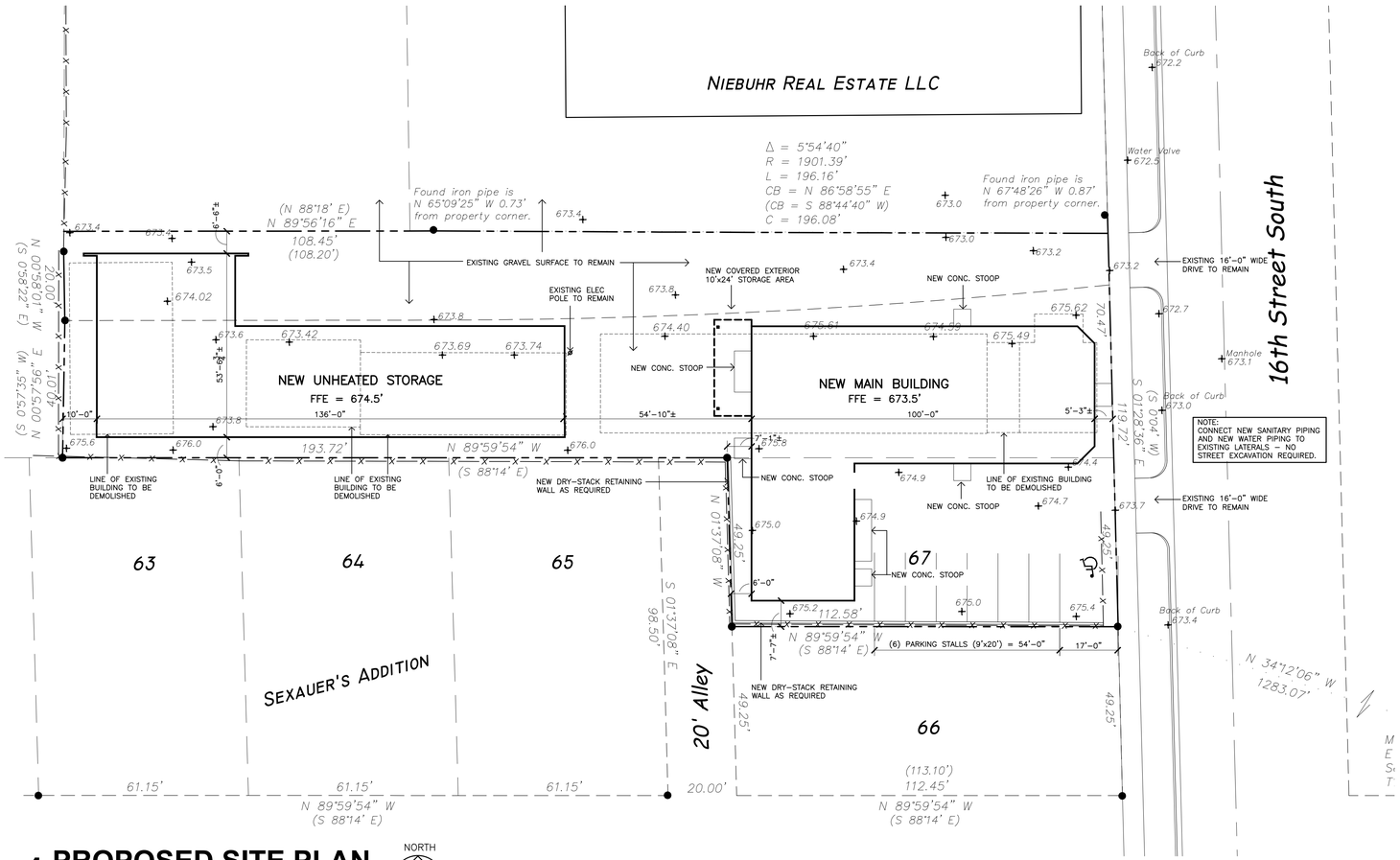


1 PROPOSED SITE PLAN

1" = 20'-0"

NORTH

SITE PLAN NOTES

1. LOCATION OF UTILITIES, PAVED SURFACES, STORM DRAINAGE, ETC., ARE APPROXIMATE BASED ON PREVIOUS PLANS FOR CONSTRUCTION IN THIS AREA. FIELD VERIFY ALL ITEMS AND REPORT DISCREPANCIES TO ENGINEER AND/OR OWNER IMMEDIATELY UPON DISCOVERY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. CALL DIGGERS HOTLINE (800) 242–8511
2. NO WORK SHALL PROCEED UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN VERIFIED WITH THE UTILITY COMPANIES.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ARRANGE FOR ANY NECESSARY INSPECTIONS BY LOCAL GOVERNMENT THAT MAY BE REQUIRED.
4. PROVIDE A MINIMUM SLOPE AWAY FROM BUILDING OF 1/2" PER FOOT UNLESS NOTED OTHERWISE.
5. SOIL BEARING CAPACITY HAS BEEN ASSUMED. REPORT ANY AND ALL DISCREPANCIES TO SUCH ASSUMPTIONS AS DISCOVERED DURING EXCAVATION TO ENGINEER AND/OR OWNER.
6. THE OWNER SHALL PROVIDE DESIGNATED SPACE ADJACENT TO THE BUILDING FOR THE COLLECTION OF RECYCLABLE WASTE MATERIALS AS PER SPS 362.0400(2)
7. OWNER TO PROVIDE AT LEAST 1 VAN ACCESSIBLE PARKING SPACE (132" MIN. WIDTH) AS PER I ICC/ANSI 117.1, CHAPTER 5. INCLUDE VEHICLE SPACE AND AISLE MARKING AS PER ICC/ANSI 117.1, FIG. 502.2. PROVIDE SIGNAGE AT HANDICAPPED PARKING STALLS AS PER ICC/ANSI 117.1, SECTION 703.6.3.1 WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY. INCLUDE "VAN ACCESSIBLE" SIGN AT VAN PARKING SPACE. BOTTOM OF SIGNS TO BE 60" ABOVE PAVING AT PARKING STALLS.

DRAWING INDEX

CODE INFORMATION

ADDRESS & LEGAL DESCRIPTION
1714 S. 16TH STREET
CITY OF LA CROSSE
LA CROSSE COUNTY TAX PARCEL #17-50266-30

APPLICABLE CODES
CITY OF LA CROSSE MUNICIPAL CODE CHAPTER 115 (ZONING) & CHAPTER 103 (BUILDINGS & BUILDING REGULATIONS)
WISCONSIN COMMERCIAL BUILDING CODE (2015 IBC W/AMENDMENTS)

ZONING DISTRICT
LIGHT INDUSTRIAL DISTRICT

SCOPE OF WORK
MAIN BUILDING
CONSTRUCT 5,175 SF LUMBER YARD HEADQUARTERS BUILDING WITH MEZZANINE

OCCUPANCY - TOTAL OCCUPANCY LOAD = 75

MAIN BUILDING
UNSEPARATED, UNPROTECTED MULTIPLE OCCUPANCIES
BUSINESS GROUP, B
MERCANTILE GROUP, M
STORAGE GROUP, S-1 MODERATE HAZARD STORAGE

SIZE
MAIN BUILDING 1ST/ FLOOR = 5,175 SF
COVERED EXTERIOR STORAGE= 240 SF
MAIN BUILDING MEZZANINE = 1,680 SF
TOTAL = 7,095 SF

TYPE OF CONSTRUCTION
TYPE VB, UNPROTECTED WOOD FRAME

FIRE PROTECTION
NO AUTOMATIC FIRE SPRINKLER SYSTEM

EXIT DISTANCE
200 FEET

SEISMIC CATEGORY
CODE "A"

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET A1

JIM WEBB, PE
Engineering & Construction, LLC
1224 King Street
La Crosse, WI 54601
(608) 780-4672

NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: PROPOSED SITE PLAN AND CODE INFORMATION

FLOOR PLAN NOTES

1. ILLUMINATED EXIT LIGHTS COMPLY WITH 2015 IBC 1013. INCLUDE MEANS OF EGRESS/EMERGENCY LIGHTING PER 2015 IBC 1008.
2. PROVIDE FIRE EXTINGUISHERS TO COMPLY WITH 2015 IFC 906 AND MAINTAIN FE'S AS PER NFPA 10. VERIFY LOCATIONS WITH LOCAL FIRE DEPARTMENT REPRESENTATIVES. (FE)
3. MAXIMUM ALLOWABLE QUANTITY OF FLAMMABLE AND HAZARDOUS MATERIALS THROUGHOUT BUILDING TO COMPLY WITH 2015 IBC TABLES 307.1(1), 307.1(2), 414.2.5(1), 414.2.5(2) AND 414.5.1.
4. INTERIOR WALL AND CEILING FINISHES TO BE CLASS C FINISHES IN ACCORDANCE WITH ASTME 84 OR UL723 (FLAME SPREAD INDEX 76-200, SMOKE DEVELOPED INDEX 0-450) INTERIOR FLOOR COVERINGS TO COMPLY WITH REQUIREMENTS OF DOC FF-1 "PILL TEST" OR ASTM 2859. MINIMUM CRITICAL RADIANT FLUX SHALL NOT BE LESS THAN CLASS II AS PER REQUIREMENTS OF DOC FF-1 "PILL TEST" OR ASTM 2859.
5. PROVIDE RIBBED STEEL LINER PANEL AT CEILING AND ALL WALLS IN 103 &104 AREAS.
6. ALL NEW INTERIOR PARTITIONS TO EXTEND TO UNDERSIDE OF ROOF FRAMING MEMBERS.

WINDOW SCHEDULE

(A) 60" WIDE x 60" HIGH WITH SILL AT 26" A.F.F. INFINITY RECTANGLE WINDOW UNIT WITH LOW-E & ARGON INSULATED GLASS. U = 0.28, SHGC = 0.22 OR BETTER. COLOR: BRONZE

(B) 72" WIDE x 48" HIGH WITH SILL AT 36" A.F.F. INFINITY DOUBLE HUNG COMPOSITE WINDOW UNITS WITH LOW-E & ARGON INSULATED GLASS. U = 0.28, SHGC = 0.22 OR BETTER. COLOR: BRONZE

DOOR AND FRAME NOTES

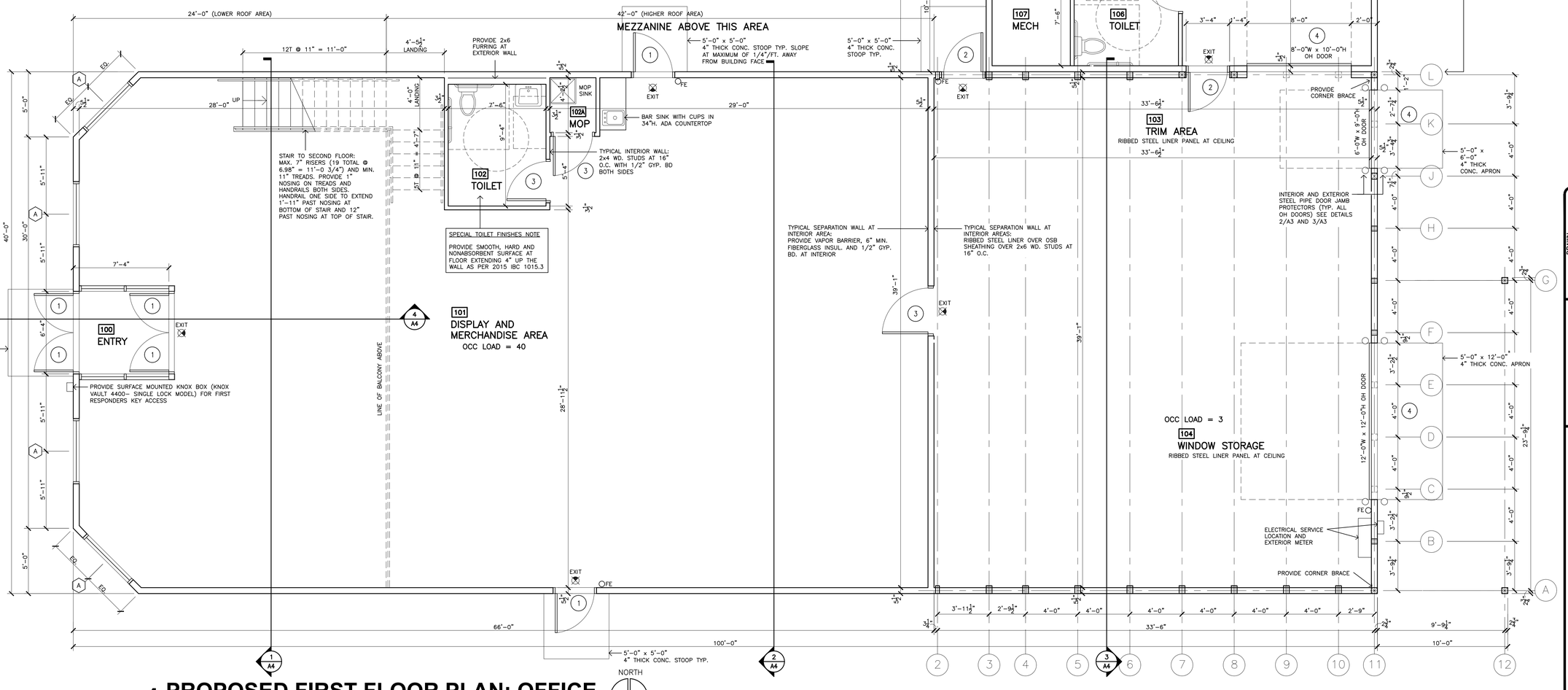
(1) **ALUMINUM DOORS AND FRAMES**
3'-0" x 7'-0" TUBELITE MEDIUM STYLE SINGLE THERMAL DOOR WITH 1" INSULATED GLASS (LOW E) - MILL FINISH ALUMINUM.

(2) **EXTERIOR HOLLOW METAL DOORS AND FRAMES**
3'-0" x 7'-0" INSULATED FLUSH PANEL, COMPOSITE HOLLOW METAL ENTRY DOOR IN HOLLOW METAL FRAME (U = 0.28 OR BETTER)

(3) **INTERIOR HOLLOW METAL DOORS AND FRAMES**
3'-0" x 7'-0" HOLLOW METAL DOOR IN HOLLOW METAL FRAME
PROVIDE PRIVACY HARDWARE AT TOILET ROOMS, OFFICE AND PASSAGE HARDWARE AT ALL OTHERS

(4) **OVERHEAD DOORS**
SEE PLAN FOR SIZE. OVERHEAD DOORS TO BE INSULATED STEEL SECTIONAL DOORS COMPLETE WITH FULLY ENCAPSULATED FOAMED-IN-PLACE PANELS, PVC THERMAL BREAK BETWEEN SKINS, AND PVC JOINT SEAL. PROVIDE HIGH LIFT TRACK AND EMERGENCY OPERATION. (U = 0.08 OR BETTER)

FINISH HARDWARE
DOOR HARDWARE THROUGHOUT TO COMPLY WITH ICC/ANSI A 117.1, CHAPTER 3, SECTION 309 (LEVER HANDLES, PUSH-TYPE MECHANISMS/U-SHAPED HANDLES). ALL HARDWARE REQUIRED FOR DOOR PASSAGE SHALL BE NO HIGHER THAN 48" ABOVE FINISHED FLOOR. EXTERIOR DOOR THRESHOLDS MAY NOT EXCEED 1/2" ON EITHER SIDE OF DOOR.



1 PROPOSED FIRST FLOOR PLAN: OFFICE
1/4" = 1'-0"

TOTAL OCCUPANCY LOAD = 63

DRAWN	JAW
CHECKED	
DATE	JUNE 22, 2022
SCALE	AS NOTED
SHEET	A2

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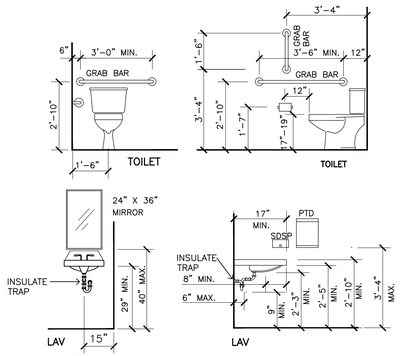
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: PROPOSED 1ST FLOOR PLAN

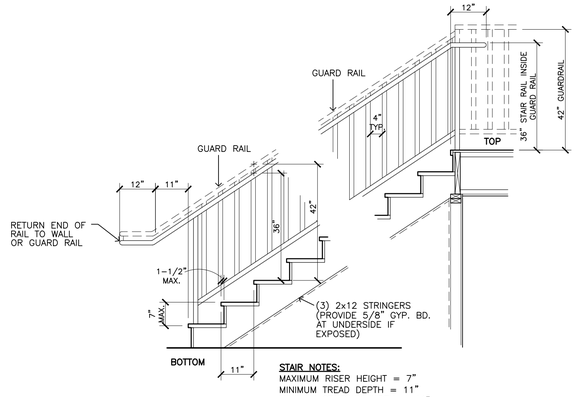


NOTE:
LOCATIONS OF TOILET ACCESSORIES ARE SHOWN SO AS TO INDICATE MOUNTING HEIGHTS TO COMPLY WITH ADAAG. VERIFY LOCATIONS OF SOAP DISPENSERS, PAPER TOWEL DISPENSERS, ETC. WITH OWNER. PROVIDE ADEQUATE BLOCKING FOR SURFACE MOUNTED INSTALLATIONS.

GRAB BARS	–	1 1/2ø x MIN. LENGTH INDICATED. MOUNT SO AS TO WITHSTAND 250# LOAD FROM ANY DIRECTION.
TPH DISPENSER	–	SURFACE MOUNTED, LARGE ROLL
MIRROR FRAMED	–	SURFACE MOUNTED, ALUMINUM
MIRROR	–	VERIFY SIZE WITH OWNER.
SOAP DISPENSER	–	SURFACE MOUNTED.
PAPER TOWEL DISPENSER	–	SURFACE MOUNTED.

2 TYP. MOUNTING HGT. DET.

N.T.S.



STAIR NOTES:
MAXIMUM RISER HEIGHT = 7"
MINIMUM TREAD DEPTH = 11"
MINIMUM STAIRWAY WIDTH = 44"
MINIMUM LANDING LENGTH = 36"

GUARDRAIL/HANDRAIL @ 36" ABOVE TREAD NOSE OPEN GUARDS TO INCLUDE BALLUSTERS SUCH THAT A 4" DIA. SPHERE CANNOT PASS THROUGH

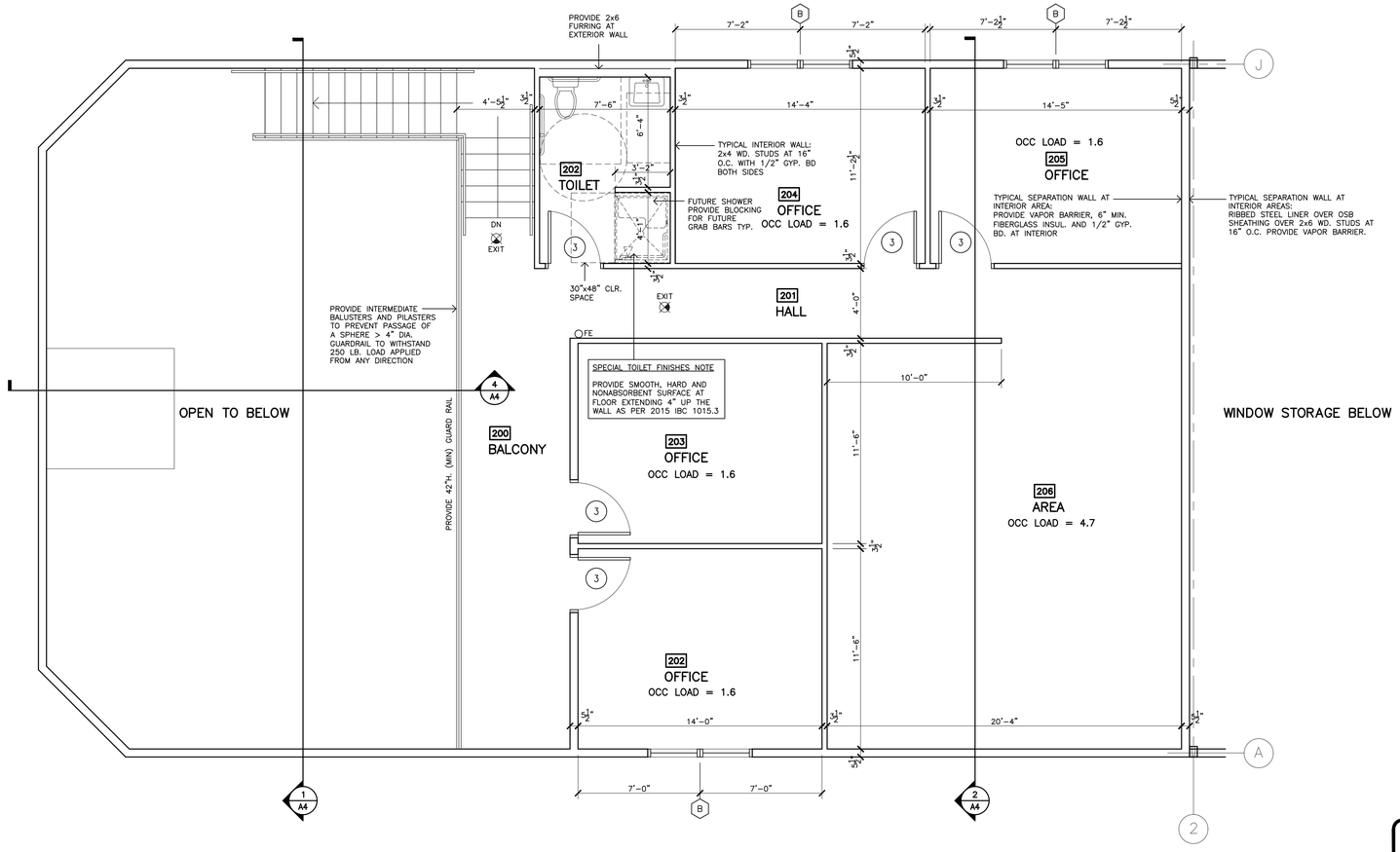
GUARDRAIL/HANDRAILS TO WITHSTAND 250 PSF LOAD APPLIED FROM ANY DIRECTION

STAIR & LANDING LIVE LOAD = 100 PSF OPEN RISERS NOT ALLOWED

HANDRAIL TO BE 1 1/2" DIA. MINIMUM

3 TYP. STAIR AND RAIL DETAILS

N.T.S.



1 PROPOSED MEZZANINE PLAN

1/4" = 1'-0"

NORTH

TOTAL OCCUPANCY LOAD = 12

FLOOR PLAN NOTES

1. ILLUMINATED EXIT LIGHTS COMPLY WITH 2015 IBC 1013. INCLUDE MEANS OF EGRESS/EMERGENCY LIGHTING PER 2015 IBC 1008.
2. PROVIDE FIRE EXTINGUISHERS TO COMPLY WITH 2015 IFC 906 AND MAINTAIN FE'S AS PER NFPA 10. VERIFY LOCATIONS WITH LOCAL FIRE DEPARTMENT REPRESENTATIVES. (FE)
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5. SEE SHEET A2 FOR DOOR AND WINDOW NOTES.
6. ALL NEW INTERIOR PARTITIONS TO EXTEND TO UNDERSIDE OF ROOF FRAMING MEMBERS.

Fig. 23 Transfer Shower Compartment.

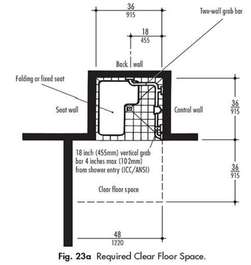

Fig. 23a Required Clear Floor Space.

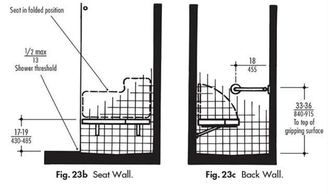

Fig. 23b Seat Wall. Fig. 23c Back Wall.

4 TYP. SHWR. GRAB BAR DETAILS

N.T.S.

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET A3

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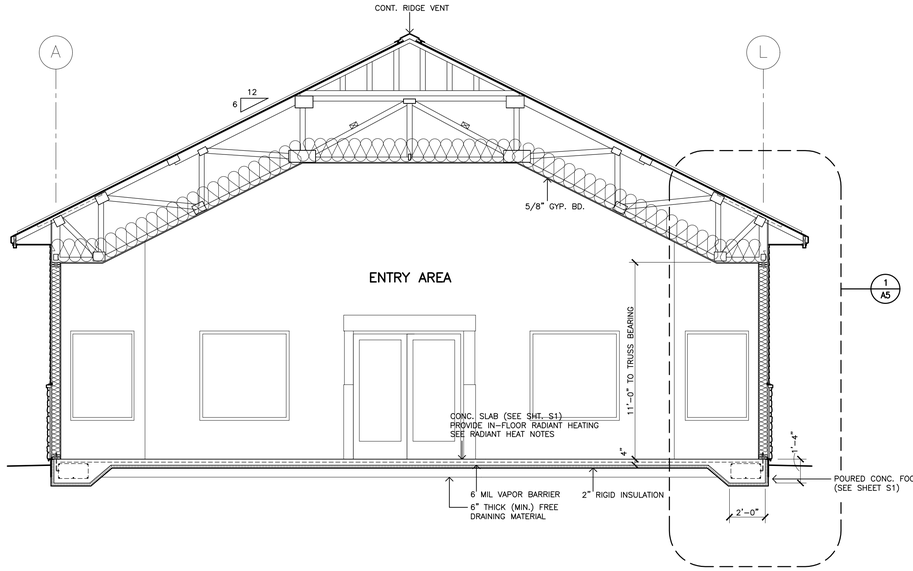
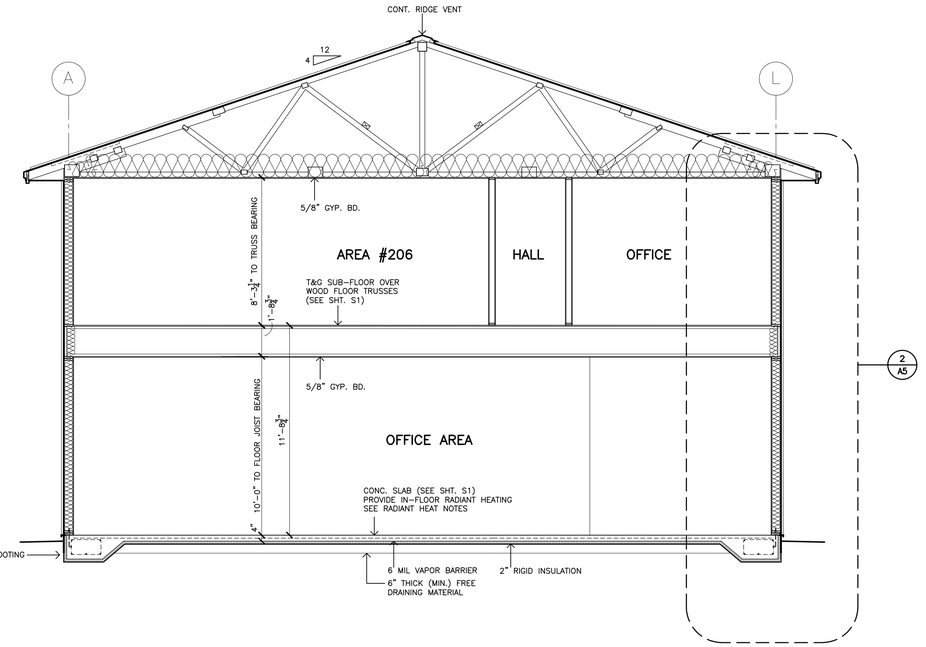
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: PROPOSED MEZZANINE PLAN



1 BUILDING SECTION

1/4" = 1'-0"



2 BUILDING SECTION

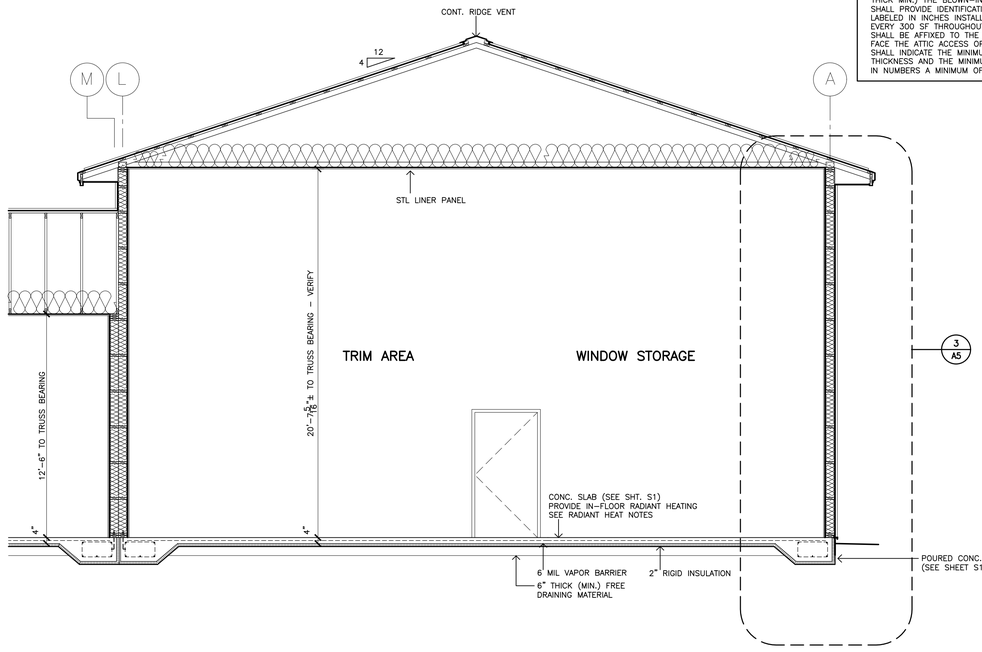
1/4" = 1'-0"

NOTE:
PROVIDE ATTIC VENTLATION. NET FREE AREA TO BE 1/300TH OF ATTIC SQUARE FOOTAGE WITH AT LEAST 50% OF THE REQUIRED VENTILATED AREA PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE BEING VENTILATED AT LEAST 3 FEET ABOVE EAVE AND THE BALANCE IN THE EAVE.

R-42 BLOWN-IN CELLULOSE INSULATION (14" THICK MIN.) THE BLOWN-IN INSULATION INSTALLER SHALL PROVIDE IDENTIFICATION MARKERS THAT ARE LABELED IN INCHES INSTALLED AT LEAST 1 FOR EVERY 300 SF THROUGHOUT ATTIC. THE MARKERS SHALL BE AFFIXED TO THE TRUSSES AND SHALL FACE THE ATTIC ACCESS OPENING. MARKERS WILL SHALL INDICATE THE MINIMUM INSTALLED THICKNESS AND THE MINIMUM SETTLED THICKNESS IN NUMBERS A MINIMUM OF 1" IN HEIGHT.

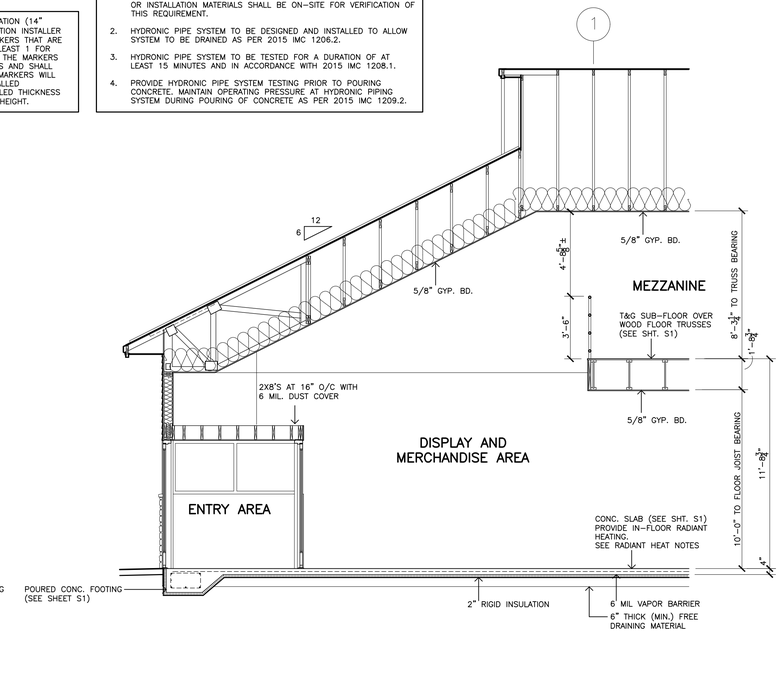
RADIANT HEAT SYSTEM NOTES

1. HYDRONIC PIPING OR TUBING SHALL MEET THE REQUIREMENTS OF 2015 IMC 1202.4 AND SHALL BE MARKED WITH TESTING STANDARD OR INSTALLATION MATERIALS SHALL BE ON-SITE FOR VERIFICATION OF THIS REQUIREMENT.
2. HYDRONIC PIPE SYSTEM TO BE DESIGNED AND INSTALLED TO ALLOW SYSTEM TO BE DRAINED AS PER 2015 IMC 1206.2.
3. HYDRONIC PIPE SYSTEM TO BE TESTED FOR A DURATION OF AT LEAST 15 MINUTES AND IN ACCORDANCE WITH 2015 IMC 1208.1.
4. PROVIDE HYDRONIC PIPE SYSTEM TESTING PRIOR TO POURING CONCRETE. MAINTAIN OPERATING PRESSURE AT HYDRONIC PIPING SYSTEM DURING POURING OF CONCRETE AS PER 2015 IMC 1209.2.



3 BUILDING SECTION

1/4" = 1'-0"



4 BUILDING SECTION

1/4" = 1'-0"

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET A4

JIM WEBB, PE
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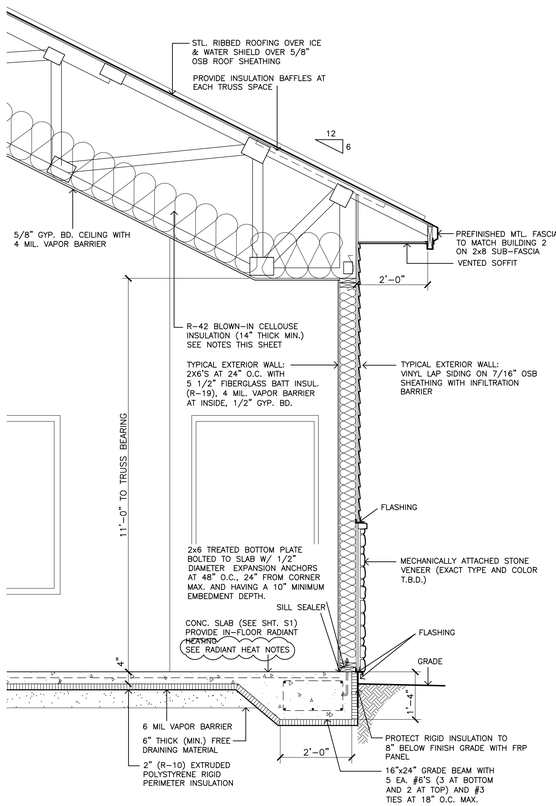
La Crosse, WI 54601
(608) 780-4672

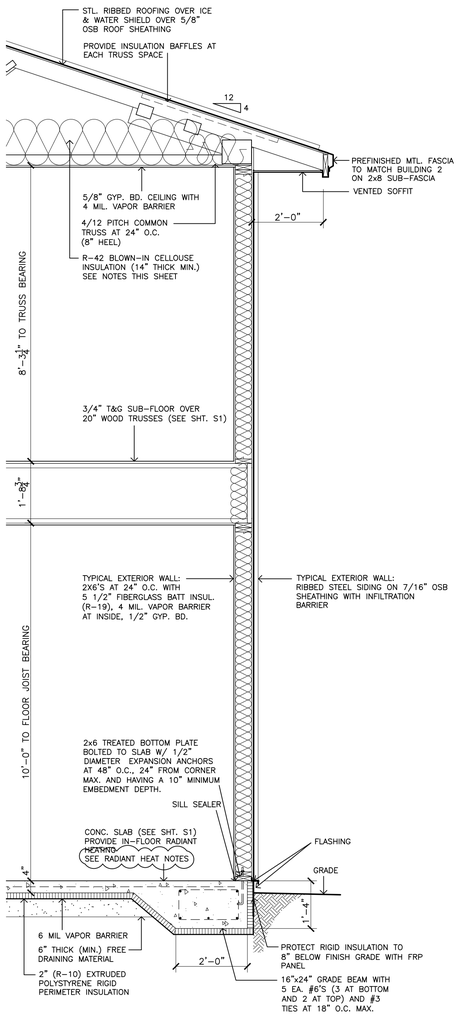
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: BUILDING SECTIONS



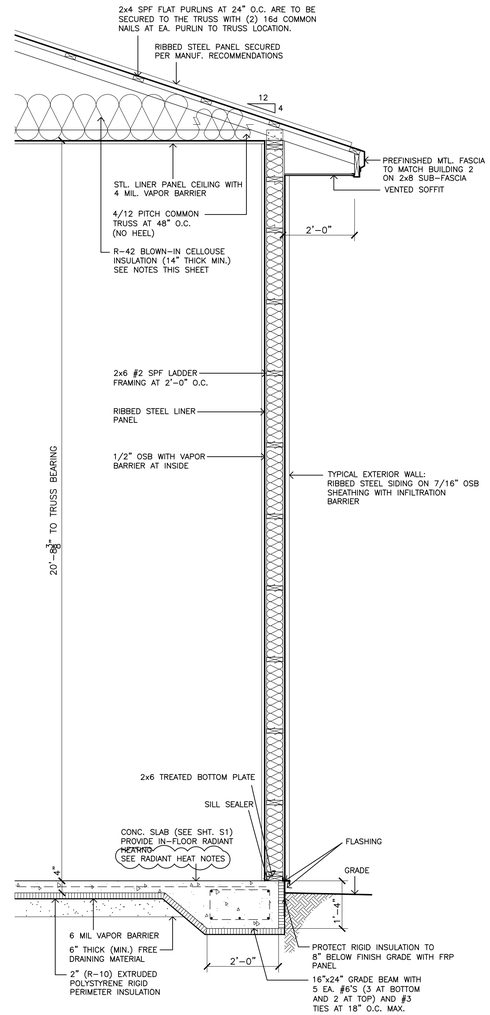
1 WALL SECTION

1/2" = 1'-0"



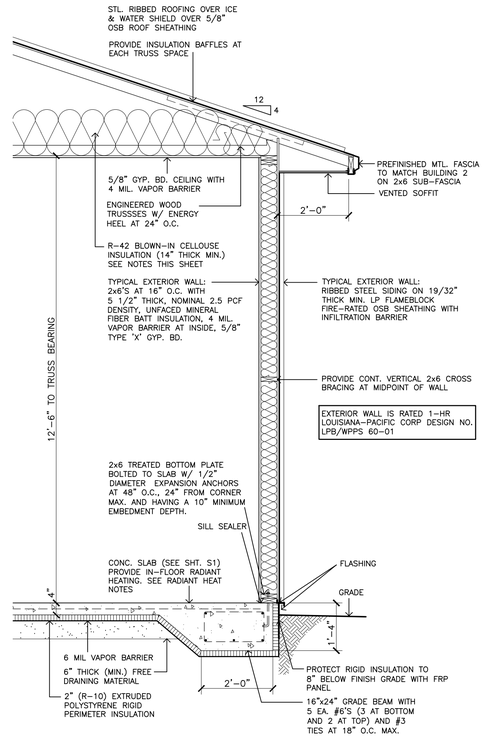
2 WALL SECTION

1/2" = 1'-0"



3 WALL SECTION

1/2" = 1'-0"



4 WALL SECTION

1/2" = 1'-0"

NOTE:
PROVIDE ATTIC VENTILATION. NET FREE AREA TO BE 1/300TH OF ATTIC SQUARE FOOTAGE WITH AT LEAST 50% OF THE REQUIRED VENTILATED AREA PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE BEING VENTILATED AT LEAST 3 FEET ABOVE EAVE AND THE BALANCE IN THE EAVE.

R-42 BLOWN-IN CELLULOSE INSULATION (14" THICK MIN.) THE BLOWN-IN INSULATION INSTALLER SHALL PROVIDE IDENTIFICATION MARKERS THAT ARE LABELED IN INCHES INSTALLED AT LEAST 1 FOR EVERY 300 SF THROUGHOUT ATTIC. THE MARKERS SHALL BE AFFIXED TO THE TRUSSES AND SHALL FACE THE ATTIC ACCESS OPENING. MARKERS WILL SHALL INDICATE THE MINIMUM INSTALLED THICKNESS AND THE MINIMUM SETTLED THICKNESS IN NUMBERS A MINIMUM OF 1" IN HEIGHT.

RADIANT HEAT SYSTEM NOTES

1. HYDRONIC PIPING OR TUBING SHALL MEET THE REQUIREMENTS OF 2015 IMC 1202.4 AND SHALL BE MARKED WITH TESTING STANDARD OR INSTALLATION MATERIALS SHALL BE ON-SITE FOR VERIFICATION OF THIS REQUIREMENT.
2. HYDRONIC PIPE SYSTEM TO BE DESIGNED AND INSTALLED TO ALLOW SYSTEM TO BE DRAINED AS PER 2015 IMC 1206.2.
3. HYDRONIC PIPE SYSTEM TO BE TESTED FOR A DURATION OF AT LEAST 15 MINUTES AND IN ACCORDANCE WITH 2015 IMC 1208.1.
4. PROVIDE HYDRONIC PIPE SYSTEM TESTING PRIOR TO POURING CONCRETE. MAINTAIN OPERATING PRESSURE AT HYDRONIC PIPING SYSTEM DURING POURING OF CONCRETE AS PER 2015 IMC 1209.2.

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET A5

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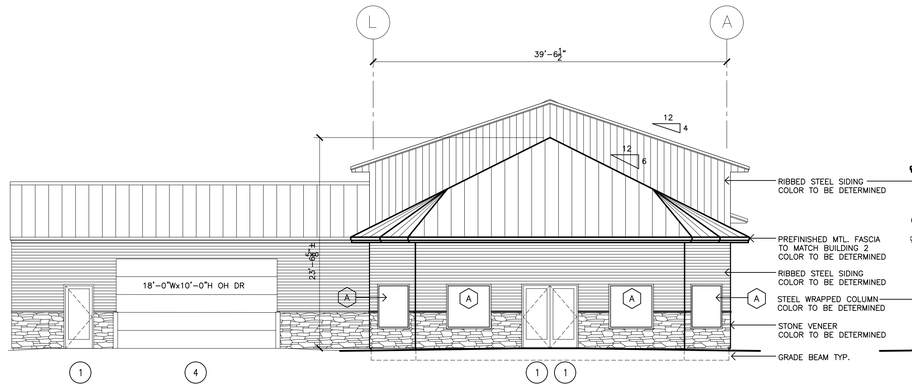
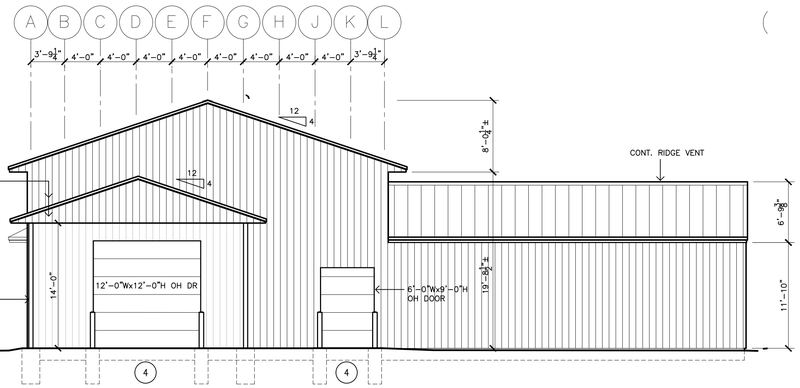
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: WALL SECTIONS



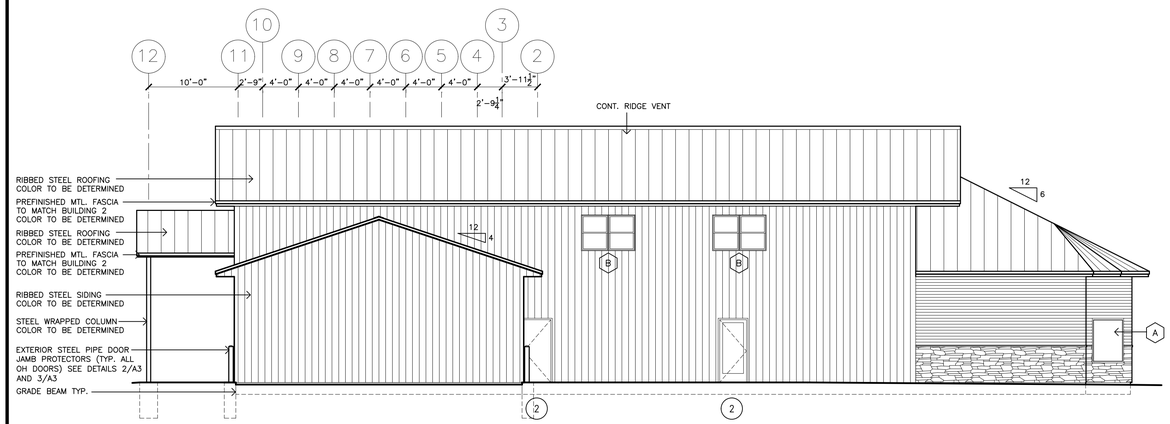
1 FRONT EXT. ELEVATION

1/8" = 1'-0"



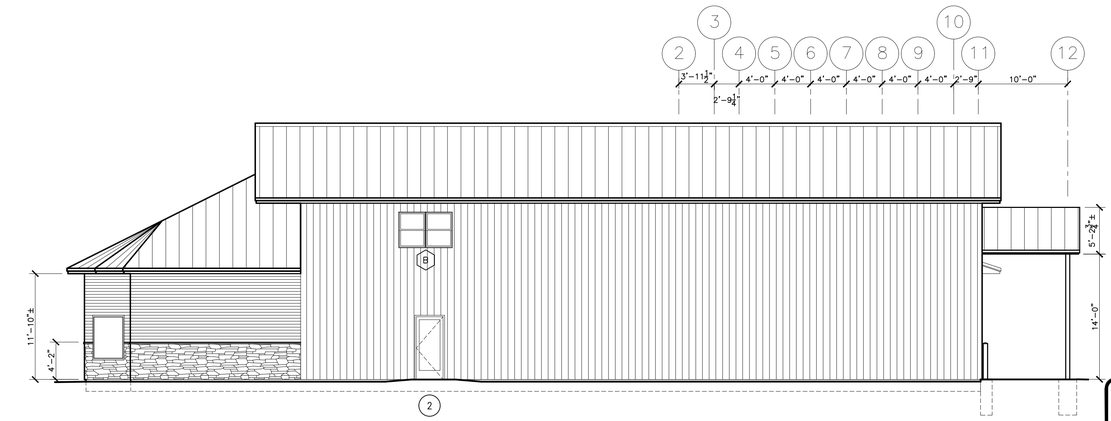
2 REAR EXT. ELEVATION

1/8" = 1'-0"



3 LEFT SIDE EXTERIOR ELEVATION

1/8" = 1'-0"



4 RIGHT SIDE EXTERIOR ELEVATION

1/8" = 1'-0"

GENERAL STRUCTURAL NOTES

DESIGN LOADS

FLOOR LOADS
LIVE LOAD 65 PSF
DEAD LOAD, TOP CHORD 15 PSF
DEAD LOAD, BOTTOM CHORD 5 PSF

ROOF LOADS (SEE SHT. S2 FOR ADDITIONAL LOAD CONDITIONS)
GROUND SNOW LOAD 40 PSF
DEAD LOAD, TOP CHORD 15 PSF
DEAD LOAD, BOTTOM CHORD 5 PSF

WIND LOADS
BASIC WIND SPEED = 115 MPH EXPOSURE C
RISK CATEGORY = II

SEISMIC & THERMAL PERFORMANCE
SEISMIC HAZARD: RISK CATEGORY: GROUP II – SEISMIC DESIGN CATEGORY: A SITE CLASSIFICATION:C
HEATED, INSULATED STRUCTURE

CONSTRUCTION AND SAFETY

1. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
2. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS RESPONSIBLE FOR HIS OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. SHOULD ANY DISCREPANCY BE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF THE CONDITION.
4. CONTRACTOR SHALL BRACE ENTIRE STRUCTURE AS REQUIRED DURING DEMOLITION AND CONSTRUCTION TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT.

FOUNDATIONS

5. FOUNDATION ELEVATIONS ARE SHOWN FOR BIDDING PURPOSES AND MAY VARY TO TO SUIT SUB-SURFACE SOIL CONDITION. ELEVATION AND BEARING STRATA SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
6. FOOTINGS MAY BE PLACED WITHOUT SIDE FORMS IF EXCAVATED WALLS STAND APPROXIMATELY VERTICAL.
7. ALL FOOTINGS SHALL BEAR ON LEVEL (WITHIN 1 IN 12) UNDISTURBED SOIL OR APPROVED ENGINEERED FILL. FOUNDATIONS HAVE BEEN DESIGNED FOR A MAXIMUM SOIL BEARING PRESSURE OF 2000 PSF (1,850 PSF EFFECTIVE ALLOWABLE) BELOW STRIP FOOTINGS AND ISOLATED COLUMN FOOTINGS.
8. CONTRACTOR SHALL CONTACT UTILITY COMPANIES FOR LOCATING UNDERGROUND SERVICES AND IS RESPONSIBLE FOR THEIR PROTECTION AND SUPPORT.
9. COMPACTION
   A. ALL FILL MATERIALS SHALL BE APPROVED BY A GEOTECHNICAL CONSULTANT.
   B. FILL BELOW FOOTINGS: ENGINEERED FILL BELOW FOOTINGS: MINIMUM COMPACTION 98% STANDARD PROCTOR DENSITY AT THE OPTIMUM MOISTURE CONTENT.

CONCRETE

10. CONCRETE WORK AND TESTING SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318.
11. CONCRETE WORK IN COLD WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 306.1-90 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING" AND ACI 306.1-90 "COLD WEATHER CONCRETING".
12. CONCRETE WORK IN HOT WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 305R-91 "HOT WEATHER CONCRETING". THE AIR TEMPERATURE, RELATIVE HUMIDITY, CONCRETE TEMPERATURE, AND WIND VELOCITY SHALL BE ENTERED INTO NOMOGRAPH FIGURE 2.1.5 TO DETERMINE IF PRECAUTIONS AGAINST PLASTIC SHRINKAGE ARE REQUIRED.
13. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR EACH TYPE OF CONCRETE TO THE STRUCTURAL ENGINEER FOR APPROVAL IN ACCORDANCE WITH ACI 318 SECTION 3.9 OR 3.10. 14. MATERIALS: (f'c BASED ON 28 DAYS UNLESS NOTED)
A. CONCRETE UNLESS NOTED: f'c = 4000 PSI, NORMAL AGGREGATE.
B. CONCRETE FOR INDUSTRIAL OR WAREHOUSE INTERIOR FLOOR SLABS: f'c = 4000 PSI AT 28 DAYS, 1800 PSI AT 3 DAYS, NORMAL WEIGHT AGGREGATE, MINIMUM PORTLAND CEMENT CONTENT PER ACI 318-14 TABLE 3.14.2(b), FLY ASH NOT PERMITTED, WATER NOT PERMITTED TO BE ADDED AT THE SITE, HRWR ADMIXTURE REQUIRED, MAXIMUM WATER / CEMENT RATIO = 0.50.
C. CONCRETE FOR OTHER INTERIOR FLOOR SLABS, f'c = 4000 PSI AT 28 DAYS, 1800 PSI AT 3 DAYS, NORMAL WEIGHT AGGREGATE, MINIMUM PORTLAND CEMENT CONTENT PER ACI 318-99 TABLE 3.14.2(b), WATER NOT PERMITTED TO BE ADDED AT THE SITE, HRWR ADMIXTURE REQUIRED, MAXIMUM WATER / CEMENT RATIO = 0.50.
D. CONCRETE FOR EXTERIOR FLAT WORK, WALKS, ETC. f'c = 4500 PSI, (4.5% TO 7.5% ENTRAINED AIR), MINIMUM PORTLAND CEMENT CONTENT = 520 #/CY, MAXIMUM WATER CEMENTITOUS RATIO = 0.50.
E. CONCRETE FOR FOUNDATION WALLS WITH EXTERIOR EXPOSURE, f'c = 4000 PSI, (4.5% TO 7.5% ENTRAINED AIR), MAXIMUM WATER CEMENTITOUS RATIO = 0.50.
F. CONCRETE FOR FOOTINGS: f'c = 3000 PSI
G. REINFORCING STEEL: ASTM A615 60 KSI YIELD DEFORMED BARS AND ASTM A185 MESH, FLAT SHEETS ONLY.
H. FLY ASH: ASTM C618, TYPE F OR C. TOTAL FLY ASH–TO–PORTLAND CEMENT RATIO SHALL NOT EXCEED 20% MAXIMUM.
J. HIGH RANGE WATER REDUCER (HRWR) ADMIXTURE: ASTM C494. K. CHLORIDE CONTENT OF CONCRETE: LIMIT TOTAL CHLORIDE ION CONTENT TO AMOUNT INDICATED IN TABLE 4.4.1 OF ACI 318. ADMIXTURES CONTAINING CHLORIDE ARE NOT PERMITTED IN REINFORCED CONCRETE OR CONCRETE CONTAINING METALS.
15. SLUMP SHALL BE MEASURED PRIOR TO ADDITION OF HRWR.
16. LAP SPLICE REINFORCING BARS AS FOLLOWS UNLESS NOTED OTHERWISE.
   A. BARS WITH MORE THAN 12" OF CONCRETE BELOW – 48 BAR DIAMETERS, #4 BAR = 24" LAP, #5 BAR = 30" LAP, #6 BAR = 36" LAP.
   B. BARS WITH LESS THAN 12" OF CONCRETE BELOW – 40 BAR DIAMETERS, #4 BAR = 20" LAP, #5 BAR = 25" LAP, #6 BAR = 30" LAP.
17. MACHINE TROWEL FINISH FLOOR SLAB AND CURE USING "CURE AND SEAL" TYPE CURING COMPOUND MEETING FEDERAL SPECIFICATION TT–C–00800, VOC COMPLIANT, 30% MINIMUM SOLIDS CONTENT. FOR APPLICATION EXPOSED TO SUNLIGHT USE LIGHT BROOM FINISH AND ACRYLIC BASED CURING COMPOUND.
18. FLOOR SLAB–ON–GRADE SHALL CONFORM TO THE FOLLOWING SURFACE PROFILE TOLERANCES PER ASTM E–1155 AND ACI 117:

	FF (FLATNESS)	FL (LEVELNESS)
SPECIFIED OVERALL VALUE	25	20
MINIMUM LOCAL VALUE	18	13

MAXIMUM GAP UNDER 10 FT. UNLEVELED STRAIGHT EDGE = 1/4"

19. AT SLAB AND WALL OPENING CORNERS AND REENTRANT CORNERS, PROVIDE (1) #5 BAR I IN EACH FACE PARALLEL TO EACH EDGE EXTENDING A MINIMUM OF 2'–0" PAST EDGE OF OPENING. THIS STEEL MAY BE OMITTED IF TYPICAL WALL STEEL EXCEEDS THIS MINIMUM REQUIREMENT.
20. CONTROL JOINTS ON SLABS ON GRADE SHALL BE LOCATED AT 12'–6" MAXIMUM SPACING AND SHALL CREATE SECTIONS OF SLAB WITH A MAXIMUM ASPECT RATIO OF 1.5 : 1. CONTROL JOINTS SHALL BE SAWN AND SHALL BE A MINIMUM OF 1/4 OF THE SLAB THICKNESS DEEP. THE CONTROL JOINT SHALL BE SAWN AS SOON AS THE SAW BLADE CAN CUT THE CONCRETE WITHOUT DISPLACING THE AGGREGATE. CUT EVERY OTHER MESH WIRE AT THE CONTROL JOINT PRIOR TO PLACING THE CONCRETE.

WOOD

21. STORE ALL MATERIALS IN SUCH A MANNER AS TO ENSURE PROPER VENTILATION AND DRAINAGE, AND TO PROTECT AGAINST DAMAGE AND WEATHER.
22. ALL ROUGH CARPENTRY SHALL PRODUCE JOINTS TRUE TIGHT AND WELL NAILED, WITH ALL MEMBERS ASSEMBLED IN ACCORDANCE WITH THE DRAWINGS AND WITH ALL PERTINENT CODES AND REGULATIONS.
23. USE TREATED LUMBER FOR ALL WOOD BUCKS, NAILING GROUNDS, PLATES, ETC.., IN CONTACT WITH CONCRETE. MASONRY WORK AND STRUCTURAL STEEL.
24. SET ALL HORIZONTAL OR SLOPED MEMBERS WITH THE CROWN UP.
25. DO NOT NOTCH, BORE OR CUT MEMBERS FOR PIPES. DUCTS, CONDUITS OR OTHER REASON, EXCEPT AS SHOWN ON THE DRAWINGS OR AS SPECIFICALLY APPROVED IN ADVANCED BY THE BUILDING DESIGNER.
26. AIR INFILTRATION BARRIER TO BE TYVEK COMMERCIAL WRAP OR EQUAL COMPLYING WITH ASTM E 2357 WITH FLAME–SPREAD AND SMOKE DEVELOPED INDEXES OF LESS THAN 25 AND 450 AS TESTED IN ACCORDANCE WITH ASTM E 84 AND UV STABILIZED FOR 9 MONTH EXPOSURE. INCLUDE FLASHING AND SEALING OF ALL PENETRATIONS
27. FRAME ALL CORNERS AND INTERSECTIONS WITH THREE OR MORE STUDS AND ALL REQUIRING BEARING FOR WALL FINISH.
28. PLACE ALL PLYWOOD AND OSB SHEATHING WITH FACE GRAIN PERPENDICULAR TO SUPPORTS, AND CONTINUOUSLY OVER AT LEAST TWO SUPPORTS. CENTER JOINTS ACCURATELY OVER SUPPORTS.
29. PREFABRICATED FLOOR AND ROOF TRUSSES FURNISHED TO COMPLY WITH WISCONSIN COMMERCIAL BUILDING CODE REQUIREMENTS INCLUDING PREPARATION AND SEALING OF PLANS AND CALCULATIONS FOR SUBMITTAL AS COMPONENT PRIOR TO DELIVERY AND INSTALLATION.
30. LVL'S (LAMINATED VENEER LUMBER) TO BE ENGINEERED WOOD PRODUCT WITH A MINIMUM Fb = 2,600 PSI AND MODULUS OF ELASTICITY = 1,900,00 PSI (GRADE 1.9E) USE ONLY COMMON WIRE NAILS OR SPIKES OF THE DIMENSION SHOWN ON THE NAILING SCHEDULE.
31. FOR CONDITIONS NOT COVERED IN THE NAILING SCHEDULE, PROVIDE PENETRATION INTO THE PIECE RECEIVING THE POINT OF NOT LESS THAN 1/2 THE LENGTH OF THE NAIL OR SPIKE (NOTE: 16d NAILS MAY BE USED TO CONNECT PIECES OF 2" NOMINAL THICKNESS).
32. FRAMING LUMBER TO BE SPUCE–PINE–FIR (SPF) SPECIES, #2 GRADE WHEN VISUALLY–GRADED ACCORDING TO ASTM 1990–16.
33. PLYWOOD TO BE APA GRADED COMPLETE WITH MARKINGS IDENTIFYING THICKNESS AND ALLOWABLE SPANS. ORIENTED STRAND BOARD TO COMPLY WITH APA GRADING REQUIREMENTS AND MUST BE MARKED IDENTIFYING THICKNESS, ALLOWABLE SPANS AND EXPOSURE.

NAILING SCHEDULE :

BLOCKING TO JOIST BEARING	TWO, 10d TOENAILED, EACH SIDE
BLOCKING TO JOIST	TWO, 8d TOENAILED
STUDS ENDNAILED TO PLATE	TWO, 16d
STUDS TOENAILED TO PLATE	TWO, 16d, EACH SIDE
STUDS NAILED TOGETHER	16d @ 12" ON CENTER, STAGGERED
PLATES :	
UPPER TO LOWER	16d @ 12" ON CENTER, STAGGERED
AT SPLICES	TWO, 16d FACE NAILED
PLATE LAP AT CORNERS	TWO, 16d FACE NAILED
JOISTS & RAFTERS :	
TO SUPPORT	TWO, 8d TOENAILED, EACH SIDE
AT LAPS	FOUR, 16d NAILED
ROOF SHEATHING TO SUPPORTS	8d @ 12" ON CENTER, AT PERIMETER 8d @ 16" ON CENTER AT FIELD
WALL SHEATHING TO SUPPORTS	8d @ 6" ON CENTER, AT PERIMETER 8d @ 12" ON CENTER AT FIELD
GYPSUM WALLBOARD TO EXT. STUDS	7" SPACING OF FASTENERS @ PERIMETER 12" SPACING @ FIELD

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET A6

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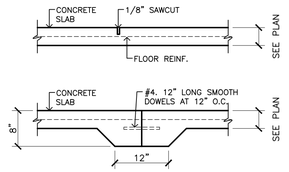
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: EXTERIOR ELEVATIONS AND STRUCTURAL NOTES



PROVIDE CONSTRUCTION OR CONTROL JOINTS AS SHOWN ON PLAN (15'-0" O.C./E.W. MAX.)

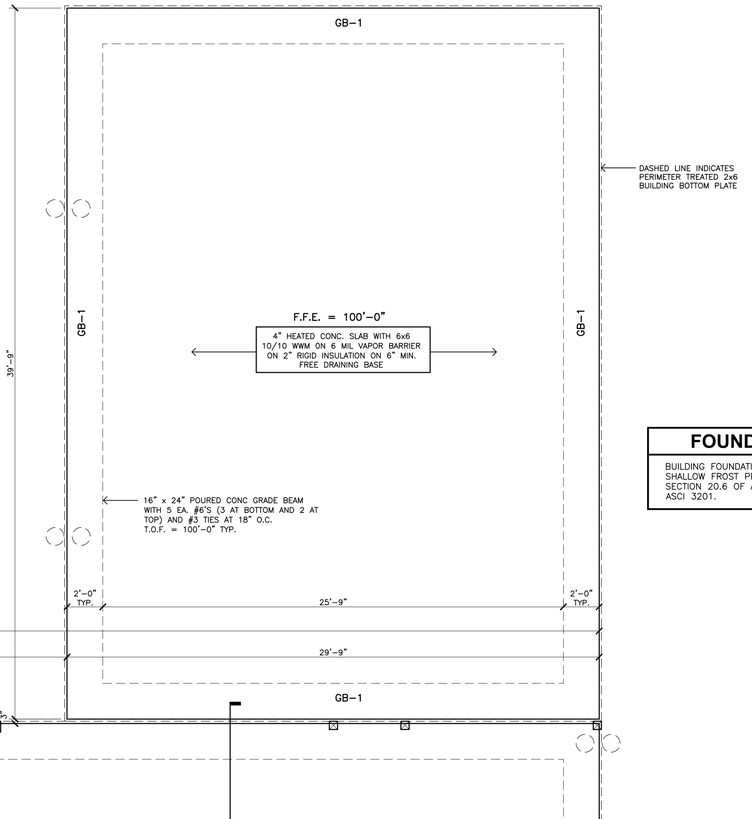
2 FLOOR JOINT

3/4" = 1'-0"

STRUCTURAL SCHEDULE

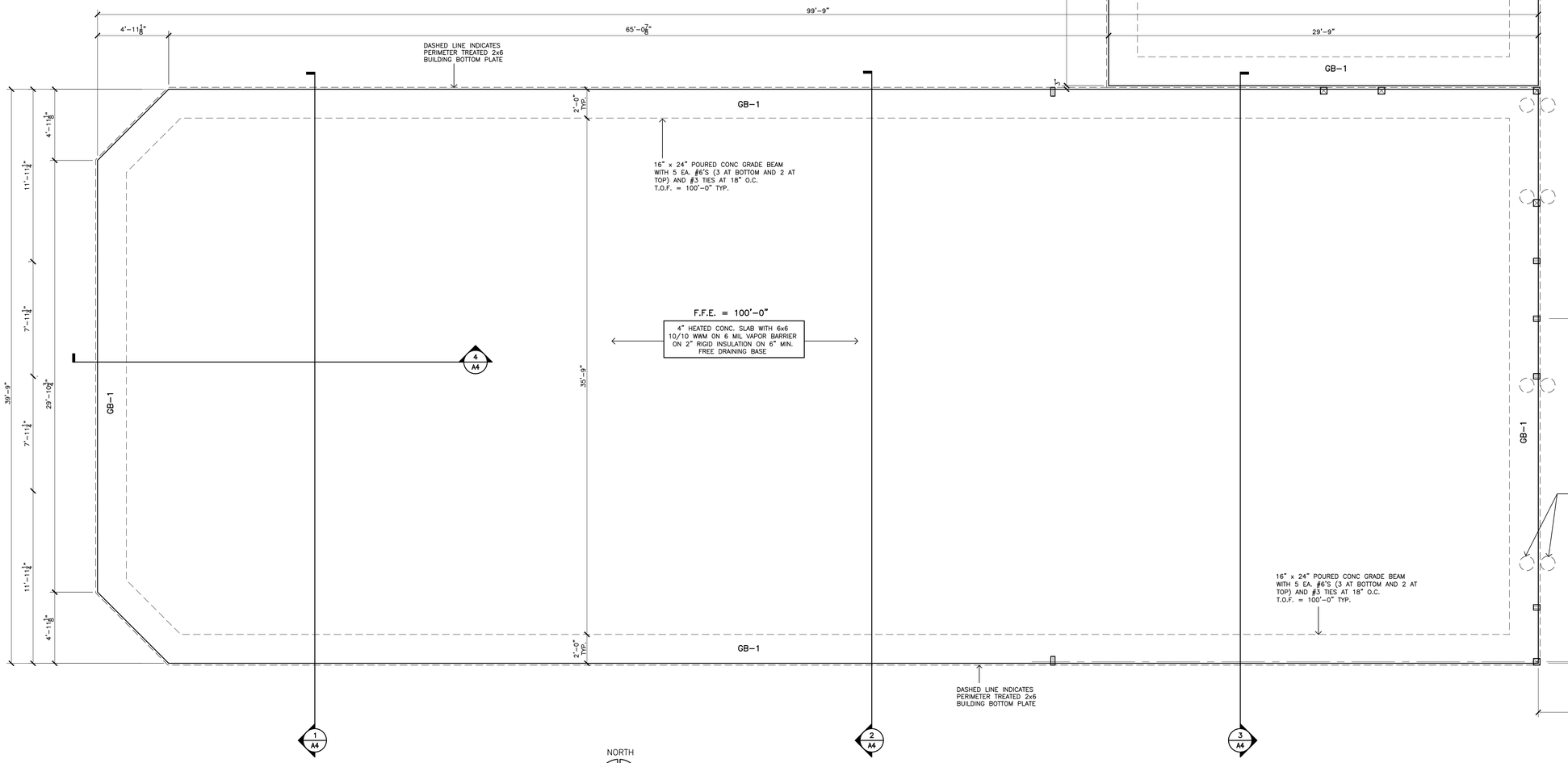
MARK	DESCRIPTION	REINFORCING/REMARKS
GB-1	16" X 24" GRADE BEAM	5 EA. #6'S (3 AT BOTTOM AND 2 AT TOP) AND #3 TIES AT 18" O.C.
CF-1	24" DIA. SONOTUBE	

NOTE: TOP OF WALL = 100'-0" U.N.O.



FOUNDATION NOTE

BUILDING FOUNDATION HAS BEEN DESIGNED AS SHALLOW FROST PROTECTED FOUNDATION AS PER SECTION 20.6 OF ACI 318 AND SECTION 1809.5 OF ASCI 3201.



1 PROPOSED FIRST FLOOR PLAN

1/4" = 1'-0"

NORTH

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET S1

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NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

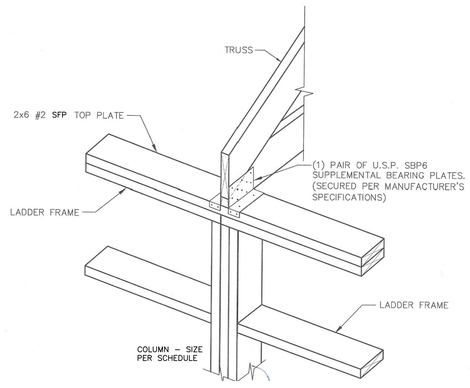
MAIN BUILDING: FOUNDATION PLAN AND DETAILS

STRUCTURAL SCHEDULE

MARK	DESCRIPTION	REINFORCING/REMARKS
L-1	(2) 2x10'S	DOOR/WINDOW LINTEL
L-2	(2) 2x6'S	DOOR/WINDOW LINTEL
L-3	(2) 2x8'S	WINDOW LINTEL
L-4	(2) 1.75 x 7.25 LVL'S	OH DOOR LINTEL
L-5	(3) 1.75 x 11.25 LVL'S	OH DOOR LINTEL
L-6	(2) 1.75 x 9.25 LVL'S	CANOPY LINTEL
SP-1	6 X 6 WD. STUB COLUMN	ROOF SUPPORT
PR-1	2x4 #2 SPF PURLIN (FLAT)	SPAN UP TO (5) BAYS. SECURE TO TRUSSES WITH (2) 16d THREADED HARDENED STEEL NAILS AT EA. PURLIN – SEE DETAIL
C-1	(2) 1.75 x 7.25 LVL'S	PROVIDE TWO (2) SIMPSON STRONG-TIE HTT4HDG AT BASE OF ALL COLUMNS
C-2	(3) 1.75 x 7.25 LVL'S	PROVIDE TWO (2) SIMPSON STRONG-TIE HTT4HDG AT BASE OF ALL COLUMNS
C-3	(3) 2x6 COLUMN	SIMPSON STRONG-TIE ABU66Z COLUMN BASE
C-4	6x6 COLUMN	SIMPSON STRONG-TIE ABU66Z COLUMN BASE
C-5	6x6 PRESSURE TREATED COLUMN	SIMPSON STRONG-TIE CBS66 COLUMN BASE SIMPSON STRONG-TIE CCQ66SDS2.5ROT COLUMN CAP AT COLUMN BEAM CONNECTORS WHERE APPLICABLE

ATTIC ACCESS PANEL NOTE:

ATTIC ACCESS PANELS TO BE NOT LESS THAN 20" BY 30" LOCATE SUCH THAT A HEADROOM OF NOT LESS THAN 30" SHALL BE PROVIDED IN THE ATTIC SPACE AT OR ABOVE THE ACCESS OPENING. A MINIMUM OF 30" CLEAR HEADROOM REQUIRED AT OR ABOVE THE ACCESS OPENING



3 TRUSS INSTALLATION

ROOF LOADING:

GROUND SNOW LOAD	=	40 PSF
FLAT ROOF SNOW LOAD	=	25.2 PSF
Is=1.0 Ce=1.0 Ct=1.0		
DEAD LOAD, TOP CHORD	=	10 PSF
DEAD LOAD, BOTTOM CHORD	=	5 PSF

FLOOR LOADING:

LIVE LOAD	=	65 PSF UNLESS NOTED OTHERWISE
DEAD LOAD, TOP CHORD	=	10 PSF
DEAD LOAD, BOTTOM CHORD	=	5 PSF

NORTH

1 FIRST FLOOR ROOF AND FLOOR FRAMING PLAN

1/4" = 1'-0"

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET **S2**

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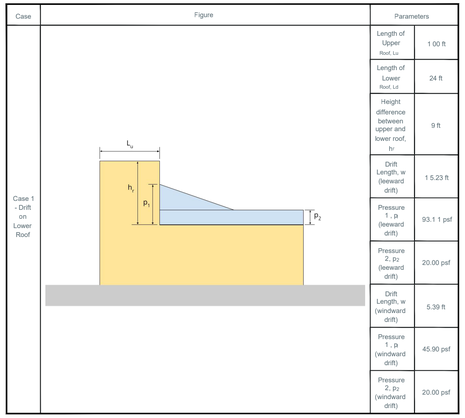
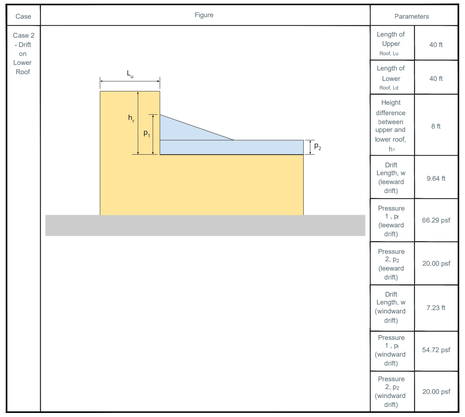
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: FLOOR FRAMING PLAN



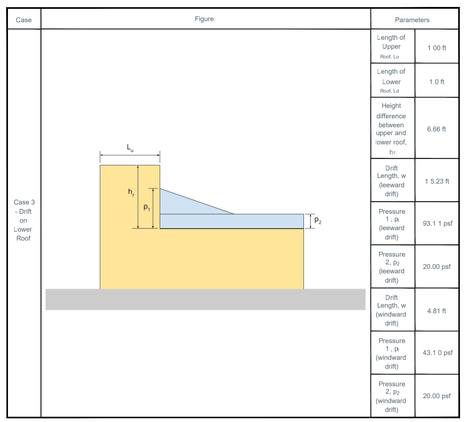
2 SNOW DRIFT AT HIGH ROOF/EAST WALL

NO SCALE



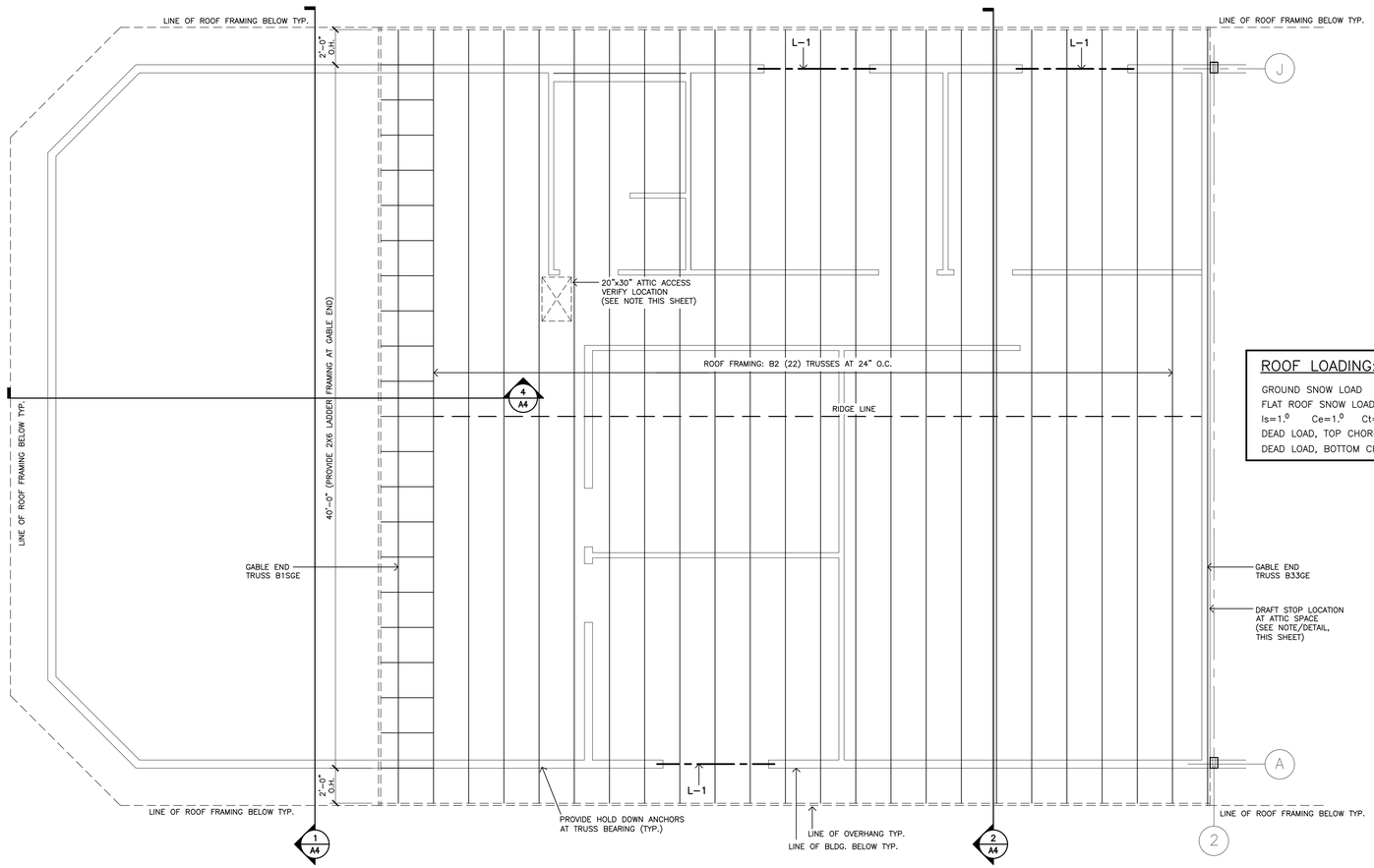
3 SNOW DRIFT AT HIGH ROOF/LOW ROOF

NO SCALE



4 SNOW DRIFT AT HIGH ROOF/CANOPY ROOF

NO SCALE



1 SECOND FLOOR ROOF FRAMING PLAN

1/4" = 1'-0"

NORTH

ROOF LOADING:

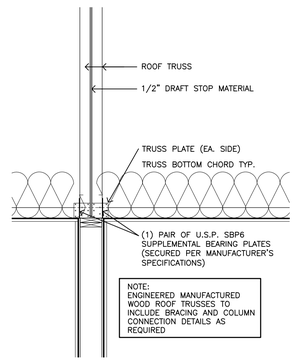
GROUND SNOW LOAD	=	40 PSF
FLAT ROOF SNOW LOAD	=	25.2 PSF
Is=1.0 Ce=1.0 Ct=1.0		
DEAD LOAD, TOP CHORD	=	10 PSF
DEAD LOAD, BOTTOM CHORD	=	5 PSF

STRUCTURAL SCHEDULE

MARK	DESCRIPTION	REINFORCING/REMARKS
L-1	(2) 2x10'S	DOOR/WINDOW LINTEL

ATTIC ACCESS PANEL NOTE:

ATTIC ACCESS PANELS TO BE NOT LESS THAN 20" BY 30". LOCATE SUCH THAT A HEADROOM OF NOT LESS THAN 30" SHALL BE PROVIDED IN THE ATTIC SPACE AT OR ABOVE THE ACCESS OPENING. A MINIMUM OF 30" CLEAR HEADROOM REQUIRED AT OR ABOVE THE ACCESS OPENING



DRAFTSTOP NOTE:
ATTIC AND CONCEALED ROOF SPACE SHALL BE SUBDIVIDED INTO AREAS THAT DO NOT EXCEED 3,000 SF AS PER 2015 IBC 718.4.3
DRAFTSTOP MATERIALS TO BE APPLIED TO ONE SIDE OF ROOF TRUSS OR AT TRUSS END FROM CEILING BELOW TO ROOF DECK ABOVE
ACCEPTABLE DRAFTSTOP MATERIALS INCLUDE 3/8" THICK ORIENTATED STRAND BOARD (OSB), 1" THICK NOMINAL LUMBER OR 1/2" THICK GYPSUM WALLBOARD
INTEGRITY OF DRAFTSTOP MUST BE MAINTAINED

5 DRAFTSTOP DETAIL

1/2" = 1'-0"

DRAWN JAW
CHECKED
DATE JUNE 22, 2022
SCALE AS NOTED
SHEET S3

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NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

MAIN BUILDING: ROOF FRAMING PLAN

Wind Load Report

1. Site & Building Data

Roof Type:	Gable
Wind Speed (ult):	115 mph
Exposure Category:	C
Enclosure Class:	Enclosed
Building Width (W):	40 ft.
Building Length (L):	76 ft.
Eave Height (he):	20 ft.
Foundation Height (hf):	0 ft.
Roof Pitch:	4 /12
Eave Overhang (OHe):	2 ft.
Gable Overhang (OHg):	1 ft.

2. Parameters & Coefficients

Topographic Factor (Kzt):	1.0
Directionality Factor (Kd):	.85
Roof Angle (θ):	18.43 deg.
Mean Roof Height (h):	23.33 ft.
Ridge Height (hr):	26.67 ft.
Pos. Internal Pressure (+GCpi):	+0.18
Neg. Internal Pressure (-GCpi):	-0.18
Velocity Pressure Exp. Coeff. (Kh):	0.93 @ z=h
Velocity Pressure (qh):	26.81 psf
End Zone Width (a):	3.00 ft.
Zone 2/2E Dist.:	20.00 ft.

3. Design Assumptions and Notes

Code Standard:	ASCE 7-10
Geometry:	Regular-Shaped Bldg.
Height Class:	Low-Rise Building

Notes:

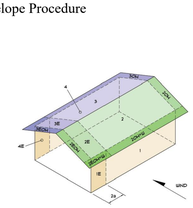
4. Design Loads

Top Chord Dead Load:	10 psf
Bottom Chord Dead Load:	5 psf
Truss/Rafter Spacing:	24 in. o/c

4. Design Wind Pressures: MWFRS Envelope Procedure

Load Case A: Transverse Direction

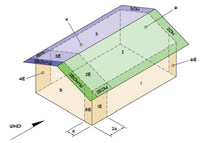
Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	Design Pressure (psf) (w/ -GCpi)
1	0.52	9.02	18.67
2	-0.69	-23.32	-13.67
3	-0.47	-17.39	-7.74
4	-0.42	-15.96	-6.31
1E	0.78	16.09	25.74
2E	-1.07	-33.51	-23.86
3E	-0.67	-22.88	-13.23
4E	-0.62	-21.40	-11.75
2OH	-0.69	-18.50	
2EOH	-1.07	-28.69	
3OH	-0.47	-12.56	
3EOH	-0.67	-18.05	
2OH+W	-0.69/-0.7	-36.67	
2EOH+W	-1.07/-0.7	-46.85	



a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.

Load Case B: Longitudinal Direction

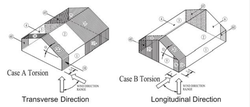
Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	Design Pressure (psf) (w/ -GCpi)
1	-0.45	-16.89	-7.24
2	-0.69	-23.32	-13.67
3	-0.37	-14.75	-5.09
4	-0.45	-16.89	-7.24
5	0.40	5.90	15.55
6	-0.29	-12.60	-2.95
1E	-0.48	-17.69	-8.04
2E	-1.07	-33.51	-23.86
3E	-0.53	-19.04	-9.38
4E	-0.48	-17.69	-8.04
5E	0.61	11.53	21.18
6E	-0.43	-16.35	-6.70
2OH	-0.69	-18.50	
2EOH	-1.07	-28.69	
3OH	-0.37	-9.92	
3EOH	-0.53	-14.21	
2EOH+W	-1.07/-0.7	-47.45	
3EOH+W	-0.53/-0.7	-32.98	



a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.

Torsional Load Cases

Surface Load Case		GCpf	Design Pressure (psf) (w/ +GCpi)	Design Pressure (psf) (w/ -GCpi)
1T	A	-	2.25	4.67
2T	A	-	-5.83	-3.42
3T	A	-	-4.35	-1.93
4T	A	-	-3.99	-1.58
5T	B	-	1.47	3.89
6T	B	-	-3.15	-0.74

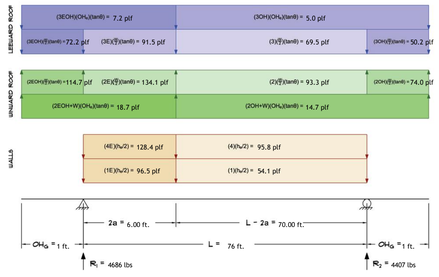


a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) Pressures designated with a "T" are 25% of full design wind pressures.
c) Torsional loading shall apply to all 8 load patterns using the figures shown.
d) Design pressures are for strength design, multiply by 0.6 for ASD.
e) Torsional Design Exceptions: One story bldg. with h ≤ 30 ft,
Two stories or less framed with light frame construction,
Two stories or less with flexible diaphragms.

5. Wind Load Calculations

1.) Lateral Loads - Transverse Direction:

Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.

Wind Base Shear (ASD)

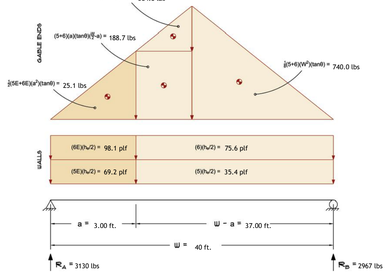
Load Case A: Transverse Direction

Load Case	Walls (lbs)	Roof (lbs)	Roof Overhangs (lbs)	Total Lateral Load (lbs)	R1 (lbs)	R2 (lbs)
Positive Internal Pressure	11842	-1918	-832	9093	4686	4407
Negative Internal Pressure	11842	-1918	-832	9093	4686	4407
Roof Pressure = 0	11842	0	0	11842	6128	5714
Min. Pressures (8 psf, 16 psf)	7296	2432	314	10042	5021	5021

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

2.) Lateral Loads - Longitudinal Direction:

Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.
c) Where the length of building (L) exceeds 4X the mean roof height (h), wind drag forces should additionally be considered.

Wind Base Shear (ASD)

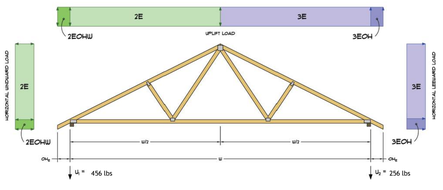
Load Case B: Longitudinal Direction

Load Case	Walls (lbs)	Gable Ends (lbs)	Roof (lbs)	Total Lateral Load (lbs)	RA (lbs)	RB (lbs)
Positive Internal Pressure	4609	1488	0	6097	3130	2967
Negative Internal Pressure	4609	1488	0	6097	3130	2967
Roof Pressure = 0	4609	1488	0	6097	3130	2967
Min. Pressures (8 psf, 16 psf)	3840	1280	0	5120	2560	2560

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

3.) Roof Truss Reactions:

Roof Truss/Rafter Reactions: Transverse End Zone



a) Strength design values multiplied by 0.6 to obtain ASD values.
b) Windward loads may be positive or negative depending on pitch of roof.

Roof Truss/Rafter Reactions (ASD)

w/ Positive Internal Pressure

Load Case	Horizontal Load (lbs)	Gross Uplift (lbs)	Net Uplift (lbs)	U1 (lbs)	U2 (lbs)
Transverse Int. Zone	67	1095	299	215	83
Transverse End Zone	108	1509	713	456	256
Longitudinal Int. Zone	75	982	185	155	30
Longitudinal End Zone	127	1364	568	389	179

a) Gross Uplift calculations do not include any counteracting roof dead loads.
b) Net Uplift calculations include counteracting roof dead loads multiplied by 0.6 per load case (7) ASCE 7-10.
c) Strength design values multiplied by 0.6 to obtain ASD values for wind loads.
d) Loads based on truss spacing calculated at 24" o/c.
e) Negative values for horizontal load indicate load acting in windward direction (transverse load cases).
f) Negative values for uplift indicate net downward force (zero uplift).

Wind Load Report

1. Site & Building Data

Roof Type:	Gable
Wind Speed (ult):	115 mph
Exposure Category:	C
Enclosure Class:	Enclosed
Building Width (W):	30 ft.
Building Length (L):	40 ft.
Eave Height (he):	12 ft.
Foundation Height (hf):	0 ft.
Roof Pitch:	4 /12
Eave Overhang (OHe):	2 ft.
Gable Overhang (OHg):	1 ft.

2. Parameters & Coefficients

Topographic Factor (Kzt):	1.0
Directionality Factor (Kd):	.85
Roof Angle (θ):	18.43 deg.
Mean Roof Height (h):	14.50 ft.
Ridge Height (hr):	17.00 ft.
Pos. Internal Pressure (+GCpi):	+0.18
Neg. Internal Pressure (-GCpi):	-0.18
Velocity Pressure Exp. Coeff. (Kh):	0.85 @ z=h
Velocity Pressure (qh):	24.43 psf
End Zone Width (a):	3.00 ft.
Zone 2/2E Dist.:	15.00 ft.

3. Design Assumptions and Notes

Code Standard:	ASCE 7-10
Geometry:	Regular-Shaped Bldg.
Height Class:	Low-Rise Building

Notes:

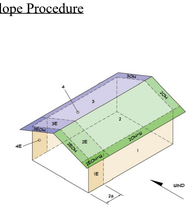
4. Design Loads

Top Chord Dead Load:	10 psf
Bottom Chord Dead Load:	5 psf
Truss/Rafter Spacing:	24 in. o/c

4. Design Wind Pressures: MWFRS Envelope Procedure

Load Case A: Transverse Direction

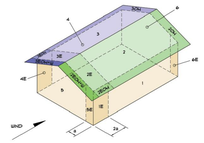
Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	Design Pressure (psf) (w/ -GCpi)
1	0.52	9.22	17.01
2	-0.69	-21.25	-12.46
3	-0.47	-15.84	-7.05
4	-0.42	-14.54	-5.75
1E	0.78	14.66	23.46
2E	-1.07	-30.54	-21.74
3E	-0.67	-20.85	-12.05
4E	-0.62	-19.50	-10.70
2OH	-0.69	-16.86	
2EOH	-1.07	-26.14	
3OH	-0.47	-11.45	
3EOH	-0.67	-16.45	
2OH+W	-0.69/-0.7	-33.96	
2EOH+W	-1.07/-0.7	-43.24	



a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.

Load Case B: Longitudinal Direction

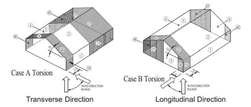
Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	Design Pressure (psf) (w/ -GCpi)
1	-0.45	-15.39	-6.60
2	-0.69	-21.25	-12.46
3	-0.37	-13.44	-4.64
4	-0.45	-15.39	-6.60
5	0.40	5.37	14.17
6	-0.29	-11.48	-2.69
1E	-0.48	-16.12	-7.33
2E	-1.07	-30.54	-21.74
3E	-0.53	-17.34	-8.55
4E	-0.48	-16.12	-7.33
5E	0.61	10.50	19.30
6E	-0.43	-14.90	-6.11
2OH	-0.69	-16.86	
2EOH	-1.07	-26.14	
3OH	-0.37	-9.04	
3EOH	-0.53	-12.95	
2EOH+W	-1.07/-0.7	-43.24	
3EOH+W	-0.53/-0.7	-30.05	



a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.

Torsional Load Cases

Surface Load Case		GCpf	Design Pressure (psf) (w/ +GCpi)	Design Pressure (psf) (w/ -GCpi)
1T	A	-	2.05	4.25
2T	A	-	-5.31	-3.11
3T	A	-	-3.96	-1.76
4T	A	-	-3.64	-1.44
5T	B	-	1.34	3.54
6T	B	-	-2.87	-0.67

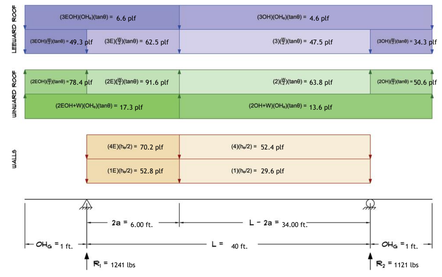


a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) Pressures designated with a "T" are 25% of full design wind pressures.
c) Torsional loading shall apply to all 8 load patterns using the figures shown.
d) Design pressures are for strength design, multiply by 0.6 for ASD.
e) Torsional Design Exceptions: One story bldg. with h ≤ 30 ft,
Two stories or less framed with light frame construction,
Two stories or less with flexible diaphragms.

5. Wind Load Calculations

1.) Lateral Loads - Transverse Direction:

Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.

Wind Base Shear (ASD)

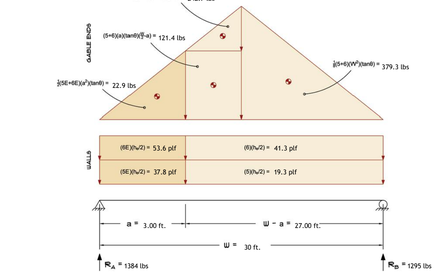
Load Case A: Transverse Direction

Load Case	Walls (lbs)	Roof (lbs)	Roof Overhangs (lbs)	Total Lateral Load (lbs)	R1 (lbs)	R2 (lbs)
Positive Internal Pressure	3524	-726	-435	2362	1241	1121
Negative Internal Pressure	3524	-726	-435	2362	1241	1121
Roof Pressure = 0	3524	0	0	3524	1867	1657
Min. Pressures (8 psf, 16 psf)	2304	960	182	3446	1723	1723

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

2.) Lateral Loads - Longitudinal Direction:

Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.
c) Where the length of building (L) exceeds 4X the mean roof height (h), wind drag forces should additionally be considered.

Wind Base Shear (ASD)

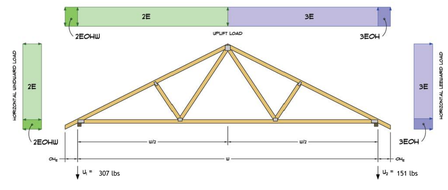
Load Case B: Longitudinal Direction

Load Case	Walls (lbs)	Gable Ends (lbs)	Roof (lbs)	Total Lateral Load (lbs)	RA (lbs)	RB (lbs)
Positive Internal Pressure	1913	766	0	2679	1384	1295
Negative Internal Pressure	1913	766	0	2679	1384	1295
Roof Pressure = 0	1913	766	0	2679	1384	1295
Min. Pressures (8 psf, 16 psf)	1728	720	0	2448	1224	1224

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

3.) Roof Truss Reactions:

Roof Truss/Rafter Reactions: Transverse End Zone



a) Strength design values multiplied by 0.6 to obtain ASD values.
b) Windward loads may be positive or negative depending on pitch of roof.

Roof Truss/Rafter Reactions (ASD)

w/ Positive Internal Pressure

Load Case	Horizontal Load (lbs)	Gross Uplift (lbs)	Net Uplift (lbs)	U1 (lbs)	U2 (lbs)
Transverse Int. Zone	50	777	167	136	30
Transverse End Zone	80	1068	458	307	151
Longitudinal Int. Zone	53	687	76	83	-7
Longitudinal End Zone	90	956	346	249	97

a) Gross Uplift calculations do not include any counteracting roof dead loads.
b) Net Uplift calculations include counteracting roof dead loads multiplied by 0.6 per load case (7) ASCE 7-10.
c) Strength design values multiplied by 0.6 to obtain ASD values for wind loads.
d) Loads based on truss spacing calculated at 24" o/c.
e) Negative values for horizontal load indicate load acting in windward direction (transverse load cases).
f) Negative values for uplift indicate net downward force (zero uplift).

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