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Sarasota, Florida 34236
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Tel: (941) 927-8525
jbonacci@karins.com

November 8, 2022

Eco Dwelling LLC
16400 NW 15th Avenue
Miami Gardens, FL 33179

Re: Plan No.: 21L0205-2021-E01R
Building Size: 40'-0"x8'-0"
Occupancy Classification: Residential
Karins Approval Date: 11-08-2022

To Whom It May Concern:

This is to confirm that Karins Engineering Group, Inc. (Karins) approved the above referenced plan under the Florida Manufactured Buildings Program administered by the Florida Department of Business & Professional Regulation (FAC Rule Chapter 61-41). Karins' review confirmed that the design complies with the 2020 Florida Residential Building Code (7th Edition), with the following limitations:

- I. The Manufactured Buildings Program approval pertains to the factory-built modular structure only (approval does not include foundation system).
- II. The foundation and anchoring system, utility connections, and items constructed and installed on-site are subject to review, approval, and inspection by the local Authority Having Jurisdiction (AHJ).
- III. See the site-installed items list on the approved plans for list of items that must be completed on-site.
- IV. Chapter 633 Fire Safety plan review and inspection are reserved for the local fire safety AHJ.
- V. This plan is valid for use only in those jurisdictions where the structural design loads are less than or equal to the design loads indicated on the approved plans.
- VI. This plan is approved for the High Velocity Hurricane Zone.

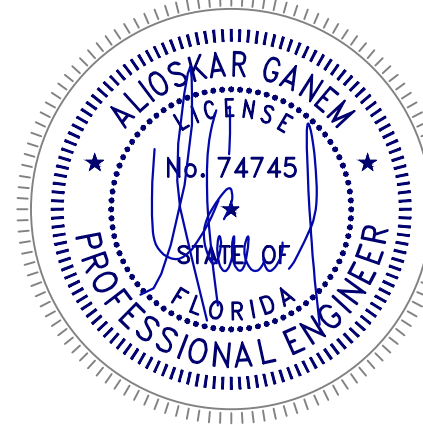
Karins' review included a review of products for compliance with 553.842(5) or FAC Chapter 61-G20-3. A set of signed and sealed plans will be retained on file at Karins, in accordance with the Manufactured Buildings Program requirements.

Sincerely,
Karins Engineering Group, Inc.

John F. Bonacci, PhD, PE
Vice President of Engineering

Alioskar Ganem Osorio
Digitally signed by Alioskar Ganem Osorio
Date: 2022.10.21 10:39:39 -04'00'

CONSULTING ENGINEER



ALIOSKAR GANEM P.E.
FL, LIC. No. 74745

PROJECT NAME:
ECODWELLING.LLC

(01)

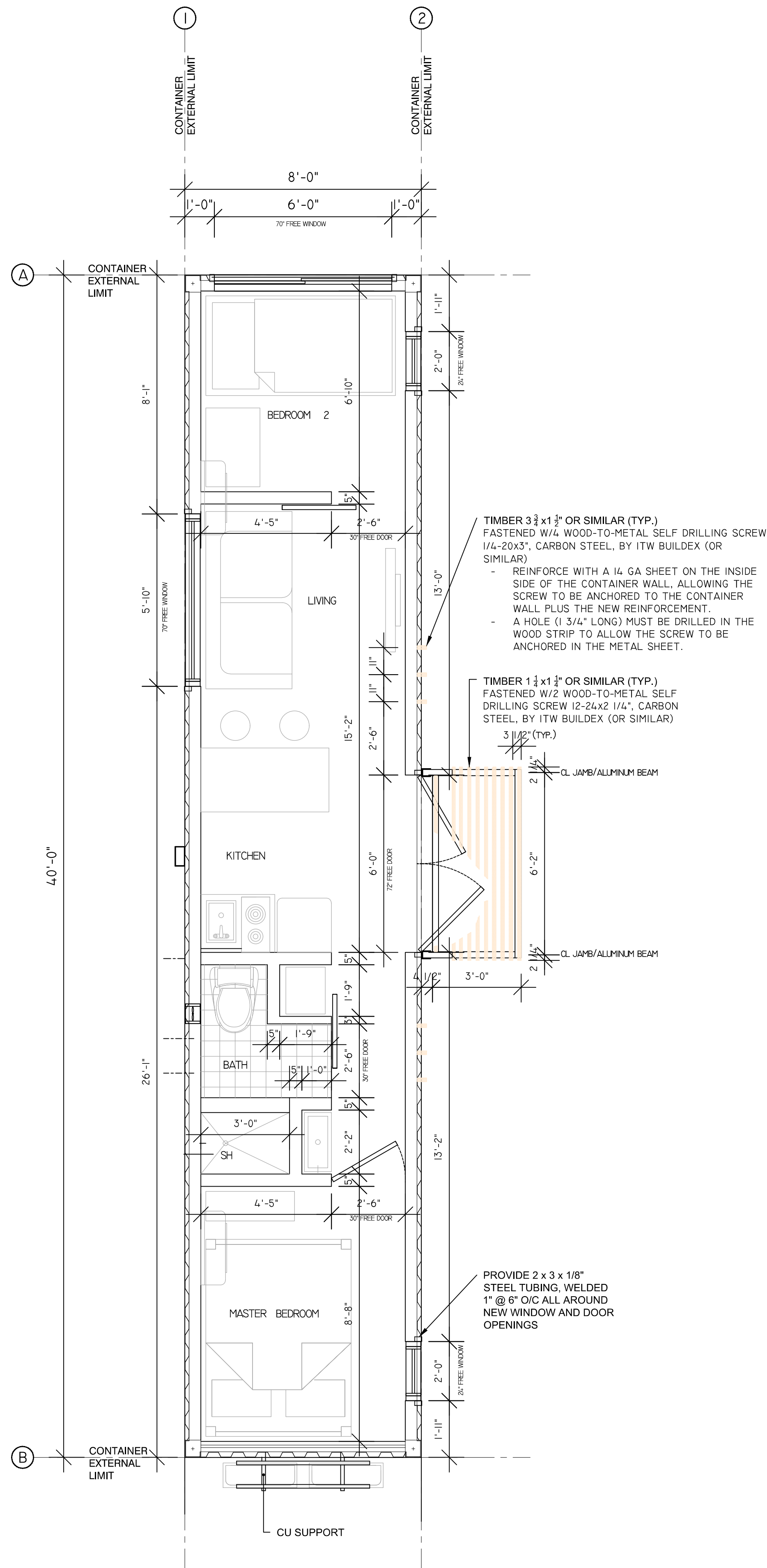
PROJECT ADDRESS:
16400 NORTH WEST 15TH
AVENUE, MIAMI, FL
33169

REVISIONS	DATE
02	07/13/2021
05	10/06/2022

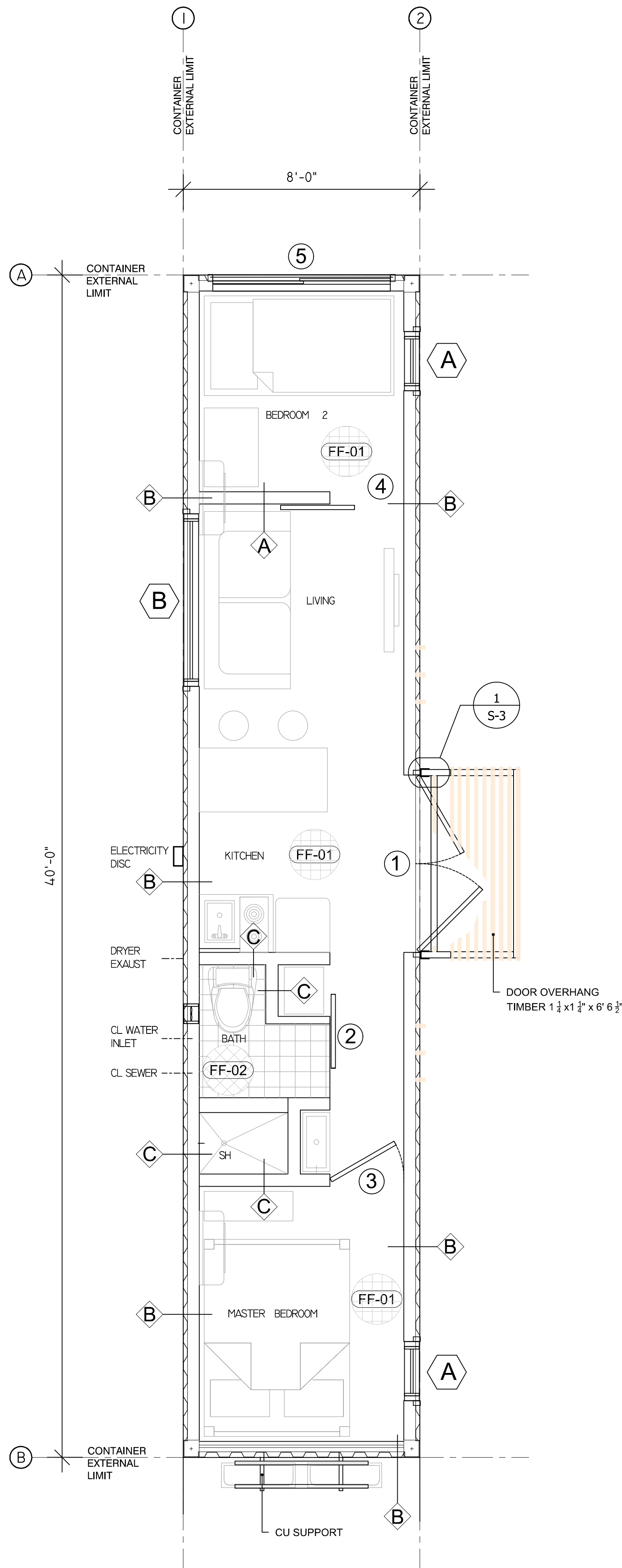
Project No: 2021-E01
Scale: AS NOTED
Date: 02-12-2021
Drawn: A.G.
Checked: A.G.
CAD File:

Drawing Title:

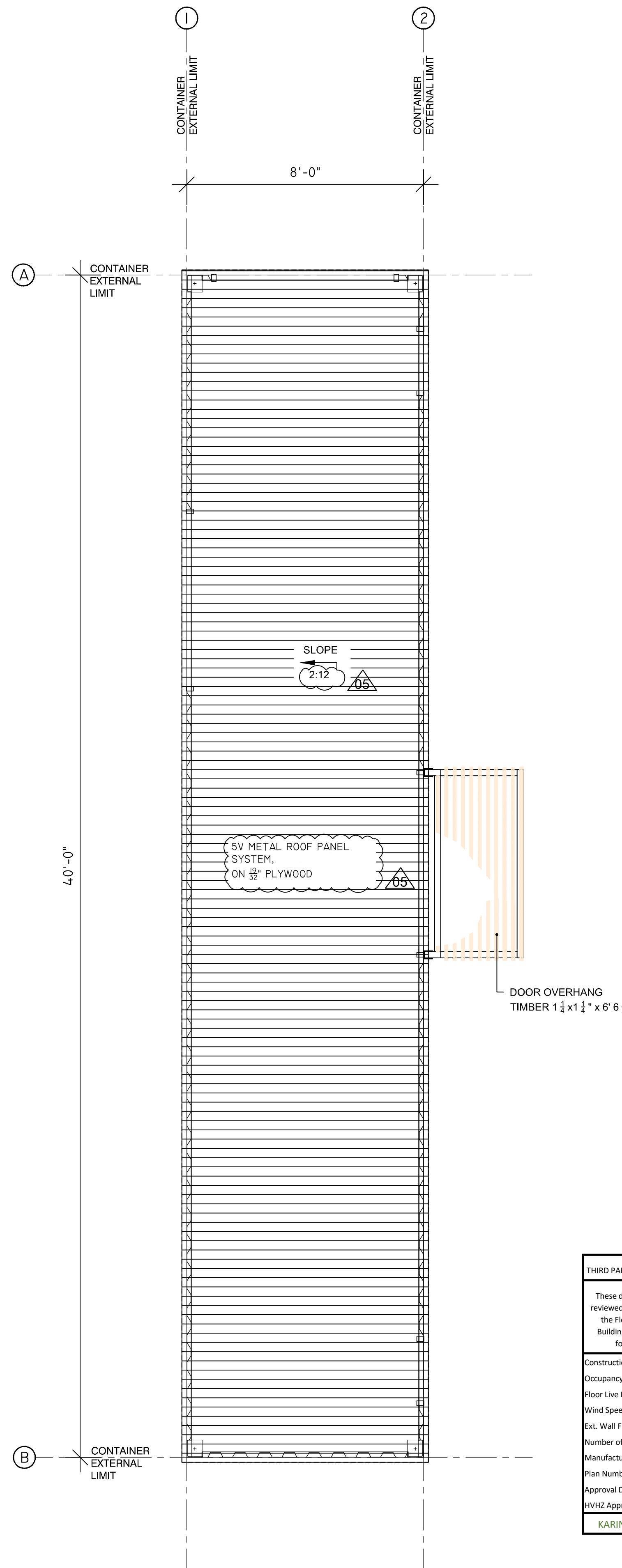
A-1



01 GROUND FLOOR PLAN
3/8" = 1'-0"



02 GROUND FLOOR PLAN - ARCHITECTURE DETAILS
3/8" = 1'-0"

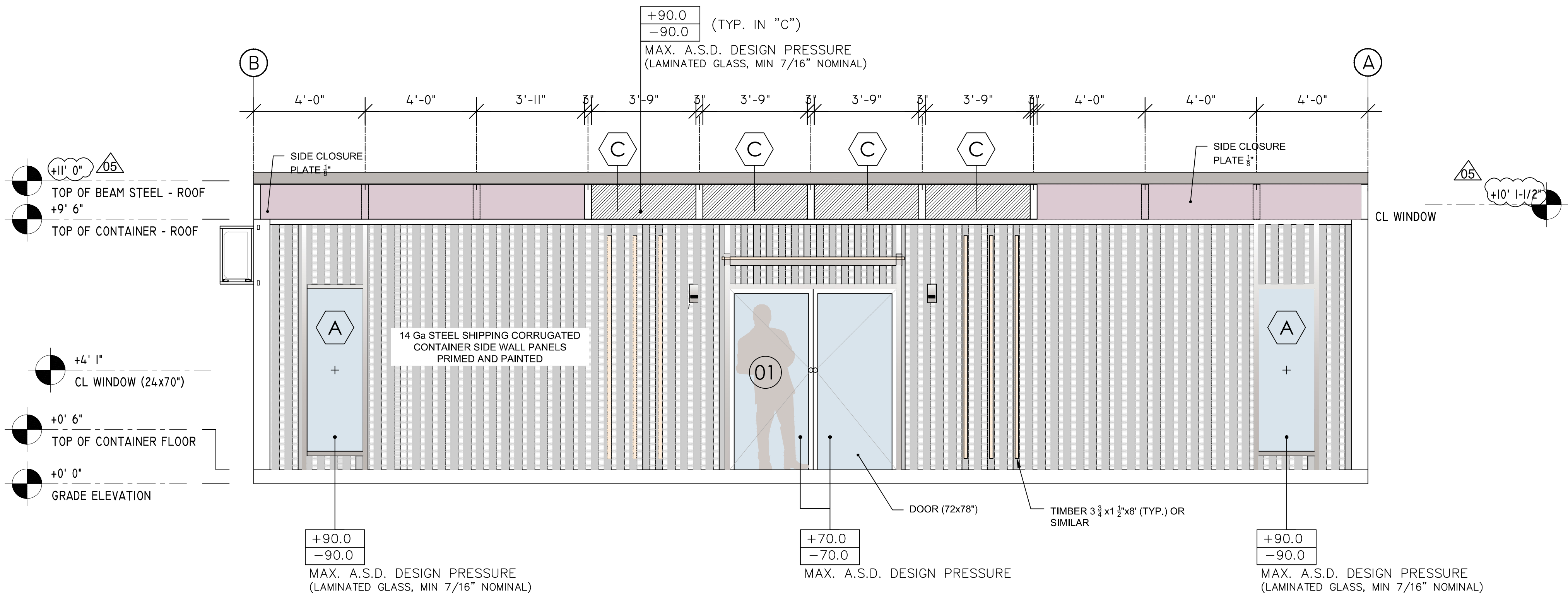


03 ROOF PLAN
3/8" = 1'-0"

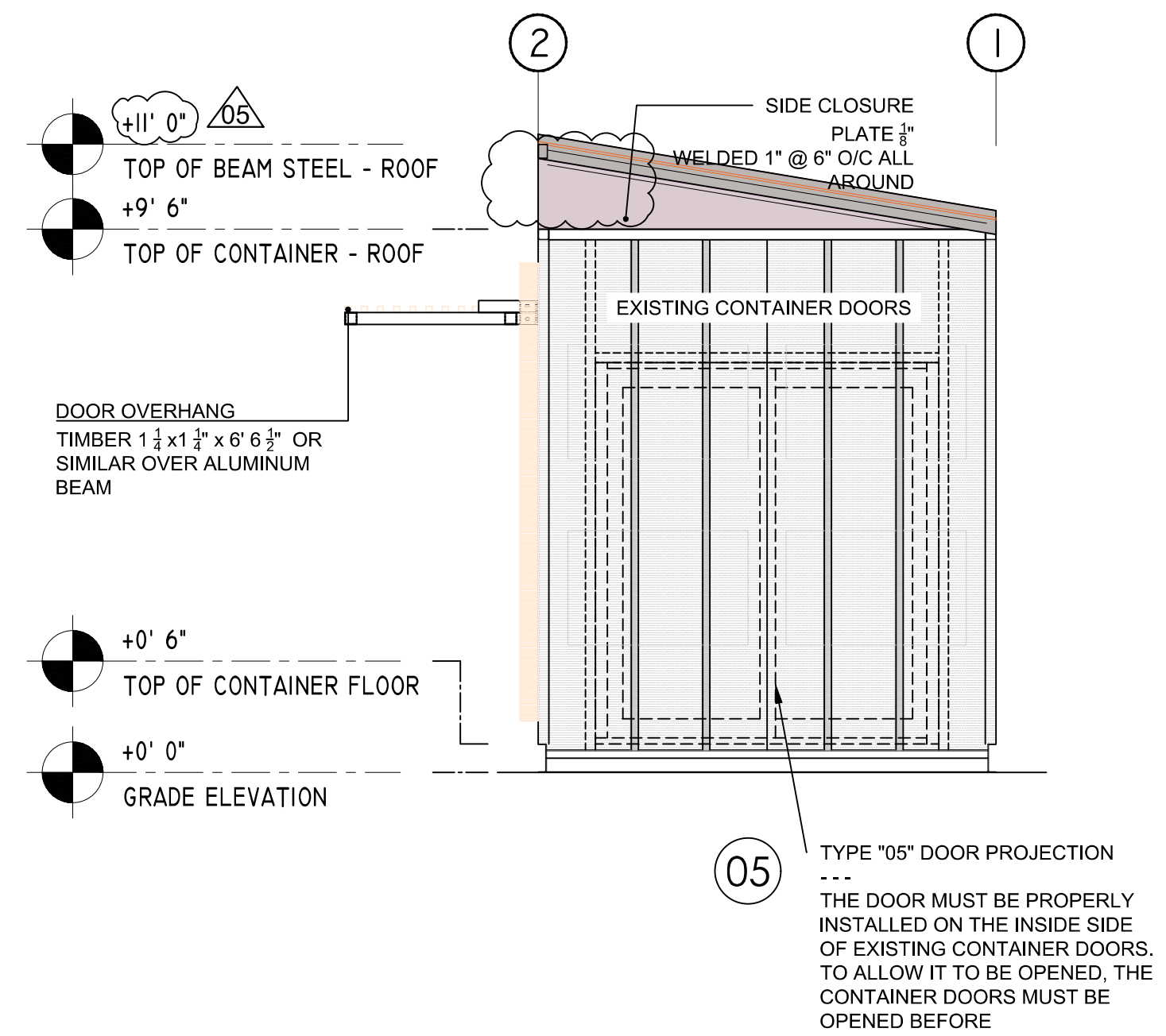
These documents have been reviewed for conformance with the requirements of FL Rule 61-41, F.A.C.
John F. Bonacci, P.E.
FL PE# 63063
KARINS ENGINEERING
1626 Ringling Blvd., Suite 400
Sarasota, FL 34236

APPROVED
FL Third Party Agency
Karins Engineering Group
11/8/2022

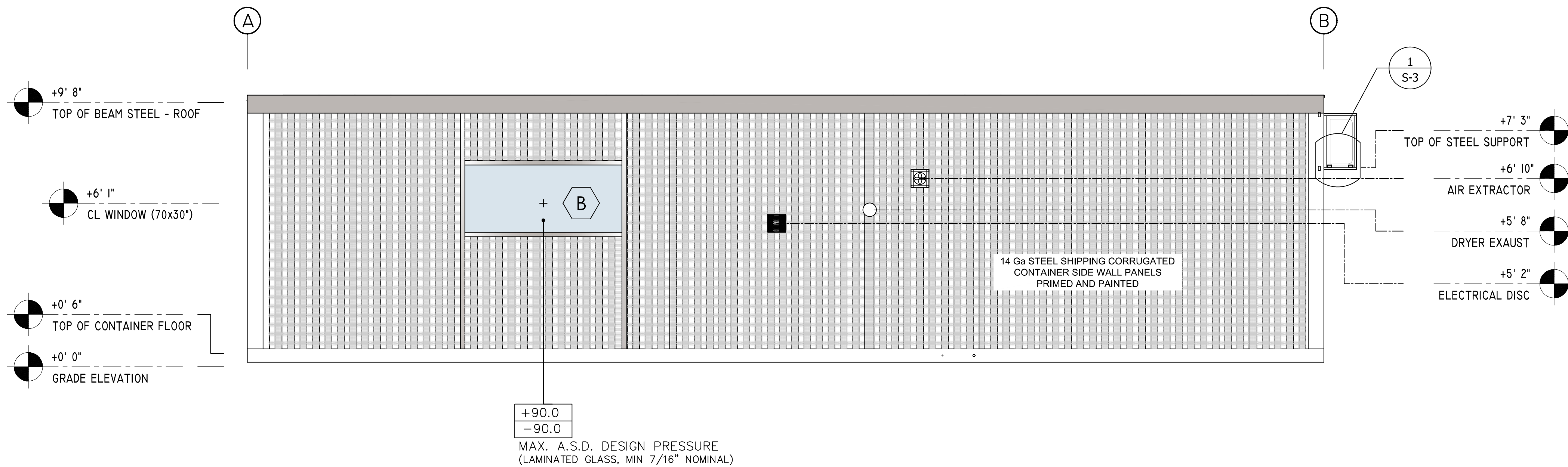
THIRD PARTY AGENCY APPROVAL
These documents have been reviewed for conformance with the Florida Manufactured Buildings Act, subject to the following criteria:
Construction Type: III-B
Occupancy: RESIDENTIAL
Floor Live Load (psf): 40
Wind Speed/Ulf. (mph): 180
Ext. Wall Fire Rating (hrs): 0
Number of Stories: 1
Manufacturer: ECODWELLING
Plan Number: ECO-2021-01R
Approval Date: 11/8/2022
HVHZ Approval: YES
KARINS ENGINEERING



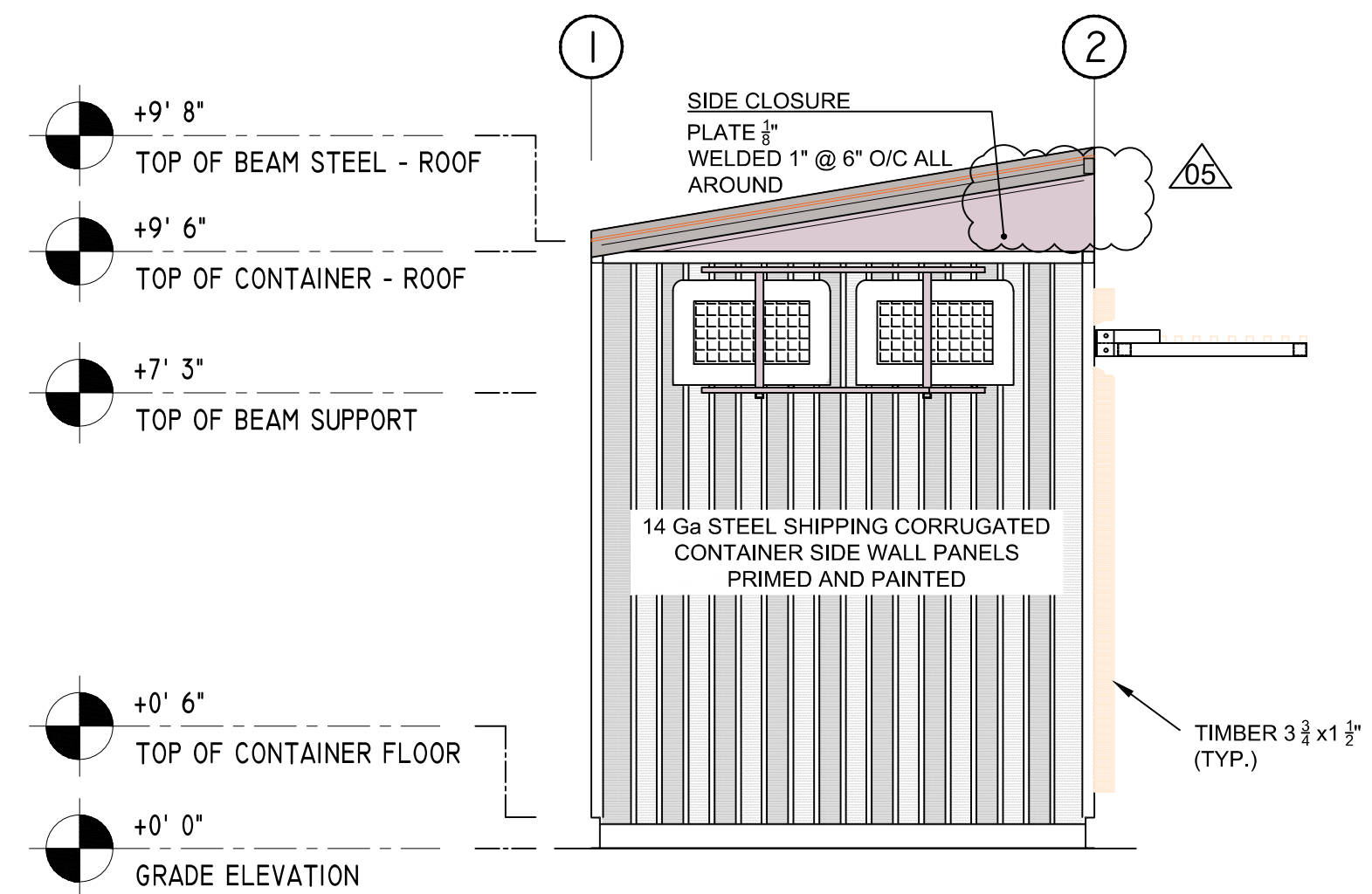
01 MAIN ELEVATION (AXIS 2)
3/8" = 1'-0"



03 LATERAL ELEVATION (AXIS A)
3/8" = 1'-0"



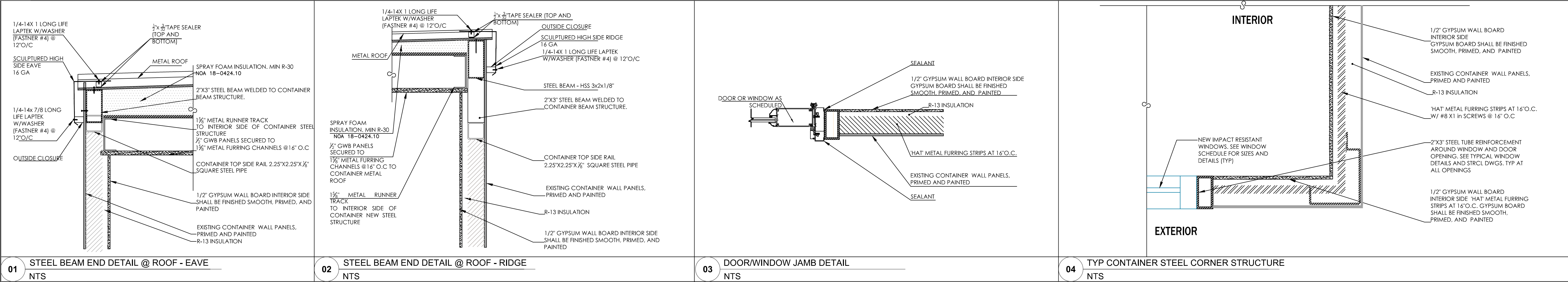
02 REAR ELEVATION (AXIS 1)
3/8" = 1'-0"



04 LATERAL ELEVATION (AXIS B)
3/8" = 1'-0"

REVISIONS	DATE
01	05/20/2021
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Project No:	2021-E01
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CAD File:	



FLOOR FINISH SCHEDULE				
LEGEND	LABEL	LOCATION	DESCRIPTION	NOTES
	FF-01	BEDROOMS, LIVING, KITCHEN	VINYL TILE	SEE GROUND FLOOR PLAN FOR LOCATIONS OF USE. 1.10" THICK 19 PLY PLYWOOD BOARD (EXISTING) + WHISPER MAT (110 MIL PEEL & STICK MEMBRANE) + VINYL TILE INSTALL IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS.
	FF-02	BATHS	CERAMIC TILE	SEE GROUND FLOOR PLAN FOR LOCATIONS OF USE. 1.10" THICK 19 PLY PLYWOOD BOARD (EXISTING) + WHISPER MAT (110 MIL PEEL & STICK MEMBRANE) + CERAMIC TILE INSTALL IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS.

DOOR SCHEDULE (ALL NEW EXTERIOR DOORS MUST BE IMPACT RATED) Clear glass anodize aluminum (or by the owner)									
No	LOCATION	TYPE	DESCRIPTION/REMARKS	SIZE		MATERIAL		NOTES	SHGC
1	ENTRY	SWING OUT	DOUBLE	6'-0"	7'-0"	METAL/ GLASS	METAL	FL # 29844	0.33
2	BATH	POCKET	SINGLE	2'-6"	6'-8"	WOOD	WOOD		
3	BEDROOM (MASTER)	SWING	SINGLE	2'-6"	6'-8"	WOOD	WOOD		
4	BEDROOM 2	POCKET	SINGLE	2'-6"	6'-8"	WOOD	WOOD		
5	BEDROOM(TO EXTERIOR)	SLIDING	DOUBLE	6'-0"	6'-8"	METAL/GLASS	METAL	NOA 18-1108.02	0.33
ALL OPERABLE DOORS SHALL BE PROVIDED WITH SCREENS/ FRAME /GLASS/ FULL VIEW MIAMI DADE COUNTY PRODUCT APPROVAL REQUIRED ON ALL WINDOWS AND DOORS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER ALL EXTERIOR DOORS SHALL BE IMPACT RESISTANT, AS PER FBC 2011 /NOA NOT OLDER THAN MAY 2012 TO BE PROVIDED BY MANUFACTURER									
WINDOW SCHEDULE Clear glass anodize aluminum windows (or by the owner)									
No	LOCATION	GLASS TYPE	DESCRIPTION /REMARKS	MAS. OPENING WIDTH HEIGHT		NOTES		U-FACTOR	SHGC
A	BEDROOMS	IMPACT RESISTANT	FIXED GLASS	24"	170"	NOA 20-0113.02		1.04	0.50
B	LIVING ROOM	IMPACT RESISTANT	FIXED GLASS	70"	30"	NOA 20-0113.02		1.04	0.50
C	LIVING - ROOF	IMPACT RESISTANT	FIXED GLASS	56"	15"	NOA 20-0113.02		1.04	0.50
ALL OPERABLE WINDOWS SHALL BE PROVIDED WITH SCREENS/ FRAME / GLASS/ FULL VIEW MIAMI DADE COUNTY PRODUCT APPROVAL REQUIRED ON ALL WINDOWS AND DOORS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER ALL WINDOWS SHALL BE IMPACT RESISTANT, AS PER FBC 2010 /NOA NOT OLDER THAN MAY 2012 TO BE PROVIDED BY MANUFACTURER									

WALL FINISH SCHEDULE				
LEGEND	LABEL	LOCATION	DESCRIPTION	NOTES
	WF-01	INTERIOR	1/2" GYPSUM	SEE DETAILS 1, 2 & 3 (DRAWING A-3: ARCHITECTURE DETAILS FOR LOCATIONS OF USE) 1/2" GYPSUM WALL BOARD INSTALL/APPLY IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS.
	WF-02	EXTERIOR	WALL PANEL - STEEL CORRUGATED	SEE DETAILS 1, 2 & 3 (DRAWING A-3: ARCHITECTURE DETAILS FOR LOCATIONS OF USE) EXISTING : 14 Ga STEEL SHIPPING CORRUGATED CONTAINER SIDE WALL PANELS, PRIMED AND PAINTED OR INSTALL/APPLY SIDING IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS.
	WF-03	INTERIOR	STEEL CORRUGATED + CERAMIC TILE	SEE DETAILS 1, 2 & 3 (DRAWING A-3: ARCHITECTURE DETAILS FOR LOCATIONS OF USE) 14 Ga STEEL SHIPPING CORRUGATED CONTAINER SIDE WALL PANELS + BOARD + TILE INSTALL/APPLY IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS AND WHAT IS INDICATED IN THE DRAWINGS

 WALL FINISH SCHEDULE NTS | | | | |

GCE
GANEM CONSULTING ENGINEERING
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NORTH MIAMI BEACH, FL. 33160
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fax: (305) 848-9318
alioskar@ganemce.com

KEY PLAN

CONSULTING ENGINEER

ALIOSKAR GANEM P.E.
FL. LIC. No. 74745

PROJECT NAME:
ECODWELLING.LLC

(01)

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FL Third Party Agency
Karins Engineering Group
11/8/2022

A-4

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Sheet No: 4 OF 4

STRUCTURAL NOTES

GENERAL NOTES:

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT ARCHITECTURAL DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS. AS A MINIMUM, CONSTRUCTION SHALL COMPLY WITH FLORIDA BUILDING CODE LAST EDITION, ACI 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 350, AISI MANUAL 2010, NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS SG02-01, AND AISC SPECIFICATIONS. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN. ALL ELEMENTS, DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD, ACCORDING TO THE CONDITIONS OF THE SITE, BEFORE ITS INSTALLATION. DO NOT SCALE THE DRAWINGS. FOLLOW WRITTEN DIMENSIONS ONLY. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PART OF THE WORK. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS WORK INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. THE CONTRACTOR SHALL SUPPLEMENT THE MINIMUM REQUIRED FOUNDATION AND SITE PREPARATION REQUIREMENTS AND SLAB-ON-GRADE THICKNESS TO HANDLE CONSTRUCTION LOADS.

CODES:

THE STRUCTURAL FRAMING WAS DESIGNED USING THE FOLLOWING CODES

- BUILDING CODE: FLORIDA BUILDING CODE 2020 7TH EDITION
- CONCRETE: ACI 318-14
- STEEL: AISC 360-10 (14th Ed.)
- MASONRY: ACI 350-11
- WOOD: NDS 2015
- WIND: ASCE 7-16

DESIGN LOADS:

THE STRUCTURAL FRAMING WAS DESIGNED USING THE FOLLOWING SUPERIMPOSED LOADS. DESIGN WIND

LOADS WERE DETERMINED IN ACCORDANCE WITH ASCE 7-10 AND FBC 2020 7TH EDITION.

ROOF: 1st LEVEL:
LIVE LOAD.....30 PSF LIVE LOAD.....30 PSF
DEAD LOAD.....25 PSF DEAD LOAD.....25 PSF

WIND:
DESIGN WIND SPEED = 180 MPH EXPOSURE D
RISK CATEGORY II INTERNAL PRESSURE COEFFICIENT = + 0.18/- 0.18

Kd = 0.85 (Building)

SHOP DRAWING REVIEW:

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED. SHOP DRAWINGS IN THE FORM OF REPRODUCIBLE SEPIAS OF STRUCTURAL DRAWINGS (CONTRACT DOCUMENTS) ARE PROHIBITED WITHOUT THE EXPRESS WRITTEN PERMISSION FROM THE ENGINEER. IN ALL INSTANCES, THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.

CONCRETE:

THE RESISTANCE (28 DAY COMPRESSIVE STRENGTHS) AND CHARACTERISTICS OF THE CONCRETE MUST BE DEFINED BY THE DELEGATED ENGINEER, ACCORDING TO THE TYPE OF ELEMENT TO BE DESIGNED, COMPLYING WITH THE PROVISIONS OF THE NATIONAL AND LOCAL ENGINEERING CODES. CONTRACTOR SHALL SUBMIT PROPOSED MIX DESIGNS, WITH HISTORICAL STRENGTH DATA FOR EACH SEPARATE MIX PRIOR TO CONCRETE PLACEMENT. CONCRETE SLUMP SHALL NOT EXCEED 4" +/- 1" PRIOR TO THE ADDITION OF PLASTICIZER. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ACI 201 AND ASTM C-94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME-STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM WHEN WATER IS ADDED TO THE MIX UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED 90 MINUTES. IF FOR ANY REASON THERE IS A DELAY SUCH THAT A BATCH IS HELD FOR LONGER THAN 90 MINUTES, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LABORATORY TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL CONCRETE SHALL BE CURED USING A CURING COMPOUND MEETING ASTM STANDARD C-309, TYPE 1. CURING COMPOUNDS SHALL HAVE A FUGITIVE DYE. THE CURING COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE VISIBLE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE UTILIZED IN THE WORK. OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER. REQUIRED CONCRETE COVERAGE OVER REBAR SHALL BE AS FOLLOWS:

- A. 3" FOR CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH
- B. FOR CONCRETE EXPOSED TO EARTH AND/OR WEATHER:
 - 1 1/2" FOR #5 AND SMALLER
 - 2" FOR #6 AND LARGER
- C. FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
 - 3/4" FOR SLABS, WALLS, AND JOISTS
 - 1-1/2" FOR BEAM AND COLUMN PRIMARY REINF., TIES, STIRRUPS

THE REINFORCEMENT FOR FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST THE GROUND SHALL HAVE NOT LESS THAN 3 INCHES OF CONCRETE BETWEEN THE REINFORCEMENT AND THE GROUND CONTACT SURFACE. IF CONCRETE SURFACES AFTER REMOVAL OF THE FORM ARE TO BE EXPOSED TO THE WEATHER OR BE IN CONTACT WITH THE GROUND, THE REINFORCEMENT SHALL BE PROTECTED WITH NOT LESS THAN 2 INCHES OF CONCRETE FOR BARS LARGER THAN #5 AND 1-1/2" FOR #5 OR SMALLER BARS. EXCAVATIONS FOR CONTINUOUS FOOTINGS SHALL BE CUT TRUE TO LINE AND GRADE AND THE SIDES OF FOOTINGS BE FORMED, EXCEPT WHERE SOIL CONDITIONS ARE SUCH THAT THE SIDES OF THE EXCAVATION STAND FIRM AND SQUARE. EXCAVATIONS SHALL BE MADE TO FIRM, CLEAN BEARING SOIL.

WHEN POLYETHYLENE SHEETS ARE USED AS A VAPOR BARRIER BENEATH A GROUND FLOOR SLAB, THE SUB GRADE FOR THAT SLAB SHALL BE CONSIDERED A FORMED SURFACE FOR THE PURPOSE OF REINFORCING STEEL COVERAGE.

STRUCTURAL CONCRETE SHALL CONFORM WITH ACI-301 IT SHALL REACH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS FOR SLABS FOR BEAMS AND COLUMNS. AGGREGATES SHALL BE CLEAN AND GRADED MAXIMUM SIZES 3/4" CONCRETE ASTM C-33 SHALL CONFORM TO ASTM C-94

CONCRETE TESTING IS REQUIRED AS FOLLOWS: 1 SET OF 5 CYLINDERS FOR EVERY 50 CU. YDS. OF CONCRETE AS PER ASTM C-94

MAXIMUM PERMISSIBLE SLUMP IS 5-6" IN STRUCTURAL CONCRETE WITH THE EXCEPTION BEING SAND CEMENT GROUT

REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60. REINFORCING STEEL SHALL BE DETAILED AND FABRICATED ACCORDING TO THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". HOOK ALL DISCONTINUOUS TOP REINFORCING, PROVIDE CORNERS WITH 2# 5 X 5'-0" BEND. CLEAR COVER FOR REINFORCING BARS SHALL BE:

G. BEAMS.....3" UNFORMED FACES3"
SLABS3/4" FORMED FACES IN
BEAMS/COLUMNS1-1/2" CONTACT WEARTH 2"

REINFORCING STEEL:

REBAR SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE, AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF THE ACI STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. HORIZONTAL AND VERTICAL BARS SHALL LAP 6 X BAR NO., UNLESS OTHERWISE NOTED. UNSCHEDULED FIELD LAPS ARE SUBJECT TO ENGINEER'S REVIEW. PROVIDE 3' X 3' CORNER BARS LAPPED AND TIED TO EACH BEAM REBAR, TYPICAL AT ALL CORNERS. THESE CORNER BARS SHALL BE THE SAME SIZE AS LONGITUDINAL BEAM BARS. SEE DETAILS FOR ADDITIONAL INFORMATION.

WELDED WIRE MESH:

WELDED WIRE MESH SHALL BE ASTM A-185, GRADE 65, FREE FROM OIL, SCALE, AND RUST, AND SHALL BE PLACED IN ACCORDANCE WITH THE ACI TYPICAL DETAILS. MINIMUM LAP SHALL BE ONE SPACE PLUS TWO INCHES.

STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL COMPLY WITH THE PROVISIONS OF THE NATIONAL AND LOCAL ENGINEERING CODES, AND SHALL BE ACCORDING TO:

PLATE ASTM A-36
HOLE STRUCTURAL SECTION (HSS) ASTM A-500
SHIPPING CONTAINER ELEMENTS:
CROSS MEMBER, SIDE WALL, ROOF, TOP-SIDE RAIL ASTM A-242
WEATHERING CORTEN-A

FORMWORK:

FORMWORK, SHORING, AND BRACING FOR ALL CONCRETE BEAMS, SLABS, COLUMNS, WALLS, AND FOOTINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ACI 347, "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK".

WOOD:

- ALL WOOD FOR BEAMS, BEARING WALLS, SOLE PLATES, TOP PLATES, BLOCKING, BRACING, LEDGERS, CRIPPLES, SILLS, ETC., SHALL BE SOUTHERN PINE NO. 2, KD-15, OR BETTER.
- MICRO-LAM BEAMS SHALL BE MANUFACTURED BY TRUS-JOIST CORP., OR APPROVED EQUAL, AND SHALL PROVIDE A MODULES OF ELASTICITY OF 2,000,000 PSI, A MIN. FLEXURAL STRESS OF 2,925 PSI, AND A MIN. HORIZONTAL SHEAR STRESS OF 285 PSI.
- ALL WOOD IN CONTACT WITH CONCRETE OR CONCRETE BLOCK SHALL BE PRESSURE-TREATED. WOOD FOR NON-STRUCTURAL USES SHALL BE RATED TO RETENTION LEVELS OF 0.25 PCF OF CHROMATED COPPER ARSENATE (CCA). WOOD FOR STRUCTURAL USE THAT SHALL BE TREATED FOR ANY REASON SHALL BE RATED TO RETENTION LEVELS OF 0.4 PCF OF CCA OR MORE.
- FOR STRUCTURAL USES, AVOID BUYING TREATED LUMBER THAT CONTAINS MORE THAN 1/2" OF HEARTWOOD.
- AVOID INHALATION OF SAWDUST PRODUCED BY PRESSURE TREATED WOOD. WEAR A DUST MASK AND WORK OUTDOORS. DISPOSE OF DUST AND SCRAP BY ORDINARY TRASH COLLECTION. DO NOT BURN IT: PRESSURE TREATED WOOD MAY PRODUCE VERY TOXIC FUMES.
- IN HIGHLY CORROSIVE ENVIRONMENTS, ALL WIND RESISTING HARDWARE INCLUDING THE HURRICANE STRAPS, SHALL BE MADE OF STAINLESS STEEL, EITHER IN CONTACT OR NOT WITH CONCRETE.
- WOOD PREVIOUSLY USED AS FORMWORK SHALL NOT BE USED AS ROOF FRAMING OR SHEATHING.
- HURRICANE STRAPS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- HANGERS OR STRAPS THAT DO NOT MATCH EXACTLY THE ONES SPECIFIED ON THE DRAWINGS IN STEEL YIELD OR ULTIMATE STRENGTH, STEEL DIMENSIONS (LENGTH AND WIDTH), NUMBER AND DIAMETER OF HOLES FOR THE SAME SIZES OF NAILS OR BOLTS, AND/OR DO NOT HAVE THE SAME GENERAL SHAPE, WILL NOT BE ACCEPTABLE.
- ALL NAILS, SCREWS, AND BOLTS SHALL BE HOT-DIPPED GALVANIZED.

TERMITE PROTECTION:

ALL BUILDINGS SHALL HAVE PRE-CONSTRUCTION TREATMENT PROTECTION AGAINST SUBTERRANEAN TERMITES. THE RULES AND LAWS AS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES SHALL BE DEEMED AS APPROVED WITH RESPECT TO PRE-CONSTRUCTION SOIL TREATMENT FOR PROTECTION AGAINST SUBTERRANEAN TERMITES. A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT:

"THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."

FOUNDATION/SITE PREPARATION:

PRIOR INSTALLATION OF ANY FOOTING FOUNDATION SYSTEM FOR THE NEW BUILDING, STRUCTURES OR ADDITIONS, THE BUILDING OFFICIAL SHALL BE PROVIDED WITH A STATEMENT OF ALLOWABLE BEARING CAPACITY FROM THE ENGINEER OF RECORD. SAID STATEMENT SHALL CLEARLY IDENTIFY THE ALLOWABLE IN-PLACE BEARING CAPACITY OF THE BUILDING PAD FOR THE NEW BUILDING OR ADDITION AND VERIFY THE EXISTING SOIL CONDITIONS. THE CERTIFIED IN-PLACE BEARING CAPACITY SHALL HAVE BEEN DETERMINED BY WAY OF RECOGNIZED TEST OR RATIONAL ANALYSIS.

THE MAXIMUM SIZE OF ROCK WITHIN 12 INCHES BELOW THE FLOOR SLAB IN COMPACTED FILL SHALL BE 3 INCHES IN DIAMETER. WHERE FILL MATERIAL INCLUDES ROCK, LARGE ROCKS SHALL NOT BE ALLOWABLE TO NEST AND ALL VOIDS SHALL BE CAREFULLY FILLED WITH SMALL STONES OR SAND, AND PROPERLY COMPACTED. WHEN FOUNDATION WALL ARE TO BE POURED SEPARATELY FROM THE FOOTING, THEY SHALL BE KEYED AND DOWELED TO THE FOOTING WITH NO LESS THAN #4 DOWELS, 20 DIAMETERS IN LENGTH ABOVE AND BELOW THE JOINT, SPACED NOT MORE THAN 4 FEET APART. WHERE FOOTING DEPTH DOES NOT ALLOW STRAIGHT DOWELS, STANDARD HOOKS WILL BE ALLOWABLE. SLAB SUBGRADE SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY, DETERMINED IN ACCORDANCE WITH ASTM D-1557.

FOR FOUNDATION DESIGN, IF REQUIRED BY THE CITY, A GEOTECHNICAL REPORT MUST BE SUBMITTED. OTHERWISE, THE ENGINEER OF RECORD MUST SUBMIT A SOIL DECLARATION.

THE SPECIALTY ENGINEER MUST FOLLOW LOCAL CODES RECOMMENDATIONS.

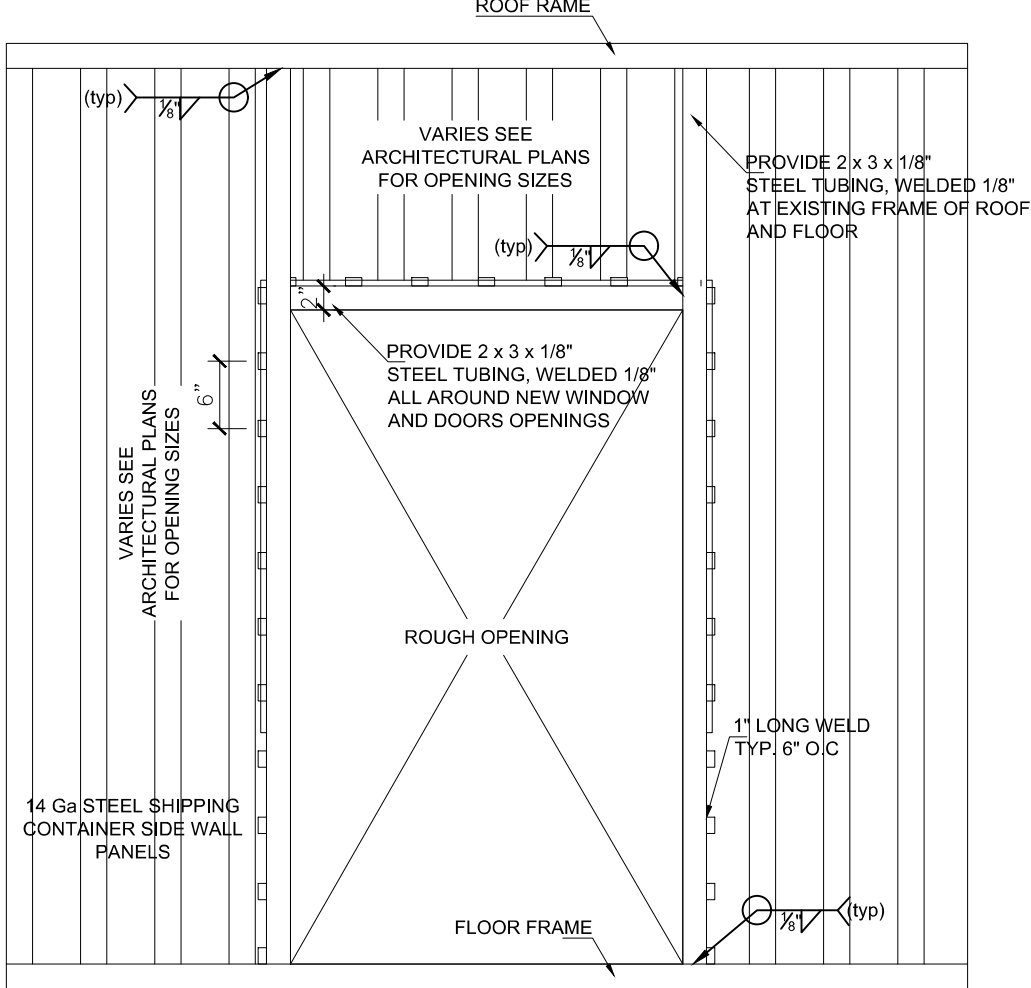
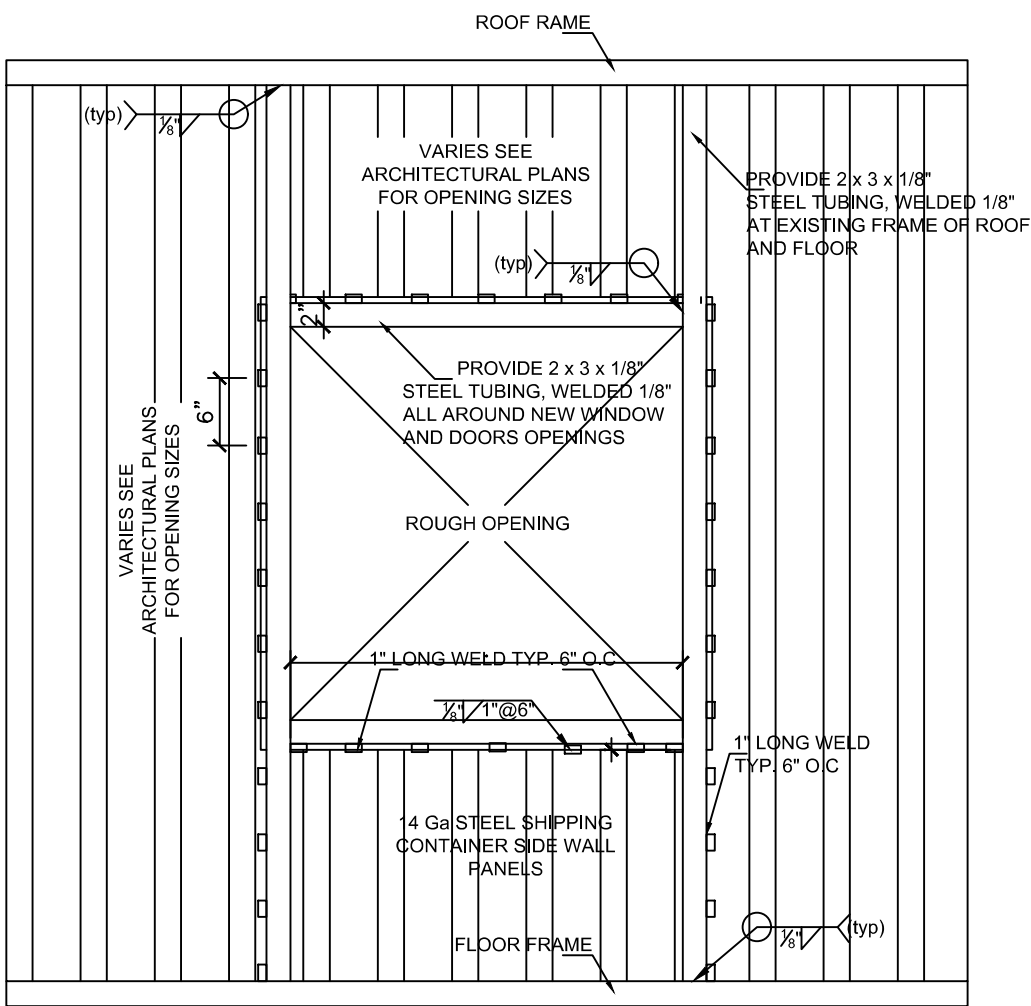
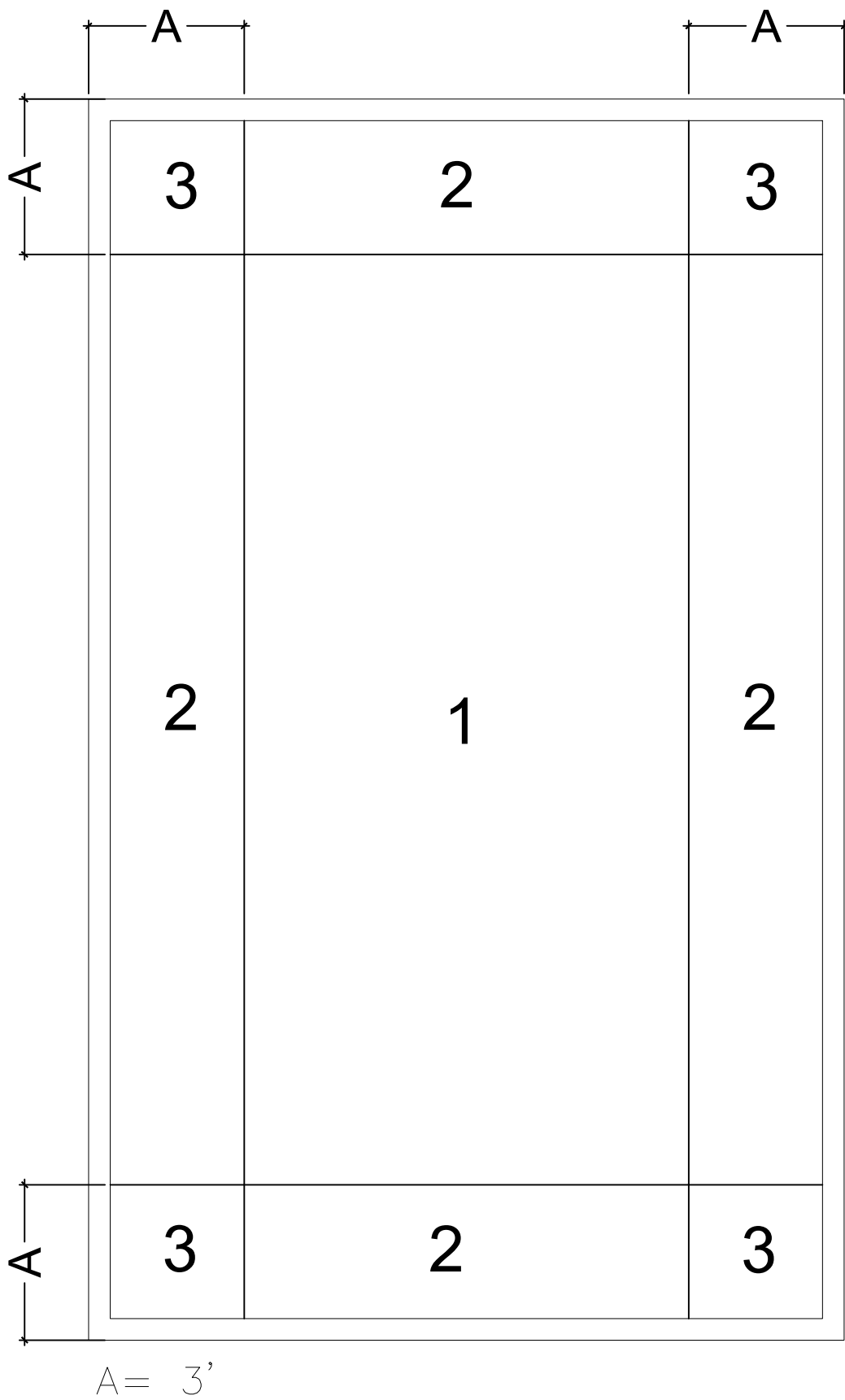
ALL DIMENSIONS REFERENCE TO ARCHITECTURAL DRAWING PRODUCT CONTROL APPROVAL AND SHOP DRAWING NOTES

NOTE:

UNDERGROUND UTILITIES MAY BE PRESENT.- DIG WITH CAUTION.- CALL UTILITY LOCATION CENTER BEFORE YOU DIG.

CONTAINER NOTES

NO MODIFICATIONS OTHER THAN PENETRATIONS NEEDED FOR PLUMBING VENTS AND PIPING SHALL BE MADE TO THE EXISTING STRUCTURE OF THE SHIPPING CONTAINER ROOF OR FLOOR CONTRACTOR TO COORDINATE LOCATION OF THE PLUMBING FIXTURES TO AVOID CONFLICT WITH EXISTING FLOOR CROSS MEMBERS AND BOTTOM SIDE RAILS



TYPICAL OPENING FRAMING DETAIL

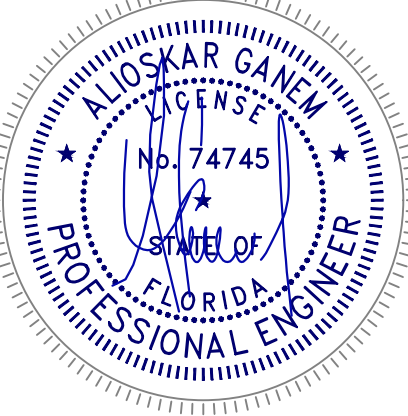
SCALE: N.T.S.

WIND PRESSURE FOR GENERAL CALCULATIONS			
AREA (ft ²)	ZONE	PRES. (+)	PRES. (-)
10	1	31.16	-95.06
10	2	31.16	-95.06
10	3	31.16	-138.66
10	4	51.46	-55.78
10	5	51.46	-68.84
20	1	26.26	-78.50
20	2	26.26	-78.50
20	3	26.26	-108.83
20	4	47.79	-52.11
20	5	47.79	-61.51

PRESSURE BASED ON ASCE 7-16 ASD CODE

KEY PLAN

CONSULTING ENGINEER



ALIOSKAR GANEM P.E.
FL. LIC. No. 74745

PROJECT NAME:
ECODWELLING.LLC

(01)

PROJECT ADDRESS:

16400 NORTH WEST 15TH
AVENUE, MIAMI, FL
33169

REVISIONS DATE

01	05/20/2021
03	11/02/2021
04	01/06/2022
05	10/06/2022
06	10/14/2022

Project No:

Scale: 2021-E01

Date: AS NOTED

Drawn: 02-12-2021

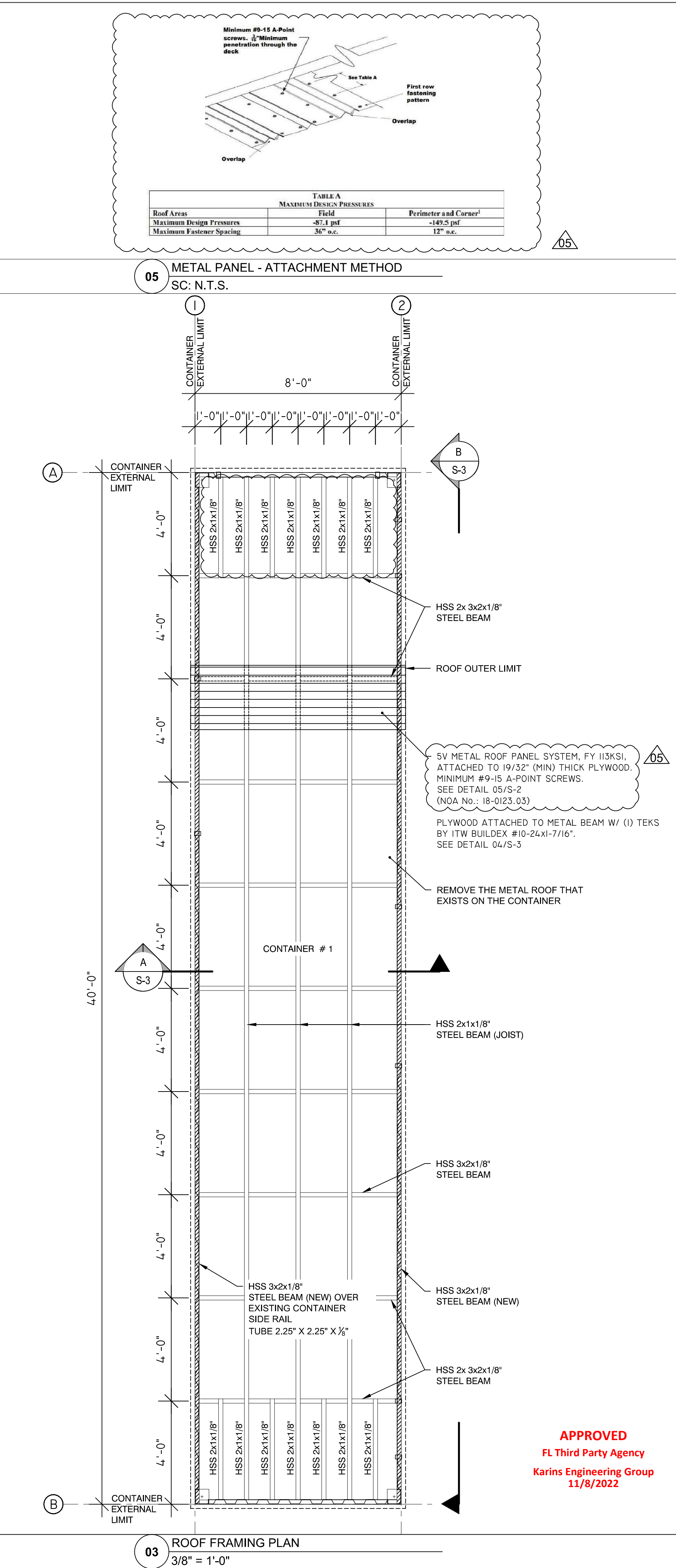
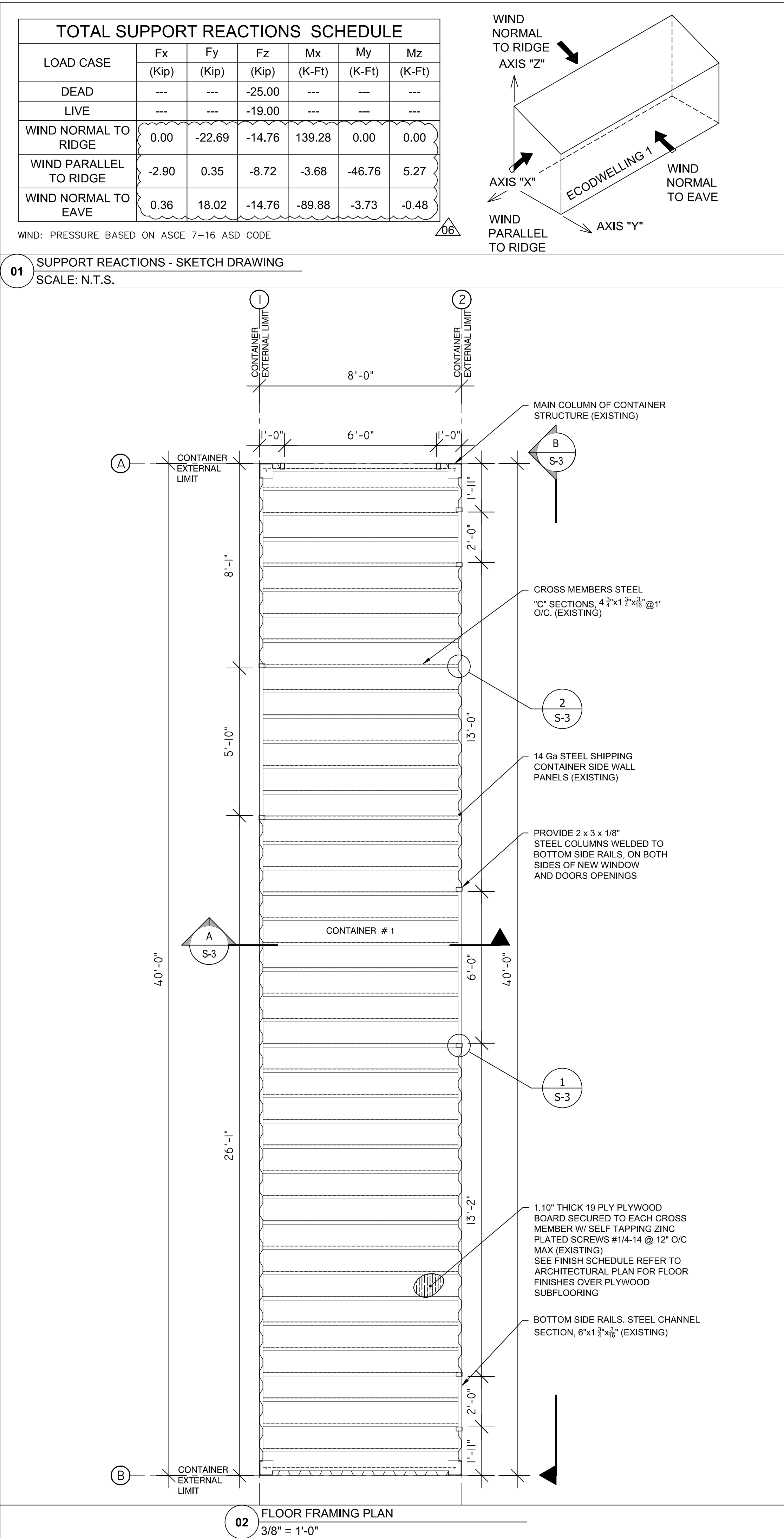
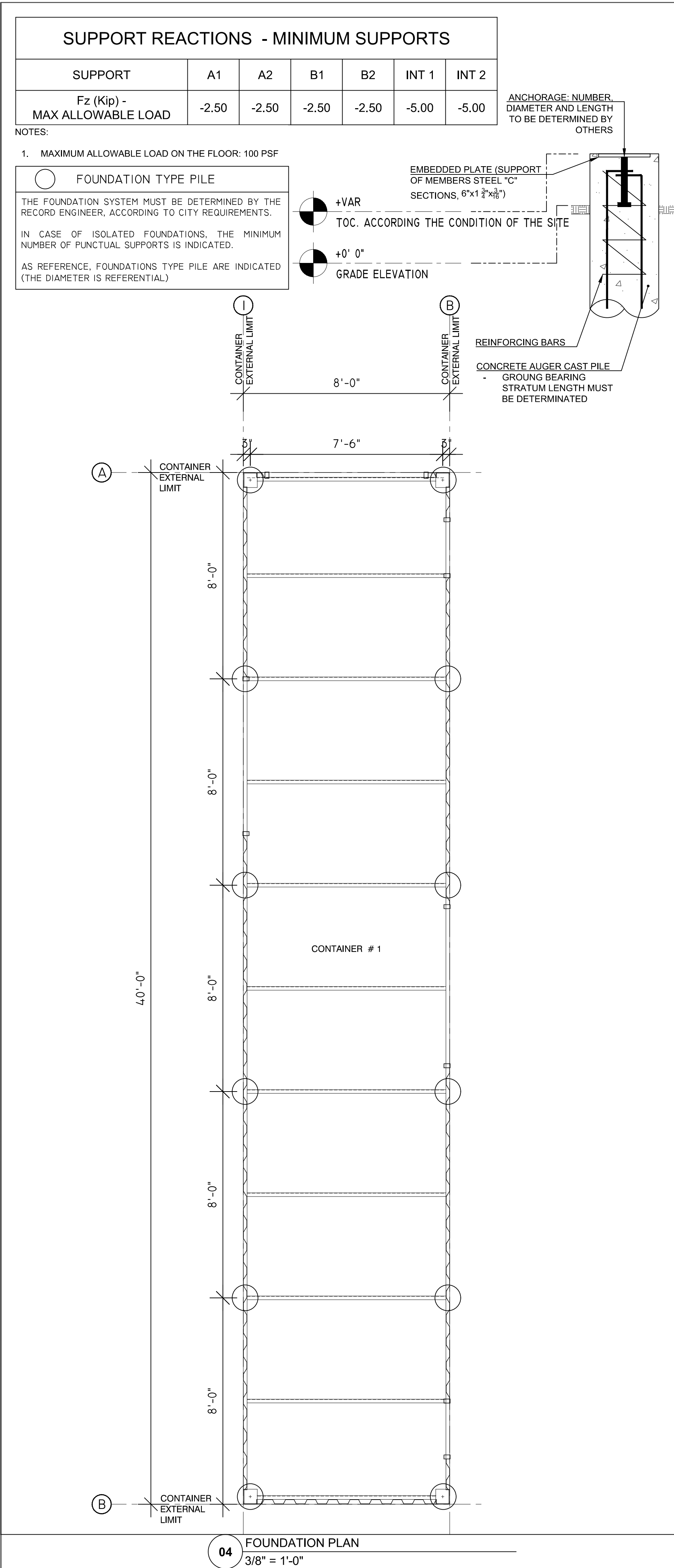
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Drawing Title:

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Sheet No: 1 OF 3



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ALIOSKAR GANEM

FLORIDA

PROFESSIONAL ENGINEER

No. 74745

ALIOSKAR GANEM P.E.
FL LIC. No. 74745

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16400 NORTH WEST 15TH
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REVISIONS

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01

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06

10/14/2022

Project No:

2021-E01

Date:

AS NOTED

Drawn:

02-12-2021

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Drawing Title:

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APPROVED

FL Third Party Agency

Karins Engineering Group

11/8/2022

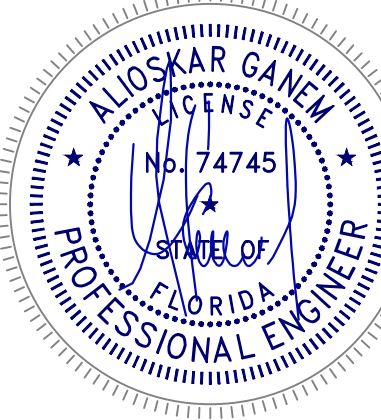
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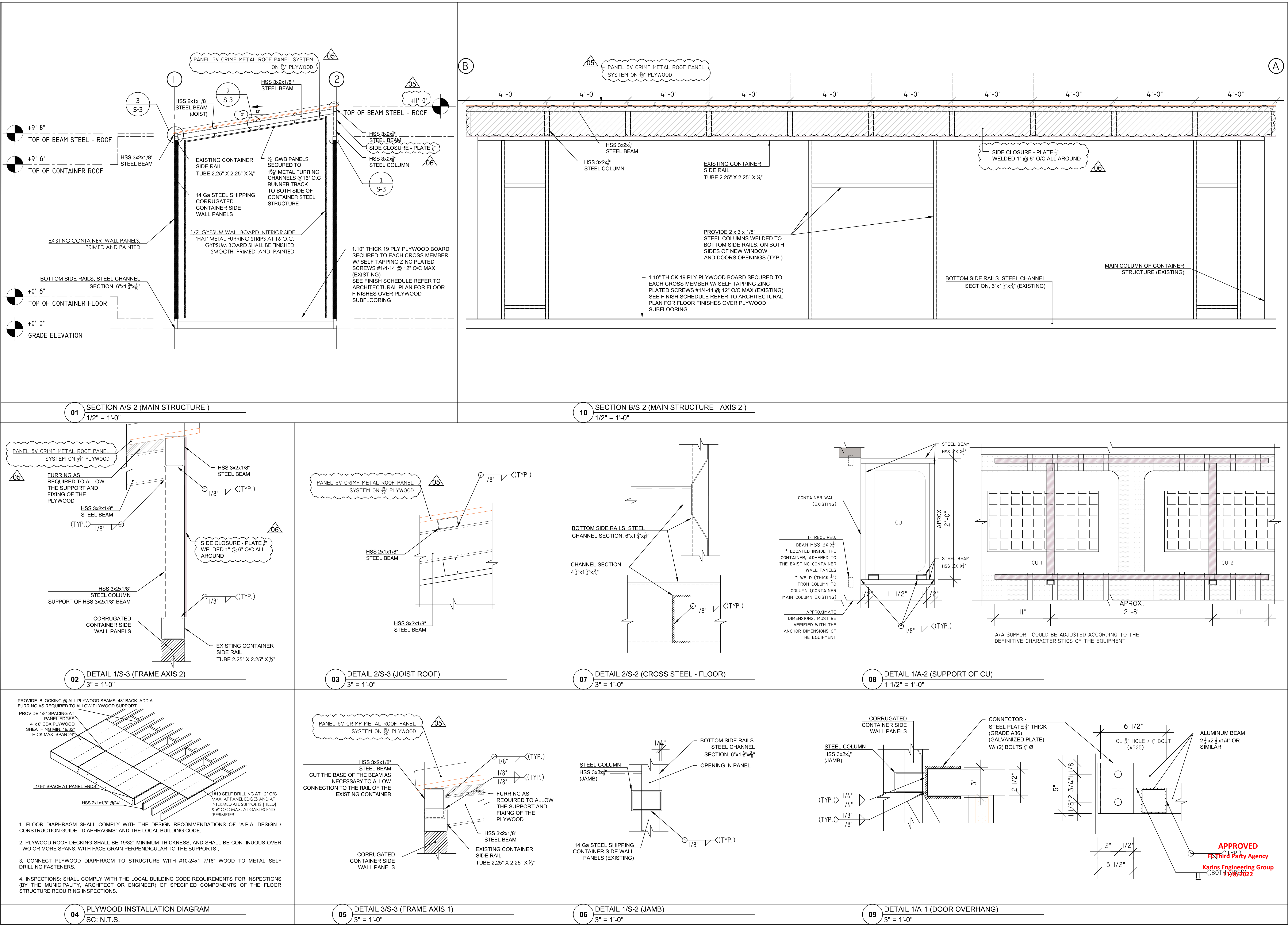
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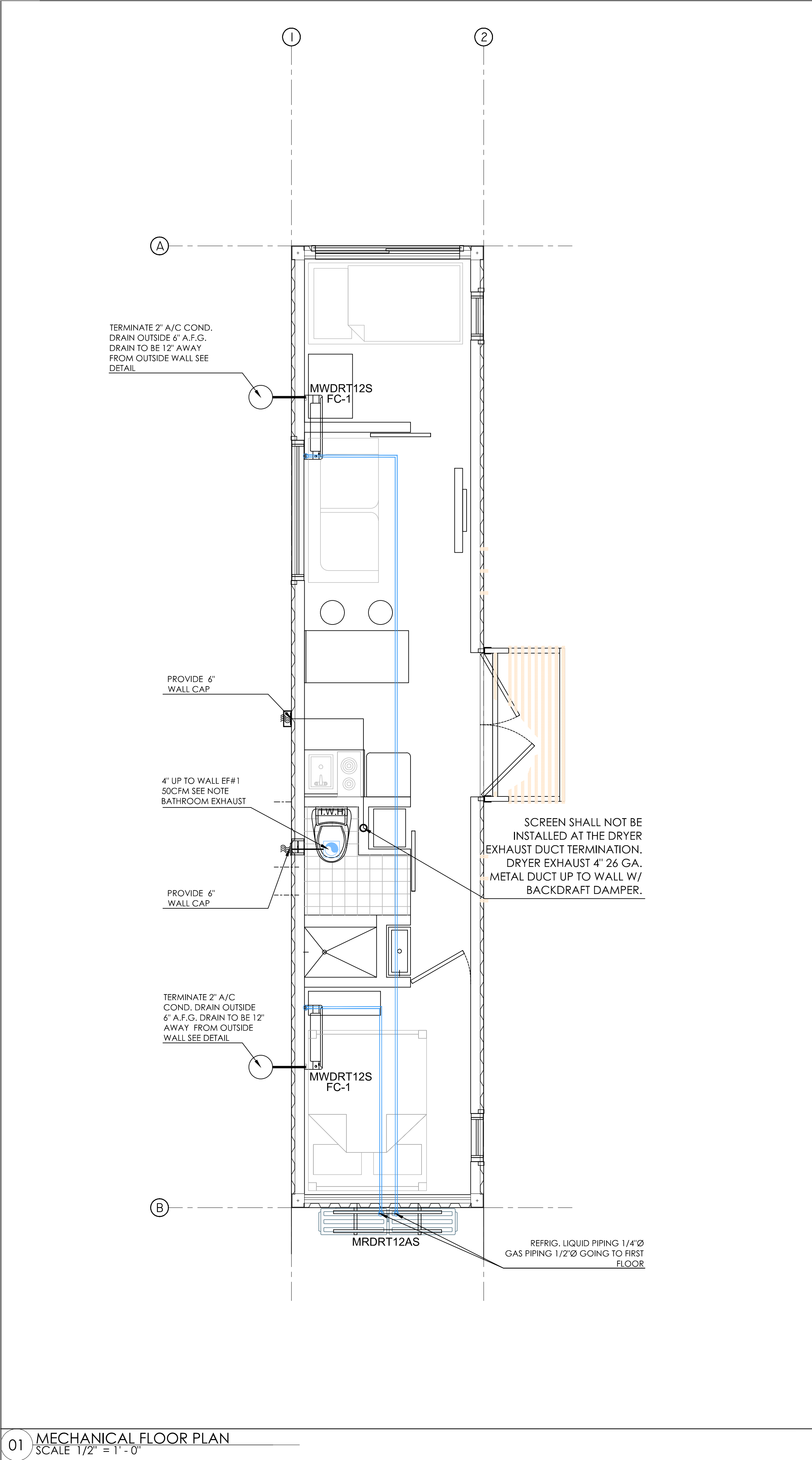
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01	05/20/2021
02	07/13/2021
03	10/06/2022
04	10/14/2022





A/C NOTE:

- A/C MUST HAVE PROGRAMMABLE THERMOSTAT
- DUCTWORK INSULATION R-6
- WALL INSULATION R-7.8
- CEILING INSULATION R-30
- U-FACTOR: 1.080
- SHGC: 0.410

A/C STATIC PRESSURE

1.25" S.P. WATER GAUGE
AUXILIARY DRAIN PAN

AUXILIARY DRAIN PAN SHALL HAVE A MINIMUM DEPTH OF 1-1/2" AND SHALL NOT BE LESS THAN 3" LARGER THAN UNIT OR COIL DIMENSIONS IN WIDTH AND LENGTH AND SHALL BE CONSTRUCTED OF NOT LESS THAN 24 GAUGE GALVANIZED SHEET METAL

EXHAUST NOTE FOR BATHROOMS

PROVIDE A BACKDRAFT DAMPER, WITH A CORROSION RESISTANT SCREEN MATERIAL HAVING A MESH NOT LARGER THAN 1/2", AND BE FITTED WITH A WEATHER CAP. BATHROOM EXHAUST DUCTS SHALL BE SHEET METAL.












O.A. NOTE:

PROVIDE SHUTOFF DAMPER CONTROL

SEQUENCE OF OPERATION:

OUTSIDE AIR DAMPER TO BE CLOSED WHEN A/C UNIT IS OFF

02 NOTES
NTS

LEGEND:	
	CEILING SUPPLY A.C.
	CEILING SUPPLY A.C.
	WALL SUPPLY A.C.
	RETURN A.C.
	EXHAUST FAN
	THERMOSTAT
	PROVIDE 1" U.C. DOOR
	PROVIDE LOUVER DOORS
	WALL RETURN
	EXISTING
	DISTRIBUTION BOX

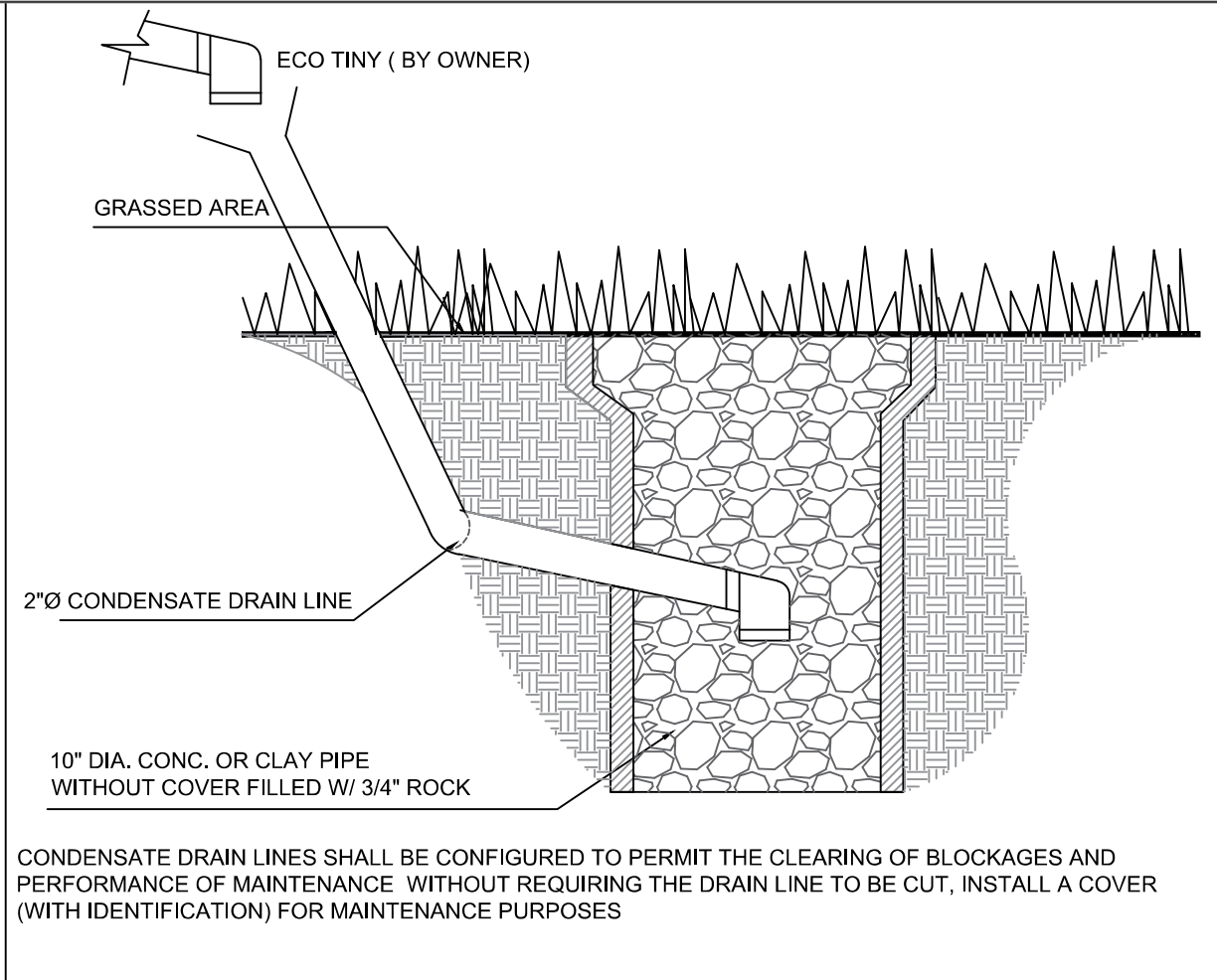
05 LEGEND
NTS

FAN COIL UNIT (TGM OR SIMILAR)															
DESIGNATION	CFM	BTUH		ENTERING F		ELECTRICAL DATA					REF. UNIT	DIMENSIONS			NOTES
		TOTAL	SENSIBLE	RB	DB	VOLTS	PHASES	HTNG KU	AMPS	FUSES		H	W	D	
AHU - 1	360	11,500	9,960	67	80	240	1	-	-	-	MWDRT12S	11.89	31.7	7.59	1/4" 1/2"

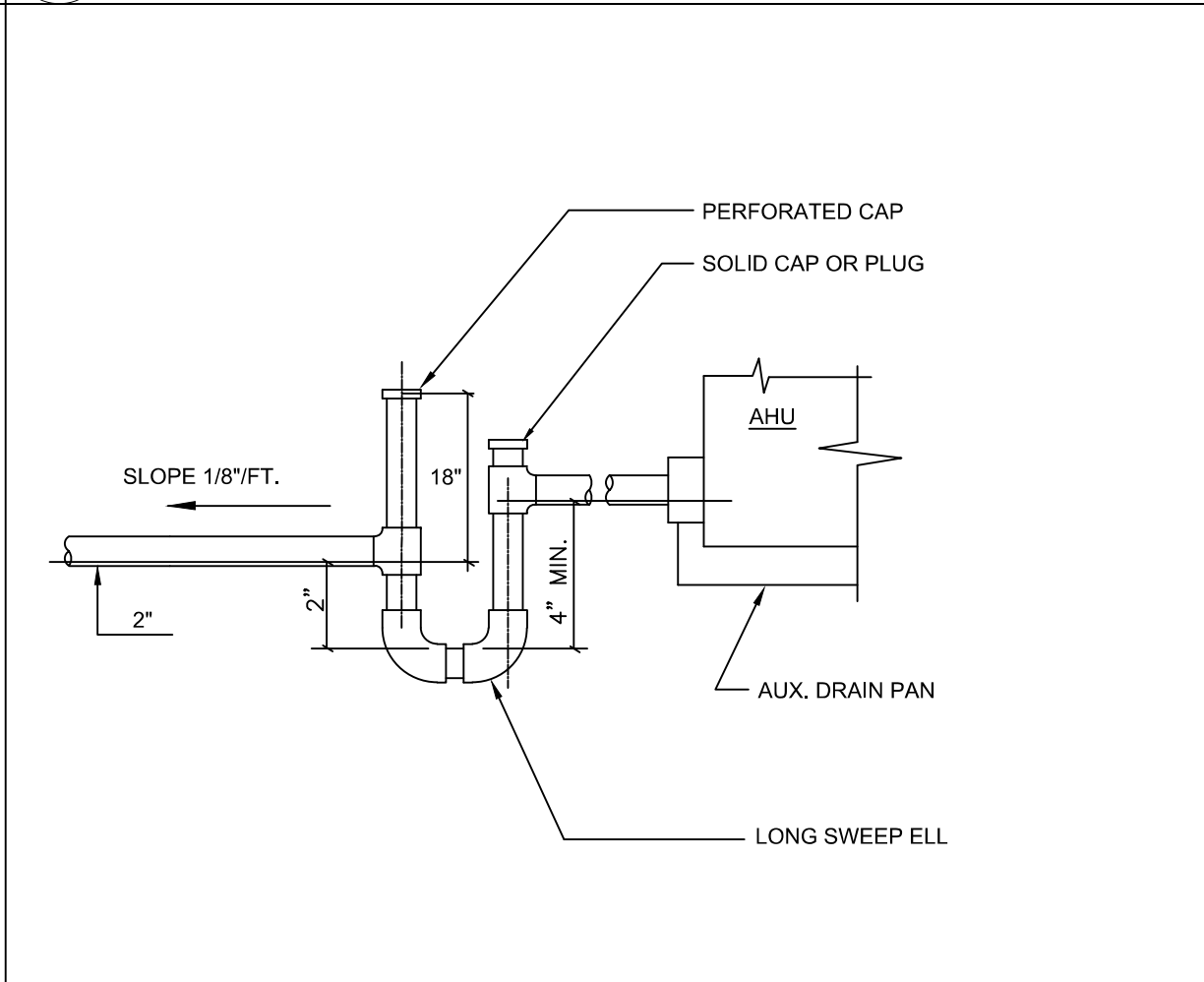
CONDENSING UNIT (TGM OR SIMILAR)									
DESIGNATION	BTUH	TEMP. ENT. CONDENSER	ELECTRICAL DATA				REF. UNIT	SEER	NOTES
			VOLTS	PHASES	WIRE AMPS	FUSES			
CU- 1	30,000	95	230	1	11	15	MRDRT12AS	19	

08 AIR CONDITIONER SCHEDULE
NTS

09 NTS
(TYPICAL)



03 CONDENSATE DRAIN DRY WELL
NTS



06 CONDENSATE DRAIN DETAIL
NTS

FAN COIL UNIT (TGM OR SIMILAR)															
DESIGNATION	CFM	BTUH		ENTERING F		ELECTRICAL DATA					REF. UNIT	DIMENSIONS			NOTES
		TOTAL	SENSIBLE	RB	DB	VOLTS	PHASES	HTNG KU	AMPS	FUSES		H	W	D	
AHU - 1	360	11,500	9,960	67	80	240	1	-	-	-	MWDRT12S	11.89	31.7	7.59	1/4" 1/2"

CONDENSING UNIT (TGM OR SIMILAR)									
DESIGNATION	BTUH	TEMP. ENT. CONDENSER	ELECTRICAL DATA				REF. UNIT	SEER	NOTES
			VOLTS	PHASES	WIRE AMPS	FUSES			
CU- 1	30,000	95	230	1	11	15	MRDRT12AS	19	

08 AIR CONDITIONER SCHEDULE
NTS

10 NTS
(TYPICAL)

HVAC DESIGN REQUIRES	YES	NO
DUCT SMOKE DETECTOR		✓
FIRE DAMPER(S)		✓
SMOKE DAMPER(S)		✓
FIRE RATED ENCLOSURE		✓
FIRE RATED ROOF/FLOOR CEILING ASSEMBLY		✓
FIRE STOPPING		✓
SMOKE CONTROL		✓

04 CHECK MARKS & AIR DISTRIBUTION SCHEDULE
NTS

GENERAL H.V.A.C. NOTES:

- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT FOR A COMPLETE H.V.A.C. SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE 2020 AND THE LATEST EDITION OF THE FOLLOWING PUBLICATIONS:
A) ANS B9.1 MECHANICAL REFRIGERATION
B) NFPA PAMPHLETS 90A & 91
C) SMACNA
D) ASHORE.
- ALL AIR CONDITIONING DUCTWORK SHALL BE 1-1/2 INCH STANDARD DUTY FOLL REINFORCED FIBERGLASS WITH MANUFACTURED LOGO PRINTED ON THE VAPOR BARRIER.
- DUCT & GRILL SIZE SHOWN ARE NET FREE AREA.
- ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE CHEMICALLY TREATED TO RECEIVE PAINT TO MATCH COLOR OR AIR GUIDE OR APPROVED EQUAL.
- PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.
- PROVIDE TURNING VANES AND EXTRACTORS ALL ELBOWS AND TAKE OFF.
- THERMOSTATS SHALL BE COMBINATION COOLING/HEATING WITH SYSTEM COOL/AUTO/HEAT/OFF AND FAN ON/AUTO SELECTOR SWITCHES.
- FAN COIL SHALL BE MOUNTED ON A STRUCTURAL STEEL BASE WITH CONTINUOUS STRIP OF ISO MODE AROUND ITS PERIMETER. CONDENSING UNIT SHALL BE ANCHORED TO ITS BASE PER MANUFACTURER'S SPECIFICATIONS.
- REFRIGERANT PIPING SHALL BE COPPER TYPE "L" ARMAFLEX INSULATION SHALL BE PROVIDED FOR SUCTION LINES.
- PROVIDE NEW FILTERS FOR FAN COIL BEFORE STARTING. THESE FILTERS MUST ALSO BE REPLACED PRIOR TO FINAL ACCEPTANCE BY OWNER.
- ANY INCONSISTENCIES OR DISCREPANCIES MUST BE ADVISED TO THE ENGINEER OF RECORD PRIOR TO BEGIN THE JOB.

07 NTS
(TYPICAL)

FAN COIL UNIT (TGM OR SIMILAR)															
DESIGNATION	CFM	BTUH		ENTERING F		ELECTRICAL DATA					REF. UNIT	DIMENSIONS			NOTES
		TOTAL	SENSIBLE	RB	DB	VOLTS	PHASES	HTNG KU	AMPS	FUSES		H	W	D	
AHU - 1	360	11,500	9,960	67	80	240	1	-	-	-	MWDRT12S	11.89	31.7	7.59	1/4" 1/2"

CONDENSING UNIT (TGM OR SIMILAR)									
DESIGNATION	BTUH	TEMP. ENT. CONDENSER	ELECTRICAL DATA				REF. UNIT	SEER	NOTES
			VOLTS	PHASES	WIRE AMPS	FUSES			
CU- 1	30,000	95	230	1	11	15	MRDRT12AS	19	

08 AIR CONDITIONER SCHEDULE
NTS

11 NTS
(TYPICAL)

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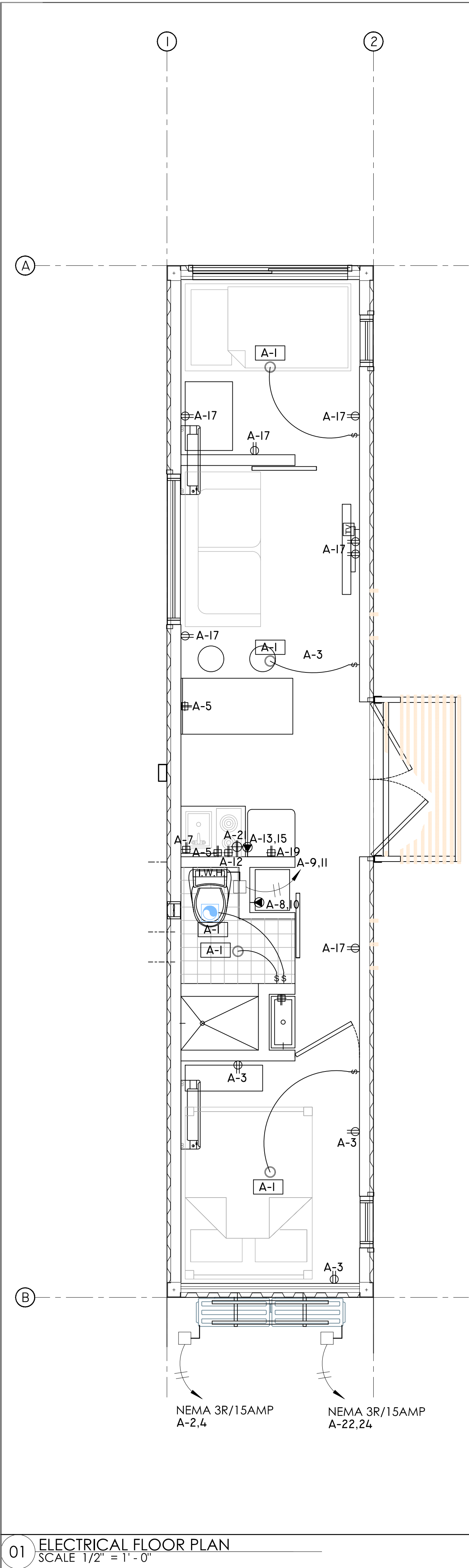
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Karins Engineering Group
11/8/2022

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ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
[Symbol]	CEILING MOUNTED LIGHTS
[Symbol]	VAPOR PROOF MOUNTED LIGHTS
[Symbol]	CEILING MOUNTED LIGHTS
[Symbol]	DUPLEX RECEPTACLE
[Symbol]	RECEPTACLE GROUND FAULT INTERRUPTER
[Symbol]	FLOOR RECEPTACLE
[Symbol]	DUPLEX RECEPTACLE- UNDER CABINET GFI
[Symbol]	DUPLEX RECEPTACLE ABOVE
[Symbol]	DUPLEX RECEPTACLE- UNDER CABINET
[Symbol]	240 VOLT RECEPTACLE
[Symbol]	LIGHTS TRANSFORMER
[Symbol]	THERMOSTAT
[Symbol]	WALL SWITCH (3-WAY)
[Symbol]	WALL SWITCH (SINGLE, DOUBLE)
[Symbol]	WALL MOUNTED LIGHTS FIXTURE
[Symbol]	EXHAUST FAN
[Symbol]	DISPOSAL
[Symbol]	CEILING MOUNTED SMOKE DETECTOR
[Symbol]	MOTION SENSOR LIGHTS-WATER PROOF
[Symbol]	EXTERIOR CEILING LIGHTS
[Symbol]	EXTERIOR WALL MOUNTED LIGHTS-WATER PROOF
[Symbol]	WALL MOUNTED LIGHTS-WATER PROOF
[Symbol]	TELEPHONE/CABLE OUTLET
[Symbol]	TV OUTLET
[Symbol]	DISCONNECT SWITCH
[Symbol]	ELECTRICAL METER
[Symbol]	ELECTRICAL PANEL
[Symbol]	INSTANT WATER HEATER
[Symbol]	SMOKE DETECTOR + MONOXIDE COMBO
[Symbol]	PINNED RECESSED LIGHT

ABBREVIATIONS:
R+ = EXISTING TO BE RELOCATED
N = NEW CIRCUIT
C = COUNTER TOP LEVEL
BC = BELOW COUNTER
MSL = MOTION SENSOR LIGHTSING

GFI = GROUND FAULT INTERRUPTER
VWP = VAPOR PROOF PRIOR TO INSTALLATION
PB = PUSH BUTTON
VP = VAPOR PROOF
WP = WEATHER PROOF
EL = EXTERIOR LIGHTS

ELECTRICAL LOAD CALCULATIONS

ITEM	PANEL A WATTS
SQ. FT.	320
GENERAL LIGHTING (3W/S.F.)	960
KITCHEN SMALL APPLIANCES	3,000
REFRIGERATOR	800
COOTOP	5,000
SMALL FRIDGE	400
INSTANT WATER HEATER	11,800
MICROWAVE	1,100
DRYER	5,000
CONNECTED LOAD: (LESS A/C)	29,160
FIRST 10KW @ 100%	10,000
BAL. @40%	7,664
A/C OR HTG. 1 @ 100%	2,640
A/C OR HTG. 2 @ 100%	2,640
DEMAND LOAD:	22,944
AMPS @ 240/120V. 1PH	96
BREAKER SIZE	100
	120
NEUTRAL LOAD	
PANEL A WATTS	
LIGHTING, WASHER, SMALL APPLIANCES	3,960
3KW @ 100%	3,000
BALANCE @ 35%	336
COOKTOP @ 70%	3,500
DRYER @ 70%	3,500
DISPOSAL	0
DISHWASHER	0
GRAL OUTLETS (GFI)	0
120V. APPLIANCES	
TOTAL NEUTRAL W.	10,336
NEUTRAL AMPS (N.W./240)	43
MAIN LOAD CALCULATIONS	
Panel A	
CONNECTED LOAD: (LESS A/C)	29,160
Panel A. A/C OR HTG. 1 @ 100%	8,304
Panel B. A/C OR HTG. 2 @ 100%	0
DEMAND LOAD:	37,464
AMPS @ 240/120V. 1PH	156
BREAKER SIZE	200

02 ELECTRICAL LOAD CALCULATIONS
NTS

TYPE: SIEMENS,GE,SD OR EQUIV.
SERVICE: 1Ø,3W
VOLTAGE: 120/240
AIC:10,000

PANEL 'A'

BUS RATING: 100A
POLES: 24 MINIMUM
FEEDER: #3
NEUTRAL: #3

CKT	SERVES	TRIP POLE	WIRE	CON DUIT	VA	PHASE A C	CKT	SERVES	TRIP POLE	WIRE	CON DUIT	VA
1	LIGHTS AFCI	15/1	#14	1/2	*	•	2	AC UNIT 01	15/2	#14	1/2	2,640
3	RECEPTACLE BEDROOM AFCI	20/1	#12	1/2	*	•	4					
5	SM. APP AFCI/GFI	20/1	#12	1/2	1,500	•	6					
7	SM. APP AFCI/GFI	20/1	#14	1/2	1,500	•	8	DRYER	30/2	#10	1/2	5,000
9	INSTANT WATER HEATER	60/2	#4	1	11,800	•	10					
11						•	12	MICROWAVE AFCI	20/1	#14	1/2	1,100
13	COOKTOP	30/2	#10	1/2	5,000		14					
15							16					
17	RECEPTACLE GENERAL AFCI	20/1	#12	1/2	*		18					
19	REFRIGERATOR	20/1	#12	1/2	800		20					
21	SMALL REFRIGERATOR	20/1	#12	1/2	400		22	AC UNIT 02	15/2	#14	1/2	2,640
23							24					

* = 320 SQFT X 3VA = 960 VA
TOTAL LOAD = SEE LOAD CALCULATION

09 ELECTRICAL PANELS.
NTS

03 ENCASED GROUNDING ELECTRODE DETAIL
NTS

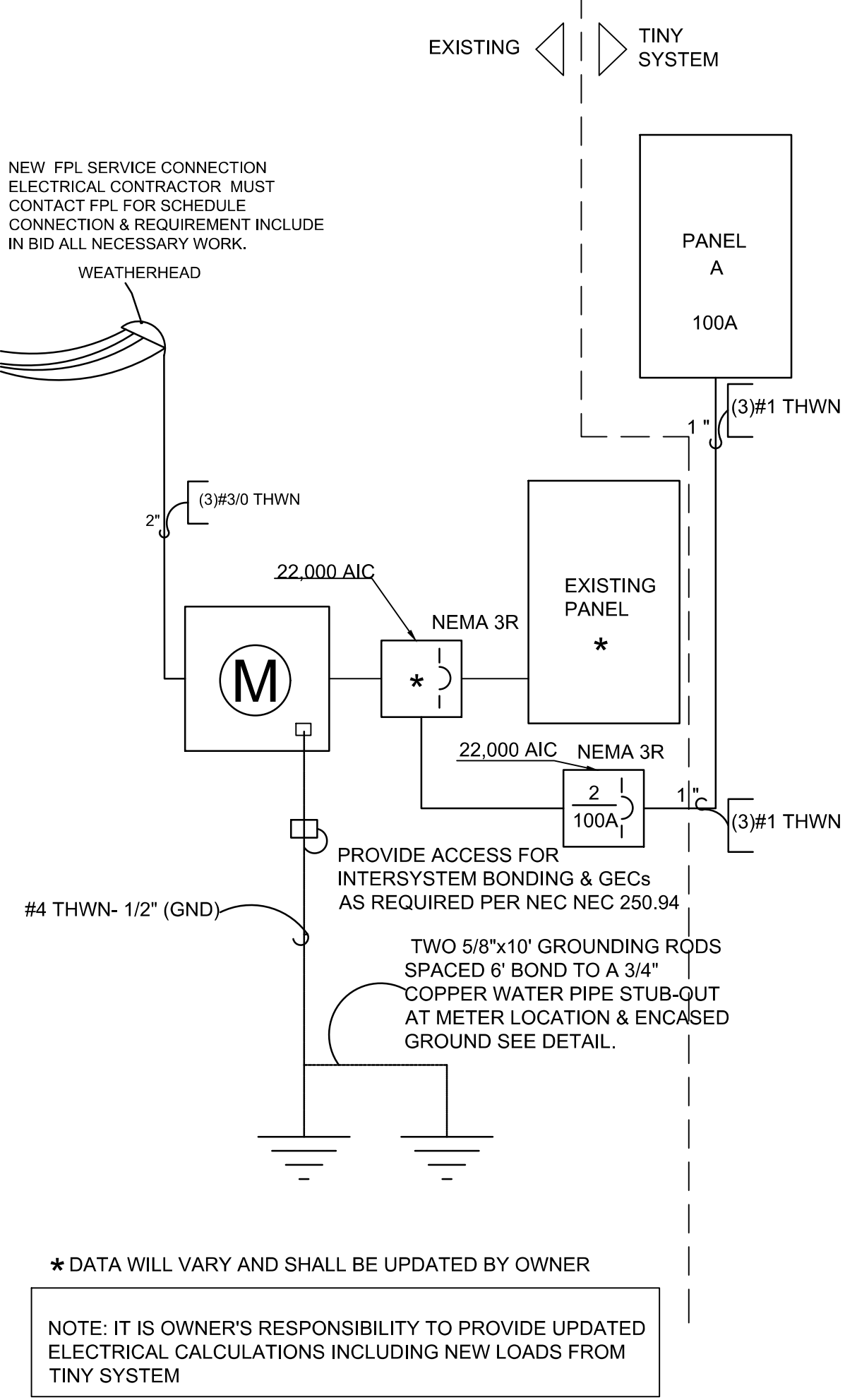
- NOTES:
- ALL FIXTURES EQUIPMENT , OF ELEMENT SHOWN ARE TO BE PROVIDED BY CONTRACTOR UNLESS OTHER WISE NOTED.
 - ALL EXTERIOR FIXTURES TO BE WP W/GFI BREAKERS.
 - FINISH, COLOR & SPECS MUST BY SIGNED OFF & APPROVED BY OWNER. SUBMIT SHOP DWGS, CUT SHEETS OF SAMPLES FOR OWNERS APPROVAL PRIOR TO ORDER OF COMMENCING ANY WORK.
 - IN ALL SPECIFIED AREAS IN 210.52, ALL NONLOCKING-TYPE 125-VOLT,15A AND 20A OUTLETS SHALL BE TAMPER RESISTANT.
 - MIN. 75% OF LAMPS TO BE HIGH EFFICIENCY.
 - ALL NEW OUTLETS SHALL BE AFCI.
 - ALL OUTLETS IN BUILDING SHALL BE TAMPERPROOF.
 - LIGHTING IN THE THERMAL ENVELOPE SHALL BE IC RATED AND MEETING ASTM E 283 FOR LEAKAGE LABELED AIR TIGHT AND HOUSING SHALL BE SEALED WITH A GASKET OR CAULK TO CEILING OR WALL, R402.4.
 - DETERIORATING AGENTS, (NEC 110.11): ALL DISCONNECTS, SERVICE DISCONNECTS, RECEPTACLES, LUMINAIRES, APPLIANCES SHALL BE LISTED FOR THE ENVIRONMENT AND SHALL BE LABELED WP OR NEMA 3-R.
 - RECESSED LIGHT FIXTURES MUST BE IC RATED & AIRTIGHT TO PREVENT LEAKAGE FROM CONDITIONED TO UNCONDITIONED SPACES AS PER ENERGY CODE.

05 ELECTRICAL LOAD CALCULATIONS.
NTS

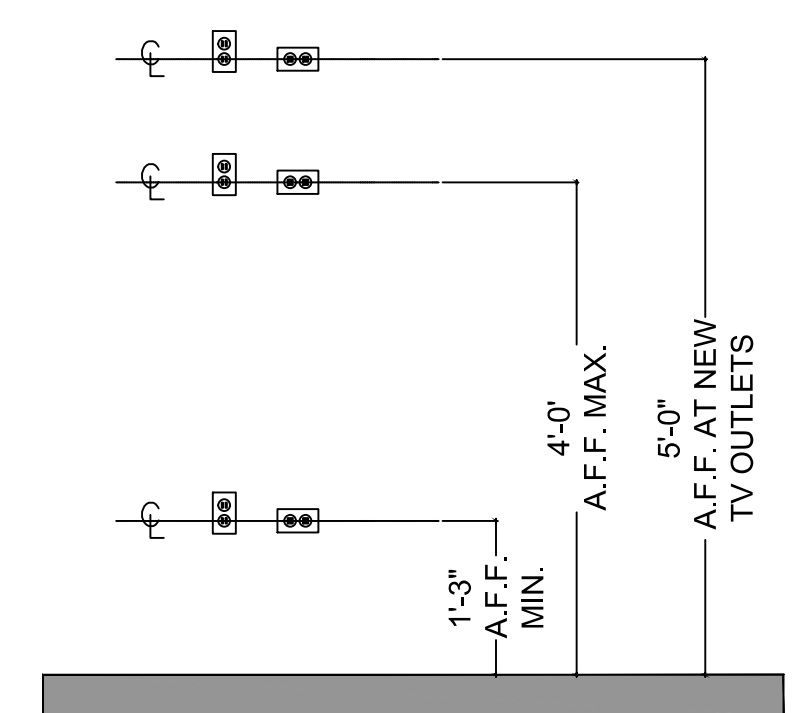
- TAMPER-RESISTANT RECEPTACLES AS PER NEC 406.12
- TAMPER-RESISTANT RECEPTACLES IN DWELLING UNITS. ALL NONLOCKING TYPE 15A AND 20A, 125V RECEPTACLES IN THE FOLLOWING AREAS OF A DWELLING UNIT [210.52] MUST BE LISTED AS TAMPER-RESISTANT.
- WALL SPACE — 210.52(A)
 - SMALL-APPLIANCE CIRCUIT — 210.52(B)
 - COUNTERTOP SPACE — 210.52(C)
 - BATHROOM AREA — 210.52(D)
 - OUTDOORS — 210.52(E)
 - LAUNDRY AREA — 210.52(F)
 - GARAGE AND OUTBUILDINGS — 210.52(G)
 - HALLWAYS — 210.52(H)
- EX: RECEPTACLES IN THE FOLLOWING LOCATIONS AREN'T REQUIRED TO BE TAMPER-RESISTANT:
- RECEPTACLES LOCATED MORE THAN 5/8 FT ABOVE THE FLOOR.
 - RECEPTACLES THAT ARE PART OF A LUMINARY OR APPLIANCE.
 - A RECEPTACLE LOCATED WITHIN DEDICATED SPACE FOR AN APPLIANCE THAT IN NORMAL USE ISN'T EASILY MOVED FROM ONE PLACE TO ANOTHER.
 - NONGROUNDING RECEPTACLES USED FOR REPLACEMENTS AS PERMITTED IN 406.4(D)(2)(A).
- ARC FAULT NOTE
ALL 15A OR 20A, 120V BRANCH CIRCUITS IN DWELLING UNITS SUPPLYING OUTLETS IN DWELLING UNITS, KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS OR SIMILAR ROOMS OR AREAS MUST BE PROTECTED BY A LISTED AFCI DEVICE OF THE COMBINATION TYPE (NEC 210.12)

06 NOTES
NTS

04 SMOKE AND MONOXIDE CONNECTION DETAIL
NTS



07 ELECTRICAL RISER DIAGRAM.
NTS



10 MOUNTING HEIGHTS FOR OUTLETS
NTS

ELECTRICAL SPECIFICATIONS

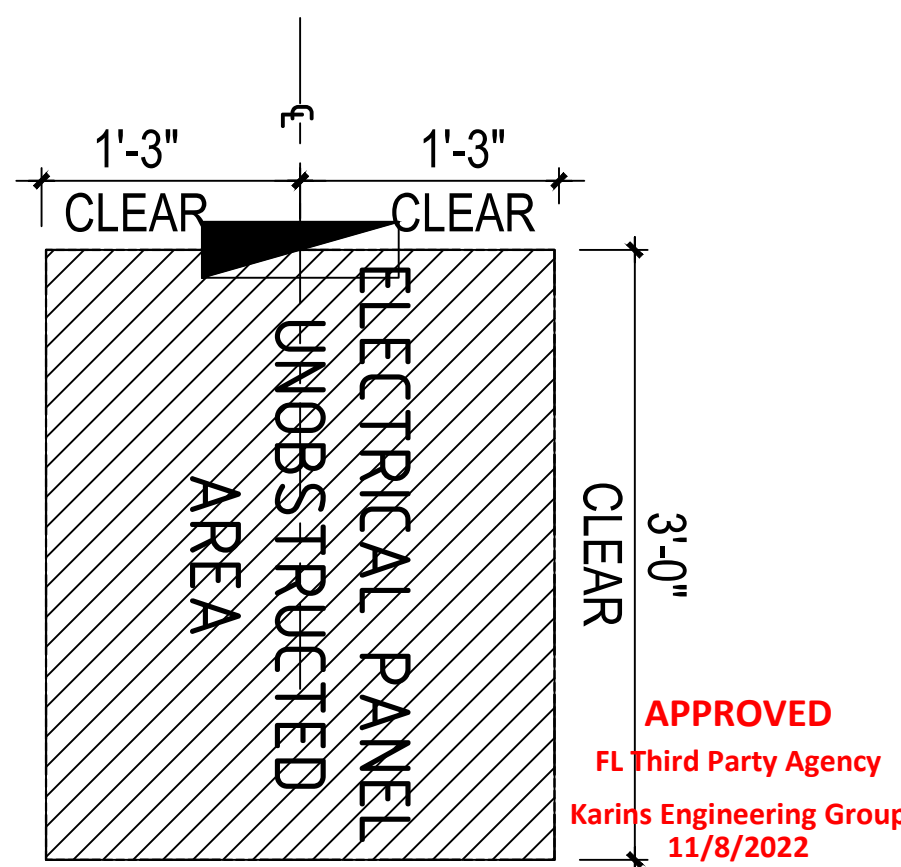
- GUARANTEES AND RESPONSIBILITY: ALL MATERIAL AND WORKMANSHIP FOR ONE YEAR FROM DATE OF ACCEPTANCE. ALL DEFECTS SHALL BE CORRECTED WITHOUT CHARGE, INCLUDING ALL PATCHING AND PAINTING AND OTHER INCIDENTAL REPAIRS OR REPLACEMENT.
- WORKMANSHIP: ALL WORK SHALL BE INSTALLED IN A NEAT, ORDERLY MANNER. DEVICES, PLATES, EXPOSED RACEWAYS, ENCLOSURES, COVERS, FIXTURES, ETC. SHALL BE ALIGNED PERPENDICULAR TO OR PARALLEL WITH, THE PRINCIPAL STRUCTURAL MEMBERS. THE EDGE OF THESE COVERS, PLATES ENCLOSURES, ETC., SHALL BE IN VERTICAL OR HORIZONTAL PLANE AS APPLICABLE FOR THE ITEMS INVOLVED. EXPOSED RACEWAYS SHALL BE OFFSET WHERE THEY ENTER SURFACE-MOUNTED EQUIPMENT. WIRING INSTALLED IN PANELS AND OTHER ENCLOSURES SHALL BE NEATLY LOOPED AND LACED & NOT WADDLED OR BUNDLED.
- MATERIAL STANDARDS: ALL MATERIALS SHALL BE NEW & CONFORM TO THE APPLICABLE STANDARDS WHERE SUCH HAVE BEEN ESTABLISHED FOR THE MATERIALS IN QUESTION. THE PUBLICATIONS AND STANDARDS OF THE ORGANIZATIONS BELOW ARE APPLICABLE TO THE MATERIALS SPECIFIED HEREIN.
 - AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 - UNDERWRITER'S LABORATORIES, INC. (UL)
 - AMERICAN STANDARDS ASSOCIATION (ASA)
 - NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA)
 - NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- WHERE REFERENCE IS MADE TO TRADE NAMES OR NAMES OF MANUFACTURERS, SUCH REFERENCES ARE MADE SOLELY TO DESIGNATE AND TO IDENTIFY THE QUALITY OF THE MATERIALS OR EQUIPMENT TO BE FURNISHED, AND DOES NOT PRECLUDE THE USE OF "EQUAL" EQUIPMENT AS APPROVED BY THIS ENGINEER.
- REFERENCE STANDARDS: INSTALLATION SHALL COMPLY WITH THE REGULATIONS OF THE FOLLOWING:
 - NATIONAL ELECTRICAL CODE NEC 2020.
 - FLORIDA BUILDING CODE 2020, 6th EDITION.
 - DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
 - THE MINIMUM WIRE SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE COPPER WITH TW INSULATION FOR SIZE #8 AND SMALLER. CONDUCTORS LARGER THAN #8 SHALL HAVE TYPE THE INSULATION, UNLESS OTHERWISE NOTED. ALL CONDUCTORS #10 AND SMALLER MAY BE SOLID AND ALL THOSE #8 AND LARGER SHALL BE STRANDED.
 - ALL RACEWAYS AND PIPES PLACED IN OR THRU A CONCRETE SLAB SHALL BE SPACED A MINIMUM OF 3 DIAMETERS OF THE LARGEST CONDUIT OR PIPE OF ANY OTHER SERVICE.
 - ALL RACEWAYS SHALL BE CARLON PY-DUIT, TYPE A, U.L. LISTED OR EQUAL. CONDUIT FITTINGS AND CEMENT SHALL BE PRODUCED BY THE SAME MANUFACTURER.
 - RUNS IN CONCRETE IN CONTACT WITH EARTH, UNDERGROUND, EXPOSED OR IN INTERIOR WALLS OR FEEDERS 1 1/4" OR LARGER, SHALL BE RIGID STEEL OR PVC
 - METALLIC ELECTRICAL CONDUIT OR ROMEX MAY BE USED IN THE INTERIOR PARTITIONS AND CEILINGS.
 - OUTLET BOXES SHALL BE POLYVINYL CHLORIDE AND SHALL CONFORM TO THE N.E.M.A. STANDARDS.
 - THE DISCONNECT SWITCHES SHALL BE HORSEPOWER-RATED HEAVY DUTY, QUICK-MAKE/QUICK-BREAK IN N.E.M.A.-1 INTERIOR, 4 EXTERIOR.
 - IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH & INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN A PROPER WORKING ORDER. SHOULD ANY ITEMS BE MISSING, HE SHALL NOTIFY THE ARCHITECT/ENGINEER BEFORE COMMENCING WORK. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE CONTRACTOR'S FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.

ELECTRICAL NOTES:

- OUTSIDE RECEPTACLES, RECEPTACLES AT BATH, GARAGE AND KITCHEN COUNTER, SHALL BE G.F.I.
- ELECTRICAL METER AND PANEL LOCATION MAY VARY AS PER SERVICE ENTRANCE LOCATION.
- ELECTRICAL CONTRACTOR TO COORDINATE SERVICE WITH F.P.L.
- ALL "F" BOXES SHALL COMPLY WITH N.E.C. 314
- ELECTRICAL OUTLETS (RECEPTACLES AND LIGHTSING) BELOW BASE FLOOD ELEVATION SHALL BE INSTALLED AT THE HIGHEST PERMITTED ELEVATION AND SHALL BE INSTALLED ON (SEPARATE) INDEPENDENT CIRCUITS FROM THOSE IN THE HABITAT AREAS.
- NO APPLIANCES OR APPLIANCE OUTLETS SHALL BE INSTALLED BELOW BASE FLOOD ELEVATION.
- IT IS SUGGESTED THAT YOU CONFER WITH FLORIDA POWER AND LIGHTS TO LOCATE THE ELECTRICAL METER TO COMPLY WITH FEDERAL EMERGENCY MANAGEMENT AGENCY REQUIREMENTS.

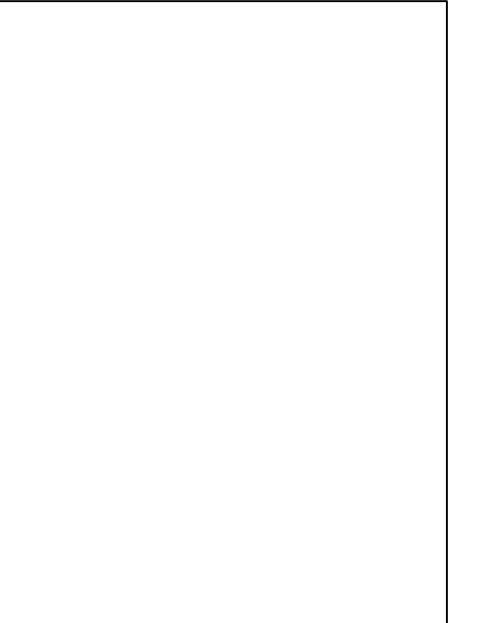
08 ELECTRICAL NOTES.
NTS



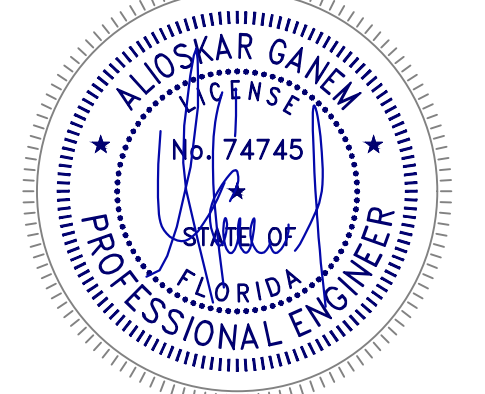
11 ELECTRICAL PANEL CLEARANCE AREA DETAIL.
NTS



KEY PLAN



CONSULTING ENGINEER



ALIOSKAR GANEM P.E.
FL. LIC. No. 74745

PROJECT NAME:
ECODWELLING.LLC

(01)

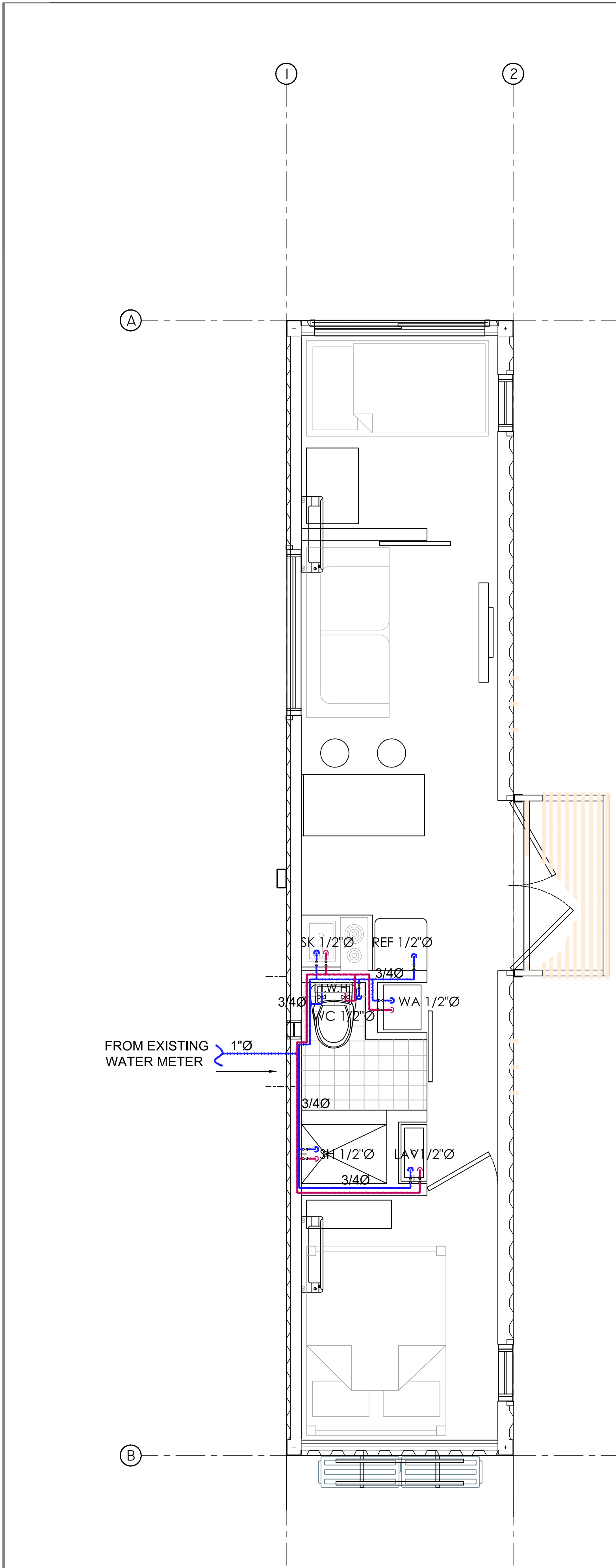
PROJECT ADDRESS:
16400 NORTH WEST 15TH
AVENUE, MIAMI, FL
33169

REVISIONS	DATE

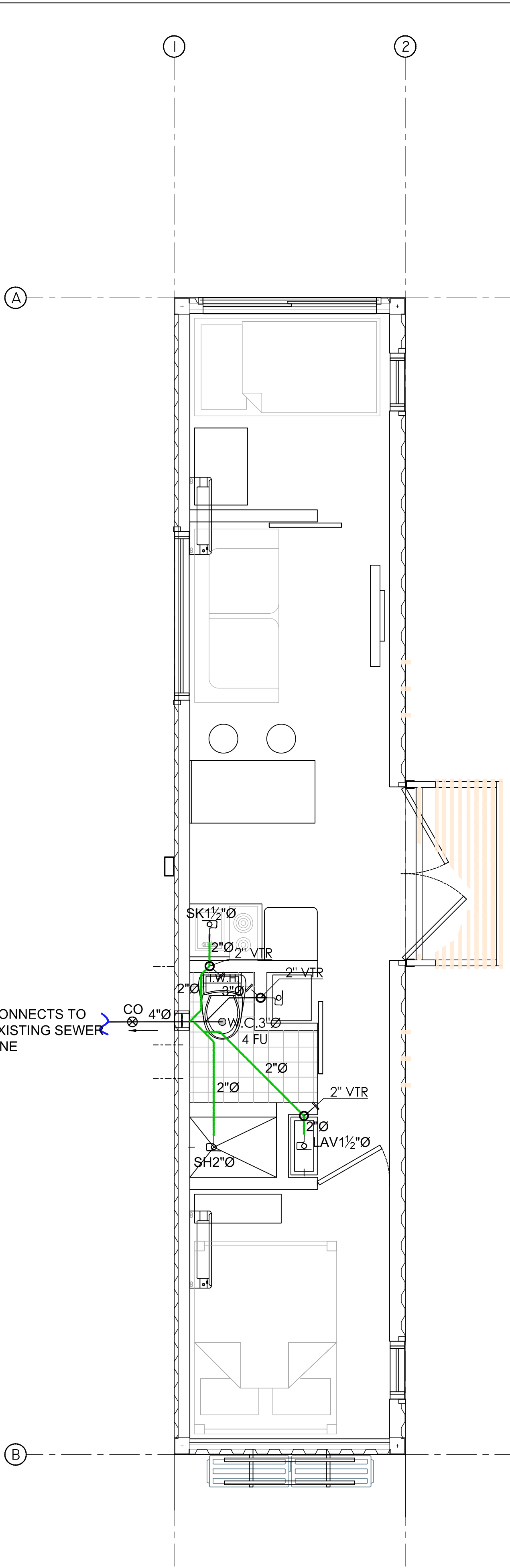
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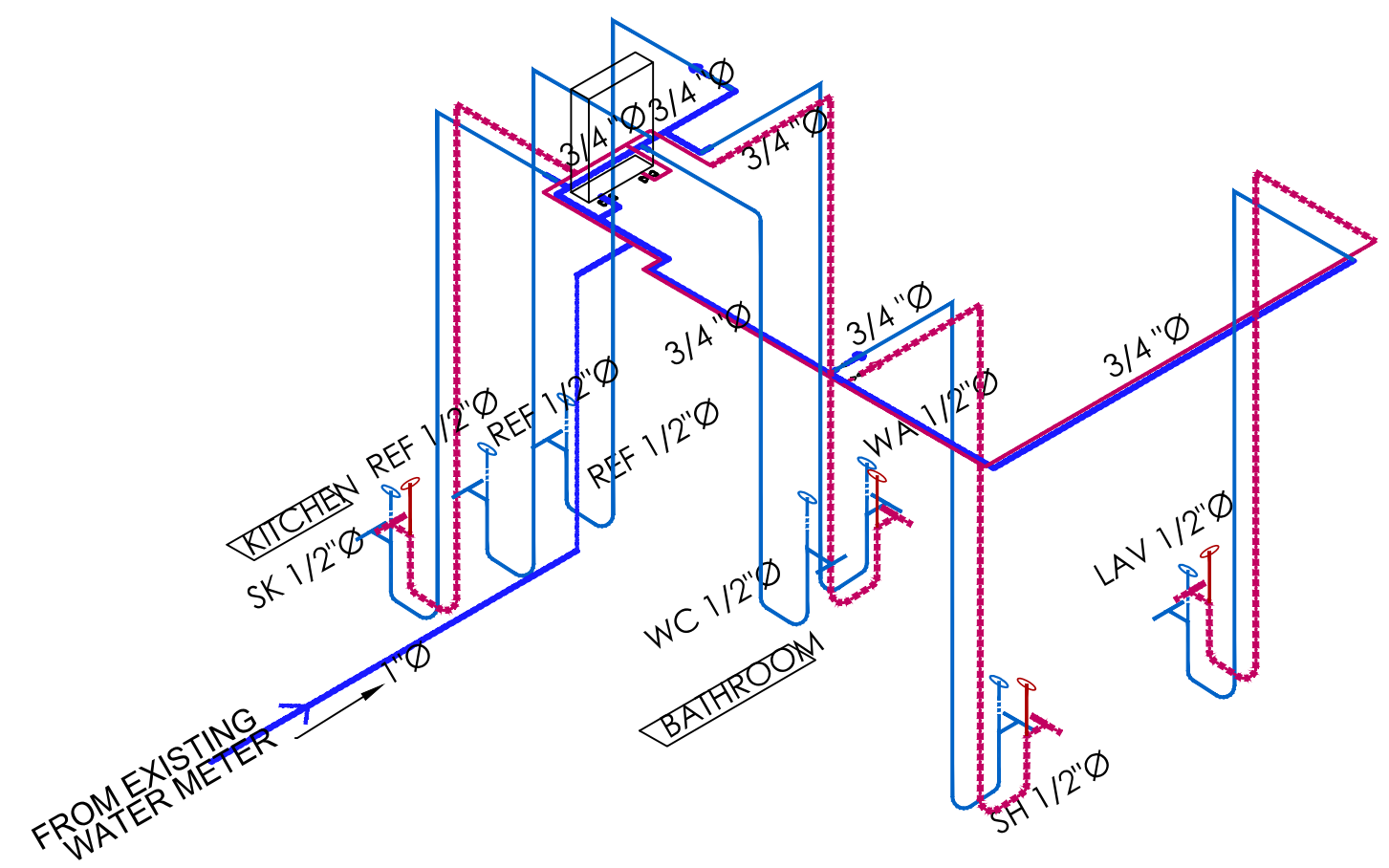
E-1



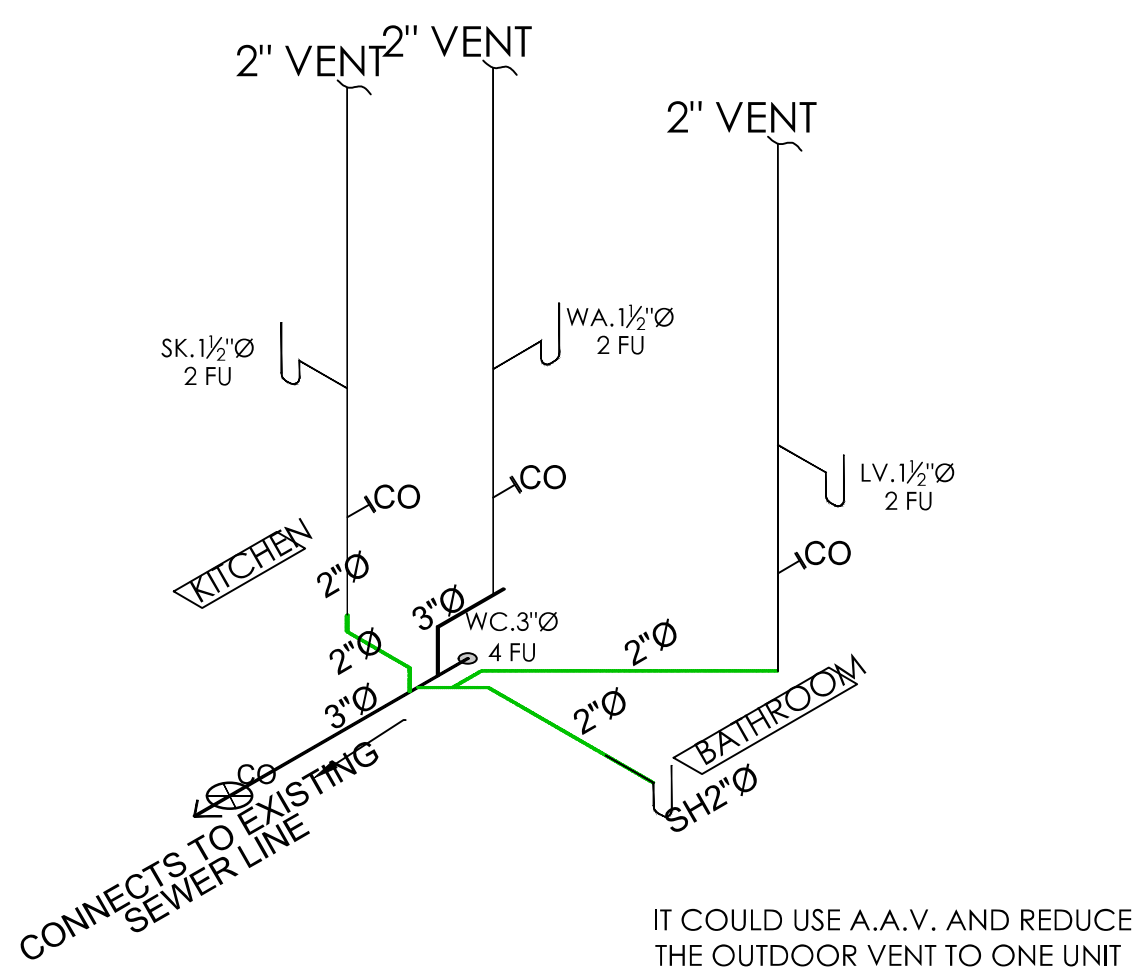
01 PLUMBING PLAN
3/8" = 1'-0"



02 SEWER PLAN
3/8" = 1'-0"



03 PLUMBING ISOMETRIC
3/8" = 1'-0"



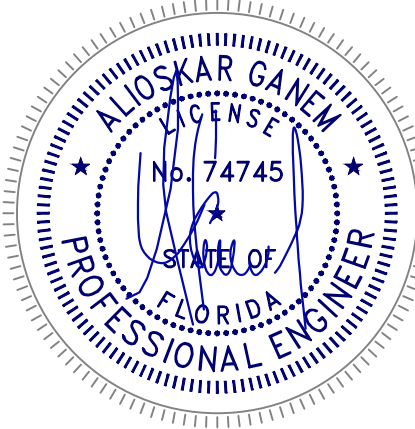
04 SEWER ISOMETRIC
3/8" = 1'-0"

APPROVED
FL Third Party Agency
Karins Engineering Group
11/8/2022

KEY PLAN



CONSULTING ENGINEER



ALIOSKAR GANEM P.E.
FL, LIC. No. 74745

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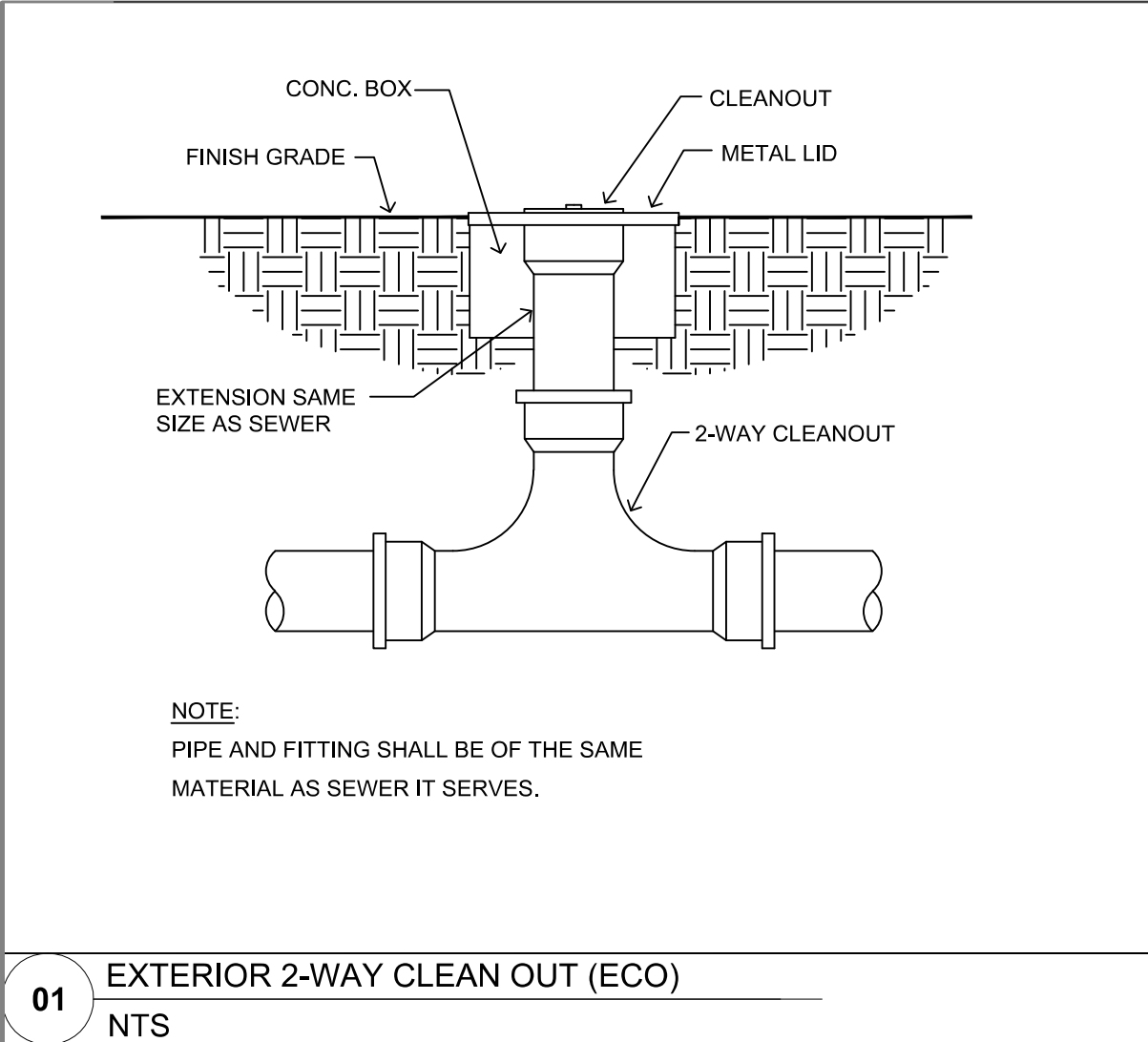
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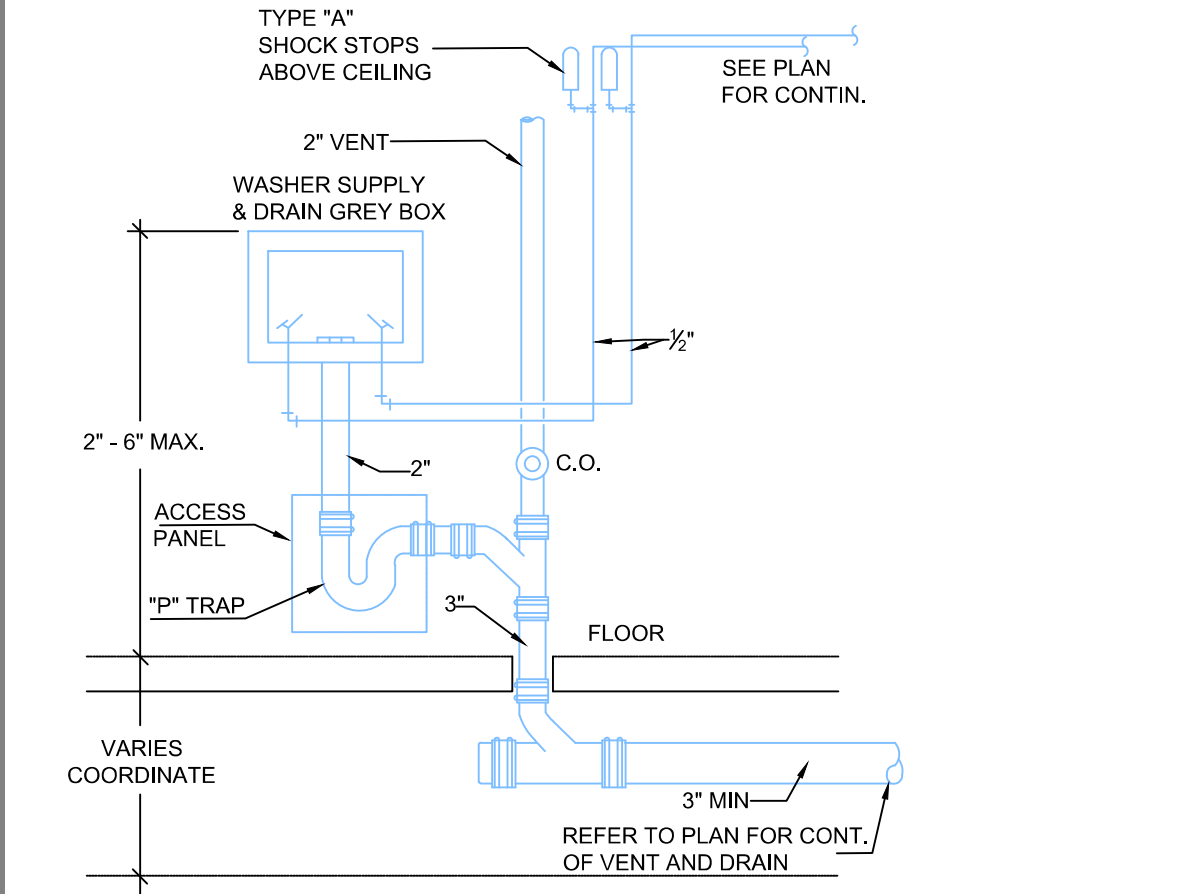
Project No: 2021-E01
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Drawn: A.G.
Checked: A.G.
CAD File:

Drawing Title:

P-1



01 EXTERIOR 2-WAY CLEAN OUT (ECO)
NTS



05 WASHING MACHINE SUPPLY & DRAIN PIPING DIAGRAM
NTS



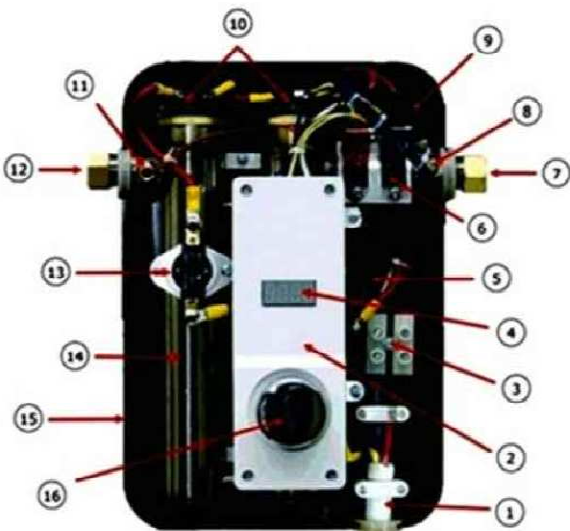
ECO - 11 SPECIFICATIONS:

MODEL	SIZE			MATERIAL	FLOW RATE
	W	H	D		
ECO-11	8.0"	11"	3.75"	STAINLESS STEEL	61° @ 2 GPM

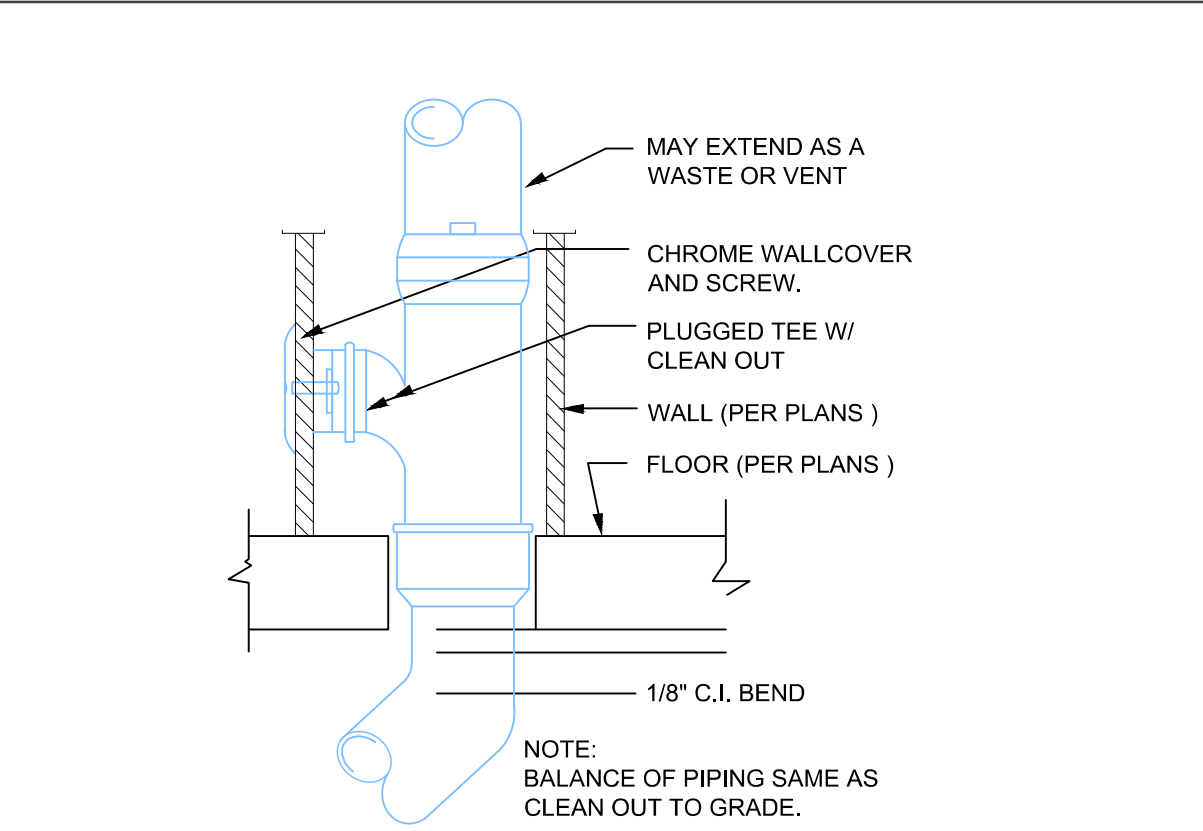
ECO 8 ECO 11

The only difference between the ECO 8 and the ECO 11 is that the ECO 8 has only (1) heating element and exchanger and 1 ECO 11 has (2) elements and exchanger.

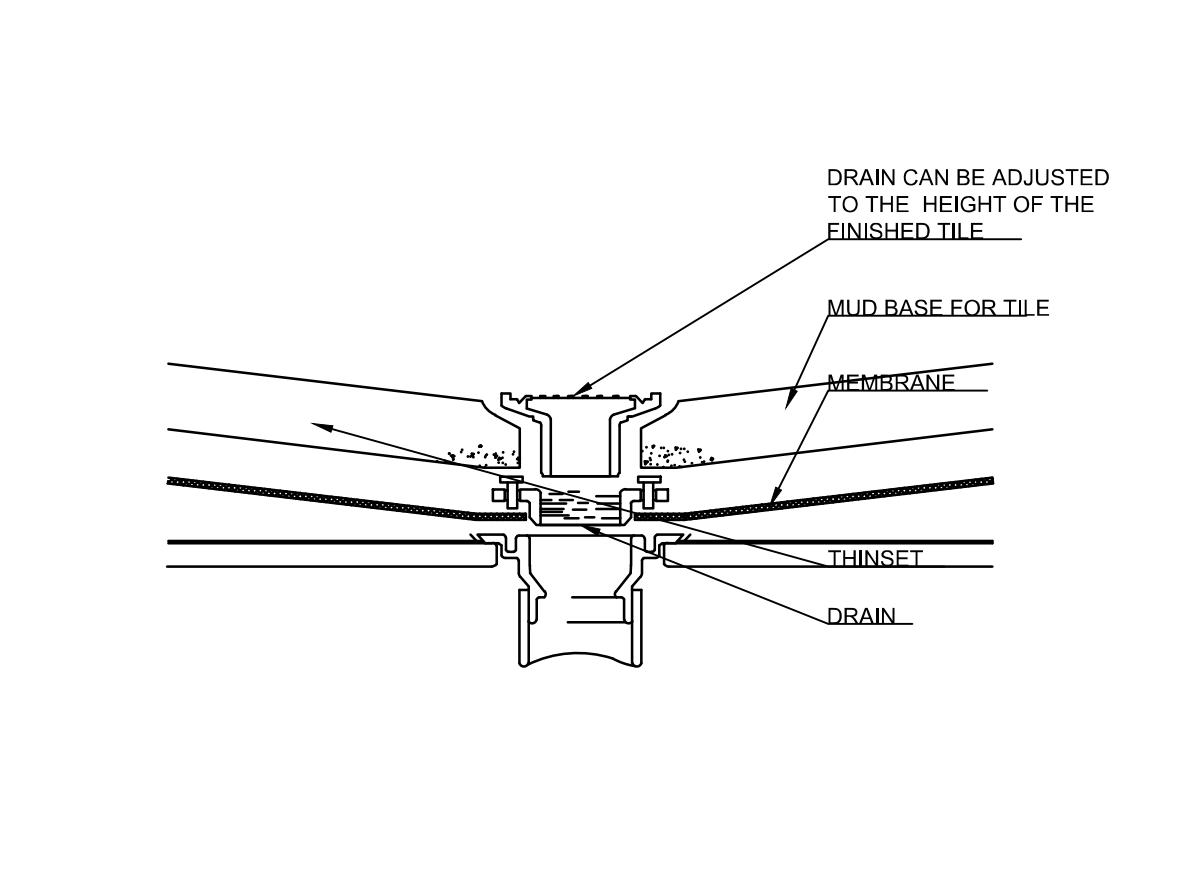
Parts Description	
1.	Supplied Electrical Cable
2.	Electronic Board
3.	Terminal Block
4.	LED Temperature Display
5.	Thermistor
6.	Triacs
7.	Cold Water Inlet Connection
8.	Inlet Thermostat
9.	Flow Sensor
10.	Copper Heating Elements
11.	Outlet Thermostat
12.	Hot Water Outlet Connection
13.	Thermostat
14.	Stainless Steel Heat Exchanger
15.	Back Casing
16.	Temperature Control Setting Knob



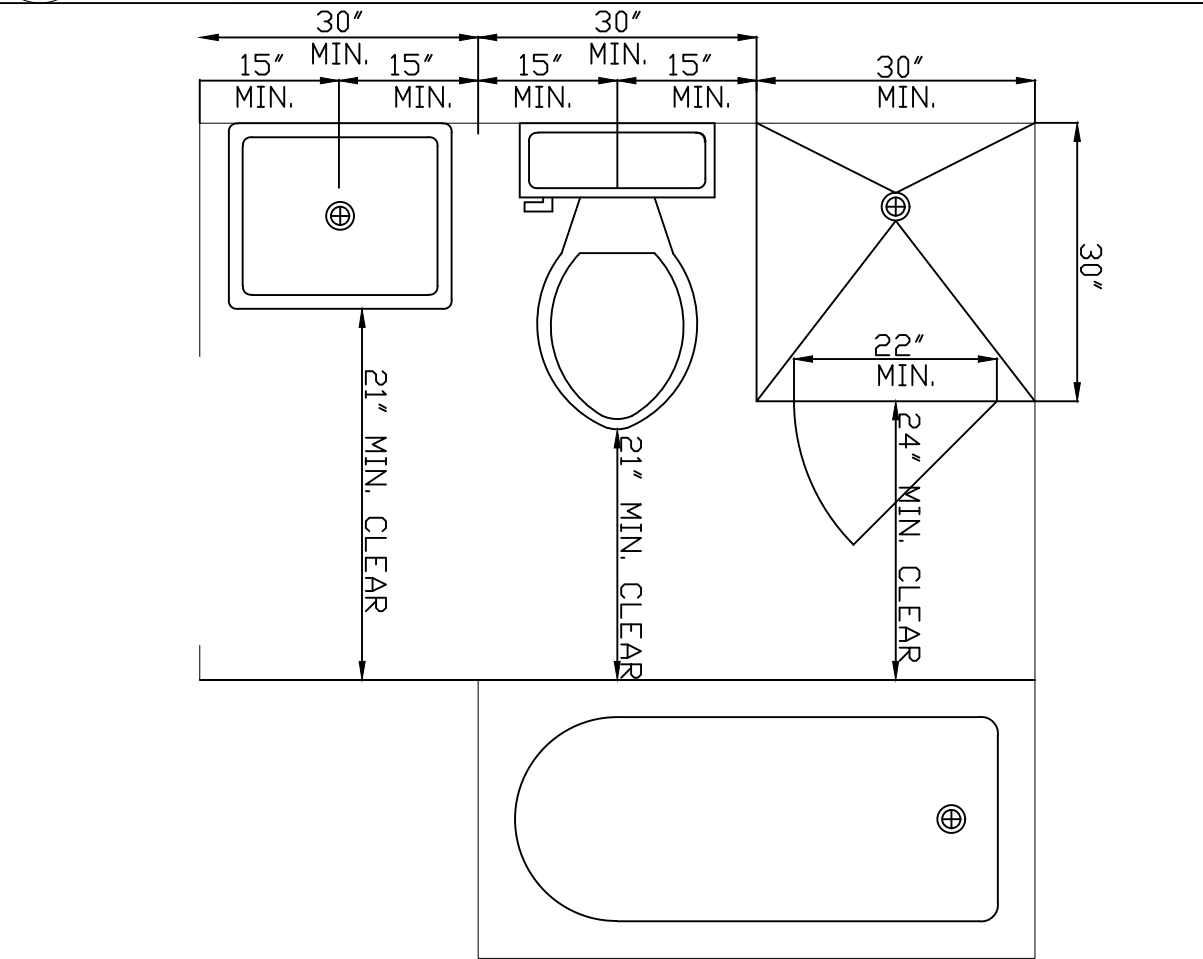
12 ECO SMART ECO 11 ELECTRIC TANKLESS WATER HEATER
NTS



02 WALL CLEAN OUT DETAIL
NTS



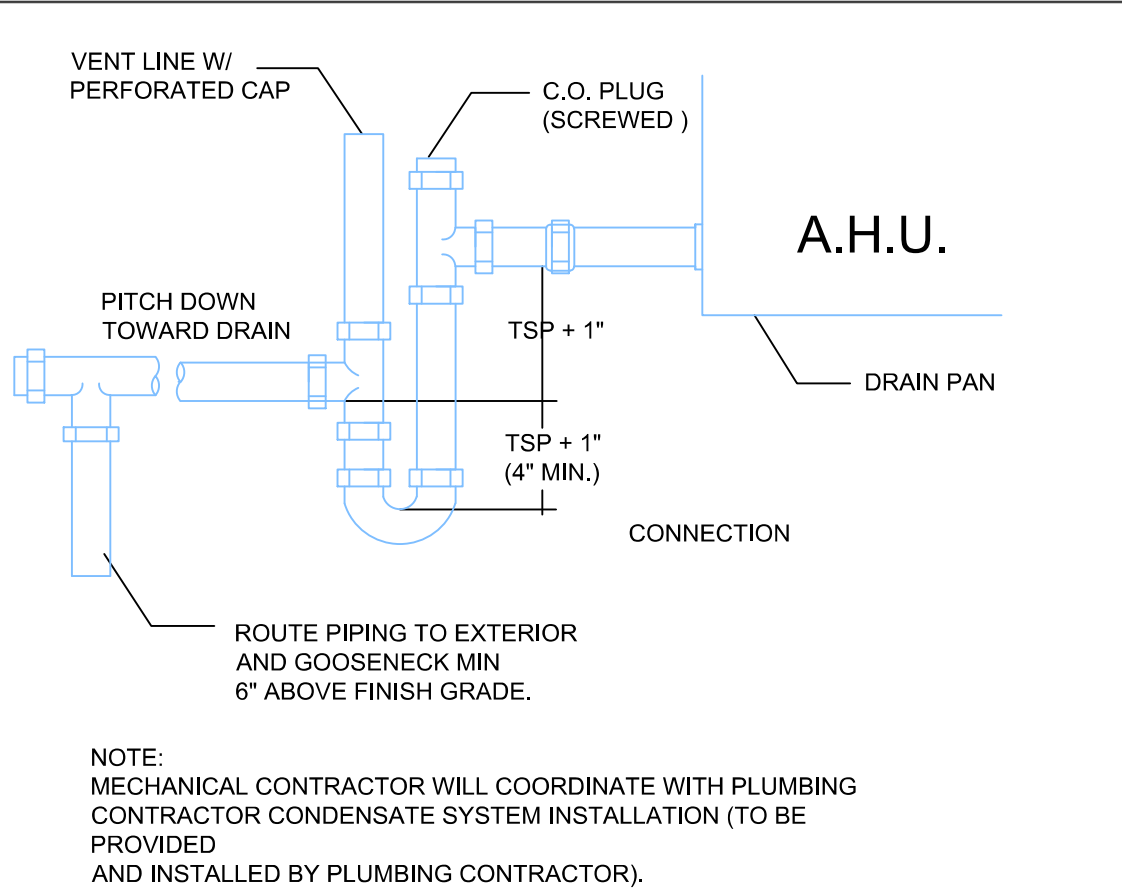
06 DRAIN DETAIL
NTS



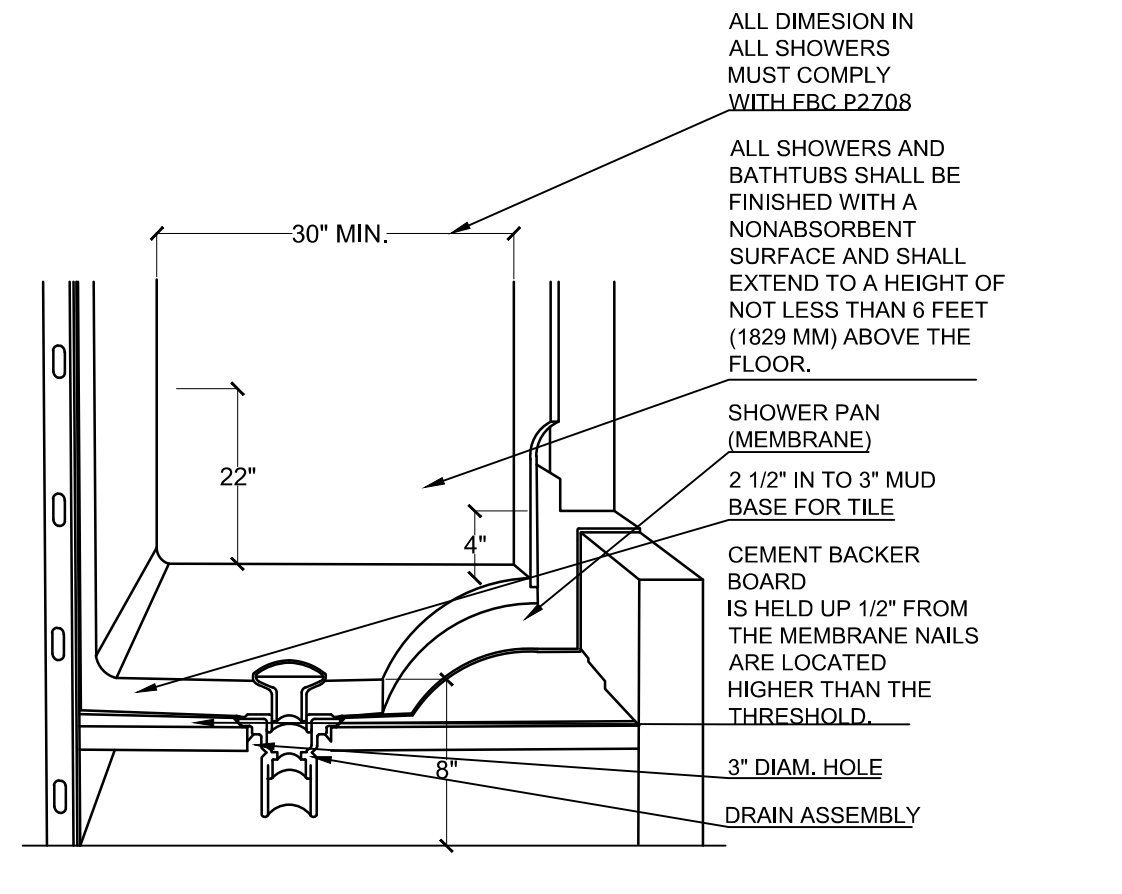
09 FIXTURE CLEARANCES
NTS



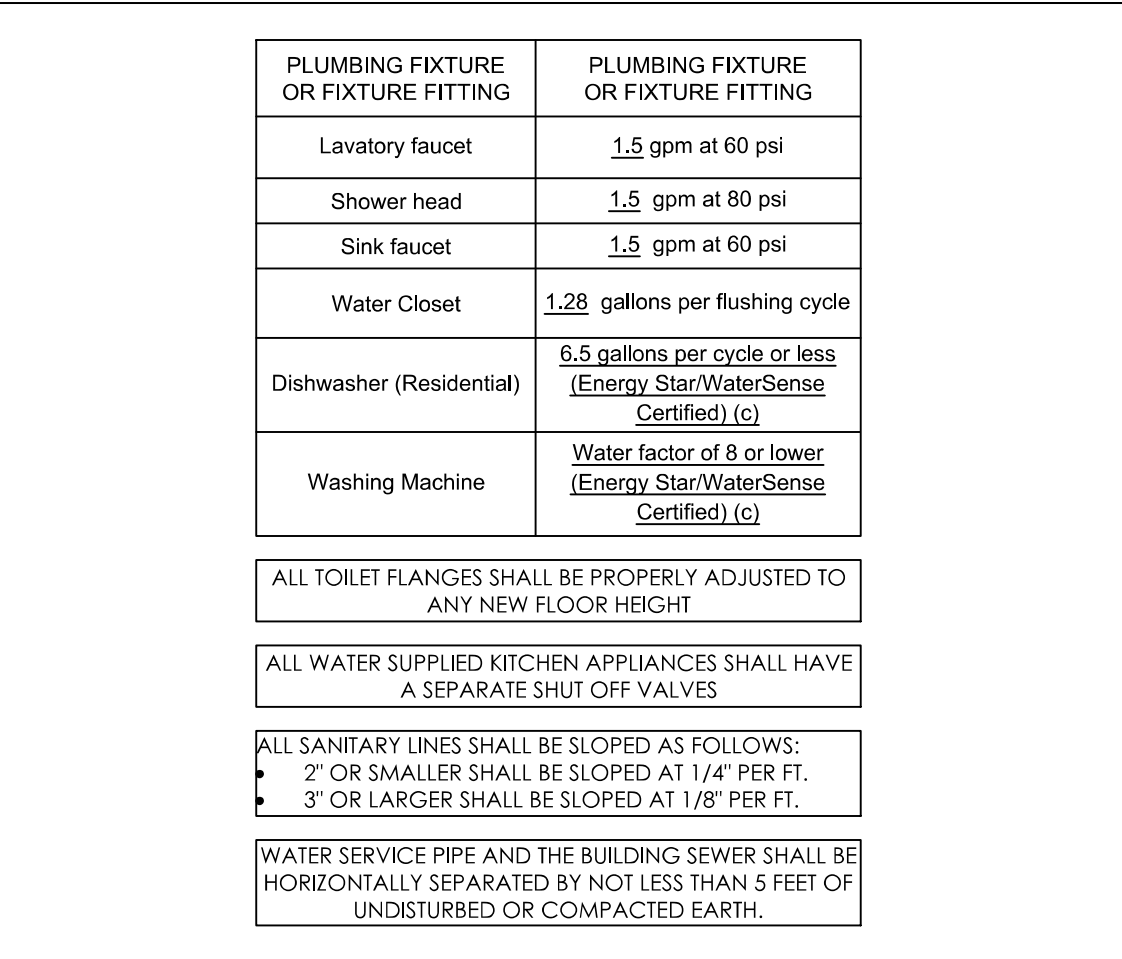
13 NTS



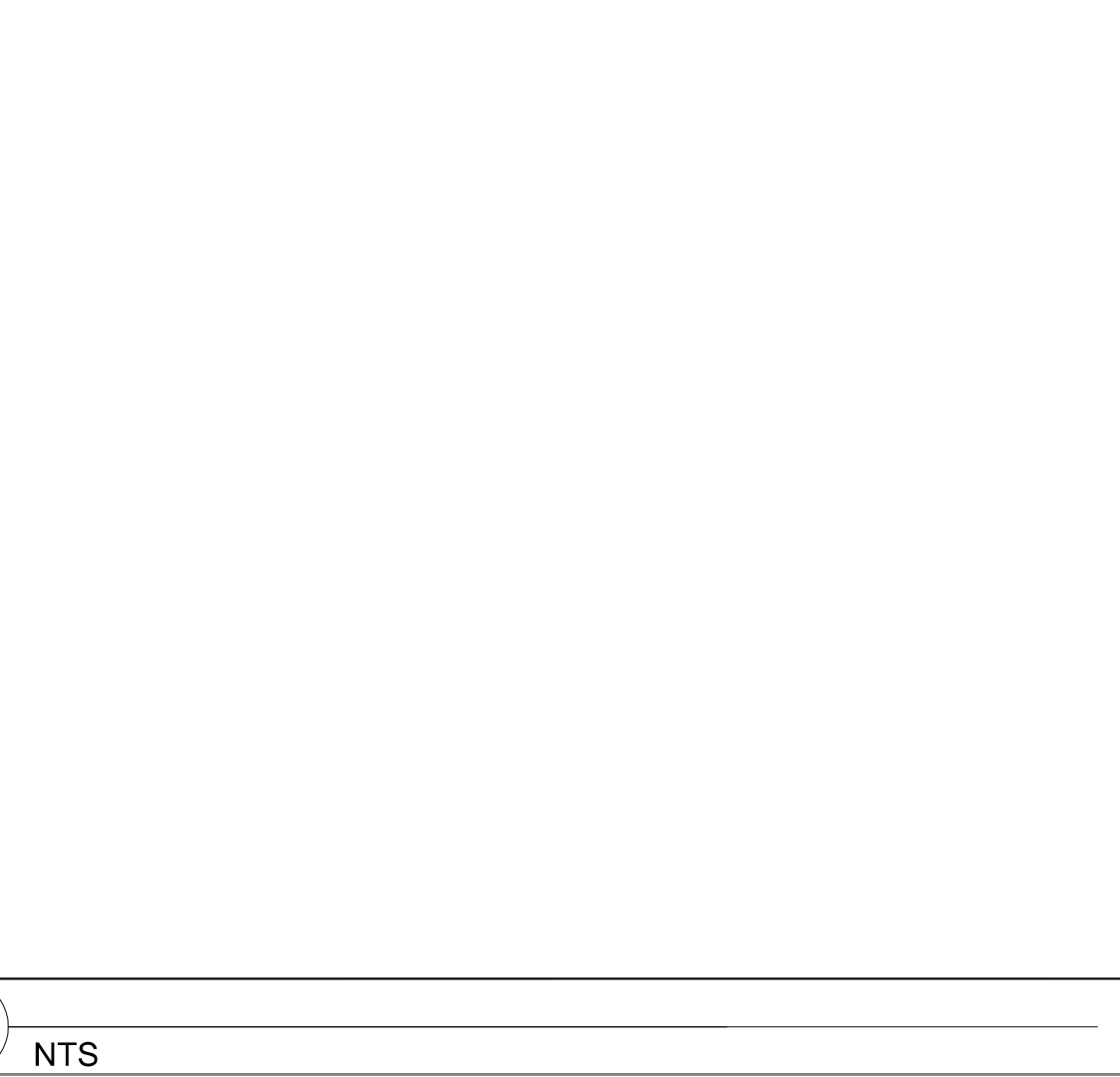
03 CONDENSATE DRAIN TRAP DETAIL
NTS



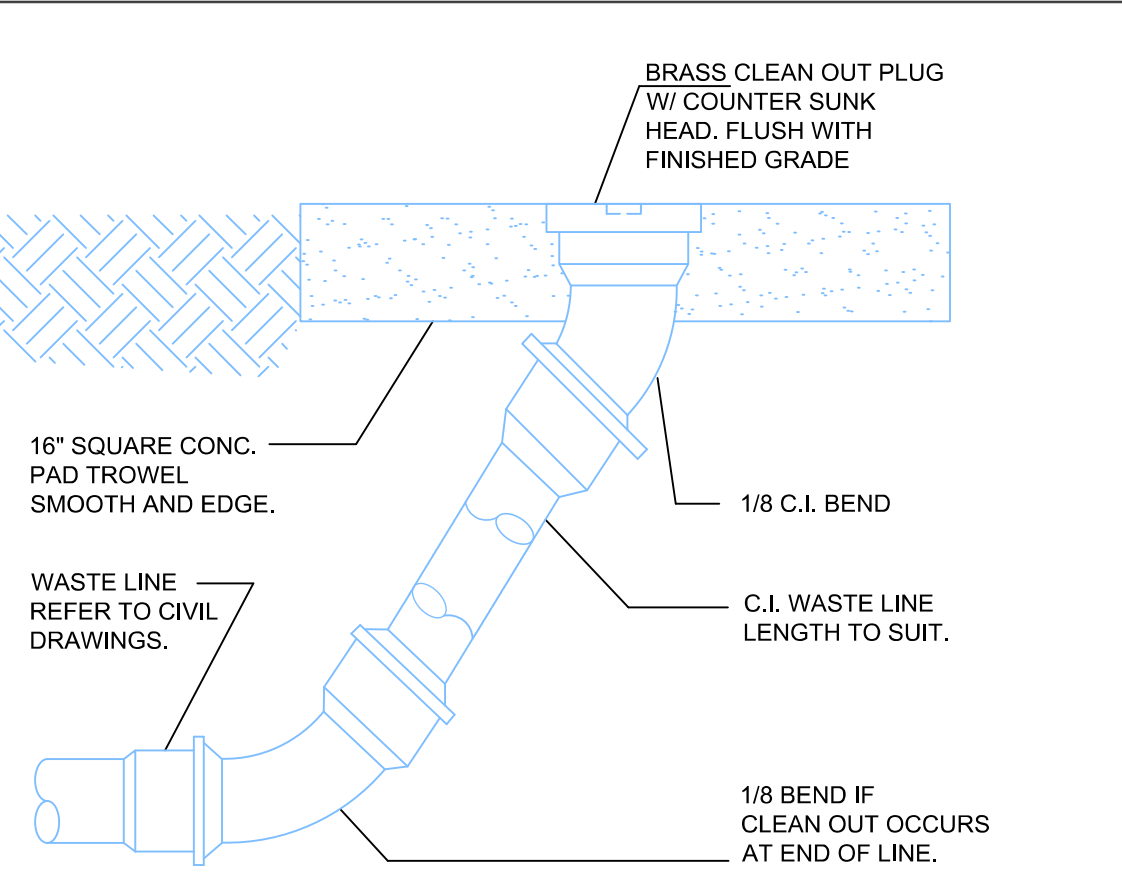
07 SHOWER DETAIL
NTS



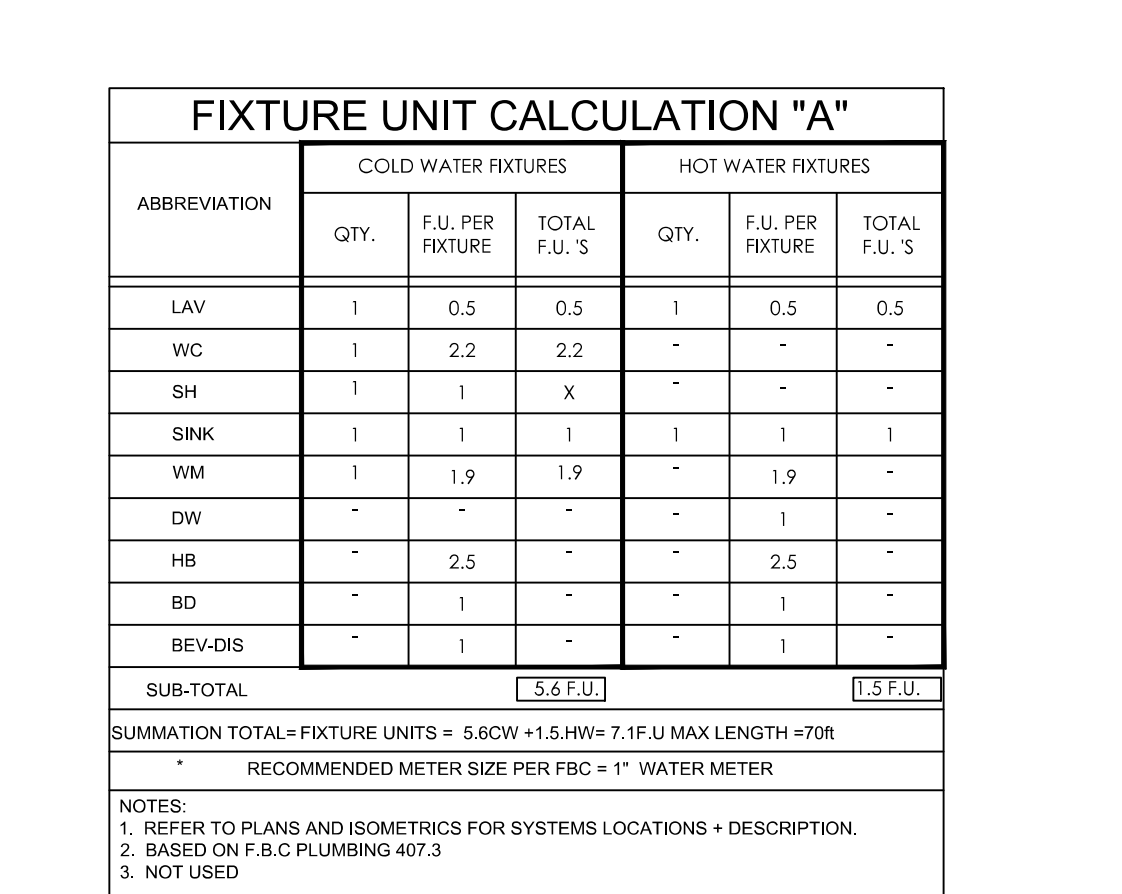
10 PLUMBING FIXTURE FITTING DETAIL
NTS



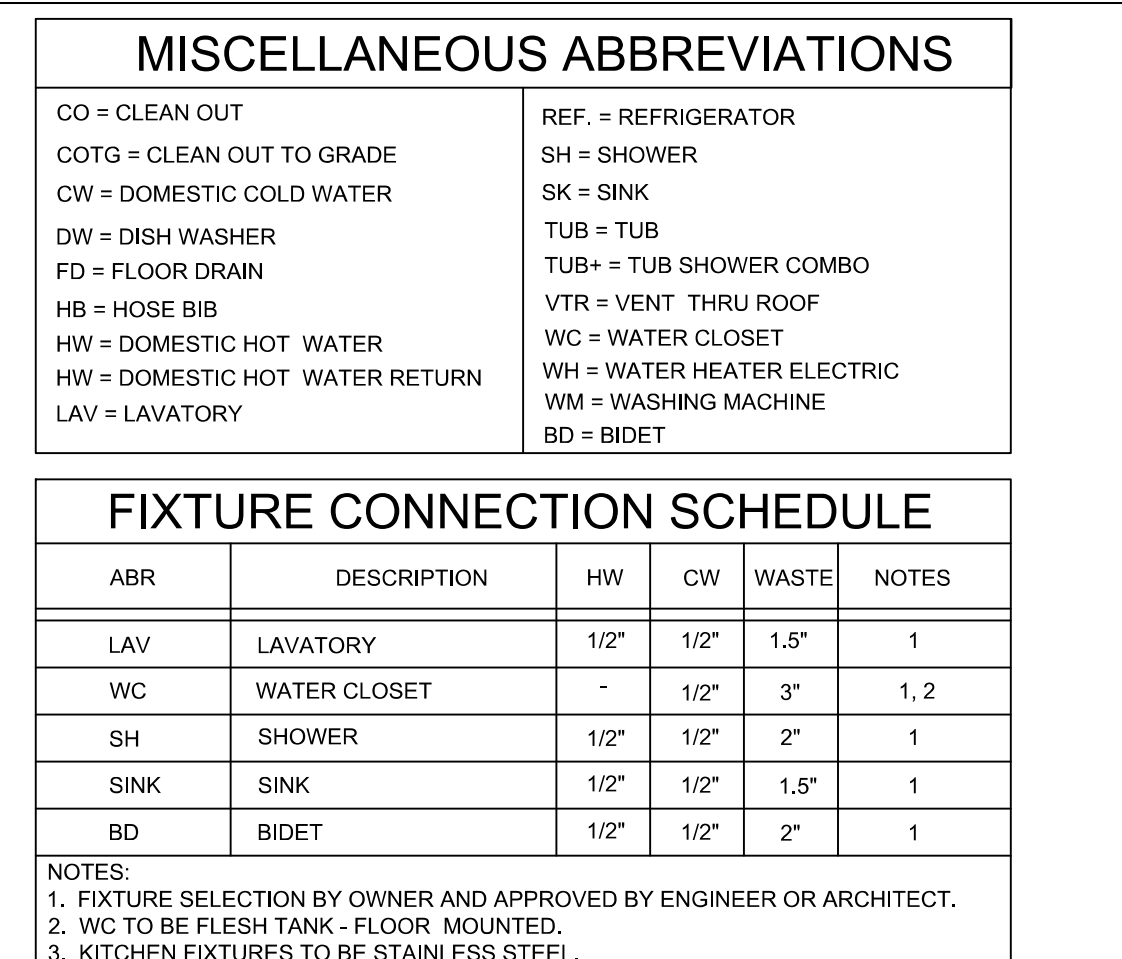
14 NTS



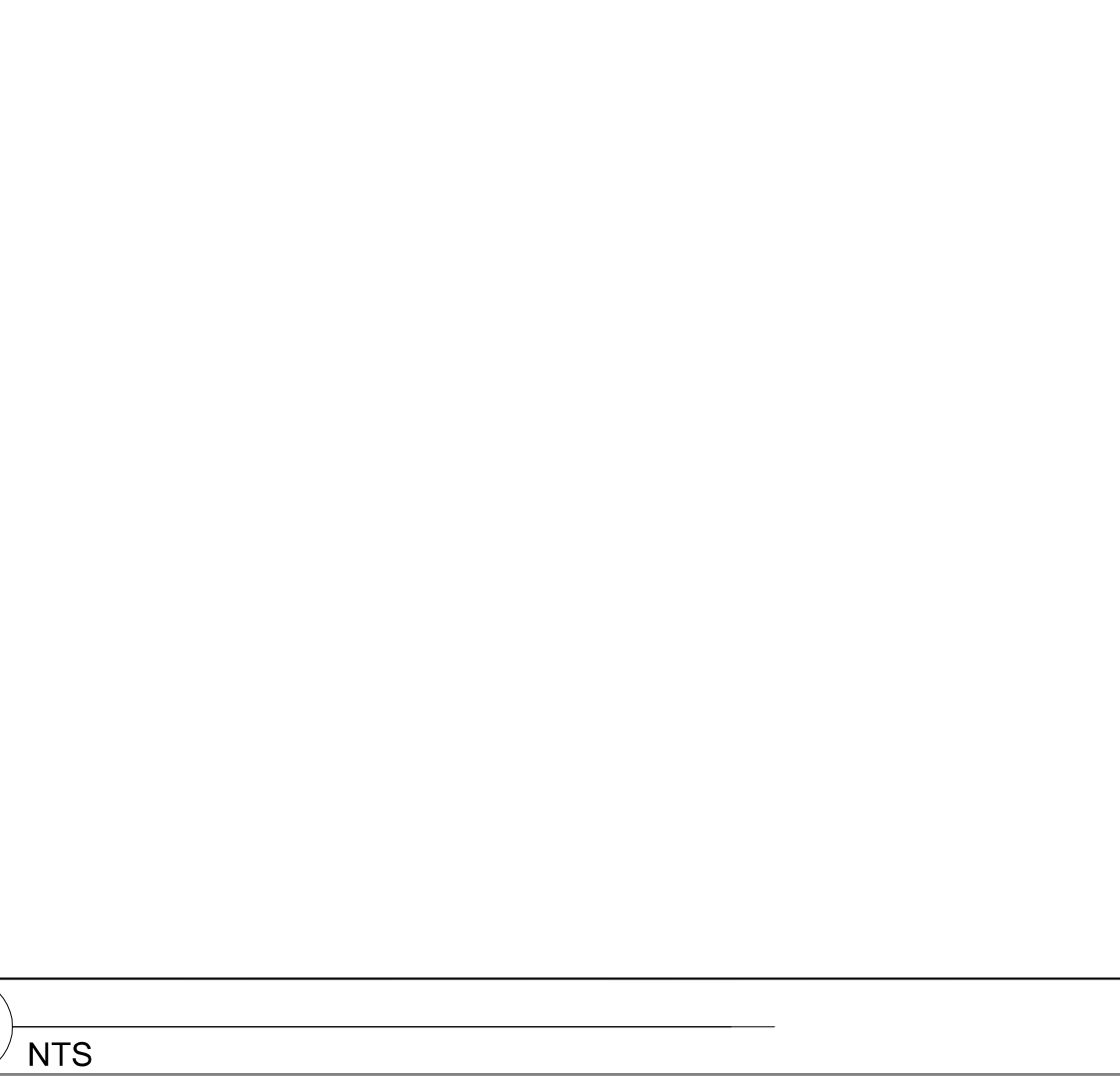
04 FLOOR CLEAN OUT INSTALLATION
NTS



08 FIXTURE UNIT CALCULATIONS DETAIL
NTS



11 MISCELLANEOUS ABBREVIATIONS/ FIXTURE CONNECTION
SCEDULE DETAIL



15 NTS

GENERAL PLUMBING NOTES

1. PLUMBING PIPING, MATERIALS AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE - PLUMBING AND ALL APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
2. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE, BECOMING THOROUGHLY FAMILIAR WITH ALL CONDITIONS. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACK FILL AS REQUIRED FOR INSTALLATION OF PLUMBING SYSTEM SHALL BE A PART OF THIS CONTRACT.
3. ALL MATERIALS SHALL BE NEW AND BARE STANDARD AND / OR TESTING LABELS AS APPLICABLE AND REQUIRED.
4. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1)YEAR FROM DATE OF OWNER ACCEPTANCE.
5. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC USABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
6. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TEST, PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
7. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
8. CONTRACTOR SHALL TEST PLUMBING SYSTEMS AS REQUIRED BY CODE AND REPORT FINDINGS TO OWNER.
9. CONTRACTOR SHALL COORDINATE EQUIPMENT CONNECTIONS WITH EQUIPMENT DRAWINGS AND SUPPLIER. INSTALL EQUIPMENT AND MAKE FINAL CONNECTIONS FURNISHING SHUT OF VALVES, P - TRAPS, AND ALL PIPING REQUIRED.
10. CONTRACTOR SHALL COORDINATE WITH ALL DISCIPLINES INVOLVED SO AS TO AVOID ANY PIPE ROUTING PROBLEMS.
11. CORRECTIONS OF ANY DEFECTS OR REPAIR OF UNACCEPTABLE WORKMANSHIP AND / OR MATERIALS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE TO OWNER AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
12. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
13. ALL WORK SHALL BE COORDINATED WITH THE OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION REPORT AND CONFLICT OR DISCREPANCY TO ARCHITECT PRIOR TO BEGINNING CONSTRUCTION. ARCHITECT DISPOSITION OF THE ISSUE WILL BE USED AND INSTALLED.
14. THE INSTALLATION OF ALL PLUMBING FIXTURES SHALL BE IN ACCORDANCE WITH FBC PLUMBING SECTION 405 FOR PROPER FIXTURE CLEARANCES. CONTRACTOR SHALL NOT INSTALL FIXTURES IN LOCATIONS OR SPACES NOT MEETING CODE MINIMUM STANDARD REFER TO ARCHITECTURAL FLOOR PLANS FOR PLUMBING FIXTURE LOCATIONS. NOTIFY ARCHITECT OF DISCREPANCY.
15. VERIFY LOCATION, SIZE, DIRECTION FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
16. WATER PIPING SHALL BE TYPE "L" COPPER (HARD DRAWN COPPER) WITH WROUGHT COPPER OR BRONZE FITTINGS AND 35-SOLDER JOINTS (LEAD FREE SOLDER JOINTS) ABOVE GRADE AND ON-GRADE FLOOR SLABS. ALL UNDERGROUND WATER PIPING SHALL BE TYPE "K" COPPER, UNDERGROUND WATER PIPING LOCATED BELOW FLOOR SLABS. SHALL BE TYPE "K" COPPER TUBING OF SUFFICIENT LENGTH SO THAT NO JOINTS ARE MADE BELOW FLOOR SLAB PROVIDE 1" INSULATION (CODE APPROVED) ON ALL BELOW GRADE PIPING AND HOT WATER PIPING ABOVE. FOAM CLASS FOR WALL PENETRATIONS.
17. SOIL, WASTE AND VENT PIPING SHALL BE PVC SCHEDULE 40 NO HUB WITH SOLVENT JOINTS, ASTM 02729, OR CAST IRON.
18. FURNISH AND INSTALL APPROVED SHOCK ARRESTORS (WATER HAMMER ARRESTORS) AT EACH PLUMBING FIXTURE WHERE QUICK CLOSING VALVES ARE UTILIZED. WATER HAMMER ARRESTORS SHALL BE ACCESSIBLE AND LOCATED WITHIN THE AFFECTED RANGE OF THESE VALVES PER PDL FURNISH AND INSTALL APPROVED SHOCK ARRESTORS ON MAIN LINES OR RISERS.
19. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS.
20. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATION PAD.
22. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM. TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS AS PART OF THE PLUMBERS WORK.
23. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1)YEAR FROM DATE OF OWNER ACCEPTANCE.
24. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND ALL WATER HAMMER ARRESTERS. ACCESS PANELS IN RATED WALLS SHALL MAINTAIN THE ASSEMBLY FIRE RATING AND SHALL MATCH THE WALL FINISH IN AREA IT IS INSTALLED.
24. PROVIDE CHROME PLATED OR CORROSION RESISTANT COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL WALL CLEANOUTS.
26. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
27. NO PERMITTED IN ELECTRICAL ROOMS; INCLUDING WATER, SANITARY OR DRAINAGE PIPING.
28. ALL CONTROL VALVES SHALL BE TAGGED AND MARKED A REPRODUCIBLE DIAGRAM LOCATING ALL VALVES SHALL BE PROVIDED FOR OWNER/OPERATOR.
29. ALL CONDENSATE DRAIN PIPING SHALL BE TYPE "L" COPPER WITH 1" THICK ARMAFLEX INSULATION WHERE USED IN A RETURN AIR PLENUM. PVC PIPING WITH 1" THICK ARMAFLEX INSULATION MAY BE USED IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. REFER TO PLUMBING DRAWINGS OR SIZE AND LOCATION PIPING.
30. PROVIDE ANGLE STOPS ON ALL WATER SERVICE UNES TO FIXTURES FOR INDIVIDUAL SHUT - OFF.
31. WATER PIPING INSULATION SHALL BE 1" THICK RAMAFLEX INSTALLED IN ACCORDANCE 24, WITH MANUFACTURERS INSTRUCTIONS FOR ALL HOT WATER AND RETURN PIPING WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION.
32. LAYOUT PIPES TO FALL (CONCEALED) WITHIN PARTITION WALL OR CHASES NOTIFY ARCHITECT IF ADDITIONAL PIPE SPACE IS REQUIRED. COORDINATE PIPE DROP WITH FOOTINGS, STRUCTURAL, STEEL FIRE WALLS, RATED WALLS, ETC., WHICH MAY FALL BELOW PARTITION WALL OR CHANCE. MAKE NECESSARY ADJUSTMENT TO PIPING TO AVOID CONFLICT WITH BUILDING OBSTRUCTIONS.
33. CONSULT WITH ARCHITECT AND CONTRACT DOCUMENTS FOR LOCATION OF ALL RATED WALLS, RATED CEILINGS, RATED FLOORS AND RATED ROOF AS OCCURRING. FURNISH AND INSTALL APPROPRIATED AND APPROVED FIRE BARRIER AT ALL THROUGH-WALL PENETRATIONS, WHERE AS INSTALLATION SHALL BE PER MANUFACTURERS SPECIFICATIONS.
34. DO NOT INSTALL PIPES WITHIN FIRE RATED WALLS ALL PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE SLEEVED AND/OR PATCHED AS DIRECTED BY THE SPECIFICATIONS. PATCHING SHALL MATCH FINISH, (SEE ARCH. DRAWINGS).
35. THE MAXIMUM WATER CONSUMPTION AND QUANTITIES FOR ALL PLUMBING FIXTURES AND FIXTURE FITTINGS SHALL BE IN ACCORDANCE WITH FBC PLUMBING TABLE 604.4.
36. PROVIDE VACUUM BREAKERS AND SHUTOFF AT EACH HOSE BIB.
37. DRAWINGS ARE DIAGRAMMATIC DO NOT SCALE FOR LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.

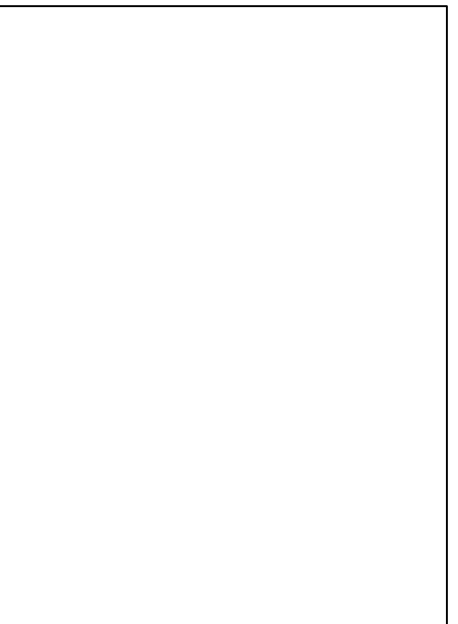
PLUMBING NOTES:

1. WC = 1.25 GALLON PER FLUSH MAX.
2. ALL SANITARY LINES SHALL BE SLOPED AS FOLLOWS:
 - 2" OR SMALLER SHALL BE SLOPED AT 1/4" PER FT.
 - 3" OR LARGER SHALL BE SLOPED AT 1/8" PER FT.
3. PROVIDE ANTI SCALD VALVES 120" MAX. AT ALL SHOWERS AND BATHTUBS.
4. PROVIDE 12" HIGH WATER HAMMER ARRESTING CHAMBER AT EACH FIXTURE GROUP.
5. PROVIDE GATE CONTROL VALVE @ EACH FIXTURE. HOSE BIB EVEN IF NOT INDICATED ON RISER OR ISOMETRIC. NO EXCEPTIONS (TYPICAL)
6. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS AND SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET (1829 MM) ABOVE THE FLOOR.
7. FOR WATER SERVICE SYSTEM SIZES UP TO AND INCLUDING 1 1/2" PRESSURE CONTROLLER DEVICE MUST BE INSTALLED
8. ALL DIMENSIONS IN ALL SHOWERS MUST COMPLY WITH FBC P2708
9. SHOWER LINER SLOPE MUST BE 1/4" PER FT

16 PLUMBING NOTES.
NTS

GCE
GANEM CONSULTING ENGINEERING
FL. CA. #31167 • FL. PE #74745
15805 Biscayne Blvd Suite 105
NORTH MIAMI BEACH, FL. 33160
TEL: (786) 916-6546
fax: (305) 848-9318
alioskar@ganemce.com

KEY PLAN



CONSULTING ENGINEER



ALIOSKAR GANEM P.E.
FL. LIC. No. 74745

PROJECT NAME:
ECODWELLING.LLC

(01)

PROJECT ADDRESS:

16400 NORTH WEST 15TH
AVENUE, MIAMI, FL
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P-2

GANEM CONSULTING ENGINEERING**C.A. 31187**

15805 Biscayne Blvd. Ste 105

North Miami Florida 33160

Phone (786) 916-6546

alioskar@ganemce.com

October 06, 2022

JOHN BONACCI

KARINS - Fort Lauderdale

5200 NW 33rd Avenue Suite 220

Fort Lauderdale, FL 33309

RE: ECO DWELLING, LLC

16400 NORTH WEST 15th Av

Miami Gardens, FL, 33169

LETTER OF COMPLIANCE 2020 FLORIDA BUILDING CODE, 7th EDITION

Dear Official:

I, Alioskar Ganem, a Professional Engineer with the State of Florida, hereby attest to the best of my knowledge, belief, and professional judgment, the structural and envelope components of the structure **ECODWELLING-01 (ECOTINY)** are in compliance with the Florida Building Code 2020 Edition, including the High Velocity Hurricane Zone of the Florida Building. Below, is a summary of FBC compliance for HVHZ.

2020 FBC Residential - 7 th EDITION		2020 FBC Building - 7 th EDITION			
SECTION	ELEMENT	HVHZ requirements CHAPTER	Section	COMPLIANCE	REMARKS
4401	Walls	14		NOA No.: 18-0123.03 (ref)	5V CRIMP metal panel
4402	Roofing	15		NOA No.: 18-0123.03 (ref)	5V CRIMP panel
4403	General	16	1616.3.1	verified	Allowable Deflection req roof & ceiling: L/360 floor member: L/360
					provided: L/600 provided: L/2000
			1620.2	verified	Wind Velocity req.: 175 mph
					Provided: 180 mph
			1620.3	verified	Exposure req min: C
					Provided: D
			1626.1	verified	windborne debris impact standards: See Section 1626.4 (3)
			1626.4(3)	See analysis below	Construction Assemblies <i>Deemed to Comply</i> with Section 1626
4408	Steel	22	2214.3	verified	<u>Standards</u> req: AISC, AISI, ASCE, ANSI/AWS, ASTM
4409	Wood	23	2322.2.3	verified	Nominal Thickness – Plywood Roof Sheathing
					req: 19/32" Provided: 19/32"
4410	Glass and glazing	24		NOA No.: 20-0113.02 (ref) FL # 29844_R1 (ref)	Fixed Window Door

FBC 1626.4 (3):

Construction Assemblies Deemed to Comply with Section 1626 (Impact Tests for Wind-Borne Debris):

"Exterior frame walls and roofs constructed in accordance with Chapter 22 (High-Velocity Hurricane Zones) of this code sheathed with a minimum 24-gage rib-deck-type material and clad with an approved wall finish".

HVHZ requirements CHAPTER	Section		COMPLIANCE	REMARKS
22	2205	Structural Steel		
	2205.1	General	verified	Structure meets with AISC 360 requirements
	2210	Cold Formed Steel		

GANEM CONSULTING ENGINEERING

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North Miami Florida 33160

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HVHZ requirements CHAPTER	Section		COMPLIANCE	REMARKS
	2210.1	General	verified	Side and End panels meet with AISI S100 requirements
	2216	Design loads		
	2216.1		verified	Design Loads meet with chapter 16
	2217	Minimum Thickness of Material		
	2217.1		verified	Side and End panels meet with AISI S100 requirements
	2222	Cold Formed Steel Construction		
	2222.1		verified	wall panels meet with AISI S100 requirements
	2222.3	Individual Structural Members	verified	All connections are welded providing positive attachment
	2222.4	Structural Sheets	verified	Panels were designed in accordance with AISI S310-16 (analytic method, which is virtually the same as that DDM)
	2222.4.3		verified	Metal siding is 14 Ga (>24 Ga)
	2222.4.4	Deflection	verified	$0.19" (L/C:D+0.60Wz) < L/240 \quad (L/240 = 8" = 0.40")$
	2222.4.5	FS = 2.50 (bending stress)	verified	Bending about the symmetric axis: $737 \text{ lb-in/in } (1.67/2.5) = 492 \text{ lb-in/in} > 119 \text{ lb-in/in} \text{ (ok !)}$ Bending about the centroidal axis perpend to axis of symmetric: $836 \text{ lb-in/in } (1.67/2.5) = 558 \text{ lb-in/in} > 411 \text{ lb-in/in} \text{ (ok !)}$
	2222.6	Protection Metal		Metal panel is 14 Ga > 20 gauge

If you have any questions, or need any additional information relating to this project, please do not hesitate to contact me.

Regards,



Alioskar Ganem
FI Lic 74745

Alioskar
Ganem
Osorio

Digitally signed by
Alioskar Ganem
Osorio
Date: 2022.10.07
12:26:48 -04'00'