INDIANA FIRE PREVENTION AND BUILDING SAFETY COMMISSION

Wednesday, October 6, 2021 By Electronic Mail

Melissa Tupper
Representative for the Petitioner
RTM Consultants, Inc.
6640 Parkdale Place, Suite J
Indianapolis, IN 46254
mtupper@rtmconsultants.com

Shirley Underwood Petitioner W.R. Beach Inc. 820 W Sumner Ave Indianapolis, IN 46217 wrbeachinc@att.net

Re: Petition for Administrative Review – IDHS Order of Denial of Variance No. 21-09-46 – W.R. Beach Inc.

Dear Ms. Tupper and Ms. Underwood:

The Indiana Fire Prevention and Building Safety Commission (Commission) is in receipt of your electronically-filed petition for administrative review of Indiana Department of Homeland Security (IDHS) Order of Denial of Variance No. 21-09-46 – W.R. Beach Inc., submitted on Wednesday, October 6, 2021. Pursuant to the requirements of Indiana Code § 4-21.5-3-7, your petition for administrative review is hereby granted by the Commission.

Your petition will now be forwarded to the Indiana Office on Administrative Law Proceedings (OALP) to be assigned to the Commission's administrative law judge. OALP or the judge will contact you directly to make arrangements for further proceedings. Should you have any questions, you may contact the Indiana Department of Homeland Security's deputy general counsel assigned to this matter, Justin Guedel, at jguedel@dhs.in.gov or (317) 234-9515.

Sincerely,

Douglas J. Boyle, Director

Y-7.B/

Indiana Fire Prevention and Building Safety Commission

Indiana Department of Homeland Security

Indiana Government Center South, Room E-208

302 W. Washington Street Indianapolis, IN 46204 doboyle@dhs.in.gov

Enclosure

cc: Justin K. Guedel, Indiana Department of Homeland Security Deputy General Counsel – Legal Counsel for the Respondent (by electronic mail)
Bryston Sprecher, Administrative Assistant of the Indiana Fire Prevention and Building Safety Commission (by electronic mail)

From: DHS Legal Mailbox

To: Guedel, Justin K; Boyle, Douglas J (DHS); Sprecher, Bryston

Subject: FW: Petition for Review

Date: Wednesday, October 6, 2021 1:43:27 PM

Attachments: 68379161 variance commission report withmultiactiondt.pdf

68380022 Variance Application and Cost Estimate.pdf

From: noreply@formstack.com <noreply@formstack.com>

Sent: Wednesday, October 6, 2021 5:41:48 PM (UTC+00:00) Monrovia, Reykjavik

To: DHS Legal Mailbox <Legal@dhs.IN.gov>

Subject: Petition for Review

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****



Formstack Submission For: petition for review

Submitted at 10/06/21 1:41 PM

Individual Name:	Melissa Tupper
Business Name: :	RTM Consultants, Inc.
Phone Number:	(317) 329-7700
Email Address:	mtupper@rtmconsultants.com
Mailing Address:	6640 Parkdale Place Suite J Indianapolis, IN 46254
Are you represented by an attorney?:	No

Attorney Name:	
Firm:	
Phone Number:	
Email Address:	
Mailing Address:	
Order Number:	
Facility Device Boiler ID:	
Date Order Received:	Oct 04, 2021
How did you receive the Order?:	Email
Entity Issuing Order:	Indiana Department of Homeland Security
Entity Name:	
Upload Order:	View File
Was this order specifically directed to you?:	No
Explain:	

Explain:

RTM Consultants Inc is representing Shirley Underwood, W.R. Beach, Inc. Responses below are on behalf of the owner.

Have you been aggrieved or adversely affected by the order?:

Yes

Explain:

The owner is adversely affected by the order, which renders this project not economically viable. The state took part of the company's property where there existing repair shop was, requiring them to build a new one. The owner should not be punished due to being forced by the state to build a new building to replace their previous one. The project cost, with inflation due to COVID, is \$150,000. Per an email from Citizen Energy it is estimated to cost t \$1.4-\$1.8 Million to install a water main and hydrant south along Bluff Road. That is over 9 times as much as the project costs.

Explain:

If the order was not specifically directed to you and you have not been aggrieved or adversely affected by the order, are you entitled to review under some other law?:

What law?:

I request review of the entire order

Yes

described above:

If you are not requesting review of the entire order, what is the scope of your request?:

I request a stay of effectiveness:

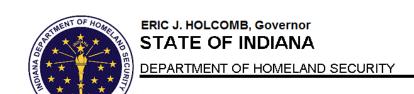
Yes

What is the basis of your challenge?:

The owner is adversely affected by the order denying Variance 21-09-46, which renders this project not economically viable. The state took part of the company's property where there existing repair shop was, requiring them to build a new one. The owner should not be punished due to being forced by the state to build a new building to replace their previous one. The project cost, with inflation due to COVID, is \$150,000. Per an email from Citizen Energy it is estimated to cost t \$1.4-\$1.8 Million to install a water main and hydrant south along Bluff Road. That is over 9 times as much as the project costs. The Department of Homeland Security sent us a notice of proposed denial of this variance. Their reasoning was "Applicant has not sufficiently demonstrated that noncompliance with the rule will not be adverse to public health, safety, or welfare." We responded with an email that we were in disagreement with the proposed denial of this variance. The auto repair shop is not open to the general public. There are typically two employees in the building on a given day. I requested a call or virtual meeting to discuss this further. I received an email from Karla Hacker with the department staying she would be in contact with me so we can get something set up. I then received another email from the department stating "The Department will review the information provided and issue an appropriate order. If the Department determines additional information or discussion is necessary, a request for additional information will be delivered." I was never contacted by anyone in the department after that and then received the letter stating the variance was not approved. The applicant was not afforded the opportunity to communicate with Variance Staff on

	the proposed denial of the variance.
What is your desired outcome?:	Reverse the order of the agency and approve the variance.
Additional information in support of my request:	
Additional Attachments:	View File
Additional Attachments:	View File
Additional Attachments:	View File

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STEPHEN COX EXECUTIVE DIRECTOR
Indiana Department of Homeland Security
Indiana Government Center South
302 West Washington Street
Indianapolis, IN 46204

317-232-3980

October 4, 2021

Shirley Underwood WR Beach, Inc. 820 WEST SUMNER AVE

INDIANAPOLIS, IN 46217

Dear Shirley Underwood,

This letter provides notice of the action taken on your application(s) for a variance(s) from the Commission's rules under IC 22-13-2-11.

Project Number	Project Name	Variance Number
417594	WR Beach	21-09-46

Conditions

Edition	Code	Code Section	Action & Date
Other C	ode (Not in the list	2014 IFC, 507.5.1	Not Approved 09/30/2021

If you have any questions regarding this order, you may contact that Department at (317) 232-2222.

ADMINISTRATIVE REVIEW

If you desire administrative review of this order, you must comply with the requirements of Indiana Code IC 4-21.5-3-7 and file a written petition for review within fifteen (15) days after receiving notice of this order. Your petition for review must state facts demonstrating that you are:(1) a person to whom the order is specifically directed; (2) aggrieved or adversely affected by the order; or (3) entitled to review under any law. You may submit your petition by one of the following methods:

U.S.MAIL OR PERSONAL SERVICE

ONLINE

Indiana Department of Homeland Security
Fire Prevention and Building Safety Commission
302 W.Washington Street, Rm. E208
Indianapolis, IN 46204

By completing the form at https://www.in.gov/dhs/appeals.htm

For additional information about the administrative review process and applicable templates that may be used for filings, visit the following link $\frac{\text{https://www.in.gov/dhs/appeals.htm}}{\text{https://www.in.gov/dhs/appeals.htm}}$

Owner / Applicant Information
Shirley Underwood
WR Beach, Inc.
820 WEST SUMNER AVE
INDIANAPOLIS IN 46217
Phone 3177871591
Email WRBEACHINC@ATT.NET
Submitter Information
Melissa Tupper
RTM Consultants, Inc.
6640 Parkdale Place
Indianapolis IN
Phone 3173297700
Email mtupper@rtmconsultants.com
Designer Information
Gordon Clark
Gordon Clark, Architect AIA
4820 Buttonwood Crescent
Indianapolis IN
Phone 3172552546
Email GClark4820@aol.com
Project Information
WR Beach
4402 Bluff Rd
INDIANAPOLIS 0 46217
County MARION
Project Type New Y Addition Alteration Existing Change of Occupancy
Project Status F F=Filed U or Null=Unfiled
IDHS Issued Correction order? Has Violation been Issued? yes
<u>Violation Issued by:</u> LFD
Local Building Official
Phone: 3173278700 Email: planreview.class1@indy.gov
Local Fire Official
Phone: 3173278700 Email: margie.bovard@indy.gov

Variance	Details
variance	Details

Code Name: Other Code (Not in the list provided)

2014 IFC, 507.5.1

Conditions:

A new building was constructed on an existing site without a fire hydrant located within 400 feet of a fire hydrant. The building is approximately a 0.5 mile (2,640 feet) from the nearest fire hydrant and public water supply.

The building is used as an auto repair shop. The building is 1-story, 2,400 square feet, and Type VB Construction.

DEMONSTRATION THAT PUBLIC HEALTH, SAFETY, AND WELFARE ARE PROTECTED:

	1=Non-compliance with the rule will not be adverse to the public health, safety or we
1	2= Applicant will undertake alternative actions in lieu of compliance with the rule to ensure that granting of the variance will not be adverse to public health, safety, or welfare. Explain why alternative actions would be adequate (be specific).
Facts:	The existing building was tore down due to being located within a portion of ground taken by the state for the final leg of the I-69 project connecting Indianapolis to Evansville.
	The new building was constructed as close as possible to the road with the required set backs.
	The building is used to service the company¿s equipment. There are typically two employees on a given day at the building.

EMONS	TRATION OF UNDUE HARDSHIP OR HISTORICALLY SIGNIFICANT STRUCTURE:
	Imposition of the rule would result in an undue hardship (unusual difficulty) because of physical limitations of the construction site or its utility services.
	Imposition of the rule would result in an undue hardship (unusual difficulty) because of major operational problems in the use of the building or structure.
Υ	Imposition of the rule would result in an undue hardship (unusual difficulty) because of excessive costs of additional or altered construction elements.
	Imposition of the rule would prevent the preservation of an architecturally or a historically significant part of the building or structure.
Facts:	It is a cost hardship to provide a hydrant within 400 feet of the furthest point of the building. The new building had to be constructed due to the state taking part of their property, where

the existing building was located, for the I-69 project. It is estimated to cost \$1.4-\$1.8 Million to run a water main for a hydrant south along Bluff Road.

Melissa Tupper

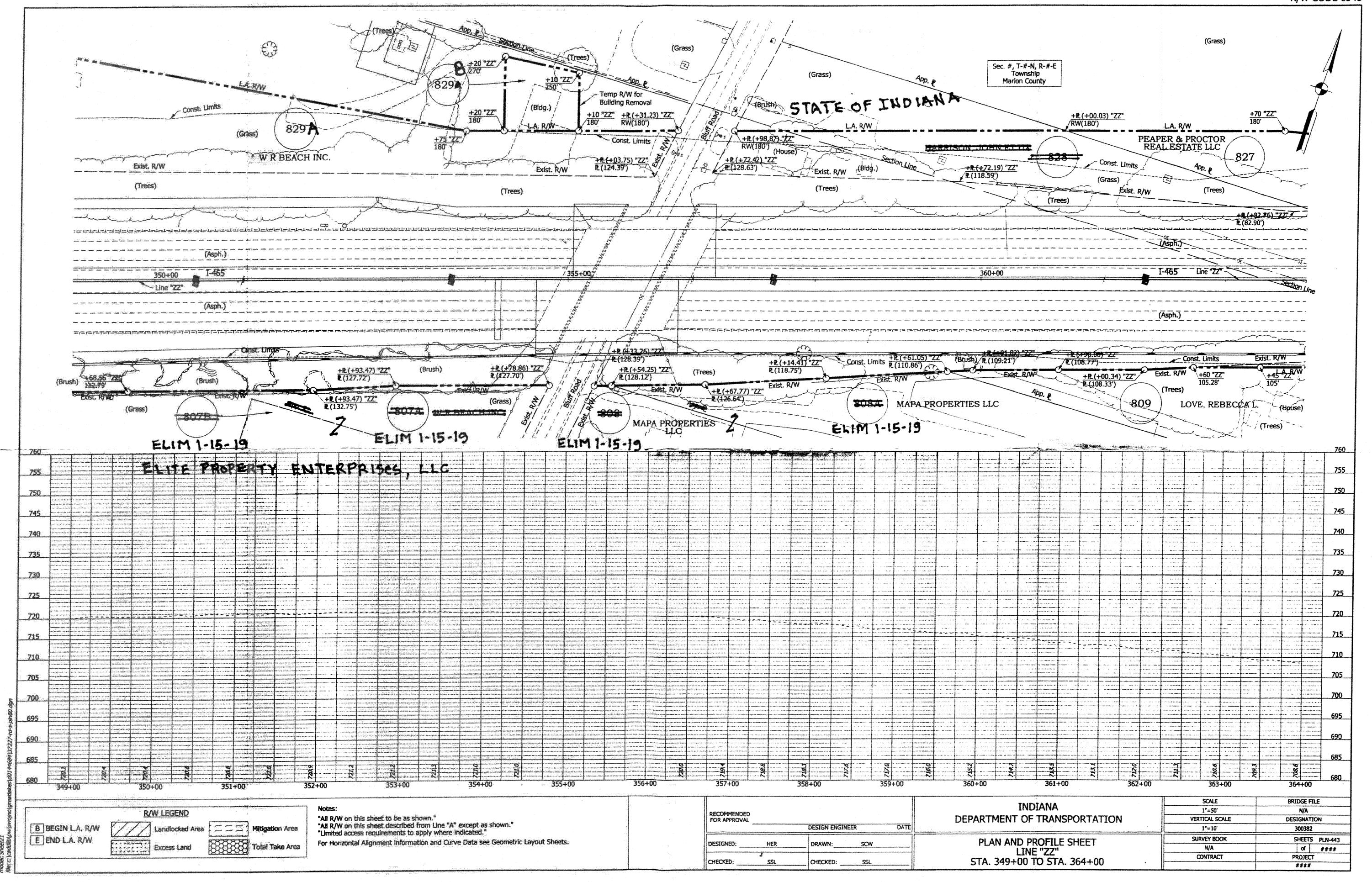
From: Sent: To: Subject:	wrbeachinc <wrbeachinc@att.net> Friday, September 3, 2021 4:52 PM Melissa Tupper FW: RE: Fire Hydrant request</wrbeachinc@att.net>
Follow Up Flag: Flag Status:	Follow up Flagged
See below	
Will this work?	
Thank you	
Tom	
Original mess From: "Ritter, Scott' Date: 9/3/21 4:37 P	' <sritter@citizensenergygroup.com> M (GMT-05:00) vrbeachinc@att.net></sritter@citizensenergygroup.com>
	template for the estimate to run a water main for a hydrant south along Bluff Road. The estimated ater main and hydrant is \$1.4M to \$1.8M.
Scott Ritter	
Project Manager Un	derground Engineering & Construction
O: 317.927.4434	
C: 317.450.4715	

Citizens Energy Group

2150 Dr. Martin Luther King Jr. St.
Indianapolis, IN 46202
<u>citizensenergygroup.com</u>
Please click here to provide your feedback
From: W.R. Beach <wrbackinc@att.net> Sent: Friday, August 20, 2021 2:15 PM To: Ritter, Scott <sritter@citizensenergygroup.com> Subject: Fire Hydrant request</sritter@citizensenergygroup.com></wrbackinc@att.net>
<u>WARNING:</u> This email originated outside of Citizens Energy Group. DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.
Scott
we are building a 2400 sq ft commercial pole barn building. Code calls for a sprinkler system to be installed inside it
We are trying to get a variance so we do not have to install the system
as part of this effort we are being asked: How much would it cost to have a public fire hydrant installed within 1000 ft. of our new building

New Building address: 4402 Bluff Rd Indianapolis, In. 46217

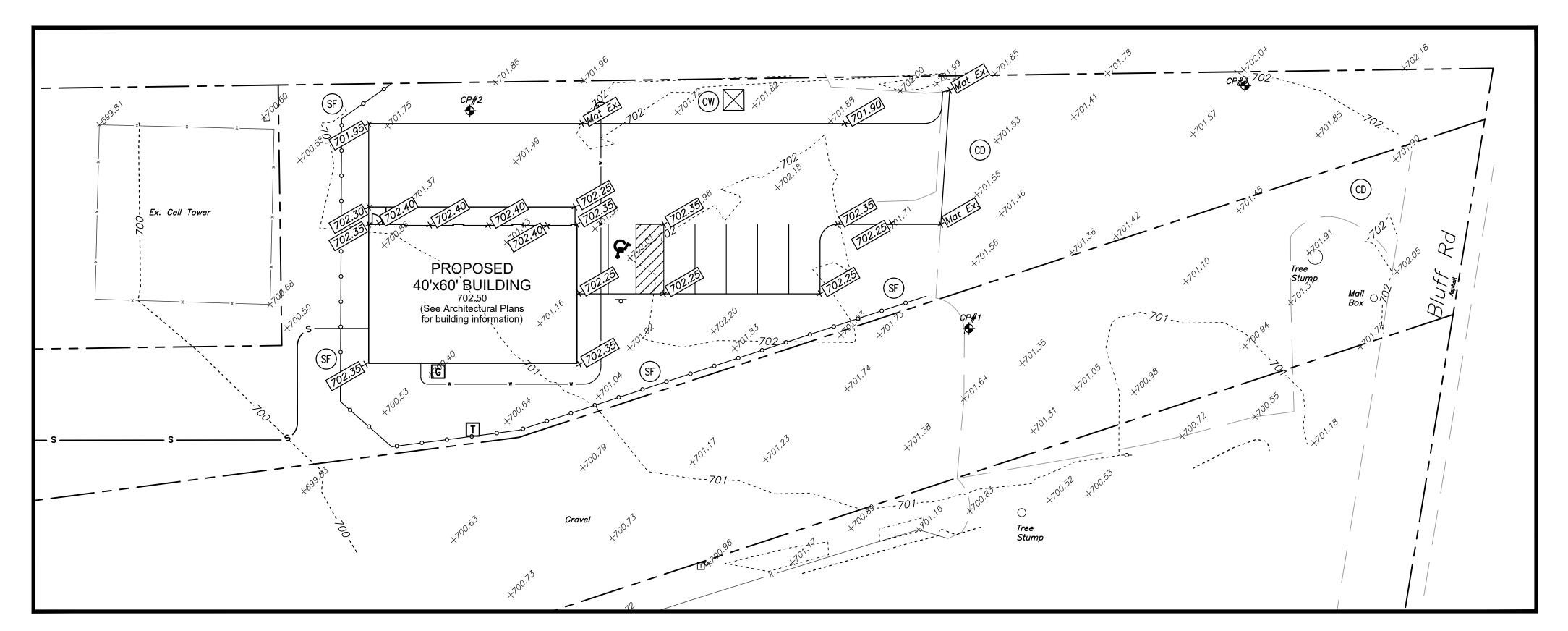
Could you provide us a cost estimate?
Thank you
Tom Carman W.R. Beach, Inc. 820 W. Sumner Ave Indianapolis, In 46217 (317) 787-1591
This email has been scanned for spam and viruses by Proofpoint Essentials. Click <u>here</u> to report this email as spam.



SITE IMPROVEMENTS NOTES

- 1) PROPOSED CONCRETE PAVEMENT, SEE DETAIL SHEET C103
- 2 PROPOSED CONCRETE STOOP, SEE DETAIL SHEET C106
- (3) PROPOSED ASPHALT PAVEMENT, SEE DETAIL SHEET C103
- (4) PAVEMENT STRIPING, 4" SOLID WHITE
- (5) PAVEMENT STRIPING, ADA, 4" SOLID BLUE W/ SYMBOLS
- 6 ADA PARKING SIGN & POST, SEE DETAIL SHEET C103

SITE IMPROVEMENTS PLAN



SITE GRADING AND EROSION CONTROL PLAN

EROSION CONTROL LEGEND

- SF SILT FENCE TO BE INSTALLED ALONG LOWER EDGE OF ALL AREAS NOT TO BE PAVED, SEE DETAIL SHEET C107
- (CW) CONCRETE WASHOUT BASIN, SEE DETAIL SHEET C107
- CONSTRUCTION ACCESS DRIVE USE EXISTING GRAVEL PAVEMENT. PROVIDE EROSION CONTROL MEASURES SUCH AS DAILY SWEEPING & BARRIERS TO PREVENT SEDIMENT FROM ENTERING PUBLIC ROW

SEQUENCE OF CONSTRUCTION OPERATIONS - EROSION PREVENTION

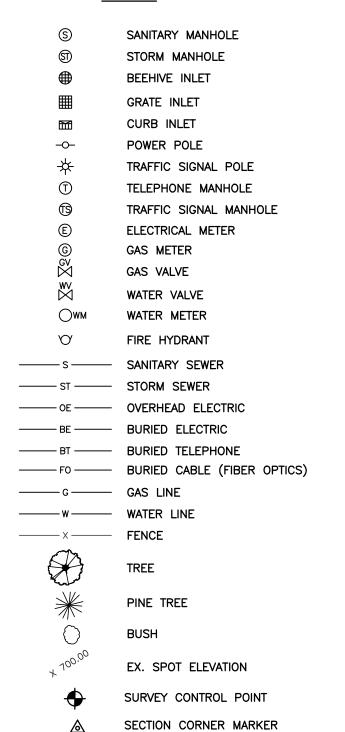
- STEP #1 INSTALL SILT FENCING ALONG ALL LOWER AREAS NOT TO BE PAVED STEP #2 DEMOLISH EXISTING BUILDING
 STEP #3 EXCAVATE FOR NEW BUILDINGS AND PROPOSED SITE IMPROVEMENTS
- STEP #3 EXCAVATE FOR NEW BUILDINGS AND PROPOSED SITE IMPROVEMENTS
 STEP #4 INSTALL PROPOSED SITE IMPROVEMENTS
 STEP #5 REMOVE EROSION CONTROL ITEMS UPON COMPLETION OF WORK

EROSION CONTROL NOTES:

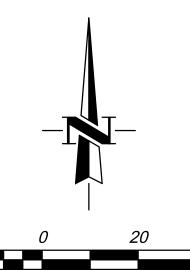
- 1) THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF CUNNINGHAM CONSTRUCTION, GREENWOOD, IN (317) 742-7339
- 2) ALL PROPOSED EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH CHAPTER 600 OF THE CITY OF INDIANAPOLIS STORMWATER SPECIFICATIONS MANUAL, LATEST EDITION. DISCREPANCIEDS BETWEEN THE PLANS AND THE MANUAL SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE MANUAL.
- 3) ADDITIONAL EROSION CONTROL MEASURES MAY BE BE REQUIRED BY THE INSPECTOR.

GRADING LEGEND

<u>LEGEND</u>



RIGHT OF WAY MARKER

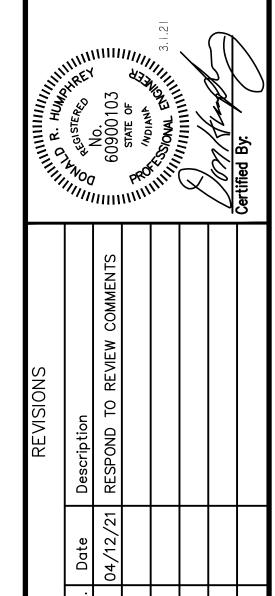


Scale: 1"= 20'

RING SOLUTIONS COMPANY, LLC

TAL ENGINEERING
NO SARGENT ROAD
ANAPOLIS, IN 46256

EACH NEW POLE BARN
402 BLUFF ROAD

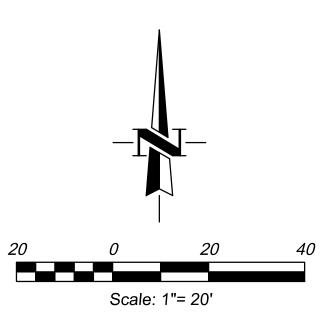


SHEET TITLE:
SITE IMPROVEMENTS
AND
GRADING & EROSION

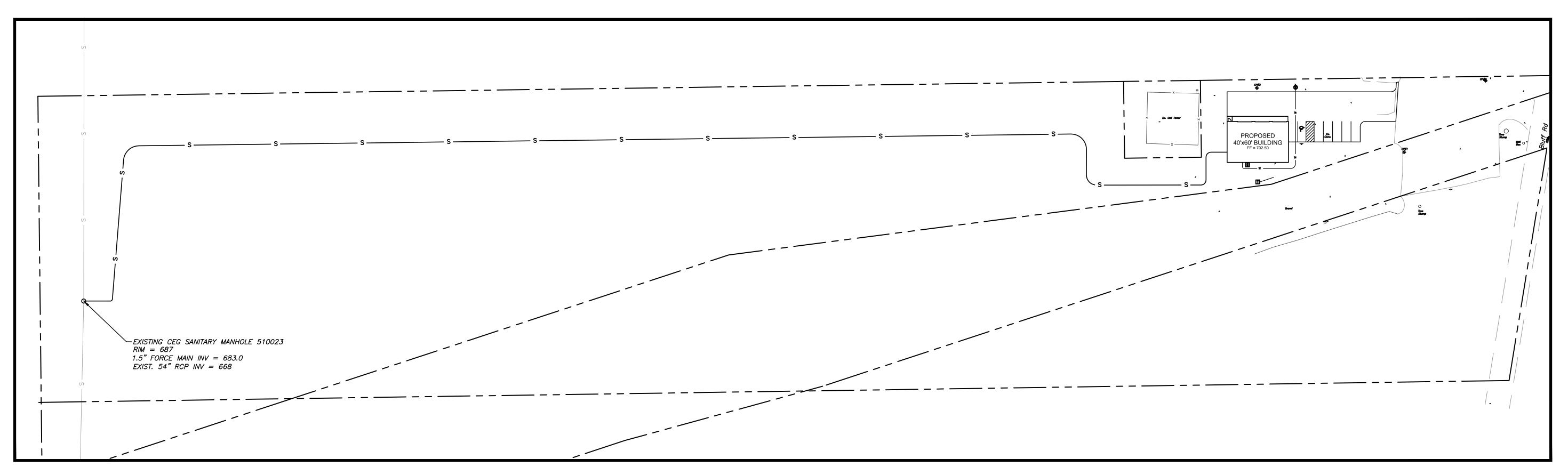
CONTROL PLANS

SHEET NUMBER:

Project No. 21010

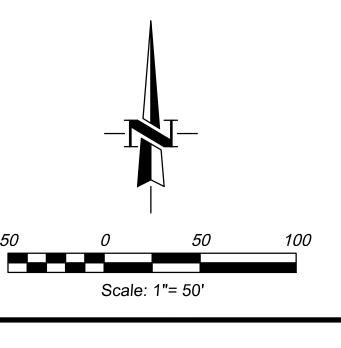


SITE UTILITY PLAN



OVERALL SITE UTILITY PLAN

- CORE EXISTING MANHOLE AND STUB 1.5" SCH40 PVC TO 6" OUTSIDE STRUCTURE. SEAL WITH KOR-N-SEAL, PRESS SEAL, ALOK OR EQUAL RUBBER CONNECTOR PER ASTM C-923 AND CHAPTER 300 OF CITIZENS ENERGY GROUP SANITARY STANDARDS MANUAL, REV. JANUARY 2021.
- 2. TURN DOWN INTERNAL 1.5" PVC 90° AND ATTACH TO MANHOLE WALL USING STAINLESS STEEL STRAPS & ANCHORS @ 4'-0" MAX. SPACING (2 STRAPS MIN.) ANCHOR DEPTH MIN. 3"
- 3. ALL MATERIALS AND INSTALLATION TO BE IN ACCORDANCE WITH CITIZENS ENERGY GROUP SANITARY STANDARDS MANUAL, REV. JANUARY 2021.
- 4. COORDINATE ALL CONSTRUCTION WITH CITIZENS ENERGY GROUP.

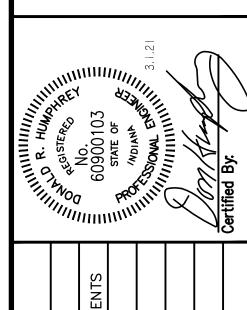


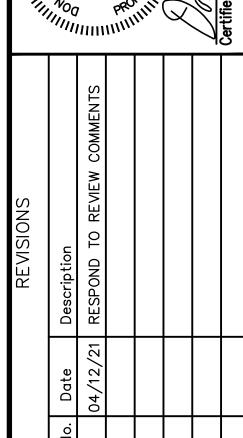
ERING SOLUTIONS COMPANY, LLC

OTAL ENGINEERING STOO SARGENT ROAD

SARN

BEACH NEW POLE BARN 4402 BLUFF ROAD





SHEET TITLE:
SITE UTILITY PLAN

SHEET NUMBER:

Project No. 21010

GENERAL REQUIREMENTS AND GUIDELINES FOR THIS PROJECT:

THE CONTRACT DOCUMENTS CONSIST OF THE DRAWINGS AND SPECIFICATIONS ON THE DRAWINGS. THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ITEMS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

THE CONTROLLING CODE FOR ALL WORK UNDER THESE DRAWINGS SHALL BE THE INTERNATIONAL BUILDING CODE 2014 WITH INDIANA AMENDMENTS, ALL IN THEIR CURRENT ADDITIONS.

THE CONTROLLING DOCUMENT FOR ALL WORK UNDER THESE DRAWINGS SHALL BE THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA (AMERICAN INSTITUTE OF ARCHITECTS) DOCUMENT A201, CURRENT EDITION. AGREEMENT BY ANY PARTY TO WORK UNDER THIS CONTROLLING DOCUMENT SHALL COMMENCE WITH THE START OF ANY WORK DESCRIBED WITHIN THESE DOCUMENTS.

THE ARCHITECT SHALL FILE FOR STATE PLAN REVIEW AND PROVIDE A RELEASE FOR USE IN OBTAINING LOCAL PERMITS. THE GENERAL CONTRACTOR SHALL FILE DRAWINGS OR OTHER MATERIALS FOR PERMIT APPLICATION AT THE LOCAL LEVEL AND SECURE ALL NECESSARY BUILDING PERMITS. SUBCONTRACTORS TO THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THEIR OWN LOCAL PERMITS.

PRIOR TO COMMENCING ACTIVITIES, EACH CONTRACTOR AND MATERIAL SUPPLIER SHALL CAREFULLY STUDY AND COMPARE THE CONTRACT DOCUMENTS AND BECOME FULLY AWARE OF THE REQUIREMENTS. EACH CONTRACTOR AND MATERIAL SUPPLIER SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL CAREFULLY COMPARE SUCH MEASUREMENTS AND CONDITIONS WITH THE CONTRACT DOCUMENTS.

IN THE EVENT OF INCONSISTENCIES WITHIN OR BETWEEN THE CONTRACT DOCUMENTS, EACH CONTRACTOR OR MATERIAL SUPPLIER SHALL PROVIDE THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK, AND SHALL COMPLY WITH THE STRICTER REQUIREMENT. INCONSISTENCIES DISCOVERED SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT IN WRITING.

NO PLEAS OF IGNORANCE RESULTING FROM FAILURE TO EXAMINE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OR THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED WILL BE ACCEPTED AS AN EXCUSE FOR FAILURE OR OMISSION ON THE PART OF EACH CONTRACTOR AND MATERIAL SUPPLIER TO FULFILL IN EVERY RESPECT ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

VERIFY THAT SURFACES TO RECEIVE MATERIALS ARE IN A CONDITION TO ACCOMMODATE INSTALLATION. IMMEDIATELY REPORT TO THE ARCHITECT ANY

DISCREPANCIES OR ERRORS WHICH WOULD RESULT IN POOR APPLICATION OR CAUSE LATENT DEFECTS IN WORKMANSHIP. IF A CONTRACTOR OR SUBCONTRACTOR PROCEEDS WITH INSTALLATION OF MATERIALS OVER ANOTHER CONTRACTOR'S WORK, IT SHALL BE ASSUMED THAT THE CONTRACTOR OR SUBCONTRACTOR ACCEPTS THE WORK TO RECEIVE HIS MATERIAL.

ALL LABOR, CONSTRUCTION MATERIALS, PROVIDED AND INSTALLED TO COMPLETE THE WORK OF THESE CONTRACT DOCUMENTS SHALL BE EXECUTED IN COMPLETE COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES, PRACTICES OR ORDINANCES AND WITHIN THE CONSTRAINTS OF THE HIGHEST ACCEPTABLE CONSTRUCTION PRACTICES.

UPON COMPLETION OF THE PROJECT, OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY THE LOCAL JURISDICTIONS AND FURNISH OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS AND CERTIFICATES OF OCCUPANCY, IF ISSUED BY THE JURISDICTION.

THE GENERAL CONTRACTOR SHALL PROVIDE REASONABLE SUPERVISION AND COORDINATION OF ALL SUB-CONTRACTORS WORK INCLUDING WORK PERFORMED BY OTHERS SUCH AS SUPPLIERS OF OWNER-SUPPLIED ITEMS.

UPON COMPLETION OF PROJECT, PROVIDE OWNER WITH ALL INSTRUCTION MANUALS, WARRANTIES OR OTHER DOCUMENTS REQUIRED FOR THE PROPER OPERATION OR MAINTENANCE OF ANY PART OF THE CONTRACTOR'S WORK.

THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION AND SECURITY MEANS FOR HIS WORK UNTIL TURNED OVER TO THE OWNER. IF THE PROJECT AREA IS TO BE USED BY EMPLOYEES OR THE PUBLIC DURING CONSTRUCTION, FULLY PROTECT THE CONSTRUCTION SITE, CONSTRUCT BARRIERS AND FENCING, AND PROVIDE APPROPRIATE SIGNAGE TO PROTECT THESE PERSONS.

THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN MINIMUM GENERAL LIABILITY INSURANCE. THE FRANCHISEE, FRANCHISER, AND THE ARCHITECTS SHALL BE HELD HARMLESS AGAINST ALL GENERAL LIABILITY CLAIMS THAT MAY RESULT AS A PART OF THIS PROJECT.

SOIL S

OTHERS HAVE CHOSEN TO NOT TEST SOILS FOR THIS PROJECT, NOR MAKE SOIL DATA AVAILABLE TO THE ARCHITECT. THE ARCHITECT SHALL BE HELD HARMLESS FOR ANY COMMON SOIL FAILURES SUCH AS FAILURE OF COMPACTION; DENSITY FAILURE; GENERAL SOIL SHEAR OR SHRINKAGE; SETTLEMENT FAILURE; SLOPE FAILURE; FLOW SLIDE FAILURE; MOVEMENTS CAUSED BY EXPANISIVE OR HIGHLY PLASTIC SOILS; OR ANY OTHER COMMONY ANALYIZED SOIL FAILURES.

ARCHITECT / ENGINEER NOTIFICATION:

IF THE GENERAL CONTRACTOR DISCOVERS CONDITIONS THAT ARE NOT SUBSTANTIALLY LIKE THE ARCHITECT'S DRAWINGS, THE ARCHITECT OR ENGINEER SHALL BE IMMEDIATELY NOTIFIED.

THIS NOTIFICATION RELATES TO ALL PARTS OF THIS PROJECT, INCLUDING BUT NOT LIMITED TO DISCOVERED SOIL CONDITIONS, INAPPROPRIATE OR NON-SPECIFIED PRODUCTS DELIVERED AND/OR INSTALLED ON SITE, OR ANY QUESTION REGARDING POSSIBLE VIOLATION OF CODES OR ORDINANCE STANDARDS.

PROCEEDING WITH THE WORK SHALL CONSTITUTE ACCEPTANCE BY THE GENERAL CONTRACTOR OF THE EXISTING CONDITIONS, AND THAT THE PROJECT CAN BE BUILT STRUCTURALLY SOUND AND MEETING LOCAL CODES.

Indiana Adopted Codes for Building Construction In effect December 1, 2014

<u>2014 Indiana Building Code A</u>doption by Reference: 2012 International Building Code First Printing plus Indiana Amendments, effective December 1st 2014.

<u>2009 Indiana Electrical Code A</u>doption by Reference: 2008 National Electric Code First Printing plus Indiana Amendments, effective August 26, 2009

2014 Indiana Fuel Gas Code Adoption by Reference: 2012 International Fuel Code First Printing plus Indiana Amendments, effective December 1st

<u>2014 Indiana Mechanical Code A</u>doption by Reference: 2012 International Mechanical Code First Printing plus Indiana Amendments, effective December 1st 2014.

<u>2012 Indiana Plumbing Code A</u>doption by Reference: 2006 International Plumbing Code Second Printing plus the Indiana Amendments, effective December 24, 2012.

<u>2005 Indiana Residential Code A</u>doption by Reference: 2003 International Residential Code Fifth Printing plus Indiana Amendments, effective September 11, 2005.

<u>2014 Indiana Fire Code Adoption</u> by Reference: 2012 International Fire Code First Printing plus Indiana Amendments, effective December 1st 2014.

<u>2010 Indiana Energy Conservation Code</u> Adoption by Reference: 2007 Edition ASHRAE 90.1 plus Indiana Amendments, effective May 6, 2010.

A Complete list of all codes and other rules adopted by the Fire Prevention & Building Safety Commission of the State of Indiana along with PDF versions of the Indiana Amendments can be found at: http://www.in.gov/dhs/2490.htm

BUILDING FOR: WR BEACH 4402 BLUFF ROAD INDIANAPOLIS, INDIANA

ARCHITECT:

GORDON CLARK ARCHITECT AIA



INDEX OF DRAWINGS OF THIS SET:

COVER SHEET GENERAL PROJECT GUIDELINES; INDIANA BUILDING CODES; SHEET INDEX; SCHEMATIC SITE PLAN; DETAIL SITE PLAN

A1.1 DIMENSION FLOOR PLAN; ROUGH CARPENTRY

A1.2 RESTROOM DETAILS: DIMENSION PLAN; PLUMBING ISOMETRIC; RESTROOM ELEVATIONS; ADA DIMENSIONS

A1.3 FOOTING PLAN; CONCRETE SPECIFICATIONS

NEW DRAWING

A2.1 BUILDING ELEVATIONS

A3.1 TRANSVERSE BUILDING SECTION

A4.1 TRUSS ENGINEERING DIAGRAMS; TRUSS SPECIFICATIONS; TRUSS INSTALLATION REQUIREMENTS; ROOF FRAMING PLAN; ROOF PLAN

NEW DRAWING

A5.1 POST BUILDING CRITERIA; FOOTING DETAILS AND CALCULATIONS

NEW DRAWING

P1.1 SANITARY PLUMBING PLAN; DOMESTIC WATER DISTRIBUTION, PLUMBING SPECIFICATIONS; DOMESTIC WATER DISTRIBUTION SPECIFICATIONS; SCHEMATIC OF SYSTEM FROM WELL TO DOMESTIC SUPPLY.

M/E1.1 MECHANICAL AND ELECTRICAL PLAN; ELECTRICAL SPECIFICATIONS; UNIT HEATER SPECIFICATIONS; UNIT HEATER SUPPORT REQUIREMENTS; GAS PIPING REQUIREMENTS AND SIZES; BUILDING GROUNDING REQUIREMENTS; POWER RISER DIAGRAM

The concepts, ideas, designs, plans, and details as shown on this document are the sole property of Gordon Clark, Architect, and were created, developed and presented use on this specific project. None of the concepts, ideas, designs, drawings, or details shall be used by any person, firm, or corporation for any purpose whatsoever, without the express written permission of Gordon Clark, Architect.

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DRAWING COMPLETION DATE:
REVISIONS PER FIRST CITY REVIEW
JUNE 27, 2021

SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THESE STRUCTURAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST PROVISIONS SHALL GOVERN

GOVERNING CODES: INDIANA BUILDING CODE, 2012 IBC, WITH CURRENT INDIANA AMENDMENTS.

ROUGH CARPENTRY SPECIFICATIONS: SECTION 06100 ALL WOOD CONNECTIONS, JOIST HANGERS, POST CAPS, BASES, HOLD-DOWNS, ETC. SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE CO. INC. OR AN APPROVED EQUAL. UNLESS OTHERWISE NOTED, CONNECTIONS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR CONDITIONS SIMILAR TO THESE APPLICATIONS.

ALL MEMBER SIZES GIVEN IN THE DRAWINGS ARE NOMINAL DIMENSIONS.

ALL FLOOR JOISTS (IF USED AND OF ANY SIZE) AND ROOF JOISTS (GREATER THAN 2X8'S) SHALL BE LATERALLY SUPPORTED BY SOLID BLOCKING EXCEPT WHERE ENDS OF JOIST ARE NAILED TO A HEADER OR RIM JOIST OR TO AN ADJOINING STUD. S90LID BLOCKING SHALL NOT BE LESS THAN TWO INCHES IN THICKNESS AND THE FULL DEPTH OF THE JOIST. SOLID 2X BRIDGING AT CENTER OF SPAN FOR ALL FLOOR JOISTS.

COORDINATE ALL DIMENSION LUMBER SIZES BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT.

WHERE POSTS ARE SHOWN, HEADERS SHALL BEAR FULLY ON POSTS.

ALL WOOD JOISTS SHALL BEAR ON THE FULL WIDTH OF SUPPORTING MEMBERS.

ALL BEAMS AND JOISTS NOT BEARING ON SUPPORTING MEMBERS SHALL BE FRAMED WITH SIMPSON JOIST HANGERS OR EQUAL. USE TYPE LU-210 (OR EQUAL) FOR SINGLE 2X'S AND TYPE HUS-210-2 (OR EQUAL) FOR DOUBLE 2X'S.

PROVIDE MINIMUM 2-2X12 HEADERS WITH MIN. 1/2 INCH PLYWOOD FLITCH PLATE AT ALL OPENINGS IN BEARING WALLS WHERE NO HEADERS ARE CALLED OUT. MAXIMUM SPAN FOR 2-2X12 HEADERS SHALL BE 4'-0" UNLESS NOTED.

WOOD HEADERS OR POSTS MADE UP OF 2X'S SHALL BE SPIKED TOGETHER.

BOTTOM PLATES OF ALL BEARING INTERIOR AND EXTERIOR FIRST FLOOR STUD WALLS SHALL BE ANCHORED WITH 1/2 INCH RED HEAD ANCHOR BOLTS WITH MIN. 6 INCH EMBEDMENT AT 4'-0" ON CENTER, OR WITH EQUIVALENT ANCHORS AS APPROVED BY THE ARCHITECT. ANCHORS SHALL BE A MAXIMUM OF 1'-0" FROM CORNERS.

BOTTOM PLATES OF NON-BEARING FIRST FLOOR STUD WALLS IN CONTACT WITH SLAB SHALL BE ANCHORED USING #16D CONCRETE NAILS 32" ON CENTER OR EQUAL.

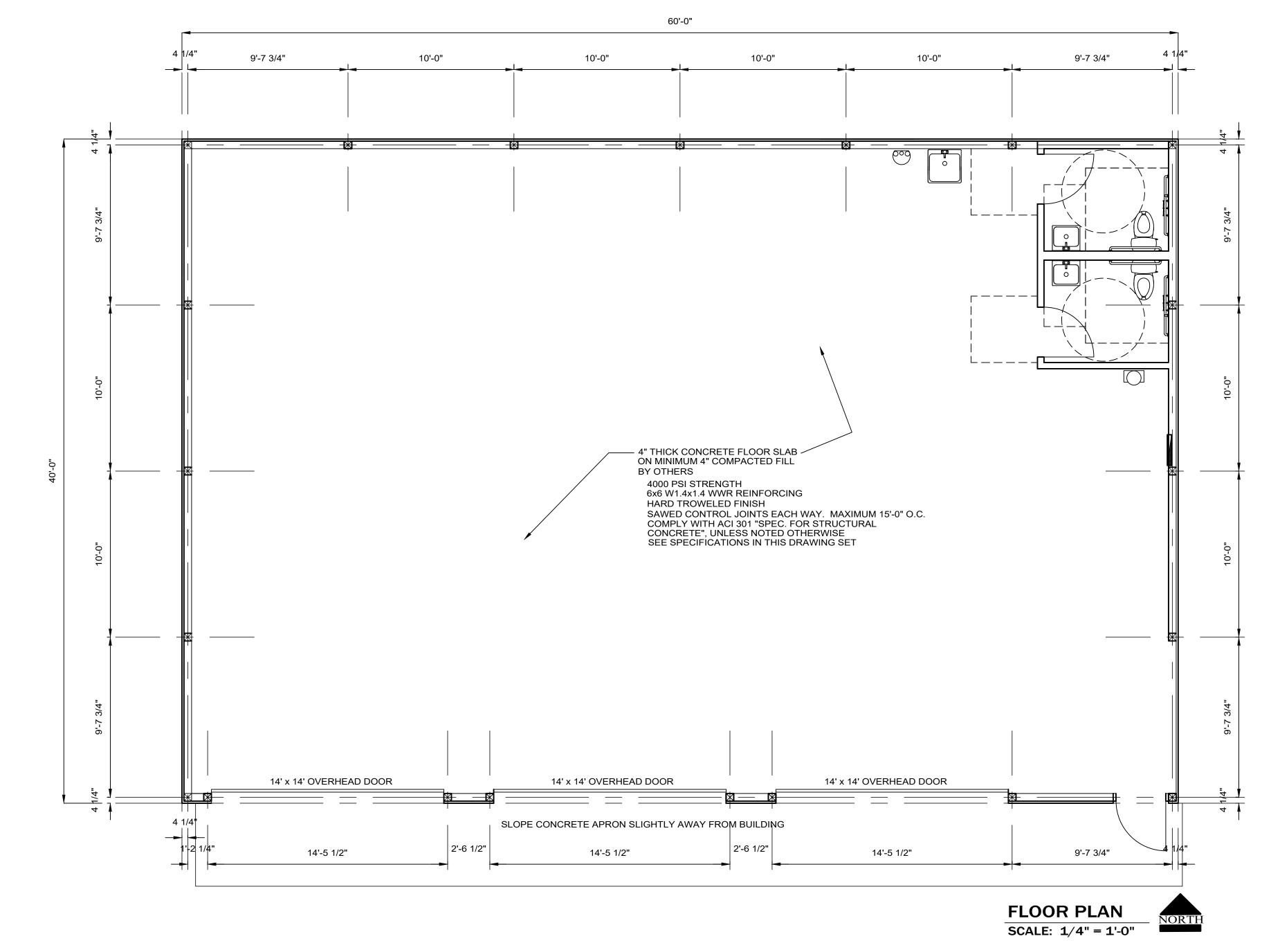
BOTTOM PLATES IN CONTACT WITH MASONRY OR CONCRETE SLAB, AND LUMBER USED FOR BATTEN BOARDS. SHALL BE PRESSURE TREATED IMPREGNATED WITH WATERBORNE PRESERVATION IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVATION BUREAU (AWPB) STANDARD LP-2, CURRENT EDITION.

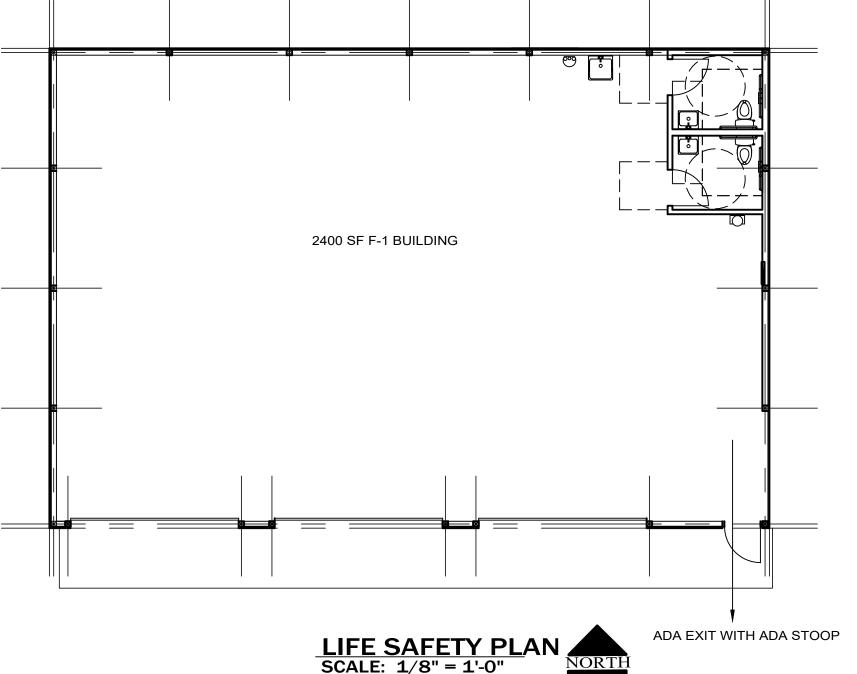
ROOF SHEATHING SHALL BE MIN. 1/2 INCH 32/16 4-PLY C-D INT-APA. H-CLIPS SHALL BE USED TO SUPPORT EDGES OF THE PLYWOOD SHEATHING BETWEEN THE TRUSSES OR ROOF RAFTERS.

WALL SHEATHING AT CORNERS SHALL BE 1/2 INCH CDX PLYWOOD, GLUED WITH EXTERIOR GLUE AND NAILED AT PERIMETER CORNERS. NAILED-ONLY ALONG STRAIGHT RUNS.

ALL LUMBER USED FOR LOAD SUPPORTING PURPOSES, INCLUDING END-JOINTING OR EDGE GLUED LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK OF AN INSPECTION AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARDS COMMITTEE" (ALSC). IN LIEU OF A GRADE MARK, A CERTIFICATE OF INSPECTION AS TO SPECIES AND GRADE ISSUED BY A LUMBER GRADING OR INSPECTION AGENCY APPROVED BY THE ALSC MAY BE ACCEPTED. ALL LUMBER SHALL BE SEASONED TO A MOISTURE CONTENT OF 19 PERCENT.

LUMBER SHALL BE PROTECTED FROM THE ELEMENTS UNTIL SUCH TIME IT IS USED IN CONSTRUCTION STORED OFF THE GROUND.





SCALE: 1/8" = 1'-0"

CODE SUMMARY: WR BEACH, INDIANAPOLIS, IN

OCCUPANCY, CHAPTER 3

CLASSIFICATIONS PER 306

OCCUPANCY -F-1 MINOR AUTOMOTIVE REPAIR

CONSTRUCTION, CHAPTER 6 CLASSIFICATION PER 602.1

TYPE V-B UNSPRINKLED

BUILDING AREA:

F-1 MINOR AUTOMOTIVE REPAIR: 2,400 SF

ALLOWABLE AREA:

PER TABLE 503: F-1 = 8,500 SF

BUILDING OCCUPANT LOAD, CHAPTER 10 F-1 AREA: AUTOMOTIVE @ 100 SF PER PERSON

2,400 SF / 500 SF = 24 PEOPLE

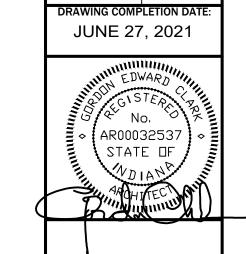
BUILDING EXITING:

ADA EXIT WITH ADA STOOP

PER TABLE 1019.1: ONE EXIT REQUIRED- LESS THAN 49 PEOPLE ONE PROVIDED

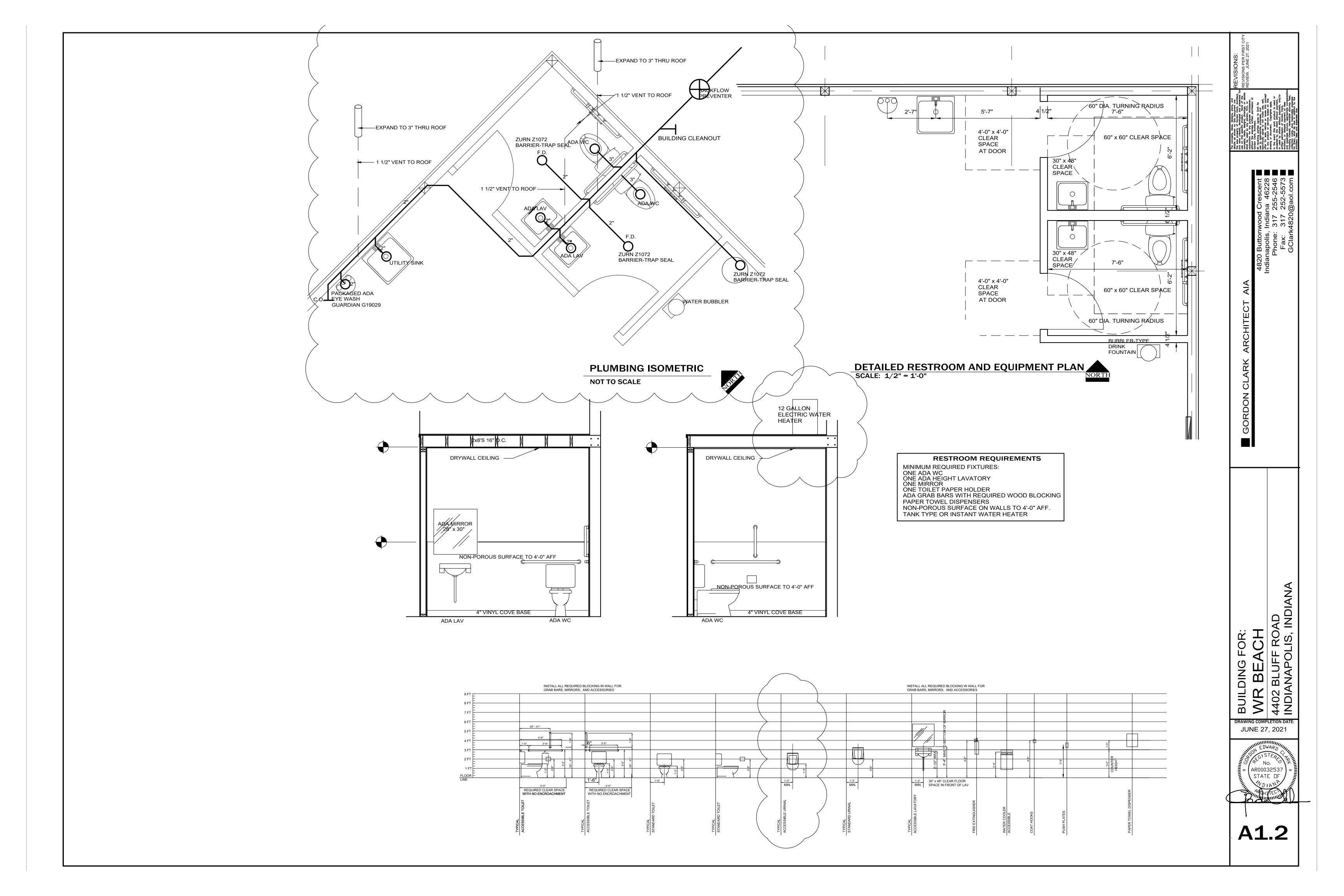
FIRE EXTINGUISHER:

ONE ABC TYPE EXTINGUISHER SHALL BE PROVIDED



A1.1

ACH OR BUILDING WR BEA



CONCRETE REQUIREMENTS AND SPECIFICATIONS:

IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.

SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THESE STRUCTURAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST PROVISIONS SHALL GOVERN.

GOVERNING CODES: INTERNATIONAL BUILDING CODE, 2008, WITH CURRENT INDIANA AMENDMENTS.

FOUNDATIONS:

NOTIFY THE ARCHITECT AS SOON AS POSSIBLE OF ANY UNUSUAL SOIL CONDITIONS, SUCH AS UNEXPECTED SPRING OR SEEPAGE WATER, OR SOIL OF QUESTIONABLE BEARING CAPACITY.

ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL OR ENGINEERED FILL WITH AN ALLOWABLE BEARING CAPACITY OF 2,000 POUNDS PER SQUARE FOOT.

PERIMETER FOOTINGS SHALL BEAR A MINIMUM OF 3'-0" BELOW EXTERIOR GRADE. STEP FOOTINGS AS REQUIRED. WHERE UNDERGROUND UTILITIES ENTER OR EXIT THE BUILDING, STEP TOPS OF ALL FOOTINGS BELOW UTILITY INVERT ELEVATIONS.

DESIGN NET SOIL PRESSURES SPREAD FOOTINGS:

2,000 PSI 1,500 PSI. CONTINUOUS FOOTERS

BACKFILL AND FILL MATERIALS: PROVIDE SATISFACTORY SOIL MATERIALS FOR BACKFILL AND FILL, FREE OF CLAY, DEBRIS, WASTE, FROZEN MATERIALS, VEGETABLE AND OTHER DELETERIOUS MATTER.

REINFORCED CONCRETE:

ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318-95, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

SPECIFICATIONS: IN GENERAL, COMPLY WITH ACI 301-96, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE". PLACEMENT AND CURING OF CONCRETE SHALL CONFORM TO ACI 305 "HOT WEATHER CONCRETING" AND ACI 306 "COLD WEATHER CONCRETING".

ALL REINFORCING DETAILS SHALL CONFORM TO ACI 315-86, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS. ALL DEFORMED REINFORCING BARS: ASTM A615, GRADE 60 ALL WELDED WIRE FABRIC: ASTM A185, DELIVERED IN FLAT SHEETS

REINFORCING SUPPLIER SHALL PROVIDE ALL BAR ACCESSORIES, CHAIRS, AND SUPPORTS NECESSARY TO SECURE STEEL IN ACCORDANCE WITH "ACT CODE OF STANDARD PRACTICE".

WHERE ANY STEPS IN FALL FOOTING ELEVATIONS OCCUR, PROVIDE MAXIMUM STEP OF ONE VERTICAL TO TWO HORIZONTAL.

CONCRETE COVER: UNLESS OTHERWISE NOTED, DETAIL REINFORCING TO PROVIDE MINIMUM COVER AS FOLLOWS: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3

CONCRETE EXPOSED TO EARTH OR WEATHER, #5 RE-BARS OR SMALLER: 1 1/2 INCHES ALL OTHER: 2 INCHES

CONCRETE CONTRACTOR SHALL VERIFY SOIL BEARING PRIOR TO CONCRETE PLACEMENT. REPORT DEVIATIONS TO GENERAL CONTRACTOR AND ARCHITECT.

CONCRETE IN THE FOLLOWING AREAS SHALL CONSIST OF NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE 1 PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING COMPRESSIVE STRENGTH AT 28 DAYS:

FOOTINGS AND PADS: 3,000 PSI

SLABS-ON-GRADE

4,000 PSI AND PIERS:

RETAINING WALLS, CURBS, SIDEWALKS, AND SLABS EXPOSED TO DE-

4,000 PSI (6% + 1% ENTRAINED AIR BY

NO PART OF THE STRUCTURE SHALL BE PLACED ON FROZEN OR WET SOIL.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE FOUNDATION AND SOIL WITHIN THE BUILDING AREA FROM FREEZING DURING WINTER CONSTRUCTION.

FOOTINGS AND PIERS:

DOWELS IN FOOTINGS SHALL MATCH VERTICAL PIER REINFORCING.

PROVIDE CORNER BARS AT FOOTING CORNERS TO MATCH HORIZONTAL REINFORCING. MINIMUM LENGTHS OF EACH LEG TO BE 45 BAR DIAMETERS.

BACKFILL AGAINST BOTH SIDES OF WALLS EQUALLY UNTIL THE LOWER ELEVATION IS ATTAINED. BRACE ALL FOUNDATION WALLS BEFORE BACKFILLING AND COMPACTING.

PROVIDE LEAN CONCRETE (CLASS IV) UNDER FOUNDATIONS FOR ACCIDENTAL OVER-EXCAVATION, SOFT SPOTS, AND TRENCHES.

BUILT-IN WORK:

INSTALL ALL ANCHORS, INSERTS, NOSINGS, REGLETS AND LIKE ITEMS FURNISHED BY OTHER TRADES FOR INSTALLATION IN CONCRETE WORK. ALL BUILT-IN ITEMS SHALL BE IN PROPER LOCATION AND SHALL BE SO MAINTAINED DURING THE PERFORMANCE OF CONCRETE WORK.

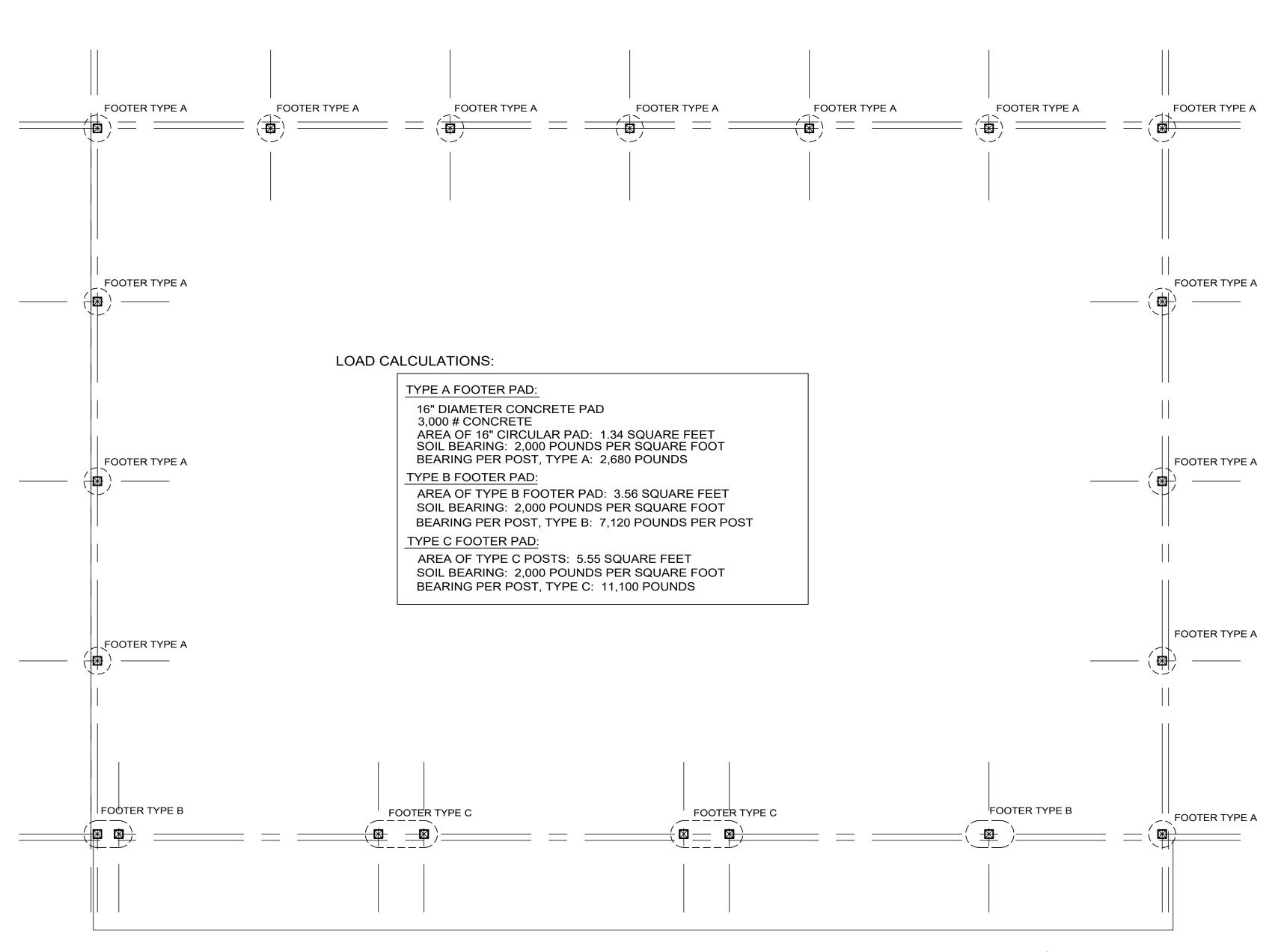
SLEEVES, CONDUITS, PIPES AND LIKE ITEMS PASSING THROUGH FLOORS, WALLS, OR BEAMS SHALL BE OF SUCH SIZE OR IN SUCH LOCATION AS NOT TO IMPAIR UNDULY THE STRENGTH OF THE CONSTRUCTION.

VAPOR BARRIER PLACEMENT:

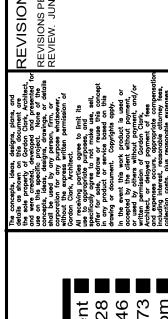
USE A CONCRETE MIXTURE WITH AN ADEQUATE CEMENT FACTOR - MINIMUM OF 5 1/2 BAGS PER CUBIC YARD. USE A SMALL AMOUNT OF AIR-ENTRAINMENT IN THE MIXTURE TO REDUCE BLEEDING - ABOUT 3% TO 5% AIR. EXTERIOR CONCRETE SHALL HAVE 5 1/2% AIR. PLACE CONCRETE AT LOWEST PRACTICAL SLUMP. A WATER-REDUCING ADMIXTURE MAY BE USED TO LOWER THE MIX WATER CONTENT, IF USED STRICTLY ACCORDING TO WRITTEN MANUFACTURER'S INSTRUCTIONS.

PERIMETER INSULATION:

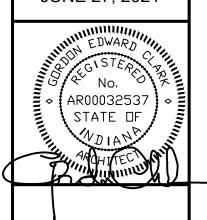
A TOTAL OF FOUR FEET WIDTH OF PERIMETER INSULATION SHALL BE PUT IN PLACE. THIS CAN BE A COMBINATION OF HORIZONTAL AND VERTICAL RIGID INSULATION, AS SHOWN ON DRAWINGS.

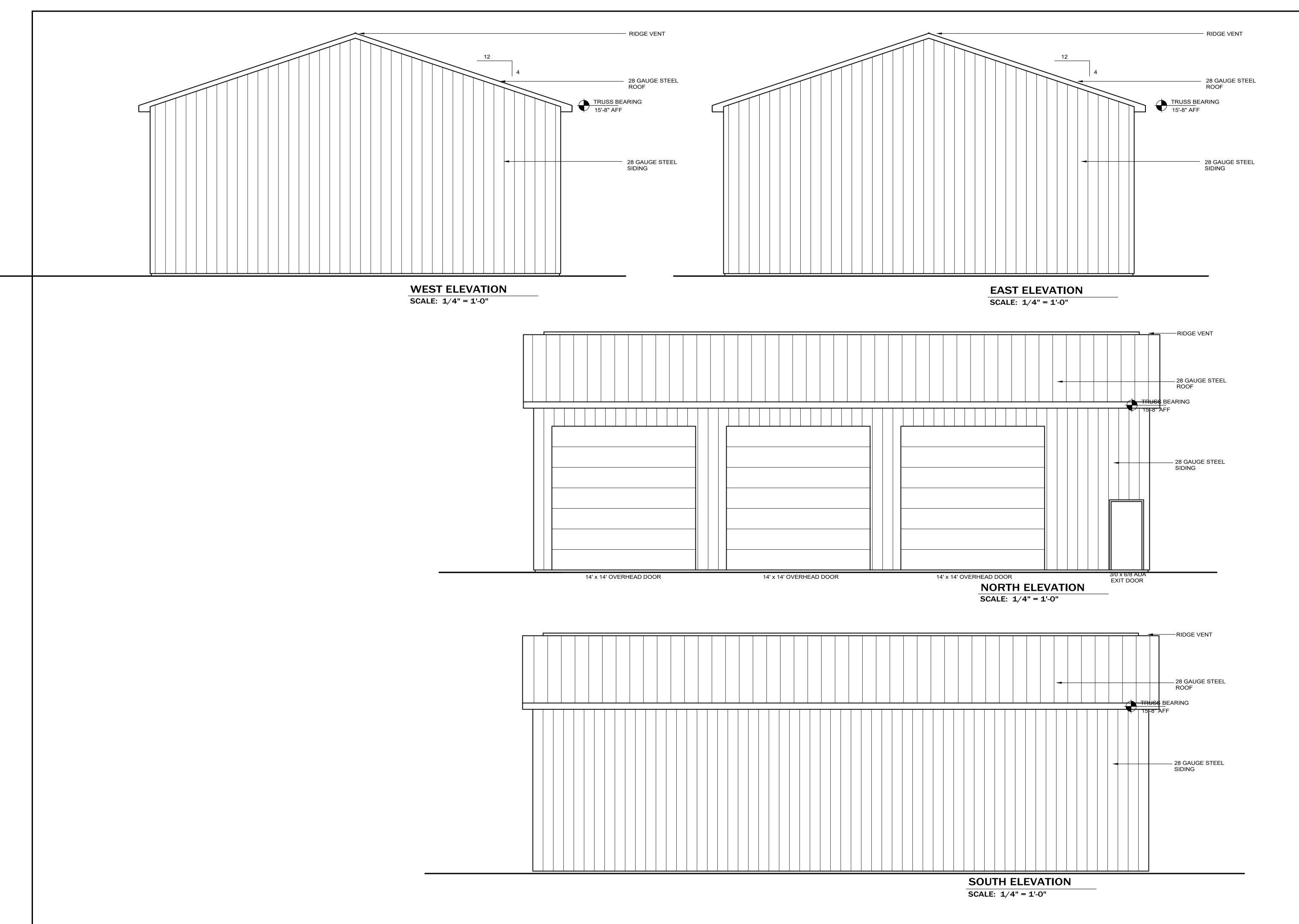






BUILDING WR BE JUNE 27, 2021

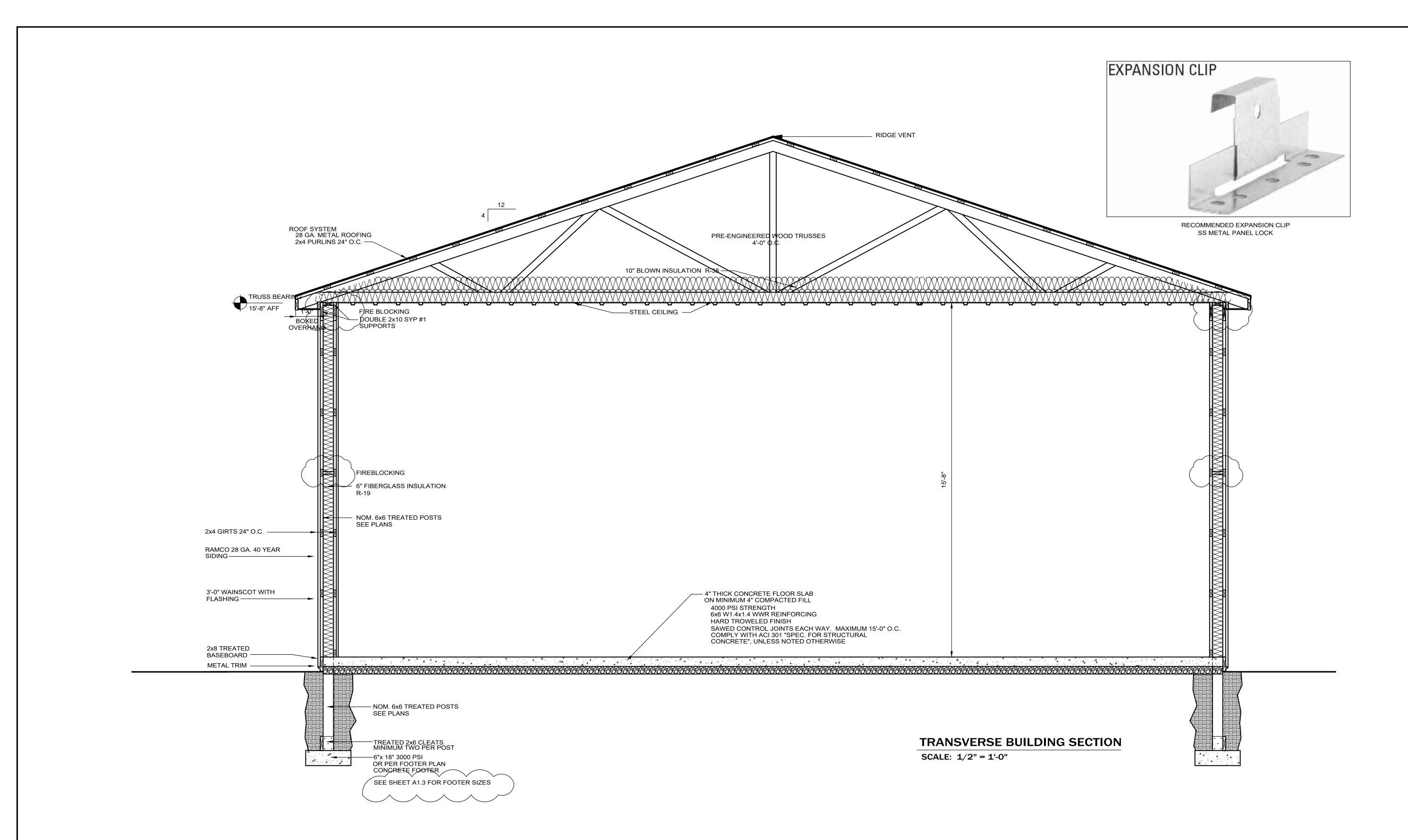




BUILDING FOR:
WR BEACH
4402 BLUFF ROAD
INDIANAPOLIS, INDIANA



A2.1



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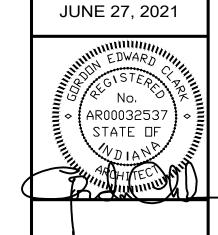
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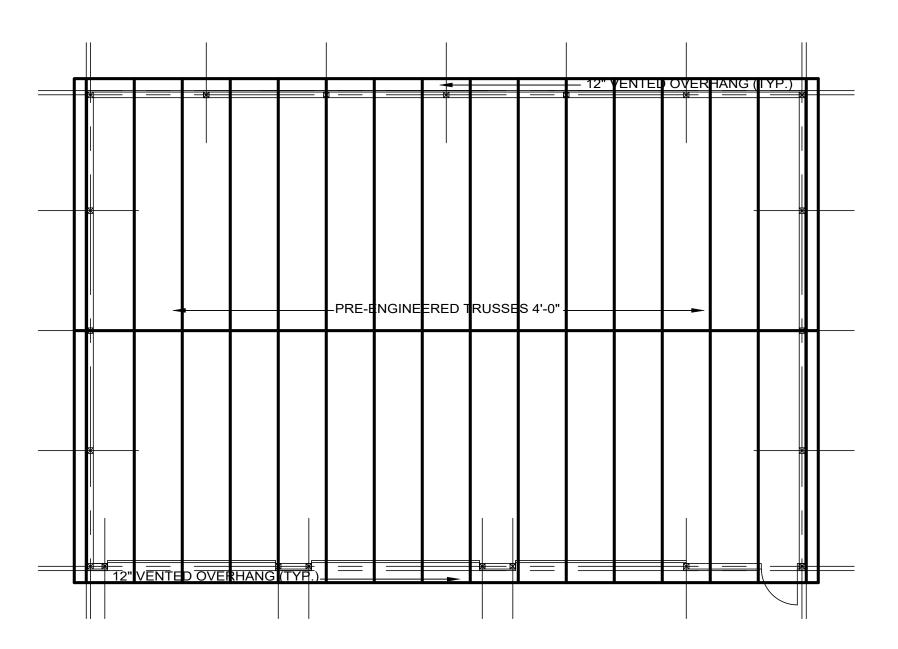
4820 Buttonwood C Indianapolis, Indiana Phone: 317 25 Fax: 317 25

GORDON CLARK AR

BUILDING FOR:
WR BEACH
4402 BLUFF ROAD
INDIANAPOLIS, INDIANA

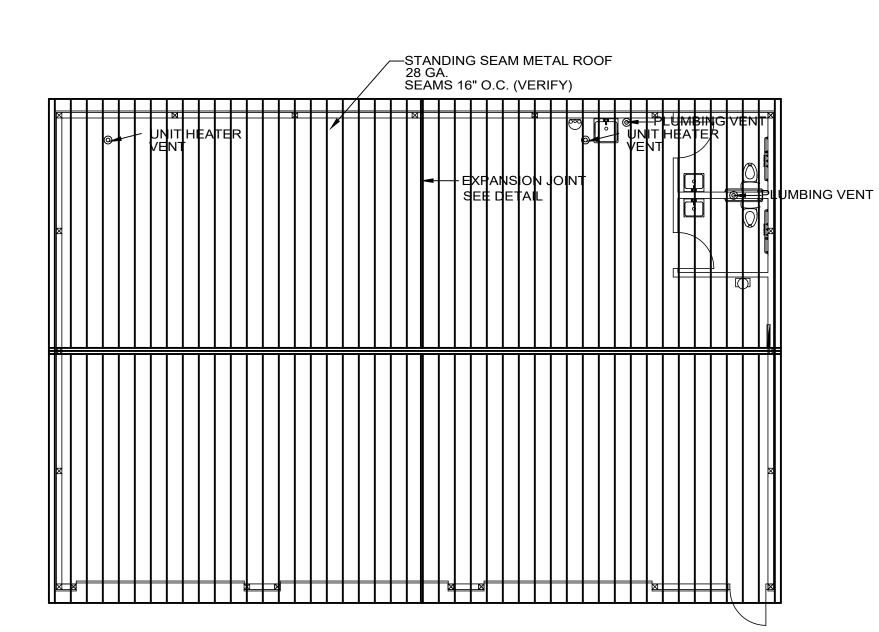


A3.1



ROOF FRAMING PLAN SCALE: 1/8" = 1'-0"





ROOF PLAN SHOWING SEAM LAYOUT SCALE: 1/8" = 1'-0"



RECOMMENDED EXPANSION CLIP



MiTek USA, Inc. 16023 Swingley Ridge Rd Chesterfield, MO 63017 314-434-1200

Re: Beach_720 Burns Beach

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Beachwood Lumber.

Pages or sheets covered by this seal: I42194107 thru I42194107 My license renewal date for the state of Indiana is July 31, 2022.



Liu, Xuegang IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use. the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2

142194107 BEACH 720 MOD. QUEEN Job Reference (optional) 8.010 s Aug 11 2017 MiTek Industries, Inc. Tue Jul 28 08:18:12 2020 Page 1 ID:Zyt_om2mwPy2DSPSTrb2?uyMtMy-SM2HCHpeSPbWioXz_Xh8BPiUn_m7qFdvn_Ybu9ytbJf 5x12 MT20HS = 5x12 = 5x12 MT20HS = Plate Offsets (X,Y)-- [2:0-1-0,Edge], [10:0-1-0,Edge LOADING (psf) PLATES TCLL (roof) Plate Grip DOL -0.46 14-16 >999 360 MT20 Snow (Pf/Pg) 15.4/20.0 -0.83 14-16 >575 240 Vert(TL) Lumber DOL 1.15 MT20HS 187/143 Rep Stress Incr Weight: 256 lb FT = 20% TOP CHORD 2x6 SP No.1 2-0-0 oc purlins (2-5-0 max.) Switched from sheeted: Spacing > 2-8-0). BOT CHORD 2x6 SP 2400F 1.8E *Except* BOT CHORD 13-15: 2x6 SP No.1 Rigid ceiling directly applied or 5-7-7 oc bracing. 2x4 SP No.2 5-14, 7-14 1 Row at midpt **REACTIONS.** (lb/size) 2=2642/0-8-8, 10=2642/0-8-8 Max Horz 2=-237(LC 14) Max Uplift 2=-1110(LC 16), 10=-1110(LC 16) Max Grav 2=3125(LC 2), 10=3125(LC 2) FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-7439/2778, 3-5=-6699/2504, 5-6=-4803/1971, 6-7=-4803/1971, 7-9=-6699/2504, 9-10=-7439/2779 BOT CHORD 2-16=-2445/6944, 14-16=-1933/5749, 12-14=-1961/5749, 10-12=-2451/6944 3-16=-903/528, 5-16=-192/1017, 5-14=-1692/776, 6-14=-766/2226, 7-14=-1692/776, 7-12=-192/1017, 9-12=-903/528 1) Unbalanced roof live loads have been considered for this design. 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; B=45ft; L=40ft; eave=5ft; Cat. II; Exp C; enclosed; MWFRS (directional) and C-C Exterior(2) -1-0-0 to 3-0-0. Interior(1) 3-0-0 to 20-0-0. Exterior(2) 20-0-0 to 24-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp C; Partially Exp.; Ct=1.1 4) Unbalanced snow loads have been considered for this design. 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads. 6) Dead loads shown include weight of truss. Top chord dead load of 5.0 psf (or less) is not adequate for a shingle roof. Architect to verify adequacy of top chord dead load. 7) All plates are MT20 plates unless otherwise indicated.

No. 19900415 STATE OF July 28,2020

MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information

available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide

10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1110 lb uplift at joint 2 and 1110 lb

11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

WOOD ROOF TRUSSES

1.01 WORK INCLUDED

A. FABRICATE AND SUPPLY WOOD TRUSSES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. WORK TO INCLUDE ANCHORAGE, BLOCKING, CURBING, MISCELLANEOUS FRAMING AND BRACING.

1.02 DEFINITIONS

A. TRUSS: THE TERMS "TRUSS" AND "WOOD TRUSS COMPONENT" REFER TO OPEN WEB LOAD CARRYING ASSEMBLIES SUITABLE FOR SUPPORT OF ROOF DECKS OR FLOORS IN BUILDINGS. B./MANUFACTURER: A MANUFACTURER WHO IS REGULARLY ENGAGED IN DESIGN AND FABRICATION OF WOOD TRUSS

\ COMPONENTS. C. TRUSS INSTALLER: BUILDER, CONTRACTOR OR SUB-CONTRACTOR WHO IS RESPONSIBLE FOR THE FIELD STORAGE. HANDLING AND INSTALLATION OF TRUSSES.

1.03 TRUSS DESIGN

. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THESE SPECIFICATIONS AND WHERE ANY APPLICABLE DESIGN FEATURE IS NOT SPECIFIED HEREIN, DESIGN SHALL BE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NCD) AMERICAN FOREST AND PAPER ASSOCIATION (AFPA), AND DESIGN SPECIFICATIONS FOR METAL \ PLATE CONNECTED WOOD TRUSSES (ANSI/TPI 1), TRUSS PLATE INSTITUTE (TPI), AND CODE OF JURISDICTION.

B. TEMPORARY BRACING: STRICTLY FOLLOW TPI DSB FOR DESIGN SPECIFICATIONS FOR TEMPORARY BRACING. C./HANDLING, INSTALLING AND BRACING: STRICTLY FOLLOW TPI HIB COMMENTARY AND RECOMMENDATIONS.

Q. MANUFACTURER SHALL FURNISH DESIGN DRAWINGS BEARING

\SEAL AND REGISTRATION NUMBER OF A CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF INDIANA. DRAWINGS SHALL BE APPROVED BY ARCHITECT PRIOR TO FABRICATION. E. TRUSS DESIGN DRAWINGS SHALL INCLUDE AS MINIMUM / INFORMATION:

- 1. SPAN, DEPTH OR SLOPE AND SPACING OF TRUSSES;
- 2. REQUIRED BEARING WIDTH; 3. DESIGN LOADS AS APPLICABLE, TO MEET ALL CURRENT INDIANA CODES:
- 4. ADJUSTMENT TO LUMBER AND PLATE DESIGN LOADS FOR CONDITION OF USE;

- 5. REACTIVE FORCES, THEIR POINTS OF
- OCCURRENCE AND DIRECTION; 6. PLATE TYPE, GAGE, SIZE AND LOCATION OF PLATE AT EACH JOINT;
- 7. LUMBER SIZE, SPECIES AND GRADE FOR EACH MEMBER: 8. LOCATION OF ANY REQUIRED CONTINUOUS LATER
- BRACING;
- 9. CALCULATED DEFLECTION RATIO AND/OR MAXIMUM DEFLECTION FOR LIVE AND TOTAL LOAD; 10. MAXIMUM AXIAL COMPRESSIVE FORCES IN TRUSS
- MEMBERS: 11. LOCATION OF JOINTS: 12. CONNECTION REQUIREMENTS FOR: a. TRUSS TO TRUSS GIRDERS;
- b. TRUSS PLY TO PLY; AND c. FIELD SPLICES. F. PROVIDE METAL PLATE CONNECTED WOOD TRUSSES CAPABLE OF WITHSTANDING DESIGN LOADS WITHIN LIMITS AND UNDER
- CONDITIONS INDICATED. a. DESIGN LOADS:
 - 1. DEAD LOAD: 15 PSF 2. LIVE LOAD: 25 PSF
 - 3. SNOW EXPOSURE FACTOR: .9 4. SNOW LOAD IMPORTANCE FACTOR: 1.0
- 5. THERMAL FACTOR: 1.0 b. MAXIMUM DEFLECTION UNDER DESIGN LOADS: 1. ROOF TRUSSES: VERTICAL DEFLECTION OF 1/360
 - 2. ROOF TRUSSES: HORIZONTAL DEFLECTION AT REACTIONS OF 1-1/4 INCHES.

2.01 MATERIALS

c. LUMBER USED FOR TRUSS MEMBERS SHALL BE IN ACCORDANCE WITH PUBLISHED VALUES OF LUMBER RULES WRITING AGENCIES APPROVED BY BOARD OF REVIEW OF AMERICAN LUMBER STANDARDS COMMITTEE. LUMBER SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION BUREAU OR AGENCY APPROVED BY THAT BOARD, AND SHALL BE AS SHOWN ON DESIGN DRAWINGS.

d. MOISTURE CONTENT OF LUMBER SHALL BE NO LESS THAN 7 PERCENT NOR GREATER THAN 19 PERCENT AT TIME OF FABRICATION.

- e. ADJUSTMENT OF VALUES FOR DURATION OF LOAD OR CONDITIONS OF USE SHALL BE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD
- CONSTRUCTION (NDS). f. FIRE RETARDANT TREATED LUMBER, IF APPLICABLE SHALL MEET SPECIFICATIONS OF TRUSS DESIGN AND ANSI/TPI 1-1995, PAR 9.1.5 AND SHALL BE RE-DRIED AFTER TREATMENT IN ACCORDANCE WITH AWPA STANDARD C20. ALLOWABLE VALUES MUST BE ADJUSTED IN ACCORDANCE WITH NDS PAR 2.3.6. LUMBER TREATER SHALL SUPPLY CERTIFICATE OF COMPLIANCE.

B. METAL CONNECTOR PLATES: METAL CONNECTOR PLATES SHALL MEET OR EXCEED ASTM A653-94 GRADE 3 AND SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A653-94, COATING DESIGNATION G60. WORKING STRESSES IN STEEL ARE TO BE APPLIED TO EFFECTIVE RATIOS FOR PLATES AS DETERMINED BY TESTING IN ACCORDANCE WITH APPENDIX E AND F OF ANSI/TPI 1-1995.

2.02 TRUSS FABRICATION

EXCESSIVE BENDING.

TRUSSES SHALL BE FABRICATED IN A PROPERLY EQUIPPED MANUFACTURING FACILITY OF A PERMANENT NATURE. TRUSSES SHALL BE MANUFACTURED BY EXPERIENCED WORKMEN, USING PRECISION CUTTING, JIGGING, AND PRESSING EQUIPMENT MEETING REQUIREMENTS OF ANSI/TPI 1-1995, SECTION 4. TRUSS MEMBERS SHALL BE ACCURATELY CUT TO LENGTH ANGLE AND TRUE LINE TO ASSURE PROPER FITTING JOINTS WITHIN TOLERANCES SET FORTH IN ANSI/TPI 1-1995, SECTION 4, AND PROPER FIT WITH OTHER WORK.

3.01 HANDLING, INSTALLATION AND BRACING OF ROOF AND FLOOR TRUSSES

- 1. TRUSS DELIVERY SHALL BE SCHEDULED REASONABLY NEAR THE SCHEDULED TIME OF ERECTION. 2. TRUSSES SHALL BE HANDLED DURING FABRICATION, DELIVERY AND AT JOB SITE SO AS NOT TO BE SUBJECTED
- 3. TRUSSES SHALL BE UNLOADED ON SMOOTH GROUND TO AVOID LATERAL STRAIN. TRUSSES SHALL BE PROTECTED FROM DAMAGE THAT MIGHT RESULT FROM ON-SITE ACTIVITIES AND ENVIRONMENTAL CONDITIONS. PREVENT TOPPLING WHEN BANDING IS REMOVED.
- 4. UPON ARRIVAL AND DURING THE UNLOADING PROCESS, TRUSSES SHALL BE INSPECTED FOR DAMAGE.

- 5. HANDLE DURING INSTALLATION IN ACCORDANCE WITH HANDLING, INSTALLING AND BRACING WOOD TRUSSES (HIB-91), TPI, AND ANSI/TPI 1-1995. INSTALLATION SHALL BE CONSISTENT WITH GOOD WORKMANSHIP AND GOOD BUILDING PRACTICES AND SHALL BE RESPONSIBILITY OF TRUSS
- INSTALLER. 6. APPARENT DAMAGE TO TRUSSES. IF ANY, SHALL BE
- REPORTED TO MANUFACTURER PRIOR TO INSTALLATION. 7. TRUSSES SHALL BE SET AND SECURED LEVEL AND PLUMB, AND IN CORRECT LOCATION. TRUSSES SHALL BE HELD TO CORRECT ALIGNMENT UNTIL SPECIFIED PERMANENT BRACING IS INSTALLED.
- 8. CUTTING AND ALTERING OF TRUSSES IS NOT PERMITTED. 9. CONCENTRATED LOADS SHALL NOT BE PLACED ATOP TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND DECKING IS PERMANENTLY NAILED IN PLACE. SPECIFICALLY AVOID STACKING FULL BUNDLES OF DECKING OR OTHER HEAVY MATERIAL ONTO UNSHEATHED TRUSSES. 10. ERECTION BRACING IS REQUIRED. PREVENT TOPPLING OR "DOMINOING" (CASCADING COLLAPSE) OR TRUSSES DURING
- INSTALLATION. 11. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FURNISHING THE MATERIALS USED FOR INSTALLATION OF PERMANENT BRACING.
- 3.02 REPAIRS AND PROTECTION: REPAIR DAMAGED GALVANIZED COATINGS ON ESPOSED SURFACES WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A 780.
- REPAIR OR REPLACE TRUSSES OR ACCESSORIES DAMAGED IN DELIVERY OR INSTALLATION IMMEDIATELY.

TRUSS INSTALLATION

INSTALL AND BRACE TRUSSES ACCORDING TO TPI RECOMMENDATIONS AND AS INDICATED. INSTALL TRUSSES PLUMB, SQUARE, AND TRUE TO LINE AND SECURELY FASTEN TO SUPPORTING CONSTRUCTION.

ANCHOR TRUSSES SECURELY AT BEARING POINTS; USE METAL FRAMING ANCHORS AND TIE-DOWNS SIMILAR TO SIMPSON HURRICANE FASTENERS H-1. INSTALL FASTENERS THROUGH EACH FASTENER HOLE IN METAL FRAMING ANCHOR ACCORDING TO MANUFACTURER'S FASTENING SCHEDULES AND WRITTEN INSTRUCTIONS.

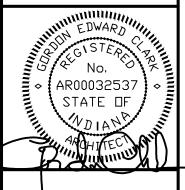
IT IS TRUSS DESIGNER'S RESPONSIBILITY TO DESIGN TRUSS-TO-GIRDER CONNECTION BASED ON CONDITIONS AT SITE AND THESE

SECURELY CONNECT EACH TRUSS PLY REQUIRED FOR FORMING BUILT-UP GIRDER TRUSSES. ANCHOR TRUSSES TO GIRDER TRUSSES AS INDICATED.

INSTALL AND FASTEN PERMANENT BRACING DURING TRUSS ERECTION AND BEFORE CONSTRUCTION LOADS ARE APPLIED. ANCHOR ENDS OF PERMANENT BRACING WHERE TERMINATING AT WALLS OR BEAMS.

DO NOT CUT OR REMOVE TRUSS MEMBERS.





Post Frame Buildings

Introduction

Post-frame buildings are efficient structures whose primary framing system is comprised of wood roof trusses or rafters connected to vertical timber columns or sidewall posts. Secondary members such as roof purlins and wall girts support the exterior cladding and vertical horizontal forces to and from the post-frame. Figure 1 illustrates the common components of a post-frame

building. The purpose of this document is to provide guidance to post-frame building designers for meeting the requirements of the International Building Code (IBC) and to confirm that a properly designed post-frame building is in fact code compliant.

The following chapters and headings correspond to those of the *IBC*:

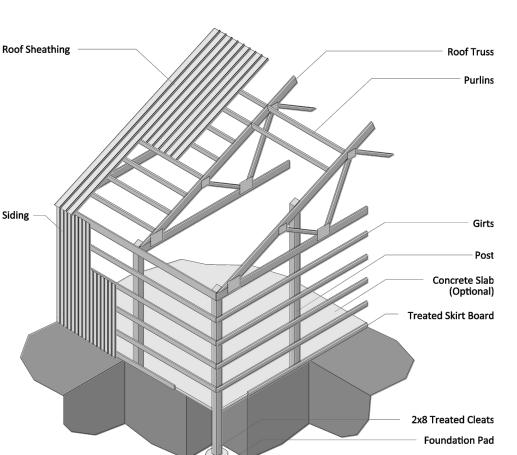


Figure 1 Components of a Post Frame Building

Collar as required by design

Figure 3 Post anchorage (post embedded) typical for

Figure 4A Post anchorage (post pinned) typical for solid-

Pre-cast concrete pier Wet-set bracket

sawn or laminated columns

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Figure 4B Post anchorage (moment connection) by wet-

set bracket or pre-cast concrete pier typical for solid-

solid-sawn or laminated columns

sawn or -laminated columns

Concrete footing

Wood post

1/2" Thru-Bolt

1/4" Screw

Internal Steel

Hi-Strength Concrete

Galvanized Uplift Anchor (optional)

Precast

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Exterior finish

Vapor retarde

Interior girt

Insulation (Nominal 6-inch post provide:

Insulation (Nominal 6-inch post provide:

Figure 2 Typical post frame wall sections with (a) girts on

exterior and interior of posts, and (b) girts between posts.

Chapter 5 General Building Heights and

Table 503 Allowable Building Heights and Areas

Post-frame buildings are wood structures and as such are classified as Type VA or VB. The basic allowable height and area for each occupancy group for Type VA and VB is presented in the last two columns of Table 503. The allowable height may be modified in accordance with Section 504 and the allowable area may be modified in accordance with Section 506 and 507. Chapter 4 contains specific exceptions to the allowable height and areas in Table 503 and Chapter 5.

Chapter 6 Types of Construction

Table 601 Fire-Resistance Rating Requirements

for Building Elements Per this table, there is no minimum required fire resistance rating of the elements of Type VB construction. With some exceptions (Notes b and d), the minimum required fire resistance rating of the elements of Type VA construction is one hour. There is a report available from the National Frame Building Association (NFBA) of a tested one hour one directional wall assembly and a two directional -- one, two, and three-hour post-frame wall assembly. The two directional wall assemblies are also listed under UL Design No. V304, BXUV.V304. A one hour roof ceiling assembly may be constructed with wood roof trusses in accordance with item 21-1.1 of Table 721.1(3). Other systems are available from the Structural Building Components Association (SBCA) as well as proprietary systems from the manufacturers of truss metal connector plates. A compendium of all known fire-rated truss assemblies is available from SBCA. There are many one hour assemblies for roofs built from dimension lumber or engineered wood. Many of these can be found in DCA No. 3 - Fire-Rated Wood-Frame Wall and Floor/Ceiling Assemblies.

Table 602 Fire-Resistance Rating Requirements for Exterior Walls Base on Fire Separation

This table presents the minimum fire resistance rating for exterior walls based on occupancy group and fire separation distance. As previously mentioned, a report of a tested one, two and three-hour post-frame wall assembly is available from the NFBA. <u>DCA No. 3</u> - Fire Rated Wood Wall Assemblies describes how

interior and exterior wood-frame walls can be used to meet building code requirements for fire resistive

Section 602.3 Type III and Section 602.4 Type IV

Both Type III and Type IV construction allow exterior wall assemblies to contain fire-retardant-treated wood. Both Sections 602.3 and 602.4 include the statement. "Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies with a 2-hour rating or less."

Chapter 7 Fire and Smoke Protection

Table 705.8 Maximum Area of Exterior Wall Openings Based on Fire Separation Distance and Degree of Opening Protection

This table presents the maximum allowable percentage of wall openings based on fire separation distance and fire classification of the opening.

A parapet is an extension of the wall above the roof line. Section 705.11 requires parapets on exterior walls of buildings. There are six exceptions to this requirement provided in this Section. In general, it is wise to avoid placing parapets along the eave line of post-frame buildings. Parapets at the eave increase the ikelihood of roof leaks, and in cold climates will catch

Section 706.3 Exception

This Section allows fire walls in Type V Construction to be of combustible materials

Chapter 12 Interior Environment

Section 1203.2 Attic Spaces

It is important that attics are ventilated in accordance with this section.

Chapter 13 Energy Efficiency

Chapter 13 refers the designer to the *International* Energy Conservation Code (IECC). The IECC has specific requirements for residential and commercial construction with minimum insulation values based on climate zones. One of the benefits of post-frame construction is that it allows for economical superinsulated buildings. Attic spaces may be easily insulated

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POST FRAME BUILDINGS

with R-40 or higher materials. Because of their unique construction, post-frame walls may be easily insulated with R-30 batts. See Figure 2.

Chapter 14 Exterior Walls

Table 1405.2 Minimum Thickness of Weather

The most common exterior wall covering for postframe buildings is pre-painted corrugated steel siding. But other materials such as exterior plywood, wood sidings, brick veneers, etc. are also common. This table provides the code prescribed minimum thickness for weather coverings.

Section 1405.11Metal Veneers

This section provides the requirements for metal

Section 1406 Combustible Materials on the

Exterior Side of Exterior Walls This section provides requirements for combustible sidings and Section 1406.2.3 provides fire blocking

Chapter 15 Roof Assemblies and Rooftop

Section 1507.2 Asphalt shingles

requirements.

Structures

Shingle and wood sheathed roofs are also common on post-frame buildings. Section 1507.2 provides the minimum code requirements for asphalt shingle roofs.

Section 1507.4 Metal roof panels

As with siding, the most common roof cladding for post-frame buildings is pre-painted corrugated steel. Section 1507.4 provides the minimum code requirements for metal roof panels. These steel roof systems are commonly used as horizontal diaphragms to transfer lateral loads from the post-frame to end and interior shear walls. When using a "floating" metal roof such as standing seam, it is essential to recognize that the "floating" roof does not provide a diaphragm, and to accommodate this during structural design.

Chapter 16 Structural Design

Post-frame buildings must be designed for structural requirements of this chapter, just as any other

Table 1604.3 Deflection Limits

One notable exception to the deflection limits in Table 1604.3 is Note "a". Because of its inherent flexibility, corrugated metal can sustain relatively high deflections without failure. If purlins or girts are used to support interior finishes in addition to metal siding, then they must meet the deflection limits of Table 1604.3.

Section 1604.8 Anchorage

Embedded posts must maintain a load path for uplift loads per the provisions of Section 1604.8.1. Note that dead load can be used to offset uplift as permitted in

Chapter 18 Soils and Foundations

The foundation system of a post-frame building is unique. The posts can be embedded in the ground or anchored to a concrete foundation (Figure 4).

In all cases, vertical loads from the roof are transferred to columns and from columns to concrete footings or foundations, and finally to the soil. Buried or embedded posts also can resist lateral loads by developing partial fixity. See Figure 3.

Section 1806 Presumptive Load Bearing Values of

The foundation system must be evaluated with respect to load bearing values of the soil. Section 1806 outlines those requirements.

Section 1807 Foundation Walls, Retaining Walls and Embedded Posts and Poles

Standard practice for embedded posts is that a round hole is drilled for each post approximately four feet in the ground (or greater if required for frost protection per 1809.5). Either a pre-cast or cast in place round concrete pad is placed in the bottom of this hole. Pads are usually unreinforced. The diameter of this pad is determined so that the calculated vertical load in the post divided by the area of the pad is less than the allowable soil bearing pressure (per Sections 1806 and 1807). The foundation under an anchored post is designed conventionally. The minimum 28 day concrete strength is 2,500 psi or 3,000 psi per Items 1 and 2 in Table 1808.8.1.

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Section 1807.3 Embedded Posts and Poles Embedded posts can resist lateral loads through the development of partial fixity of the base. However, there are limitations as shown in Section 1807.3. Research has shown that where the roof and side walls can act as diaphragms or shear walls, that the majority of the lateral loads will be resisted by them. The *Post*-Frame Design Manual, published by the National Frame Builders Association, as well as ANSI/ASAE EP 484.2, referenced in Section 2306.1, provide techniques for dividing the lateral loads among frames and diaphragms. After the design moments at the base of the posts have been determined, the embedment depth can be checked in accordance with Section 1807.3. More extensive design and analysis procedures for embedded post and pier foundations are contained in ANSI/ASAE EP 486.1.

Chapter 23 Wood

Section 2303.1.8 Preservative-treated wood

Preservative treated wood has been used successfully in contact with the ground for many years. The use of properly treated wood may provide assurance that a post-frame building may last for 50 years or more. This section and Section 1807.3 specify that wood posts shall be treated in accordance with American Wood Protection Association (AWPA) standard U1 (Commodity Specification A, Use Category 4B for sawn timber posts and Commodity Specification B, Use Category 4B for round timber posts). Waterborne preservatives are often the preferred method of treatment for wood in contact with the ground. Posts or wood columns embedded in soil must be treated to a minimum use category level of AWPA UC4B, and other wood at or above soil level up to one foot above grade must be treated to at least UC4A. Southern Pine has long been a preferred species for treatment because its cellular structure permits relatively deep and uniform penetration of the preservative.

Section 2303.4 Trusses

Metal plate connected wood trusses shall designed and manufactured in accordance with ANSI/TPI 1. Chapter 2 in ANSI/TPI 1 is titled *Standard* Responsibilities in the Design and Application of Metal-Plate-Connected Wood Trusses. Every post-frame building designer should be familiar with this document, since 1) trusses are based on the building designer's specifications and 2) long-span trusses require special attention to bracing and erection. It is important that building designers understand their role in the design

process relating to wood trusses. Additional information

pertaining to design and installation of metal plate connected wood trusses is available from SBCA.

Section 2304.9 Connectors and Fasteners

Structural lumber in a post-frame building is usually in a highly stressed state at design loads. Therefore, it is important that all connections between structural members be carefully designed by the postframe building designer, not left to the discretion of the erector. When preservative-treated or fire-retardanttreated wood is used, care should be taken in the selection of fasteners and connectors. Section 2304.9.5 covers the different applications.

Section 2304.11 Protection against decay and

This section specifies the locations where wood is required to be preservative treated.

Section 2306.1 Allowable stress design

Post-frame design is normally based on allowable stress. The ANSI/ASAE standards cited in this section as well as the *Post-Frame Design Manual* published by the National Frame Builders Association, give guidance to the post-frame building designer.

For additional information contact:

The information contained in this document is intended to assist the designer of post framed structures. Special effort has been made to assure that the information reflects the state of the art. However, the American Wood Council does not assume responsibility for particular designs or calculations prepared from this publication.



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POST BUILDING REQUIREMENTS:

The International Building Code requires the following provisions be followed in the design and construction of Post or Pole type buildings.

All poles and posts are to be treated per preservative treatment by pressure processes using the following:

o Standard Specifications C1, C2, C3, C4, C9, C14, C15, C16, C22, C23, C24. C28 and M4. AQPA.

o Standard Specifications CP, LP2, LP3, LP4, LP5, LP7, LP22, LP33. LP44. LP65. LP77.

Provide minimum of 6" of concrete at bottom of all holes occupied by posts which directly support rafters or roof trusses.

Provide minimum embedment of 4'-0" for 6"x6" posts and 4'-6" for 8"x8" posts or provide engineering data to substantiated lesser embedment for buildings exempt from engineering requirements.

Erect all walls and structural framing true and plumb. Bracing to be placed during erection wherever necessary to carry and brace all loads. Building shall be designed to resist minimum horizontal and uplift wind

pressures up to 85 mph. Building shall be designed for a snow load per the IBC Building Code.

Building shall have trusses designed certified by a licensed structural engineer to include maximum spans for each given truss spacing and connection of trusses to poles.

Provide adequate anchorage of roof to walls and columns.

o Use Simpson Strong-Tie anchors or similar products.

o Follow Fastener Requirements below.

Backfill the space around posts and columns not embedded in poured concrete by one of the following methods:

o Backfill shall be of concrete with an ultimate strength of 200 psi at 28 days. The hole shall be not less than 4" larger than the diameter of the

o Backfill shall be of clean sand. The sand shall be thoroughly compacted by tamping in layers of not more than 8".

Schedule inspections per requirements of local authorities.

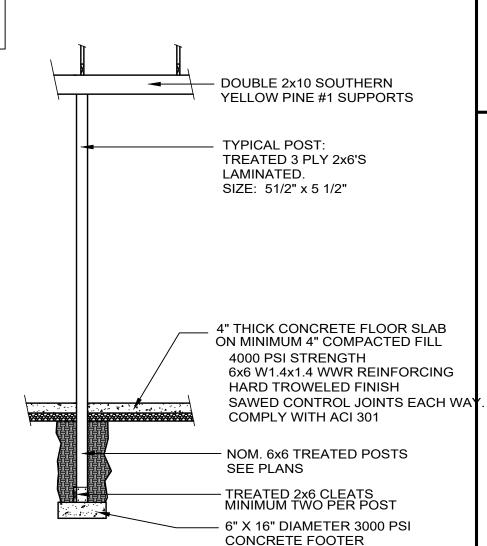
Fastener Requirements:

Building Code Requirements:

All fasteners shall strictly meet the provisions of IBC Table 2304.9.1 Current Edition. Use ring shank nails whenever possible. Additionally, follow recommendations made in the American Wood Council Document "Connection Solutions for Wood-Frame Structures".

When using power nailers, set the pressure of the gun to drive the nails flush with the surface, not below it.

In general, nails shall be ring shank 20d for headers and ledgers, and 40d for fastening of trusses to columns (posts) if hurricane ties are not installed.



ELEVATION OF TYPICAL POST

SECTION THRU TYPICAL POST

TYPE A FOOTER PAD:

16" DIAMETER CONCRETE PAD 3,000 # CONCRETE AREA OF 16" CIRCULAR PAD: 1.34 SQUARE FEET SOIL BEARING: 2,000 POUNDS PER SQUARE FOOT BEARING PER POST, TYPE A: 2,680 POUNDS

TYPE B FOOTER PAD:

TYPE C FOOTER PAD:

AREA OF TYPE B FOOTER PAD: 3.56 SQUARE FEET SOIL BEARING: 2,000 POUNDS PER SQUARE FOOT BEARING PER POST, TYPE B: 7,120 POUNDS PER POST

AREA OF TYPE C POSTS: 5.55 SQUARE FEET SOIL BEARING: 2,000 POUNDS PER SQUARE FOOT BEARING PER POST, TYPE C: 11.100 POUNDS

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ELECTRICAL SPECIFICATIONS AND GENERAL REQUIREMENTS:

THE CONTRACT DOCUMENTS CONSIST OF THE DRAWINGS AND SPECIFICATIONS ON THE DRAWINGS. THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ITEMS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

BUILDING CODES: NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CITY, STATE AND LOCAL BUILDING CODES FOR THIS CLASS OF WORK.

ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS AT THE JOBSITE. IF DISCREPANCIES ARE FOUND THE GENERAL CONTRACTOR SHALL BE NOTIFIES BEFORE PROCEEDING WITH ANY WORK OR ORDERING ANY EQUIPMENT OR MATERIAL IN THE AFFECTED AREA.

FIT AND QUANTITY OF THE WIRING, ELECTRICAL EQUIPMENT, THE VARIOUS NECESSARY PARTS AND MATERIALS TO MAKE A COMPLETE AND FINISHED JOB SHALL BE VERIFIED AND COORDINATED PRIOR TO START OF CONSTRUCTION AND ARE THE EXCLUSIVE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

LOCAL UTILITY COORDINATION: ELECTRICAL CONTRACTOR SHALL COORDINATE TRANSFORMERS AND SERVICE REQUIREMENTS WITH THE LOCAL UTILITY COMPANY. THE E.C. SHALL CONSULT WITH THE LOCAL UTILITY TO ESTABLISH REQUIRED KACI RATINGS.

ALL FIXTURES, EQUIPMENT AND MATERIALS SHALL BE INSTALLED PER THE MANUFACTURER'S SUGGESTED INSTALLATION REQUIREMENTS IN A NEAT AND WORKMANLIKE MANNER

UL LABELING: ALL ELECTRICAL EQUIPMENT SHALL HAVE "UL" LABELS.

WIRING DEVICES SHALL BE SPECIFICATION GRADE.

PROVIDE ALL DISCONNECTS REQUIRED PER NATIONAL AND LOCAL ELECTRICAL CODES RATED TO UTILITY SUPPLIED KAIC LIMITS, OR, IF NOT SUPPLIED, TO NEC MINIMUMS.

ALL EXPOSED WIRE AND WIRING BELOW CONCRETE SLABS SHALL BE IN

WIRE: ALL WIRE SHALL BE COPPER, MINIMUM SIZE #12 AWG. ALL CONDUCTORS SHALL HAVE TYPE "THHN" INSULATION. CONDUCTORS #10 AND SMALLER MAY BE SOLID. GROUNDING CABLES SHALL BE NO SMALLER THAN 4 COPPER.

BREAKER PANELS: FURNISH AND INSTALL A BREAKER PANEL AS MANUFACTURED BY SQUARE D OR ITE. INSTALL PANEL SO TOP BREAKER IS NO HIGHER THAN 6'-0".

FURNISH AND INSTALL TYPEWRITTEN DIRECTORY. IDENTIFY AND LABEL ALL ELECTRICAL SERVICE EQUIPMENT.

GROUNDING: GROUNDING SHALL BE DONE STRICTLY ACCORDING TO SECTION 250.52 OF THE NATIONAL ELECTRIC CODE USING ACCEPTABLE ELECTRODES AND CONNECTIONS.

SWITCHES: ALL SWITCHES SHALL BE RATED 20 AMP, 125 VOLT AND SHALL BE MOUNTED 4'-6" AFF, UNLESS NOTED OTHERWISE.

RECEPTICALS: ALL RECEPTACLES TO BE 15 AMP, 125 VOLT, GROUNDING TYPE AND SHALL BE MOUNTED 18" AFF, UNLESS NOTED OTHERWISE.

PROVIDE TEMPORARY POWER REQUIRED BY THE GENERAL CONTRACTOR AND OTHER TRADES. COORDINATE POWER REQUIREMENTS WITH GC PRIOR TO INSTALLATION.

LIGHTING FIXTURES: LIGHTING FIXTURES TO BE FURNISHED AND INSTALLED COMPLETE WITH LAMPS AS DETAILED ON THE PLANS OR AS INTENDED. SEE REFLECTED CEILING PLAN AND/OR LIGHTING PLAN FOR THE EXACT LOCATION OF THE CEILING GRID, LIGHT FIXTURES, OR THE GENERAL INTENT OF THE DRAWINGS.

SEE THE ELECTRICAL DRAWING(S) FOR THE FIXTURE SCHEDULE, NOTES AND OTHER SPECIFICATION REQUIREMENTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR NOTICE TO THE INSPECTING AUTHORITIES, ARCHITECT, OR GENERAL CONTRACTOR, SO THAT WORK CAN BE INSPECTED OR APPROVED BEFORE COVERING. THIS PROCEDURE SHALL OCCUR WITHOUT AFFECTING CONSTRUCTION PROGRESS AND COMPLETION.

THE INTENTION OF THESE DOCUMENTS IS TO PROVIDE THE OWNER WITH A BUILDING COMPLETE IN ITS ENTIRETY AT THE TIME OF OCCUPANCY. IT IS THE SUB-CONTRACTOR'S RESPONSIBILITY TO CONTACT THE GENERAL CONTRACTOR DURING THE BIDDING/PRICING PHASE OF ANY DETAILS MISSING VAGUE, OR INCOMPLETE SO THAT AN APPROPRIATE ADDENDUM OR CLARIFICATION CAN BE ISSUED. THE SELECTED CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE, FUNCTIONAL, AND OPERATIONAL FACILITY.

DRAWING NOTES:

- MINIMUM WIRE SIZE TO BE #12 AWG COPPER
- INSTALLATION TO MEET ALL STATE AND LOCAL CODES. ALL WIREING TO BE INSTALLED IN METAL RACEWAYS
- OR MC CABLE WHERE PERMITTED BY CODE. MAXIMUM LOAD OF 1,600 WATTS FOR 20 AMP BRANCH CIRCUITS.
- FINAL LOCATIONS OF ALL DEVICES AND EQUIPMENT
- CONNECTIONS TO BE VERIFIED BY THE OWNER. 6. THE FINAL LOCATION OF THE ELECTRICAL METER WILL
- BE DETERMINED BY THE POWER COMPANY.
- GROUNDING PER 2008 NEC CODE. 8. ALL EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED BY PHOTOCELL(S).

MECHANICAL SPECIFICATIONS AND UNIT HEATERS:

NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CITY, STATE AND LOCAL BUILDING CODES AND NFPA CODES FOR THIS CLASS OF WORK.

MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL APPLICABLE PERMITS, INSPECTIONS\AND LICENSES NECESSARY TO COMPLETE THIS INSTALLATION AND THE SATISFACTORY OPERATION 2. VENT THRU ROOF IN A SHORT DISTANCE TO AVOID CONDENSATION IN OF THE SYSTEM.

MECHANICAL CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS AT THE JOBSITE. IF DISCREPANCIES ARE FOUND THE GENERAL CONTRACTOR SHALL BE NOTIFIED (BEFORE PROCEEDING WITH ANY WORK OR ORDERING ANY EQUIPMENT OR MATERIAL IN THE AFFECTED AREA. IF THE MECHANICAL CONTRACTOR PROCEEDS WITH THE WORK, IT SHALL/BE ASSUMED THAT HE FINDS THE CONDITIONS SATISFACTORY.

THE MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AND VERIFY ALL POWER AND DRAINS ARE PROVIDED AND IN THE PROPER LOCATION.

ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED PER THE MANUFACTURER'S SUGGESTED INSTALLATION REQUIREMENTS IN A NEAT AND WORKMANLIKE MANNER.

MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND MUST BE FIELD VERIFIED FOR EXACT ROUTING AND ADDITIONAL EQUIPMENT OR DEVICES NECESSARY FOR COMPLETE JOB.

MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTACTORS, RELAYS AND THERMOSTATS.

ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SWITCHES AND DISCONNECTS

THE MECHANICAL CONTRACTOR SHALL COMPLETE TEMPERATURE CONTROL WIRING.

PROVIDE ALL NECESSARY HANGERS, FASTENERS, CLIPS AND OTHER DEVICES REQUIRED FOR A COMPLETE JOB.

ALL WIRE SHALL BE COPPER, MINIMUM SIZE #12 AWG. ALL CONDUCTORS SHALL HAVE TYPE "THHN" INSULATION. CONDUCTORS #10 AND SMALLER MAY BE SOLID.

GAS PIPING SPECIFICATIONS

2" OR SMALLER-SCHEDULE 40, GRADE "B" ASTM A120 SCREWED 150 PSI BLACK MALLEABLE IRON FITTINGS.

VALVES: PLUG TYPE GAS SUPPORTS SHALL BE MINIMUM OF 10'-0" O.C.

MANUFACTURER'S MINIMUM CLEARANCE RECOMMENDATIONS SHALL BE MAINTAINED ON ALL EQUIPMENT AND DUCTWORK.

SEE THE MECHANICAL DRAWING(S) FOR THE SCHEDULES, NOTES, BTUH SIZING AND OTHER SPECIFICATION REQUIREMENTS. ADD ALL NECESSARY WORK NOT SHOWN ON SCHEDULES TO DELIVER A COMPLETE PROJECT.

HVAC UNITS SHALL BE TESTED UPON COMPLETION OF INSTALLATION TO INSURE THAT THEY ARE FUNCTIONING PROPERLY AND STARTUP FORMS AND AIR BALANCE REPORTS SUBMITTED TO OWNER.

CONTRACTOR SHALL BE RESPONSIBLE FOR NOTICE TO THE INSPECTING AUTHORITIES, ARCHITECT, OR GENERAL CONTRACTOR, SO THAT WORK CAN BE INSPECTED OR APPROVED BEFORE COVERING. THIS PROCEDURE SHALL OCCUR WITHOUT AFFECTING CONSTRUCTION PROGRESS AND COMPLETION.

TWO COPIES OF OPERATION AND MAINTENANCE MANUALS FOR MATERIALS INSTALLED PER WORK OF THIS SECTION SHALL BE DELIVERED TO OWNER PRIOR TO ACCEPTANCE OF THESE SPACES FOR OCCUPANCY. END

UNIT HEATER NOTES:

GENERAL:

UNIT HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH THE LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

SUPPORT:

SUSPENDED-TYPE UNIT HEATERS SHALL BE SUPPORTED BY ELEMENTS THAT ARE DESIGNED AND CONSTRUCTED TO ACCOMMODATE THE WEIGHT AND DYNAMIC LOADS. HANGERS AND BRACKETS SHALL BE OF NONCOMBUSTIBLE MATERIAL

SUPPORT, IF NOT INTEGRAL WITH THE UNIT HEATER, SHALL BE SIMILAR TO UNISTRUT MECHANICAL HVAC SUPPORT SYSTEMS.

DUCTWORK SPECIFICATIONS:

GENERAL REQUIREMENTS:

- STRICTLY FOLLOW THE HVAC DUCT CONSTRUCTION STANDARDS. CURRENT EDITION WITH AMENDMENTS, AND DOCUMENTED IN THE **CURRENT SMACNA MANUAL.**
- SIZING SHALL BE BASED ON SMACNA STANDARDS
- STRICTLY FOLLOW THE DUCTWORK STANDARDS FOR ATTACHMENT TO THE BUILDING FRAME AND SUPERSTRUCTURE. THE MECHANICAL SUB-CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF ATTACHMENTS.

PANEL P 120/208V SELF-CONTAINED 3o. 4 W 20A MB (4) 250 AL\IN 2 1/2",CONDUIT PUBLIØ UTILITY 2 1/2" CONDUIT -4-3/0 THHN #4 CU GROUND TO DRIVEN GROUND ROD PER NEC 250 RISER DIAGRAM SEE DETAILS **NOT TO SCALE**

GAS UNIT HEATER VENTING REQUIREMENTS:

1. VENTING SHALL BE DONE STRICTLY FOLLOWING THE UNIT HEATER INSTALLATION INSTRUCTIONS.

- VENT DUCT.
- 3. MATCH INSTRUCTIONS AND/OR MINIMUM 3" DIAMETER FROM UNIT HEATER. USE SELF-TAPPING SCREWS. USE 3" ROOF FLASHING\ FITTING EXITING THE ROOF DECK OR METAL ROOF. ATTACH WITH 1 1/4' **ROOFING NAILS.**

4. CAULK ALL JOINTS WITH ROOF MASTIC.

SYMBOLS

- 5. ATTACH VENT COVER PER INSTRUCTIONS. MINIMUM SELF-TAPP) NG
- SCREWS AND ROOF MASTIC.

LED HIGH BAY SUSPENDED FIXTURE

LIGHTED EXIT SIGN W/ EM LIGHT/ REMOTE HEAD

WITH GROUND FAULT INTERUPTOR

SURFACE MOUNTED LED

FLAT PANEL 24" x 24"

EMERGENCY LIGHT PACK ELUCENT WPDS WALL PACK

LED LIGHT

MODEL WPD590

DUPLEX RECEPTICAL

DUPLEX RECEPTICAL

SEE RISER DIAGRAM

100,000 IN, 87,000 OUT

BELOW AND PLAN LOCATIONS

ELECTRIC PANEL

UNIT HEATER

4" POWER VENT 115V / 1-P / 60

REZNOR UDAP 100 VENT PER SPECS AT LEFT

ELECTRICAL POWER AND LIGHTING PLAN UNIT HEATER PLAN

FOR OHD

GAS METER PER LOCAL UTILITY.

1" GAS FROM

METER TO "T".

FOR OHD

90 CU. FT PER HOUR-

-100,000 BTUH

4" POWER VENT

L115V / 1-P / 60

100,000 IN, 87,000 OUT

VENT PER SPECS AT LEFT

50 AMP OUTLET

VERIFY LOCATION

) CFM EXHAUST FAN

INSECT SCREEN.

TIE TO LIGHT WITH 4 M/NUTE DELAY

VENT TO DAYLIGHT WITH RAIN HOOD

UNIT HEATER

-100,000 BTUH

UNIT HEATER

4" POWER VENT

50 AMP OUTLET

TIE EMERGENCY LIGHTING LIGHT PACK

FOR OHD

TO POWER CIRCUIT

VERIFY LOCATION

_115V / 1-P / 60

100,000 IN, 87,000 OUT

VENT PER SPECS AT LEFT

SCALE: 1/8" = 1'-0" GAS ENTRANCE SCHEMATIC DRIP LEG

GENERAL NOTES:

1. INSTALL THREE PHASE IF AVAILABLE 2. DEVICE HEIGHTS SHALL BE NO HIGER THAN 48" AFF. 3. 50 AMP OUTLETS: INSTALL TWO, VERIFY LOCATIONS WITH OWNER PRIOR TO INSTALLATION.

4. GROUND PER NOTES AT LEFT AND NEC.

ELECTRICAL SYSTEM GROUNDING REQUIREMENTS:

STRICTLY FOLLOW NEC 250.50 AND 250.52.

INSTALL GROUNDING ELECTRODE ACCORDING TO THE FOLLOWING LIST:

WATER PIPE IF 10 FEET OR MORE OF METAL WATER PIPE IS IN CONTACT WITH THE EARTH.

METAL FRAME OF THE BUILDING OR STRUCTURE WHERE ANY OF THE FOLLOWING FOUR METHODS ARE USED TO MAKE AN EARTH **CONNECTION:**

- 1. CONCRETE-ENCASED ELECTRODE IN AT LEAST 2 INCHES OF CONCRETE LOCATED WITHIN OR NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS IN INDIRECT CONTACT WITH THE EARTH.
- 2. GOUND RING ENCIRCLING THE BUILDING OR STRUCTURE IN
- DIRECT CONTACT WITH THE EARTH. 3. ROD OR PIPE ELECTRODE NOT LESS THAN 8 FEET IN LENGTH.
- 4. OTHER LOCAL UNDERGROUND SYSTEMS SUCH AS PIPING, UNDERGROUND TANKS AND UNDERGROUND WELL CASING.

COMMUNICATIONS EQUIPMENT: COMMUNICATIONS EQUIPMENT SHALL BE GROUNDED TO BUILDING GROUNDING ELECTRODE SIMILAR TO OTHER ELECTRICAL EQUIPMENT. FOLLOW NEC 800.100 (B).

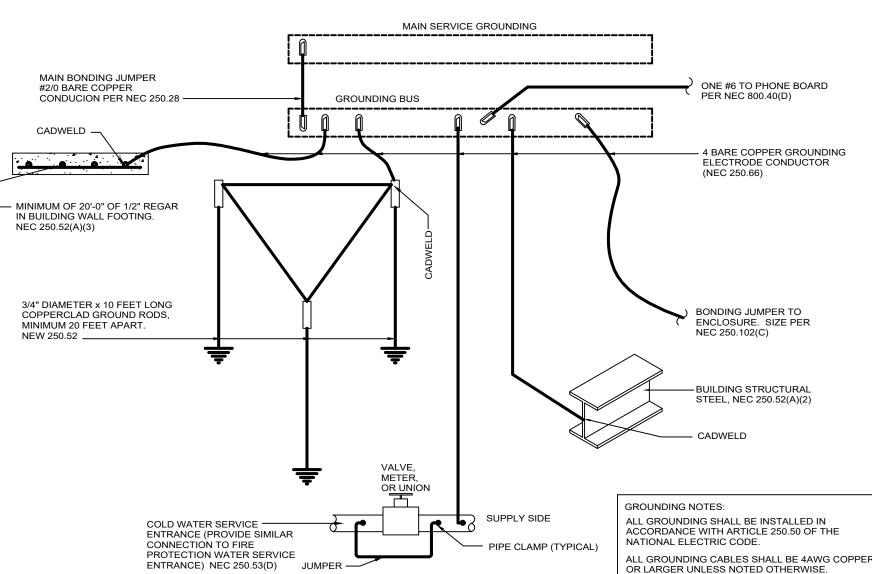
ALL GROUNDING ELECTRODES THAT ARE PRESENT AT THIS BUILDING STRUCTURE SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEMS.

BOND ALL GROUNDING ELECTRODES THAT ARE PRESENT AT THIS LIGHTING LIGHT PACKBUIKDING STRUCTURE TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. GROUNDING ELECTRODES THAT MAY BE PRESENT AT THIS BUILDING INCLUDE GROUNDING ELECTRODE RODS, CONCRETE ENCASED ELECTRODES SUCH AS BUILDING FOUNDATION REBAR. UNDERGROUND METAL WATER PIPES, AND METAL FRAME OF THE BUILDING INCLUDING STRUCTURAL STEEL COLUMNS.

SEE GROUNDING DETAIL THAT IS A PART OF DRAWINGS OF THIS SET.

NOT)PERMITTED:

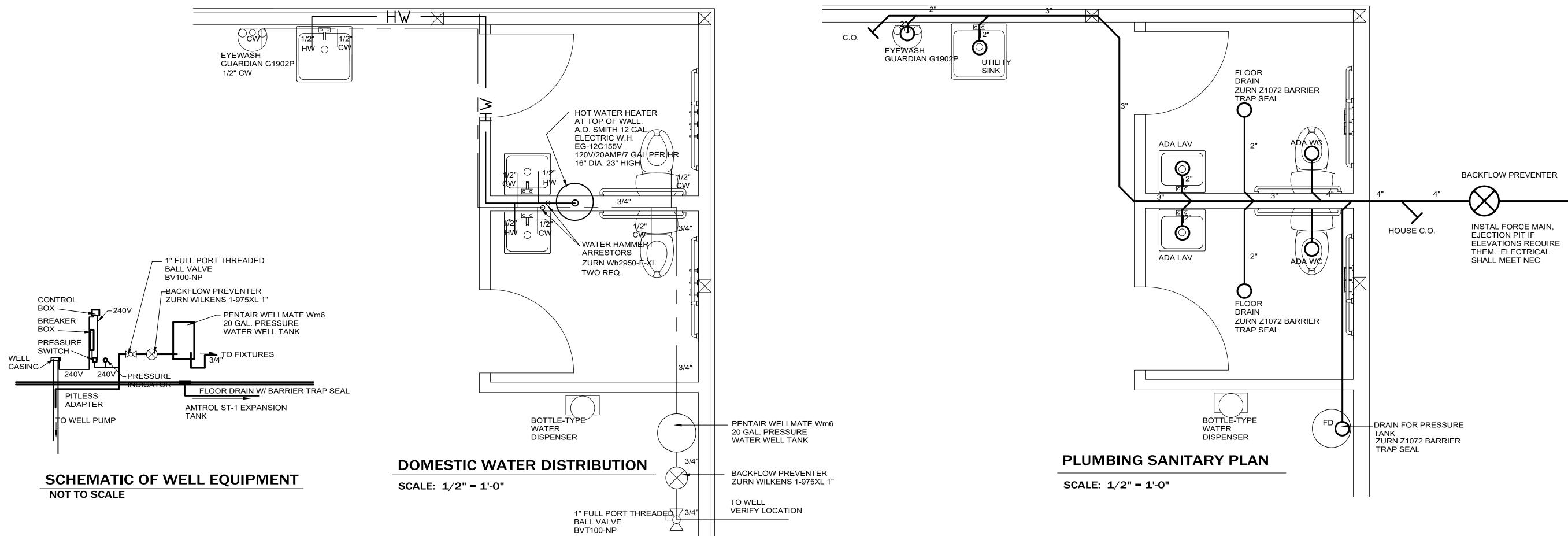
METAL UNDERGROUND GAS PIPING. **ALUMINUM ELECTRODES**



GROUNDING DIAGRAM NOT TO SCALE

O DING \Box BUILI WR JUNE 27, 2021

EDWAR No. AR00032537 STATE OF



<u>PLUMBING – GENERAL NOTES AND SPECIFICATIONS:</u>

PLUMBING CONTRACTOR SHALL CONFIRM SIZES OR ESTABLISH SIZES OF WASTE, VENT AND SUPPLY AS REQUIRED TO MAKE A COMPLETE AND WORKING SYSTEM.

THE SCOPE OF THE PLUMBING WORK INCLUDES FURNISHING, INSTALLING TESTING AND WARRANTY OF ALL PLUMBING WORK SHOWN ON THE PLUMBING

THE PLUMBING CONTRACTOR ACKNOWLEDGES THAT HE IS AWARE THAT PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW ALL EQUIPMENT OR FITTINGS REQUIRED. LOCATIONS ARE DIAGRAMMATIC. PLUMBING CONTRACTOR SHALL ADJUST LOCATION OF PIPING AS REQUIRED. CONFIRM DETAILED LOCATIONS WITH OWNER IF CRITICAL.

THIS PROJECT SHALL BE COMPLETE, OPERATIONAL AND MEET CURRENT STATE AND LOCAL CODES AND ORDINANCES IN EVERY WAY. THE CURRENT CODE IS THE 2012 INDIANA PLUMBING CODE (2006 INTERNATIONAL PLUMBING CODE WITH 2012 INDIANA AMENDMENTS)

COORDINATE WORK WITH OTHER TRADES AND CONFIRM THAT CLEARANCES AND FITTING REQUIREMENTS ARE KEPT.

MATERIALS AND WORKMANSHIP:

ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND FIRST QUALITY. PROVIDE ALL NECESSARY CLIPS, HANGERS, FASTENERS, AND OTHER DEVICES REQUIRED FOR A COMPLETE JOB.

ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THEIR PARTICULAR TRADES. A LICENSED PLUMBING CONTRACTOR SHALL PERFORM

SANITARY SEWER SYSTEMS:

PROVIDE CLEANOUTS WHERE REQUIRED, WHETHER SHOWN ON DRAWINGS OR

PIPE IN GRADE BELOW FLOOR SLABS SHALL BE RIGID PVC SCHEDULE 40, TYPE 1, GRADE 1, COMPLYING WITH ASTM D2665 AND D-1784. PRESSURE TEST AND REPLACE DEFECTIVE MATERIALS AND CONNECTIONS.

WASTE AND VENTS:

SOIL, WASTE AND VENT LINES SHALL BE PVC SCHEDULE 40 ASTM D1785 WITH ASTM D2665 DWV SOCKET FITTINGS; OR, SERVICE WEIGHT CAST IRON, OR AS REQUIRED BY LOCAL CODES. SLOPE WASTE PIPING UNIFORMLY 1/8" PER FOOT MINIMUM. SLOPE VENT PIPING TO PREVENT CONDENSATION FROM SYSTEM. TEST SOIL, WASTE, AND VENT PIPING SHALL BE TESTED TO A MINIMUM 10 FEET OF HEAD MAINTAINED FOR A MINIMUM 15 MINUTES. REPLACE DEFECTIVE PIPE AND JOINTS AT NO ADDITIONAL COST TO OWNER.

FLOOR DRAINS SHALL BE EQUAL TO SMITH 2010-A.

FLOOR CLEANOUTS SHALL BE EQUAL TO SMITH 4021 OR 4021Y. WALL CLEANOUTS SHALL BE EQUAL TO SMITH 4710.

PROVIDE AND INSTALL ALL REQUIRED OR SHOWN BACK-FLOW PREVENTERS

DOMESTIC WATER SYSTEM:

WATER SUPPLY LINES SHALL BE OF TYPE "L" OR "K" COPPER AS REQUIRED BY LOCAL PLUMBING CODES. ALL WATER SUPPLY LINES SHALL BE RUN UNDER FLOOR SLAB AND UP PLUMBING WALLS. SIZE WATER SUPPLY AS REQUIRED FOR BUILDING USAGE.

BACKFLOW PREVENTERS SHALL BE INSTALLED IF REQUIRED BY STATE AND LOCAL ORDINANCES.

INSTALL WARM WATER LINES ON WARM SIDE OF CEILING INSULATION.

BACKFLOW PREVENTERS SHALL BE INSTALLED IF REQUIRED BY STATE AND LOCAL ORDINANCES.

INSTALL WARM WATER LINES ON WARM SIDE OF CEILING INSULATION. TEST TO 50 PSIG ABOVE OPERATING PRESSURE (125 PSIG MIN.) AND MAINTAIN PRESSURE FOR 15 MINUTES MINIMUM WITH NO PRESSURE LOSS. REPLACE DEFECTIVE MATERIALS AND CONNECTIONS. CLEAN, FLUSH AND DISINFECT ALL WATER PIPING IN ACCORDANCE WITH AWWA C601 INSTALL PID RATED SHOCK ABSORBERS IN COLD WATER LINES WHERE REQUIRED.

ALL WATER SUPPLY (BOTH HOT AND COLD) LINES ABOVE FLOOR SLAB SHALL BE INSULATED WITH 3/4" ARMA FLEX TYPE INSULATION.

INSTALL DIELECTRIC UNIONS WHERE DISSIMILAR METALS ARE CONNECTED.

PLUMBING FIXTURES:

FIXTURES SHALL BE COMPLETE WHEN FULLY INSTALLED, INCLUDING TRIM, VALVES, SUPPLIES AND ESCUTCHEONS.

TRIM SHALL BE BRASS CHROME PLATED: FIXTURES SHALL BE WHITE. UNLESS OTHERWISE NOTED. SEAL CRACKS AROUND EACH FIXTURE AT WALL AND FLOOR WITH

PERMANENTLY PLIABLE WHITE SILICONE SEALANT. STRICTLY FOLLOW ACCESSIBILITY STANDARDS NOTED BELOW.

DOMESTIC WATER HEATING:

PROVIDE GAS FIRED STORAGE WATER HEATER COMPLETE WITH POWER BURNER OR ELECTRIC WATER HEATER TO SIZE REQUIRED. TANK SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASME CODE, STAMPED AND TESTED. TANK SHALL BE INSULATED.

THE COMPLETE WATER HEATER SHALL BE LISTED BY UL, WITH LABEL ATTACHED.

VENTING FOR GAS WATER HEATERS: UL APPROVED TYPE B DOUBLE-WALL GAS VENT PIPING. VENT EXTENDED 3 FEET ABOVE THE ROOF, MINIMUM TWO FEET HIGHER THAN ANY PORTION OF BUILDING WITHIN 10 FEET.

ACCESSIBILITY STANDARDS:

STRICTLY COMPLY WITH THE REQUIREMENTS OF UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS), THE ADA, AND IBC, INDIANA CODE CHAPTER 11. PROVIDE RAISED SEAT FOR THE ACCESSIBLE WATER CLOSETS, PROVIDE FLUSH ON ACCESS SIDE OF WC'S, TRAP TIGHT TO THE WALL UNDER LAVATORIES, INSULATE ALL WASTE AND WATER PIPING BELOW LAVATORIES, AS WELL AS ALL OTHER ADA REQUIREMENTS.

THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IF REQUIRED DIMENSIONS, CLEARANCES, OR STRUCTURAL CONDITIONS EXIST THAT COULD PREVENT THE ABOVE ACCESSIBILITY REQUIREMENTS FROM BEING STRICTLY FOLLOWED.

ALL PIPES SHALL BE PRESSURE TESTED PER STANDARD PRACTICE. REPLACE ALL DEFECTIVE LINES AND CONNECTIONS AT NO ADDITIONAL COST TO OWNER.

MANUALS:

TWO COPIES OF OPERATION AND MAINTENANCE MANUALS FOR MATERIALS INSTALLED PER WORK OF THIS SECTION SHALL BE DELIVERED TO OWNER PRIOR TO ACCEPTANCE OF THESE SPACES FOR OCCUPANCY.

DOMESTIC WATER DISTRIBUTION GENERAL REQUIREMENTS:

PIPING SHALL BE SIZED TO PROVIDE A VELOCITY NOT EXCEEDING SIX FEET PER SECOND (FPS) FOR COLD AND HOT WATER SYSTEMS.

UNDERGROUND: 'K" COPPER: BRAISED JOINTS; SLEEVES THRU CONCRETE. INSULATED IN GRAVEL BACKFILL. ABOVE SLAB: 'L' COPPER TUBING; CPVC PIPING, SCHEDULE 40 WITH SOLVENT WELDED JOINTS; PEX TUBING WITH BRASS FITTINGS. VENTING AND DRAINAGE: SCHEDULE 40 PVC WITH SOLVENT WELDED JOINTS.

INSULATION:

INTERIOR COLD WATER PIPING SHALL BE INSULATED TO PREVENT CONDENSATION. INTERIOR HOT WATER PIPING SHALL BE INSULATED AS REQUIRED BY CODE AND PER LATEST ASHRE STANDARD A90.1, TABLE 7.2.3.

WALL HYDRANTS:

PROVIDE FREEZE-PROOF WALL HYDRANTS ON EXTERIOR WALLS A MAXIMUM OF 150 FEET APART. LOCATE APPROXIMATELY 18" ABOVE FINISH GRADE. COORDINATE LOCATIONS WITH THE BUILDING OWNER AND THE PROJECT ARCHITECT.

VALVES:

PROVIDE ACCESSIBLE CHECK VALVES IN THE INDIVIDUAL COLD AND HOT WATER FIXTURE SUPPLY LINES SERVING MIXING VALVE TYPE FAUCETS OR ASSEMBILES HAVING HOSE CONNECTION OUTLETS THAT ARE NOT EQUIPPED WITH INTEGRAL CHECK STOPS.

PROVIDE LINE SHUT-OFF VALVES AT LOCATIONS REQUIRED FOR PROPER OPERATION, SERVICING AND TROUBLESHOOTING OF THE DOMESTIC WATER DISTRIBUTION SYSTEM AND CONNECTED COMPONENTS. LOCATIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: AT EACH FIXTURE AND PIECE OF EQUIPMENT; AT EACH BRANCH TAKE-OFF FROM MAINS; AT THE BASE OF EACH RISER; AT EACH BATTERY OF FIXTURES; WHERE RECOMMENDED BY EQUIPMENT MANUFACTURERS AND AT STRATEGIC LOCATIONS TO ALLOW FOR SECTIONAL ISOLATION WHILE LIMITING DISRUPTION OF SERVICES.

ALL VALVES SHALL BE ACCESSIBLE FOR OPERATION AND SERVICING.

TRAP PRIMING DEVICES THAT RELY UPON LINE PRESSURE DIFFERENTIAL FOR ACTIVATION ARE NOT ALLOWED.

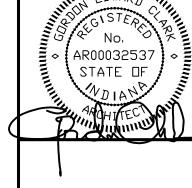
DOMESTIC HOT WATER SYSTEMS

WATER HEATERS INSTALLED AND UTILIZED FOR FOOD WERVICE AREAS SHALL COMPLY WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD NUMBER 5. HOT WATER SERVING COMMERCIAL DISHWASHERS AND POT SINKS SHALL BE 140 DEGREES F. ALL OTHER HOT WATER SHALL BE 110 DEGREES MAXIMUM AT OUTLETS.

CONTAMINATION PROTECTION:

INSTALLATION OF DOMESTIC WATER SYSTEMS SHALL AVOID ALL CROSS CONNECTIONS AND ELIMINATE THE POSSIBILITY OF WATER CONTAMINATION. ON EACH WATER SUPPLY SERVING A FIXTURE WHERE A DISCHARGE LINE PROVIDES AN OPPORTUNITY WHERE CROSS CONTAMINATION COULD OCCUR. PROVIDE A VACUUM BREAKER OR BACKFLOW PREVENTER.

AC DING BE/ BUILI 02 D/ JUNE 27, 2021



EDWAR

INDIANA DEPARTMENT OF HOMELAND SECURITY



NOTICE OF PROPOSED ORDER OF DENIAL

Variance ID: 21238

Applicant: Shirly Underwood **Submitter:** Melissa Tupper

The Indiana Department of Homeland Security ("Department") has reviewed your application for a variance and intends to deny your request for the following reason(s):

• Applicant has not sufficiently demonstrated that non-compliance with the rule will not be adverse to public health, safety, or welfare.

If you disagree with the reason(s) mentioned above and would like to provide additional information addressing the Department's reasons for denial, please submit your response in writing to variances@dhs.in.gov within five (5) business days of receiving this notice. Upon receipt of your response, the Department will review the information provided and issue an appropriate order. If you do not provide any additional information within the time period mentioned above, the Department will move forward with denial of your request.