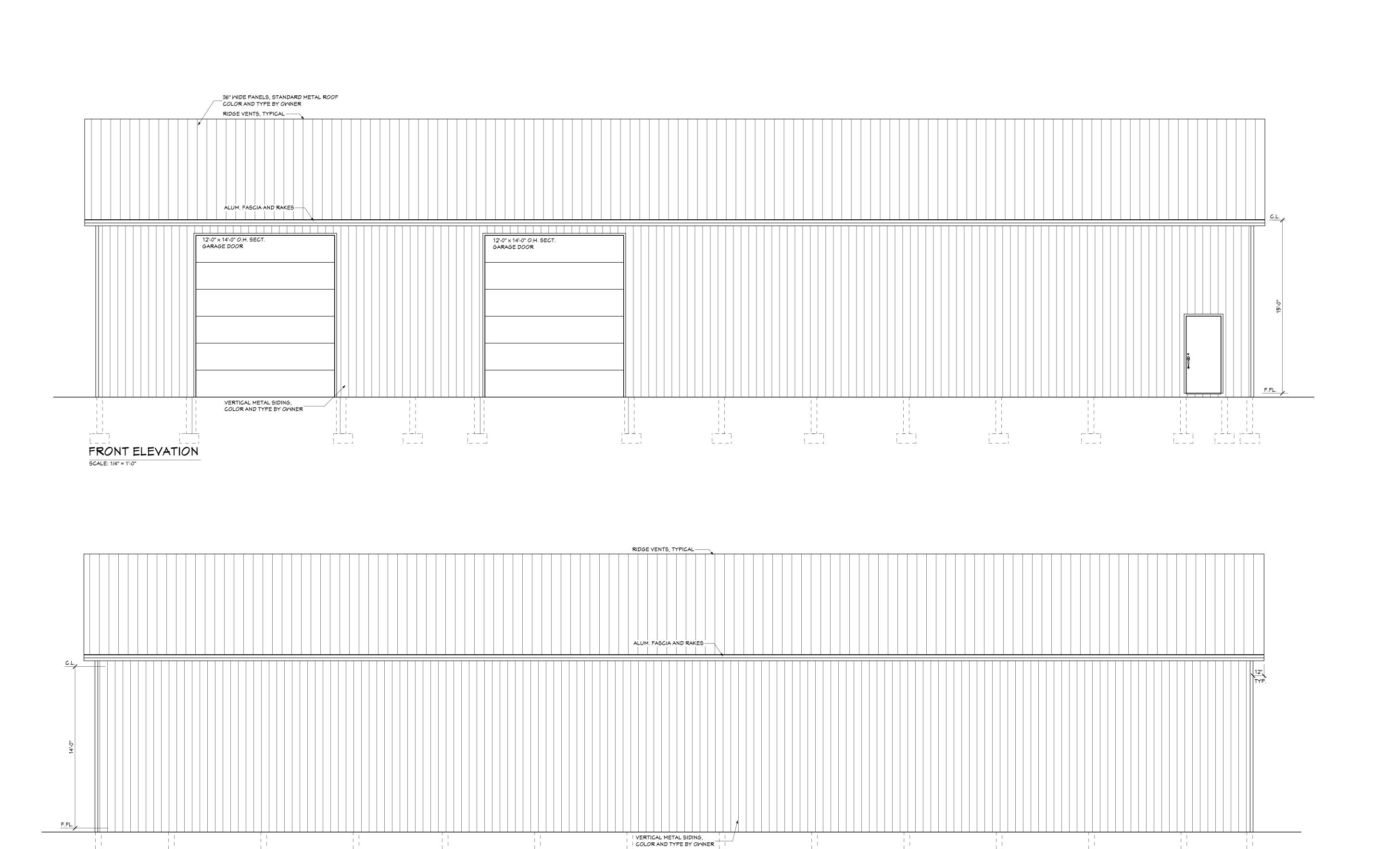
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MR 1866 MICHIGAN 48138

PLOT DATE: 07- 20- 2022 07- 21- 2022 08- 06- 2022

2284-22 PROJECT NUMBER:

51.1



BACK ELEVATION

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

PET DEPOT REHOUSE

LIZ HARROW, ARCHITECT

NAREMICHIO,

PLOT DATE: 07- 20- 2022 07- 21- 2022 08- 06- 2022

2284-22 PROJECT NUMBER:

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CARPET DEPOT
MAREHOUSE
1878 E MICHIGAN 36
HAMBURG, MICHIGAN 48139

PLOT DATE: 07- 20- 2022 07- 21- 2022 08- 06- 2022

2284-22 PROJECT NUMBER:

51.3

#### GENERAL FRAMING NOTES

- 1. Do not scale these drawings, use dimensions indicated on the drawings and those verified at the project site. Any dimensions or areas that are unclear on the drawings shall be clarified by the owner's representative. Scaling of the drawings or other methods to determine dimensions will not be acceptable.
- 2. All Contractors (General and Sub Contractors, Vendors, and Suppliers) shall reveiw and verify all dimensions and shall notify architect in writing of any descrepancies prior to starting work. Starting work shall be contractor's acceptance of these documents being correct and valid as to their part of the work. Requests for changes based on these drawings after start of work will not be accepted.
- 3. Provide nailers, blocking and grounds where required. Set work plumb, level, and accuruately cut.
- 4. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction.
- 5. Exterior doors concrete slab shall be flush with interior floor elevation with threshold no greater than 1/2" in height. Comply with barrier free design rules.
- 6. Structural wood framing requirements. Based on spruce-pine-fir #2 or better Fb= 875 psi Fc= 1,100 psi E=1,400,000 psi
- 7. Wood nailers, blocking, furring and sleepers: Construction grade, finish 4 sides, 15% moisture content
- 8. The maximum total deflection of wood beams shall not exceed 1/360 of the total

- 9. All wood beams shall have a minimum bearing of 4".
- 10. PLYWOOD: APA rated for use and exposure. Roof sheathing: APA sheathing, exterior

- Preservative Treatment: Pressure treated with waterborne preservatives, to comply with AMPB LP-2 or LP-22, as applicable. Kiln dry to 15% max. moisturre content. Treat wood exposed to deterioration by moisture, such as items in contact with roofing, flashing, waterproofing, masonry, concrete, or the ground.
- 13. Comply with manufacturer's requirements for cutting, handling, fastening, and working with treated materials.
- 15. Window headers shall be (3)  $2" \times 8"$  or (2)  $2" \times 10"$  with 1/2" plywood spacer
- 17. Nailing Pattern: Exterior Wall Sheathing:: field of panel.

#### ROOF FRAMING NOTES:

- 1. Do not scale the drawings, use dimensions indicated on the drawings, and those verified at the project site. Any demensions or areas that are unclear on the drawingss shall be clarified by the owner's representative. Scaling of these drawings or other methods to determine dimensions will not be accepted.
- MOOD TREATMENT: Preservative treatment: Pressure-treated with waterborne preservatives, to comply with AMPB LP-2 or LP-22, as applicable. Kiln dry to 15% max. moisture content. Treat wood exposed to deterioration by moisture, such as items in contact with roofing, flashing, waterproofing, masonry, concrete, or the ground.
- 3. Comply with manufacturer's requirements for cutting, handling, fastening, and working with treated materials.
- 4. Treat wood subject to insect attack.
- 5. All sill/sole plates shall be pressure treated.
- 6. Provide diagonal bracing at all wall corners, at each floor level.
- 7. Provide triple studs at bearing locations.
- Coordinate work with other trades.

Use experienced installers.

- 9. PREFABRICATED WOOD TRUSSES: Provide a complete roof framing system that consists of a minimum of roof trusses, permanent lateral bracing, permanent diagonal bracing, strongbacks, and truss bearing connectors (wind hold down clips) and other materials as required.
- 10. PREFABRICATED WOOD TRUSSES: Provide prefabricated gable, mono sloped, scissor, and girder & special profile trusses as required: Submit for review shop drawings and product data prepared by the truss manufacturer's structural engineer licensed in the State of Michigan. Comply with governing codes and regulations. Provide products of acceptable manaufacturers which have been in satisfactory use in similar service for three years.
- 11. PREFABRICATED WOOD TRUSSES: Truss profiles shown on drawings are generic and shall be verified with owner for each area. Provide trusses indicated, and special profile trusses as required to complete the project. Web members indicated are symbolic and the truss manufacturer's structural engineer shall engineer actual locations, spacing, connections and sizes of all truss chord, web and bracing members.
- 12. Provide plywood sheathing or horizontal ties as required by truss engineer to eliminate horizontal thrusts from scissor and other trusses onto exterior wWalls.
- 13. PREFABRICATED WOOD TRUSSES: Standard dimension lumber connected by metal plates. Wood: Softwood meeting stress rating and design requirements. Metal plates: galvanized sheet steel, ASTM A 446, Grade A, Coating G60
- 14. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- 15. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent contruction. Coordinate with work of other sections. Restore damaged components, clean and protect work from damage. Provide temporary and permanent bracing as required by design engineer and truss manufacturer.
- 16. Roof Trusses shall be tied to wall below to resist wind uplift in compliance with MBC. Truss manufacturer shall indicate required fasteners on truss shop drawings.
- 17. Provide truss shop & permanent bracing drawings prepared by engineer licensed in the State of Michigan. Submit copies to the building authority.
- 18. Provide temporary bracing during construction and truss erection as required by truss manufacturer.
- 19. Provide permanent bracing as required by truss manufacturer and as shown on permanent bracing drawings prepared by truss manufacturer structural engineer licensed in State of Michigan. Part of permanent bracing drawings shall include nailing schedule for Bracing
- 20. Provide continuous diagonal bracing at each line of lateral bracing.
- 21. Lateral roof truss bracing shall overlap a minimum of one truss space. Butt joint ends of bracing shall not be allowed.
- 22. Contractor shall provide for inspection of installed tTruss & permanent bracing system by engineer licensed in the State of Michigan.
- 23. Provide nailers, blocking and grounds where required. Set work plum, level, and accurately cut.
- 24. Owner/ Contractor shall have the trusses and truss bracing inspection in accordance with section 1704.8 of the building code and in accordance with the truss manufacturer.

- Mall sheathing: APA sheathing, exterior
- 11. BUILDING PAPER: Asphalt saturated felt. Non-perforated
- 12. MOOD TREATMENT:
- 14. Treat wood subject to insect attack.
- 16. Nailing Pattern: Plywood for Shear Roof Diaphram: 8d common nails spaced at 6" on center at panel edge and 12" on center in the field of panel.
- 8d common nails spaced at 6" on center at panel edge and 12" on center in the



PLOT DATE: 07- 20- 2022 07-21-2022 08-06-2022

PROJECT NUMBER

PAGE NUMBER:

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#### GENERAL MECHANICAL NOTES

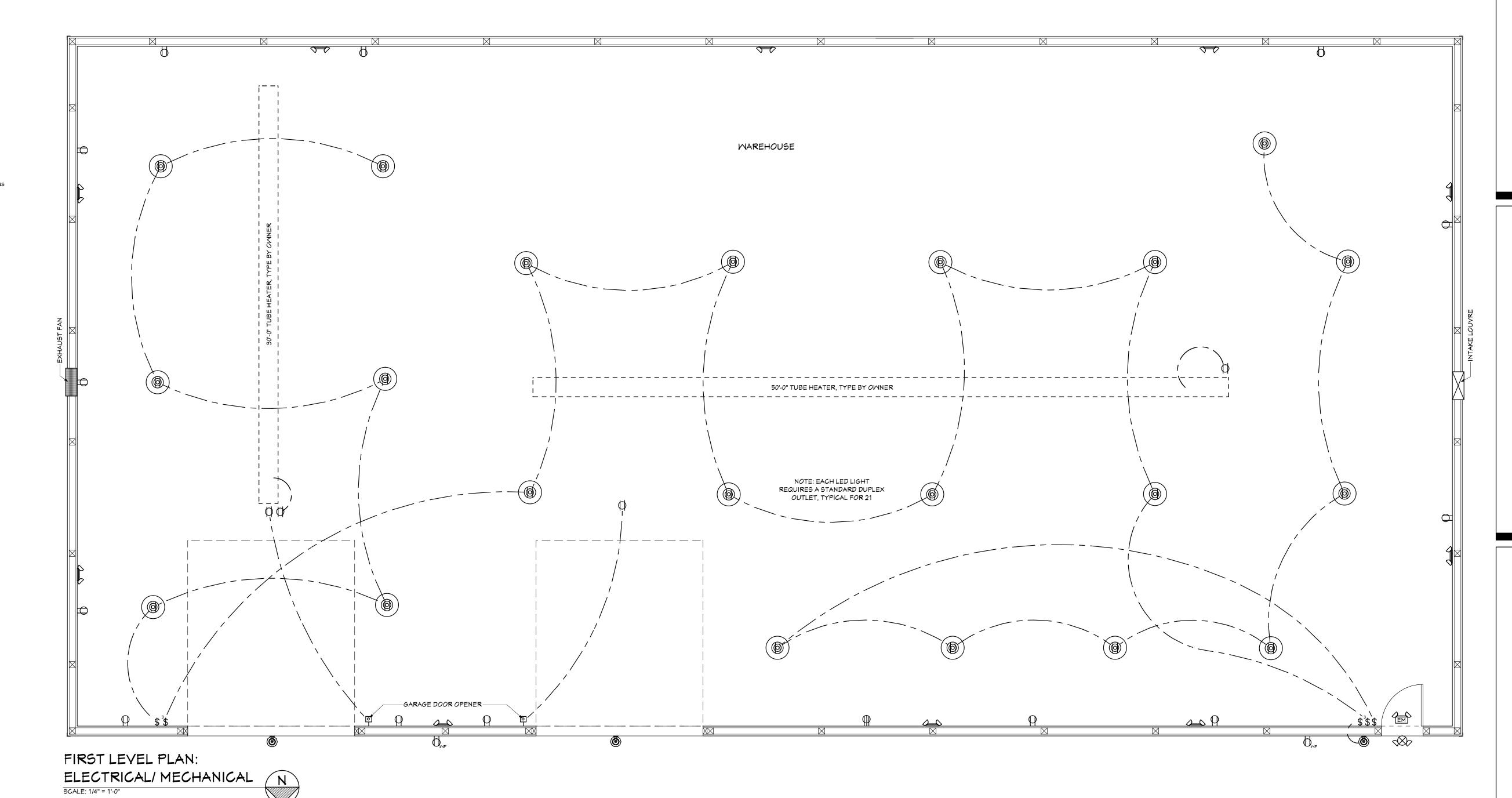
- Install new systems as shown on drawings and in specifications and as required for complete, fully operational systems.
- Contractor shall field verify locaions and sizes and routing before submitting bids.
   Relocate and/or replace existing equipment, ductwork, lighting, piping, valves, etc. as required to maintain operation of all systems.
- 3. Contractor shall verify all dimensions, structures, elevations, etc. and report to the construction manager any conflicts which may effect the work prior to starting. Any dimensions shown on the drawings are for reference only and shall be field verified prior to start of demolition or new work.
- 4. Arrange and pay for all permits and inspections required. All work shall be provided by a licensed contractor and in accordance with all state and local codes, and with the provisions of the latest editions.
- Contractor(s) shall remove and haul away all debris, equipment, pipes, ducts, etc from the site immediately upon removal. Failure to remove and clean debris from areas promptly shall result in construction manager option to remove them at contractor's expense.
- 6. Fill all unused holes in floors and walls with grout and seal.
- 7. In finish areas, cut and patch existing walls as required, to install all new mechanical work, unless otherwise indicated.
- 8. Contractor shall leave adequate clearance around all new equipment, fittings, valves, electrical panels, etc. for service and operation.
- 9. Coordinate entire installation of the HVAC system wiith the work of other trades prior to any fabrication or installation. Provide all fitting, offsets, and transitions as required for a complete workable insallation.
- 10. Maintenance label shall be affixed to all mechanical equipment and a maintenance manual shall be provided for the owner's use.
- 11. Refer to electrical drawings and specifications for all electrical devices required.
- 12. All equipment, ductwork, piping, and other devices and materials installed outside of the building or otherwise exposed to the weather shall be completely weatherproofed.
- 13. All outside air intakes shall be a min 10'-0" from any exhaust fan discharge, piping vents, and other exhaust system.
- 14. Each mechanical and electrical trade shall provide membrane and through penetration fire stop systems as required by the code, and shall submit methods of fire stopping to the building official for approval prior to work starting.
- 15. All gas piping by mechanical contractor.
- 16. All fresh air ducts and exhaust fan ducts shall be terminated to the exterior of the building envelope via a weatherproof cap. Terminating into the attic shall not be permitted.
- 17. Builder/ Developer to provide a concrete pad for condensing units if required.

# GENERAL ELECTRICAL NOTES AND SPECIFICATIONS

- All work shall be done in acordance with the latest edition of the National Electrical Code (NEC), and all state and local codes.
- 2. Coordinate the installation of all electrical equipment and connections with architectural and mechanical plans and equipment drawings.
- 3. All conductors shall be copper, aluminum conductors will not be acceptable.
- 4. Motor loads which are less than 6.0 amps shall be protected by a 15 amp circuit breaker.
- 5. Final connection to items subject to vibration shall be made with flexible metallic or liquidtite flexible metallic conduit. Install liquidtite flexible conduit in wet, damp, or corrosive atmosphere locations. Flexible metallic conduit or liquidtite flexible metallic conduit will not be approved for use as a grounding conductor. A seperate green ground wire shall be installed in all flexible metallic conduit and liquidtite flexible metallic conduit.
- All disconnect switches shall be standard duty type. Disconnect switches installed indoors shall be NEMA type I. Weatherproof disconnect switches shall be NEMA type 3R
- 7. All circuit breakers controlling or switching light fixtures shall be "SMD" rated. All circuit breakers controlling HVAC equipment shall be "HACR" rated.
- All receptacles installed on 15 amp and 20 amp circuits shall be of the grounding type.
- 9. All fractional horsepower motor starters shall consist of a horsepower rated toggle switch, thermal overload and red pilot light in a common enclosure. Enclosure shall be NEMA type I for indoor locations and NEMA type 3R for outdoor locations.
- Back to back or through wall boxes shall not be used. Boxes installed on opposite sides of a fire rated partition shall be separated by 24" min.
- 11. All conduits run in floor slab shall be spaced a minimum of one conduit diameter apart except where they rise to a panel.
- 12. All device mountings heights shall comply with the State of Michigan barrier free requirements.
- 13. Electrical and data lines to be verified with lessee before construction begins
- 14. Battery back-up exit and emergency lights shall be fed from the same circuit as normal lighting in their respective areas and be connected ahead of any

local switches. Provide power for exterior signs

- 15. Exit signs shall be internally or externally illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes, in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment, or an on-site generator.
- All detectors shall be installed and maintained in operable condition per their manufacturer's recommendations.
- Multi-purpose fire extinguishers with a minimum 2A-10BC classification shall be installed in or adjacent to the door of the heat plant room.



#### FIXTURE LEGEND

LIGHT SWITCH

\$ \$3

220 OUTLET

DUPLEX OUTLET

WATER PROOF
EXTERIOR OUTLET

EMERGENCY EXIT LIGHT

EMERGENCY EGRESS LIGHT

EMERGENCY FLOOD LIGHT

EXTERIOR WALL PACK/ LIGHT

NOTE: EACH LED LIGHT
REQUIRES A STANDARD DUPLEX

## HYAC SPECIFICATIONS

- 1. THERMOSTATS:
  1) Comfort Sense 5000
- 2. O2/ CO2 Detector: Macurco Cm6, Tx6 O2 Sensor interlocked with exhaust fan
- 3. Exhaust Fan: 24" Cook, 5000 cfm , 240v, 6.5 amps, with matching intake louvre.
- 4. Tube Heater: Gordon Ray, BH 140, 140,000 BTU, 120v, 1 amp, verify with HVAC contractor
- 5. Make up air requirements based on Mechanical Code table 403.3

PLOT DATE: 07- 20- 2022 07- 21- 2022 08- 06- 2022

2284-22
PROJECT NUMBER

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