

July 15, 2026

Manufactured Housing / Factory Built Housing
Division of Codes and Standards
CA Department of Housing & Community Development
PO Box 278180 / Sacramento, CA 95827-8180
(Mailing)

RE: Factory Built Housing Program
 Approval #R-22348
 Expiration Date – 07-14-2029

To whom it may concern:

Architectural Testing, Inc. (Intertek-ATI, Inc.), part of Intertek Building Science Solutions, has completed an engineering code review for the above-referenced document(s) for compliance with all applicable codes, as evidenced by the Intertek, Inc. approval stamp on each page. This approval covers the factory-built structure only—any alterations to the factory-built structure on-site void the approval. Items installed on-site are subject to review and approval by the local authority. A signed and sealed plan set is on file with Intertek and the client.

Please contact our office if you need further information or assistance. Thank you.

Respectfully submitted,

William Tegeler

William Tegeler
Plan Review Manager
Building Science Solutions

^[1] Intertek is a brand name representing the Intertek Group plc legal entities, including but not limited to, Intertek Testing Services NA Inc., Professional Service Industries, Inc. ("INTERTEK-PSI"), Architectural Testing Inc. ("INTERTEK-ATI"), and MT Group Inc. ("INTERTEK-MT")

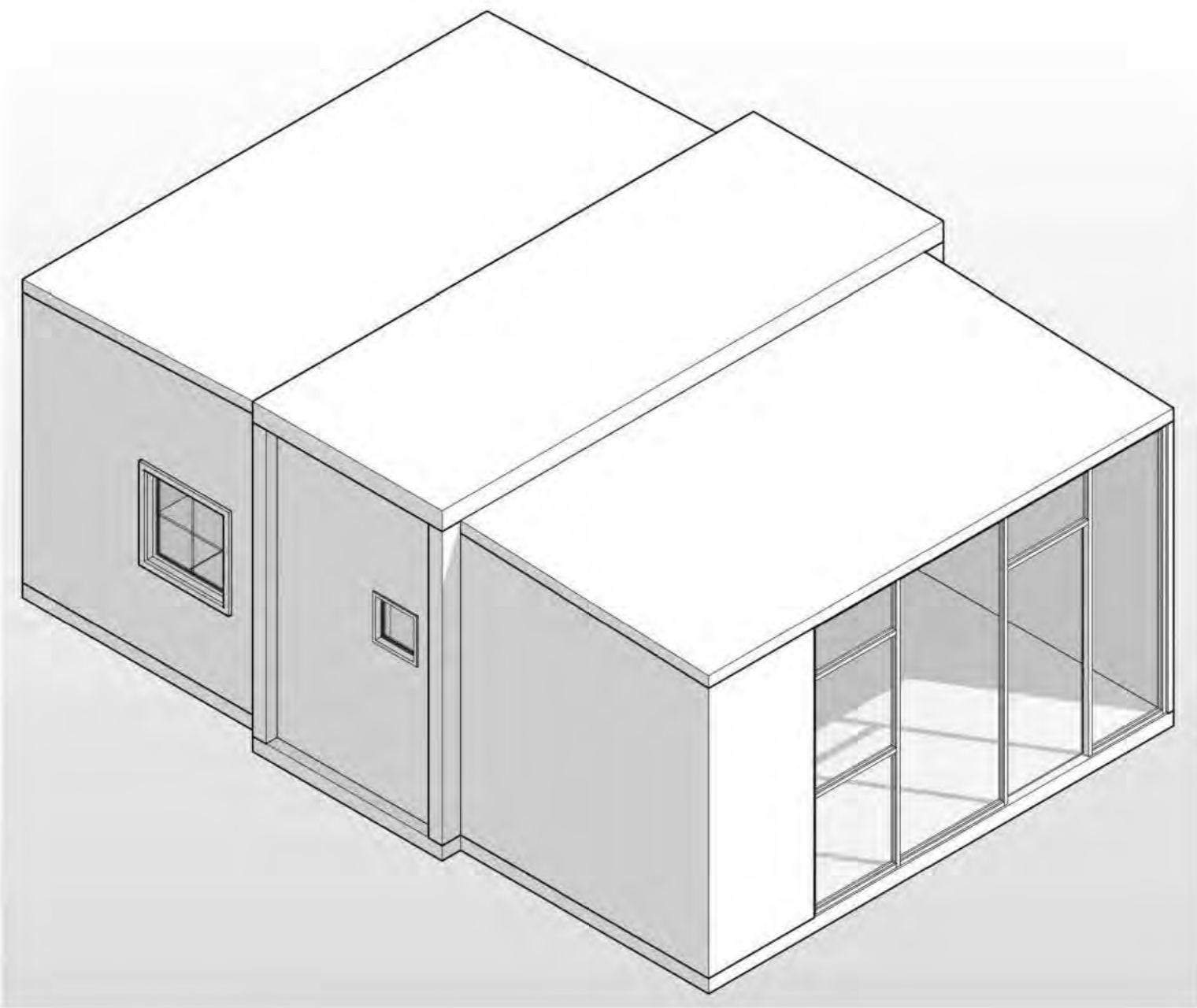


1L PREFAB MODULAR HOUSE

[ONE-BEDROOM ADU WITH KITCHEN ON LEFT SIDE]

WUI COMPLIANCE STATEMENT

THIS PROJECT IS LOCATED WITHIN A DESIGNATED WILDLAND-URBAN INTERFACE AREA. ALL EXTERIOR MATERIALS, PRODUCTS, AND ASSEMBLIES SHALL COMPLY WITH THE WILDLAND-URBAN INTERFACE REQUIREMENTS OF THE CALIFORNIA RESIDENTIAL CODE AND ALL APPLICABLE LOCAL AMENDMENTS. REQUIRED WILDLAND-URBAN INTERFACE PRODUCT LISTINGS AND APPROVALS SHALL BE PROVIDED TO THE AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION.



SCHEMATIC 3D VIEW

MANUFACTURER INFORMATION

MANUFACTURER: GUANGZHOU ZHONGLIAN STEEL STRUCTURE CO., LTD.
ADDRESS: 260 METERS NORTH OF XINSHUO NEW BUILDING MATERIALS CO., LTD., XIXINDIAN TOWNSHIP, BOTOU CITY, CANGZHOU CITY, HEBEI PROVINCE

FACTORY GENERAL MANAGER: ZHENG CHAORONG
CONTACT EMAIL: GZHRHOUSE@GMAIL.COM
PHONE NUMBER: 86 15011966448

QA CONTACT: ZHENG CHAORONG
CONTACT EMAIL: GZHRHOUSE@GMAIL.COM
PHONE NUMBER: 86 15011966448

CODE COMPLIANCE

1. ALL WORK SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL BUILDING CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO:

- 2025 CALIFORNIA BUILDING STANDARDS CODE
- 2025 CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1)
- 2025 CALIFORNIA BUILDING CODE (CBC)
- 2025 CALIFORNIA RESIDENTIAL CODE (CRC)
- 2025 CALIFORNIA ELECTRICAL CODE (CEC)
- 2025 CALIFORNIA MECHANICAL CODE (CMC)
- 2025 CALIFORNIA PLUMBING CODE (CPC)
- 2025 CALIFORNIA ENERGY CODE (TITLE 24, PART 6)
- 2025 CALIFORNIA FIRE CODE (CFC)
- 2025 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

IN ADDITION, ALL WORK SHALL ADHERE TO ANY LOCAL ORDINANCES AND AMENDMENTS SPECIFIC TO THE PROJECT'S JURISDICTION.

2. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS & CERTIFICATES FROM LOCAL BUILDING AUTHORITIES AND ENSURE COMPLIANCE WITH ZONING, PROPERTY, AND UTILITY REQUIREMENTS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY MEASURES, INCLUDING SHORING, BRACING, AND OSHA COMPLIANCE. ALL CONSTRUCTION MEANS, METHODS, AND PROCEDURES SHALL FOLLOW INDUSTRY STANDARDS.
4. ALL DIMENSIONS ARE TO THE FACE OF STUD, CONCRETE, OR MASONRY UNLESS NOTED OTHERWISE. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND REPORT DISCREPANCIES BEFORE WORK BEGINS.
5. THE CONTRACTOR SHALL LOCATE & PROTECT ALL UTILITIES, WHETHER INDICATED ON THE PLANS OR NOT. ANY DAMAGE SHALL BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. ALL MODIFICATIONS OR REVISIONS MUST BE APPROVED BY THE ARCHITECT & BUILDING OFFICIAL. PRODUCT SUBSTITUTIONS MUST MATCH OR EXCEED PERFORMANCE REQUIREMENTS AND BE APPROVED BEFORE INSTALLATION.
7. ALL MATERIALS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. SPECIFIC DRAWING DETAILS TAKE PRECEDENCE OVER GENERAL NOTES. WHERE DETAILS ARE NOT PROVIDED, CONSTRUCTION SHALL FOLLOW SIMILAR WORK ON THE PROJECT.
8. THE CONTRACTOR SHALL IMPLEMENT STORMWATER POLLUTION PREVENTION & WASTE MANAGEMENT MEASURES AS REQUIRED BY LOCAL ENVIRONMENTAL REGULATIONS.
9. THE CONTRACTOR SHALL SCHEDULE & PASS ALL REQUIRED INSPECTIONS AND COORDINATE WITH UTILITY PROVIDERS FOR SERVICE INSTALLATIONS.

SCOPE OF FACTORY AND SITE WORK

FACTORY SCOPE (MANUFACTURER):
ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING WORK WITHIN THE MODULES. WORK IS FABRICATED AND INSPECTED UNDER THE APPLICABLE STATE PROGRAM.

SITE SCOPE (LOCAL JURISDICTION):
FOUNDATION, UTILITY SERVICE CONNECTIONS FOR WATER, SEWER, GAS, AND ELECTRIC, FINAL MODULE SETTING, EXTERIOR CLADDING INSTALLATION (STUCCO OR FIBER-CEMENT SIDING), AND RELATED SITE WORK. ALL ITEMS ARE SUBJECT TO LOCAL APPROVAL AND INSPECTIONS.

FIRE SPRINKLER DEFERRED SUBMITTAL

FIRE SPRINKLER DESIGN AND CALCULATIONS, SHALL BE PROVIDED AS A DEFERRED SUBMITTAL ON SITE BY OTHERS

COMPONENT AND CLADDING DESIGN WIND PRESSURES

PER STRUCTURAL CALCULATIONS (ASCE 7-22)
BASIC WIND SPEED = 100 MPH
EXPOSURE C
RISK CATEGORY II
ENCLOSED BUILDING

PRESSURES SHOWN ARE BASED ON AN EFFECTIVE WIND AREA OF ≤10 SF (CONSERVATIVE).

- ROOF ZONE 1:** +8.8 / -34.5 PSF
- ROOF ZONE 2:** +8.8 / -45.5 PSF
- ROOF ZONE 3:** +8.8 / -62.0 PSF
- WALL ZONE 4:** +19.8 / -21.5 PSF
- WALL ZONE 5:** +19.8 / -26.4 PSF

REFER TO MANUFACTURER'S PRODUCT APPROVAL FOR COMPLIANCE WITH REQUIRED DESIGN PRESSURES AND APPLICABLE WIND ZONES.

PROJECT INFORMATION

ADDRESS	9744 WILSHIRE BLVD STE 203, BEVERLY HILLS, CA 90212
ASSESSOR'S PARCEL NUMBER	4328-009-021
LOT SIZE	14,029 SF (0.322 ACRES)
LEGAL DESCRIPTION	TRACT # 6648 LOTS 38 AND LOT 39

PROJECT TEAM

OWNER	---
DEVELOPER	ADU BY CASDEN DEVELOPMENT, LLC ARIK CASDEN ARIK@CASDENDEVELOPMENT.COM

DESIGN CRITERIA (PER STRUCTURAL)

OCCUPANCY USE GROUP	RESIDENTIAL
CONSTRUCTION TYPE	STEEL FRAMING SYSTEM
WIND SPEED	100 MPH
WIND EXPOSURE CATEGORY	C
SEISMIC SITE CLASS	D (VS30 = 260 M/S)
SEISMIC DESIGN CATEGORY	E
ROOF LIVE LOAD	20.1 PSF
ROOF DEAD LOAD	5.2 PSF
FLOOR LIVE LOAD	41.8 PSF
FLOOR DEAD LOAD	10.4 PSF

DRAWING LIST

ARCHITECTURAL	
A1.0	TITLE SHEET
A1.1	GENERAL NOTES
A2.1	FLOOR PLAN
A3.1	EXTERIOR ELEVATIONS & SECTIONS
STRUCTURAL	
S-0	GENERAL NOTES & REQUIREMENTS & DETAILS
S-1	FLOOR & ROOF FRAMING PLANS
S-2	STRUCTURAL ELEVATIONS
MEP	
M1.0	MECHANICAL FLOOR PLAN, SCHEDULES, AND NOTES
P1.0	PLUMBING LEGEND SCHEDULES, AND NOTES
P2.0	PLUMBING DOMESTIC WATER AND SEWER FLOOR PLAN
P3.0	PUMBING RISER DIAGRAMS
P4.0	PLUMBING DETAILS
E0.1	ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
E0.2	ELECTRICAL SPECIFICATIONS
E1.0	ELECTRICAL POWER AND LIGHTING PLAN
E2.0	ELECTRICAL SINGLE LINE DIAGRAM AND PANEL SCHEDULES
E3.0	ELECTRICAL DETAILS

SCALE NOTE

WRITTEN DIMENSIONS SHALL GOVERN OVER SCALE. ALL PLANS MUST BE REVIEWED AND APPROVED BY THE APPROPRIATE CITY OR COUNTY AUTHORITIES.



Approved for Factory Built Housing Only

Approved by: State of California

Factory Built Housing - DAA #DF1507648

Intertek (Intertek-ATI)

Plan Approval: #R-22348

Approval Date: 2026-07-15

Expiration Date: 2029-07-14

Without Foundation / Site Work Approval

1748 33rd Street
Orlando, FL 32835

1L PREFAB MODULAR HOUSE
[ONE-BEDROOM ADU WITH KITCHEN ON LEFT SIDE]

9744 WILSHIRE BLVD, STE 203,
BEVERLY HILLS, CA 90212

03/17/2026

REVISIONS

NO.	DESCRIPTION	DATE
1	PLAN REVIEW #1	10/09/2025
2	PLAN REVIEW #2	02/20/2026

DEVELOPER

ADU BY CASDEN DEVELOPMENT, LLC
ARIK CASDEN
ARIK@CASDENDEVELOPMENT.COM

TITLE SHEET

A1.0

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DEVELOPER

ADU BY CASDEN DEVELOPMENT, LLC

ARIK CASDEN

ARIK@CASDENDVELOPMENT.COM

FLOOR PLAN

A2.1

SHEET NO.

© 2025

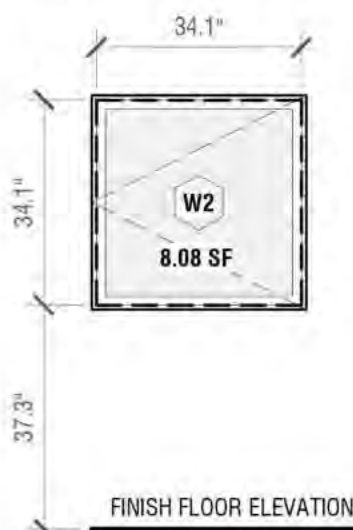
DOOR SCHEDULE							
NO.	OPERATION	LOCATION	WIDTH	HEIGHT	TEMPERED	U-FACTOR	SHGC
D1	SWING	LIVING ROOM	36.22"	90.55"	YES	0.30	0.18
D2	SWING	BATH 1	27.55"	78.74"	N/A	N/A	N/A
D3	SWING	BEDROOM 1	33.86"	78.74"	N/A	N/A	N/A

WINDOW SCHEDULE								
NO.	OPERATION	LOCATION	WIDTH	HEIGHT	HEAD HEIGHT	TEMPERED	U-FACTOR	SHGC
W1	FIXED	BATH 1	19.69"	19.69"	78.74"	YES	0.30	0.18
W2	CASEMENT	BEDROOM 1	36.61"	36.61"	72.61"	NO	0.30	0.18
W3	SLIDING	BEDROOM 1	36.61"	36.61"	72.61"	NO	0.30	0.18

SAFETY GLAZING SHALL COMPLY WITH CRC SECTION R308 AND CRC SECTION 2406

- IN ALL DOORS AND SHOWER OR TUB ENCLOSURES
- IN GLAZING WITHIN 24" OF THE VERTICAL EDGE OF A DOOR IN THE CLOSED POSITION WHEN THE BOTTOM EXPOSED EDGE IS LESS THAN 60" ABOVE THE WALKING SURFACE
- IN BATHING AREAS WHERE GLAZING IS WITHIN 60" HORIZONTALLY OF A TUB OR SHOWER AND THE BOTTOM EXPOSED EDGE IS LESS THAN 60" ABOVE THE STANDING SURFACE
- SAFETY GLASS SHALL BE TEMPERED OR LAMINATED AND PERMANENTLY MARKED AS SAFETY GLAZING

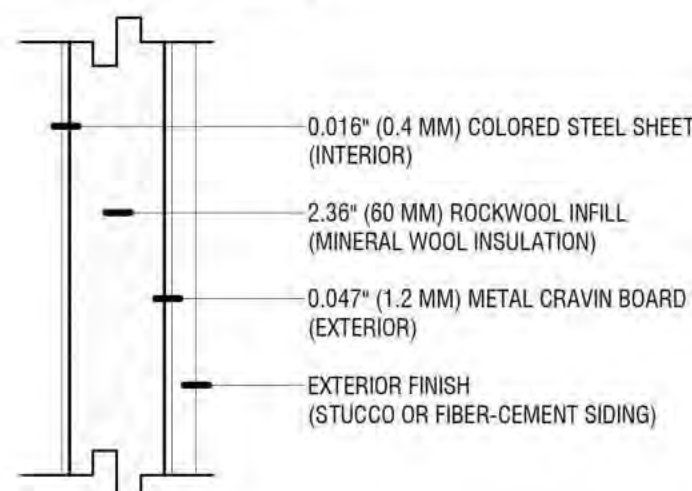
EGRESS WINDOW COMPLIANCE



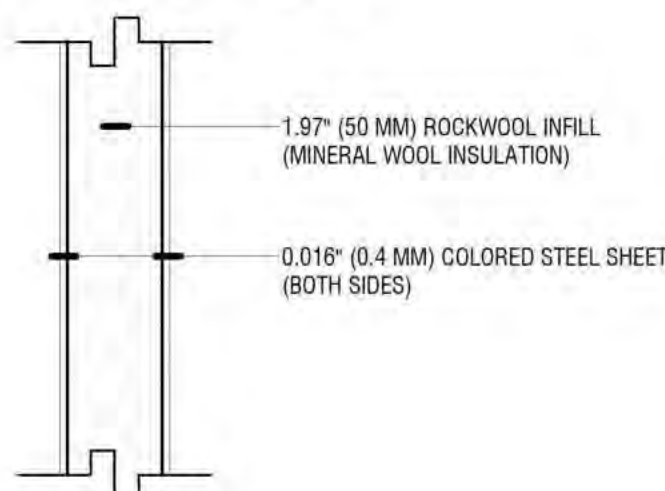
EGRESS WINDOW SHALL COMPLY WITH CBC SECTION 1030 AND CRC SECTION R310.2.

- MINIMUM NET CLEAR OPENING: 5.7 SQ.FT.
- MINIMUM CLEAR OPENING HEIGHT: 24"
- MINIMUM CLEAR OPENING WIDTH: 20"
- MAXIMUM SILL HEIGHT: 44" ABOVE FINISHED FLOOR
- WINDOW SHALL BE OPERABLE FROM INSIDE WITHOUT KEY, TOOL, OR SPECIAL KNOWLEDGE
- OPENING SHALL BE UNOBSTRUCTED WHEN FULLY OPEN

EXTERIOR WALL - WALL TYPE A



PARTITION WALL - WALL TYPE B



FINAL EXTERIOR FINISH TO BE INSTALLED ON SITE PER LOCAL JURISDICTION SCOPE.

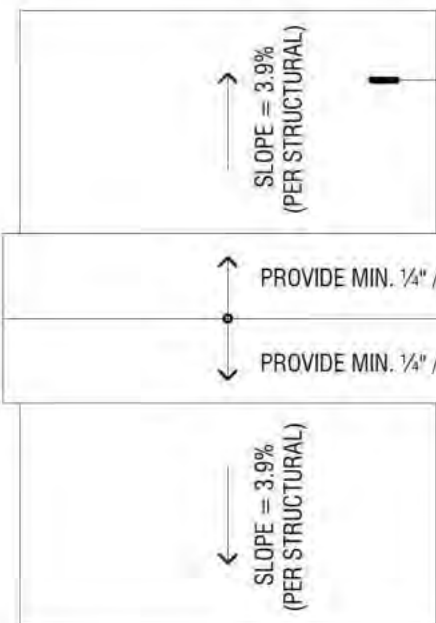
- OPTION A: 3-COAT STUCCO SYSTEM OVER WRB AND METAL LATH
- OPTION B: FIBER-CEMENT SIDING OVER WRB AND FURRING CHANNELS

INSULATION REQUIREMENTS

PROVIDE ROCKWOOL INSULATION PER TITLE 24

FLOOR FINISH (INTERIOR)

- SPC (STONE-PLASTIC COMPOSITE) LOCKING FLOORING SYSTEM
- WATERPROOF AND SLIP-RESISTANT
- FINAL MATERIAL AND COLOR TO BE SELECTED FROM MANUFACTURER'S STANDARD COLOR RANGE



ROOF MATERIAL

FACTORY-INSTALLED METAL PANEL SYSTEM WITH INSULATED CORE.
ALL SEAMS AND PENETRATIONS SHALL BE SEALED AND WATERTIGHT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND CRC R303.
PROVIDE COATING OR MEMBRANE AS REQUIRED FOR MOISTURE PROTECTION AND TITLE 24 ENERGY COMPLIANCE

2 ROOF PLAN

1/8" = 1'-0"

1 FLOOR PLAN

1/2" = 1'-0"

ELECTRICAL DESIGN BY SEPARATE PACKAGE

ELECTRICAL DESIGN, CALCULATIONS, ONE LINE DIAGRAMS, PANEL SCHEDULES, AND LIGHTING AND POWER LAYOUTS ARE PROVIDED UNDER A SEPARATE ELECTRICAL PACKAGE.
REFER TO THE ELECTRICAL PACKAGE FOR ALL ELECTRICAL DESIGN AND COMPLIANCE. ON SITE ELECTRICAL SERVICE CONNECTIONS ARE SUBJECT TO REVIEW AND INSPECTION BY THE LOCAL AUTHORITY HAVING JURISDICTION

LIGHTING & VENTILATION (BEDROOM 1)

ROOM AREA = 180 SF
LIGHTING REQUIRED (8%) = 12.8 SF
VENTILATION REQUIRED (4%) = 6.4 SF

GLAZING PROVIDED = 13.7 SF > 12.8 SF ✓
OPERABLE AREA = 11.3 SF > 6.4 SF ✓

LIGHTING & VENTILATION (LIVING ROOM)

ROOM AREA = 208 SF
LIGHTING REQUIRED (8%) = 16.6 SF
VENTILATION REQUIRED (4%) = 8.3 SF

GLAZING PROVIDED = 124.1 SF > 34.3 SF ✓
OPERABLE AREA = 22.8 SF > 17.2 SF ✓

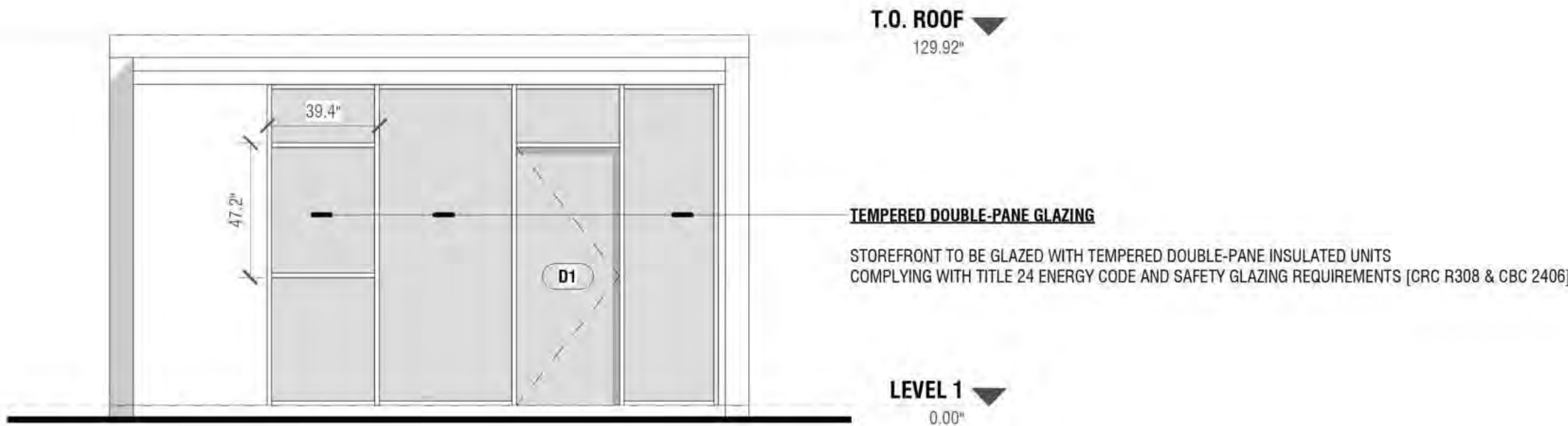
TEMPERED DOUBLE-PANE GLAZING

STOREFRONT TO BE GLAZED WITH TEMPERED DOUBLE-PANE INSULATED UNITS
COMPLYING WITH TITLE 24 ENERGY CODE AND SAFETY GLAZING REQUIREMENTS [CRC R308 & CBC 2406]

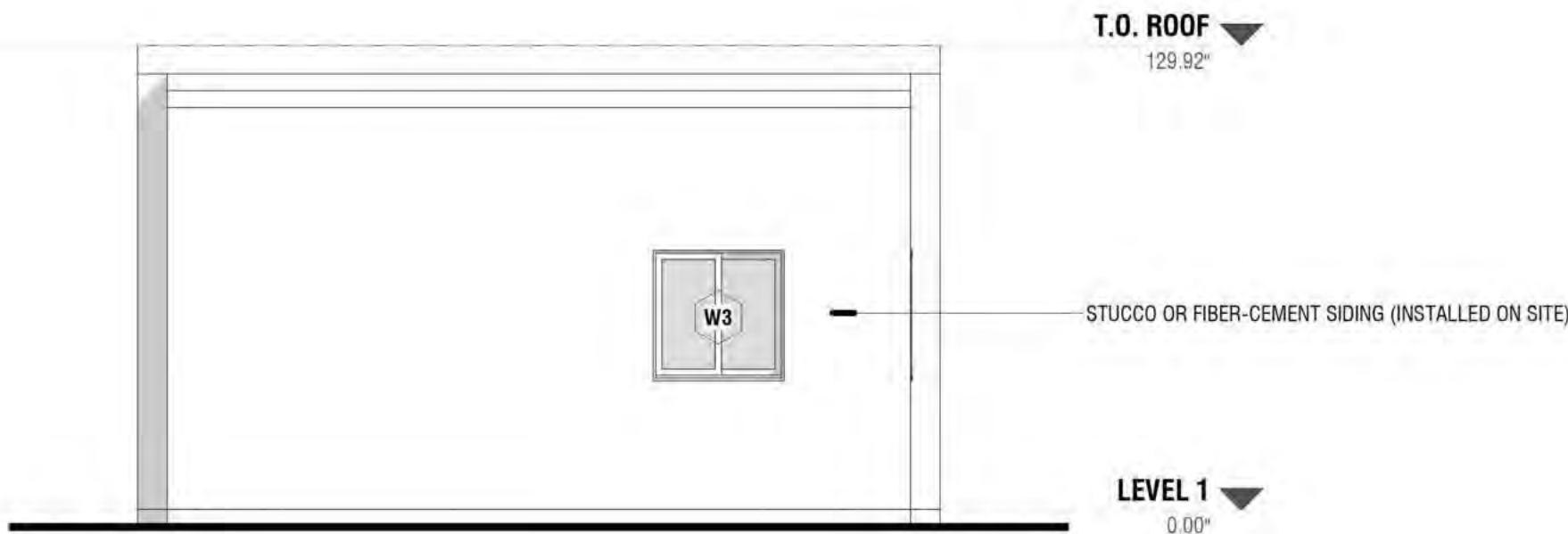
ELEVATION NOTES

EXTERIOR WALL PANEL FINISH
COLOR-COATED STEEL SANDWICH PANELS WITH ROCKWOOL CORE. FINISH TO BE SELECTED FROM MANUFACTURER'S STANDARD OPTIONS INCLUDING WOOD GRAIN, STONE TEXTURE, OR SOLID COLORS.

OPTIONAL UPGRADE – CURVED METAL FACADE PANELS
DECORATIVE CURVED METAL PANELS AVAILABLE AT ADDITIONAL COST. TEXTURE AND COLOR OPTIONS INCLUDE FAUX MARBLE, BRICK, WOOD, AND STONE FINISHES. FINAL SELECTION SUBJECT TO CLIENT APPROVAL.

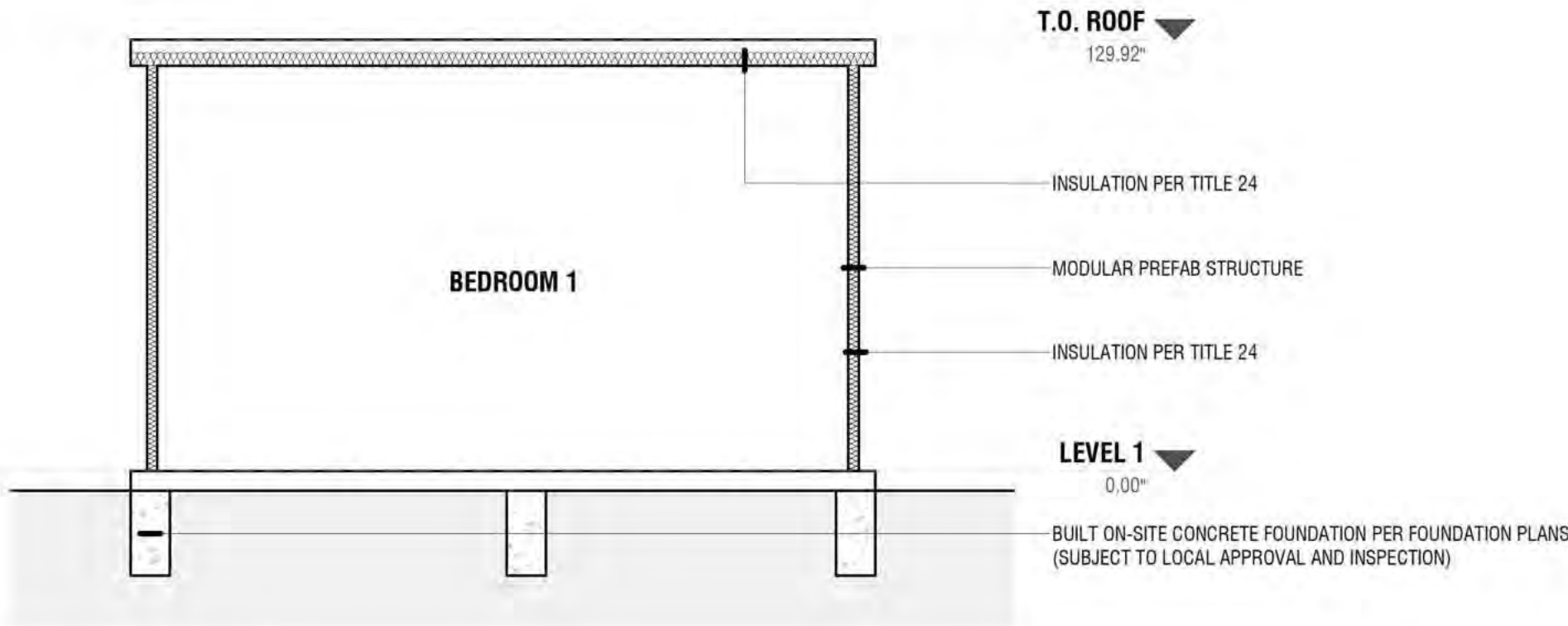


1 FRONT ELEVATION
1/4" = 1'-0"

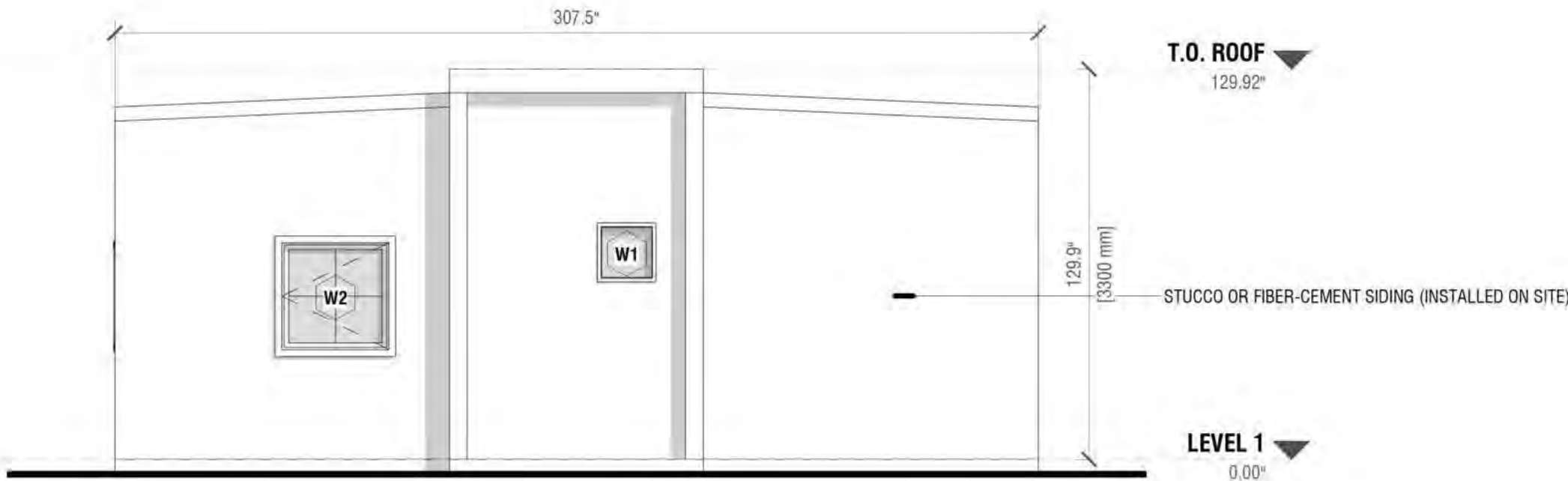


3 REAR ELEVATION
1/4" = 1'-0"

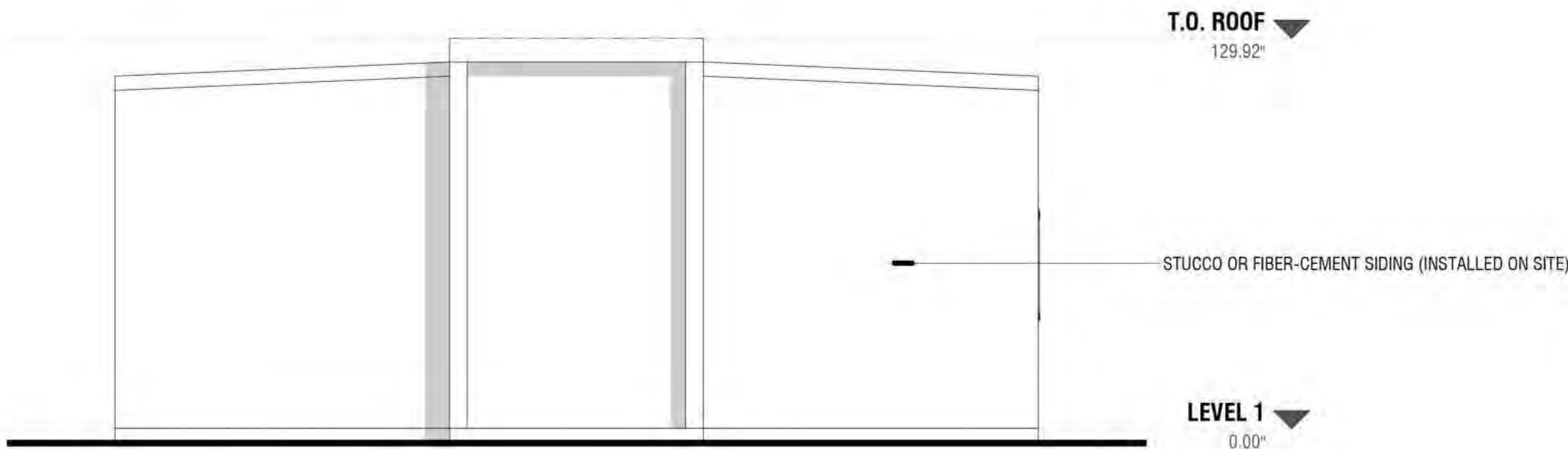
FOUNDATION AND ALL SITE WORK ARE SUBJECT TO REVIEW AND INSPECTION BY THE LOCAL AUTHORITY HAVING JURISDICTION



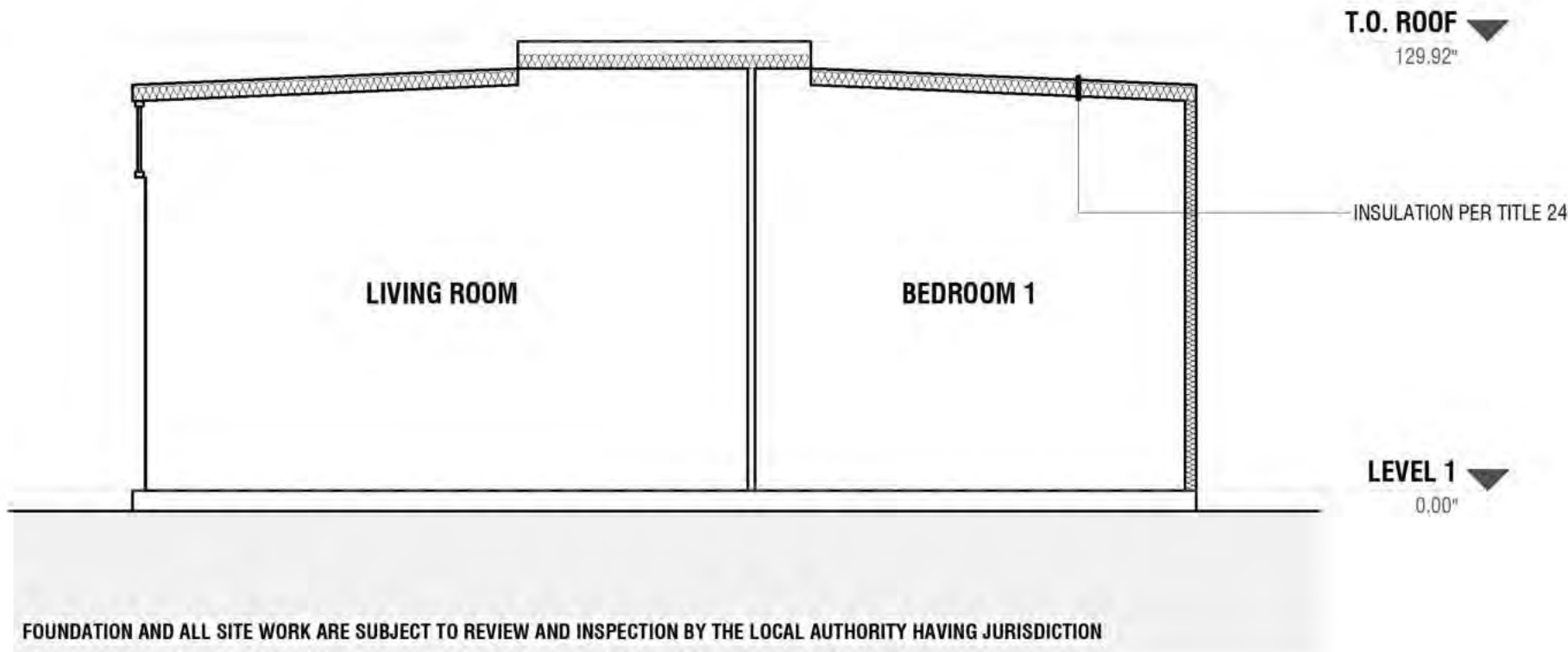
5 BUILDING SECTION 1
1/4" = 1'-0"



2 LEFT ELEVATION
1/4" = 1'-0"



4 RIGHT ELEVATION
1/4" = 1'-0"



6 BUILDING SECTION 2
1/4" = 1'-0"

SCALE NOTE

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DEVELOPER

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ARIK CASDEN
ARIK@CASDENDVELOPMENT.COM

EXTERIOR ELEVATIONS &
SECTIONS

A3.1

22 05 00 - COMMON WORK RESULTS FOR PLUMBING

1. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. REFER TO CODES AND STANDARDS REFERENCED UNDER MECHANICAL SPECIFICATIONS.
2. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATION SHOWN. WHERE INTERFERENCES WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTS AND LOCATIONS THAT VARY FROM THOSE SHOWN, NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.
3. ALL DRAWINGS AND SPECIFICATIONS (INCLUDING ARCHITECTURAL, MECHANICAL, PLUMBING, ETC.) ARE DEVELOPED TO BE AN INCLUSIVE SET. ANY CONFLICTS WITHIN SHALL BE BROUGHT TO THE DESIGN TEAM'S ATTENTION. CONTRACTOR SHALL NOT MAKE ANY CHANGES TO THE DESIGN OR CONTRACT WITHOUT WRITTEN CONSENT FROM THE OWNER.
4. ALL PRODUCTS SHALL COMPLY WITH 25/50 FLAME AND SMOKE HAZARD RATINGS PER ASTM E-84, NFPA 225, AND UL 723.
5. PENETRATIONS BETWEEN NON-CONDITIONED AND CONDITIONED SPACES SHALL BE SEALED TO ELIMINATE MOISTURE MITIGATION, SUCH AS BETWEEN INSIDE AND OUTSIDE BUILDINGS, NON-CONDITIONED BOILER ROOMS, INTO REFRIGERATORS/FREEZERS, ETC. SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS, AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR, OR CEILING.
6. PLUMBING MATERIAL AND EQUIPMENT: NO MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, OR EQUIPMENT SHALL BE SOLD OR INSTALLED IN THE CITY UNLESS THEY ARE IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE, THE LAWS OF THE STATE OF TEXAS AND APPLICABLE RULES AND REGULATIONS ISSUED UNDER THE AUTHORITY OF THAT STATE STATUTES. THE MAKER'S NAME, TRADEMARK, OR OTHER IDENTIFICATION SYMBOL, SHALL BE PLACED ON ALL ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, AND EQUIPMENT USED OR INSTALLED UNDER THE PROVISIONS OF THIS CODE. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE INTENDED USE AND SHALL BE INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY.

23 08 00 - COMMISSIONING REQUIREMENTS (PLUMBING)

1. COMMISSIONING AGENT:
 - 1.1. THE OWNER'S PROJECT MANAGER OR OTHER PERSON DESIGNATED SHALL FUNCTION AS THE COMMISSIONING AGENT (CA) FOR THIS PROJECT.
2. SUBMITTALS
 - 2.1. IN ORDER TO OBTAIN OFFICIAL APPROVAL, PRIOR TO ORDERING OF EQUIPMENT, CONTRACTOR SHALL PROVIDE THE CA WITH MANUFACTURER'S SUBMITTAL DATA ON ALL NEW EQUIPMENT TO BE FURNISHED. PRE-CONSTRUCTION SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, SHOP DRAWINGS AND INSTALLATION MANUALS. PROVIDE SUBMITTALS FOR THE FOLLOWING MAJOR COMPONENTS AND EQUIPMENT PRIOR TO ORDERING:
 - 2.1.1. PLUMBING FIXTURES
 - 2.1.2. PLUMBING FIXTURE ACCESSORIES
 - 2.1.3. FAUCETS
 - 2.1.4. VALVES
 - 2.1.5. WATER HEATERS
3. FIELD INSPECTIONS
 - 3.1. WHERE REQUIRED BY CA, COORDINATE FIELD INSPECTIONS OF CRITICAL CONSTRUCTION DETAILS FOR APPROVAL, PRIOR TO PROCEEDING WITH ADDITIONAL WORK. AT A MINIMUM, FIELD INSPECTIONS SHALL INCLUDE PIPING SYSTEM STARTUP AND TESTING, EQUIPMENT STARTUP AND TESTING, OPERATIONS, AND MAINTENANCE TRAINING.
4. START UP AND TESTING
 - 4.1. PRESSURE TEST THE WASTE / VENT PIPING SYSTEM BY PLUGGING BUILDING MAIN DRAIN CONNECTION TO SEWER, AND FILLING ENTIRE SYSTEM FULL OF WATER FROM LOWEST POINT TO HIGHEST POINT.
 - 4.2. PRESSURE TEST THE POTABLE WATER SYSTEMS TO MINIMUM OF 60 PSIG, USING POTABLE WATER OR AIR, FOR A MINIMUM OF 60 MINUTES WITHOUT LEAKS. FLUSH TO REMOVE DEBRIS AND PROVIDE DISINFECTION AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
 - 4.3. FOLLOW ALL EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS TO PROVIDE COMPLETE START UP AND TESTING OF NEW PLUMBING EQUIPMENT. MAKE MODIFICATION ADJUSTMENTS AS REQUIRED TO MEET PERFORMANCE SPECIFICATIONS ON PLANS. PROVIDE THE CA WITH COMPLETED MANUFACTURER'S START UP SHEETS AS RECORD OF SUCCESSFUL INSTALLATION.

22 10 00 - PLUMBING PIPING SYSTEMS

- GENERAL PIPING SYSTEMS
1. ALL PACKAGED EQUIPMENT SHALL BE INDEPENDENTLY THIRD PARTY LABELED AS A SYSTEM FOR ITS INTENDED USE BY A (UL) IN ACCORDANCE WITH OSHA FEDERAL REGULATIONS, AS WELL AS A NFPA PAMPHLET NO. 70, AND THE NATIONAL ELECTRICAL CODE (NEC).
2. ALL SYSTEMS SHALL BE A COMPLETE AND OPERABLE SYSTEM. PROVIDE THE NECESSARY ADAPTORS, FITTINGS, VALVES, TRAPS, GAUGES, STRAINERS, UNION, ETC. PROVIDE COMPLETE WITH BASES, ISOLATORS, SUPPORTS, AND OTHER REQUIRED ACCESSORIES.
3. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES FOR REQUIREMENTS OF ALL EQUIPMENT AND DEVICES AS REQUIRED FOR A PROPER FUNCTIONING SYSTEM.
4. ALL ABOVE GRADE PIPING SHALL BE INSTALLED PARALLEL TO BUILDING WALLS, WITH THE EXCEPTION OF PIPING PURPOSELY SLOPED PER CITY AND CODE REQUIREMENTS.
5. ALL PIPING TO BE INSTALLED WITH A UNIFORM SLOPE TO MITIGATE UN-DRAINABLE LOW POINTS.
6. DI-ELECTRIC UNIONS AND COUPLINGS ARE REQUIRED FOR DISSIMILAR METALS SUCH AS CONNECTIONS BETWEEN COPPER AND STEEL OR IRON PIPES.
7. ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.
2. DOMESTIC WATER SYSTEM
- 2.1. REFER TO MATERIAL LEGEND
- 2.2. PROVIDE MATERIALS, PRODUCTS, AND FABRICATIONS THAT COMPLY WITH ENVIRONMENTAL PROJECT AGENCY (EPA) REQUIREMENTS AND RECOMMENDATIONS REGARDING LEAD CONTENT AND CONTRIBUTION OF LEAD TO POTABLE WATER, THAT HAVE NO LEAD OR LEAD ALLOYS IN CONTACT WITH POTABLE WATER, AND THAT DO NOT CONTRIBUTE TO OR CAUSE LEAD IN POTABLE WATER.
- 2.3. SOLDER: LEAD FREE, ASTM B32 95-5 TIN-ANTIMONY OR GRADE SN96 TIN-SILVER SOLDER
- 2.4. FLUX: PERMANENT NOT MORE THAN 0.2 PERCENT LEAD, MEETING NSF 61
- 2.5. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH LATEST ASSE AND SHALL BE ACCESSIBLE.
- 2.6. PROVIDE MANUAL SHUT OFF VALVES AT EACH BRANCH LINE OF ALL WATER PIPING. PROVIDE ISOLATION VALVES AT ALL FIXTURES. PROVIDE SCREWED ACCESS PANEL FOR ALL VALVES PLACED BEHIND OR ABOVE HARD CEILINGS AND WALLS. PRIOR TO INSTALLING ABOVE HARD CEILINGS, THE INTENT SHOULD BE TO INSTALL ABOVE LAY-IN CEILINGS.
3. SANITARY WEST AND VENT PIPING
- 3.1. REFER TO MATERIAL LEGEND. IF CAST IRON, REFER TO CHAPTER IV OF CISPI "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK"
- 3.2. INSTALL WASTE AND VENT PIPING AT A MINIMUM SLOPE, UNLESS OTHERWISE INDICATED ON THE PLANS.
- 3.3. SANITARY PIPE: 2 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING 2-1/2" AND SMALLER, 1 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING 3" TO 6".
- 3.4. VENT PIPE: 1 PERCENT DOWN TOWARDS THE VERTICAL FIXTURE VENT OR TOWARD THE VENT STACK.
- 3.5. VENT THRU ROOF SHALL BE A MINIMUM OF 10'-0" AWAY FROM ANY FRESH AIR INTAKES.
- 3.6. PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE (EVERY 50' MAXIMUM AND EVERY 90 DEGREE TURN)
- 3.7. VERIFY EXIST LOCATION OF EQUIPMENT AND FLOOR SLOPE PRIOR TO INSTALLATION OF FLOOR DRAINS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
4. NATURAL GAS PIPING
- 4.1. REFER TO MATERIAL LEGEND.
- 4.2. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON SIDES OR TOP ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR ANY INACCESSIBLE AREAS. ALL GAS VALVES SHALL BE EASY ACCESSIBLE. REFER TO GAS CONNECTION DETAIL DRAWING FOR INSTALLATION.
- 4.3. FLUE VENT PIPING SHALL BE SLOPED 1/8" PER 1' DOWN TOWARDS FURNACE.
5. FOUNDATIONS, HANGERS, AND SUPPORTS
- 5.1. MANUFACTURER'S STANDARDIZATION STRATEGY SP-69 OR FEDERAL SPECIFICATION WWW-H-171D, TYPES AS RECOMMENDED OR REQUIRED, PERFORATED OR PLAIN METAL STRAP AND WIRE ARE NOT ACCEPTABLE.
- 5.2. HANGERS IN CONTACT WITH COPPER PIPE: SAME AS FOR GENERAL PURPOSE. COPPER OR COPPER PLEATED WITH PLASTIC COATING.
- 5.3. TRAPEZE PIPE HANGERS: MSS SP-58, TYPE 59. SHOP- OR FIELD-FABRICATED PIPE SUPPORT ASSEMBLY, MADE FROM STRUCTURAL-CARBON-STEEL SHAPES, WITH MSS SP-58 CARBON STEEL HANGER RODS, NUTS, SADDLES, AND U-BOLTS.
- 5.4. CARBON STEEL PIPE HANGERS AND SUPPORTS:
- 5.4.1. MSS SP-58, TYPES 1 THROUGH 58, FACTORY FABRICATED COMPONENTS
- 5.4.2. GALVANIZED METALLIC COATINGS: PRE-GALVANIZED, HOT-DIP GALVANIZED, OR ELECTRO-GALVANIZED
- 5.4.3. NONMETALLIC COATINGS: PLASTIC COATED OR EPOXY POWDER COATED
- 5.4.4. PADDED HANGERS: HANGERS WITH FIBERGLASS OR OTHER PIPE INSULATION PAD OR CUSHION TO SUPPORT BEARINGS SURFACE OF PIPING
- 5.4.5. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF CARBON STEEL.
- 5.5. HANGER AND SUPPORT INSTALLATION:
- 5.5.1. PIPES OF VARIOUS SIZES: SUPPORT TOGETHER AND SPACE TRAPEZES FOR SMALLEST PIPE SIZE, OR INSTALL INTERMEDIATE SUPPORTS FOR SMALLER DIAMETER PIPES AS SPECIFIED FOR INDIVIDUAL PIPE HANGERS.
- 5.5.2. FIELD FABRICATE FROM ASTM A36/A36M CARBON STEEL SHAPES SELECTED FOR LOADS BEING SUPPORTED. WELD STEEL ACCORDING TO AWS D1.1/D1.1M.
- 5.5.3. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED THERMAL AND SEISMIC MOVEMENT OF PIPING SYSTEMS, TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, EXPANSION BENDS, AND SIMILAR UNITS.
- 5.5.4. INSTALL LATERAL BRACING WITH PIPE HANGERS AND SUPPORTS TO PREVENT SWAYING.
- 5.5.5. MAXIMUM HORIZONTAL AND VERTICAL HANGER SPACING SHALL COMPLY WITH 2015 IRC TABLE P2605.1.
6. INSULATION - HOT AND COLD PIPE:
- 6.1. FIBERGLASS PIPE INSULATION: JOHNS-MANVILLE MICRO-LOK HEAVY DENSITY PIPE INSULATION WITH ARMSTRONG ARMAFLEX FINISH FOR INDOOR OR OUTDOOR APPLICATION.
- 6.2. UL LISTED FOR FLAME SPREAD 25, SMOKE DEVELOPED 50, FUEL CONTRIBUTED 50
- 6.3. HOT WATER (80°F - 140°F):
- 6.3.1. INSULATION CONDUCTIVITY: 0.21-0.28 (BTU X IN.)/(HR X FT2 X F)
- 6.3.2. PIPE SIZES SMALLER THAN 1-1/2": 1"
- 6.3.3. PIPE SIZES LARGER THAN 1-1/2": 1-1/2"
- 6.4. COLD WATER (40°F - 60°F):
- 6.4.1. INSULATION CONDUCTIVITY: 0.21-0.27 (BTU X IN.)/(HR X FT2 X F)
- 6.4.2. PIPE SIZES SMALLER THAN 1-1/2": 1"
- 6.4.3. PIPE SIZES LARGER THAN 1-1/2": 1-1/2"
- 6.5. BUTT INSULATION TOGETHER AND ADHERE IN PLACE WITH MANUFACTURER'S RECOMMENDED CONTACT CEMENT. WHERE POSSIBLE, SLIP TUBING ON WITHOUT SLITTING. WHERE INSULATION TERMINATES, NEATLY BEVEL AND FINISH.

— CW —	DOMESTIC COLD WATER		
— HW —	DOMESTIC HOT WATER		
— HWR —	DOMESTIC HOT WATER RETURN		
— SS —	SANITARY SEWER		SECTION VIEW SYMBOL
— V —	VENT PIPE		DETAIL DESIGNATION
— NG —	NATURAL GAS PIPE		
— FV —	FLUE VENT PIPE		
—	ELBOW - TURNED DOWN		POWERED EQUIPMENT TAG
—	ELBOW - TURNED UP		
— T —	TEE - TURNED DOWN		
—	TEE - TURNED UP		
	BALL VALVE		
	BACKFLOW PREVENTER		SHEET KEY NOTES
	WATER METER		
	FLOOR DRAIN		POINT OF CONNECTION
	FLOOR SINK		
— FCO —	FLOOR CLEANOUT		POINT OF DISCONNECTION

CODE	FIXTURE	MANUFACTURER / MODEL	CW	HW	WASTE	VENT	DESCRIPTION
<u>WC-1</u>	WATER CLOSET	RE: ARCH	1/2"	--	3"	2"	1.28 GPF TWO PIECE ROUND FRONT TOILET.
<u>L-1</u>	LAVATORY	RE: ARCH	1/2"	1/2"	2"	1-1/2"	UNDER MOUNT BATHROOM SINK. CENTERSET BATHROOM SINK FAUCET (1.2 GPM). PROVIDE WITH TRAP AND DRAIN.
<u>S-1</u>	SINK	RE: ARCH	1/2"	1/2"	2"	1-1/2"	SINGLE BOWL UNDER MOUNT SINK. MAX 1.5 GPM METAL CONSTRUCTION FAUCET ¹ WITH 3/8" COMPRESSION FITTINGS. PROVIDE WITH TRAP AND DRAIN. 1/2 HP GARBAGE DISPOSAL.
<u>WB-1</u>	WATER BOX (FOR ICE MAKER)	RE: ARCH	1/2"	1/2"	--	--	ONE PIECE BOX AND FLANGE CONSTRUCTION WITH PRE INSTALLED LEAD FREE BRASS VALVE.
<u>WB-2</u>	WATER BOX (FOR WASHING MACHINE)	RE: ARCH	1/2"	1/2"	1-1/2"	2"	ONE PIECE BOX AND FLANGE CONSTRUCTION WITH PRE INSTALLED LEAD FREE BRASS VALVES.
<u>SH-1</u>	SHOWER / TUB	RE: ARCH	1/2"	1/2"	2"	1-1/2"	BATHTUB SHOWER WITH DRAIN. 1.75 GPF SHOWERHEAD, TUB SPOUT, VALVE, ARM AND FLANGE.
<u>DW-1</u>	DISHWASHER	RE: ARCH	--	1/2"	--	--	SPECIFIED BY ARCHITECT OR OWNER.
<u>ECO-1</u>	EXTERIOR FLOOR CLEAN OUT	ZURN #ZN-1400	--	--	--	--	EXTRA HEAVY DUTY ADJUSTABLE TYPE.
<u>2ECO-1</u>	DOUBLE EXTERIOR FLOOR CLEAN OUT	DOUBLE ZURN #ZN-1400	--	--	--	--	SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING.
<u>FD</u>	FLOOR DRAIN	JAY R. SMITH #2005-APBP-P	--	--	2"	1-1/2"	PRO-SET "TRAP GUARD" SIZED FOR FLOOR DRAIN. SEDIMENT BUCKET.
<u>FPHB</u>	HOSE BIBB	EVERBILT MHT GARDEN VALVE	3/4"	--	--	--	--

SYSTEM:	MATERIAL:
WATER PIPE, BELOW GRADE	TYPE "K" COPPER
WATER PIPE, ABOVE GRADE	CPVC
SANITARY SEWER, BELOW GRADE	SCH. 40 PVC
SANITARY SEWER, ABOVE GRADE	SCH. 40 PVC
VENT PIPE, BELOW GRADE	SCH. 40 PVC
VENT PIPE, ABOVE GRADE	SCH. 40 PVC
NATURAL GAS	SCH. 40 BLACK STEEL

ALL PLUMBING FIXTURES TO BE APPROVED OF BY ARCHITECT PRIOR TO PURCHASE AND INSTALLATION.

DESIGNATION	SERVICE	LOCATION	TANK CAPACITY (GALLONS)	PERFORMANCE			HEAT PUMP			ELECTRICAL DATA				STANDBY POWER (W)	TANK SIZE (INCHES)			DESIGN BASIS MANUF.	DESIGN BASIS MODEL NO.	REMARKS		
				FIRST HOUR RATING (GAL)	UEF	HYBRID/ELECTRIC TEMPERATURE OUTPUT (F)	REFRIGERANT	CHARGE QUANTITY (LBS)	TEMPERATURE RANGE (F)	VOLTAGE	PHASE	HERTZ	AMP		KW	HEIGHT	DIAMETER				DEPTH	OPERATING WEIGHT (LBS)
HPWH-1	HOTWATER	LAUNDRY ROOM	40	60	3.83	-	R134A	2	42-108	240	1	60	30	4.5	N	62.5	20	-	157	RHEEM	XE6ST10H45U1	SEE NOTES

NOTES:

1. UNISTRUT FRAME SHALL BE INSTALLED ADJACENT WATER HEATERS TO SUPPORT TANK SEISMIC RESTRAINTS, PIPING & DISCONNECT SWITCHES.
2. PROVIDE WITH MECHANICAL DISCONNECT SWITCH INSTALLED BY MECHANICAL CONTRACTOR.
3. UNIT SHALL BE INSTALLED IN ROOM WITH AT LEAST 3200 CUBIC FEET OF AIR SPACE OR PROVIDE EQUIVALENT FREE AREA VIA WALL LOUVER.
4. ENSURE PIPING MANIFOLD SERVING HEAT PUMP HAS EQUAL PIPE LENGTHS.
5. WASHABLE AIR FILTER REQUIRES PERIODIC CLEANING. FREQUENCY DEPENDS UPON AMBIENT AIR CONDITIONS.
6. PROVIDE UNINSULATED CONDENSATE DRAIN PIPING DISCHARGING TO FLOOR DRAIN.
7. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH 2018 IBC AND ASCE 7-10.
8. PROVIDE 3-YEAR TANK AND 1-YEAR PARTS/COMPRESSOR LIMITED WARRANTIES.
9. ENSURE UNIT HAS ALL CONNECTION POINTS/INSTALLED AS SHOWN ON THE HOT WATER PLANT DIAGRAM.
10. PROVIDE EQUIPMENT WITH CONCRETE HOUSEKEEPING PAD.
11. PROVIDE WITH MANUFACTURER'S 10-YEAR LIMITED TANK AND PARTS WARRANTY.

Approved for Factory Built Housing Only
 Approved by: State of California
 Factory Built Housing – DAA #DF1507648
 Intertek (Intertek-ATI)
 Plan Approval: #R-22348
 Approval Date: 2026-07-15
 Expiration Date: 2029-07-14
Without Foundation / Site Work Approval

 1748 33rd Street
 Orlando, FL 32839



ISSUES/REVISIONS

NO.	DATE	DESCRIPTION
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[ONE-BEDROOM ADU WITH
KITCHEN ON LEFT SIDE]

9744 Wilshire Blvd STE 203,
Beverly Hills, CA 90212

DRAWN BY: JL	DESIGNED BY: AJ	CHECKED BY: AJ	APPROVED BY: AJ
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PROJECT NUMBER: 25211
SCALE: AS INDICATED

PLUMBING LEGEND, SCHEDULES, AND NOTES

P1.0

GENERAL NOTES:

- CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
- PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
- PRIOR TO BID OR CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OR ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
- CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
- ALL PIPING TO BE PROPERLY SUPPORTED AND SECURED.
- PIPE DIMENSIONS SHOWN ON PLANS ARE INTERNAL DIMENSIONS.
- CONTRACTOR SHALL VERIFY THAT ALL PLUMBING COMPONENTS MEET SPACING AND CLEARANCE REQUIREMENTS PER EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
- ALL COLD AND HOT WATER PIPING SHALL BE INSULATED. SEE SPECIFICATION FOR INSULATION REQUIREMENTS.
- ALL HAND SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVES. RE: PLBG SCHEDULES
- PROVIDE AND INSTALL 1/4 TURN SHUT OFF VALVE OR INTEGRAL SHUT OFF VALVE AT EACH WATER SUPPLY CONNECTION TO EACH PLUMBING FIXTURE OR EQUIPMENT.
- ALL WATER TAPS TO PLUMBING FIXTURES SHALL BE DOWNSTREAM OF WATER METER.
- REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE COMPLETE INSTALLATION WITH THE GENERAL CONTRACTOR.
- ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
- PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.

SHEET NOTES:

- PROVIDE AND INSTALL GARBAGE DISPOSAL TO KITCHEN SINK TRAP PER GARBAGE DISPOSAL MANUFACTURER'S INSTRUCTIONS.
- CONNECT DISHWASHER DRAIN TO KITCHEN SINK TRAP PER DISHWASHER MANUFACTURER'S INSTRUCTIONS.
- CONNECT NEW SANITARY SEWER LINE TO EXISTING SANITARY MAIN LINE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS AND DIRECTIONS PRIOR TO BEGINNING ANY NEW WORK.
- CONNECT NEW VENT LINE TO EXISTING VENT MAIN LINE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS AND DIRECTIONS PRIOR TO BEGINNING ANY NEW WORK.
- CONNECT TO EXISTING CW SUPPLY STUB. FIELD VERIFY SIZE, LOCATION, AND CONDITION PRIOR TO ANY WORK.

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing – DAA #DF1507648
Intertrak (Intertrak-ATJ)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33rd Street
Orlando, FL 32839



ISSUES/REVISIONS

1L PREFAB MODULAR HOUSE
[ONE-BEDROOM ADU WITH KITCHEN ON LEFT SIDE]

9744 Wilshire Blvd STE 203,
Beverly Hills, CA 90212

DRAWN BY: J.L. ISSUED BY: A.I. CHECKED BY: A.I. APPROVED BY: A.I.
PROJECT NUMBER: 25211
SCALE: AS INDICATED

PLUMBING DOMESTIC WATER AND SEWER FLOOR PLAN

P3.0

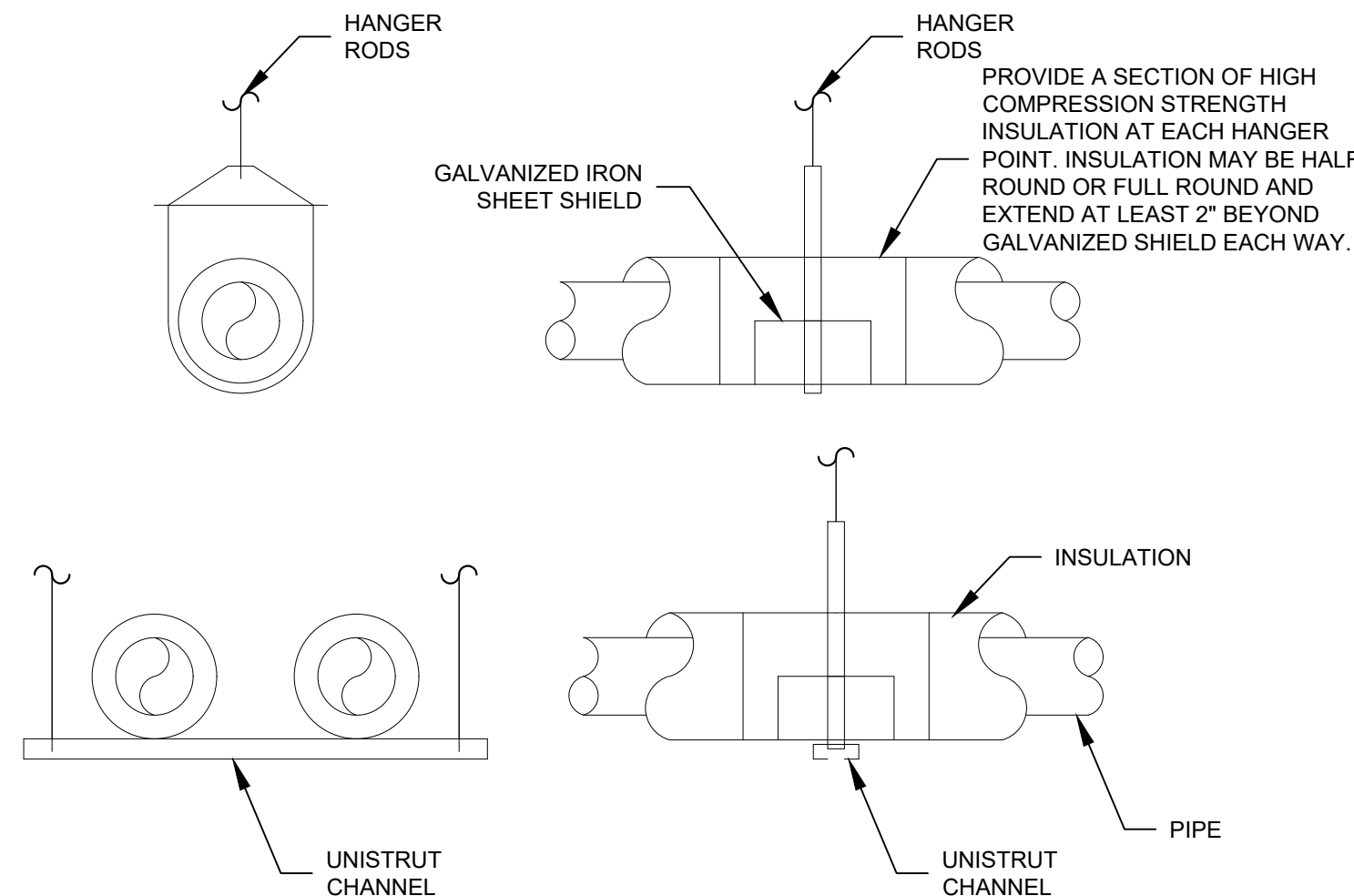
PLUMBING CODE FIXTURE UNIT SCHEDULE (COLD WATER)							
ARIK'S PREFAB		# OF FIXTURES	MIN. FIXTURE BRANCH PIPE SIZE	PRIVATE	PUBLIC	ASSEMBLY	TOTAL FIXTURE UNITS
WATER CALCULATION (BASED ON 2022 CPC)							
FIXTURE							
LAVATORY	PRIVATE	1	1/2"	1.0			1.0
WATER CLOSET	PRIVATE	1	1/2"	2.5			2.5
SHOWER	PRIVATE	1	1/2"	2.0			2.0
KITCHEN SINK	PRIVATE	1	1/2"	1.5			1.5
DISHWASHER	PRIVATE	1	1/2"	1.5			1.5
CLOTHES WASHER	PRIVATE	1	1/2"	4.0			4.0
REFRIGERATOR	PRIVATE	1	1/2"	1.0			1.0
HOSE BIBB	PRIVATE	1	3/4"	2.5			2.5

HYDRAULIC CALCULATIONS		
MINIMUM PRESSURE AT CITY MAIN	60	PSI
SET PRESSURE AT PRESSURE REDUCING VALVE	-	PSI
PRESSURE LOSS THROUGH _____ 1" _____ METER	5	PSI
PRESSURE LOSS THROUGH _____ 1" _____ REDUCED PRESSURE BACKFLOW PREVENTOR MANUFACTURER: ZURN MODEL #: 975XL2 (SET OUTLET PRESSURE AT 80 PSI MAXIMUM)	10	PSI
PRESSURE LOSS THROUGH _____ PRESSURE REDUCING VALVE	N/A	PSI
PRESSURE LOSS THROUGH SOFTNER OR OTHER MISCELLANEOUS EQUIPMENT	N/A	PSI
PRESSURE LOSS DUE TO ELEVATION _____ 10 _____ FT X 0.43	4.3	PSI
REQUIRED PRESSURE FOR FARTHEST FIXTURE (15 PSI FLUSH TANK)	15	PSI
TOTAL PRESSURE LOSSES	34.3	PSI
PRESSURE AVAILABLE FOR FRICTION LOSS IN THE SYSTEM	25.7	PSI
DEVELOPED PIPE LENGTH OF COPPER PIPING (INTERIOR)	100	L.F.
FITTING LOSS (COPPER FITTINGS)	25	%
PIPE LENGTH WITH FITTING LOSS (INTERIOR)	125	EQ. FT
PRESSURE PER 100' OF PIPE	20.6	PSI

NOTE:

- VELOCITY IN COLD WATER PIPE LIMITED TO 8 FT/SEC.
- VELOCITY IN HOT WATER PIPE LIMITED TO 5 FT/SEC.

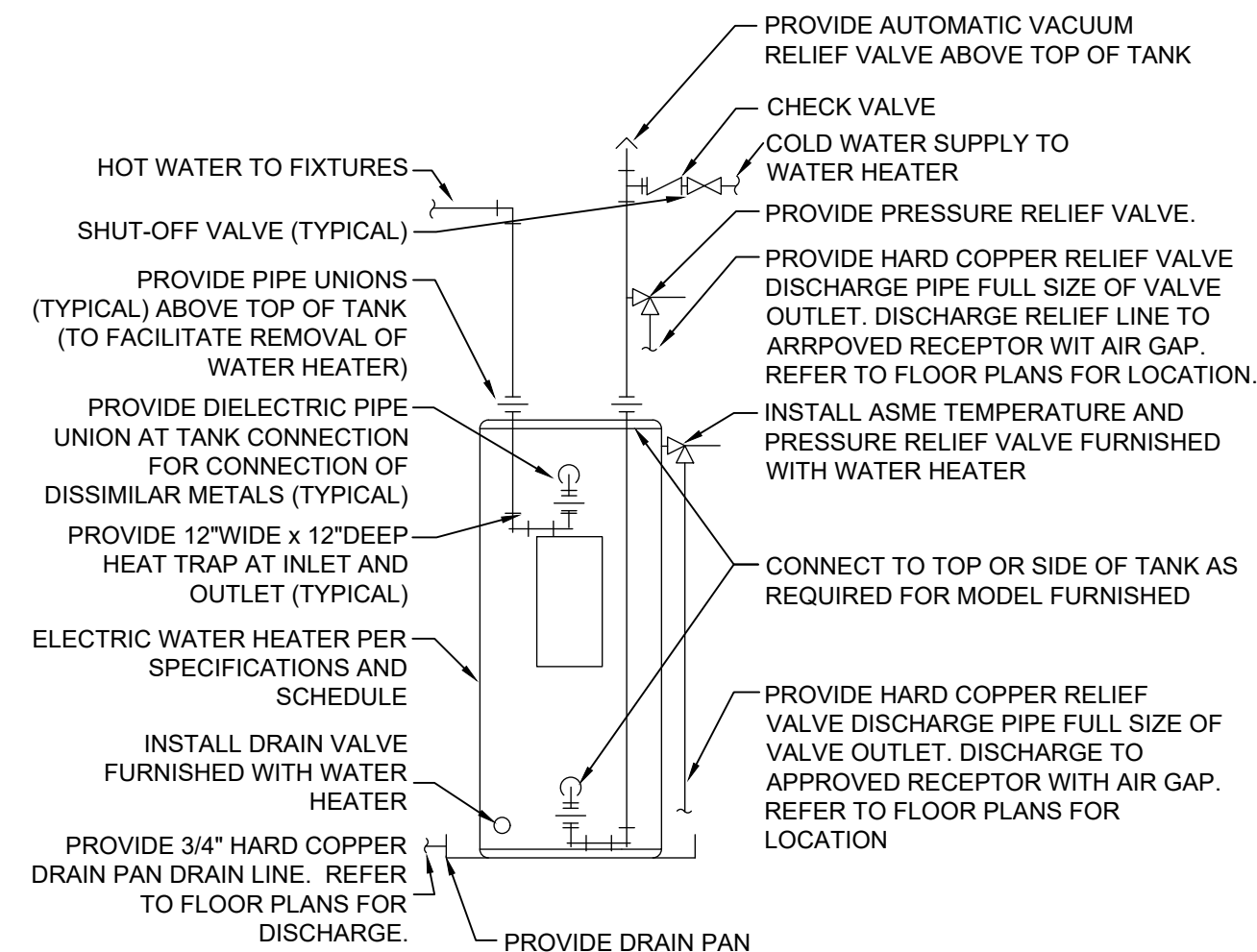
SIZE (INCHES)	MINIMUM SLOPE (INCH / FOOT)
4 OR LESS	1/4
6	1/8
8 OR LARGER	1/16



NOTES

MINIMUM DIMENSIONS OF GALVANIZED SHEETMETAL PROTECTION SHIELD AT PIPE HANGERS

4 PIPE HANGER DETAILS
N.T.S.



REFER TO SPECIFICATIONS, SCHEDULES, AND NOTES FOR MORE INFORMATION. PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. VERIFY CONNECTION SIZES AND LOCATIONS WITH WATER HEATER FURNISHED. REFER TO FLOOR PLANS FOR PIPE SIZES AND CONTINUATIONS. PROVIDE SEISMIC STRAP OR BRACING WHEN REQUIRED BY LOCAL AUTHORITIES. POWER WIRING AND DISCONNECT SWITCH ARE SPECIFIED BY ELECTRICAL.

3 WATER HEATER DETAIL

2 WATER HAMMER ARRESTOR

PART NUMBER	A OAL	B NPT	NITROGEN PRELOAD PSI
SC-500A	6-1/4"	1/2" BRASS	60
SC-750B	7-1/4"	1/2" BRASS	60
SC-1000C	9-1/4"	1/2" BRASS	60
SC-1250D	9-1/2"	1/2" BRASS	60
SC-1500E	11-1/4"	1/2" BRASS	60
SC-2000F	12"	1/2" BRASS	60

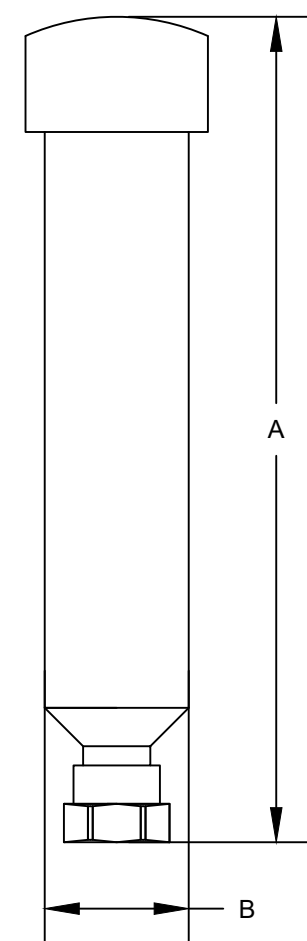


TABLE 604.1
MATERIALS FOR BUILDING SUPPLY AND WATER DISTRIBUTION PIPING AND FITTINGS

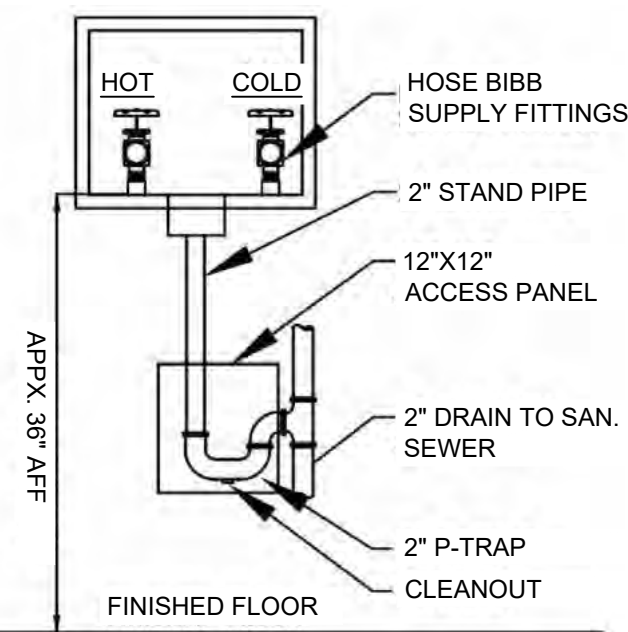
MATERIAL	BUILDING SUPPLY PIPE AND FITTINGS	WATER DISTRIBUTION PIPE AND FITTINGS	REFERENCED STANDARD(S) PIPE	REFERENCED STANDARD(S) FITTINGS
Copper and Copper Alloys	X	X	ASTM B42, ASTM B43, ASTM B75, ASTM B88, ASTM B135, ASTM B251, ASTM B302, ASTM B447	ASME B16.15, ASME B16.18, ASME B16.22, ASME B16.26, ASME B16.50 ^a , ASME B16.51, ASSE 1061, ASTM F3226, AWWA C606, CSA B242, IAPMO PS 53, IAPMO PS 117
CPVC	X	X	ASTM D2846, ASTM F441, ASTM F442, CSA B137.6	ASSE 1061, ASTM D2846, ASTM F437, ASTM F438, ASTM F439, ASTM F1970, CSA B137.6, IAPMO PS 53
CPVC-AL-CPVC	X	X	ASTM F2855	ASTM D2846
Ductile-Iron	X	X	AWWA C151	ASME B16.4, AWWA C110, AWWA C153, AWWA C806, CSA B242, IAPMO PS 53
Galvanized Steel	X	X	ASTM A53	AWWA C606, CSA B242, IAPMO PS 53
Malleable Iron	X	X	—	ASME B16.3, AWWA C606, IAPMO PS 53
PE	X ¹	—	ASTM D2239, ASTM D2737, ASTM D3035, AWWA C901, CSA B1371	ASTM D2609, ASTM D2683, ASTM D3261, ASTM F1055, CSA B1371
PE-AL-PE	X	X	ASTM F1282, CSA B137.9	ASTM F1282, ASTM F1874, CSA B137.9
PE-RT	X	X	ASTM F2769, CSA B137.18	ASSE 1061, ASTM D3261, ASTM F1055, ASTM F1807, ASTM F2098, ASTM F2159, ASTM F2735, ASTM F2769, CSA B137.18
PEX ^{3,4}	X	X	ASTM F876, CSA B137.5, AWWA C904 ¹	ASSE 1061, ASTM F877, ASTM F1807, ASTM F1960, ASTM F2080, ASTM F2159, ASTM F2735, ASTM F3347, ASTM F3348, CSA B137.5
PEX-AL-PEX ⁵	X	X	ASTM F1281, CSA B137.10	ASTM F1281, ASTM F1974, ASTM F2434, CSA B137.10
PP	X	X	ASTM F2389, CSA B137.11	ASTM F2389, CSA B137.11
PVC	X ¹	—	ASTM D1785, ASTM D2241, AWWA C900	ASTM D2484, ASTM D2486, ASTM D2467, ASTM F1970, AWWA C907, IAPMO PS 53
Stainless Steel	X	X	ASTM A269, ASTM A312, ASTM A554, ASTM A778	ASTM F3226, CSA B242, IAPMO PS 53, IAPMO PS 117

WATER CLOSET STANDARDS

411.1 APPLICATION

411.2 WATER CONSUMPTION

WASHER BOX DETAIL



1L PREFAB MODULAR HOUSE

9744 Wilshire Blvd STE 203,
Beverly Hills, CA 90212

DESIGNED BY:	CHECKED BY:	APPROVED BY:
JL	AJ	AJ

PROJECT NUMBER: 25211
SCALE: AS INDICATED

PLUMBING DETAILS

P4.0

	LOWER CASE LETTER = SWITCH LEG D = DIMMER SWITCH DL = DATALINE SWITCH K = KEY SWITCH M = MOTOR RATED SWITCH TS = DIGITAL TIMER SWITCH O = OCCUPANCY SENSOR SWITCH 3 = 3 WAY SWITCH, 4 = 4 WAY SWITCH
	PUSH BUTTON SWITCH
	POWER OUTLET SEE DRAWING FOR RATING & TYPE.(1PH)
	POWER OUTLET SEE DRAWING FOR RATING & TYPE.(3PH)
	RECEPTACLE, DUPLEX 20A, 120V, 2P, 3W, NEMA 5-20R
	EV READY LOW POWER LEVEL 2 EV CHARGING RECEPTACLE
	EV CHARGER SYSTEM WITH LEVEL 2 EVSE
	QUAD RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER 20A, 120V,
	TV OUTLET, CONFIRM EXACT MOUNTING HEIGHT WITH ARCHITECTURAL PLAN
	FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE AND COMPARTMENT FOR 2-DATA OUTLETS,
	6" DUPLEX ABOVE COUNTER RECEPTACLE WITH GFCI, 20A, 120V, 2P, 3W, NEMA 5-20R
	HALF-SWITCHED RECEPTACLE
	VERTICAL WIREMOLD RACEWAY, POWER POLE
	WIREMOLD RACEWAY.
	TRANSFORMER
	RECESSED PANELBOARD
	SURFACE PANELBOARD
	DISTRIBUTION PANELBOARD OR SWITCHBOARD
	BREAKER IN NEMA 1 ENCLOSURE, SIZE AS SHOWN
	MAN HOLE
	JUNCTION OR OUTLET BOX WITH BLANK COVER - 4X UNLESS OTHERWISE NOTED
	OCCUPANCY SENSOR, CEILING OR WALL MOUNTED
	OCCUPANCY SENSOR, CEILING OR WALL MOUNTED WITH POWER PACK
	PHOTOCELL
	PHOTOCELL FOR EXTERIOR LIGHTS
	LIGHTING CONTROL PANEL
	DOORBELL CHIME
	CEILING MOUNTED DATA/COMMUNICATION OUTLET IN 2 GANG BOX
	WALL MOUNTED TELEPHONE/DATA OUTLET 1/2"C, 6" ABOVE CEILING (2 GANG BOX)
	WALL MOUNTED DATA OUTLET 1/2"C, 6" ABOVE CEILING (2 GANG BOX)
	SPEAKER
	FIRE ALARM HORN & STROBE.
	FIRE ALARM STROBE LIGHT ONLY. WALL CEILING MOUNTED.
	WALL, CEILING-FIRE ALARM HORN/SPEAKER ONLY
	MANUAL PULL STATION
	TAMPER/PRESSURE SWITCH
	DUCT SMOKE DETECTOR WITH RELAYS
	FIRE/SMOKE DAMPER
	FIRE ALARM CONTROL PANEL
	SMOKE DETECTOR
	HEATER DETECTOR COMBINATION RATE/RISE AND 190/200° FIXED TEMP. F IS 190/200° FIXED ONLY, R= RATE OF RISE
	MECHANICAL EQUIPMENT DESIGNATION
	MOTOR, # DENOTES HORSEPOWER, CF/M = CIRCULATING FAN OR MOTOR
	ELECTRIC CONDUIT RUN EXPOSED OR CONCEALED IN WALLS, OR ABOVE CEILING WHERE WALLS AND CEILING PERMIT.
	LOW VOLTAGE WIRING (50V OR BELOW)
	GROUND GRID
	CONDUIT RUN BELOW GRADE OR FLOOR
	CONDUIT UP/DOWN
	CONDUIT STUBBED OUT AND CAPPED
	EYS EXPLOSION PROOF FITTING
	FLEX CONDUIT
	DESTINATION (PANEL-CIRCUIT NO.) CONDUIT (3/4" MIN. U.O.N.)
	GROUND CONDUCTOR
	NEUTRAL CONDUCTOR
	HOT CONDUCTORS
	DISCONNECT SWITCH (LOCKABLE), NON-FUSED/FUSED, 3-POLE, NEMA 1 U.O.N. FUSE SIZE, NF FOR NON-FUSE DISCONNECT RATING POLES
	COMBINATION MOTOR STARTER WITH NON-FUSED/FUSED CIRCUIT BREAKER DISCONNECT (LOCKABLE) FUSE SIZE, NF FOR NON-FUSE N=CONTROLLER NEMA SIZE, UON DISCONNECT RATING POLES
	METER
	COPPER GROUND ROD, 3/4"Dx10'L
	P.O.C. (POINT OF CONNECTION)
	EXISTING TO REMAIN (LIGHT LINE WORK)
	NEW WORK (DARK LINE WORK)

G1. ALL WORK SHALL COMPLY WITH THE NEC (LATEST ADPTED VERSION OF THE STATE) OR LATEST EDITION OF THE ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES. WHERE THE PLANS SHOW MORE RESTRICTIVE REQUIREMENTS, THE PLANS SHALL GOVERN, BUT NOTHING ON THESE PLANS SHALL BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.	G25. PROVIDE PHASE ROTATION SIGN AND PHASE COLOR CODE IDENTIFICATION FOR ALL WIRES INSIDE ALL 480/208V PANEL BOARDS.																
G2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS' LABORATORY LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.	G26. INSTALL THE FOLLOWING DEVICES ABOVE THE FINISHED FLOOR, UNLESS OTHERWISE NOTED. <table> <tr> <td>RECEPTACLES, POWER OUTLETS</td><td>18" TO 6"</td></tr> <tr> <td>VOICE, DATA, VOICE/DATA COMBINATION</td><td>18" TO 6"</td></tr> <tr> <td>LIGHT SWITCHES</td><td>48" TO 6"</td></tr> <tr> <td>CARD READERS & KEYPADS</td><td>48" TO 6"</td></tr> <tr> <td>DISCONNECT SWITCHES</td><td>60" AT HANDLE</td></tr> <tr> <td>TOP CIRCUIT BREAKER IN PANELBOARD</td><td>72"</td></tr> <tr> <td>WALL MOUNT OCCUPANCY SENSOR</td><td>96" TO 6"</td></tr> <tr> <td>RECEPTACLES SHOP LOCATIONS, COUNTERS OR DESKTOPS</td><td>42" OR 6" TO 6" ABOVE SPLASHGUARD, COUNTER OR DESKTOP</td></tr> </table>	RECEPTACLES, POWER OUTLETS	18" TO 6"	VOICE, DATA, VOICE/DATA COMBINATION	18" TO 6"	LIGHT SWITCHES	48" TO 6"	CARD READERS & KEYPADS	48" TO 6"	DISCONNECT SWITCHES	60" AT HANDLE	TOP CIRCUIT BREAKER IN PANELBOARD	72"	WALL MOUNT OCCUPANCY SENSOR	96" TO 6"	RECEPTACLES SHOP LOCATIONS, COUNTERS OR DESKTOPS	42" OR 6" TO 6" ABOVE SPLASHGUARD, COUNTER OR DESKTOP
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G4. UNLESS OTHERWISE NOTED, ALL WIRE SHALL BE COPPER, STRANDED ONLY, UL LISTED, RATED FOR 600 VOLTS, TYPE THHN/THWN, NO. 12 AWG MINIMUM FOR POWER AND #14 AWG MINIMUM FOR CONTROL. USE XHHW TYPE FOR #6 OR LARGER.	G27. PROVIDE COLOR CODED AS SHOWN. COLOR CODE WILL BE CARRIED THROUGHOUT ALL BRANCHES ON A SINGLE CIRCUIT. <table> <tr> <th>APPLICATION</th><th>COLOR CODING</th></tr> <tr> <td>1. 3-PHASE - 480/277 VOLT</td><td>A = BROWN B = ORANGE C = YELLOW NEUTRAL = GRAY GROUND = GREEN</td></tr> <tr> <td>2. 3-PHASE - 120/208 VOLT</td><td>A = BLACK B = RED C = BLUE NEUTRAL = WHITE GROUND = GREEN</td></tr> <tr> <td>3. 1-PHASE - 120 VOLT ISOLATED CIRCUIT (ORANGE RECEPTACLE ONLY)</td><td>HOT = ORANGE NEUTRAL = WHITE GROUND = GREEN</td></tr> <tr> <td>4. 1-PHASE - 120 VOLT CIRCUIT</td><td>HOT = BLACK, RED, OR BLUE DEPENDING ON PHASE NEUTRAL = WHITE</td></tr> <tr> <td>5. DOOR SWITCHES</td><td>HOT = RED SWITCHED = BLUE</td></tr> <tr> <td>6. FIRE CIRCUITS</td><td>RED</td></tr> </table>	APPLICATION	COLOR CODING	1. 3-PHASE - 480/277 VOLT	A = BROWN B = ORANGE C = YELLOW NEUTRAL = GRAY GROUND = GREEN	2. 3-PHASE - 120/208 VOLT	A = BLACK B = RED C = BLUE NEUTRAL = WHITE GROUND = GREEN	3. 1-PHASE - 120 VOLT ISOLATED CIRCUIT (ORANGE RECEPTACLE ONLY)	HOT = ORANGE NEUTRAL = WHITE GROUND = GREEN	4. 1-PHASE - 120 VOLT CIRCUIT	HOT = BLACK, RED, OR BLUE DEPENDING ON PHASE NEUTRAL = WHITE	5. DOOR SWITCHES	HOT = RED SWITCHED = BLUE	6. FIRE CIRCUITS	RED		
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G5. PROVIDE RGC UP TO 8' AFF WHERE EXPOSED AND INDOORS, EMT CONDUIT TYPE FOR ALL OTHER AREAS LOCATED INDOORS. IN ADDITION USE RGC FOR OUTDOORS ABOVE GRADE, AND PVC SCHEDULE 40 FOR OUTDOORS UNDERGROUND. IN ADDITION, OUTDOOR UNDERGROUND CONDUIT RISERS AND 90 DEG BENDS CONDUITS SHALL BE RGC. UNDERGROUND RGC SHALL BE WRAPPED WITH 20 MIL TAPE AND EXTEND 12" ABOVE GRADE FOR RISERS. USE MIN 3/4" CONDUIT, U.O.N.	G28. IN FINISHED INTERIOR AREAS, RUN ALL CONDUITS CONCEALED, UNLESS OTHERWISE NOTED.																
G6. THE CONTRACTOR SHALL INSTALL ALL CONDUITS AND WIRES WITH A MINIMUM NUMBER OF BENDS AND IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEAD ROOM, KEEP OPENINGS AND PASSAGEWAYS CLEAR, AND MEET ALL STRUCTURAL CODE REQUIREMENTS.	G29. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECTS PAINTING SECTION FOR REQUIREMENTS.																
G7. ALL CONDUIT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION SHALL BE MADE WITH SEALTIGHT FLEX CONDUIT. PROVIDE SUFFICIENT SLACK TO ELIMINATE VIBRATION. ARRANGE CONNECTIONS TO PREVENT THE ENTRANCE OF MOISTURE. PROVIDE FIRE STOP SEAL FOR WALL/FLOOR PENETRATION AND WATERPROOF SEAL FOR EXTERIOR WALL.	G30. POWER AND LIGHTING BRANCH CIRCUITS SHALL HAVE A MINIMUM TWO (2) #12 AWG. AND ONE (1) #12 AWG. GROUND TYPE THWN/THHN. ALL POWER WIRING SHALL RUN IN CONDUIT. PROVIDE ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODES.																
G8. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES. ALL CONDUIT RUNS SHALL INCLUDE A CODE SIZED GROUND WIRE WHETHER OR NOT SO INDICATED.	G31. SUBMIT TO THE ENGINEER SHOP DRAWINGS, MANUFACTURER'S DATA AND CERTIFICATES FOR EQUIPMENT, MATERIALS AND FINISH, AND PERTINENT DETAILS FOR EACH SYSTEM SPECIFIED. OBTAIN APPROVAL BEFORE PROCUREMENT, FABRICATION, OR DELIVERY OF THE ITEMS TO THE JOB SITE. PARTIAL SUBMITTALS ARE NOT ACCEPTABLE AND WILL BE RETURNED WITHOUT REVIEW.																
G9. ALL BRANCH CIRCUITS SHALL INCLUDE A CODE SIZED GROUND WIRE. ISOLATED/DEDICATED BRANCH CIRCUITS SHALL INCLUDE A SEPARATE GROUND WIRE CONNECTED TO THE DESIGNATED SINGLE POINT GROUND FOR EACH DUPLEX OUTLET ON A CIRCUIT.	G32. ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF, MINIMUM OF NEMA 3R RATING. EXTERIOR CONDUIT RUNS INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, CAULKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING, UON.																
G10. CERTAIN FEEDER AND BRANCH CIRCUIT WIRE SIZES HAVE BEEN OVERSIZED TO COMPENSATE FOR VOLTAGE DROP. SPICE WIRES TO COMPATIBLE SIZES FOR TERMINATION, ADJACENT TO EQUIPMENT CONNECTION AS REQUIRED. SHAVING OF CABLE STRAND NOT ALLOWED.	G33. SIZE FUSES FOR ALL FUSED SWITCHES PER SUPPLIED EQUIPMENT MANUFACTURER'S RECOMMENDATION.																
G11. ALL TERMINATION POINTS WILL HAVE SCREW-IN, CLAMP-TYPE CONNECTIONS, UNLESS OTHERWISE PRIOR APPROVAL IS GIVEN BY CLIENT'S FACILITIES REPRESENTATIVE.	G34. PROVIDE A MANUAL DISCONNECTING MEANS, CAPABLE OF BEING LOCKED IN THE OPEN POSITION FOR ALL MOTORS NOT WITHIN SIGHT OF OR MORE THAN TWENTY-FIVE (25) FEET FROM ITS CONTROLLER.																
G12. THE ENTIRE WIRING SYSTEM TO BE TESTED FOR SHORT CIRCUITS, GROUNDS, AND INSULATION RESISTANCE BETWEEN CONDUCTORS AND TO GROUND.	G35. ALL CIRCUIT BREAKERS, FUSES, AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED & NO LESS THAN THE WITHSTAND RATING OF THE BUS THEY ARE CONNECTED TO.																
G16. PROVIDE A NAMEPLATE FOR EACH INDIVIDUALLY MOUNTED CIRCUIT BREAKER OR DISCONNECT SWITCH, ELECTRICAL PANELS, TRANSFORMERS, DISTRIBUTION BOARDS, ETC, PULL BOX, ARKITE RECEPTACLE, AND FOR ANY OTHER CONTROL DEVICE OR MAJOR ITEM OF ELECTRICAL EQUIPMENT AS FOLLOWS: 1 -- PROVIDE LAMINATED NAMEPLATES ENGRAVED IN 1/4" HIGH LETTERS TO CORRESPOND WITH THE DESIGNATION ON THE DRAWINGS. PROVIDE OTHER OR ADDITIONAL INFORMATION ON NAMEPLATES WHERE INDICATED. ORANGE FOR 480V. 2 -- ATTACH NAMEPLATES TO EQUIPMENT WITH RIVETS, BOLTS, OR APPLICABLE SHEET METAL SCREWS. GLUE-ON TYPES AND POP-RIVETS TYPE ARE NOT ACCEPTABLE. LABEL ALL RECEPTACLES, OUTLETS, JUNCTION BOXES, WITH DYMO-TYPE EMBOSSED TAPE AS FOLLOWS: 1 -- RECEPTACLES AND JUNCTION BOXES: PANEL AND CIRCUIT NUMBER. 2 -- USE BLACK TAPE FOR 240V AND LESS. 3 -- USE ORANGE TAPE FOR 277V AND ABOVE. INDICATE ON THE DEVICE IF THE CIRCUIT IS DEDICATED OR ISOLATED.	G36. GROUND RODS SHALL BE MIN 10 FEET IN LENGTH, 3/4" DIAMETER, AND COPPER CLAD.																
G17. PROVIDE UPDATED, TYPED CIRCUIT BREAKER PANEL SCHEDULES THAT ACCURATELY REFLECT ALL CHANGES MADE.	G37. CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC TYPE. TEST WELL CONNECTIONS SHALL BE BOLTED TYPE.																
G18. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS, BENDS, FITTINGS, JUNCTION BOXES, PULL BOXES, AND EXPANSION FITTINGS REQUIRED TO MEET FIELD CONDITIONS. CONTRACTOR SHALL DETERMINE ACTUAL MATERIAL AND HARDWARE REQUIREMENTS AND VERIFY ALL DIMENSIONS.	G38. THE CONTRACTOR SHALL MAKE GROUND RESISTANCE MEASUREMENTS AS REQUIRED BY THE LATEST EDITION OF NEC, DOCUMENT THE READINGS AND REPORT THEM TO THE ENGINEER.																
G19. CONTRACTOR SHALL PROVIDE PULL LINE IN ALL EMPTY CONDUITS.	G39. MAJOR EQUIPMENT SHALL BE CONNECTED TO THE GROUND GRID BY TWO CONNECTIONS FROM DIFFERENT PARALLEL MAIN GRID CONDUCTORS.																
G20. FUNCTIONALLY TEST THE ELECTRICAL INSTALLATION FOR PROPER OPERATION AND ROTATION.	G40. WHEN AN EXPOSED GROUND CABLE IS RUN IN METAL CONDUIT OR PROTECTED BY A METAL GUARD, THE GROUND CABLE SHALL BE BONDED AT BOTH ENDS TO THE CONDUIT OR THE GUARD.																
G21. FURNISH AND INSTALL ALL CONDUITS, WIRES, BOXES, SWITCHES, LIGHT FIXTURES (WITH LAMPS), RECEPTACLES, SERVICE DEVICES, PANELBOARDS AND OTHER EQUIPMENT SHOWN ON THE DRAWINGS AS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM.	G41. UNLESS OTHERWISE NOTED, BURIED GROUNDING CONDUCTORS SHALL HAVE A MINIMUM OF 2 1/2" FEET OF COVER (30").																
G22. LOCATIONS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS SHALL TAKE PRECEDENCE OVER THOSE SHOWN ON THE ELECTRICAL DRAWINGS. REFER TO THE REFLECTED CEILING PLAN AND THE ARCHITECTURAL FLOOR PLANS FOR EXACT LOCATIONS OF DEVICES. REFER TO THE MECHANICAL DRAWINGS FOR LOCATIONS OF HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT, PLUMBING, FIRE SUPPRESSION EQUIPMENT, ETC. VERIFY EXISTING SITE CONDITIONS, SERVICE REQUIREMENTS, AND EXACT LOCATIONS OF SERVICE FACILITIES BEFORE SUBMITTING BID.	G42. BURIED GROUNDING CONDUCTORS SHALL BE KEPT A MINIMUM OF 12 INCHES WHEN CROSSING METAL OBJECTS, SUCH AS BURIED PIPING OR STEEL.																
G23. INDEPENDENTLY SUPPORT ALL CONDUIT ABOVE SUSPENDED CEILING. SEISMIC WIRES ARE NOT TO BE USED FOR SUPPORT.	G43. WHERE GROUNDING CONDUCTOR IS BURIED PARALLEL TO UNDERGROUND METALLIC PIPING, THREE (3) FEET SEPARATION SHALL BE MAINTAINED BETWEEN THE PIPING AND GROUND CONDUCTOR TO PREVENT POSSIBLE GALVANIC ACTION.																
G24. CONTRACTOR SHALL BE ALLOWED TO COMBINE CIRCUIT HOMERUNS. HOMERUNS SHALL NOT BE ALLOWED TO EXCEED MORE THAN THREE PHASE CONDUCTORS EXCEPT WHEN DERATING FACTORS ARE APPLIED.	G44. GROUND CONDUCTOR PITGAIL "STUB-UPS" SHALL STUB-UP WITHIN SIX (12") INCHES OF THE EQUIPMENT WITH A THIRTY (36") INCH PITGAIL ABOVE FINISHED FLOOR, IF THE EQUIPMENT HAS A GROUND PAD OR BUS, WITHIN SIX (12") INCHES OF THE POINT																

[illegible]

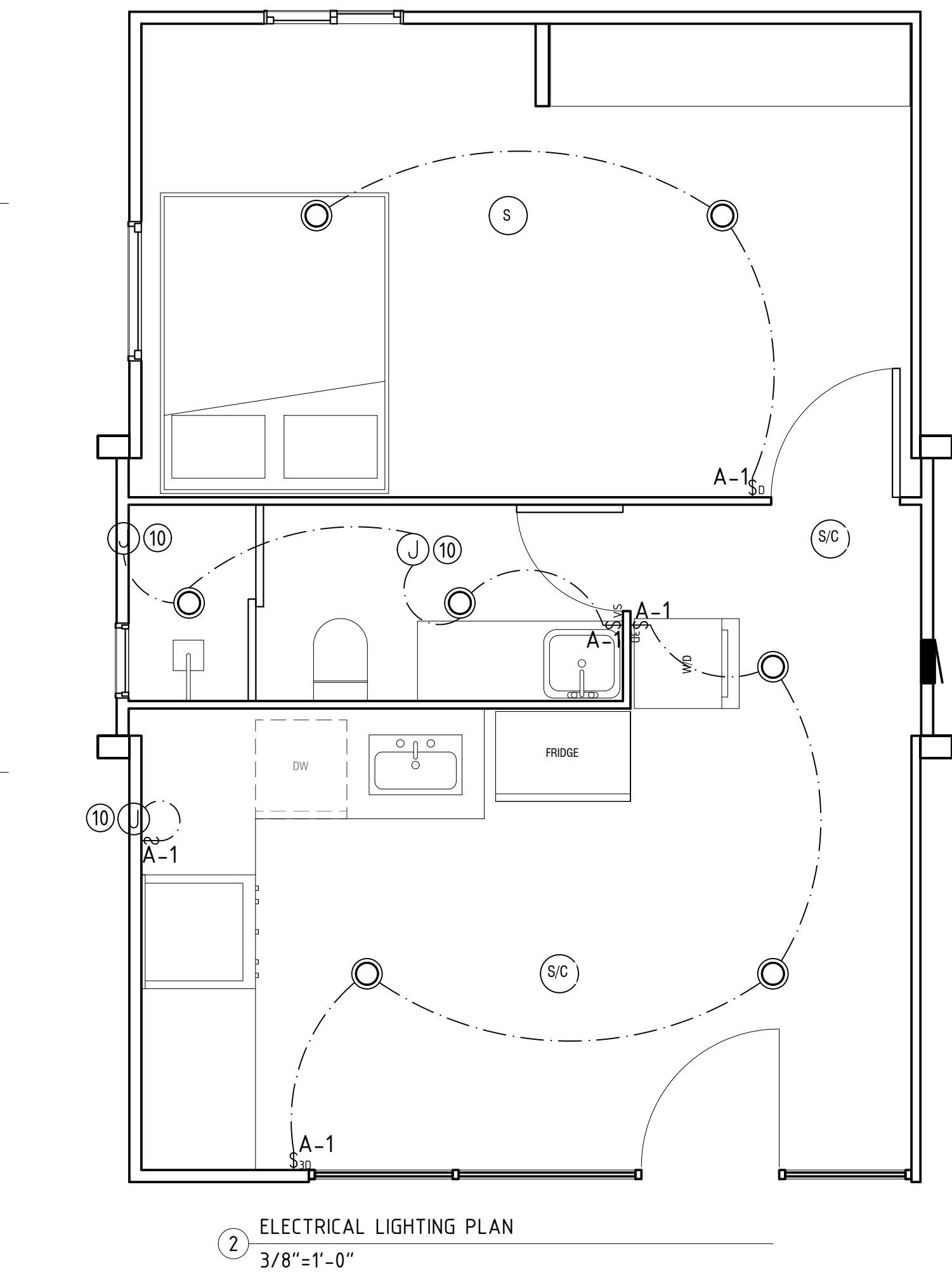
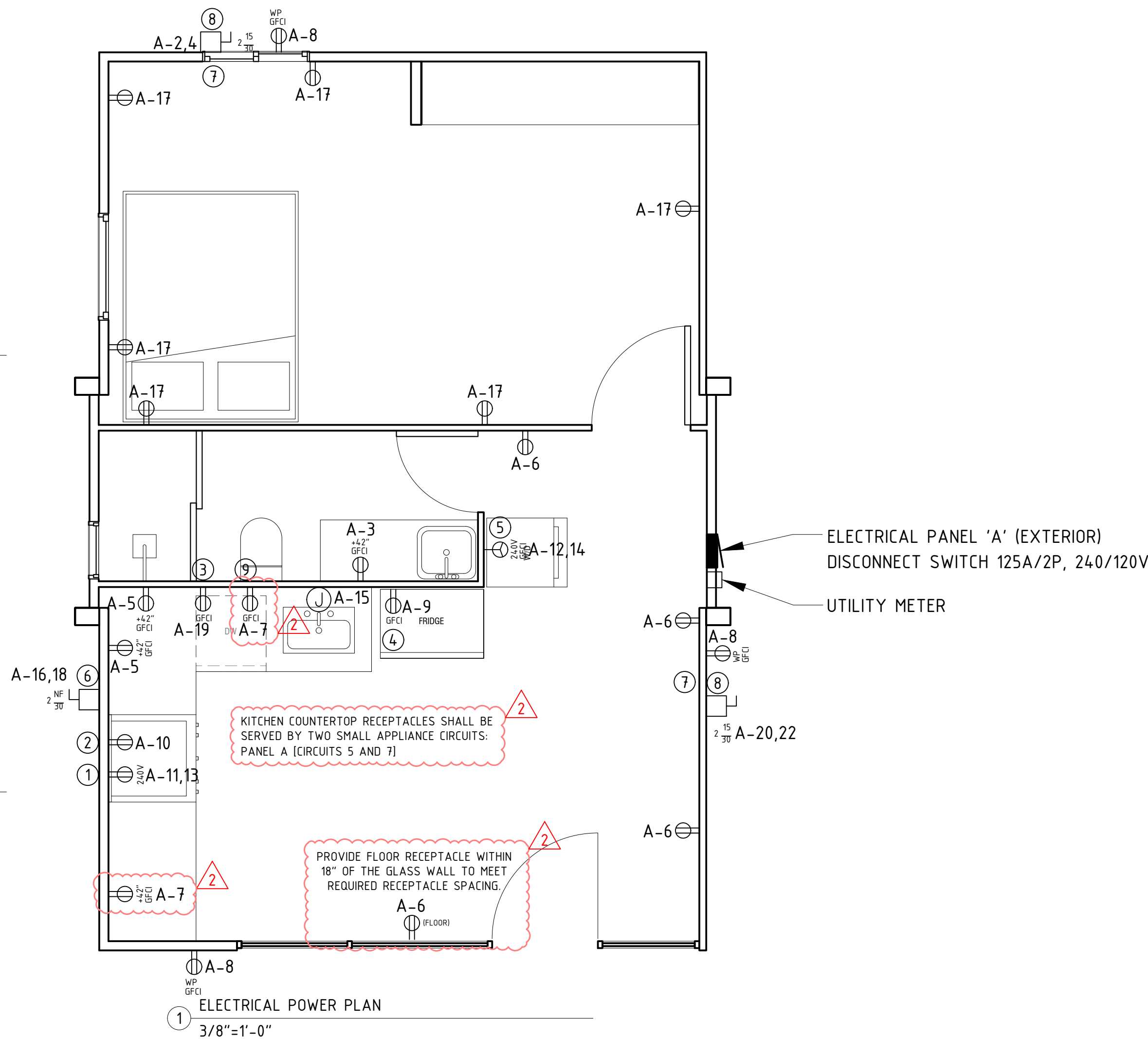
9744 Wilshire Blvd STE 203,
Beverly Hills, CA 90212

DRAWN BY: JL	DESIGNED BY: AJ	CHECKED BY: AJ	APPROVED BY: AJ
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PROJECT NUMBER: 25211
SCALE: AS INDICATED

ELECTRICAL GENERAL
NOTES, SYMBOLS, AND
ABBREVIATIONS

E0.1



GENERAL POWER NOTES:

- UNLESS OTHERWISE NOTED CONDUCTORS FOR CIRCUITS RATED 100 AMPERES OR LESS, OR MARKED FOR 14 AWG THROUGH 1 AWG SHALL BE BASED ON 60°C RATING. CONDUCTOR FOR CIRCUITS RATED MORE THAN 100A, OR MARKED HIGHER THAN 1 AWG SHALL BE BASED ON 75°C RATING.
- ALL OUTDOOR EQUIPMENT SHALL BE NEMA-3R RATED AND ALL INDOOR EQUIPMENT SHALL BE NEMA-1 RATED.
- CONTRACTOR TO VERIFY EXACT LOCATION OF ELECTRICAL PANELS.
- FURNISH AND INSTALL MATERIALS FOR A TEMPORARY CONSTRUCTION SERVICES AS REQUIRED.
- FURNISH AND INSTALL ALL REQUIRED MATERIAL AND LABOR IN COMPLIANCE WITH UTILITY COMPANY REQUIREMENTS. PROVIDE A COMPLETE ELECTRICAL SERVICE AS SHOWN ON DRAWINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGES, BREAKAGE, COLLAPSE, AND MISALIGNMENT ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES. CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO PROTECT ALL EXISTING OPERATIONS AND PROPERTY ADJACENT WITH WHICH WORK COMES IN CONTACT, OR OVER, OR UNDER WHICH HE MAY TRANSPORT, HOIST, OR MOVE MATERIALS, EQUIPMENT, DEBRIS, ETC., AND SHALL REPAIR ALL DAMAGES CAUSED BY THEM DURING CONSTRUCTION TO OWNER'S SATISFACTION.
- FOR ALL 125-VOLT, SINGLE PHASE, 15- AND 20-AMP RECEPTACLES, GFCI OUTLETS ARE REQUIRED FOR ALL KITCHEN RECEPTACLES THAT ARE DESIGNED TO SERVE COUNTERTOP SURFACES, BATHROOMS, UNDERFLOOR SPACES OR BELOW GRADE LEVEL, IN EXTERIOR OUTLETS, LAUNDRY AREAS, WITHIN 6' OF UTILITY/WET BAR SINKS, DISHWASHERS AND IN ALL GARAGES, INCLUDING OUTLETS DEDICATED TO A SINGLE DEVICE OR GARAGE DOOR OPENER (NEC 210.8 (A)).
- FOR ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMP BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES, AFCI OUTLETS ARE REQUIRED FOR KITCHEN, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY ANY OF THE MEANS DESCRIBED IN (NEC 210.12 (A))(1)-(6)).
- ALL 125-VOLT, 15- AND 20-AMPERE RECEPTACLES SHALL BE TAMPER RESISTANT IN DWELLING UNIT OR AREAS IN ACCORDANCE WITH NEC 406.12

DRAWING NOTES:

- PROVIDE POWER CONNECTION FOR RANGE. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR KITCHEN HOOD. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION AND RECEPTACLE HEIGHT WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR DISHWASHER. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR FRIDGE. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR WASHER/DRYER. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR WATER HEATER. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- POWER CONNECTION FOR MINI-SPLIT AC UNIT POWERED FROM OUTDOOR UNIT. CONFIRM REQUIREMENT WITH SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR EXTERIOR CONDENSER. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR GARBAGE DISPOSAL. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.
- PROVIDE POWER CONNECTION FOR EXHAUST FAN. CONFIRM EXACT POWER REQUIREMENT WITH THE SELECTED VENDOR. COORDINATE LOCATION WITH OTHER TRADE.

- A 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED OUTDOORS, GARAGES, ETC. SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL (NEC 210.8(A)(1)-(10)).
- RECEPTACLES LOCATED OUTDOORS SHALL BE WEATHER RESISTANT, TAMPER RESISTANT, ENCLOSED IN AN APPROVED BUBBLE COVER (NEC 406.9, 406.12, 210.52(E)).
- SPACING: RECEPTACLE TO BE INSTALLED, SO THAT NO POINT ALONG THE WALL IS FURTHER THAN 6' FROM AN OUTLET.
- KITCHEN: PROVIDE RECEPTACLES WITHIN 2 FT OF KITCHEN SINK AND AT 4 FT ON CENTER AT COUNTERS AND ISLANDS (12" OR MORE IN WIDTH).
- SMOKE DETECTORS SHALL BE HARD WIRED (110 VOLT TYPE) TO A NON-SWITCHABLE KITCHEN OR BATHROOM LIGHTING CIRCUIT, WITH BATTERY BACK UP AND SHALL NOT BE CONNECTED ONTO THE LOAD SIDE OF A GROUND FAULT CIRCUIT INTERRUPTER.
- ELECTRICAL CONTRACTOR TO PROVIDE WORKING CLEARANCE PER NEC 110.26 FOR ALL NEW ELECTRICAL EQUIPMENT.

GENERAL LIGHTING NOTES:

- REFER TO LIGHT FIXTURE SCHEDULE ON THIS SHEET FOR FIXTURE TYPES. COORDINATE FINAL SELECTION WITH THE OWNER.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS FOR A COMPLETE INSTALLATION IN ALL RESPECTS READY FOR INTENDED USE AND IN STRICT ACCORDANCE WITH NEC, STATE AND LOCAL CODES, AND MANUFACTURERS RECOMMENDATIONS.
- EQUIPMENT SHALL BE UL LISTED WHERE APPLICABLE.
- COORDINATE WITH ALL CONSTRUCTION TRADES.

WIRING METHODS:

- ALL INTERIOR BRANCH CIRCUIT CONDUCTORS INSIDE THE BUILDING SHALL BE TYPE NM (ROMEX) NONMETALLIC SHEATHED CABLE UNLESS OTHERWISE SPECIFIED.
- ALL FEEDER CONDUCTOR AND FOR ANY WIRING IN OUTDOOR SHALL BE THHN-2 WIRE.
- ALL FEEDER CONDUCTOR SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE NOTED.
- ALL CONDUCTORS INSTALLED UNDERGROUND OR IN EXPOSED OUTDOOR LOCATIONS SHALL BE RUN IN EITHER PVC SCH 40 OR RIGID GALVANIZED CONDUIT (RGC).

LIGHTING LEGEND

SYMBOL	DESCRIPTION	WATTAGE	VOLTAGE
⊙	LED CEILING FIXTURE	50W	UNV
⊙	SMOKE DETECTOR	20W	120V
⊙	SMOKE/CARBON DETECTOR	20W	120V

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing - DAA-RDF1507648
Intertek (Intertek-AT)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33" Street
Orlando, FL 32839



ISSUES/REVISIONS		
2	02/20/2026	COMMENTS
1	10/17/25	COMMENTS
A	09/23/25	FOR REVIEW
NO.	DATE	DESCRIPTION

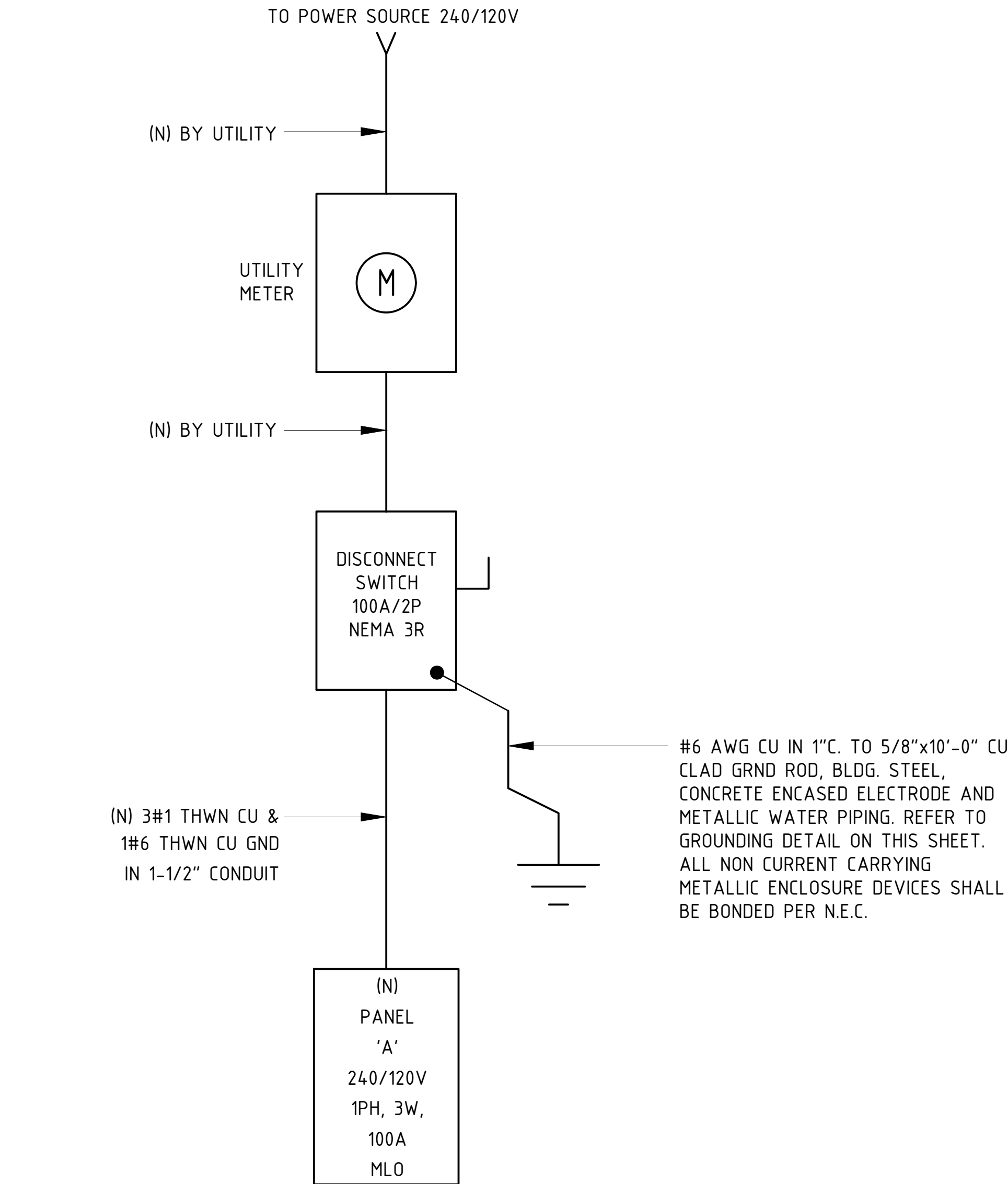
1L PREFAB MODULAR HOUSE (ONE-BEDROOM ADU WITH KITCHEN ON LEFT SIDE)

9744 Wilshire Blvd STE 203,
Beverly Hills, CA 90212

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
JL	AI	AI	AI

PROJECT NUMBER: 25211
SCALE: AS INDICATED

ELECTRICAL POWER AND LIGHTING PLAN



1 ELECTRICAL SINGLE LINE DIAGRAM
NTS

NEC LOADS CALCULATION				ONE-BEDROOM ADU
1. General Lighting Load				
General ltg and recs =	470 SF	x 3 VA/SF =	1,410 VA	TOTAL 5,910 VA
Small appliances =	1,500 VA	x 2 =	3,000 VA	
Laundry circuit =	1,500 VA	x 1 =	1,500 VA	
Sub-Total =			5,910 VA	
2. Appliances Load				
Dishwasher =	1,200 VA	x 1 =	1,200 VA	7,700 VA
Disposal =	800 VA	x 1 =	800 VA	
Fridge =	800 VA	x 1 =	800 VA	
Kitchen Hood =	400 VA	x 1 =	400 VA	
Water Heater =	4,500 VA	x 1 =	4,500 VA	
Sub-Total =			7,700 VA	
3. Electric Cooking				
Range =	8,000 VA	x 1 =	8,000 VA	8,000 VA
Sub-Total =			8,000 VA	
4. Clothes Dryer				
	5,000 VA	x 1 =	5,000 VA	5,000 VA
5. HEATING or AC Units				
AC Unit 1 =	2,400 VA	x 1 =	2,400 VA	4,800 VA
AC Unit 2 =	2,400 VA	x 1 =	2,400 VA	
Sub-Total =			4,800 VA	
6. Other Loads				
Exhaust Fans =	35 VA	x 3 =	105 VA	105 VA
Sub-Total =			105 VA	
Total Conencted Load				31,515 VA
Application of Demand Factors (220.82): Optional calculations				
First 10,000VA at	10,000 VA	100%		10,000 VA
Remaining at	16,715 VA	40%		6,686 VA
Air Conditioning at	4,800 VA	100%		4,800 VA
Total Demand Load				21,486 VA
Minimum Service Load				89.53 A
240 V, 1PH				

PANELBOARD IDENTIFICATION: 'A'										NEW	
LOCATION: <u>LIVING ROOM</u>		MAIN <u>100A</u>		BUS <u>100A</u>		VOLTS <u>240 /120V</u>		PHASE <u>1</u>		WIRE <u>3</u>	
PROTECTIVE DEVICES: <u>10 RMS SYMMETRICAL KAIC MINIMUM</u>		MOUNTING <u>RECESSED</u>									
DESCRIPTION	VOLT-AMP		BREAKER		CIR / POLE #	CIR / POLE #	BREAKER		VOLT-AMP		DESCRIPTION
	A	B	AMP	POLE			AMP	POLE	A	B	
LIGHTING-INTERIOR LIGHTS	550		20	1	1	2	20	2	2400		ACU BEDROOM
RECEPT-BATH 1		180	20	1	3	4				2400	
RECEPT- SMALL APPLIANCE CKT	360		20	1	5	6	20	1	720		RECEPT-LIVING ROOM
RECEPT- SMALL APPLIANCE CKT		360	20	1	7	8	20	1		540	RECEPT-EXTERIOR
FRIDGE	800		20	1	9	10	20	1	400		KITCHEN HOOD
RANGE		4000	40	2	11	12	30	2		2500	
	4000				13	14			2500		WASHER/DRYER
GARBAGE DISPOSAL		800	20	1	15	16	30	2		2250	
RECEPT-BEDROOM	900		20	1	17	18			2250		WATER HEATER HPWH-1
DISHWASHER		1200	20	1	19	20				2400	
SPACE			20	1	21	22	30	2	2400		ACU LIVING RM
SMOKE DETECTOR		100	20	1	23	24	20	1			SPARE
VOLT-AMPERES											
TOTAL: BUS A: <u>6610</u>		BUS B: <u>6640</u>		(ODD)							
<u>10670</u>		<u>10090</u>		(EVEN)							
SUBTOTALS: <u>17280</u>		<u>16730</u>		= TOTAL OF <u>34.01 KVA</u>							
DEMAND FACTOR <u>0.63</u> <u>21</u>											
LINE AMPS TOTAL = <u>89</u>											

RISER DIAGRAM GENERAL NOTES:

- A. UNLESS OTHERWISE NOTED CONDUCTORS FOR CIRCUITS RATED 100 AMPERES OR LESS, OR MARKED FOR 14 AWG THROUGH 1 AWG SHALL BE BASED ON 60°C RATING. CONDUCTOR FOR CIRCUITS RATED MORE THAN 100A, OR MARKED HIGHER THAN 1 AWG SHALL BE BASED ON 75°C RATING.
- B. ALL OUTDOOR EQUIPMENT SHALL BE NEMA-3R RATED.
- C. ALL INDOOR EQUIPMENT SHALL BE NEMA-1 RATED.
- D. CONTRACTOR TO VERIFY EXACT LOCATION OF ELECTRICAL PANELS.
- E. COORDINATE ALL SERVICE AND METERING DETAILS INCLUDING ANY RELOCATION OF EXISTING EQUIPMENT WITH LOCAL UTILITY COMPANY.
- F. FURNISH AND INSTALL MATERIALS FOR A TEMPORARY CONSTRUCTION SERVICES AS REQUIRED.
- G. GROUND SERVICE EQUIPMENT TO COLD WATER PIPE AND TO CONCRETE ENCASED ELECTRODE IN ACCORDANCE WITH NEC.
- H. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGES, BREAKAGE, COLLAPSE, AND MISALIGNMENT ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES. CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO PROTECT ALL EXISTING OPERATIONS AND PROPERTY ADJACENT WITH WHICH WORK COMES IN CONTACT, OR OVER, OR UNDER WHICH HE MAY TRANSPORT, HOIST, OR MOVE MATERIALS, EQUIPMENT, DEBRIS, ETC., AND SHALL REPAIR ALL DAMAGES CAUSED BY THEM DURING CONSTRUCTION TO OWNER'S SATISFACTION.
- I. ALL EQUIPMENT ARE NEW UNLESS OTHERWISE STATED. EQUIPMENT TAGGED (N) AND/OR DRAWN WITH BLACK SOLID LINE IS NEW, (E) AND/OR DRAWN WITH GRAY SOLID LINE - EXISTING TO REMAIN, (D) AND/OR DRAWN WITH BLACK DASHED LINE - TO BE DEMOLISHED.

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing - DAA #DF1507648
Intertrak (Intertrak-RTI)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33rd Street
Orlando, FL 32839



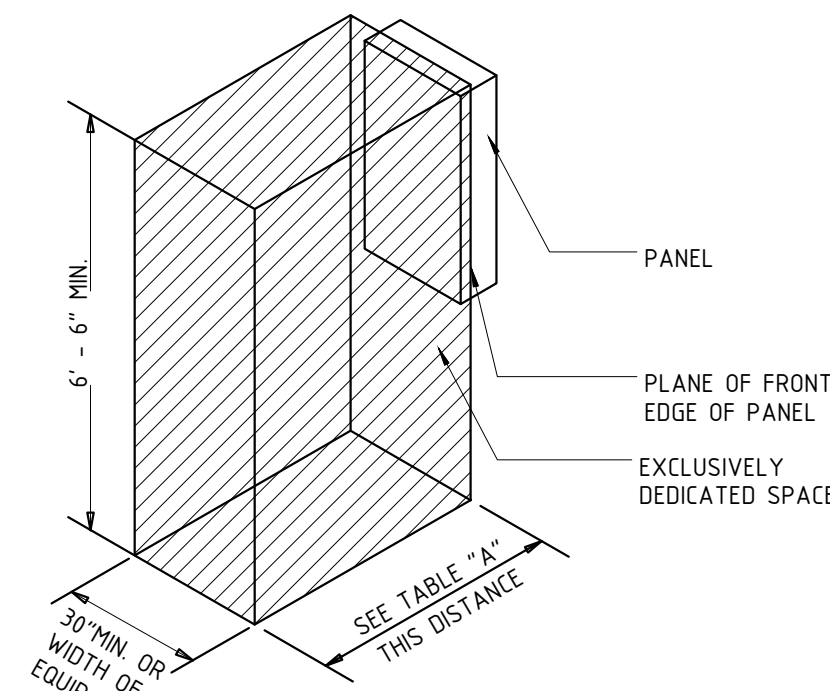
ISSUES/REVISIONS		
2	02/20/2026	COMMENTS
1	10/17/25	COMMENTS
A	09/23/25	FOR REVIEW
NO.	DATE	DESCRIPTION

1L PREFAB MODULAR
HOUSE
[ONE-BEDROOM ADU WITH
KITCHEN ON LEFT SIDE]

9744 Wilshire Blvd STE 203,
Beverly Hills, CA 90212

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
JL	AI	AI	AI
PROJECT NUMBER: 25211			
SCALE: AS INDICATED			

ELECTRICAL SINGLE LINE
DIAGRAM AND PANEL
SCHEDULES

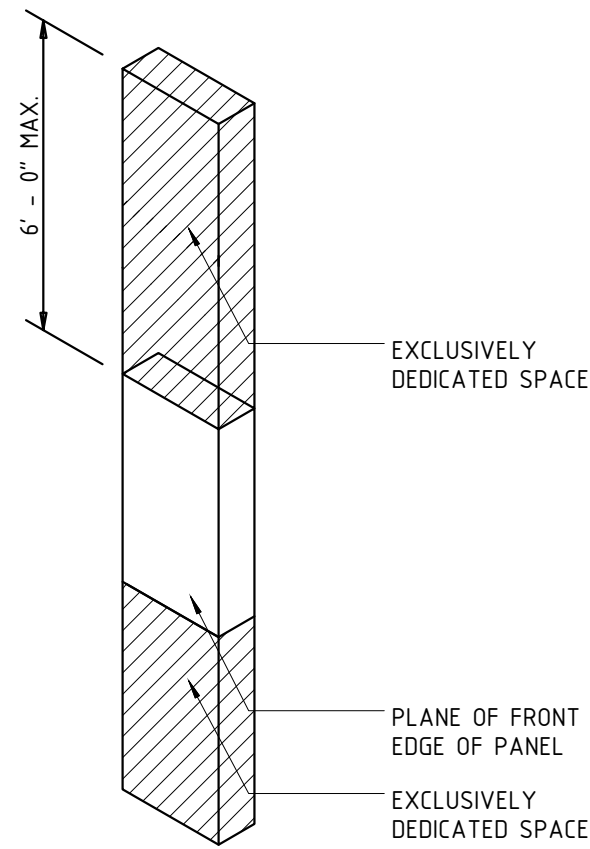


NOTE:
THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF THE PANELBOARD REQUIRED BY SECTION 110-16 OF THE NATIONAL ELECTRICAL CODE.

TABLE 110-16(A) WORKING CLEARANCES				
VOLTAGE TO GROUND, NOMINAL	MINIMUM CLEAR DISTANCE (FEET)	1	2	3
0-150		3	3	3
151-600		3	3 1/2	4

NOTE:
NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES SHALL BE PERMITTED TO BE INSTALLED, IN ENTER OR PASS THROUGH THE DEDICATED SPACES SHOWN ABOVE.

1 ELECTRICAL EQUIPMENT DEDICATED SPACE DETAIL
NTS

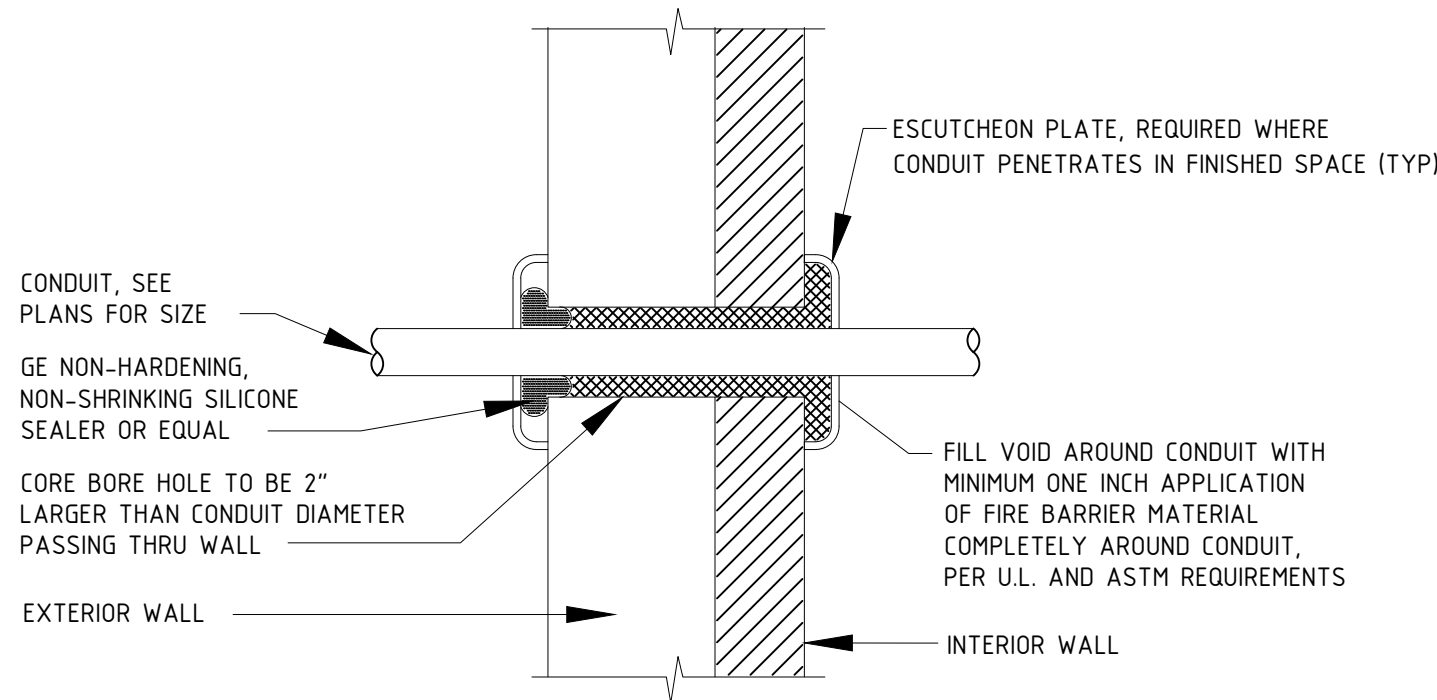


NOTE:
THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE PANELBOARD FOR THE CABLES, RACEWAYS, ETC. TO AND FROM THE PANELBOARD REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE.

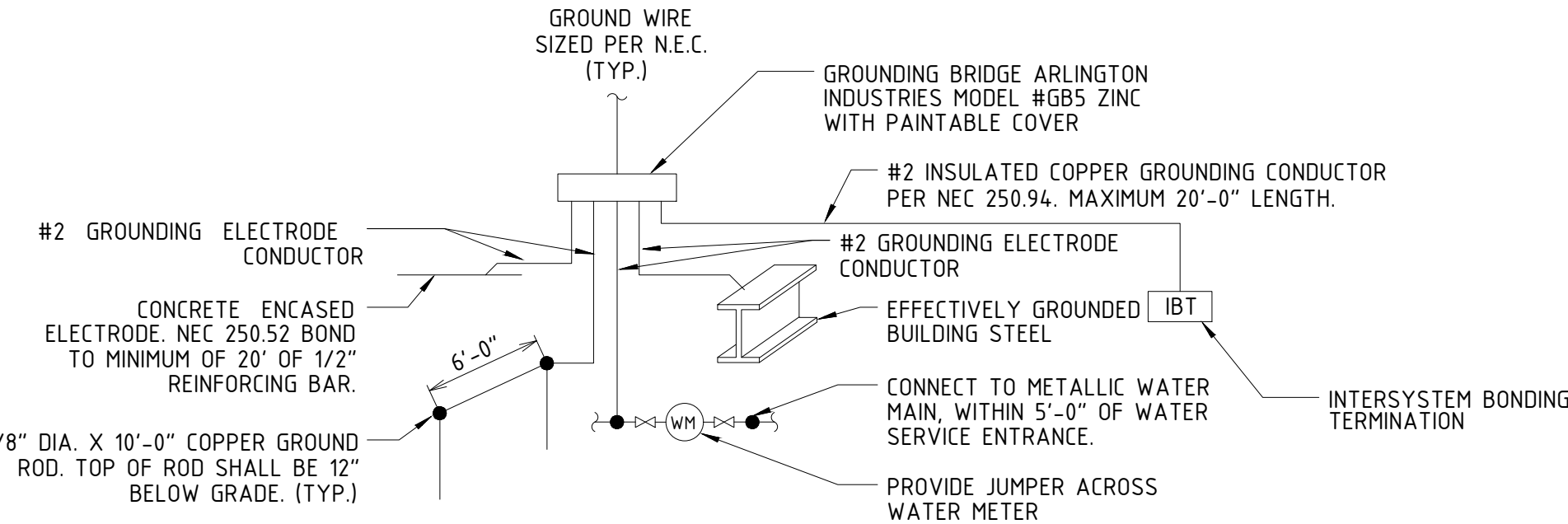
WHERE THE "CONDITIONS" ARE AS FOLLOWS:

- EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUND PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATE BUSBARS OPERATING AT NOT OVER 300 VOLTS SHALL NOT BE CONSIDERED LIVE PARTS.
- EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
- EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

2 TYPICAL RECEPTACLE WIRING DETAIL
NTS



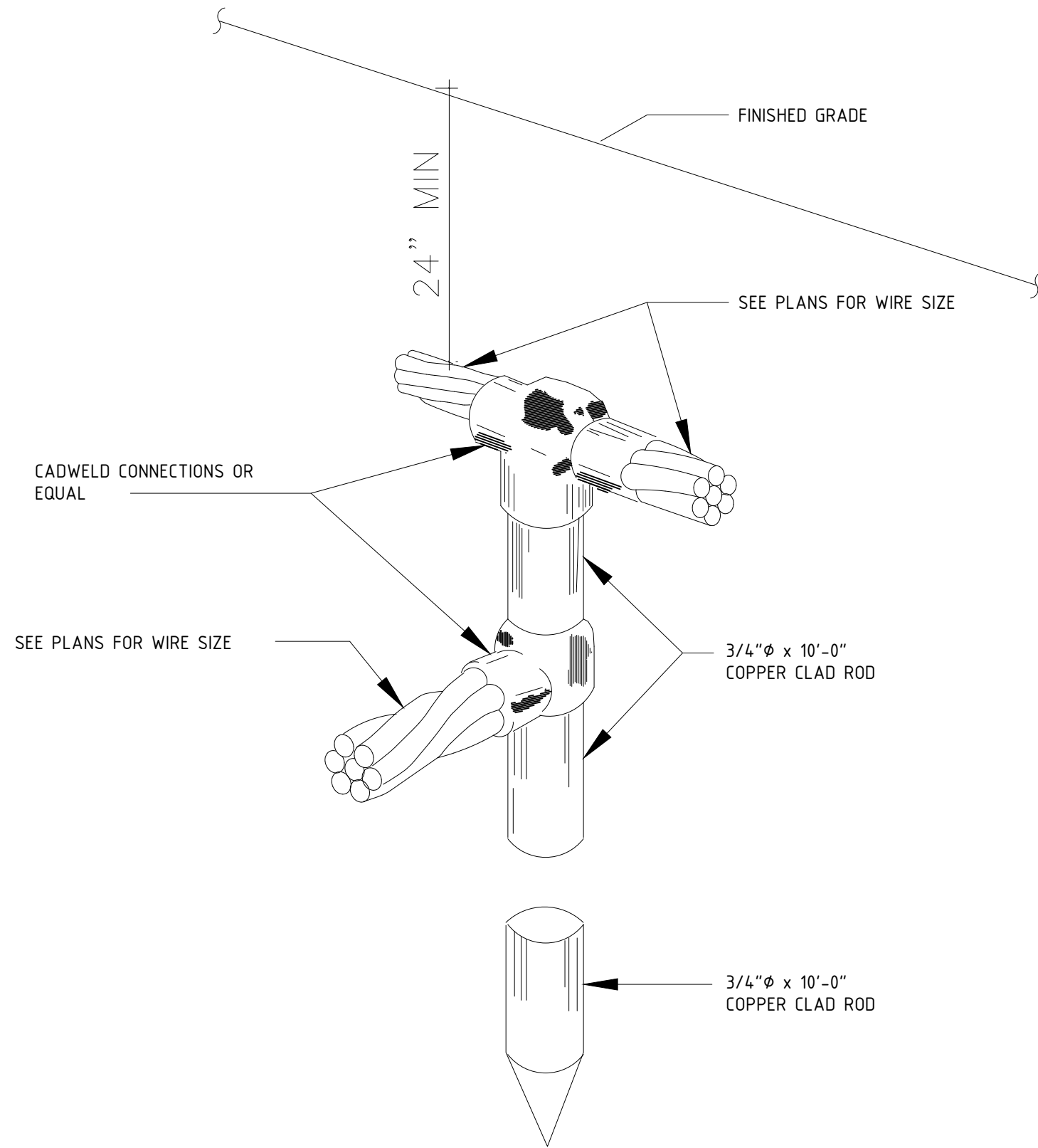
3 CONDUIT PENETRATION THROUGH WALL
NTS



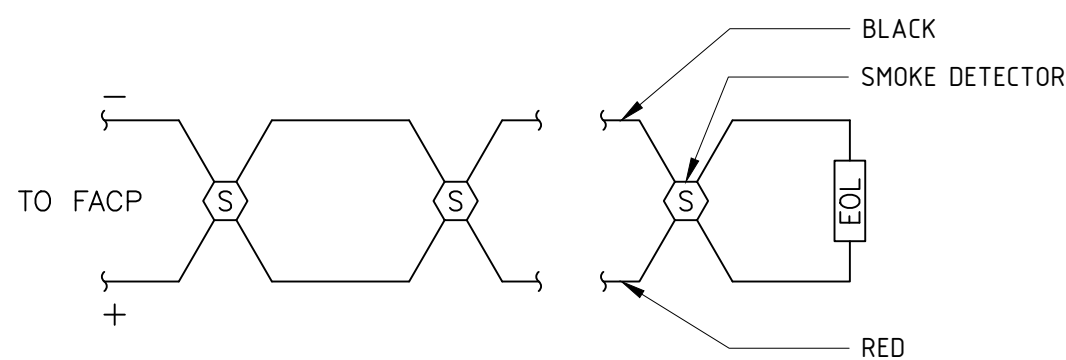
NOTES:

- GROUNDING ELECTRODE BONDING JUMPERS SHALL BE CONNECTED TO THE INTERIOR METAL WATER PIPE NOT MORE THAN 5 FT FROM THE POINT OF ENTRANCE TO THE BUILDING OR SHALL BE CONNECTED TO THE STRUCTURAL FRAME OF A BUILDING THAT IS DIRECTLY CONNECTED TO A GROUNDING ELECTRODE.

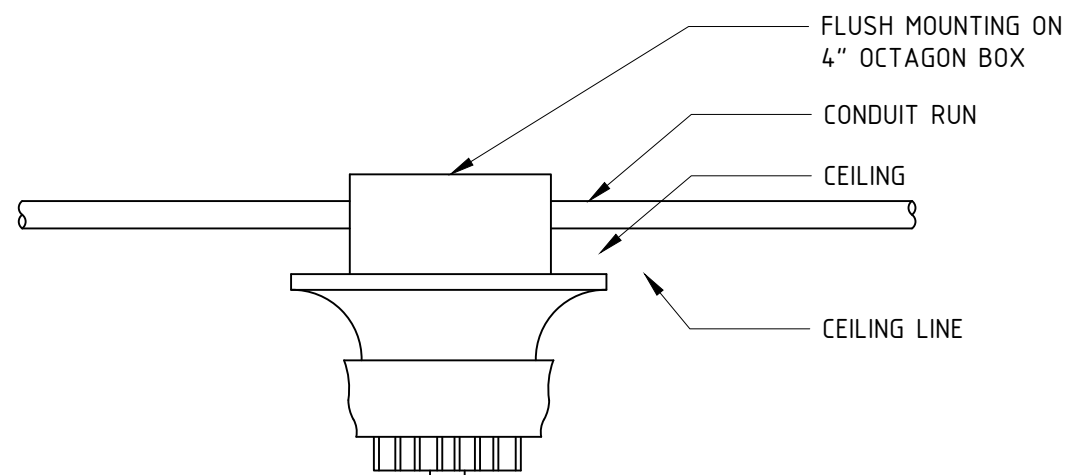
4 TYPICAL GROUNDING DETAILS
NTS



5 TYPICAL GROUND ROD CONNECTION DETAIL
NTS



6 TYPICAL SMOKE DETECTOR WIRING DIAGRAM & SMOKE DETECTOR INSTALLATION (RESPECTIVELY)
NTS



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1L PREFAB MODULAR HOUSE
[ONE-BEDROOM ADU WITH KITCHEN ON LEFT SIDE]

9744 Wilshire Blvd STE 203,
Beverly Hills, CA 90212

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
JL	AI	AI	AI

PROJECT NUMBER: 25211
SCALE: AS INDICATED

ELECTRICAL DETAILS

GENERAL NOTES

- A. NOTCHING AND/OR CUTTING OF ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED, UNLESS PRIOR CONSENT IS GIVEN BY THE STRUCTURAL ENGINEER OF RECORD.
- B. IT IS NECESSARY THAT THE STRUCTURAL DRAWINGS BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS TO HAVE A COMPLETE SCOPE OF WORK.

CONCRETE

- A. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN ACI-318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI-301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
- B. THE MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS:
1. FOOTINGS, FOUNDATIONS AND STEM WALLS U.N.O. = FC 35 MPa
- C. CONCRETE MIX DESIGN SHALL NOT EXCEED A WATER/CEMENT RATIO OF 0.50. APPROVED ADMIXTURES MAY BE USED TO INCREASE THE WORKABILITY OF THE CONCRETE UPON WRITTEN APPROVAL OF THE OWNER.
- D. ALL CONCRETE MIXING SHALL MEET THE REQUIREMENTS SET FORTH IN ASTM C94. USE TYPE I/II CEMENT, ASTM 150. CONCRETE SHALL BE NORMAL WEIGHT WITH MAX. AGGREGATE OF 3/4" AND CONFORMING TO ASTM C33.
- E. PROTECT ALL CONCRETE FROM DRYING AND PREMATURE CURING DURING EXTREME WEATHER CONDITIONS. IT IS NOT PERMITTED TO ADD ANY POTABLE WATER TO THE MIXTURE ON-SITE.
- F. CONCRETE FORM WORK TO BE OF ADEQUATE STRENGTH AND BRACED TO PREVENT DEFORMATION.
- G. PROTECT ALL CONCRETE FROM FREEZING.
- H. STAIN & TEXTURE OF EXPOSED CONCRETE SURFACES PER OWNER'S DIRECTION, IF APPLICABLE.

MECHANICAL ADHESIVE/EPOXY

- A. MECHANICAL ADHESIVE ANCHORAGE MAY BE USED AND SUBSTITUTED WITH PRIOR APPROVAL FROM THE EOR.
- B. BARS USED MUST BE DEFORMED OR THREADED FOR THE FULL EMBEDMENT DEPTH IN THE EPOXY.
- C. DRILL BIT DIAMETER BY 1/4" U.N.O. BY THE EPOXY MANUFACTURER AND TO THE REQUIRED DEPTH AS INDICATED ON THE STRUCTURAL DRAWINGS.
- D. REMOVE ALL DIRT, DUST, WATER AND ICE BY VACUUM FROM THE DRILLED HOLES.
- E. ANY DIRT, RUST OR OIL ON THE BAR SHALL BE REMOVED.
- F. ALL EPOXY MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED EXACTLY.
- G. THE FOLLOWING MECHANICAL ADHESIVE MANUFACTURERS ARE APPROVED FOR USE:
- HILTI HIT HY-150 (ICC ESR-1967)
 - SIMPSON SET-XP (ICC ESR-2508)
 - EPOCON (ICC ESR-1137)
 - HILTI HIT RE 500-SD (ICC ESR-2322)

FOUNDATION

- A. FOUNDATION DESIGNS ARE BASED ON AN ALLOWABLE SOIL BEARING CAPACITY OF 250 KPA MINIMUM.
- B. FOR ANY PIPING OR OTHER SITE RELATED UTILITIES RUNNING ALONGSIDE OR PENETRATING THROUGH THE FOUNDATIONS OR STEM WALLS CONTACT ENGINEER OF RECORD.
- C. ALL CONCRETE SLABS SHALL HAVE REINFORCING PER PLANS & CONTROL JOINTS @ 2500 MM O.C. SPACING MAX AND SHALL BE FOUNDED ON MATERIALS COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY A STANDARD PROCTOR AT OPTIMUM MOISTURE AND PLACED IN 8" LIFTS. SLAB SAWN CONTROL & CONSTRUCTION JOINTS SHALL BE MADE AS SOON AS POSSIBLE WITHOUT DAMAGE TO THE SURFACE. FILLING OF SAWN JOINTS WHERE REQUIRED SHALL BE DELAYED AS LONG AS POSSIBLE TO ALLOW MAXIMUM SHRINKAGE TO OCCUR IN SLABS.
- D. MINIMUM CONCRETE RAFT THICKNESS IS 250MM.

REINFORCING STEEL

- A. ALL ARRANGEMENT AND DETAILING OF REINFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACERS, SHALL BE IN ACCORDANCE WITH THE LATEST ACI 315 DETAILING MANUAL.
- B. ASTM A615, GRADE 40 (#3 REBAR OR SMALLER), ASTM A615, GRADE 60 (#4 REBAR OR LARGER), ASTM A185, GRADE 65 (WELDED WIRE FABRIC SHEETS), BARS TO BE WELDED SHALL BE ASTM A706, GRADE 60.
1. DIMENSIONS OF REINFORCING ARE TO BAR CENTERLINES U.N.O. IN DRAWINGS.
2. MINIMUM CLEAR PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS:
- CONCRETE PLACED DIRECTLY AGAINST EARTH = 3"
 - FORMED SURFACES AND EXPOSED TO EXTERIOR (#5 BARS OR SMALLER) = 2"
 - INTERIOR FACE OF WALLS = 1 1/4"
 - STRUCTURAL SLABS = 1"
 - ELEVATED SLABS, BEAMS & COLUMNS = 1 1/2"
- C. MINIMUM REINFORCING LAP SPLICES/DEVELOPMENT LENGTHS (FC = 35 MPa):
- | BAR SIZE | HOOK LENGTH (IN.) | DEV./SPICE LENGTH (IN.) |
|----------|-------------------|-------------------------|
| 3 | 6 | 21 |
| 4 | 8 | 28 |
| 5 | 10 | 36 |
| 6 | 12 | 43 |
- D. STAGGER SPLICES IN WALLS SO THAT NO TWO ADJACENT BARS ARE SPLICED IN THE SAME LOCATION.
- E. REINFORCING SHALL BE CONTINUOUS THROUGH ALL COLD JOINTS.
- F. PROVIDE CORNER BARS W/ 18" LEGS AT CORNERS AND INTERSECTING WALLS AND FOOTINGS. SIZE AND PLACEMENT TO MATCH HORIZONTAL REINFORCEMENT. CONTACT THE ENGINEER OF RECORD FOR MORE INFORMATION.
- G. PROVIDE #4 MIN. HORIZONTAL LAP TOP OF WALL, CONT. IN FOOTINGS, AND ABOVE ALL OPENINGS. PROVIDE #4 MIN. HORIZONTALS AT ALL INTERSECTING FLOORS AND ROOF LEVELS, BOTTOM OF ALL WINDOWS AND AT 10'-0" O.C. MAX.
- H. PROVIDE #5 VERTICALS AT 16" O.C. W/ STANDARD HOOK EXTENDING INTO FOOTING AT EACH SIDE OF WALL OPENING AND AT EACH END OF WALLS.
- I. ALL REINFORCEMENT SHALL BE COLD BENT, UNLESS OTHERWISE PERMITTED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE OR MASONRY SHALL NOT BE FIELD BENT, UNLESS PERMITTED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD.
- J. PROVIDE FOUNDATION HOLDDOWNS AT ALL SHEAR WALL LOCATIONS PER PLAN, IF APPLICABLE. REFER TO FOUNDATION PLAN.
- K. ALL EXPANSION BOLTS INTO CONCRETE SHALL BE "RED HEAD" TRIBOLT WEDGE ANCHORS (ICC ESR-2427) OR APPROVED EQUIVALENT. INSTALL ANCHORS IN CONFORMANCE WITH ALL MANUFACTURER'S RECOMMENDATIONS.

STEEL

- A. FABRICATION SHALL BE IN ACCORDANCE WITH STANDARD PRACTICES AND IN COMPLIANCE WITH THE APPLICABLE SECTION, RELATING TO DESIGN REQUIREMENTS AND ALLOWABLE STRESSES OF THE LATEST EDITION OF THE AWS STRUCTURAL WELDING CODE D 1.1 AND D 1.3.

MATERIALS	ASTM DESIGNATION
WEB PLATE (BUILT-UP SECTION)	A572 — Fy=50KSI
FLANGE PLATE (BUILT-UP SECTION)	A572 — Fy=50KSI
HOT ROLLED I SECTION	A36 — Fy=36KSI
TUBES	A36 — Fy=36KSI
ANGLE	A36 — Fy=36KSI

MIN. TENSILE STRENGTH

HIGH STRENGTH BOLTS GRADE 8.8 FULLY THREADED — FU=110KSI
ANCHOR BOLTS (IF SUPPLIED) ANCHOR BOLTS (IF SUPPLIED) — A307 — FU=36KSI

BOLT TIGHTENING REQUIREMENTS

- A. ALL HIGH STRENGTH BOLTS ARE GRADE 8.8 UNLESS NOTED OTHERWISE.
- B. STRUCTURAL BOLTS SHALL BE TIGHTENED BY THE TURN-OF-THE-NUT METHOD IN ACCORDANCE WITH THE EIGHTH AISC "SPECIFICATION FOR STRUCTURAL JOINTS" USING ASTM GRADE 8.8.
- C. ALL BOLTED CONNECTIONS UNLESS NOTED ARE DESIGNED AS BEARING TYPE CONNECTION WITH THREADS NOT EXCLUDED FROM THE SHEAR PLANE.

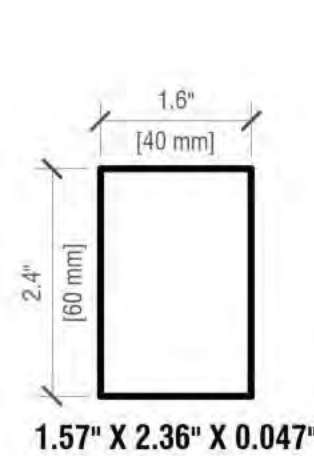
WELD CONNECTIONS

- A. ALL WELDING SHALL BE CONTINUOUS SAW FILLET WELD IN ACCORDANCE WITH REQUIREMENTS OF THE LATEST EDITION OF THE "AWS D 1.1".
- B. WELDING MATERIAL SPECIFICATIONS, E71T-1C MATERIAL WITH Fy=80-90 KSI.
- C. ALL OTHER WELDS SHALL BE SMAW (SHIELDED METAL ARC WELD).
- D. WELDING MATERIAL SPECIFICATIONS, E6013/E7018 MATERIAL WITH Fy=60-70 KSI.

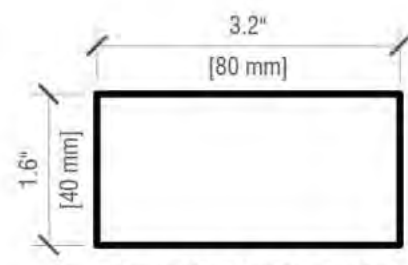
CODES/STANDARDS

RELEVANT BUILDING CODES

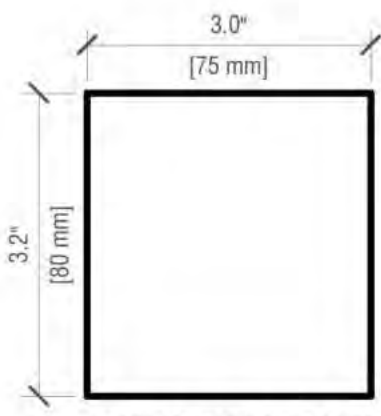
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STRUCTURAL STEEL DESIGN CODE: AISC 360-22
COLD FORMED STEEL DESIGN CODE: AISI S100-20 ASD



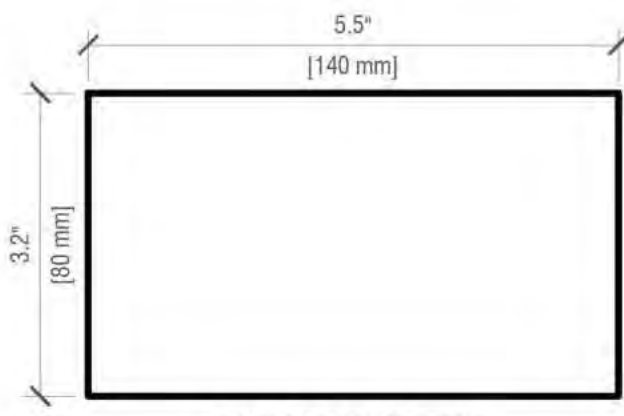
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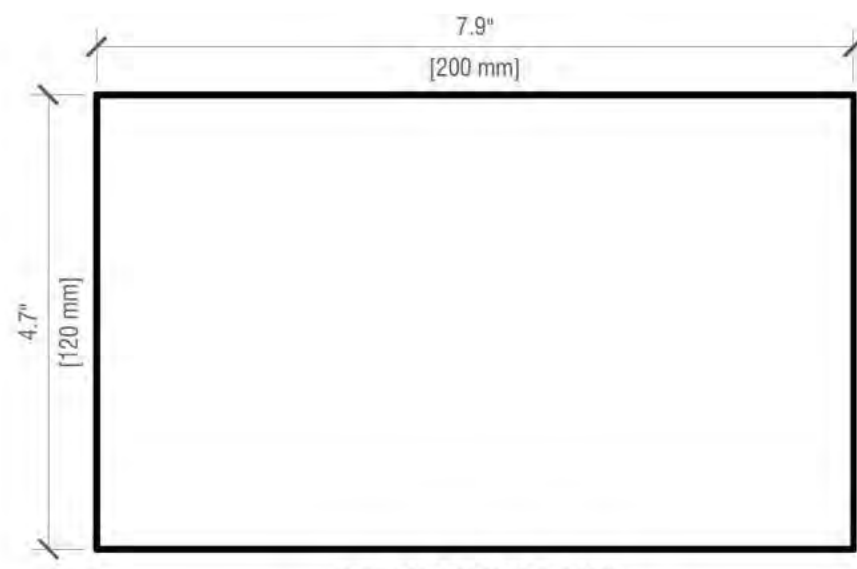
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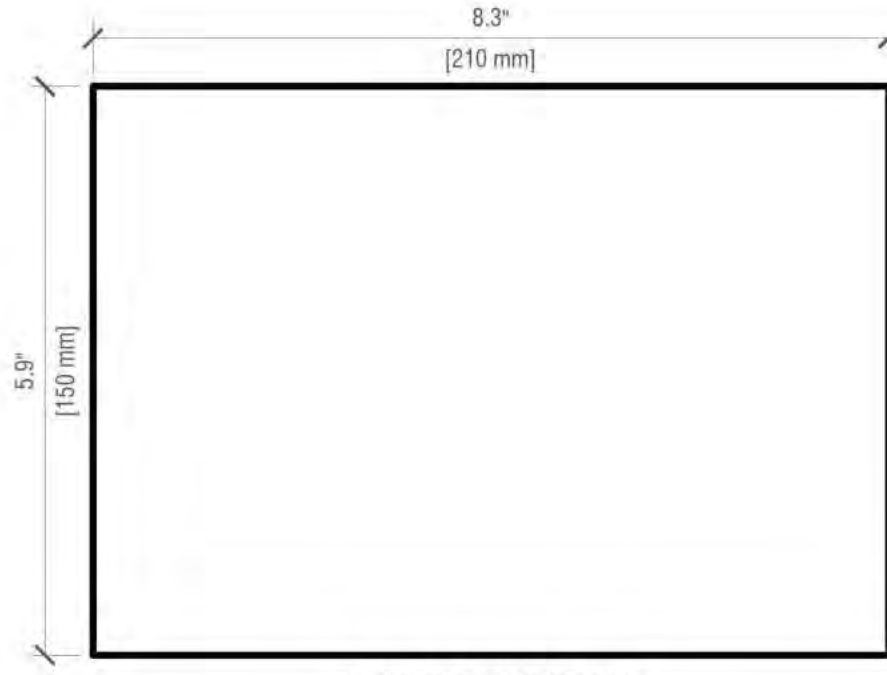
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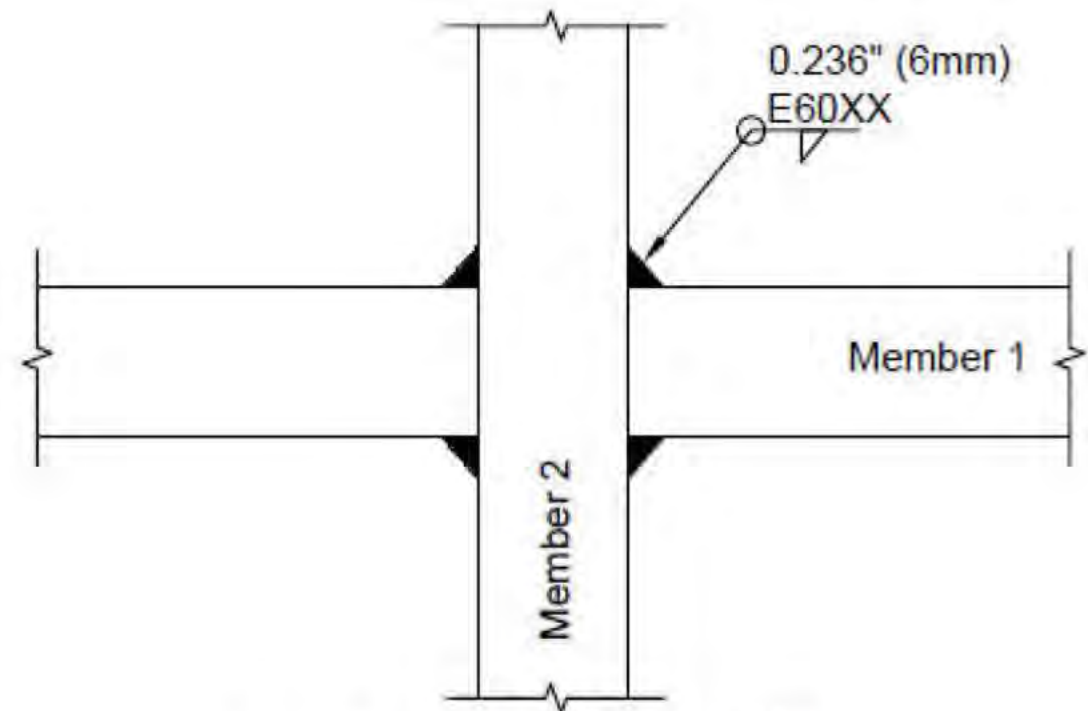
3.15" X 5.51" X 0.059"



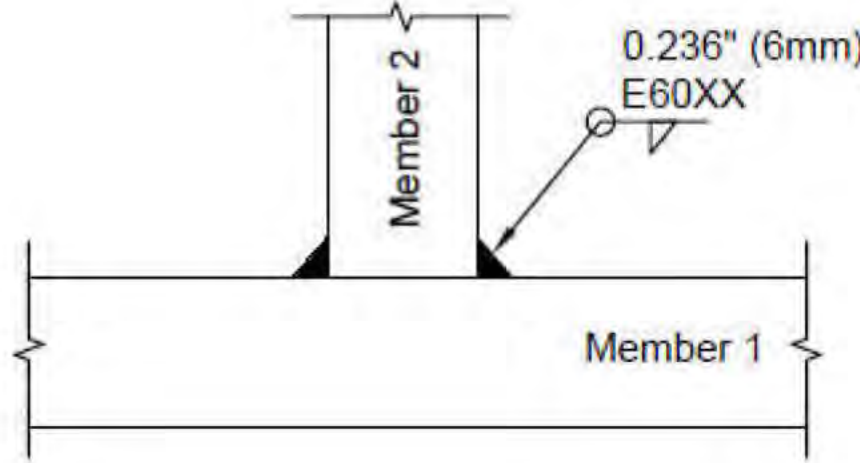
7.87" X 4.72" X 0.118"



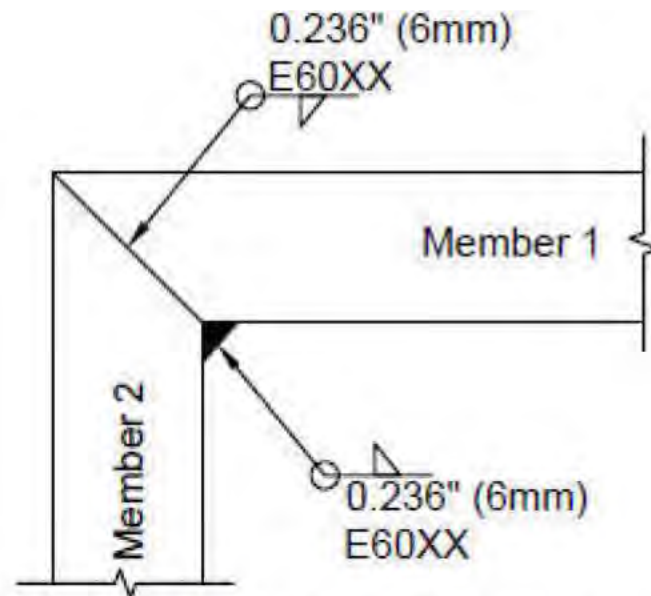
3.15" X 5.51" X 0.059"



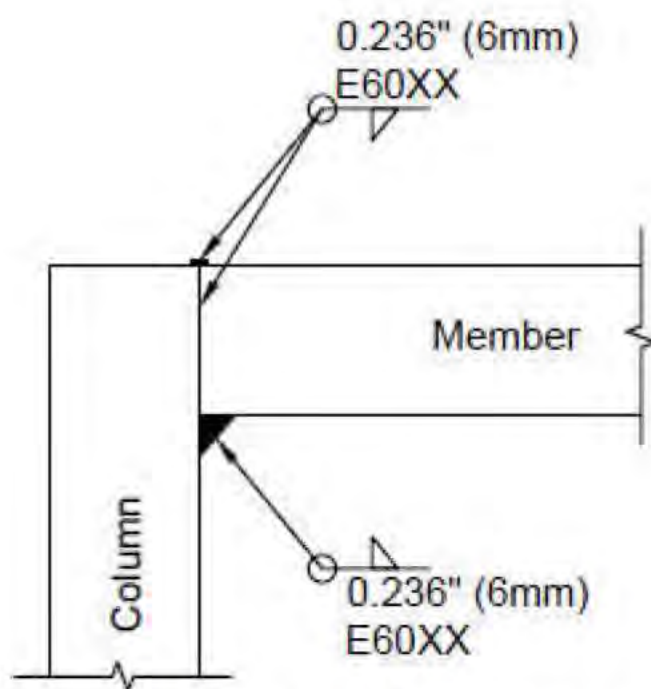
Typ. CONNECTION-1
(Member to Member)



Typ. CONNECTION-2
(Member to Member)



Typ. CONNECTION-3
(Member to Member)



Typ. CONNECTION-4
(Member to Member)

SCALE NOTE

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PLANS MUST BE REVIEWED AND APPROVED BY THE
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1748 33rd Street
Orlando, FL 32836

1L PREFAB MODULAR HOUSE

[ONE-BEDROOM ADU WITH KITCHEN ON LEFT SIDE]

9744 WILSHIRE BLVD, STE. 203,
BEVERLY HILLS, CA 90212

04/11/2026
STRUCTURAL

REVISIONS

NO.	DESCRIPTION	DATE
2	PLAN REVIEW #2	02/20/2026

DEVELOPER

ADU BY CASDEN DEVELOPMENT, LLC
ARIK CASDEN
ARIK@CASDENDVELOPMENT.COM

GENERAL NOTES &
REQUIREMENTS & DETAILS

SO

SCALE NOTE
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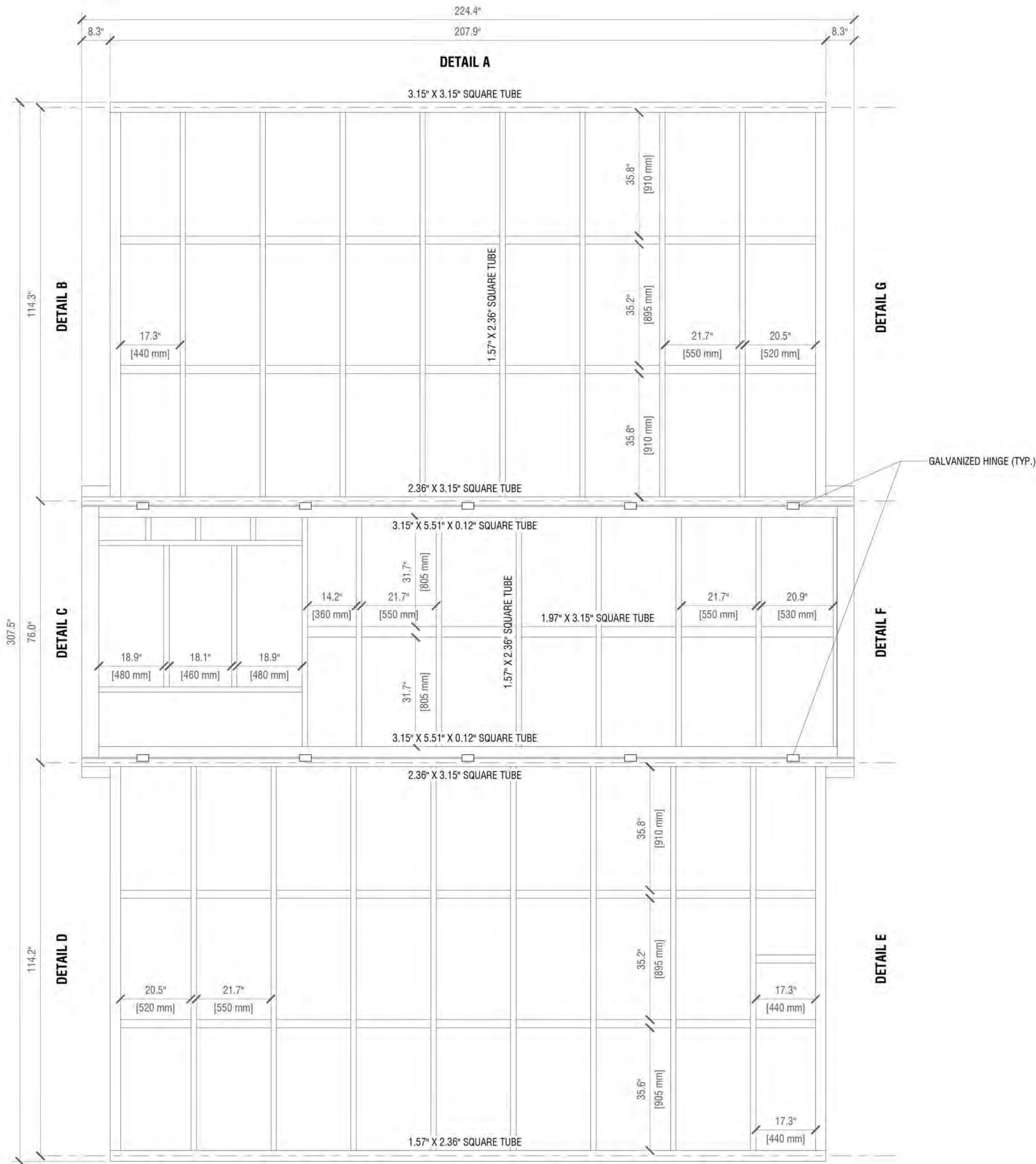
04/11/2026
STRUCTURAL

REVISIONS		
NO.	DESCRIPTION	DATE

DEVELOPER
ADU BY CASDEN DEVELOPMENT, LLC
ARIK CASDEN
ARIK@CASDENDVELOPMENT.COM

FLOOR & ROOF FRAMING PLAN

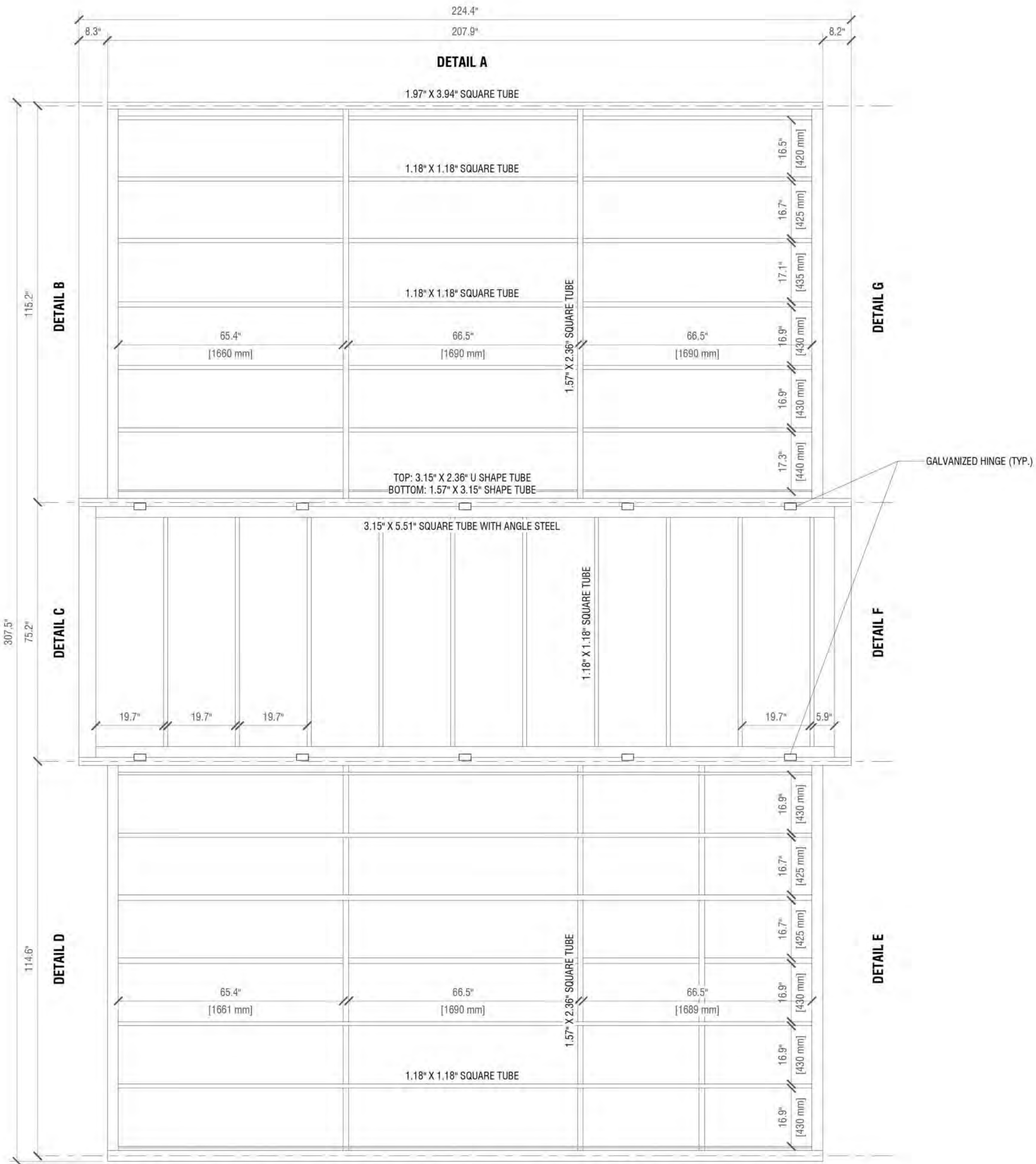
S1



DETAIL H
THE GLASS WALL IS BASED ON THE DRAWING
PROVIDED BY THE WINDOW AND DOOR SUPPLIER

1 STRUCTURAL FLOOR PLAN

1/2" = 1'-0"



DETAIL H

2 STRUCTURAL ROOF PLAN

1/2" = 1'-0"

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STRUCTURAL

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NO.	DESCRIPTION	DATE

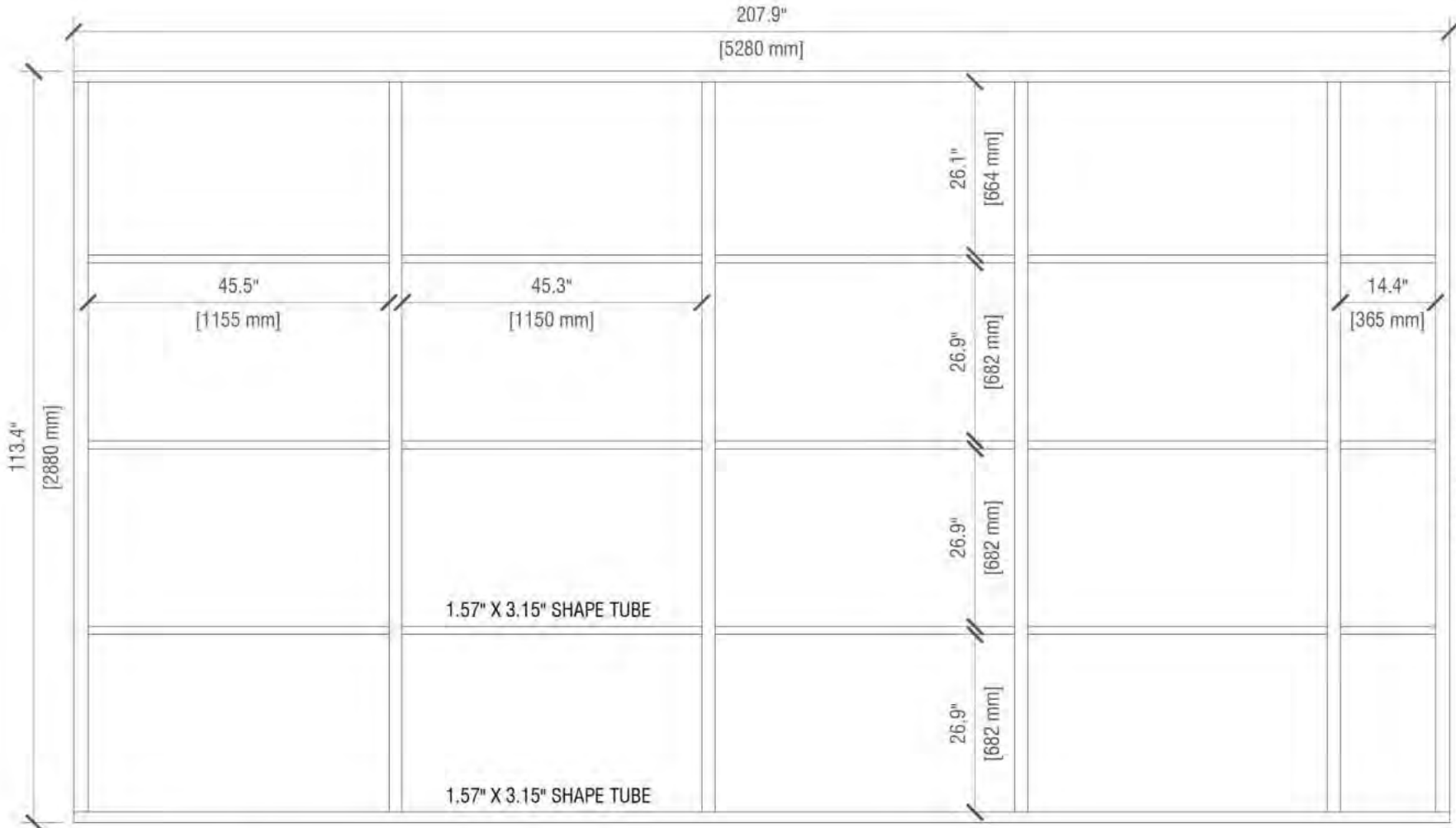
DEVELOPER

ADU BY CASDEN DEVELOPMENT, LLC

ARIK CASDEN

ARIK@CASDENDVELOPMENT.COM

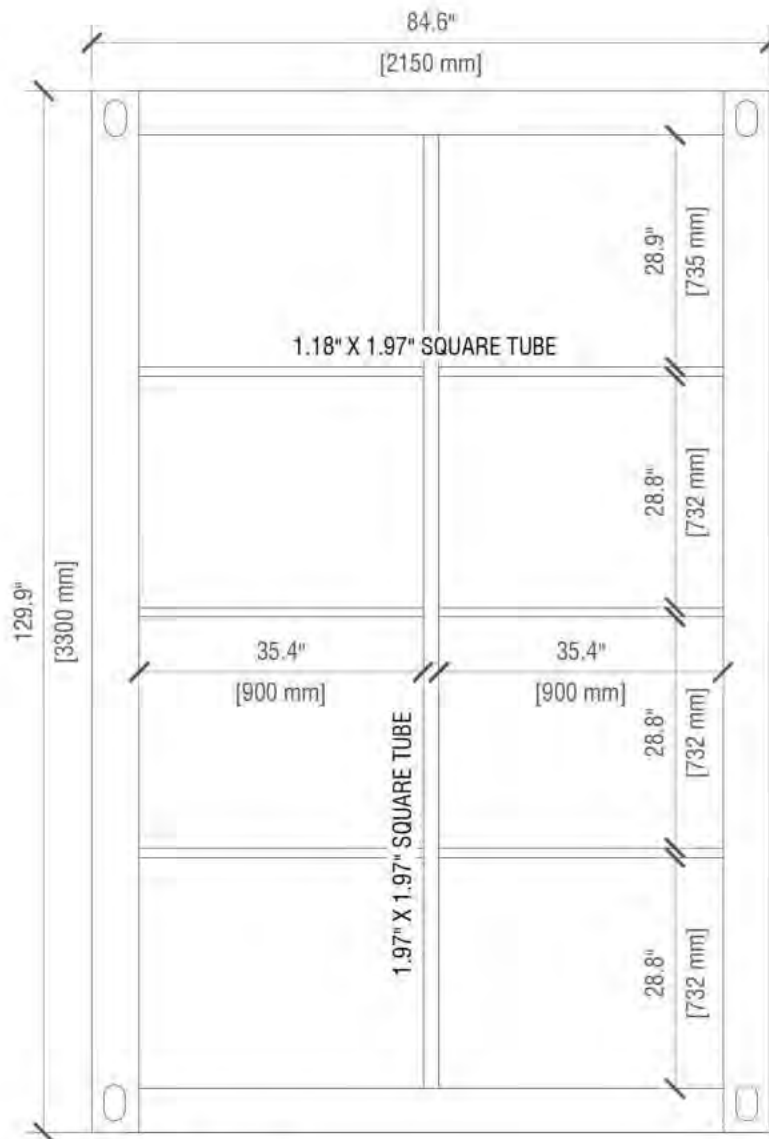
STRUCTURAL ELEVATIONS



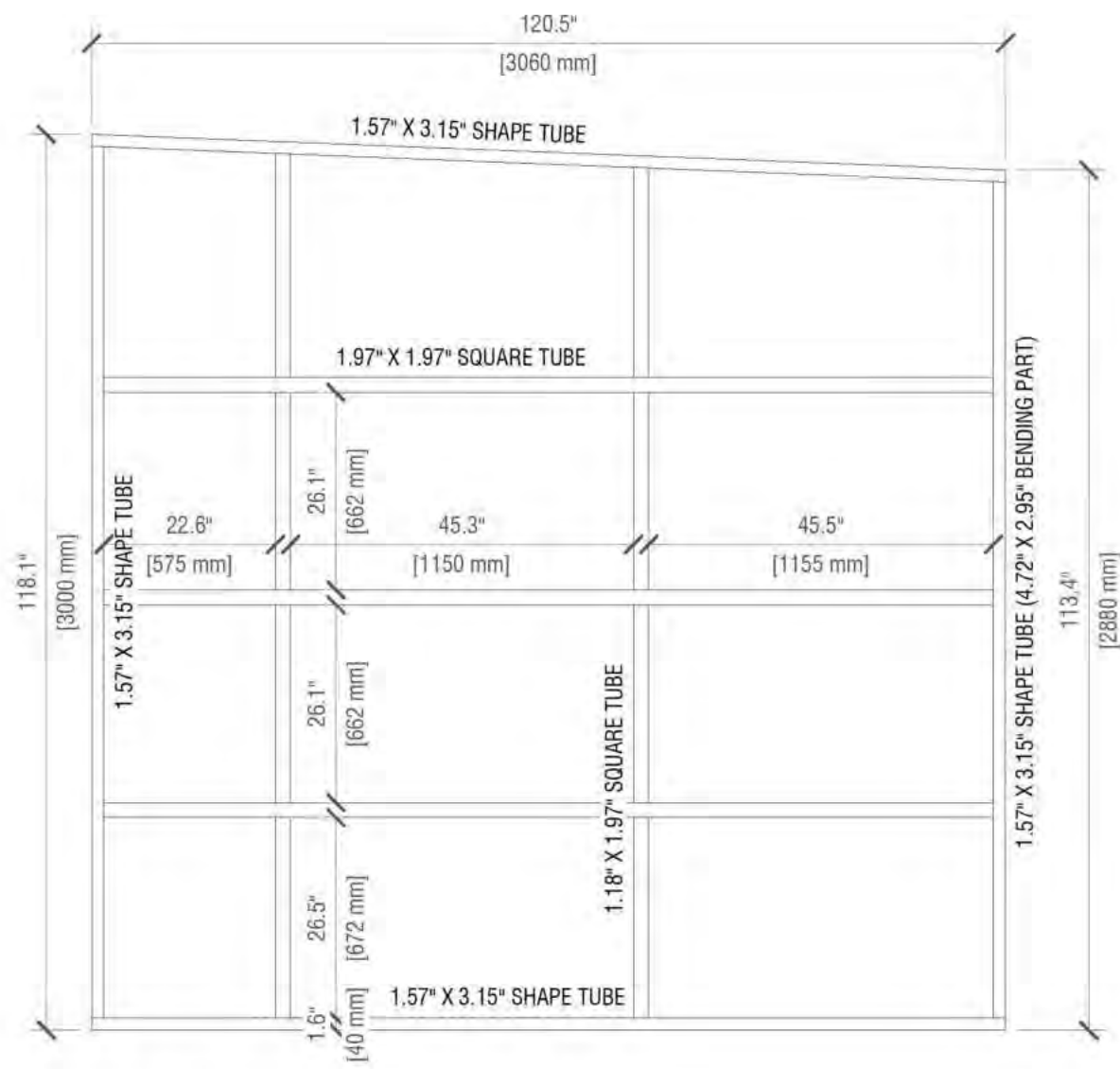
A
1/2" = 1'-0"



B
1/2" = 1'-0"



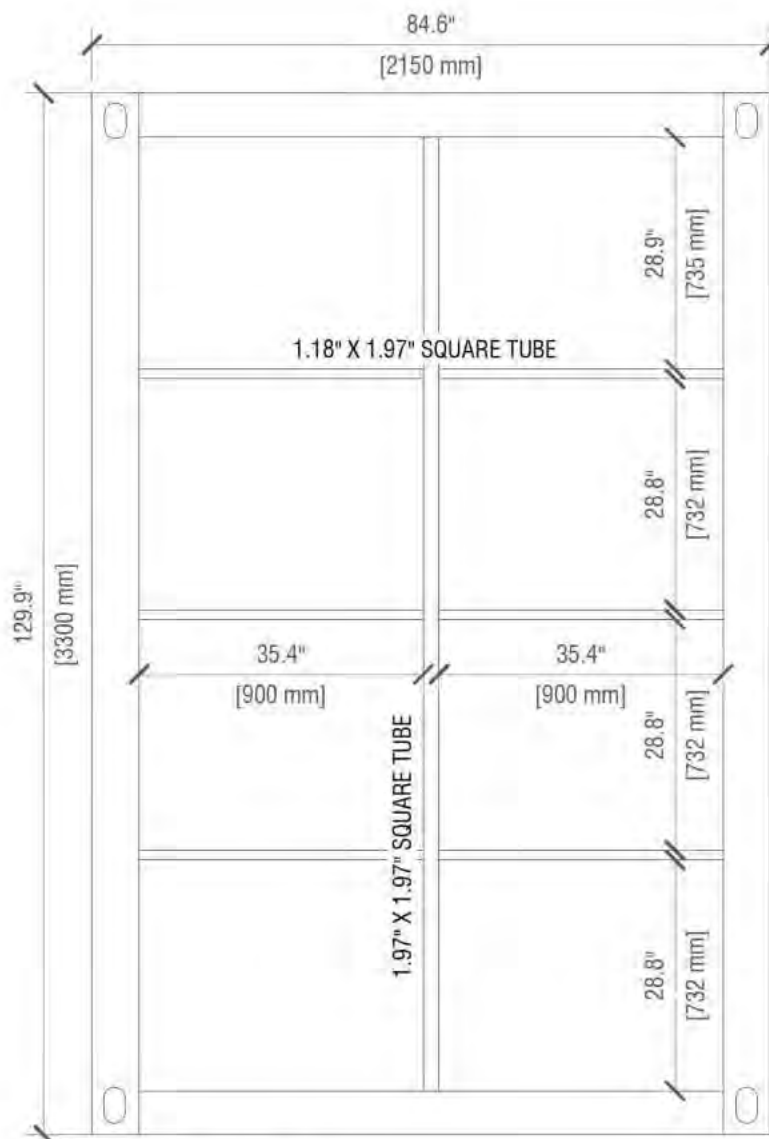
C
1/2" = 1'-0"



D
1/2" = 1'-0"



E
1/2" = 1'-0"



F
1/2" = 1'-0"



G
1/2" = 1'-0"

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2026-03-13T15:25:55-07:00

Input File Name: 36189.rbd25x

CF1R-PRF-01-E

(Page 10 of 11)

HVAC - DISTRIBUTION SYSTEMS							
01	02	03	04	05	06	07	08
Name	Type	Design Type	Duct Ins. R-value		Duct Location		
			Supply/Return		Supply	Return	
Air Distribution System 1	Unconditioned attic	Non-Verified	R-8		Attic		Attic

INDOOR AIR QUALITY (IAQ) FANS							
01	02	03	04	05	06	07	08
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - ASRE	Includes Fault Indicator Display?	Status
Sfam IAQVentRpt	28	0.35	Exhaust	No	n/a / n/a	No	

PROJECT NOTES

Building is metal formed with thermal breaks for the walls and the roofing. Parallel Path Method of calculation was used to find a comparable wood framed roof since the DOE Engine that powers the software does not allow residential buildings to be modeled with a metal roof. This is the way to model this situation per the CEC.

Registration Number: 426-P01076045A-000-000-0000000-0000

NOTES: This document has been generated by California Energy Efficiency Rating Services (CEERS) using information submitted by third parties not affiliated with or related to CEERS. Therefore, CEERS is not responsible for, and does not warrant, the accuracy or completeness of the information contained in this document.

CA Building Energy Efficiency Standards - 2025 Single-Family Compliance

Registration Date/Time: 03/13/2026 15:38

Schema Version: rev 20250101

ECC Provider: CEERS

Report Generated: 2026-03-13 15:26:21

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD		CFIR-PRF-01-E
Project Name: Residential Building		Calculation Date/Time: 2026-03-13T15:25:55-07:00
Calculation Description: Title 24 Analysis		Input File Name: 36189.rbd2x5d
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
1. I certify that this Certificate of Compliance documentation is accurate and complete.		
Documentation Author Name: Darrell Hovde Company: Hovde Engineering Inc Address: 1201 Coe Street City/State/Zip: Camarillo, CA 93010	Documentation Author Signature:  Signature Date: 03/13/2026 CEA/AEA/ECC Certification Identification (if applicable): RCN13803 Phone: (805) 388-7689	
RESPONSIBLE PERSON'S DECLARATION STATEMENT		
I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 2, and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. 5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and shall be made available to the enforcement agency for all applicable inspections. I will take the necessary steps to fulfill this requirement. 6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. I will take the necessary steps to fulfill this requirement.		
Responsible Designer Name: Darrell Hovde Company: Hovde Engineering Inc Address: 1201 Coe Street City/State/Zip: Camarillo, CA 93010	Responsible Designer Signature:  Date Signed: 03/13/2026 License: M26054, CA Phone: (805) 388-7689	
Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided to ensure the content of this registered document, and is in no way imposes Registration Provider responsibility for the accuracy of the information.		
Registration Number: 426-010706048A-000-000-0000000-0000 NOTICE: This document has been generated by California Home Energy Efficiency Rating Services (CHEERS) using information submitted by third parties and affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and does not warrant, the accuracy or completeness of the information contained in this document.		Registration Date/Time: 03/13/2026 16:38 ECC Provider: CHEERS Report Generated: 2026-03-13 15:26:21
CA Building Energy Efficiency Standards - 2025 Single-Family Compliance Report Version: rev 20250101		

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing – DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval

Proposed 1L ADU
 425 S Wetherly, Unit 1L, Beverly Hills, CA 90211
 Energy Compliance

HOVDE ENGINEERING INC
ENGINEERING * ENERGY * DRAFTING
1201 Coe Street, Camarillo, CA 93010
(805) 388-7689 (800) 982-4270



Designed

D Hovde

Drawn

RCQ/DAH

Checked

Project Number

36189

Of

EN2

3/25/2026

 2025 Single-Family Residential Mandatory Requirements Summary	
§ 110.10(d):	Documentation. A copy of the construction documents or a comparable document indicating the information from §110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Fireplaces, Decorative Gas Appliances, and Gas Log:	
§ 110.5(a):	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and light-filling damper or combustion-air control device.
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Pool and Spa Systems and Equipment:	
§ 110.4(a):	Certification by Manufacturers. Pool/spa heating equipment must be certified as compliant with Appliance Efficiency Regulations; have an externally mounted, readily accessible on-off switch that allows shutting off the heater without adjusting the thermostat; permanent, easily readable weatherproof plate or card with energy efficiency rating and operating instructions.
§ 110.4(b)1:	Heating Equipment. Pool/spa heating equipment must meet applicable standards, by fuel type.
§ 110.4(b)2:	Piping. At least 18 inches of horizontal or vertical pipe installed between the filter and the heater; or dedicated suction and return lines; or built-in or bulkhead connections installed to allow for the future addition of solar heating equipment.
§ 110.4(b)3:	Covers. Outdoor pools or spas with electric or gas heater must have a cover.
§ 110.4(b)4:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a permanently installed time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.4(c):	Heat Source Sizing. Pool/spa heating systems must be solar heating system with collector area of at least 60% of pool/spa surface area; heat pump sized per JA16.3; combination of solar and heat pump; or use 60% or more on-site renewable/recoverable energy. *
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*Exceptions may apply.



Hovde Engineering Inc

1201 Coe Street - Camarillo, CA 93010 - 1-800-982-4270

Project Number	36189-36192				
Project Name	Prefab Unit				
Project Address	425 S Wetherly, Beverly Hills, CA 90211				
Component Name	Wall Construction				
Framing Description	2" Steel Tube Framing with SIP Insulation				
Percentage	84%		2%	14%	
Component Item*	Width	R / in	Path 1	Path 2	Path 3
Interior Air Film			0.68	0.68	0.68
Indoor Wall Finish	0.5	0.5	0.25	0.25	0.25
Steel Tube Framing	2	0		0	
2" Air	2	0.70	1.4		
1.75" Air space	1.75	0.7			1.225
INSULSPAN 8-1/4" SIP	4.5	3.42	30	30	30
			0	0	0
			0	0	0
			0	0	0
			0	0	0
Exterior air film			0.17	0.17	0.17
Total			32.5	31.1	32.325
Combined R value =		32.45	27.3	0.622	4.5255
Assembly Composite U value	0.031				

* From Energy Pro database for insulating values of various building materials

Panel Thickness	White EPS	Grey GFS
	Thermal R-Value	Thermal R-Value
4 1/2	15.4	18.3
6 1/2	23.2	27.7
8 1/4	30.0	35.9
10 1/4	37.8	45.1
12 1/4	45.6	54.7



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Component Name	Roof Construction				
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Component Item*	Width	R / in	Path 1	Path 2	Path 3
Interior Air Film			0.68	0.68	0.68
Indoor Wall Finish	0.5	0.5	0.25	0.25	0.25
Steel Tube Framing	2	0		0	
2" Air	2	0.70	1.4		
1.75" Air space	1.75	0.7			1.225
INSULSPAN 12-1/4" SIP	8.25	3.63	46	46	46
			0	0	0
			0	0	0
			0	0	0
			0	0	0
Exterior air film			0.17	0.17	0.17
Total			48.1	46.7	47.925
Combined R value =		48.03	39.442	1.401	7.18875
Assembly Composite U value	0.021				

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Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing - DAA RDP1577648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
 1748 33rd Street
Orlando, FL 32839

Unit 1L ADU-SIP
425 S Wetherly Unit 1L Beverly Hills, CA 90211
Energy Compliance

HOVDE ENGINEERING INC
ENGINEERING * ENERGY * DRAFTING
1201 Coe Street, Camarillo, CA 93010
(805) 388-7689 (800) 982-4270



Designed
D Hovde
Drawn
RQC/MNQ
Checked

Project Number
36189

of
EN3
5/22/2026

 2025 Single-Family Residential Mandatory Requirements Summary	
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Percentage	84% 2% 14%				
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Interior Air Film			0.68	0.68	0.68
Indoor Wall Finish	0.5	0.5	0.25	0.25	0.25
Steel Tube Framing	2	0		0	
2" Air	2	0.70	1.4		
1.75" Air space	1.75	0.7			1.225
INSULSPAN 8-1/4" SIP	4.5	3.42	30	30	30
			0	0	0
			0	0	0
			0	0	0
			0	0	0
Exterior air film			0.17	0.17	0.17
Total			32.5	31.1	32.325
Combined R value =	32.45	27.3	0.622	4.5255	
Assembly Composite U value	0.031				

* From Energy Pro database for insulating values of various building materials

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			0	0	0
			0	0	0
			0	0	0
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Intertek (Intertek-ATI)
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Unit 1RADU SIP
425 S Wetherly Unit 1R Beverly Hills, CA 90211
Energy Compliance

HOVDE ENGINEERING INC
ENGINEERING * ENERGY * DRAFTING
1201 Coe Street, Camarillo, CA 93010
(805) 388-7689 (800) 982-4270



Designed
D Hovde
Drawn
RQC/MNQ
Checked

Project Number
36190

of
EN3
5/22/2026



CALCULATION REPORT

1L PREFAB MODULAR HOUSE [ONE-BEDROOM ADU WITH KITCHEN]

**9744 WILSHIRE BLVD STE 203,
BEVERLY HILLS, CA 90212**

February 2026

ANALYSIS REPORT



1. DESIGN INFORMATION AND OBJECTIVES

The following design criteria have been used in the analysis:

1.1 CODE OF PRACTICE

All civil and structural works have been designed in accordance with the latest editions of the following relevant standards and codes of practice:

- ASCE 7-22
- IBC 2021
- 2025 CALIFORNIA BUILDING CODE (CBC)
- AISC 360
- AISI

1.2 MATERIAL SPECIFICATION

Hot dip galvanized steel: A36

1.3 DESIGN LOADS

Dead load includes the self weight of the structure

Superimposed dead loads

Live load

Roof live load

Wind load

Seismic load

1.4 LOAD Combinations

Load combinations as per ASCE 7-22, IBC 2021

2. ATTACHMENTS

The following shows the wind load calculations as per the ASCE 7-22, Analytical model, and analysis results.



SEISMIC PARAMETERS
WIND SPEED
SNOW LOAD

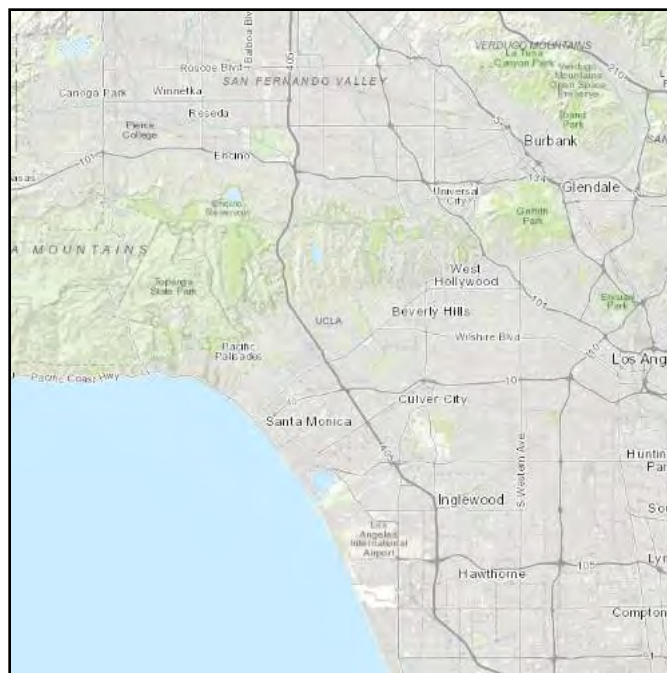


ASCE Hazards Report

Address:
9744 Wilshire Boulevard
Beverly Hills, California
90212

Standard: ASCE/SEI 7-22
Risk Category: II
Soil Class: Default

Latitude: 34.066753
Longitude: -118.408131
Elevation: 260.1981058558667 ft
(NAVD 88)



Wind

Results:

Wind Speed	94 Vmph	← However, 100 mph has been taken in the analysis
10-year MRI	65 Vmph	
25-year MRI	71 Vmph	
50-year MRI	76 Vmph	
100-year MRI	81 Vmph	
300-year MRI	88 Vmph	
700-year MRI	94 Vmph	
1,700-year MRI	101 Vmph	
3,000-year MRI	105 Vmph	
10,000-year MRI	114 Vmph	
100,000-year MRI	132 Vmph	
1,000,000-year MRI	150 Vmph	

Data Source: ASCE/SEI 7-22, Fig. 26.5-1B and Figs. CC.2-1-CC.2-4, and Section 26.5.2
Date Accessed: Mon Aug 04 2025



Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-22 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years). Values for 10-year MRI, 25-year MRI, 50-year MRI and 100-year MRI are Service Level wind speeds, all other wind speeds are Ultimate wind speeds.

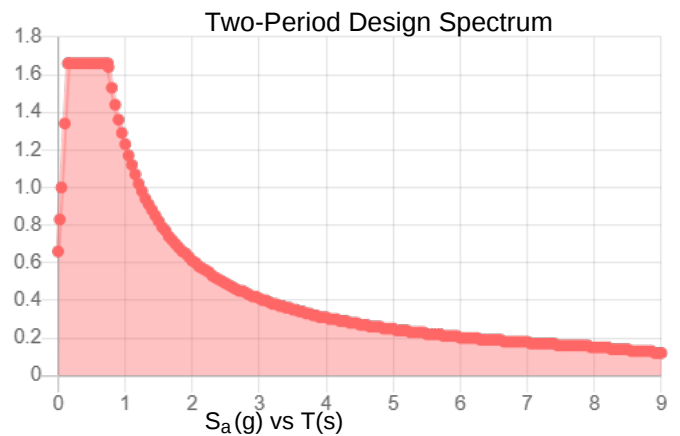
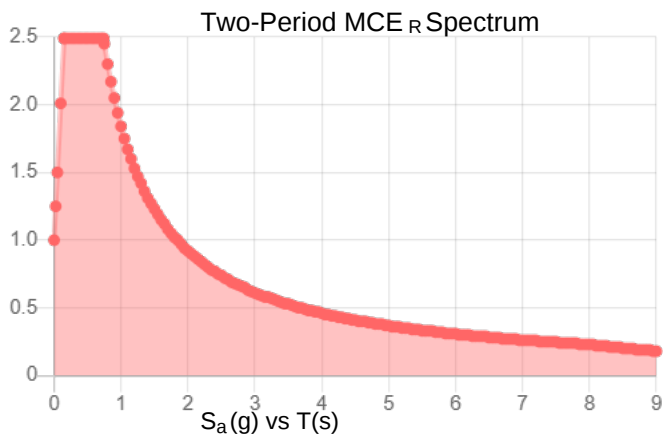
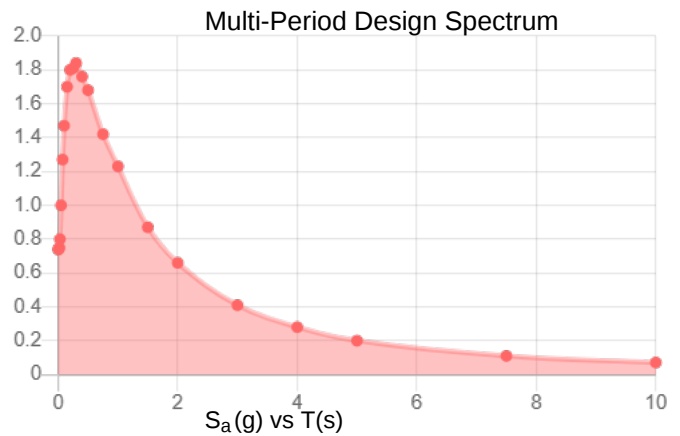
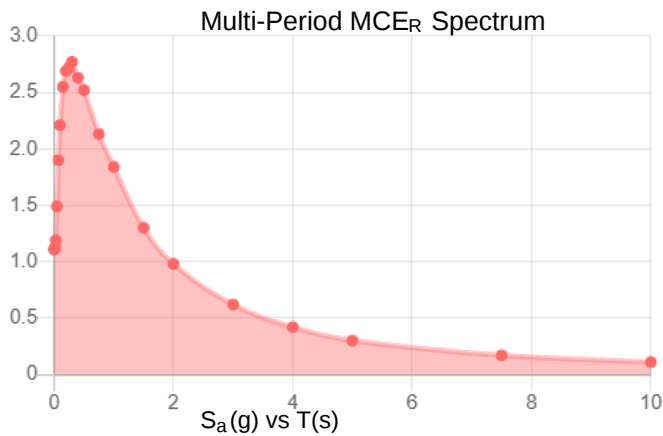
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-22 Section 26.2.

Site Soil Class: Default

Results:

PGA _M :	0.99	T _L :	8
S _{MS} :	2.49	S _S :	2.37
S _{M1} :	1.84	S ₁ :	0.87
S _{DS} :	1.66	V _{S30} :	260
S _{D1} :	1.23		

Seismic Design Category: E



MCE_R Vertical Response Spectrum
Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum
Vertical ground motion data has not yet been made available by USGS.

Data Accessed: Mon Aug 04 2025

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

Results:

Ground Snow Load, p_g :	4 lb/ft ²
20-year MRI Value:	1 lb/ft ²
Winter Wind Parameter:	0.35
Mapped Elevation:	308.0 ft
Data Source:	ASCE/SEI 7-22, Figures 7.6-1 and 7.6-2 A-D
Date Accessed:	Mon Aug 04 2025

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.

Ground Snow Loads for IRC only, $p_{g(asd)}$:	2.8 lb/ft ²
--	------------------------

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE Hazard Tool.



ANALYTICAL MODEL IN ETABS & GRAPHICAL OUTPUT

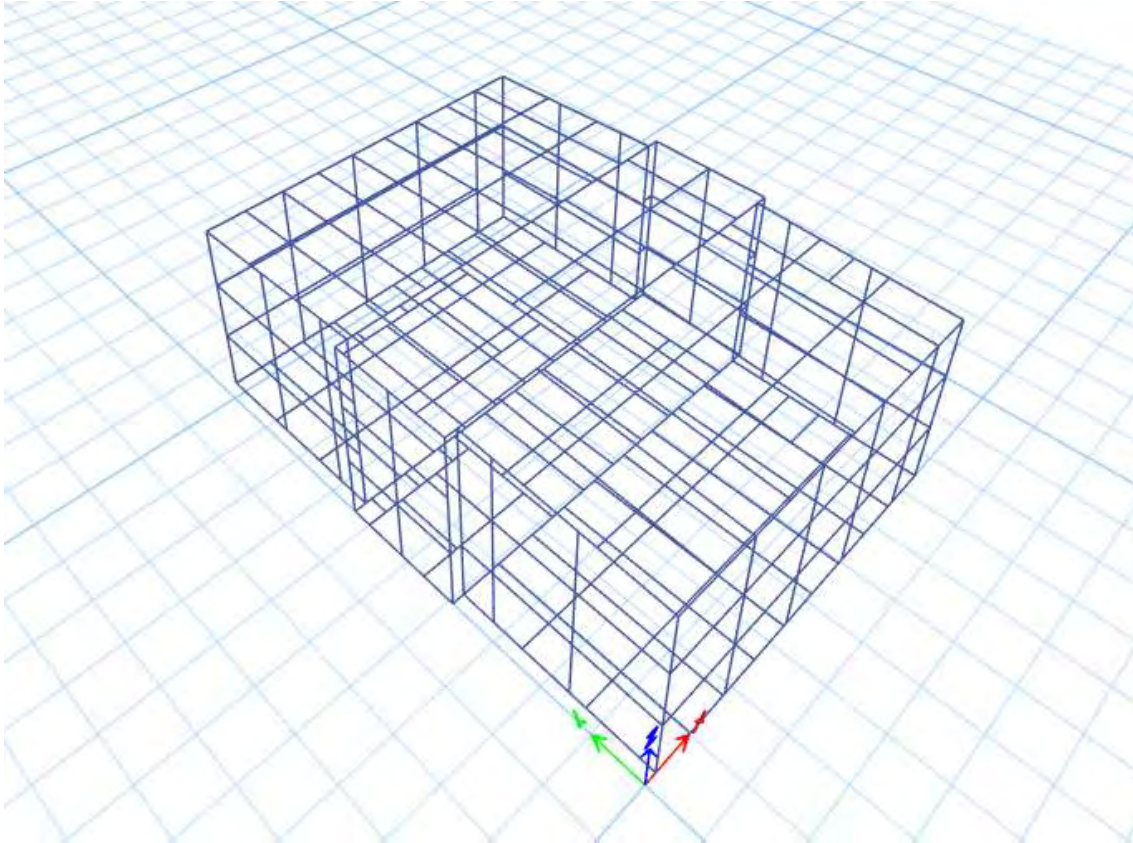


Figure 1. 3D analytical model showing steel members only

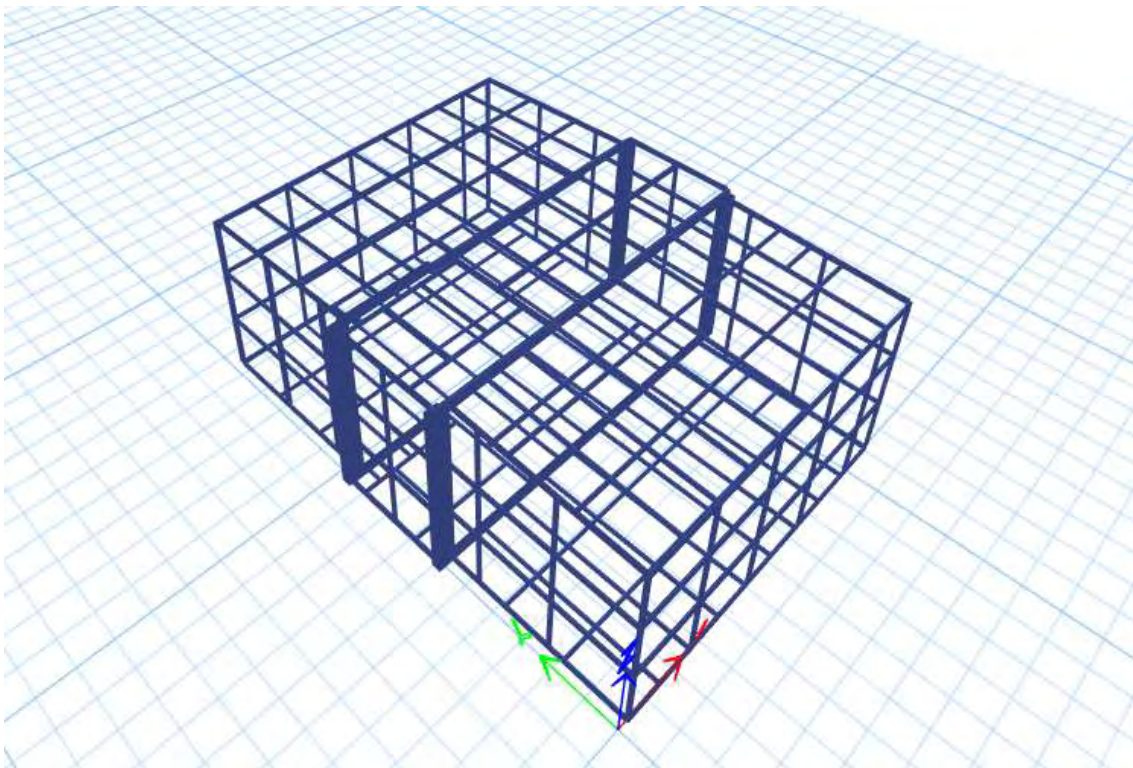




Figure 2. 3D Rendered view

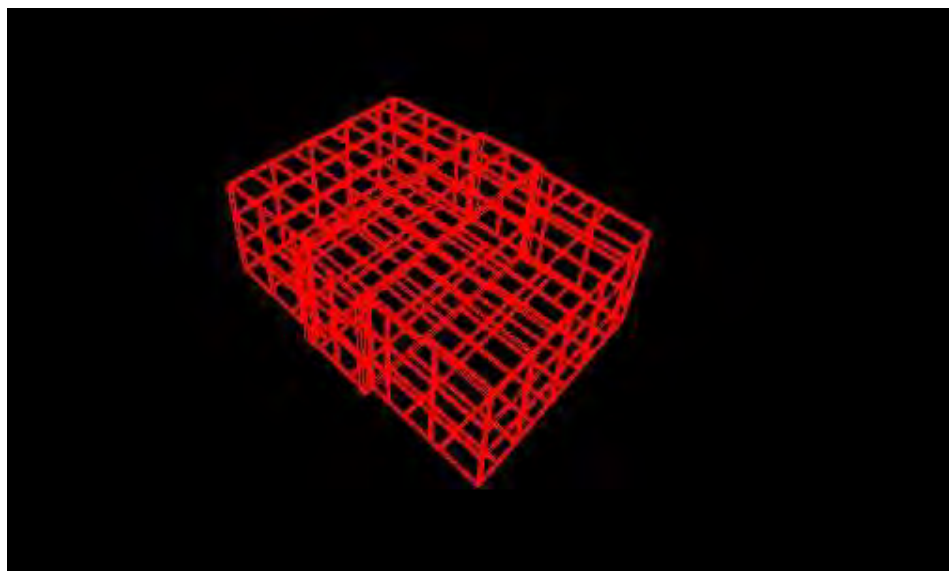


Figure 4. 3D extruded model

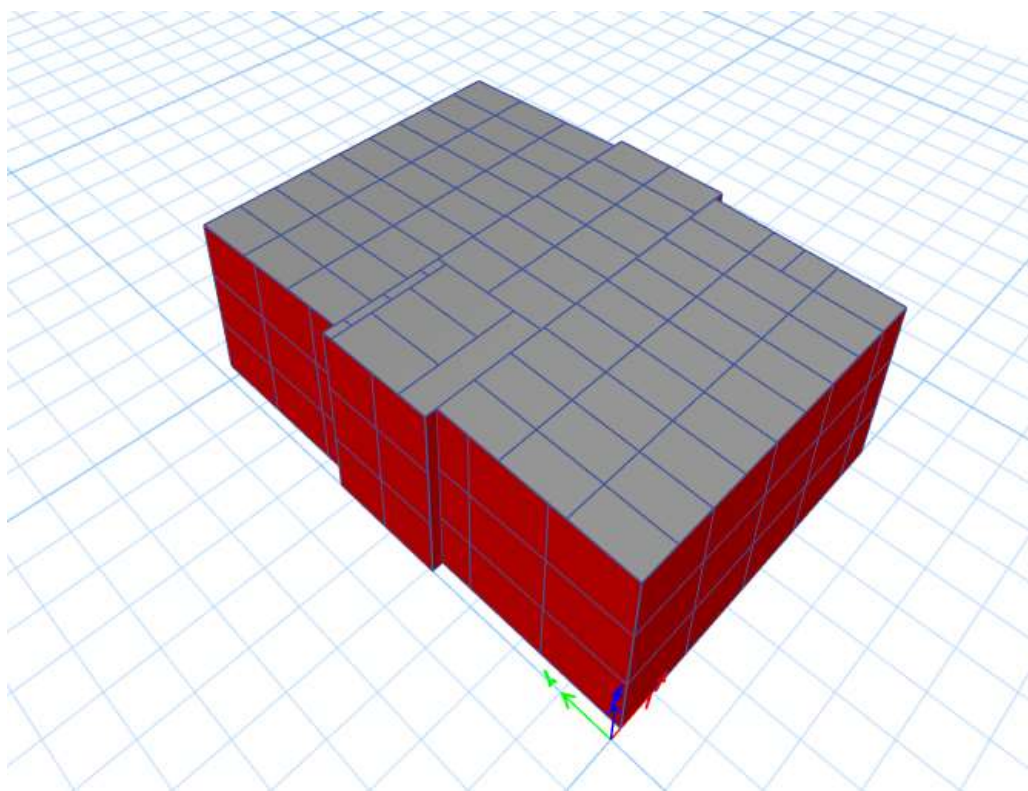


Figure 2. 3D analytical model showing steel members and area elements

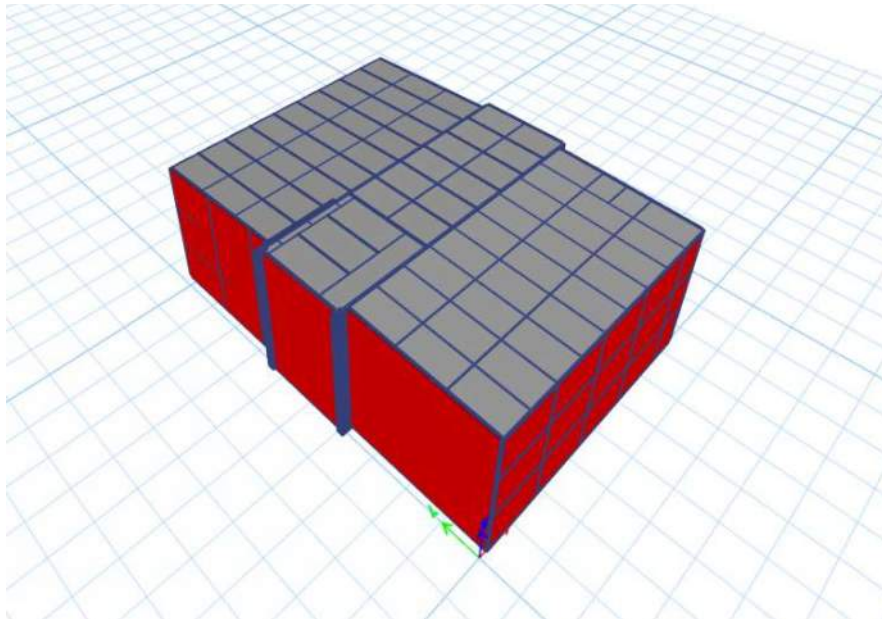


Figure 3. 3D extruded model

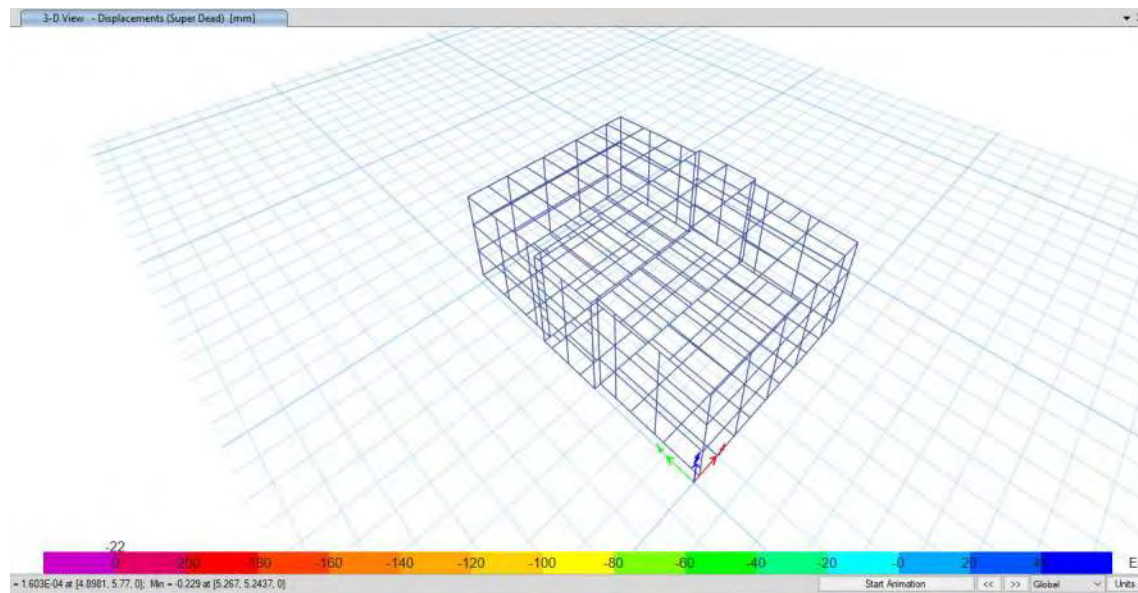


Figure 4. Displacement due to dead load

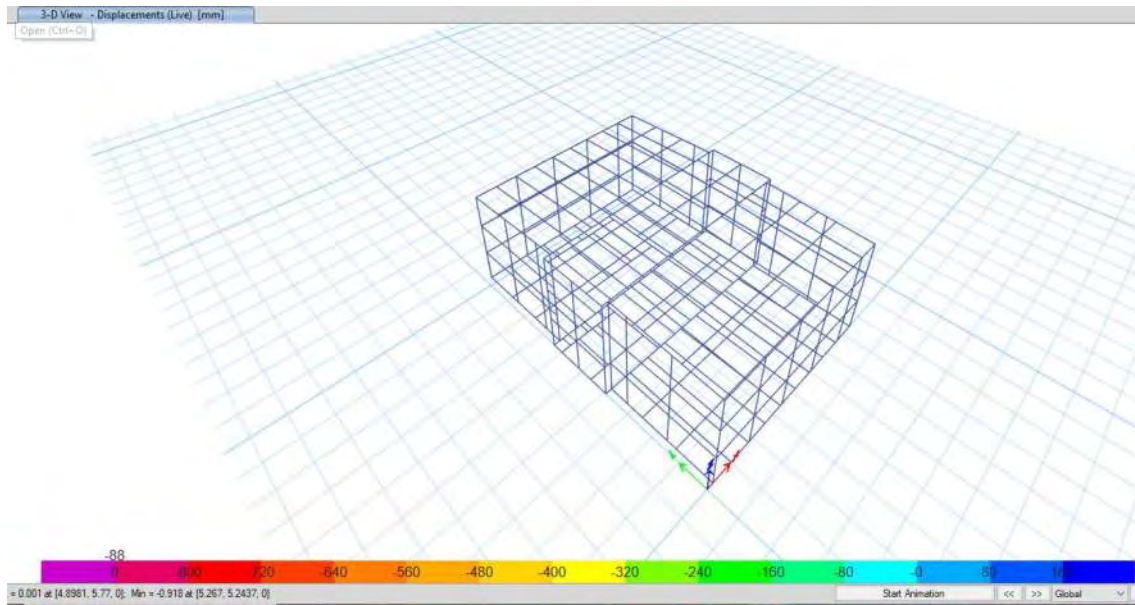


Figure 5. Displacement due to live load

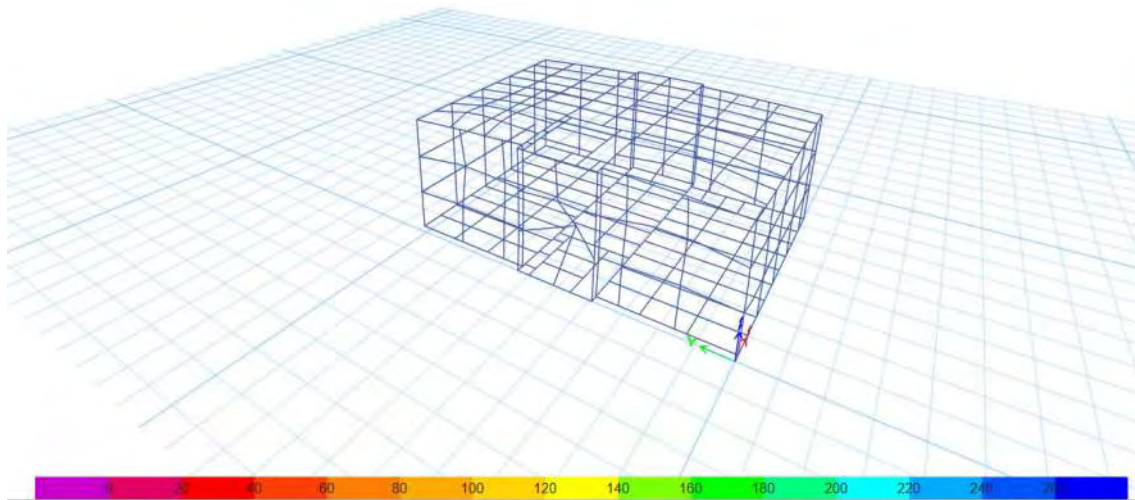


Figure 6. Displacement due to wind load Ux

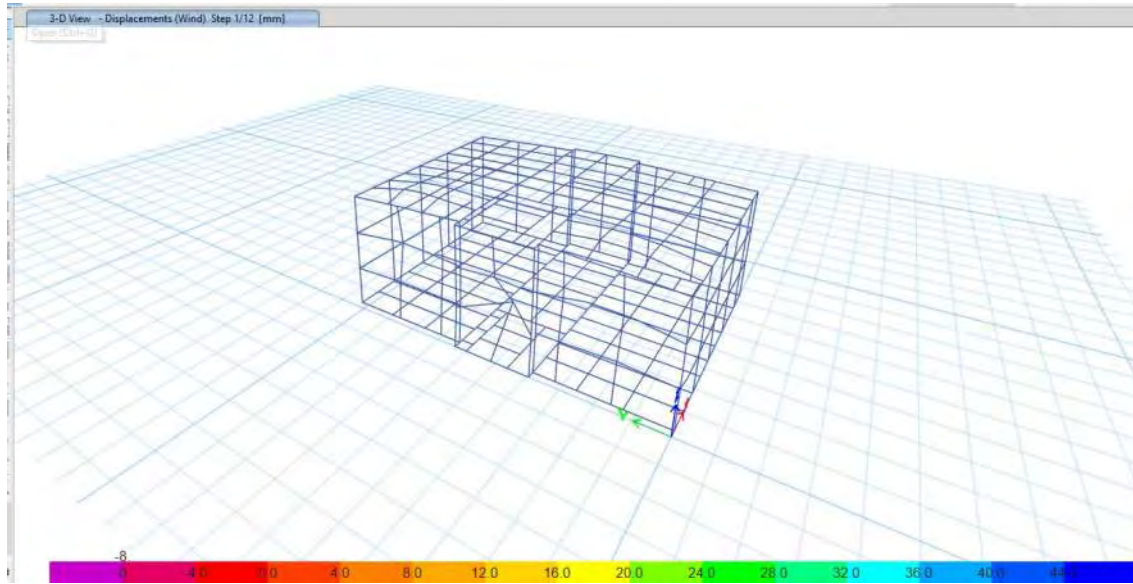


Figure 6. Displacement due to wind load Uy

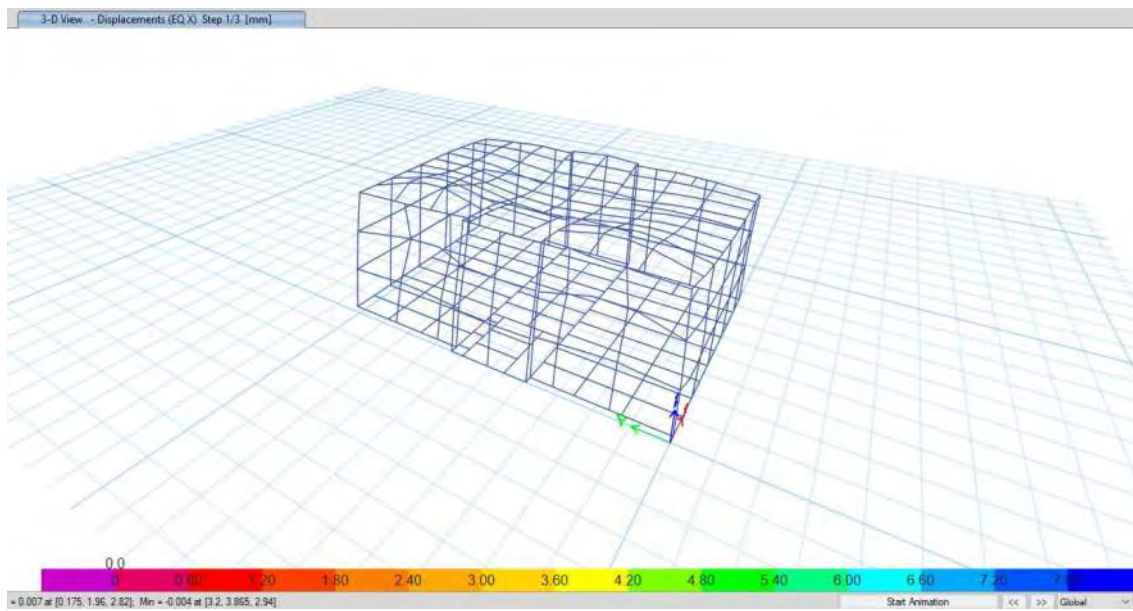


Figure 7. Displacement due to EQX

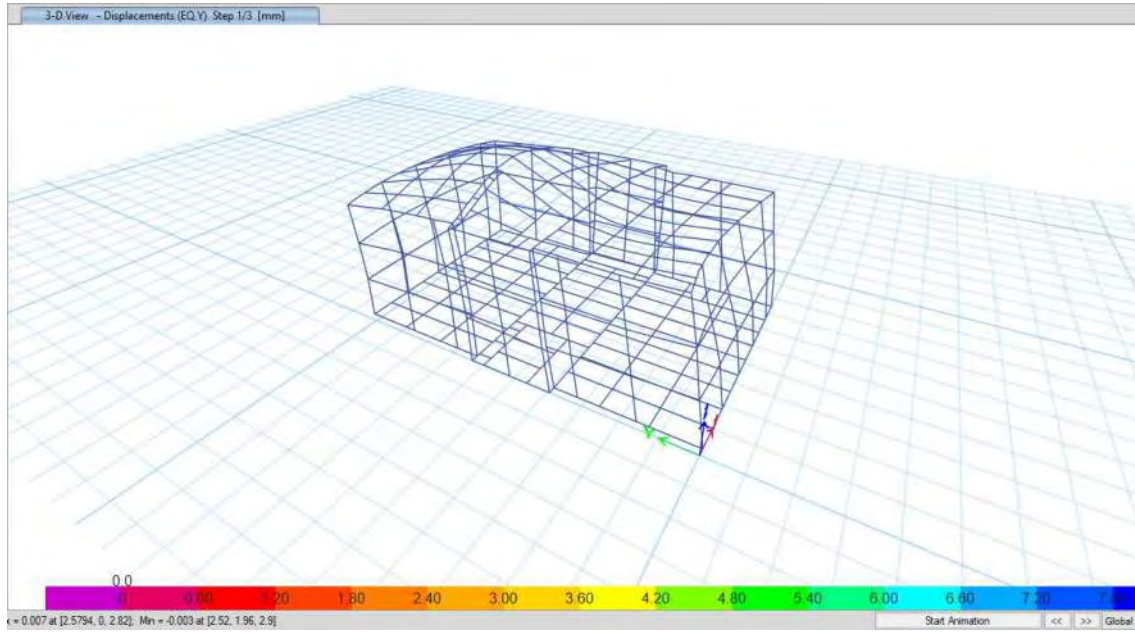


Figure 8. Displacement due to EQY

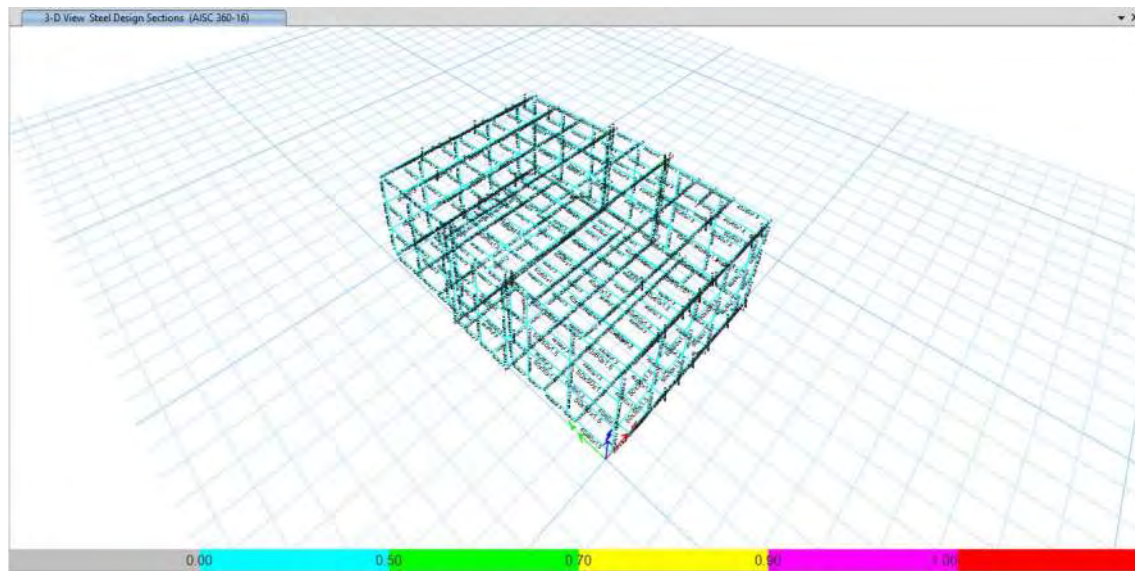


Figure 9. Design stress ratios



CONCLUSIONS

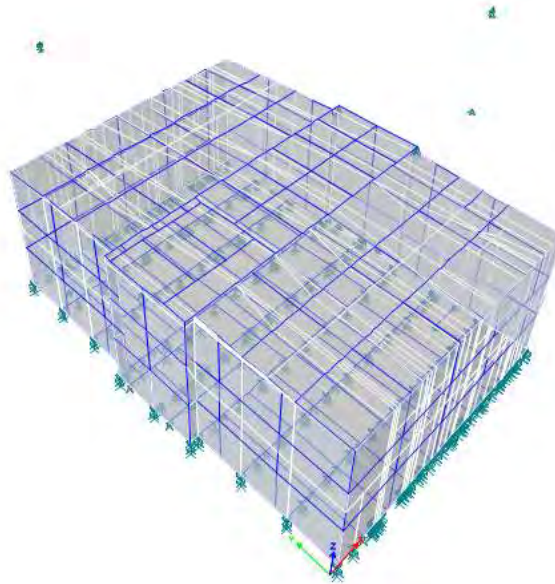
The Prefab Modular House has been analyzed for dead, live, snow, wind, and seismic loads in accordance with the 2025 California Building Code (CBC) and other applicable standards, including ASCE 7-22, IBC, AISC, and AISI. The structural analysis results indicate that the PM ratio (P/PM allowable) for all members is less than 1.0, confirming that the selected member sizes are adequate to resist the applied loads.



ETABS ANALYSIS RESULTS



ETABS[®]



Project Report

Model File: MH-01, Revision 0
1/18/2026

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1 Structure Data

This chapter provides model geometry information, including items such as story levels, point coordinates, and element connectivity.

1.1 Grid Data

Table 1.1 - Grid Definitions - General

Tower	Name	Type	Ux m	Uy m	Rz deg	Story Range	Bubble Size mm	Color
T1	G1	Cartesian	0	0	0	Default	1250	Gray6

Table 1.2 - Grid Definitions - Grid Lines

Name	Grid Line Type	ID	Ordinate m	Bubble Location	Visible
G1	X (Cartesian)	A	0	End	Yes
G1	X (Cartesian)	B	0.175	End	Yes
G1	X (Cartesian)	C	5.585	End	Yes
G1	Y (Cartesian)	1	0	Start	Yes
G1	Y (Cartesian)	2	2.94	Start	Yes
G1	Y (Cartesian)	3	4.79	Start	Yes
G1	Y (Cartesian)	4	7.73	Start	Yes

2 Properties

This chapter provides property information for materials, frame sections, shell sections, and links.

2.1 Materials

Table 2.1 - Material Properties - General

Material	Type	SymType	Grade	Color	Notes
A416Gr270	Tendon	Uniaxial	Grade 270	Gray8Dark	
A615Gr60	Rebar	Uniaxial	Grade 60	Yellow	
A992Fy50	Steel	Isotropic	Grade 50	Red	
Glass	Other	Isotropic	Unknown	Yellow	
Q235	Steel	Isotropic	Q235	Magenta	
Rockwool Insulation	Other	Isotropic	Unknown	Yellow	
SPC Floor	Other	Isotropic	Unknown	Yellow	

2.2 Frame Sections

Table 2.2 - Frame Section Property Definitions - Summary (Part 1 of 3)

Name	Material	Shape	Color	Area cm2	J cm4	I33 cm4	I22 cm4	I23 cm4	As2 cm2	As3 cm2	S33Pos cm3
210x150x2.0	Q235	Steel Tube	Blue	14.2	1071.2	940.4	563.7	0	8.2	6	89.6
40x60x1.2	Q235	Steel Tube	Magenta	2.3	13	12.1	6.5	0	1.4	1	4
40x80x1.5	Q235	Steel Tube	Red	3.5	23.7	29.9	10.2	0	2.3	1.2	7.5
50x50x1.5	Q235	Steel Tube	Magenta	2.9	17.4	11.4	11.4	0	1.5	1.5	4.6
50x80x1.5	Q235	Steel Tube	Magenta	3.8	34.7	34.5	16.7	0	2.3	1.5	8.6
80x100x3.5	Q235	Steel Tube	Magenta	12.1	225.1	177.3	125.2	0	6.8	5.6	35.5
80x140x3.0	Q235	Steel Tube	Magenta	12.8	316.5	345.6	144.8	0	8.1	4.7	49.4

Table 2.2 - Frame Section Property Definitions - Summary (Part 2 of 3)

Name	S33Neg cm3	S22Pos cm3	S22Neg cm3	Z33 cm3	Z22 cm3	R33 mm	R22 mm	CG Offset 3 mm	CG Offset 2 mm	PNA Offset 3 mm	PNA Offset 2 mm
210x150x2.0	89.6	75.2	75.2	104.8	83.5	81.3	62.9	0	0	0	0
40x60x1.2	4	3.2	3.2	4.8	3.6	22.7	16.6	0	0	0	0
40x80x1.5	7.5	5.1	5.1	9.2	5.6	29.2	17	0	0	0	0
50x50x1.5	4.6	4.6	4.6	5.3	5.3	19.8	19.8	0	0	0	0
50x80x1.5	8.6	6.7	6.7	10.3	7.5	30.1	20.9	0	0	0	0
80x100x3.5	35.5	31.3	31.3	42.2	36.1	38.3	32.2	0	0	0	0
80x140x3.0	49.4	36.2	36.2	59.8	40.6	51.9	33.6	0	0	0	0

Table 2.2 - Frame Section Property Definitions - Summary (Part 3 of 3)

Name	As2 Modifier	As3 Modifier	J Modifier	I33 Modifier	I22 Modifier	Mass Modifier	Weight Modifier
210x150x2.0	1	1	1	1	1	1	1
40x60x1.2	1	1	1	1	1	1	1
40x80x1.5	1	1	1	1	1	1	1
50x50x1.5	1	1	1	1	1	1	1

Table 2.2 - Frame Section Property Definitions - Summary (Part 3 of 3, continued)

Name	As2 Modifier	As3 Modifier	J Modifier	I33 Modifier	I22 Modifier	Mass Modifier	Weight Modifier
50x80x1.5	1	1	1	1	1	1	1
80x100x3.5	1	1	1	1	1	1	1
80x140x3.0	1	1	1	1	1	1	1

2.3 Shell Sections

Table 2.3 - Area Section Property Definitions - Summary

Name	Type	Element Type	Material	Total Thickness mm	Deck Material	Deck Depth mm
Floor	Slab	Shell-Thin	SPC Floor	22		
Roof EPS 50	Slab	Shell-Thin	Rockwool Insulation	50		
Wall EPS 60	Wall	Shell-Thin	Rockwool Insulation	60		
Wall Glass	Wall	Shell-Thin	Glass	16		

2.4 Spring Properties

Table 2.4 - Spring Property Definitions - Point Springs (Part 1 of 2)

Name	Stiffness Option	Stiffness UX kN/m	Stiffness UY kN/m	Stiffness UZ kN/m	Stiffness RX kN-m/rad	Stiffness RY kN-m/rad	Stiffness RZ kN-m/rad	Nonlinearity Specification	Link Property
Conc Stif	User	0	0	10000000	0	0	0	From Links	Link1

Table 2.4 - Spring Property Definitions - Point Springs (Part 2 of 2)

Name	Link Axial Direction	Link Axis 2 Angle deg	Color	Notes
Conc Stif	+Z	0	Cyan	

3 Loads

This chapter provides loading information as applied to the model.

3.1 Load Patterns

Table 3.1 - Load Pattern Definitions

Name	Is Auto Load	Type	Self Weight Multiplier	Auto Load
~ChineseX	Yes	Other	0	
~ChineseY	Yes	Other	0	
~LLRF	Yes	Other	0	
Dead	No	Dead	1	
EQ X	No	Seismic	0	ASCE 7-22
EQ X(1/3)	Yes	Seismic	0	ASCE 7-22
EQ X(2/3)	Yes	Seismic	0	ASCE 7-22
EQ X(3/3)	Yes	Seismic	0	ASCE 7-22
EQ Y	No	Seismic	0	ASCE 7-22
EQ Y(1/3)	Yes	Seismic	0	ASCE 7-22
EQ Y(2/3)	Yes	Seismic	0	ASCE 7-22
EQ Y(3/3)	Yes	Seismic	0	ASCE 7-22
Live	No	Live	0	
Roof Live	No	Roof Live	0	
Snow	No	Snow	0	
Super Dead	No	Super Dead	0	
Wind	No	Wind	0	ASCE 7-22
Wind(1/12)	Yes	Wind	0	ASCE 7-22
Wind(10/12)	Yes	Wind	0	ASCE 7-22
Wind(11/12)	Yes	Wind	0	ASCE 7-22
Wind(12/12)	Yes	Wind	0	ASCE 7-22
Wind(2/12)	Yes	Wind	0	ASCE 7-22
Wind(3/12)	Yes	Wind	0	ASCE 7-22
Wind(4/12)	Yes	Wind	0	ASCE 7-22
Wind(5/12)	Yes	Wind	0	ASCE 7-22
Wind(6/12)	Yes	Wind	0	ASCE 7-22
Wind(7/12)	Yes	Wind	0	ASCE 7-22
Wind(8/12)	Yes	Wind	0	ASCE 7-22
Wind(9/12)	Yes	Wind	0	ASCE 7-22

3.2 Auto Wind Loading

ASCE 7-22 Auto Wind Load Calculation

This calculation presents the automatically generated lateral wind loads for load pattern Wind according to ASCE 7-22, as calculated by ETABS.

Exposure Parameters

Exposure From = Diaphragms

Exposure Category = C

Wind Direction = 0 degrees

Basic Wind Speed, V [ASCE 26.5.1]

$V = 100 \text{ mph}$

Windward Coefficient, $C_{px,wind}$ [ASCE 27.4.1]

$C_{p,wind} = 0.8$

Leeward Coefficient, $C_{px,lee}$ [ASCE 27.4.1]

$C_{p,lee} = 0.5$

Windward Coefficient, $C_{py,wind}$ [ASCE 27.4.1]

$C_{p,wind} = 0.8$

Leeward Coefficient, $C_{py,lee}$ [ASCE 27.4.1]

$C_{p,lee} = 0.5$

Wind Case = Create All

Top Story = Story2

Bottom Story = Base

Include Parapet = No

Factors and Coefficients

Gradient Height, z_g [ASCE Table 26.9-1]

$z_g = 900$

Emperical Exponent, α [ASCE Table 26.9-1]

$\alpha = 9.5$

Velocity Pressure Exposure Coefficient, K_z [ASCE Table 27.3-1]

$$K_z = 2.01 \left(\frac{z}{z_g} \right)^{\frac{2}{\alpha}} \text{ for } 15\text{ft} \leq z \leq z_g$$

$$K_z = 2.01 \left(\frac{15}{z_g} \right)^{\frac{2}{\alpha}} \text{ for } z < 15\text{ft}$$

Topographical Factor, K_{zt} [ASCE 26.8.2]

$K_{zt} = 1$

Directionality Factor, K_d [ASCE 26.6]

$K_d = 0.85$

Gust Effect Factor, G [ASCE 26.9]

$G = 0.85$

Lateral Loading

Velocity Pressure, q_z [ASCE 27.3.2 Eq. 27.3-1]

$$q_z = 0.00256 K_z K_{zt} K_d V^2$$

Design Wind Pressure, p [ASCE 27.4.2 Eq. 27.4-2]

$$p = qG C_{p,wind} + q_h (G C_{p,lee})$$

Loads

1/18/2026

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.3522	0
Story1	2.82	11.1051	0
Base	0	0	0

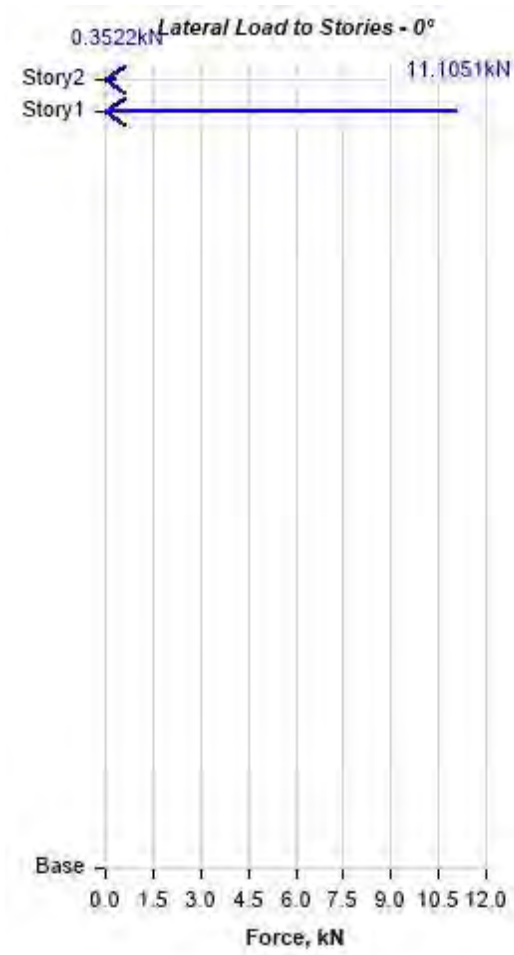


Figure 3-1-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0	0.3237
Story1	2.82	0	7.9305
Base	0	0	0

Loads

1/18/2026

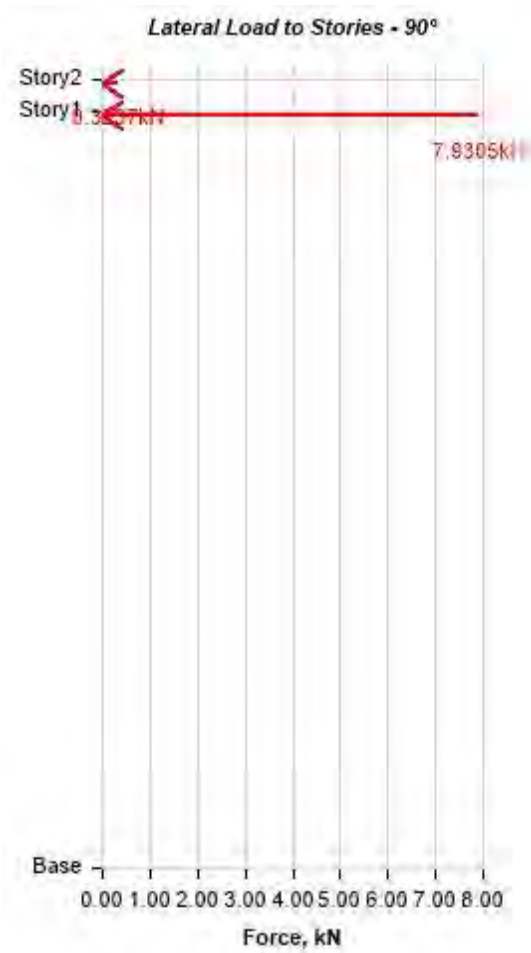


Figure 3-2-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.2641	0
Story1	2.82	8.3288	0
Base	0	0	0

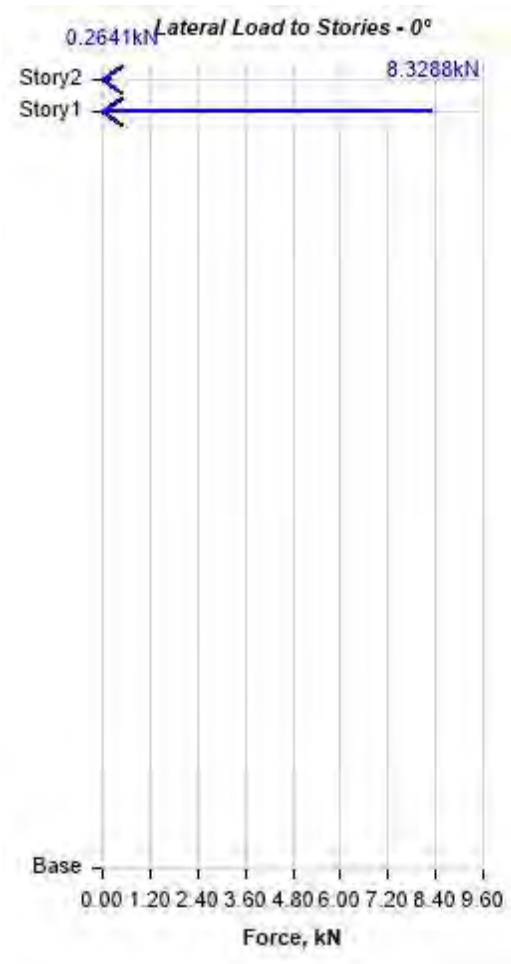


Figure 3-3-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.2641	0
Story1	2.82	8.3288	0
Base	0	0	0

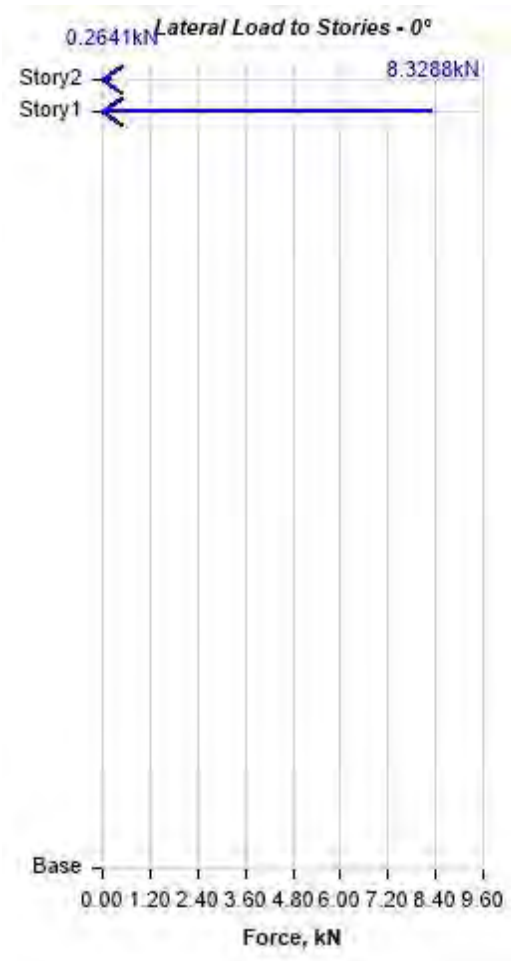


Figure 3-4-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0	0.2428
Story1	2.82	0	5.9479
Base	0	0	0

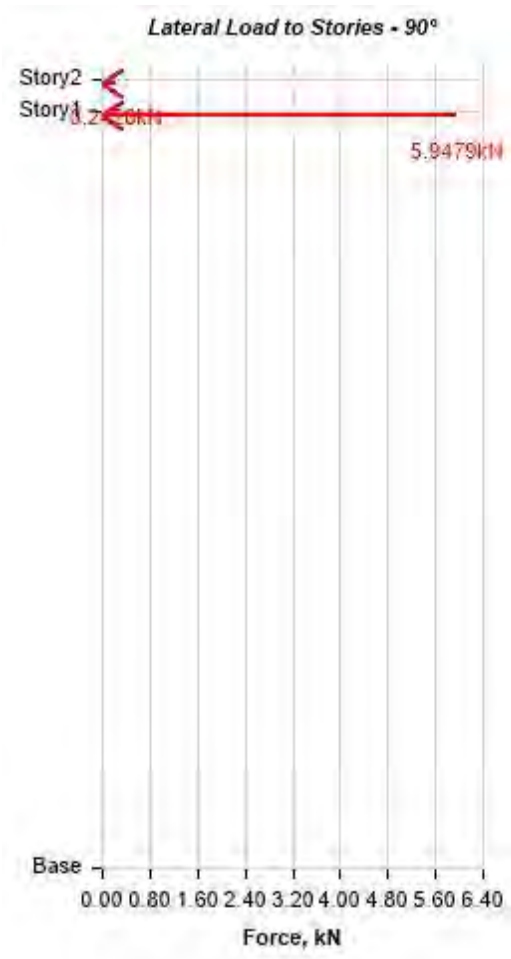


Figure 3-5-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0	0.2428
Story1	2.82	0	5.9479
Base	0	0	0

Loads

1/18/2026

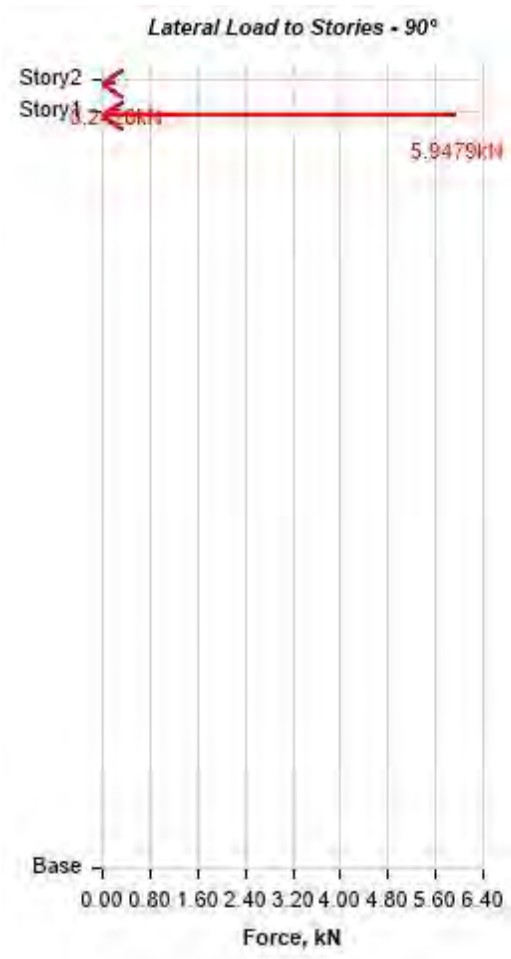


Figure 3-6-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.2641	-0.2428
Story1	2.82	8.3288	-5.9479
Base	0	0	0

Loads

1/18/2026

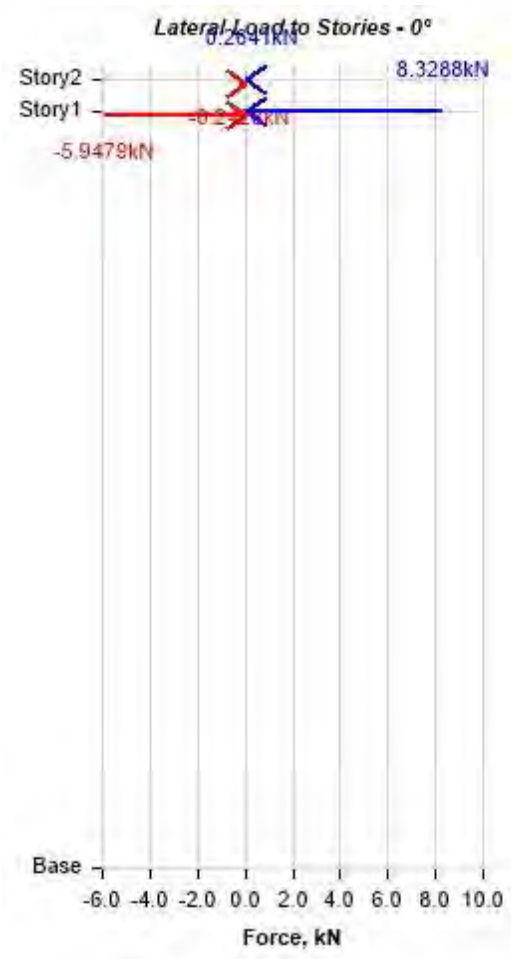


Figure 3-7-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.2641	0.2428
Story1	2.82	8.3288	5.9479
Base	0	0	0

Loads

1/18/2026

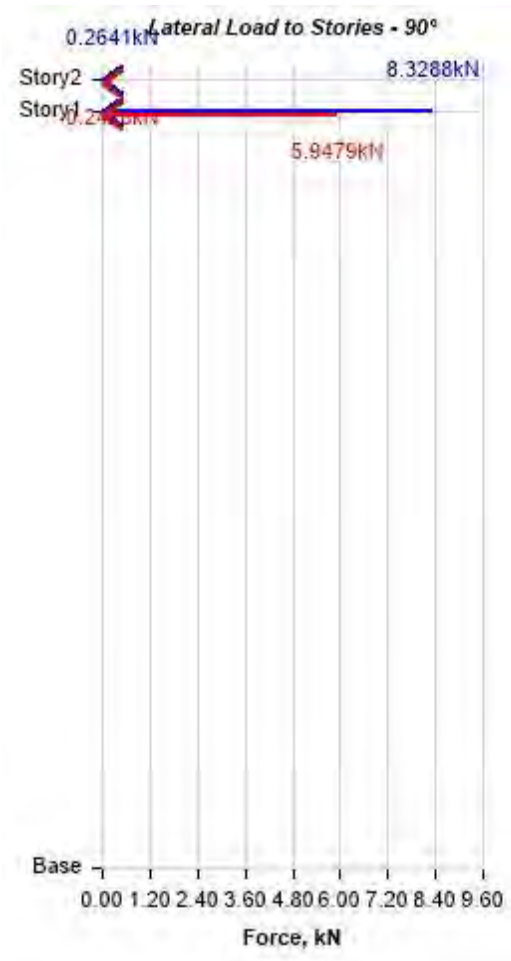


Figure 3-8-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.1983	-0.1822
Story1	2.82	6.2522	-4.4649
Base	0	0	0

Loads

1/18/2026

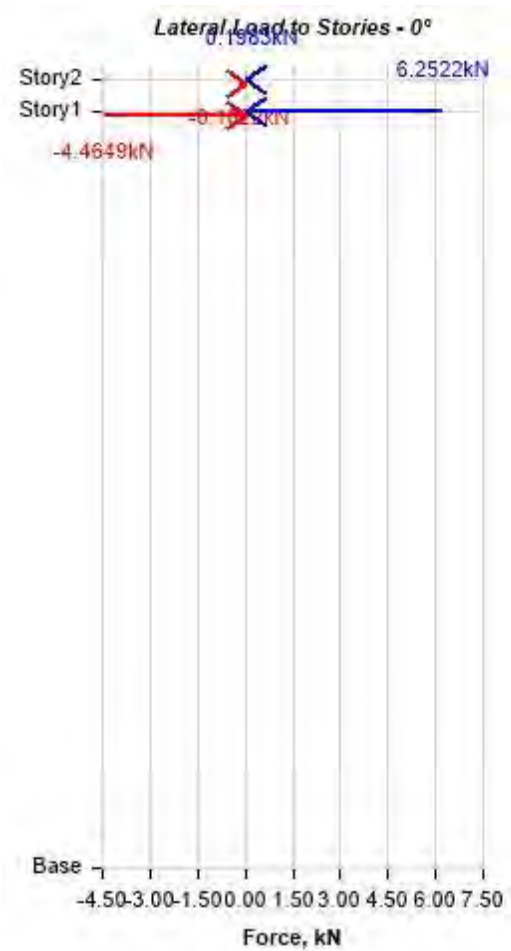


Figure 3-9-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.1983	-0.1822
Story1	2.82	6.2522	-4.4649
Base	0	0	0

Loads

1/18/2026

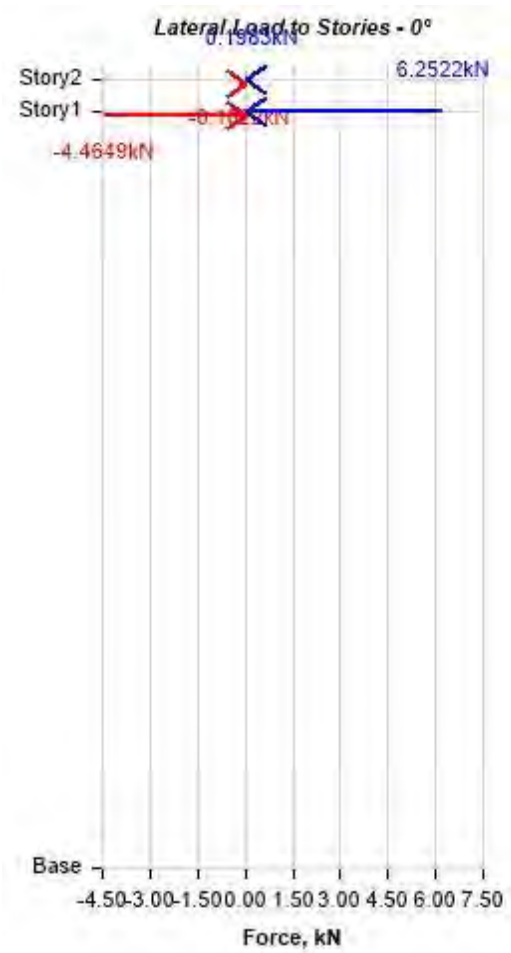


Figure 3-10-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.1983	0.1822
Story1	2.82	6.2522	4.4649
Base	0	0	0

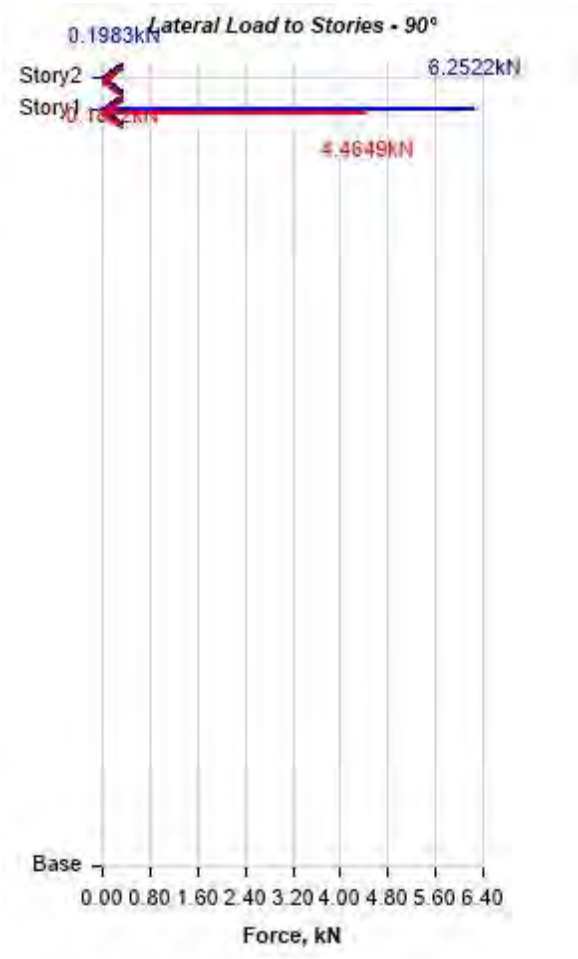


Figure 3-11-Pat 3

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0.1983	0.1822
Story1	2.82	6.2522	4.4649
Base	0	0	0

Loads

1/18/2026

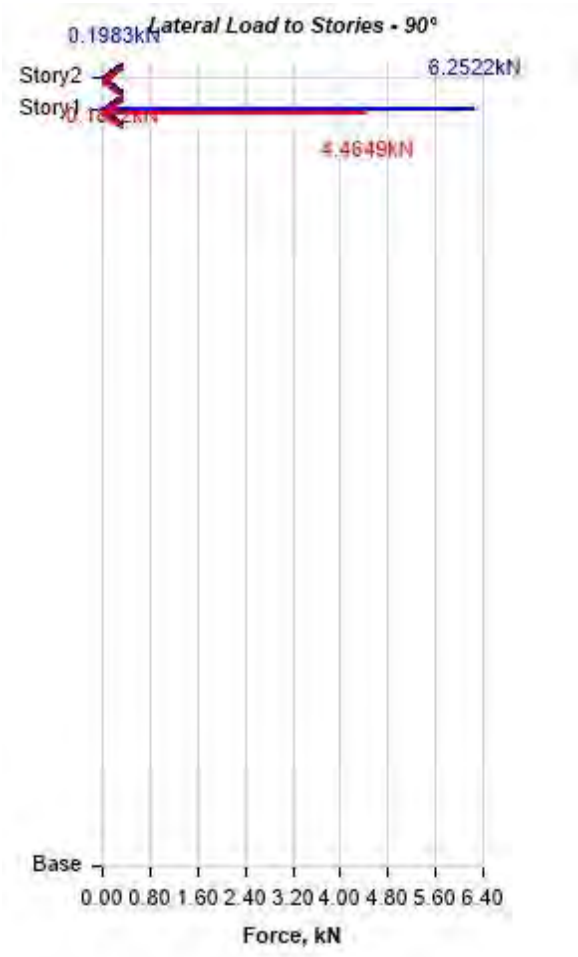


Figure 3-12-Pat 3

Loads

1/18/2026 

3.3 Auto Seismic Loading

ASCE 7-22 Auto Seismic Load Calculation

This calculation presents the automatically generated lateral seismic loads for load pattern EQ X according to ASCE 7-22, as calculated by ETABS.

Direction and Eccentricity

Direction = Multiple

Eccentricity Ratio = 5% for all diaphragms

Structural Period

Period Calculation Method = Program Calculated

Coefficient, C_t [ASCE Table 12.8-2]

$$C_t = 0.028ft$$

Coefficient, x [ASCE Table 12.8-2]

$$x = 0.8$$

Structure Height Above Base, h_n

$$h_n = 9.65 \text{ ft}$$

Long-Period Transition Period, T_L [ASCE 11.4.6]

$$T_L = 8 \text{ sec}$$

Factors and Coefficients

Response Modification Factor, R [ASCE Table 12.2-1]

$$R = 6$$

System Overstrength Factor, Ω_0 [ASCE Table 12.2-1]

$$\Omega_0 = 2.5$$

Deflection Amplification Factor, C_d [ASCE Table 12.2-1]

$$C_d = 3$$

Importance Factor, I [ASCE Table 1.5-2]

$$I = 1$$

Sds and Sd1 Source

Mapped MCE Spectral Response Acceleration, S_{ds} [ASCE 11.4.4]

$$S_{ds} = 1.66g$$

Mapped MCE Spectral Response Acceleration, S_{d1} [ASCE 11.4.4]

$$S_{d1} = 1.23g$$

Site Class [ASCE Table 20.2-1] = Default

Seismic Response

Design Spectral Response Acceleration, S_{DS} [ASCE 11.4.5, 11.4.8]

$$S_{DS} = 1.66g$$

Design Spectral Response Acceleration, S_{D1} [ASCE 11.4.5, 11.4.6]

$$S_{D1} = 1.23g$$

Design Spectral Response Acceleration, S_1 [ASCE 11.4.5.1]

$$S_1 = 0.87g$$

Equivalent Lateral Forces

Seismic Response Coefficient, C_s [ASCE 12.8.1.1, Eq. 12.8-3]

$$C_s = S_{DS} \left(\frac{R}{I} \right)$$

[ASCE 12.8.1.1, Eq. 12.8-4]

$$C_{s,max} = S_{D1} \overline{T} \left(\frac{R}{I} \right)$$

Loads

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[ASCE 12.8.1.1, Eq. 12.8-6]

$$C_{s,min} = \max (0.044 S_{DS} I, 0.01) = 0.07304$$

[ASCE 12.8.1.1, Eq. 12.8-7]

$$C_{s,min} = 0.5 S_1 \left(\frac{R}{I} \right)$$

$$C_{s,min} \leq C_s \leq C_{s,max}$$

Calculated Base Shear

Direction	Period Used (sec)	C _s	W (kN)	V (kN)
X	0.008	0.276667	18.9061	5.2307
X + Ecc. Y	0.008	0.276667	18.9061	5.2307
X - Ecc. Y	0.008	0.276667	18.9061	5.2307

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	2.0244	0
Story1	2.82	3.2063	0
Base	0	0	0



Figure 3-13-Set 1

ASCE 7-22 Auto Seismic Load Calculation

This calculation presents the automatically generated lateral seismic loads for load pattern EQ Y according to ASCE 7-22, as calculated by ETABS.

Direction and Eccentricity

Direction = Multiple

Eccentricity Ratio = 5% for all diaphragms

Structural Period

Period Calculation Method = Program Calculated

Coefficient, C_t [ASCE Table 12.8-2]

$$C_t = 0.028ft$$

Coefficient, x [ASCE Table 12.8-2]

$$x = 0.8$$

Structure Height Above Base, h_n

$$h_n = 9.65 \text{ ft}$$

Long-Period Transition Period, T_L [ASCE 11.4.6]

$$T_L = 8 \text{ sec}$$

Factors and Coefficients

Response Modification Factor, R [ASCE Table 12.2-1]

$$R = 6$$

System Overstrength Factor, Ω_0 [ASCE Table 12.2-1]

$$\Omega_0 = 2.5$$

Deflection Amplification Factor, C_d [ASCE Table 12.2-1]

$$C_d = 3$$

Importance Factor, I [ASCE Table 1.5-2]

$$I = 1$$

Sds and Sd1 Source

Mapped MCE Spectral Response Acceleration, S_{ds} [ASCE 11.4.4]

$$S_{ds} = 1.66g$$

Mapped MCE Spectral Response Acceleration, S_{d1} [ASCE 11.4.4]

$$S_{d1} = 1.23g$$

Site Class [ASCE Table 20.2-1] = Default

Seismic Response

Design Spectral Response Acceleration, S_{DS} [ASCE 11.4.5, 11.4.8]

$$S_{DS} = 1.66g$$

Design Spectral Response Acceleration, S_{D1} [ASCE 11.4.5, 11.4.6]

$$S_{D1} = 1.23g$$

Design Spectral Response Acceleration, S_1 [ASCE 11.4.5.1]

$$S_1 = 0.87g$$

Equivalent Lateral Forces

Seismic Response Coefficient, C_s [ASCE 12.8.1.1, Eq. 12.8-3]

$$C_s = S_{DS} \left(\frac{R}{I} \right)$$

[ASCE 12.8.1.1, Eq. 12.8-4]

$$C_{s,max} = S_{D1} \overline{T} \left(\frac{R}{I} \right)$$

Loads

1/18/2026

[ASCE 12.8.1.1, Eq. 12.8-6]

$$C_{s,min} = \max (0.044 S_{DS} I, 0.01) = 0.07304$$

[ASCE 12.8.1.1, Eq. 12.8-7]

$$C_{s,min} = 0.5 S_1 \left(\frac{R}{I} \right)$$

$$C_{s,min} \leq C_s \leq C_{s,max}$$

Calculated Base Shear

Direction	Period Used (sec)	C _s	W (kN)	V (kN)
Y	0.009	0.276667	18.9061	5.2307
Y + Ecc. X	0.009	0.276667	18.9061	5.2307
Y - Ecc. X	0.009	0.276667	18.9061	5.2307

Applied Story Forces

Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
Story2	2.94	0	2.0244
Story1	2.82	0	3.2063
Base	0	0	0

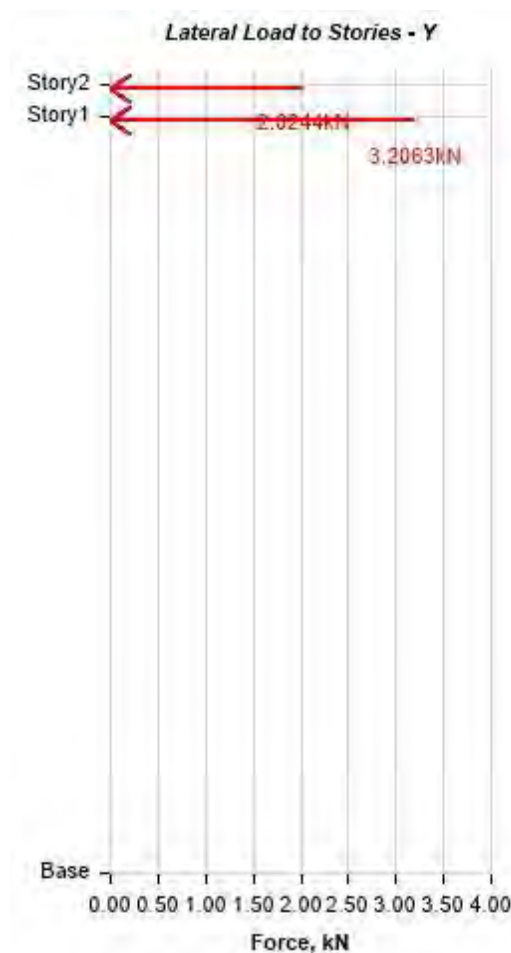


Figure 3-14-Set 1

3.4 Load Combinations

Table 3.2 - Load Combination Definitions

Name	Type	Is Auto	Load Name	SF	Notes
DStID1	Linear Add	Yes	Dead	1	Dead [Deflections]
DStID1			Super Dead	1	
DStID2	Linear Add	Yes	Dead	1	Dead + Live [Deflections]
DStID2			Live	1	
DStID2			Super Dead	1	
DStIS1	Linear Add	Yes	Dead	1.4	Dead [Strength]
DStIS1			Super Dead	1.4	
DStIS2	Linear Add	Yes	Dead	1.2	Dead + Live [Strength]
DStIS2			Live	1.6	
DStIS2			Snow	0.5	
DStIS2			Super Dead	1.2	
DStIS3	Linear Add	Yes	Dead	1.2	Dead + Live + Roof Live [Strength]
DStIS3			Live	1.6	
DStIS3			Roof Live	0.5	
DStIS3			Super Dead	1.2	
DStIS4	Linear Add	Yes	Dead	1.2	Dead + Live + Snow [Strength]
DStIS4			Live	1	
DStIS4			Snow	1.6	
DStIS4			Super Dead	1.2	
DStIS5	Linear Add	Yes	Dead	1.2	Dead + Live + Roof Live [Strength]
DStIS5			Live	1	
DStIS5			Roof Live	1.6	
DStIS5			Super Dead	1.2	
DStIS6	Linear Add	Yes	Dead	1.2	Dead + Live + Wind + Snow [Strength]
DStIS6			Live	1	
DStIS6			Snow	0.5	
DStIS6			Super Dead	1.2	
DStIS6			Wind	1	
DStIS7	Linear Add	Yes	Dead	1.2	Dead + Live - Wind + Snow [Strength]
DStIS7			Live	1	
DStIS7			Snow	0.5	
DStIS7			Super Dead	1.2	
DStIS7			Wind	-1	
DStIS8	Linear Add	Yes	Dead	1.2	Dead + Live + Roof Live + Wind [Strength]
DStIS8			Live	1	
DStIS8			Roof Live	0.5	
DStIS8			Super Dead	1.2	
DStIS8			Wind	1	
DStIS9	Linear Add	Yes	Dead	1.2	Dead + Live + Roof Live - Wind [Strength]
DStIS9			Live	1	
DStIS9			Roof Live	0.5	
DStIS9			Super Dead	1.2	
DStIS9			Wind	-1	
DStIS10	Linear Add	Yes	Dead	1.2	Dead + Snow + Wind [Strength]

Table 3.2 - Load Combination Definitions (continued)

Name	Type	Is Auto	Load Name	SF	Notes
DStIS10			Snow	1.6	
DStIS10			Super Dead	1.2	
DStIS10			Wind	0.5	
DStIS11	Linear Add	Yes	Dead	1.2	Dead + Snow - Wind [Strength]
DStIS11			Snow	1.6	
DStIS11			Super Dead	1.2	
DStIS11			Wind	-0.5	
DStIS12	Linear Add	Yes	Dead	1.2	Dead + Roof Live + Wind [Strength]
DStIS12			Roof Live	1.6	
DStIS12			Super Dead	1.2	
DStIS12			Wind	0.5	
DStIS13	Linear Add	Yes	Dead	1.2	Dead + Roof Live - Wind [Strength]
DStIS13			Roof Live	1.6	
DStIS13			Super Dead	1.2	
DStIS13			Wind	-0.5	
DStIS14	Linear Add	Yes	Dead	0.9	Dead (min) + Wind [Strength]
DStIS14			Super Dead	0.9	
DStIS14			Wind	1	
DStIS15	Linear Add	Yes	Dead	0.9	Dead (min) - Wind [Strength]
DStIS15			Super Dead	0.9	
DStIS15			Wind	-1	
DStIS16	Linear Add	Yes	Dead	1.3	Dead + Live + Static Earthquake [Strength]
DStIS16			Live	1	
DStIS16			Snow	0.2	
DStIS16			Super Dead	1.3	
DStIS16			EQ X	1	
DStIS17	Linear Add	Yes	Dead	1.3	Dead + Live - Static Earthquake [Strength]
DStIS17			Live	1	
DStIS17			Snow	0.2	
DStIS17			Super Dead	1.3	
DStIS17			EQ X	-1	
DStIS18	Linear Add	Yes	Dead	1.3	Dead + Live + Static Earthquake [Strength]
DStIS18			Live	1	
DStIS18			Snow	0.2	
DStIS18			Super Dead	1.3	
DStIS18			EQ Y	1	
DStIS19	Linear Add	Yes	Dead	1.3	Dead + Live - Static Earthquake [Strength]
DStIS19			Live	1	
DStIS19			Snow	0.2	
DStIS19			Super Dead	1.3	
DStIS19			EQ Y	-1	
DStIS20	Linear Add	Yes	Dead	0.8	Dead (min) + Static Earthquake [Strength]
DStIS20			Super Dead	0.8	
DStIS20			EQ X	1	
DStIS21	Linear Add	Yes	Dead	0.8	Dead (min) - Static Earthquake [Strength]

Table 3.2 - Load Combination Definitions (continued)

Name	Type	Is Auto	Load Name	SF	Notes
DStIS21			Super Dead	0.8	
DStIS21			EQ X	-1	
DStIS22	Linear Add	Yes	Dead	0.8	Dead (min) + Static Earthquake [Strength]
DStIS22			Super Dead	0.8	
DStIS22			EQ Y	1	
DStIS23	Linear Add	Yes	Dead	0.8	Dead (min) - Static Earthquake [Strength]
DStIS23			Super Dead	0.8	
DStIS23			EQ Y	-1	

4 Analysis Results

This chapter provides analysis results.

4.1 Modal Results

Table 4.1 - Modal Periods And Frequencies

Case	Mode	Period sec	Frequency cyc/sec	CircFreq rad/sec	Eigenvalue rad2/sec2
Modal	1	0.009	107.886	677.8692	459506.711
Modal	2	0.008	123.465	775.7534	601793.2612
Modal	3	0.007	137.787	865.7406	749506.7755
Modal	4	0.007	149.963	942.2422	887820.4395
Modal	5	0.005	184.112	1156.8118	1338213.4675
Modal	6	0.005	188.06	1181.6159	1396216.1825
Modal	7	0.005	201.115	1263.64	1596786.0485
Modal	8	0.005	209.526	1316.4913	1733149.2757
Modal	9	0.004	223.303	1403.0552	1968563.9307
Modal	10	0.004	251.569	1580.6551	2498470.6484
Modal	11	0.004	258.974	1627.1834	2647725.9036
Modal	12	0.004	266.466	1674.2568	2803135.7108

Table 4.2 - Modal Participating Mass Ratios (Part 1 of 2)

Case	Mode	Period sec	UX	UY	UZ	SumUX	SumUY	SumUZ	RX	RY	RZ	SumRX
Modal	1	0.009	0.0006	0.6874	0	0.0006	0.6874	0	0.7267	0.0006	0.0501	0.7267
Modal	2	0.008	0.2746	0	0	0.2751	0.6874	0	0	0.2897	4.507E-05	0.7267
Modal	3	0.007	0.2515	0.0019	0	0.5266	0.6894	0	0.002	0.2678	0.0315	0.7287
Modal	4	0.007	0.0113	0.0042	0	0.538	0.6936	0	0.0045	0.013	0.2186	0.7332
Modal	5	0.005	0.0187	0.0003	0	0.5567	0.6939	0	0.0003	0.0219	0.2095	0.7335
Modal	6	0.005	0.0029	0.0136	0	0.5596	0.7075	0	0.0155	0.004	0.1608	0.749
Modal	7	0.005	0.0503	0.0037	0	0.6099	0.7113	0	0.0041	0.0477	0.1141	0.7531
Modal	8	0.005	0.0687	0.0028	0	0.6787	0.7141	0	0.0031	0.0705	0.0034	0.7563
Modal	9	0.004	0.0156	0.0007	0	0.6942	0.7148	0	0.0008	0.0139	0.028	0.757
Modal	10	0.004	0.0009	0.0117	0	0.6951	0.7265	0	0.0123	0.0006	0.0028	0.7693
Modal	11	0.004	0.0009	0.0009	0	0.696	0.7274	0	0.0007	0.001	0.0021	0.77
Modal	12	0.004	0.002	0.0112	0	0.6981	0.7386	0	0.0118	0.0026	0.0014	0.7819

Table 4.2 - Modal Participating Mass Ratios (Part 2 of 2)

Case	Mode	SumRY	SumRZ
Modal	1	0.0006	0.0501
Modal	2	0.2903	0.0501
Modal	3	0.5581	0.0816
Modal	4	0.5711	0.3003
Modal	5	0.593	0.5098
Modal	6	0.5969	0.6706
Modal	7	0.6447	0.7847
Modal	8	0.7151	0.788
Modal	9	0.729	0.816

Table 4.2 - Modal Participating Mass Ratios (Part 2 of 2, continued)

Case	Mode	SumRY	SumRZ
Modal	10	0.7296	0.8188
Modal	11	0.7306	0.8209
Modal	12	0.7332	0.8223

Table 4.3 - Modal Load Participation Ratios

Case	ItemType	Item	Static %	Dynamic %
Modal	Acceleration	UX	98.64	69.81
Modal	Acceleration	UY	98.91	73.86
Modal	Acceleration	UZ	0	0

Table 4.4 - Modal Direction Factors

Case	Mode	Period sec	UX	UY	UZ	RZ
Modal	1	0.009	0.001	0.699	0	0.3
Modal	2	0.008	0.98	0	0	0.02
Modal	3	0.007	0.704	0.006	0	0.29
Modal	4	0.007	0.074	0.014	0	0.912
Modal	5	0.005	0.396	0.046	0	0.558
Modal	6	0.005	0.33	0.219	0	0.45
Modal	7	0.005	0.402	0.012	0	0.586
Modal	8	0.005	0.154	0.007	0	0.839
Modal	9	0.004	0.197	0.002	0	0.801
Modal	10	0.004	0.199	0.092	0	0.709
Modal	11	0.004	0.003	0.034	0	0.963
Modal	12	0.004	0.04	0.037	0	0.923

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016188
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. To affirm the certification status, please visit www.namicertification.com. NAMI is accredited to the ISO/IEC 17065 by the Standards Council of Canada (SCC).

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "OD75F" Aluminum Side-Hinged Door Configuration: X Glazing: Insulating Glass (Tempered) Frame: W-1200mm(47.24") H-2400mm(94.49") Panel: W-1092mm(42.99") H-2327mm(91.61") DLO: W-932mm(36.69") H-2167mm(85.31")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class CW-PG30 1200 x 2400 (47 x 94)-SHD Design Pressure: ± 1440 Pa (± 30 psf) Water Penetration Resistance Test Pressure: 290 Pa (6.06 psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.
Report No: 231115006SHF-004
Expiration Date: January 31, 2028

Administrator's Signature: _____

NATIONAL ACCREDITATION AND MANAGEMENT INSTITUTE, INC.

4794 George Washington Memorial Highway

Hayes, VA 23072

Tel: (804) 684-5124

Email: nami@namiinc.com

NOPC-03/30/2023

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016183
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. To affirm the certification status, please visit www.namicertification.com. NAMI is accredited to the ISO/IEC 17065 by the Standards Council of Canada (SCC).

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "OW75" Aluminum Awning Window Configuration: X Glazing: Insulating Glass (Tempered) Frame: W-1500mm(59.06") H-900mm(35.43") Sash: W-1436mm(56.54") H-836mm(32.91") DLO: W-1316mm(51.81") H-716mm(28.19")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class CW-PG50 1500 x 900 (59 x 35)-AP Design Pressure: ± 2400 Pa (± 50 psf) Water Penetration Resistance Test Pressure: 580 Pa (12.11psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.
Report No: 231115006SHF-001
Expiration Date: December 31, 2027

Administrator's Signature: _____

NATIONAL ACCREDITATION AND MANAGEMENT INSTITUTE, INC.

4794 George Washington Memorial Highway
Hayes, VA 23072

Tel: (804) 684-5124

Email: nami@namiinc.com

NOPC-03/30/2023

Zhejiang Kingdom New Material Group Co. , Ltd.

TEST REPORT

SCOPE OF WORK

Digital Printed High Gloss Wallpanel

REPORT NUMBER

251209002SHF-001

TEST DATE(S)

2025-12-09- 2025-12-24

ORIGINAL ISSUE DATE

2025-12-25

PAGES

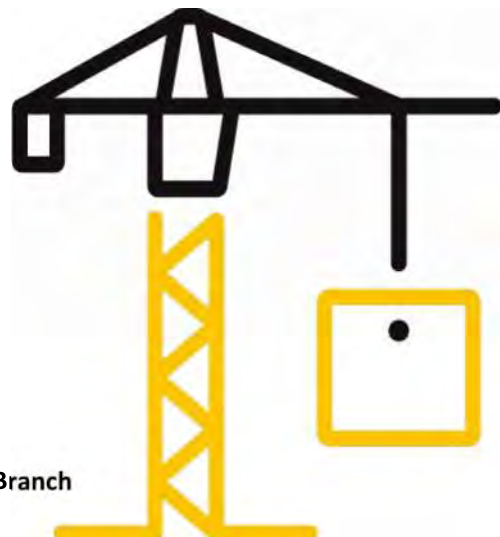
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DOCUMENT CONTROL NUMBER

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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch



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- 9.The report was digital signed by Shang Hai, Intertek Group plc, please using Adobe Acrobat Reader to verify the authenticity.

Test Report

Original Issue Date: 2025-12-25 Intertek Report No. 251209002SHF-001
Applicant: Zhejiang Kingdom New Material Group Co. , Ltd.
Address: No.38, Desheng Road, Heshan Town, Tongxiang city, Zhejiang Province, China
Attn: Banglan Wang
Manufacturer: Zhejiang Kingdom New Material Group Co. , Ltd.
Address: No.38, Desheng Road, Heshan Town, Tongxiang city, Zhejiang Province, China
Test Type: Performance test, samples provided by the applicant.

Product Information

Product Name	Model	Specification
Digital Printed High Gloss Wallpanel	/	1200*600*4.0mm
Sample ID	Sample Amount	Sample Received Date
S251209002SHF.001	6 pcs	2025-12-06
Sample Description		
Approximately 4mm thick wallpanel		

Test Methods And Standards

Test Standard	ASTM E84-24 Standard Test Method for Surface Burning Characteristics of Building Materials
Specification Standard	/
Test Conclusion	The samples were tested according to the above standards, and the results are shown in the following page.

Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized

Lu Cheng
Name: Lu Cheng Title: Reviewer
Caspian Shen
Name: Caspian Shen Title: Project Engineer



Test Report

Original Issue Date: 2025-12-25

Intertek Report No. 251209002SHF-001

Test Items, Method and Results:

Test Method: ASTM E84-24 Standard Test Method for Surface Burning Characteristics of Building Materials

Specimen Mounting Method:

The 24.02-ft. long test specimen was consisted of six 4.00-ft. long x 24.02-in. wide x 0.16-in. thick "Digital Printed High Gloss Wallpanel".

The decorative surface of the specimen was exposed to the fire.

The specimen was self-supported.

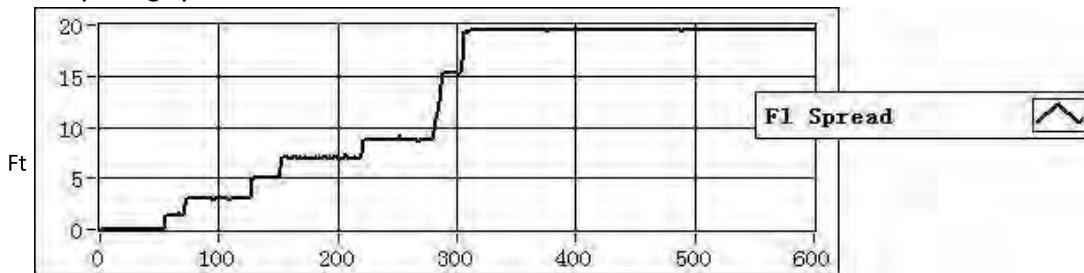
Test Observation (min:sec)

Melting	Blistering	Transient Ignition	Steady Ignition	Flaming drops
/	/	0:34	0:37	1:24
Delamination	Sagging	Cracking	After Flame	Floor Flame
/	1:48	/	>60s	1:42

Test Result

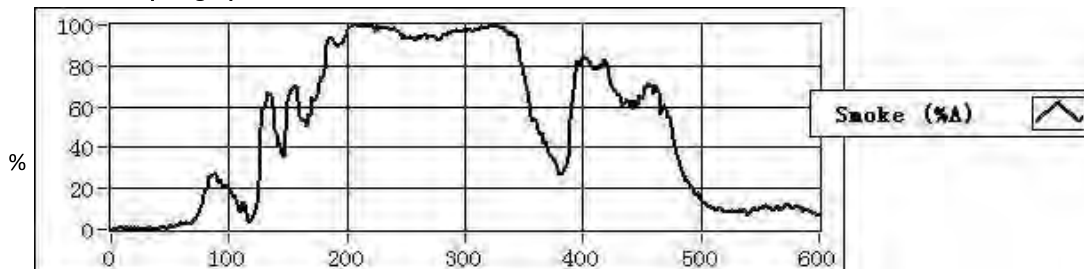
Flame Spread Index (FSI)	70	Smoke Developed Index(SDI)	700
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Flame spread graph



Time (Sec)

Smoke developed graph



Time (Sec)

Test Report

Original Issue Date: 2025-12-25

Intertek Report No. 251209002SHF-001

Test Items, Method and Results:

Commentary on Classification (for information only)

Neither ASTM E84 nor UL 723 include classification criteria for the results obtained from testing. The international Building Code[®] (IBC), NFPA 101: Life Safety Code[®] (NFPA 101), and NFPA 5000: Building Construction and Safety Code[®] (NFPA 5000) all describe a set of classification criteria required for interior wall and ceiling finish materials based on Flame Spread Index and Smoke Developed Index when tested in accordance with ASTM E84 or UL 723. The classification criteria for all three model codes is the same:

Class	Flame Spread Index	Smoke Developed Index
A	0-25	0-450
B	26-75	0-450
C	76-200	0-450

Note that classification under this scheme for interior wall and ceiling finishes does not strictly apply to all products or materials tested in accordance with ASTM E84 or UL 723 because not all products or materials are recommended or suitable for use as interior wall or ceiling finish materials in buildings, regardless of the surface burning characteristics. Consult with the product manufacturer and the local authority having jurisdiction(AHJ) regarding specific applications of a given product or material.



Test Report

Original Issue Date: 2025-12-25

Intertek Report No. 251209002SHF-001

Appendix A: Sample Received Photo



Front view (test side)



Back view

Revision:

NO.	Date	Changes
251209002SHF-001	2025-12-25	First issue





Certificate of Product Ratings

AHRI Certified Reference Number : 217896460 Date : 04-06-2026 Model Status : Active

AHRI Type : HORC-A-CB (Heat Pump with Remote Outdoor Coil, Heating Only)

Series : T Series

Outdoor Unit Brand Name : Bestcold

Outdoor Unit Model Number (Condenser or Single Package) : MYUA36NA23BCH19-O

Indoor Unit Model Number (Evaporator and/or Air Handler) : MYUA36NA23BCH19-I

The manufacturer of this Bestcold product is responsible for the rating of this system combination.

Rated as follows in accordance with AHRI 210/240-2024 (I-P), Performance Rating of Unitary Air-Conditioning & Air-Source heat Pump Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (A_{Full}) – Single or High Stage (95F), btuh : 34200

SEER2 : 18.50

EER2 (A_{Full}) – Single or High Stage (95F) : 11.30

Heating Capacity (H1Nom) - Multi/Variable Stage (47F) : 34200

HSPF2 (Region IV) : 9.00



†"Active" Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale; OR new models that are being marketed but are not yet being produced. "Production Stopped" Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale.

Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating.

The Department of Energy has published updated energy efficiency metrics for central air conditioners and heat pumps. This publication reflects both the 1987 metric (SEER) and the 2023 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRI.net for more information about updated energy efficiency metrics.

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CERTIFICATE NO.: 134200035657673893



Certificate of Product Ratings

AHRI Certified Reference Number : 217896460 Date : 04-06-2026 Model Status : Active

AHRI Type : HORC-A-CB (Heat Pump with Remote Outdoor Coil, Heating Only)

Series : T Series

Outdoor Unit Brand Name : Bestcold

Outdoor Unit Model Number (Condenser or Single Package) : MYUA36NA23BCH19-O

Indoor Unit Model Number (Evaporator and/or Air Handler) : MYUA36NA23BCH19-I

The manufacturer of this Bestcold product is responsible for the rating of this system combination.

Rated as follows in accordance with AHRI 210/240-2024 (I-P), Performance Rating of Unitary Air-Conditioning & Air-Source heat Pump Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (A_{Full}) – Single or High Stage (95F), btuh : 34200

SEER2 : 18.50

EER2 (A_{Full}) – Single or High Stage (95F) : 11.30

Heating Capacity (H1Nom) - Multi/Variable Stage (47F) : 34200

HSPF2 (Region IV) : 9.00



†"Active" Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale; OR new models that are being marketed but are not yet being produced. "Production Stopped" Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale.

Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating.

The Department of Energy has published updated energy efficiency metrics for central air conditioners and heat pumps. This publication reflects both the 1987 metric (SEER) and the 2023 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRI.net for more information about updated energy efficiency metrics.

DISCLAIMER

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CERTIFICATE VERIFICATION

The information for the model cited on this certificate can be verified at www.ahridirectory.org, click on "Verify Certificate" link and enter the AHRI Certified Reference Number and the date on which the certificate was issued, which is listed above, and the Certificate No., which is listed at bottom right.

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CERTIFICATE NO.: 134200035657673893

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016186
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. To affirm the certification status, please visit www.namicertification.com. NAMI is accredited to the ISO/IEC 17065 by the Standards Council of Canada (SCC).

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "W75H" Aluminum Fixed Window Configuration: O Glazing: Insulating Glass (Tempered) Frame: W-1500mm(59.06") H-2500mm(98.43") DLO: W-1391mm(54.76") H-2391mm(94.13")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class CW-PG50 1500 x 2500 (59 x 98)-FW Design Pressure: ± 2400 Pa (± 50 psf) Water Penetration Resistance Test Pressure: 580 Pa (12.11psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.

Report No: 231115006SHF-006

Expiration Date: **December 31, 2027**

Administrator's Signature: _____

NATIONAL ACCREDITATION AND MANAGEMENT INSTITUTE, INC.

4794 George Washington Memorial Highway

Hayes, VA 23072

Tel: (804) 684-5124

Email: nami@namiinc.com

NOPC-03/30/2023

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016185
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

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COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "W75H" Aluminum Dual-Action Window Configuration: X Glazing: Insulating Glass (Tempered) Frame: W-1200mm(47.24") H-2500mm(98.43") Sash: W-1151mm(45.31") H-2451mm(96.50") DLO: W-1042mm(41.02") H-2342mm(92.20")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class CW-PG50 1200 x 2500 (47 x 98)-DAW Design Pressure: ± 2400 Pa (± 50 psf) Water Penetration Resistance Test Pressure: 440 Pa (9.19psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.
Report No: 231115006SHF-003
Expiration Date: December 31, 2027

Administrator's Signature: _____

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Tel: (804) 684-5124

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NOPC-03/30/2023

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016187.01
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. To affirm the certification status, please visit www.namicertification.com. NAMI is accredited to the ISO/IEC 17065 by the Standards Council of Canada (SCC).

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "PS150" Aluminum Sliding Door Configuration: XO Glazing: Insulating Glass (Tempered) Frame: W-3100mm(122.05") H-2400mm(94.49") Panel: W-1491mm(58.70") H-2311mm(90.98") DLO: W-1354mm(53.31") H-2174mm(85.59")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-22	Class AW-PG40 3100 x 2400 (122 x 94)-SD Design Pressure: ± 1920 Pa (± 40 psf) Water Penetration Resistance Test Pressure: 720 Pa (15.04psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.

Report No: 240307006SHF-001

Expiration Date: March 31, 2028

Administrator's Signature: _____

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Hayes, VA 23072

Tel: (804) 684-5124

Email: nami@namiinc.com

NOPC-03/30/2023

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016187
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. To affirm the certification status, please visit www.namicertification.com. NAMI is accredited to the ISO/IEC 17065 by the Standards Council of Canada (SCC).

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "SD95" Aluminum Sliding Door Configuration: XO Glazing: Insulating Glass (Tempered) Frame: W-3100mm(122.05") H-2400mm(94.49") Panel: W-1530mm(60.26") H-2319mm(91.30") DLO: W-1449mm(57.05") H-2217mm(87.28")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class CW-PG30 3100 x 2400 (122 x 94)-SD Design Pressure: ± 1440 Pa (± 30 psf) Water Penetration Resistance Test Pressure: 220 Pa (4.59psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.
Report No: 231115006SHF-005
Expiration Date: December 31, 2027

Administrator's Signature: _____

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NOPC-03/30/2023

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016187.02
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. To affirm the certification status, please visit www.namicertification.com. NAMI is accredited to the ISO/IEC 17065 by the Standards Council of Canada (SCC).

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "PS150" Aluminum Sliding Door Configuration: XO Glazing: Insulating Glass (Tempered) Frame: W-3100mm(122.05") H-2400mm(94.49") Panel: W-1491mm(58.70") H-2311mm(90.98") DLO: W-1354mm(53.31") H-2174mm(85.59")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-22	Class CW-PG40 3100 x 2400 (122 x 94)-SD Design Pressure: ± 1920 Pa (± 40 psf) Water Penetration Resistance Test Pressure: 720 Pa (15.04psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.

Report No: 240307006SHF-002

Expiration Date: March 31, 2028

Administrator's Signature: _____

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Tel: (804) 684-5124

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NOPC-03/30/2023

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI016184
DATE: 05/13/2024
CERTIFICATION PROGRAM: Structural
COMPANY: Passive
CODE: 3052-1

This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. To affirm the certification status, please visit www.namicertification.com. NAMI is accredited to the ISO/IEC 17065 by the Standards Council of Canada (SCC).

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Shandong New Passive System Windows & Doors Company, Ltd. No. 7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province, China 262600	Series "OW75" Aluminum Casement Window Configuration: X Glazing: Insulating Glass (Tempered) Frame: W-900mm(35.43") H-1500mm(59.06") Sash: W-836mm(32.91") H-1436mm(56.54") DLO: W-716mm(28.19") H-1316mm(51.81")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class CW-PG50 900 x 1500 (35 x 59)-C Design Pressure: ± 2400 Pa (± 50 psf) Water Penetration Resistance Test Pressure: 440 Pa (9.19psf)

Product Tested By: Intertek Testing Services Shenzhen Ltd.
Report No: 231115006SHF-002
Expiration Date: December 31, 2027

Administrator's Signature: _____

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NOPC-03/30/2023

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CERTIFICATE OF LISTING

NSF/ANSI/CAN 61

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Issued To:

KAIPING YINGCHUAN SANITARY WARE TECHNOLOGY CO. LTD

NO.172-178 TAIHE RD. JIAXING INDUSTRIAL ZONE SHUIKOU TOWN KAIPING GUANDONG, GD 529321, GUANGDONG, CHINA

Product:

Drinking Water System Components - Health Effects

Products are in compliance with the following standard(s)

NSF/ANSI/CAN 61-2020

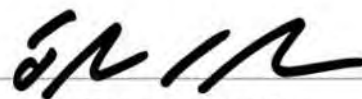
File Number: N-13156

Effective Date: September 2021

Void After: September 2026*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

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Issued To:

CHAOZHOU LEMAN CERAMICS CO.,LTD.

(BEHIND GANGHUA GAS DEPOT) DAPUDONG, SANPU, GUSAN VILLAGE, GUXIANG TOWN, CHAOAN DISTRICT CHAOZHOU, GD 521000
, CHINA

Product:

Ceramic Plumbing Fixtures

Products are in compliance with the following code(s):

Uniform Plumbing Code (UPC®)
National Plumbing Code of Canada
National Standard Plumbing Code

Products are certified to the following standard(s)

ASME A112.19.2-2018/CSA B45.1-18

File Number: 7797

Effective Date: April 2024

Void After: April 2029*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

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CERTIFICATE OF LISTING



Issued To: CHAOZHOU LEMAN CERAMICS CO.,LTD.

Effective Date: April 2024

File Number: 7797

Product: Ceramic Plumbing Fixtures

Void After: April 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Ceramic Plumbing Fixtures shall be marked with the manufacturer's name or registered trademark, or in the case of private labeling, the name of the customer for whom the fixture was manufactured. Markings shall be permanent, legible, and visible after installation.

The model number of close-coupled water closets shall be marked on both the tank and the bowl.

Water closets and urinals shall be marked to identify the average water consumption, expressed in litres and gallons per flush. The litre or gallon value may be stated first, at the manufacturer's option.

Gravity flush tanks shall be marked with a water level mark or with the information necessary to determine the water level in the tank needed to deliver the intended flush volume. This mark shall be applied to the ceramic body of the tank, the tank liner, or the flush valve overflow tube. The vertical distance between the water level mark and the lowest point of the tank overflow channel shall not exceed 38 mm (1.5 in).

Water closet tanks shall have a label indicating at least the following:

- (a) the telephone number or contact information of a service department from which end-users can obtain replacement parts;
- (b) the serial or part number of the flush valve seal; and
- (c) information on procuring replacement parts for maintaining the original flush volume.

All packaging shall be marked with the manufacturer's name or registered trademark; or in case of private labeling, the name of the customer for whom the fixture was manufactured and the model number. Packaging for water closets and urinals shall be marked with the water consumption in gpf and Lpf.

Each fixture shall be marked with the cUPC® certification mark. In the case where the tank and the bowl are sold separately, both shall have the certification mark.

Fixtures that require proprietary (i.e., non-standard) components, e.g., supply fittings, waste fittings, or water closet seats, shall indicate, in the packaging or the accompanying literature, that such components are provided by the manufacturer and shall identify the proper replacement parts.

Fixtures that do not comply with one or more of the dimensional requirements of this Standard shall be marked with an "N" to indicate the non-standard nature of the fixture.

Characteristics:

Ceramic plumbing fixtures may include water closets, lavatories, urinals, bidets, service sinks and drinking fountains. To be installed in accordance with the manufacturer's instructions, the latest edition of the Uniform Plumbing Code, and the National Plumbing Code of Canada.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: CHAOZHOU LEMAN CERAMICS CO.,LTD.

Effective Date: April 2024

File Number: 7797

Product: Ceramic Plumbing Fixtures

Void After: April 2029

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Models

Model Number	Description
8056	Cabinet basin
806	Art basin
9056EA	Cabinet basin
AP406	
CUO1512	
CUO1610	
CUO1611	
CUO1613	
CUO1714	
CUO1714A	
CUS1612	
CUS1801	Under counter mounting
CUS1802	Under counter mounting
CUS1804	Under counter mounting
CUS1808	Under counter mounting
CUS1809	Under counter mounting
CUS1811	
CUS1812	
CUS1813	
H203	
H311	
LJ2249	Under counter mounting
LM-211	Art basin
LM-227	Counter top mounting
LM-525	Art basin
LM-538	Counter top mounting
PAC-02	Art basin

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CERTIFICATE OF LISTING



Issued To: CHAOZHOU LEMAN CERAMICS CO.,LTD.

Effective Date: April 2024

File Number: 7797

Product: Ceramic Plumbing Fixtures

Void After: April 2029

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
PAC-04	Art basin
PAC-06	Art basin
PAC-07	Art basin
PAC-21	Art basin
SF-16	

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CERTIFICATE OF LISTING



Issued To: CHAOZHOU LEMAN CERAMICS CO.,LTD.

Effective Date: April 2024

File Number: 7797

Product: Ceramic Plumbing Fixtures

Void After: April 2029

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Additional Company Information

Lenova, Inc.

Additional Company Model	Description
PAC-02	Art basin
PAC-04	Art basin
PAC-06	Art basin
PAC-07	Art basin
PAC-21	Art basin
PT-10W	(White Color), PT-10B (Biscuit Color)
PU-01W	(White Color) PU-02B (Biscuit Color) PU-03BK (Black Color)
PU-04W	(White Color) PU-05B(Biscuit Color)
PU-06W	
PU-07W	
PU-901W	(White Color) PU-901B (Biscuit Color) PU-901BK (Black Color)
PU-902W	(White Color) PU-902B (Biscuit Color) PU-902BK (Black Color)
PU-910	
PU-911	
PU-911ADA	
PU-912ADA	
PU-914	

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Issued To:

KAIPING CHESTON SANITARY WARE CO., LTD.

NO. E3-1, THE THIRD INDUSTRIAL SHUIKOU TOWN KAIPING, GD 529321, GUANDONG, CHINA

Product:

Plumbing Fixture Fittings

Products are in compliance with the following code(s):

Uniform Plumbing Code (UPC®)
National Plumbing Code of Canada
National Standard Plumbing Code

Products are certified to the following standard(s)

ASME A112.18.1-2018/CSA B125.1-18

File Number: 9784

Revised Date: June 8, 2023

Effective Date: December 2019

Void After: December 2024*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: December 2019

File Number: 9784

Revised Date: June 8, 2023

Product: Plumbing Fixture Fittings

Void After: December 2024

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Plumbing supply fittings shall be marked with the manufacturer's recognized name, trademark, or other mark or, in the case of private labeling, the name, trademark or other mark of the customer for whom the fitting was manufactured. The marking shall be accomplished by use of a permanent mark or by placing a permanent label on the product. Markings on plumbing supply fittings shall be visible after installation.

Showerheads and hand-held showers shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm.

Kitchen, lavatory, and metering faucets shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm or L/cycle and gpc.

Single-handle and single-control bath and shower mixing valves shall have their temperature control settings identified alphabetically, numerically, or graphically.

High-efficiency commercial pre-rinse spray valves shall be marked with the manufacturer's specified maximum flow rate, in L/min (gpm).

Listed products shall bear the cUPC® certification mark.

Packaging for plumbing supply fittings shall be marked with the manufacturer's name, trademark, or other mark as well as the model number or, in the case of private labeling, the name, trademark, or mark of the customer for whom the fitting was manufactured as well as the model number.

Packaging for showerheads and hand-held showers shall be marked with the manufacturer's specified maximum flow rate and either the manufacturer's specified minimum flow rate or the statement "For use with automatic compensating valves rated at xxx L/min (yyy gpm) or less", where xxx L/min (yyy gpm) is the manufacturer's specified minimum flow rate.

Packaging for kitchen, lavatory, and metering faucets shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm or L/cycle and gpc.

Characteristics:

Fittings may include lavatory, sink, bath & shower, lawn and sediment faucets. Plumbing fixture fittings to be installed in accordance with the manufacturer's instructions and the requirements of the latest edition of the Uniform Plumbing Code and National Plumbing Code of Canada.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

File Number: 9784

Product: Plumbing Fixture Fittings

Effective Date: December 2019

Revised Date: June 8, 2023

Void After: December 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Models

Model Number	Description
110007*	Basin mixer
110008*	Basin Mixer
110117*	Basin Mixer
110118*	Basin Mixer
110005*	Basin Mixer
110098*	Basin mixer
110093*	Basin mixer
110094*	Basin Mixer
130001*	Pull down kitchen mixer
130077*	Pull down kitchen mixer
130002*	Pull out kitchen mixer
130003*	Pull down kitchen mixer
130162*	Kitchen mixer
130191*	Kitchen mixer
130156*	Kitchen mixer
130004*	Pull out kitchen mixer
130073*	Pull down kitchen mixer
130015*	Pull down kitchen mixer
130067*	Kitchen mixer
130017*	Pull down kitchen mixer
130022*	Pull out kitchen mixer
130027*	Pull out kitchen mixer
130029*	Pull out kitchen mixer
130018*	Basin Mixer
130033*	Pull out kitchen mixer
130071*	Pull down kitchen mixer
130070*	Kitchen Mixer

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.
 File Number: 9784
 Product: Plumbing Fixture Fittings

Effective Date: December 2019
 Revised Date: June 8, 2023
 Void After: December 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
130074*	Pull down kitchen mixer
130078*	Pull down kitchen mixer
130079*	Pull down kitchen mixer
130083*	Pull down kitchen mixer
130171*	Pull out kitchen mixer
130218*	Pull out kitchen mixer
170002*	Floor standing mixer
170003*	Floor standing mixer
170004*	Floor standing mixer
170006*	Floor standing mixer
170038*	Floor standing mixer
130078BR*	Pull down kitchen mixer
130079BR*	Pull down kitchen mixer
130083BR*	Pull down kitchen mixer
110315-P-D-*	Single Handle Lavatory Faucet
110316-P-D-*	Single Handle Lavatory Faucet
110209-P-D-*	Single Handle Lavatory Faucet
110219-P-D-*	Single Handle Lavatory Faucet
110298-P-D-*	Single Handle Lavatory Faucet
110299-P-D-*	Single Handle Lavatory Faucet
110218-P-D-*	Single Handle Lavatory Faucet
110226-P-D-*	Single Handle Lavatory Faucet
110228-P-D-*	Single Handle Lavatory Faucet
110247-P-D-*	Single Handle Lavatory Faucet
110167-P-D-*	Single Handle Lavatory Faucet
110171-P-D-*	Single Handle Lavatory Faucet
110184-P-D-*	Single Handle Lavatory Faucet
110205-P-D-*	Single Handle Lavatory Faucet
110025-P-D-*	Single Handle Lavatory Faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

File Number: 9784

Product: Plumbing Fixture Fittings

Effective Date: December 2019

Revised Date: June 8, 2023

Void After: December 2024

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
110215-P-D-*	Single Handle Lavatory Faucet
110030-P-D-*	Single Handle Lavatory Faucet
110031-P-D-*	Single Handle Lavatory Faucet
230359-*	Lavatory faucet
230359-H-P-S-*	Lavatory faucet
120052-*	Two Handle Lavatory Faucet
120052-D-H-S-*	Two Handle Lavatory Faucet
130353-P-*	Pull out kitchen faucet
130352-P-*	Pull out kitchen faucet
S130283-P-*	Pull down kitchen faucet
S130351-P-*	Pull out kitchen faucet
230356-*	Pressure Balance Valve
230356-H-P-*	Pressure Balance Valve With Trim
230357-*	Pressure Balance Valve with Diverter
230357-H-P-*	Pressure Balance Valve with Diverter
230358-*	Pressure Balance Valve with Diverter
230358-H-P-*	Pressure Balance Valve with Diverter
120053-*	Roman Tub Faucet
120053-H-S-HS-*	Roman Tub Faucet With Hand-held Shower
230357-H-P-S-SH-A-*	Pressure Balanced Tub & Shower Set
230358-H-P-S-SH-HS-A-E-*	Pressure Balanced Tub & Shower Set

H	Different Handle
H01	
H02	
H03	
H04	
H05	
H06	



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H	Different Handle
H07	
H08	
H09	
H10	
H11	
H12	
H13	
H14	
H15	
H16	
H17	
H18	
H19	
H20	
H21	
H22	
H23	
H24	
H25	
H26	
H27	
H28	
H29	
H30	
H31	
H32	
H33	
H34	
H35	

IAPMO RESEARCH AND TESTING, INC.

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Product: Plumbing Fixture Fittings

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Revised Date: June 8, 2023

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H	Different Handle
H36	
H37	
P	Different Plate
None	Without plate
P01	
P02	
P03	
P04	
P05	
P06	
P07	
P08	
P09	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	
P21	
P22	
P23	
P24	
P25	

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



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File Number: 9784

Product: Plumbing Fixture Fittings

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P Different Plate

P26
P27
P28
P29
P30
P31
P32
P33

D Different Drain

None Without drain
D01
D02
D03
D04
D05
D06
D07
D08
D09
D10
D11
D12
D13
D14
D15
D16
D17
D18

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

File Number: 9784

Product: Plumbing Fixture Fittings

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Void After: December 2024

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S	Different Spout
None	Without spout
S01	
S02	
S03	
S04	
S05	
S06	
S07	
S08	
S09	
S10	
S11	
S12	
S13	
S14	
S15	
S16	
S17	
S18	
S19	
S20	
S21	
S22	
S23	
S24	
S25	
S26	
SH	Different Shower Head
None	Without shower head

IAPMO RESEARCH AND TESTING, INC.

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File Number: 9784

Product: Plumbing Fixture Fittings

Effective Date: December 2019

Revised Date: June 8, 2023

Void After: December 2024

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SH	Different Shower Head
SH01	
SH02	
SH03	
SH04	
HS	Different Hand Held Shower
None	Without hand held shower
HS01	
HS02	
HS03	
HS04	
HS05	
E	Different Connector
E01	
E02	
A	Different Shower Arms
None	Without shower arm
A01	
A02	
A03	
A04	
A05	
A06	
A07	
A08	
**	represents different types of finishes as follows
1	Chrome

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

File Number: 9784

Product: Plumbing Fixture Fittings

Effective Date: December 2019

Revised Date: June 8, 2023

Void After: December 2024

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*** represents different types of finishes as follows

2	Brush nickel
3	White paint
4	Black
5	Surface blackening
6	Titanium gold
07	Rose gold
08	Gunmetal
09	Brushed chrome
10	ORB
11	Antique bronze
12	Brushed brass
13	Brushed gold
14	Antique brass brushed nickel
15	SS PVD
16	Archaize
17	Chrome and black
18	White and chrome
19	Brushed nickel and black
20	Black and antique brass brushed nickel
21	Chrome and rose gold
22	Brushed nickel and rose gold
23	Black and rose gold
24	matte brushed nickel
25	Pearl gun metal

Model Number	Description
110335-P-D-*	Single Handle Lavatory Faucet
110099-P-D-*	Single Handle Lavatory Faucet
110217-P-D-*	Single Handle Lavatory Faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing – DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 53rd Street
Orlando, FL 32839



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

File Number: 9784

Product: Plumbing Fixture Fittings

Effective Date: December 2019

Revised Date: June 8, 2023

Void After: December 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
110283-P-D-*	Single Handle Lavatory Faucet
110284-P-D-*	Single Handle Lavatory Faucet
P	Different Handle
None	Without plate
P01	
P02	
P03	
P04	
P05	
P06	
P07	
P08	
P09	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	
P21	
P22	
P23	
P24	

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



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File Number: 9784

Product: Plumbing Fixture Fittings

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Revised Date: June 8, 2023

Void After: December 2024

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P	Different Handle
P25	
P26	
P27	
P28	
P29	
P30	
P31	
P32	
P33	
D	Different Drain
None	Without drain
D01	
D02	
D03	
D04	
D05	
D06	
D07	
D08	
D09	
D10	
D11	
D12	
D13	
D14	
D15	
D16	
D17	
D18	

IAPMO RESEARCH AND TESTING, INC.

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File Number: 9784

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Effective Date: December 2019

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*** represents different types of finishes as follows:**

1	Chrome
2	Brush nickel
3	White paint
4	Black
5	Surface blackening
6	Titanium gold
07	Rose gold
08	Gunmetal
09	Brushed chrome
10	ORB
11	Antique bronze
12	Brushed brass
13	Brushed gold
14	Antique brass brushed nickel
15	SS PVD
16	Archaize
17	Chrome and black
18	White and chrome
19	Brushed nickel and black
20	Black and antique brass brushed nickel
21	Chrome and rose gold
22	Brushed nickel and rose gold
23	Black and rose gold
24	matte brushed nickel
25	Pearl gun metal

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Additional Company Information

Belanger UPT

Model Number	Description
NOB22**	Single Handle Lavatory Faucet
NOB26**	Single Handle Lavatory Faucet
NOB78R**	Pull out kitchen faucet
NOB78S**	Pull out kitchen faucet
**	represents the available Finishes:
CP	Chrome
MB	Black
GM	Gum Metal
MG	Brushed Brass
SS	SS PVD

Builders Adventure, Inc. DBA MEGABAI

BAI

Model Number	Description
2607	Single handle bathroom faucet
0612	Single handle bathroom faucet
0611	Single handle bathroom faucet
0613	Single handle bathroom faucet

IAPMO RESEARCH AND TESTING, INC.

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Effective Date: December 2019

Revised Date: June 8, 2023

Void After: December 2024

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Model Number	Description
0652	Single handle bathroom faucet
0609	Single handle bathroom faucet
0623	Single handle bathroom faucet
0689	Single handle bathroom faucet
0690	Single handle bathroom faucet
0608	Single handle bathroom faucet
679	Wall mounted bathroom faucet
680	Wall mounted bathroom faucet
681	Wall mounted bathroom faucet
2608	Single handle bathroom faucet
2609	Single handle bathroom faucet
682	Single handle bathroom faucet
683	Single handle bathroom faucet
684	Single handle bathroom faucet
685	Single handle bathroom faucet
0600	Kitchen faucet with pull down spray
0630	Kitchen faucet with pull down spray
2610	Kitchen faucet with pull down spray
2611	Kitchen faucet with pull down spray
0601	Kitchen faucet with pull down spray
0631	Kitchen faucet with pull down spray
2612	Kitchen faucet with pull down spray
2613	Kitchen faucet with pull down spray
0625	Kitchen faucet with pull down spray
0626	Kitchen faucet with pull down spray
2614	Kitchen faucet with pull down spray
2615	Kitchen faucet with pull down spray
0624	Kitchen faucet with pull down spray
2616	Kitchen faucet with pull down spray

IAPMO RESEARCH AND TESTING, INC.

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Model Number	Description
2617	Kitchen faucet with pull down spray
0618	Free standing tub faucet with hand shower
0654	Free standing tub faucet with hand shower
2618	Free standing tub faucet with hand shower
2619	Free standing tub faucet with hand shower
2620	Free standing tub faucet with hand shower
0619	Free standing tub faucet with hand shower
0653	Free standing tub faucet with hand shower
2621	Free standing tub faucet with hand shower
2600	Single handle bathroom faucet
2601	Single handle bathroom faucet
2602	Single handle bathroom faucet
2603	Single handle bathroom faucet
2625	Single handle bathroom faucet

Marcobelle Company LLC

Bath Royale

Model Number	Description
500-**	Pasha Lav Faucet
500T-**	Pasha Tall Lav Faucet
500SD-**	Pasha Shower Valve With Diverter
500S-**	Pasha Shower Valve
501-**	Pasha 8" Spread Lav Faucet
500DM-**	Pasha Deck Mount Tub Filler
600-**	Milano Lav Faucet
600T-**	Milano Tall Lav Faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

File Number: 9784

Product: Plumbing Fixture Fittings

Effective Date: December 2019

Revised Date: June 8, 2023

Void After: December 2024

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Model Number	Description
600SD-**	Milano Shower Valve with Diverter
600S-**	Milano Shower Valve
601-**	Milano 8" Spread Lav Faucet
DMTF	Deck Mount Tub Filler Rough-In Parts
600DM-**	Milano Deck Mount Tub Filler
700-**	Envol Lav Faucet
700T-**	Envol Tall Lav Faucet
700SD-**	Envol Shower Valve with Diverter
700S-**	Envol Shower Valve
701-**	Envol 8" Spread Lav Faucet
700WM-**	Envol Wall Mount Lav Faucet
700DM-**	Envol Deck Mount Tub Filler
2200-**	Kitchen Faucet With Pull Out Spray
2201-**	Kitchen Faucet With Pull Out Spray
2202-**	Kitchen Faucet With Pull Out Spray
2203-**	Pull Down Kitchen Faucet
2204-**	Kitchen Faucet With Pull Out Spray
2205-**	Pull Down Kitchen Faucet
BRSV	Pressure Balancing Shower Valve Rough-In Parts
BRSD	Pressure Balancing Shower Valve w/Diverter Rough-In Parts
**	represents the available Finishes:
CP	Chrome
BN	Brushed Nickel
MB	Matte Black
BG	Brushed Gold
SS	SS PVD

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

File Number: 9784

Product: Plumbing Fixture Fittings

Effective Date: December 2019

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Void After: December 2024

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Stylish International Inc.

Model Number	Description
K-143**	Pull out kitchen faucet,
K-141**	Pull out kitchen faucet,
B-104**	Single Handle Lavatory Faucet
B-122**	Single Handle Lavatory Faucet
B-102**	Single Handle Lavatory Faucet
**	represents the available Finishes:
C	Chrome
B	Brush Nickel
N	Black
P	Gun Metal
NC	Chrome&Black
NS	Brush Nickel and Black
NG	Black and antique brass brushed Nickel

IAPMO RESEARCH AND TESTING, INC.

5001 E. Philadelphia Street, Ontario, CA 91761 • Phone (909) 472-4100 • Fax (909) 472-4244 • www.iapmort.org



CERTIFICATE OF LISTING



IAPMO Research and Testing, Inc. is a product certification body in which its product certification system includes inspection and testing of samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and/or warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

Issued To:

Tianli (Fujian) Sanitary-Ware Joint Stock Co., Ltd.

NO. 19, CHUANGXIN AVENUE XIAMEI TOWN NAN'AN CITY 362302, FUJIAN, CHINA

Product:

Plumbing Fixture Waste Fittings

Products are in compliance with the following code(s):

**Uniform Plumbing Code (UPC®)
National Plumbing Code of Canada**

Products are certified to the following standard(s)

ASME A112.18.2-2020/CSA B125.2-20

File Number: 12039

Revised Date: March 4, 2025

Effective Date: October 2024

Void After: October 2029*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

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CERTIFICATE OF LISTING



Issued To: Tianli (Fujian) Sanitary-Ware Joint Stock Co., Ltd.

Effective Date: October 2024

File Number: 12039

Revised Date: March 4, 2025

Product: Plumbing Fixture Waste Fittings

Void After: October 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Products shall be permanently and legibly marked with the manufacturers recognized name, trademark, or other mark; or, in the case of private labeling, the name, trademark, or other mark of the customer for whom the fitting was manufactured.

The marking shall be accomplished by use of a permanent mark or by placing a permanent label on the product.

Marking shall be visible after installation.

Packages shall be marked with the manufacturers recognized name, trademark, or other mark as well as the model number or, in the case of private labeling, the name, trademark, or other mark of the customer for whom the fitting was manufactured as well as the model number.

Product shall also bear the cUPC® certification mark.

Characteristics:

Plumbing fixture waste fittings to be installed with other IAPMO R&T listed fittings and fixtures in accordance with the manufacturer's installation instructions and the requirements of the latest edition of the Uniform Plumbing Code.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing – DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33rd Street
Orlando, FL 32839



Issued To: Tianli (Fujian) Sanitary-Ware Joint Stock Co., Ltd.

File Number: 12039

Product: Plumbing Fixture Waste Fittings

Effective Date: October 2024

Revised Date: March 4, 2025

Void After: October 2029

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Models

Model Number	Description
XJ403C001	Lavatory drain for 1-1/2 in. drain openings-type 304 stainless steel drain body
XJ403C002	Lavatory drain for 1-1/2 in. drain openings-type 316stainless steel drain body
XK136C023	sink basket strainer
XK136C024	sink basket strainer
XK387	Drain Strainer
XK387C008	sink basket strainer
XK387SN	sink basket strainer
XK393	Drain Strainer
XK404C002	deep drain waste without overflow connection
XK393C006	Drain Strainer
XK345	Drain Strainer

IAPMO RESEARCH AND TESTING, INC.

5001 E. Philadelphia Street, Ontario, CA 91761 • Phone (909) 472-4100 • Fax (909) 472-4244 • www.iapmort.org



CERTIFICATE OF LISTING



IAPMO Research and Testing, Inc. is a product certification body in which its product certification system includes inspection and testing of samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and/or warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

Issued To:

KAIPING YINGCHUAN SANITARY WARE TECHNOLOGY CO. LTD

NO.172-178 TAIHE RD. JIAXING INDUSTRIAL ZONE SHUIKOU TOWN KAIPING GUANDONG, GD 529321, GUANGDONG, CHINA

Product:

Plumbing Fixture Fittings

Products are in compliance with the following code(s):

**Uniform Plumbing Code (UPC®)
 National Plumbing Code of Canada**

Products are certified to the following standard(s):

ASME A112.18.1-2018/CSA B125.1-18

File Number: 13155

Effective Date: September 2021

Void After: September 2026*

Chairman, Product Certification Committee



Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING YINGCHUAN SANITARY WARE
TECHNOLOGY CO. LTD

Effective Date: September 2021

File Number: 13155

Product: Plumbing Fixture Fittings

Void After: September 2026

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Plumbing supply fittings shall be marked with the manufacturer's recognized name, trademark, or other mark or, in the case of private labeling, the name, trademark or other mark of the customer for whom the fitting was manufactured. The marking shall be accomplished by use of a permanent mark or by placing a permanent label on the product. Markings on plumbing supply fittings shall be visible after installation.

Showerheads and hand-held showers shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm.

Kitchen, lavatory, and metering faucets shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm or L/cycle and gpc.

Single-handle and single-control bath and shower mixing valves shall have their temperature control settings identified alphabetically, numerically, or graphically.

High-efficiency commercial pre-rinse spray valves shall be marked with the manufacturer's specified maximum flow rate, in L/min (gpm).

Listed products shall bear the cUPC® certification mark.

Packaging for plumbing supply fittings shall be marked with the manufacturer's name, trademark, or other mark as well as the model number or, in the case of private labeling, the name, trademark, or mark of the customer for whom the fitting was manufactured as well as the model number.

Packaging for showerheads and hand-held showers shall be marked with the manufacturer's specified maximum flow rate and either the manufacturer's specified minimum flow rate or the statement "For use with automatic compensating valves rated at xxx L/min (yyy gpm) or less", where xxx L/min (yyy gpm) is the manufacturer's specified minimum flow rate.

Packaging for kitchen, lavatory, and metering faucets shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm or L/cycle and gpc.

Characteristics:

Fittings may include lavatory, sink, bath & shower, lawn and sediment faucets. Plumbing fixture fittings to be installed in accordance with the manufacturer's instructions and the requirements of the latest edition of the Uniform Plumbing Code and National Plumbing Code of Canada.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING YINGCHUAN SANITARY WARE
TECHNOLOGY CO. LTD

Effective Date: September 2021

File Number: 13155

Product: Plumbing Fixture Fittings

Void After: September 2026

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org



Models

Model Number	Description
YC-8232**	Kitchen Faucet
YC-8231**	Kitchen Faucet
YC-WH8231**	Kitchen Faucet
YC-8231T**	Touch sensor kitchen faucet
YC-8245**	Kitchen Faucet
YC-W8245**	Kitchen Faucet
YC-82451**	Kitchen Faucet
YC-82452**	Kitchen Faucet
YC-8258**	Kitchen Faucet
YC-8265T**	Touch sensor kitchen faucet
YC-8265**	Kitchen Faucet
YC-L8257**	Kitchen Faucet
YC-L8257T**	Touch sensor kitchen faucet
YC-8267**	Kitchen Faucet
YC-8229**	Kitchen Faucet
YC-8228**	Kitchen Faucet
YC-8273**	Kitchen Faucet
YC-84001**	Kitchen Faucet
YC-84002**	Kitchen Faucet
YC-85001**	Kitchen Faucet
YC-G84010**	Kitchen Faucet
YC-82001**	Kitchen Faucet
YC-82004**	Kitchen Faucet
YC-8260**	Kitchen Faucet
YC-8268**	Kitchen Faucet
YC-8270**	Kitchen Faucet
YC-8230**	Basin faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING YINGCHUAN SANITARY WARE
TECHNOLOGY CO. LTD

Effective Date: September 2021

File Number: 13155

Product: Plumbing Fixture Fittings

Void After: September 2026

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
YC-82302**	Basin faucet
YC-8140**	Basin faucet
YC-8141**	Basin faucet
YC-8143**	Basin faucet
YC-8144**	Basin faucet
YC-8145**	Basin faucet
YC-8146**	Basin faucet
YC-811017**	Basin faucet
YC-811014**	Basin faucet
YC-A213**	Basin faucet
YC-B213**	Basin faucet
YC-A215**	Basin faucet
YC-B215**	Basin faucet
YC-81201**	Free standing bathtub faucet
YC-81204**	Free standing bathtub faucet
YC-81205**	Free standing bathtub faucet
YC-8201**	Kitchen Faucet
YC-8202**	Kitchen Faucet
YC-J80061-1-LED12**	Thermostatic shower
YC-J80061-LED12**	Thermostatic shower
YC-J80061-1-16**	Thermostatic shower
YC-J80061-16**	Thermostatic shower
YC-8090**	Thermostatic shower
YC-8090-1**	Thermostatic shower
YC-8095**	Thermostatic shower
YC-8091**	Thermostatic shower
YC-8091-1**	Thermostatic shower
YC-J8063-12**	Pressure balance Shower set
YC-J8063-1-12**	Pressure balance Shower set



IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING YINGCHUAN SANITARY WARE
TECHNOLOGY CO. LTD

Effective Date: September 2021

File Number: 13155

Product: Plumbing Fixture Fittings

Void After: September 2026

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
YC-P8063**	Pressure balance Shower set
YC-P8065**	Pressure balance Shower set
YC-P8064**	Pressure balance Shower set
YC-P8066**	Pressure balance Shower set
YC-BRP8064**	Pressure balance Shower set
YC-BRP8063**	Pressure balance Shower set
YC-BRP80621**	Two ways pressure balance shower set
YC-BRP80611**	Two ways pressure balance shower set

Option	Definition
**	Represents Different Types of Finishes
None	Brushed
B	Matt Black
G	Brushed Gold
M	Mirror

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IAPMO R&T Product Listing



This IAPMO R&T Listing is current as of May 19, 2025

File Number:

7504

Issued To:

**CHAOZHOU MUYE CERAMICS MANUFACTURE CO.,
LTD.**

LIYA INDUSTRIAL ZONE, GUXIANG CHAOAN CHAOZHOU , GUANGDONG, CHINA

Product:

Water Closets with Dual Flush Feature

Products are in compliance with the following code(s):

Uniform Plumbing Code (UPC®)
National Plumbing Code of Canada
National Standard Plumbing Code

Products are certified to the following standard(s)

ASME A112.19.2-2018/CSA B45.1-18 and ASME A112.19.14-2013 (R2018)

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: CHAOZHOU MUYE CERAMICS MANUFACTURE CO., LTD.

File Number: 7504

Product: Water Closets with Dual Flush Feature

This IAPMO R&T Listing is current as of May 19, 2025

Identification:

Water Closets with Dual Flush Feature shall be marked with the manufacturer's name or registered trademark, or in the case of private labeling, the name of the customer for whom the fixture was manufactured. Markings shall be permanent, legible, and visible after installation.

The model number of close-coupled water closets shall be marked on both the tank and the bowl.

Water closets with Dual Flush Feature shall be marked to identify the average water consumption, expressed in litres and gallons per flush. The litre or gallon value may be stated first, at the manufacturer's option. The product shall be marked with the reduced flush volume and the designation ASME A112.19.14 to signify compliance with this Standard. The location of this mark shall be determined by the manufacturer and is not required to be permanent, but it shall be visible after installation. The label shall be intended for removal by the occupant only, and this shall be so stated on the label.

Gravity flush tanks shall be marked with a water level mark or with the information necessary to determine the water level in the tank needed to deliver the intended flush volume. This mark shall be applied to the ceramic body of the tank, the tank liner, or the flush valve overflow tube. The vertical distance between the water level mark and the lowest point of the tank overflow channel shall not exceed 38 mm (1.5 in).

Water closet tanks shall have a label indicating at least the following:

- (a) the telephone number or contact information of a service department from which end-users can obtain replacement parts;
- (b) the serial or part number of the flush valve seal; and
- (c) information on procuring replacement parts for maintaining the original flush volume.

All packaging shall be marked with the manufacturer's name or registered trademark; or in case of private labeling, the name of the customer for whom the fixture was manufactured and the model number. Packaging shall be marked with the water consumption in gpf and Lpf.

Each fixture shall be marked with the cUPC® certification mark. In the case where the tank and the bowl are sold separately, both shall have the certification mark.

Identification of flush mode options shall be depicted on the actuator. This identification shall be either by graphic display or lettering, or shall be intuitively apparent.

Fixtures that require proprietary (i.e., non-standard) components, e.g., supply fittings, waste fittings, or water closet seats, shall indicate, in the packaging or the accompanying literature, that such components are provided by the manufacturer and shall identify the proper replacement parts.

Fixtures that do not comply with one or more of the dimensional requirements of this Standard shall be marked with an "N" to indicate the non-standard nature of the fixture.

Characteristics:

To be installed in accordance with the manufacturer's instructions, the latest edition of the Uniform Plumbing Code, and the National Plumbing Code of Canada.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.



Models

Note: Models preceded by a "*" are also in compliance with ICC/ANSI A117.1.

Model Number	Description
MY-2121	One-Piece Dual Flush Toilet
MY-2132	Siphonic One-piece closet S-trap 305MM
MY-2133	Siphonic One-piece closet S-trap 305MM
MY-2137	One piece, elongated bowl, floor mounted, gravity flush
*MY-2190	One piece, elongated bowl, floor mounted, gravity flush
MY-2785	Wall hung toilet, front bowl rim
MY-2138	One Piece, elongated bowl, gravity flush
MY-2113	One Piece, elongated bowl, gravity flush
MY-2107	Once Piece, round bowl, gravity flush
MY-2167	One Piece, elongated bowl, gravity flush
MY-2115	One-Piece Dual Flush Toilet
MY-2148	One-Piece Dual Flush Toilet
MY-2173	One-Piece Dual Flush Toilet
MY-2787	Wall Hung Toilet

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CERTIFICATE OF LISTING



IAPMO Research and Testing, Inc. is a product certification body in which its product certification system includes inspection and testing of samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and/or warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

Issued To:

TAIZHOU TENG YUN SANITARY WARE TECHNOLOGY CO., LTD.

NO. 1188, HAIMAO ROAD, SANJIA STREET, TAIZHOU BAY NEW DISTRICT TAIZHOU, ZHEJIANG, CHINA

Product:

Plumbing Waste Fittings

Products are in compliance with the following code(s):

**Uniform Plumbing Code (UPC®)
 National Plumbing Code of Canada**

Products are certified to the following standard(s)

ASME A112.18.2-2020/CSA B125.2-20

File Number: 10943

Effective Date: May 2024

Void After: May 2029*


 Chairman, Product Certification Committee




 Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: TAIZHOU TENG YUN SANITARY WARE
TECHNOLOGY CO., LTD.

Effective Date: May 2024

File Number: 10943

Product: Plumbing Waste Fittings

Void After: May 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Product and package assembly shall be permanently and legibly marked with the manufacturer's name or trademark. The product shall also bear the cUPC® certification mark. Markings shall be visible after installation.

Characteristics:

Tubular continuous wastes and tailpieces shall not be less than 20 B&S gauge (0.032in or 8mm). Bathwaste and Overflow Assemblies to be installed with other IAPMO R&T listed fittings and fixtures in accordance with the manufacturer's instructions and the requirements of the latest edition of the Uniform Plumbing Code.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: TAIZHOU TENG YUN SANITARY WARE
TECHNOLOGY CO., LTD.

Effective Date: May 2024

File Number: 10943

Product: Plumbing Waste Fittings

Void After: May 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Models

Note: Models preceded by a "*" shall bear the UPC® certification mark. All other models shall bear the cUPC® certification mark.

Tonnyund®

Model Number	Description
*TY-D1023	Brass bottle trap
TY-A1008	Brass Pop-Up Drain
TY-A1009	Brass Pop-Up Drain
TY-B1013	Brass waste for wash basin, Clic-clac
TY-B1014	Brass waste for wash basin, Clic-clac
TY-B1025	Brass Bathtub drain, Clic-clac
TY-B1026	Brass basin waste, Clic-clac
TY-B1026-1	Brass basin waste, Clic-clac
TY-B1052	Brass basin waste, Clic-clac
TY-B1053	Brass basin waste, Clic-clac
TY-B1054	Brass basin waste, Clic-clac
TY-B1055	Brass basin waste, Clic-clac
TY-B1061	Brass waste for public wash basin
TY-B1062	Brass waste for public wash basin
TY-B1063-1	Brass basin waste, Clic-clac
TY-C1012-1	Brass basin waste, Clic-clac
TY-D1016	Brass P-trap
TY-D1017	Brass P-trap
TY-D1022	Brass P-trap
TY-D1019	Brass P-Trap
TY-D1020	Brass P-Trap

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CERTIFICATE OF LISTING

LEAD FREE

IAPMO Research and Testing, Inc. is a product certification body in which its product certification system includes inspection and testing of samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and/or warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

Issued To:

KAIPING CHESTON SANITARY WARE CO., LTD.

NO. E3-1, THE THIRD INDUSTRIAL SHUIKOU TOWN KAIPING, GD 529321, GUANDONG, CHINA

Product:

Lead Free Plumbing Products

Products are certified to the following standard(s)

Section 1417(d) of the Safe Drinking Water Act The lead content requirements of Section 116875 of the California

**Health & Safety Code
NSF/ANSI/CAN 372-2022**

File Number: 9786

Revised Date: June 8, 2023

Effective Date: September 2019

Void After: September 2024*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

LEAD FREE

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Each product shall bear permanent and legible markings to identify the manufacturer. This marking shall be the trade name, trademark, or other mark known to identify the manufacturer. The product shall bear the appropriate IAPMO R&T certification mark. The product may also bear either "Lead Free" or "Low Lead" above or in close proximity to the IAPMO R&T certification mark.

Characteristics:

Products may include any pipe, pipe fitting, solder, flux, or other plumbing products providing water for human consumption.

Products listed below are to be installed in accordance with the manufacturer's instruction. These products have been verified with weighted average lead content $\leq 0.25\%$; Solder and flux lead content $\leq 0.2\%$.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Models

Model Number	Description
130001*	Pull down kitchen mixer
130004*	pull out kitchen mixer
130003*	Pull down kitchen mixer
130171*	pull out kitchen mixer
130027*	pull out kitchen mixer
130083*	Pull down kitchen mixer
130083BR*	Pull down kitchen mixer
130079*	Pull down kitchen mixer
130079BR*	Pull down kitchen mixer
130078*	Pull down kitchen mixer
130078BR*	Pull down kitchen mixer
130071*	Pull down kitchen mixer
130070*	kitchen mixer
130017*	Pull down kitchen mixer
130015*	Pull down kitchen mixer
130067*	kitchen mixer
130077*	Pull down kitchen mixer
130022*	pull out kitchen mixer
130073*	Pull down kitchen mixer
130162*	kitchen mixer
130191*	kitchen mixer
130074*	Pull down kitchen mixer
130218*	pull out kitchen mixer
130002*	pull out kitchen mixer
130029*	pull out kitchen mixer
130018*	kitchen mixer
110007*	basin mixer

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

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Model Number	Description
110008*	basin mixer
110117*	basin mixer
110005*	basin mixer
110098*	basin mixer
130156*	kitchen mixer
130033*	pull out kitchen mixer
110118*	basin mixer
110093*	basin mixer
110094*	basin mixer
110315-P-D-*	Single Handle Lavatory Faucet
110316-P-D-*	Single Handle Lavatory Faucet
110209-P-D-*	Single Handle Lavatory Faucet
110219-P-D-*	Single Handle Lavatory Faucet
110298-P-D-*	Single Handle Lavatory Faucet
110299-P-D-*	Single Handle Lavatory Faucet
110218-P-D-*	Single Handle Lavatory Faucet
110226-P-D-*	Single Handle Lavatory Faucet
110228-P-D-*	Single Handle Lavatory Faucet
110247-P-D-*	Single Handle Lavatory Faucet
110167-P-D-*	Single Handle Lavatory Faucet
110171-P-D-*	Single Handle Lavatory Faucet
110184-P-D-*	Single Handle Lavatory Faucet
110205-P-D-*	Single Handle Lavatory Faucet
110025-P-D-*	Single Handle Lavatory Faucet
110215-P-D-*	Single Handle Lavatory Faucet
110030-P-D-*	Single Handle Lavatory Faucet
110031-P-D-*	Single Handle Lavatory Faucet
230359-*	Lavatory faucet
230359-H-P-S-*	Lavatory faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing – DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33rd Street
Orlando, FL 32839



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
120052-*	Two Handle Lavatory Faucet
120052-D-H-S-*	Two Handle Lavatory Faucet
130353-P-*	Pull out kitchen faucet
130352-P-*	Pull out kitchen faucet
S130283-P-*	Pull down kitchen faucet
S130351-P-*	Pull out kitchen faucet
H	Different Handle
H01	
H02	
H03	
H04	
H05	
H06	
H07	
H08	
H09	
H10	
H11	
H12	
H13	
H14	
H15	
H16	
H17	
H18	
H19	
H20	
H21	

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

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H Different Handle

H22

H23

H24

H25

H26

H27

H28

H29

H30

H31

H32

H33

H34

H35

H36

H37

P Different Plate

P01

P02

P03

P04

P05

P06

P07

P08

P09

P10

P11

P12

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

LEAD FREE

Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

P	Different Plate
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	
P21	
P22	
P23	
P24	
P25	
P26	
P27	
P28	
P29	
P30	
P31	
P32	
P33	
D	Different Drain
None	Without drain
D01	
D02	
D03	
D04	
D05	
D06	

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

D	Different Drain
D07	
D08	
D09	
D10	
D11	
D12	
D13	
D14	
D15	
D16	
D17	
D18	
S	Different Spout
None	Without spout
S02	
S04	
S06	
S07	
S08	
S13	
S15	
S18	
S20	
S21	
S22	
***	represents different types of finishes as follows
1	Chrome
2	Brush nickel

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

*** represents different types of finishes as follows

3	White paint
4	Black
5	Surface blackening
6	Titanium gold
07	Rose gold
08	Gunmetal
09	Brushed chrome
10	ORB
11	Antique bronze
12	Brushed brass
13	Brushed gold
14	Antique brass brushed nickel
15	SS PVD
16	Archaize
17	Chrome and black
18	White and chrome
19	Brushed nickel and black
20	Black and antique brass brushed nickel
21	Chrome and rose gold
22	Brushed nickel and rose gold
23	Black and rose gold
24	matte brushed nickel
25	Pearl gun metal

Model Number	Description
110335-P-D-*	Single Handle Lavatory Faucet
110099-P-D-*	Single Handle Lavatory Faucet
110217-P-D-*	Single Handle Lavatory Faucet
110283-P-D-*	Single Handle Lavatory Faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
110284-P-D-*	Single Handle Lavatory Faucet
P	Different Handle
None	Without plate
P01	
P02	
P03	
P04	
P05	
P06	
P07	
P08	
P09	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	
P21	
P22	
P23	
P24	
P25	

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing – DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2020-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33rd Street
Orlando, FL 32839



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

LEAD FREE

File Number: 9786

Revised Date: June 8, 2023

Product: Lead Free Plumbing Products

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

P Different Handle

P26
P27
P28
P29
P30
P31
P32
P33

D Different Drain

None Without drain
D01
D02
D03
D04
D05
D06
D07
D08
D09
D10
D11
D12
D13
D14
D15
D16
D17
D18

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

LEAD FREE

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Effective Date: September 2019

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* represents different types of finishes as follows:

1	Chrome
2	Brush nickel
3	White paint
4	Black
5	Surface blackening
6	Titanium gold
07	Rose gold
08	Gunmetal
09	Brushed chrome
10	ORB
11	Antique bronze
12	Brushed brass
13	Brushed gold
14	Antique brass brushed nickel
15	SS PVD
16	Archaize
17	Chrome and black
18	White and chrome
19	Brushed nickel and black
20	Black and antique brass brushed nickel
21	Chrome and rose gold
22	Brushed nickel and rose gold
23	Black and rose gold
24	matte brushed nickel
25	Pearl gun metal

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Additional Company Information

Belanger UPT

Model Number	Description
NOB22**	Single Handle Lavatory Faucet
NOB26**	Single Handle Lavatory Faucet
NOB78R**	Pull out kitchen faucet
NOB78S**	Pull out kitchen faucet
**	represents the available Finishes:
CP	Chrome
MB	Black
GM	Gum Metal
MG	Brushed Brass
SS	SS PVD

Builders Adventure, Inc. DBA MEGBAI

Model Number	Description
2607	Single handle bathroom faucet
0612	Single handle bathroom faucet
0611	Single handle bathroom faucet
0613	Single handle bathroom faucet
0652	Single handle bathroom faucet

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Model Number	Description
0609	Single handle bathroom faucet
0623	Single handle bathroom faucet
0689	Single handle bathroom faucet
0690	Single handle bathroom faucet
0608	Single handle bathroom faucet
679	Wall mounted bathroom faucet
680	Wall mounted bathroom faucet
681	Wall mounted bathroom faucet
2608	Single handle bathroom faucet
2609	Single handle bathroom faucet
682	Single handle bathroom faucet
683	Single handle bathroom faucet
684	Single handle bathroom faucet
685	Single handle bathroom faucet
0600	Kitchen faucet with pull down spray
0630	Kitchen faucet with pull down spray
2610	Kitchen faucet with pull down spray
2611	Kitchen faucet with pull down spray
0601	Kitchen faucet with pull down spray
0631	Kitchen faucet with pull down spray
2612	Kitchen faucet with pull down spray
2613	Kitchen faucet with pull down spray
0625	Kitchen faucet with pull down spray
0626	Kitchen faucet with pull down spray
2614	Kitchen faucet with pull down spray
2615	Kitchen faucet with pull down spray
0624	Kitchen faucet with pull down spray
2616	Kitchen faucet with pull down spray
2617	Kitchen faucet with pull down spray

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Product: Lead Free Plumbing Products

Void After: September 2024

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Model Number	Description
2600	Single handle bathroom faucet
2601	Single handle bathroom faucet
2602	Single handle bathroom faucet
2603	Single handle bathroom faucet
2625	Single handle bathroom faucet

Marcobelle Company LLC

Bath Royale

Model Number	Description
500-**	Pasha Lav Faucet
500T-**	Pasha Tall Lav Faucet
501-**	Pasha 8" Spread Lav Faucet
600-**	Milano Lav Faucet
600T-**	Milano Tall Lav Faucet
601-**	Milano 8" Spread Lav Faucet
700-**	Envol Lav Faucet
700T-**	Envol Tall Lav Faucet
701-**	Envol 8" Spread Lav Faucet
700WM-**	Envol Wall Mount Lav Faucet
2200-**	Kitchen Faucet With Pull Out Spray
2201-**	Kitchen Faucet With Pull Out Spray
2202-**	Kitchen Faucet With Pull Out Spray
2203-**	Pull Down Kitchen Faucet
2204-**	Kitchen Faucet With Pull Out Spray
2205-**	Pull Down Kitchen Faucet

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Void After: September 2024

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**** represents the available Finishes:**

CP	Chrome
BN	Brushed Nickel
MB	Matte Black
BG	Brushed Gold
SS	SS PVD

Stylish International Inc.

Model Number	Description
K-143**	Pull out kitchen faucet,
K-141**	Pull out kitchen faucet,
B-104**	Single Handle Lavatory Faucet
B-122**	Single Handle Lavatory Faucet
B-102**	Single Handle Lavatory Faucet

**** represents the available Finishes:**

C	Chrome
B	Brush Nickel
N	Black
P	Gun Metal
NC	Chrome&Black
NS	Brush Nickel and Black
NG	Black and antique brass brushed Nickel

IAPMO RESEARCH AND TESTING, INC.

5001 E. Philadelphia Street, Ontario, CA 91761 • Phone (909) 472-4100 • Fax (909) 472-4244 • www.iapmort.org



CERTIFICATE OF LISTING

NSF/ANSI/CAN 61

IAPMO Research and Testing, Inc. is a product certification body in which its product certification system includes inspection and testing of samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and/or warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

Issued To:

KAIPING CHESTON SANITARY WARE CO., LTD.

NO. E3-1, 3 INDUSTRIAL SHUIKOU TOWN KAIPING GUANDONG, GD 529321, CHINA

Product:

Drinking Water System Components - Health Effects

Products are certified to the following standard(s)

NSF/ANSI/CAN 61-2019

File Number: N-9785

Revised Date: June 8, 2023

Effective Date: September 2019

Void After: September 2024*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

File Number: N-9785

Revised Date: June 8, 2023

NSF/ANSI/CAN 61

Product: Drinking Water System Components - Health Effects

Void After: September 2024

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Identification:

Each product shall be permanently and legibly marked with the manufacturer's name or trademark. The product may also be marked with the standard designation "NSF/ANSI/CAN 61".

Characteristics:

Materials or products that come into contact with drinking water and/or drinking water treatment chemicals. Products and materials may include process media, protective materials, joining and sealing materials, pipes and related products, mechanical devices used with treatment/transmission/distribution systems, and mechanical plumbing devices. To be installed in accordance with the manufacturer's instruction. Lead free requirements are addressed under a separate certificate of listing.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



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Effective Date: September 2019

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Product: Drinking Water System Components - Health Effects

Void After: September 2024

NSF/ANSI/CAN 61

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Models

Note: For models indicated with a subscript “Q” the lead statistic Q value are in compliance with the “Optional Lower Lead Requirements” per Section 9.5.1.1 of NSF/ANSI/CAN 61-2020.

Model Number	Description
130001*	Pull down kitchen mixer
130004*	pull out kitchen mixer
130003*	Pull down kitchen mixer
130171*	pull out kitchen mixer
130027*	pull out kitchen mixer
130083*	Pull down kitchen mixer
130083BR*	Pull down kitchen mixer
130079*	Pull down kitchen mixer
130079BR*	Pull down kitchen mixer
130078*	Pull down kitchen mixer
130078BR*	Pull down kitchen mixer
130071*	Pull down kitchen mixer
130070*	Kitchen mixer
130017*	Pull down kitchen mixer
130015*	Pull down kitchen mixer
130067*	Kitchen mixer
130077*	Pull down kitchen mixer
130022*	pull out kitchen mixer
130073*	Pull down kitchen mixer
130162*	Kitchen mixer
130191*	Kitchen mixer
130074*	Pull down kitchen mixer
130218*	pull out kitchen mixer
130002*	pull out kitchen mixer
130029*	pull out kitchen mixer

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File Number: N-9785

Revised Date: June 8, 2023

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Void After: September 2024

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Model Number	Description
130018*	Kitchen Mixer
110007*	Basin mixer
110008*	Basin mixer
110117*	Basin mixer
110005*	Basin mixer
110098*	Basin mixer
130156*	Kitchen mixer
130033*	pull out kitchen mixer
110118*	Basin mixer
110093*	Basin mixer
110094*	Basin mixer
Q110315-P-D-*	Single Handle Lavatory Faucet
Q110316-P-D-*	Single Handle Lavatory Faucet
Q110209-P-D-*	Single Handle Lavatory Faucet
Q110219-P-D-*	Single Handle Lavatory Faucet
Q110298-P-D-*	Single Handle Lavatory Faucet
Q110299-P-D-*	Single Handle Lavatory Faucet
Q110218-P-D-*	Single Handle Lavatory Faucet
Q110226-P-D-*	Single Handle Lavatory Faucet
Q110228-P-D-*	Single Handle Lavatory Faucet
Q110247-P-D-*	Single Handle Lavatory Faucet
Q110167-P-D-*	Single Handle Lavatory Faucet
Q110171-P-D-*	Single Handle Lavatory Faucet
Q110184-P-D-*	Single Handle Lavatory Faucet
Q110205-P-D-*	Single Handle Lavatory Faucet
Q110025-P-D-*	Single Handle Lavatory Faucet
Q110215-P-D-*	Single Handle Lavatory Faucet
Q110030-P-D-*	Single Handle Lavatory Faucet
Q110031-P-D-*	Single Handle Lavatory Faucet



IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing – DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 53rd Street
Orlando, FL 32839



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

File Number: N-9785

Revised Date: June 8, 2023

NSF/ANSI/CAN 61

Product: Drinking Water System Components - Health Effects

Void After: September 2024

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Description
Q230359-*	Lavatory faucet
Q230359-H-P-S-*	Lavatory faucet
Q120052-*	Two Handle Lavatory Faucet
Q120052-D-H-S-*	Two Handle Lavatory Faucet
Q130353-P-*	Pull out kitchen faucet
Q130352-P-*	Pull out kitchen faucet
QS130283-P-*	Pull down kitchen faucet
QS130351-P-*	Pull out kitchen faucet
H	Different Handle
H01	
H02	
H03	
H04	
H05	
H06	
H07	
H08	
H09	
H10	
H11	
H12	
H13	
H14	
H15	
H16	
H17	
H18	
H19	

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Revised Date: June 8, 2023

NSF/ANSI/CAN 61

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H Different Handle

H20
H21
H22
H23
H24
H25
H26
H27
H28
H29
H30
H31
H32
H33
H34
H35
H36
H37

P Different Plate

None Without plate
P01
P02
P03
P04
P05
P06
P07
P08
P09

IAPMO RESEARCH AND TESTING, INC.

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Approved for Factory Built Housing Only
Approved by: State of California
Factory Built Housing - DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2020-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33rd Street
Orlando, FL 32839



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NSF/ANSI/CAN 61

Product: Drinking Water System Components - Health Effects

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P	Different Plate
---	-----------------

P10

P11

P12

P13

P14

P15

P16

P17

P18

P19

P20

P21

P22

P23

P24

P25

P26

P27

P28

P29

P30

P31

P32

P33

D	Different Drain
---	-----------------

None

Without drain

D01

D02

D03

IAPMO RESEARCH AND TESTING, INC.

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D	Different Drain
D04	
D05	
D06	
D07	
D08	
D09	
D10	
D11	
D12	
D13	
D14	
D15	
D16	
D17	
D18	
S	Different Spout
None	Without spout
S02	
S04	
S06	
S07	
S08	
S13	
S15	
S18	
S20	
S21	
S22	

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*** represents different types of finishes as follows

1	Chrome
2	Brush nickel
3	White paint
4	Black
5	Surface blackening
6	Titanium gold
07	Rose gold
08	Gunmetal
09	Brushed chrome
10	ORB
11	Antique bronze
12	Brushed brass
13	Brushed gold
14	Antique brass brushed nickel
15	SS PVD
16	Archaize
17	Chrome and black
18	White and chrome
19	Brushed nickel and black
20	Black and antique brass brushed nickel
21	Chrome and rose gold
22	Brushed nickel and rose gold
23	Black and rose gold
24	matte brushed nickel
25	Pearl gun metal

Note: For models indicated with a subscript “Q” the lead statistic Q value are in compliance with the “Optional Lower Lead Requirements” per Section 9.5.1.1 of NSF/ANSI/CAN 61-2022.

Model Number	Description
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IAPMO RESEARCH AND TESTING, INC.

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Model Number	Description
Q110335-P-D-*	Single Handle Lavatory Faucet
Q110099-P-D-*	Single Handle Lavatory Faucet
Q110217-P-D-*	Single Handle Lavatory Faucet
Q110283-P-D-*	Single Handle Lavatory Faucet
Q110284-P-D-*	Single Handle Lavatory Faucet
P	Different Handle
None	Without plate
P01	
P02	
P03	
P04	
P05	
P06	
P07	
P08	
P09	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	
P21	

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P Different Handle

P22
P23
P24
P25
P26
P27
P28
P29
P30
P31
P32
P33

D Different Drain

None Without drain
D01
D02
D03
D04
D05
D06
D07
D08
D09
D10
D11
D12
D13
D14
D15

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D	Different Drain
D16	
D17	
D18	
*	represents different types of finishes as follows:
1	Chrome
2	Brush nickel
3	White paint
4	Black
5	Surface blackening
6	Titanium gold
07	Rose gold
08	Gunmetal
09	Brushed chrome
10	ORB
11	Antique bronze
12	Brushed brass
13	Brushed gold
14	Antique brass brushed nickel
15	SS PVD
16	Archaize
17	Chrome and black
18	White and chrome
19	Brushed nickel and black
20	Black and antique brass brushed nickel
21	Chrome and rose gold
22	Brushed nickel and rose gold
23	Black and rose gold
24	matte brushed nickel
25	Pearl gun metal

IAPMO RESEARCH AND TESTING, INC.

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Approved by: State of California
Factory Built Housing - DAA #DF1507648
Intertek (Intertek-ATI)
Plan Approval: #R-22348
Approval Date: 2020-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval
1748 33rd Street
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Additional Company Information

Belanger UPT

Model Number	Description
QNOB22**	Single Handle Lavatory Faucet
QNOB26**	Single Handle Lavatory Faucet
QNOB78R**	Pull out kitchen faucet
QNOB78S**	Pull out kitchen faucet
**	represents the available Finishes:
CP	Chrome
MB	Black
GM	Gum Metal
MG	Brushed Brass
SS	SS PVD

Builders Adventure, Inc. DBA MEGABAI

Model Number	Description
2607	Single handle bathroom faucet
0612	Single handle bathroom faucet
0611	Single handle bathroom faucet
0613	Single handle bathroom faucet
0652	Single handle bathroom faucet

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Void After: September 2024

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Model Number	Description
0609	Single handle bathroom faucet
0623	Single handle bathroom faucet
0689	Single handle bathroom faucet
0690	Single handle bathroom faucet
0608	Single handle bathroom faucet
Q0679	Wall mounted bathroom faucet
Q0680	Wall mounted bathroom faucet
Q0681	Wall mounted bathroom faucet
Q2608	Single handle bathroom faucet
Q2609	Single handle bathroom faucet
Q0682	Single handle bathroom faucet
Q0683	Single handle bathroom faucet
Q0684	Single handle bathroom faucet
Q0685	Single handle bathroom faucet
0600	Kitchen faucet with pull down spray
0630	Kitchen faucet with pull down spray
2610	Kitchen faucet with pull down spray
2611	Kitchen faucet with pull down spray
0601	Kitchen faucet with pull down spray
0631	Kitchen faucet with pull down spray
2612	Kitchen faucet with pull down spray
2613	Kitchen faucet with pull down spray
0625	Kitchen faucet with pull down spray
0626	Kitchen faucet with pull down spray
2614	Kitchen faucet with pull down spray
2615	Kitchen faucet with pull down spray
0624	Kitchen faucet with pull down spray
2616	Kitchen faucet with pull down spray
2617	Kitchen faucet with pull down spray

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Model Number	Description
Q2600	Single handle bathroom faucet
Q2601	Single handle bathroom faucet
Q2602	Single handle bathroom faucet
Q2603	Single handle bathroom faucet
Q2625	Single handle bathroom faucet

Marcobelle Company LLC

Bath Royale

Model Number	Description
Q500-**	Pasha Lav Faucet
Q500T-**	Pasha Tall Lav Faucet
Q501-**	Pasha 8" Spread Lav Faucet
Q600-**	Milano Lav Faucet
Q600T-**	Milano Tall Lav Faucet
Q601-**	Milano 8" Spread Lav Faucet
Q700-**	Envol Lav Faucet
Q700T-**	Envol Tall Lav Faucet
Q701-**	Envol 8" Spread Lav Faucet
Q700WM-**	Envol Wall Mount Lav Faucet
2200-**	Kitchen Faucet With Pull Out Spray
Q2201-**	Kitchen Faucet With Pull Out Spray
2202-**	Kitchen Faucet With Pull Out Spray
Q2203-**	Pull Down Kitchen Faucet
2204-**	Kitchen Faucet With Pull Out Spray
2205-**	Pull Down Kitchen Faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.

Effective Date: September 2019

File Number: N-9785

Revised Date: June 8, 2023

Product: Drinking Water System Components - Health Effects

Void After: September 2024

NSF/ANSI/CAN 61

This certificate is not evidence of current listing.To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

** represents the available Finishes:

CP	Chrome
BN	Brushed Nickel
MB	Matte Black
BG	Brushed Gold
SS	SS PVD

Stylish International Inc.

Model Number	Description
QK-143**	Pull out kitchen faucet,
QK-141**	Pull out kitchen faucet,
QB-104**	Single Handle Lavatory Faucet
QB-122**	Single Handle Lavatory Faucet
QB-102**	Single Handle Lavatory Faucet

** represents the available Finishes:

C	Chrome
B	Brush Nickel
N	Black
P	Gun Metal
NC	Chrome&Black
NS	Brush Nickel and Black
NG	Black and antique brass brushed Nickel

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CERTIFICATE OF LISTING



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Issued To:

JIANGMEN TOPHOME STAINLESS STEEL PRODUCTS CO., LTD.

NO4 BUILDING B NANGE WEST ROAD HETANG TOWN, PENGJIANG DISTRICT JIANGMEN, CHINA

Product:

Plumbing Fixtures (Stainless Steel)

Products are in compliance with the following code(s):

Uniform Plumbing Code (UPC®)
National Plumbing Code of Canada
National Standard Plumbing Code

Products are certified to the following standard(s)

ASME A112.19.3-2022/CSA B45.4:22

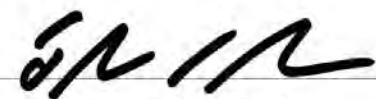
File Number: 9839

Effective Date: May 2024

Void After: May 2029*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: JIANGMEN TOPHOME STAINLESS STEEL
PRODUCTS CO., LTD.

Effective Date: May 2024

File Number: 9839

Product: Plumbing Fixtures (Stainless Steel)

Void After: May 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Each fixture shall be permanently and legibly marked with the manufacturer's name or trademark or, name of customer for whom the fixture was manufactured. The product shall also bear the cUPC® certification mark. Markings shall be applied so as to be visible after installation.

Characteristics:

Stainless steel plumbing fixtures may include kitchen sinks, bar sinks, and lavatories. Fixtures supplied with proprietary components, supply fittings, waste fittings, or water closet seats, shall indicate in the packaging or accompanying literature, that such components are provided by the manufacturer. To be installed in accordance with the manufacturer's instructions and the requirements of the latest edition of the Uniform Plumbing Code.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: JIANGMEN TOPHOME STAINLESS STEEL
PRODUCTS CO., LTD.

Effective Date: May 2024

File Number: 9839

Product: Plumbing Fixtures (Stainless Steel)

Void After: May 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Models

Model Number	Dimension
APR2921C	29" X 21" X 10"
APR3521BL	35" X 21" X 10"
APR3521C	35" X 21" X 10"
B911	28" X 18" X 10"
TH3220A	32 7/8" X 20" X 10"
TH3220BL	32 7/8" X 20" X 10"
TH3220C	32 7/8" X 20" X 10"
THAP3320BL	33" X 22 1/4" X 10"
THAP3320C	33" X 22 1/4" X 10"
THAPR3020C	30" X 22" X 10"
THAPR3320BL	32 7/8" X 20 3/4" X 10"
THAPR3320C	32 7/8" X 20 3/4" X 10"
THAPR3322A	33" X 22 1/2" X 10"
THAPR3322BL	33" X 22 1/2" X 10"
THAPR3322C	32 7/8" X 22 1/2" X 10"
THAPR3620C	35 7/8" X 20 3/4" X 10"
THAPS3320C	32 7/8" X 20 3/4" X 10"
THRA2019C	20" X 19" X 10"
THRA3219A	32" X 19" X 10"
THRA3219BL	32" X 19" X 10"
THRA3219C	32" X 19" X 10"
THRR1815C	17 1/2" X 15 1/2" X 10"
THRR2318C	23" X 18 1/8" X 10"
THRR2818C	28" X 18" X 10"
THRR2920A	29" X 20" X 10"
THRR3018A	30" X 18" X 10"
THRR3018C	30" X 18" X 10"

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: JIANGMEN TOPHOME STAINLESS STEEL
PRODUCTS CO., LTD.

Effective Date: May 2024

File Number: 9839

Product: Plumbing Fixtures (Stainless Steel)

Void After: May 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Dimension
THRR3219A	32" X 19 "X 10"
THRR3219BL	32" X 19 "X 10"
THRR3219C	32" X 19 "X 10"
UM1717C	17" X 17 "X 9"
UM1815C	18" X 15 "X 9"
UM2318C	23" X 18 "X 9"
UM3218A	31-1/8"X18"X9"
UM3218BL	31"X20-3/8"X9"
UM3218C	31-1/4"X18"X9"
2620S	26"x18"x9"
2905S	29"x18"x 5.5"
2920S	28.125"x18"x9
3120R	31"x20.375"x9/7"
3120S	31.25"x18"x9"
BR2116	21"x15"x6.25"
LDR3218A	32"x18"x10"
LDR3218BL	32"x18"x10"
LDR3318A	33"x18"x10"
LDR3320A	33"x20"x10"
THAP3620BL	36"x22.25"x9.875"
THAPR2919C	29"x19"x10"
THRA3160A	33"x18"x9.5"
THRR2018C	20"x18"x10"
THRR2520C	25"x20"x10"
THRR3020BL	30"x20"x10"
THRR3520BL	35.5"x20"x10"
TR3120A	31"x20"x10"
TR3120C	31"x20"x10
TR3322C	33"x22"x10"

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING



Issued To: JIANGMEN TOPHOME STAINLESS STEEL
PRODUCTS CO., LTD.

Effective Date: May 2024

File Number: 9839

Product: Plumbing Fixtures (Stainless Steel)

Void After: May 2029

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Model Number	Dimension
TRA2522C	25"x22"x8.625"
TRA3322A	33"x22"x8.625"
UM3121BL	31.125" x 20.375" x 9"
RR2515-6	25"x15"x6"
RR2716A-7	17"x16"x7"
RR2716C-7	27"x16"x7"
APR3120-7.75	31"x20"x7.75"
APR2518-9	25x18"x8.75"
AP3322S	34"x22"x7.75"
T3322S	34"x22"x10"
T3321S-3	
T3322-3	



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Effective Date: August 2022 Revised 6/1/2022 Void After: August 2027*

Product: EPA WaterSense High Efficiency Lavatory Faucets File No. 13687

Issued To: KAIPING CHESTON SANITARY WARE CO., LTD.
 NO. E3-1, THE THIRD INDUSTRIAL
 SHUIKOU TOWN
 KAIPING GD 529321
 GUANDONG
 CHINA

Identification: Each product shall be marked per the marking requirements of the applicable performance standard. The product packaging shall bear the EPA WaterSense label.

Characteristics: Lavatory faucets manufactured in compliance with the applicable requirements of the EPA WaterSense High Efficiency Lavatory Faucet Specification. To be installed in accordance with the manufacturer's installation instructions.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

Products are in compliance with the following standard(s):

EPA's WaterSense High Efficiency Lavatory Faucet Specification (Version 1.0, 10-01-2007 edition)

Tim Collette
 Chairman, Product Certification Committee

EP / R
 Chief Technical Service Officer

* This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be deemed sufficient cause for revocation of this listing. IAPMO Research and Testing, Inc. does not warrant the accuracy of this listing.



This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

MODELS:

Certification Date	Brand Name	Model Number	Type	Maximum Rated Flow Rate (gpm)
4/1/2022	CHESTON	120052-D-H-S-**	Faucet	1.2
5/12/2022	CHESTON	110247-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110167-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110171-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110184-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110205-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110025-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110215-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110030-P-D-**	Faucet	1.2
5/12/2022	CHESTON	110031-P-D-**	Faucet	1.2
5/12/2022	CHESTON	230359-H-P-S-**	Faucet	1.2
6/1/2022	CHESTON	110315-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110316-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110209-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110219-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110298-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110299-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110218-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110226-P-D-**	Faucet	1.2
6/1/2022	CHESTON	110228-P-D-**	Faucet	1.2

H: Represents different handle
 H01,H02,H03,H04,H05,H06,H07,H08,H09,H10,H11,H12,H13,H14,H15,H16,H17,H18,H19,H20,H21,H22,H23,H24,H25,H26,H27,H28,H29,H30,H31,H32,H33,H34,H35,H36,H37

P: Represents different plate
 None: without plate, P01,P02,P03,P04,P05,P06,P07,P08,P09,P10,P11,P12,P13,P14,P15,P16,P17,P18,P19,P20,P21,P22,P23,P24,P25,P26,P27,P28,P29,P30,P31,P32,P33

D: Represents different Drain,
 None: Without drain
 D01, D02,D03,D04,D05,D06,D07,D08,D09,D10,D11,D12,D13,D14,D15,D16,D17,D18

S:Represents different spout None: Without spout
 S02,S04,S06,S07,S08,S13,S15,S18,S20,S21,S22

"*" Represents different types of finishes as follows:
 1:Chrome
 2:Brush Nickel
 3: White Paint
 4: Black
 5: Surface Blackening
 6: Titanium Gold
 07: Rose gold
 08:Gunmetal
 09:Brushed chrome
 10:ORB
 11: Antique bronze
 12: Brushed brass
 13: Brushed gold
 14: Antique brass brushed nickel
 15:SS PVD
 16:Archaize
 17: Chrome and black
 18: White and chrome
 19: Brushed nickel and black
 20: Black and antique brass brushed nickel
 21: Chrome and rose gold
 22: Brushed nickel and rose gold
 23:Black and rose gold
 24: matte brushed nickel
 25: Pearl gun metal

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org



Approved for Factory Built Housing Only
Approved by State of California
Factory Built Housing – DSA #DF1507648
Intertek (Intertek-AT1)
Plan Approval: RR-22348
Approval Date: 2026-07-15
Expiration Date: 2029-07-14
Without Foundation / Site Work Approval

1748 33rd Street
Chico, CA 95926

IAPMO RESEARCH AND TESTING, INC.

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IAPMO R&T Product Listing



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This IAPMO R&T Listing is current as of 05/19/2025

Product:

EPA WaterSense High Efficiency Toilets

File No. 8106

Issued To:

CHAOZHOU MUYE CERAMICS MANUFACTURE CO., LTD.
LIYA INDUSTRIAL ZONE, GUXIANG
CHAOAN
CHAOZHOU 515647 GUANGDONG CHINA

Identification:

Each fixture shall be marked with the marking requirements of the applicable performance standard. The product packaging shall bear the EPA-IAPMO WaterSense label.

Characteristics:

Gravity feed vitreous china water closets manufactured in compliance to EPA's WaterSense Tank-Type High Efficiency Toilet Specification that are equipped with an IAPMO R&T listed anti-siphon ballcock and flush valves, and to be installed in accordance with the manufacturer's instructions.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

Products are certified to the following standard(s):

EPA's WaterSense Specification for Tank-Type Toilets (Version 1.2 dated 2014-06-02))

MODELS:

Certification Date	Brand Name	HET Model Number	Bowl Model Number	Bowl Brand Name	Tank Model Number	Tank Brand Name	Flush Type	Single Flush (gpf)	Full Flush (gpf)	Reduced Flush (gpf)	Flush Mechanism
12/19/2012	MUYE	MY-2152					Single	1.28			Gravity
12/19/2012	MUYE	MY-2192					Single	1.28			Gravity
12/19/2012	MUYE	MY-2195					Single	1.28			Gravity
2/22/2013	MUYE	MY-2690					Single	1.28			Gravity
2/22/2013	MUYE	MY-2602					Single	1.28			Gravity
4/16/2013	MUYE	MY-2164					Single	1.28			Gravity
9/22/2022	MUYE	MY-2137					Dual		1.6	1.1	Gravity
6/27/2014	MUYE	MY-2165					Single	1.28			Gravity
7/23/2014	MUYE	MY-2150					Single	1.28			Gravity
11/19/2015	MUYE	A1005-R					Single	1.28			Gravity
11/19/2015	MUYE	A2001-EA	A2001-EA-B		A2001-EA -T		Single	1.28			Gravity
11/19/2015	MUYE	A2011-R	A2011-R-B		A2011-R-T		Single	1.0			Gravity
11/19/2015	MUYE	DB2602B/DSX2602	DB2602B		DSX2602		Single	1.28			Gravity
12/5/2016	MUYE	MY-2604					Single	1.28			Gravity
12/5/2016	MUYE	MY-2186					Single	1.28			Gravity
12/5/2016	MUYE	MY-2176					Single	1.28			Gravity
11/1/2017	MUYE	MY-2190					Dual		1.28	1.0	Gravity
1/28/2021	MUYE	MY-2199					Single	1.28			Gravity
1/28/2021	MUYE	MY-2100					Single	1.28			Gravity
1/24/2022	MUYE	MY-2138					Dual		1.6	1.07	Gravity
1/24/2022	MUYE	MY-2113					Dual		1.6	1.07	Gravity
1/24/2022	MUYE	MY-2107					Dual		1.6	1.07	Gravity
1/24/2022	MUYE	MY-2167					Dual		1.6	1.07	Gravity
3/23/2023	MUYE	MY-2188					Single	1.28			Gravity
3/23/2023	MUYE	MY-2148					Dual		1.6	1.1	Gravity

3/23/2023	MUYE		MY-2787	MUYE	N5103	COMPAS (XIAMEN) PLUMBING TECHNOLOGY CO., LTD	Dual	Approved for Factory Built Housing Only Approved by State of California Factory Built Housing – DAA #SF2107648 Interlock (Interlock-AT) Plan Approval: RR-22348 Approval Date: 2026-07-15 Expiration Date: 2029-07-14 Without Foundation / Site Work Approval  1748 33rd Street Orlando, FL 32839	1.6	1.1	Gravity
10/9/2023	MUYE	MY-2121					Dual		1.6	1.1	Gravity
1/17/2024	MUYE	MY-2115					Dual		1.6	1.1	Gravity

This IAPMO R&T Listing is current as of 05/19/2025

IAPMO RESEARCH AND TESTING, INC.

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CERTIFICATE OF LISTING

LEAD FREE

IAPMO Research and Testing, Inc. is a product certification body which tests and inspects samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

Issued To:

KAIPING YINGCHUAN SANITARY WARE TECHNOLOGY CO. LTD

NO.172-178 TAIHE RD. JIAXING INDUSTRIAL ZONE SHUIKOU TOWN KAIPING GUANDONG, GD 529321, GUANGDONG, CHINA

Product:

Lead Free Plumbing Products

Products are in compliance with the following standard(s)

Section 1417(d) of the Safe Drinking Water Act, and The lead content requirements of Section 116875 of the California

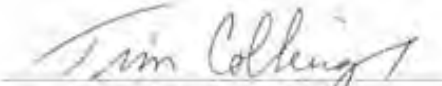
Health & Safety Code

NSF/ANSI 372-2020

File Number: 13157

Effective Date: September 2021

Void After: September 2026*


Chairman, Product Certification Committee




Chief Technical Service Officer

*This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing. This document shall be reproduced in its entirety.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Issued To: KAIPING YINGCHUAN SANITARY WARE
TECHNOLOGY CO. LTD

Effective Date: September 2021

LEAD FREE

File Number: 13157

Product: Lead Free Plumbing Products

Void After: September 2026

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org

Identification:

Each product shall bear permanent and legible markings to identify the manufacturer. This marking shall be the trade name, trademark, or other mark known to identify the manufacturer. The product shall bear the appropriate IAPMO R&T certification mark. The product may also bear either "Lead Free" or "Low Lead" above or in close proximity to the IAPMO R&T certification mark.

Characteristics:

Products may include any pipe, pipe fitting, solder, flux, or other plumbing products providing water for human consumption. Products listed below are to be installed in accordance with the manufacturer's instruction. These products have been verified with weighted average lead content $\leq 0.25\%$; Solder and flux lead content $\leq 0.2\%$.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Issued To: KAIPING YINGCHUAN SANITARY WARE
TECHNOLOGY CO. LTD

Effective Date: September 2021

LEAD FREE

File Number: 13157

Product: Lead Free Plumbing Products

Void After: September 2026

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org



Models

Model Number	Description
YC-8232**	Kitchen Faucet
YC-8231**	Kitchen Faucet
YC-WH8231**	Kitchen Faucet
YC-8231T**	Touch sensor kitchen faucet
YC-8245**	Kitchen Faucet
YC-W8245**	Kitchen Faucet
YC-82451**	Kitchen Faucet
YC-82452**	Kitchen Faucet
YC-8258**	Kitchen Faucet
YC-8265T**	Touch sensor kitchen faucet
YC-8265**	Kitchen Faucet
YC-L8257**	Kitchen Faucet
YC-L8257T**	Touch sensor kitchen faucet
YC-8267**	Kitchen Faucet
YC-8229**	Kitchen Faucet
YC-8228**	Kitchen Faucet
YC-8273**	Kitchen Faucet
YC-84001**	Kitchen Faucet
YC-84002**	Kitchen Faucet
YC-85001**	Kitchen Faucet
YC-G84010**	Kitchen Faucet
YC-82001**	Kitchen Faucet
YC-82004**	Kitchen Faucet
YC-8260**	Kitchen Faucet
YC-8268**	Kitchen Faucet
YC-8270**	Kitchen Faucet
YC-8230**	Basin faucet

IAPMO RESEARCH AND TESTING, INC.

CERTIFICATE OF LISTING

Issued To: KAIPING YINGCHUAN SANITARY WARE
TECHNOLOGY CO. LTD

Effective Date: September 2021

LEAD FREE

File Number: 13157

Product: Lead Free Plumbing Products

Void After: September 2026

This certificate is not evidence of current listing. To verify listing status, visit the IAPMO R&T Product Listing Directory at pld.iapmo.org



Model Number	Description
YC-82302**	Basin faucet
YC-8140**	Basin faucet
YC-8141**	Basin faucet
YC-8143**	Basin faucet
YC-8144**	Basin faucet
YC-8145**	Basin faucet
YC-8146**	Basin faucet
YC-811017**	Basin faucet
YC-811014**	Basin faucet
YC-A213**	Basin faucet
YC-B213**	Basin faucet
YC-A215**	Basin faucet
YC-B215**	Basin faucet
YC-8201**	Kitchen Faucet
YC-8202**	Kitchen Faucet

Option	Definition
**	Represents Different Types of Finishes
None	Brushed
B	Matt Black
G	Brushed Gold
M	Mirror

Inspection and Test Report

Report No.: JCWT20240004887

Client: Foshan Sanshui Zhenhong Steel Products Co., Ltd.

Sample Name: Zhenhong Hot-Dip Galvanized Round Pipe

Model/
Specification: See Remarks 1, 2, 3

Test Category: Entrusted Test

Report Date: 2024-01-31



Guangzhou Quality Supervision and Testing Institute

Inspection and Test Report

Report No.: JCWT20240004887

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Product Name	Zhenhong Hot-Dip Galvanized Round Pipe	Production Date	/
Trademark	Zhenhong Steel Pipe	Batch No./Lot No.	/
Model/ Specification/ Grade	See Remarks 1, 2, 3	Expiry Date/Shelf Life	/
		Client Order No.	MB0401186
Client	Foshan Sanshui Zhenhong Steel Products Co., Ltd.	Test Categoror	Entrusted Test
Client Address	Area B, E-1-2-2 (F1/F2/F3), Fanhu Community, Leping Town, Sanshui Central Science and Technology Industrial Zone, Foshan City, Guangdong Province	Sample Quantity	28 pieces
Manufacturer	Foshan Sanshui Zhenhong Steel Products Co., Ltd.	Date of Submission	2024-01-17
Sample Submission Method	Submitted by Client	Inspection Date	2024-01-31
Test Basis	GB/T 3091-2015 "Welded steel pipes for low pressure fluid delivery"		
Judgment Basis	GB/T 3091-2015 "Welded steel pipes for low pressure fluid delivery"		
Sample Condition	Normal		
Testing Environment Description	Tested according to standard requirements		
Test Conclusion	The tested items meet the requirements of the GB/T 3091-2015 standard. Date of Issue: January 31, 2024 This report is invalid if the "Inspection and Testing Special Seal" is not affixed here and on the page seams.		
Remarks	1.Specifications: DN15×2.75mm, DN20×2.75mm, DN25×3.25mm, DN32×3.5mm, DN40×3.5mm, DN50×3.75mm, DN65×4.0mm, DN80×4.0mm, DN100×4.0mm, DN125×4.5mm, DN150×4.5mm, DN200×6.0mm, DN250×6.0mm, DN300×6.0mm 2.Sample quantity 28 pieces (DN15-DN80: 1 meter/piece × 2 pieces; DN100-DN300: 0.5 meter/piece × 2 pieces) 3.Sample Material: DN15-DN40: Q195; DN50-DN300: Q235B		

Approved by:

黄瑞

Reviewed by:

吴书均

Chief Inspector:

赵宇清

Address: No. 1-2 Zhujiang Road, Shilou Chaotian Industrial Zone, Panyu District, Guangzhou



Anti-counterfeit query
code:
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Guangzhou Quality Supervision and Testing Institute

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No.	Test Item	Unit	Standard Requirements	Sample Test Results	Individual Judgment
			-----	-----	
1	Surface Defects	-----	The inner and outer surfaces of the steel pipe should be smooth, and defects such as folds, cracks, delamination, tack welding, arc break, burn-through, and other defects whose depth after grinding exceeds the lower deviation of wall thickness are not allowed. These defects should be completely removed, and the remaining wall thickness at the removal site should not be less than the minimum value allowed by the wall thickness deviation. Other local imperfections with a depth not exceeding the lower deviation of wall thickness are permitted.	All meet requirements	Qualified
2	Outer Diameter	mm	DN15: 21.3 ± 0.5 DN20: 26.9 ± 0.5 DN25: 33.7 ± 0.5 DN32: 42.4 ± 0.5 DN40: 48.3 ± 0.5 DN50: 60.3 ± 0.60 DN65: 76.1 ± 0.76 DN80: 88.9 ± 0.89 DN100: 114.3 ± 1.14 DN125: 139.7 ± 1.40 DN150: 165.1 ± 1.65 DN200: 219.1 ± 2.19 DN250: 273.1 ± 2.73 DN300: 323.9 ± 2.43	DN15: 21.16 21.25 DN20: 26.53 26.57 DN25: 33.28 33.26 DN32: 42.34 42.40 DN40: 47.93 47.98 DN50: 60.51 60.42 DN65: 75.91 75.96 DN80: 88.17 88.34 DN100: 114.28 114.24 DN125: 140.54 140.27 DN150: 165.82 165.78 DN200: 219.43 219.46 DN250: 273.84 273.77 DN300: 325.11 325.21	Qualified

Approved by:

黄琨

Reviewed by:

吴书均

Chief Inspector:

赵宇清

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Inspection and Test Report

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No.	Test Item	Unit	Standard Requirements	Sample Test Results	Individual Judgment
			-----	-----	
3	Wall Thickness	mm	DN15: 2.75 ± 0.28	DN15: 2.72 2.74	Qualified
			DN20: 2.75 ± 0.28	DN20: 2.78 2.76	
			DN25: 3.25 ± 0.32	DN25: 3.18 3.20	
			DN32: 3.5 ± 0.35	DN32: 3.55 3.53	
			DN40: 3.5 ± 0.35	DN40: 3.52 3.54	
			DN50: 3.75 ± 0.38	DN50: 3.80 3.78	
			DN65: 4.0 ± 0.40	DN65: 3.95 3.94	
			DN80: 4.0 ± 0.40	DN80: 4.02 4.01	
			DN100: 4.0 ± 0.40	DN100: 4.00 4.02	
			DN125: 4.5 ± 0.45	DN125: 4.50 4.52	
			DN150: 4.5 ± 0.45	DN150: 4.40 4.45	
			DN200: 6.0 ± 0.60	DN200: 6.05 6.03	
			DN250: 6.0 ± 0.60	DN250: 5.95 5.98	
			DN300: 6.0 ± 0.60	DN300: 6.02 6.02	
4	Bend Test	----	Longitudinal seam high-frequency electric welded steel pipes with an outer diameter not greater than 60.3mm shall undergo a bend test. During the test, the specimen should be without filler, the bending radius is 6 times the outer diameter of the steel pipe, the bending angle is 90°, and the weld is located on the outer side of the bending direction. After the test, no cracks are allowed on the specimen.	DN15~DN50 all meet requirements	Qualified
5	Flattening Test	----	Longitudinal seam high-frequency electric welded steel pipes with an outer diameter greater than 60.3mm shall undergo a flattening test. The length of the flattening specimen should not be less than 64mm. The welds of the two specimens should be located at 90° and 0° to the direction of the applied force respectively. During the test, when the distance between the two plates is 2/3 of the outer diameter of the steel pipe, no cracks or splits are allowed at the weld; when the distance between the two plates is 1/3 of the outer diameter of the steel pipe, no cracks or splits are allowed in parts other than the weld; continue flattening until the opposite pipe walls touch. During the entire flattening process, delamination or metal burning are not allowed.	DN65~DN300 all meet requirements	Qualified

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No.	Test Item	Unit	Standard Requirements	Sample Test Results	Individual Judgment
			-----	-----	
6	Lower Yield Strength	MPa	Steel pipe thickness When $\leq 16\text{mm}$ DN15~DN40 Q195: ≥ 195 DN50~DN300 Q235A、Q235B: ≥ 235	DN15: 383 DN20: 339 DN25: 405 DN32: 453 DN40: 443 DN50: 406 DN65: 375 DN80: 407 DN100: 397 DN125: 308 DN150: 407 DN200: 338 DN250: 305 DN300: 314	Qualified
7	Tensile Strength	MPa	DN15~DN40 Q195: ≥ 315 DN50~DN300 Q235A、Q235B: ≥ 370	DN15: 424 DN20: 454 DN25: 483 DN32: 524 DN40: 522 DN50: 497 DN65: 453 DN80: 491 DN100: 484 DN125: 382 DN150: 501 DN200: 436 DN250: 442 DN300: 442	Qualified

Approved by:

黄瑞

Reviewed by:

吴书均

Chief Inspector:

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Guangzhou Quality Supervision and Testing Institute

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No.	Test Item	Unit	Standard Requirements	Sample Test Results	Individual Judgment
			-----	-----	
8	Percentage Elongation after Fracture	%	Q195、Q215A、Q215B、Q235A、Q235B DN15~DN150 Nominal outer diameter D≤168. 3: ≥15 DN200~DN300 Nominal outer diameter D>168. 3: ≥20	DN15: 26. 5 DN20: 29. 0 DN25: 23. 0 DN32: 24. 5 DN40: 26. 0 DN50: 26. 0 DN65: 34. 0 DN80: 31. 5 DN100: 29. 0 DN125: 32. 0 DN150: 29. 5 DN200: 28. 5 DN250: 28. 5 DN300: 34. 0	Qualified
9	Galvanized Layer Mass	g/m ²	Galvanized steel pipes shall be tested for zinc layer mass. The total mass of the galvanized layer per unit area on the inner and outer surfaces of the pipe should not be less than 300 g/m ² .	DN15: 334 DN20: 365 DN25: 423 DN32: 422 DN40: 397 DN50: 372 DN65: 428 DN80: 387 DN100: 429 DN125: 346 DN150: 396 DN200: 448 DN250: 397 DN300: 400	Qualified
10	Galvanized Layer Uniformity	-----	Galvanized steel pipes shall undergo a zinc layer uniformity test. During the test, the specimen (except for the weld) should not turn red (copper color) after being continuously immersed in copper sulfate solution for 5 times.	All meet requirements	Qualified

Approved by:

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Guangzhou Quality Supervision and Testing Institute

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No.	Test Item	Unit	Standard Requirements	Sample Test Results	Individual Judgment
			-----	-----	
11	Galvanized Layer Adhesion	-----	For steel pipes with an outer diameter not greater than 60.3mm, a bend test shall be used to test the adhesion of the galvanized layer after galvanizing. During the test, the bent specimen should be without filler, the bending radius is 8 times the outer diameter of the steel pipe, the bending angle is 90°, and the weld is located on the outer side of the bending direction. After the test, the specimen shall not show peeling of the zinc layer.	DN15~DN50 all meet requirements	Qualified
		-----	According to the buyer's requirements, upon agreement between the supplier and buyer, and specified in the contract, for steel pipes with an outer diameter greater than 60.3mm, a flattening test shall be used to test the adhesion of the galvanized layer after galvanizing. The length of the flattening specimen is not less than 64mm. During the test, when the distance between the two plates is 3/4 of the outer diameter of the steel pipe, the specimen shall not show peeling of the zinc layer.	DN65~DN300 all meet requirements	Qualified
12	C (Carbon)	%	Grade Q195: ≤ 0.12 Grade Q235B: ≤ 0.20	DN15: 0.08 DN20: 0.07 DN25: 0.07 DN32: 0.06 DN40: 0.05 DN50: 0.16 DN65: 0.15 DN80: 0.14 DN100: 0.06 DN125: 0.15 DN150: 0.14 DN200: 0.15 DN250: 0.14 DN300: 0.08	Qualified

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Reviewed by:

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Chief Inspector:

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No.	Test Item	Unit	Standard Requirements	Sample Test Results	Individual Judgment
			-----	-----	
13	Si (Silicon)	%	Grade Q195: ≤ 0.30 Grade Q235B: ≤ 0.35	DN15: 0.09 DN20: 0.14 DN25: 0.08 DN32: 0.14 DN40: 0.08 DN50: 0.08 DN65: 0.10 DN80: 0.07 DN100: 0.07 DN125: 0.08 DN150: 0.08 DN200: 0.09 DN250: 0.10 DN300: 0.08	Qualified
14	Mn (Manganese)	%	Grade Q195: ≤ 0.50 Grade Q235B: ≤ 1.40	DN15: 0.26 DN20: 0.21 DN25: 0.24 DN32: 0.25 DN40: 0.24 DN50: 0.27 DN65: 0.26 DN80: 0.23 DN100: 0.19 DN125: 0.27 DN150: 0.21 DN200: 0.25 DN250: 0.24 DN300: 0.24	Qualified

Approved by:

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No.	Test Item	Unit	Standard Requirements	Sample Test Results	Individual Judgment
			-----	-----	
15	P (Phosphorus)	%	Grade Q195: ≤ 0.035 Grade Q235B: ≤ 0.045	DN15: 0.018 DN20: 0.008 DN25: 0.017 DN32: 0.009 DN40: 0.017 DN50: 0.015 DN65: 0.021 DN80: 0.015 DN100: 0.019 DN125: 0.016 DN150: 0.021 DN200: 0.020 DN250: 0.014 DN300: 0.018	Qualified
16	S (Sulfur)	%	Grade Q195: ≤ 0.040 Grade Q235B: ≤ 0.045	DN15: 0.035 DN20: 0.027 DN25: 0.027 DN32: 0.036 DN40: 0.021 DN50: 0.015 DN65: 0.015 DN80: 0.011 DN100: 0.020 DN125: 0.017 DN150: 0.020 DN200: 0.018 DN250: 0.009 DN300: 0.008	Qualified

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Chief Inspector:

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Important Statements

1. Guangzhou Quality Supervision and Testing Institute (hereinafter referred to as "the Institute") is a comprehensive product quality supervision, inspection and testing institution legally established by the government. Its competent authority is Guangzhou Municipal Market Supervision and Administration Bureau. It is a non-profit technical institution of social public welfare, providing technical support for government regulatory authorities at all levels and accepting entrusted tests from all sectors of society.
2. The Institute and the established National Quality Inspection and Testing Centers (hereinafter referred to as "Centers") and Provincial Authorized Product Quality Supervision and Inspection Stations (hereinafter referred to as "Stations") guarantee the scientific nature, fairness, and accuracy of inspections and tests, are responsible for the results of inspections and tests, and maintain confidentiality regarding the samples and technical information provided by the client.
3. The report is invalid without the signatures of the chief tester, reviewer, and approver, or if altered, or if it is not stamped with the Institute's (Center's/Station's) "Inspection and Testing Special Seal", or if it does not have a page-to-page seal. Without the permission of the Institute (Center/Station), the content of this report shall not be partially copied, excerpted, or tampered with.
4. The results of entrusted sample inspections and tests are only valid for the submitted samples; without the consent of the Institute (Center/Station), the sample client shall not use the inspection and test results for improper publicity.
5. The samples and related information for entrusted inspections and tests are provided by the client, and the Institute (Center/Station) is not responsible for their authenticity or completeness.
6. Any objection to the inspection and test report shall be raised to the Institute (Center/Station) within fifteen days from the date of receipt of the report, after which no requests will be entertained.
7. The Institute's (Center's/Station's) electronic inspection and test reports are stamped with the Institute's (Center's/Station's) "Inspection and Testing Special Seal (1)" and have the same legal effect as the paper version.

National Quality Inspection and Testing Centers and Provincial Authorized Quality Inspection Institutions Established at Guangzhou Quality Supervision and Testing Institute

National Quality Inspection and Testing Center for Packaging Products (Guangzhou)

National Quality Inspection and Testing Center for Cosmetics (Guangzhou)

National Quality Inspection and Testing Center for Polymer Engineering Materials and Products (Guangdong)

Guangdong Quality Supervision Daily Chemical Products Inspection Station

Guangdong Quality Supervision Footwear Products Inspection Station

Guangdong Quality Supervision Timepieces Inspection Station

Guangdong Quality Supervision Computer and Network Products Inspection Station

Guangdong Quality Supervision Infant and Child Products Inspection Station

Guangdong Quality Supervision Household and Similar Purpose Power Supply Products Inspection Station (Guangzhou)

Guangdong Quality Supervision Soil and Fertilizer Products Inspection Station (Guangzhou)

Guangdong Quality Supervision Fire Protection Products Inspection Station (Guangzhou)

Business Contact Information

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Chemical Business Department: 020-83186957 83193967 83392709 31002536

Light Industry Packaging Business Department: 020-83354114 83398676 83183524 82022363

Building Materials Fire Protection Business Department: 020-83334528 82022335 83355302 82020817

Light Industry Electromechanical Business Department: 020-82022349 83392872 39149482

Complaint Handling: Quality Assurance Review Department 020-83179105

Headquarters: No. 1-2 Zhujiang Road, Shilou Chaotian Industrial Zone, Panyu District, Guangzhou, Zip: 511447

Branch: No. 38 Bagi Erma Road, Yuexiu District, Guangzhou, Zip: 510110

No. 8 Hougang Industrial Street, Shachong Village, Dalong Street, Panyu District, Guangzhou, Zip: 511450

Report Progress and Authenticity Inquiry

Method 1: Website inquiry, URL: www.qmark.com.cn

Method 2: QR code inquiry, see the lower right corner of the inner page of this report

20 SEER Free-match TeHnical Specifications			ODU 1 drive 2	ODU 1 drive 3	ODU 1 drive 4	ODU 1 drive 5
			MYTM18NA23BCH18	MYTM27NA23BCH18	MYTM37NA23BCH18	MYTM45NA23BCH18
Type			cooling&heating	cooling&heating	cooling&heating	cooling&heating
Power supply			208/230V~/60Hz/1P	208/230V~/60Hz/1P	208/230V~/60Hz/1P	208/230V~/60Hz/1P
AHRI IDU	Rated cooling capacity 95°F/35℃	Btu/h	20000	28000	37000	45000
	Heating Rated Capacity 47°F/8.33℃	Btu/h	20000	28000	37000	45000
	SEER2	Btu/W.h	20.0	20.0	19.0	19.0
	EER2 95°F/35℃	Btu/W.h	10.5	10.5	10.5	10.0
	HSPF2-4	Btu/W.h	8.5	8.5	8.5	8.5
	HSPF2-5	Btu/W.h	7.3	7.3	7.3	7.3
	COP2 47°F/8.33℃	W/W	3.2	3.2	3.2	3.11
	COP2 5°F/-15℃	W/W	1.80	1.80	1.80	1.80
Rated Power Input	Cooling	W	1370	2020	2930	3550
	Heating	W	1410	1980	2680	3260
Rated Current	Cooling	A	6.1	9.1	13.1	15.9
	Heating	A	6.3	8.9	12.0	14.6
Min. Circuit Ampacity		A	15	20	25	30
Max. Ckt. Bkr (MOP)		A	15	20	25	30
Max. Fuse size		A	12	14	17	19
Outdoor Air Flow (H)		m3/h	2500	2800	3200	3200
	1CFM=1.7M3/H	CFM	1471	1647	1882	1882
Noise level		dB(A)	58	62	65	65
Connecting Pipe	Gas	inches	3/8	3/8	3/8	3/8
	Liquid	inches	1/4	1/4	1/4	1/4
Refrigerant quantity		g	1700	2200	2800	3400
		OZ	60.01	77.66	98.84	120.02
Net dimensions (WxDxH)		mm	845×380×699	910×359×803	1020×853×468	1020×853×468
		inches	33.27×14.967×27.52	35.84×14.14×31.64	40.19×33.61×18.44	40.19×33.61×18.44
Net weight		kg	50	56	75	85
		lbs	110.2	123.5	165.3	187.4
Packing dimensions (WxDxH)		mm	952×425×732	1022×480×835	1135×530×970	1135×530×970
		inches	37.79×16.92×29.53	40.27×18.91×32.90	44.75×20.88×38.22	44.75×20.88×38.22
Gross weight		kg	60	76	95	105
		lbs	132.3	167.5	209.4	231.5
Factory PreHarge Line		m	7.5	7.5	7.5	7.5
Total length of liquid pipe		m	30	45	60	75
MXimum Line Length		m	20	20	20	20
MXimum Height Difference Between Indoor and Outdoor		m	10	10	10	10
Room temperature	Indoor(cooling/ heating)	℃	16℃~30℃	16℃~30℃	16℃~30℃	16℃~30℃
	Outdoor(cooling/heating)	℃	-15~55℃/-25~30℃	-15~55℃/-25~30℃	-15~55℃/-25~30℃	-15~55℃/-25~30℃
Ambinet temperature	Indoor(cooling/ heating)	F	61~86	61~86	61~86	61~86
	Outdoor(cooling/heating)	F	5~131/-13~86	5~131/-13~86	5~131/-13~86	5~131/-13~86
Loading Capacity (ODU)		40'HC/ 40'GP/ 20'GP				

SCS Global Services does hereby certify that an independent assessment has been conducted on behalf of:

Zhejiang Kingdom New Material Group Co., Ltd.

No.38, Desheng Road, Heshan Industrial Park, Heshan Town, Tongxiang City, Jiaxing City, Zhejiang 314512, China

For the following product(s):

Vinyl Tile:

Loose Lay (up to 5.0mm), ESPC (up to 5.0mm), EPC/WPC (up to 15mm), PET (up to 7.5mm), SPC (up to 10.0mm), LVT (Dryback and Click, up to 7.0mm)

These products are manufactured at the following sites:

Zhejiang Kingdom New Material Group Co., Ltd., No. 38, Desheng Road, Heshan Industrial Park, Heshan Town, Tongxiang City, Zhejiang, China

Thien Lam New Material Technology Co.,Ltd, Southern Industrial Park, Phu Thinh Commune, Binh District, Yen Bai Province, Vietnam

Vytec Floor Co.,Ltd., 55/9 Moo.7 Tha Bunmee Subdistrict, Ko Chan District, Chonburi 20240, Thailand.

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

FloorScore®

Indoor Air Quality Certified to SCS-105 Version 4.2 – 2023

Conforms to the CDPH/EHLB Standard Method v1.2-2017 (California Section 01350), effective April 1, 2017, for the school classroom and private office parameters when modeled as Flooring.

Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than/equal to 0.5 mg/m³ (in compliance with CDPH/EHLB Standard Method v1.2-2017)

Registration # SCS-FS-03218

Valid from: December 01, 2025 to November 30, 2026

SCS Global Services is currently the only certification body approved by the Resilient Floor Covering Institute (RFCI) to provide FloorScore® product certification; certified products are only listed on the SCS Green Products Guide, <http://www.scsglobalservices.com/certified-green-products-guide>.



A handwritten signature in black ink.

Diana Kirsanova Phillips, Chief Assurance Officer,
SCS Global Services

CERTIFICATE OF COMPLIANCE



VYTEC FLOOR CO.,LTD

See product list below

UL 2818 - 2022 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Section 7.1 and 7.2.

Commercial furniture and furnishings are tested in accordance with ANSI/BIFMA M7.1-2011 and determined to comply with ANSI/BIFMA X7.1-2011 and ANSI/BIFMA e3-2014e Credit 7.6.1, 7.6.2, and 7.6.3. Panel based workstations are modeled in the open plan environment. Casework systems and individual furniture items are modeled in the private office environment. Seating products are modeled in the seating environment. Classroom furniture is modeled using the standard classroom model in the California Department of Public Health (CDPH) Standard Method v1.2.

Building Products are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.1-2010, using the applicable exposure scenario.



UL evaluated representative samples of the identified product, process or facility to the identified Standard or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Client (collectively "Agreement"). The Client is authorized to use the UL Mark for the identified Product, process or facility covered by this certificate, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement. This certificate is subject to modification, suspension and withdrawal by UL see [SPOT.ul.com](https://www.spot.ul.com), to authenticate the certificate.

CERTIFICATE OF COMPLIANCE

UL GREENGUARD Certified Products Listing

Product Name	Certification	Status	Certificate Number	Certification Period	Restrictions
5.5-15.0mm VYTEC/Vortis EPC/WPC	GREENGUARD Gold Certified	Certified	343976-420	2024.12.10-2026.12.10	
1.5-5.0 mm VYTEC/Vortis LVT	GREENGUARD Gold Certified	Certified	343981-420	2024.12.10-2026.12.10	
3.0-10.0mm VYTEC/Vortis SPC	GREENGUARD Gold Certified	Certified	343982-420	2024.12.10-2026.12.10	

Please refer to current certificates on <https://spot.ul.com> for complete compliance information.



UL evaluated representative samples of the identified product, process or facility to the identified Standard or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Client (collectively "Agreement"). The Client is authorized to use the UL Mark for the identified Product, process or facility covered by this certificate, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement. This certificate is subject to modification, suspension and withdrawal by UL see [SPOT.ul.com](https://spot.ul.com), to authenticate the certificate.

Project Name: Ariks Prefab

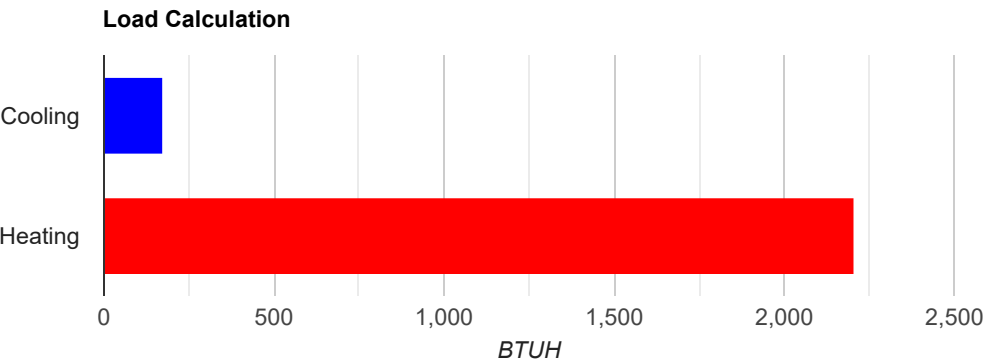
Address: 9744 Wilshire Boulevard, Beverly Hills, CA

OUTDOOR DESIGN CONDITIONS
Weather station: Santa Monica CO

Summer Outdoor F:	80	Summer Indoor F:	75	Design Grains:	19	Daily Range:	Medium
Winter Outdoor F:	43	Winter Indoor F:	70	Cooling RH:	50	Elevation (Ft):	236

LOAD CALCULATION TOTALS
HVAC System: AC 1.1

Heated square footage:	183	Heating BTUH:	2,202
Cooled square footage:	0	Cooling BTUH:	173
Heated volume (above grade CF):	1,647	CFM:	2
Cooled volume (above grade CF):	0	Sensible cooling:	52
Exposed wall area (SF):	261	Latent cooling:	121
		SHR:	0.299



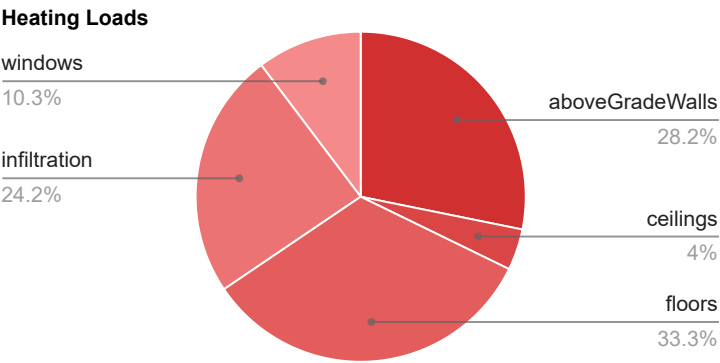
Approved ACCA MJ8 Calculations

Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building heat loss.

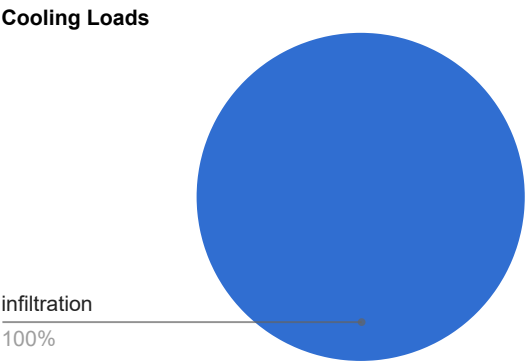


HEATING AND COOLING LOADS

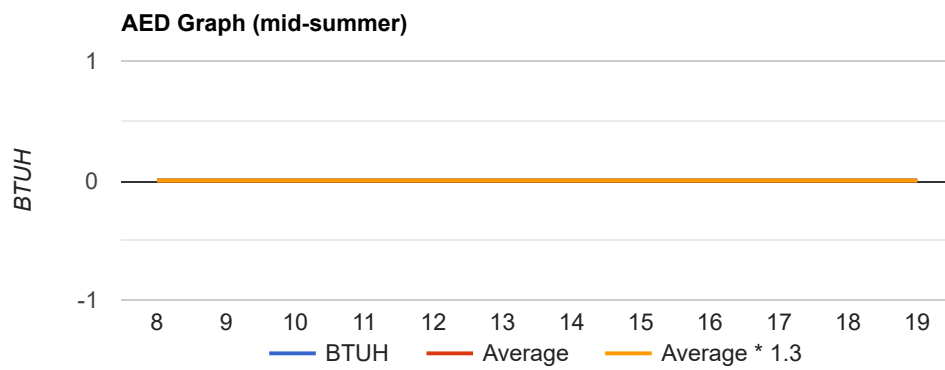
HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	237	621
ceilings	183	89
floors	183	734
infiltration	0	532
skylights	0	0
windows	24	227
Totals		2,202



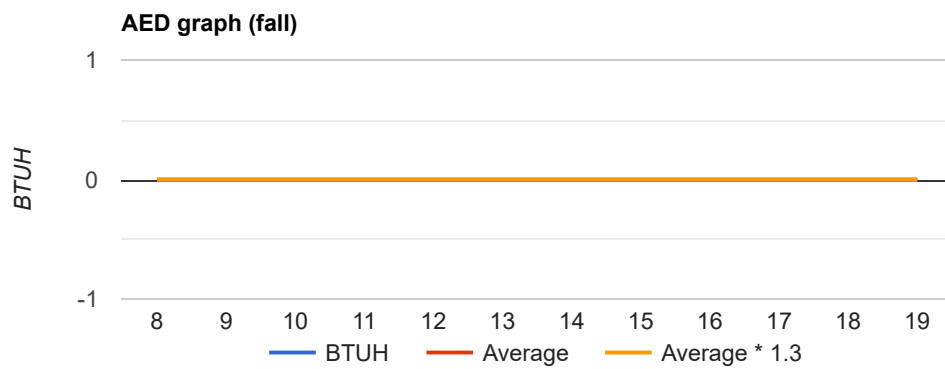
COOLING LOADS			
SECTION	AREA	SENSIBLE	LATENT
AEDExcursion	0	0	0
aboveGradeWalls	237	0	0
ceilings	183	0	0
floors	183	0	0
infiltration	0	52	121
skylights	0	0	0
windows	24	0	0
Totals		52	121



FENESTRATION LOADS



This graph represents hourly aggregate fenestration loads in mid-summer.



This graph represents hourly aggregate fenestration loads in October.

COMPONENT LOADS

ABOVE GRADE WALLS					
System generated wall - N Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr:	12B-0b w	Exposure:	N	Heating BTUH: 409
	U Value:	0.097	Area:	156	Cooling BTUH: 0
System generated wall - W Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr:	12B-0b w	Exposure:	W	Heating BTUH: 212
	U Value:	0.097	Area:	81	Cooling BTUH: 0

BELOW GRADE WALLS					
There are no components for this section.					

WINDOWS					
Default small windows for wall id 11664558 Window, NFRC rated, Clear glass.	Construction nr:	1G	U Value:	0.35	Heating BTUH: 57
	Area:	6	SHGC:	0.25	Cooling BTUH: 0
	Exposure:	N			
Default small windows for wall id 11664559 Window, NFRC rated, Clear glass.	Construction nr:	1G	U Value:	0.35	Heating BTUH: 170
	Area:	18	SHGC:	0.25	Cooling BTUH: 0
	Exposure:	W			

Window cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

CEILINGS					
System generated ceiling. Ceiling under attic or attic knee wall, Tile, Dark, R-56.	Construction nr:	16ER-56 td	Area:	183	Heating BTUH: 89
	U Value:	0.018			Cooling BTUH: 0

SKYLIGHTS					
There are no components for this section.					

Skylight cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

DOORS					
There are no components for this section.					

FLOORS					
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10pl	Heating U Value:0	Heating BTUH:	734
	Area:	183	Cooling U Value:0	Cooling BTUH:	0
				F Value:	0.937

VENTILATION					
There are no components for this section.					

HOT WATER PIPING					
There are no components for this section.					

DUCTS					
There are no components for this section.					



INFILTRATION						
Leakage Category:	Average	NCFM Heating:	77	Heating BTUH:	532	
		NCFM Cooling:	40	Sensible BTUH:	52	
				Latent BTUH:	121	

BLOWER MOTOR					
There are no components for this section.					

WINTER HUMIDIFICATION					
There are no components for this section.					

OCCUPANTS					
There are no components for this section.					

APPLIANCES					
There are no components for this section.					

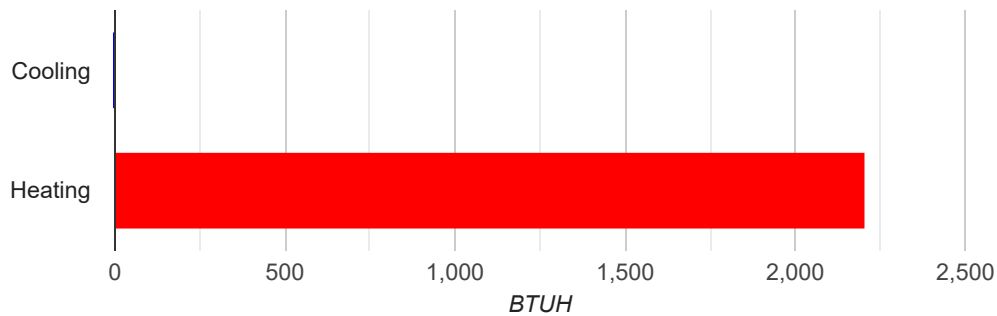
PLANTS					
There are no components for this section.					

ROOM DETAIL

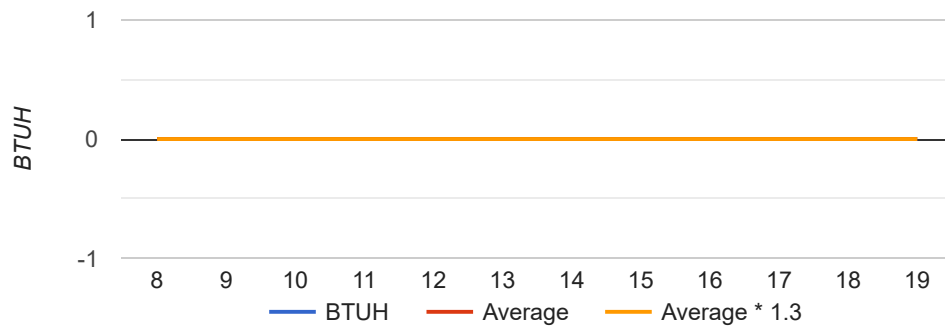
Room name: BEDROOM 1

Heated square footage:	183	Total Cooling BTUH:	0
Cooled square footage:	0	Total Heating BTUH:	2,202
Heated volume (above grade CF):	1,647	CFM:	36
Cooled volume (above grade CF):	0		
Exposed wall area (SF):	261		

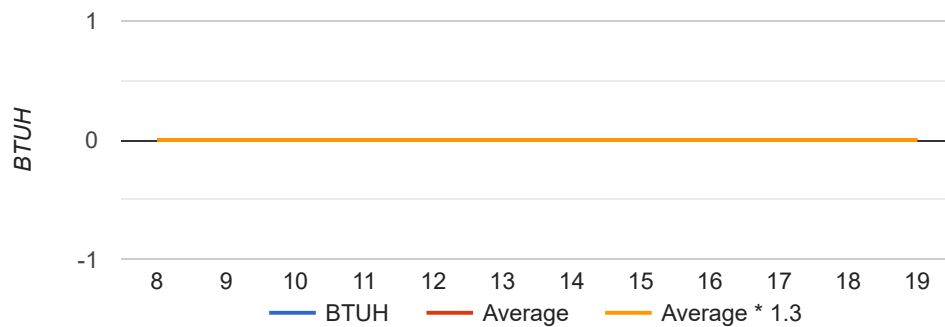
Load Calculation



AED Graph (mid-summer)



AED graph (fall)



Project Name: Ariks Prefab

Address: 9744 Wilshire Boulevard, Beverly Hills, CA

OUTDOOR DESIGN CONDITIONS

Weather station: Santa Monica CO

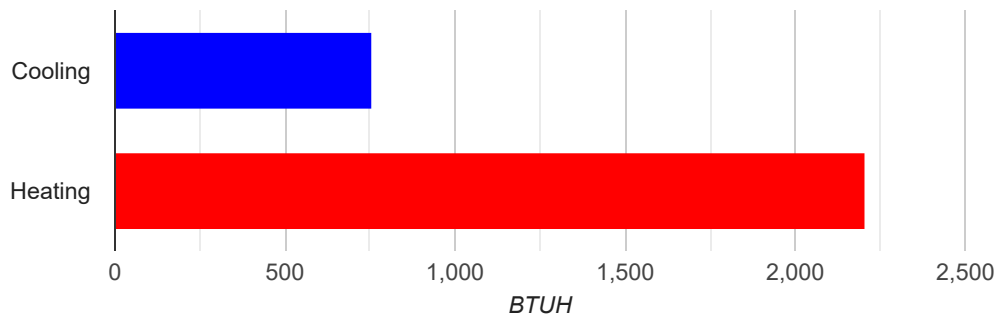
Summer Outdoor F:	80	Summer Indoor F:	75	Design Grains:	19	Daily Range:	Medium
Winter Outdoor F:	43	Winter Indoor F:	70	Cooling RH:	50	Elevation (Ft):	236

LOAD CALCULATION TOTALS

HVAC System: AC 1.2

Heated square footage:	183	Heating BTUH:	2,202
Cooled square footage:	183	Cooling BTUH:	755
Heated volume (above grade CF):	1,647	CFM:	28
Cooled volume (above grade CF):	1,647	Sensible cooling:	634
Exposed wall area (SF):	261	Latent cooling:	121
		SHR:	0.839

Load Calculation



Approved ACCA MJ8 Calculations

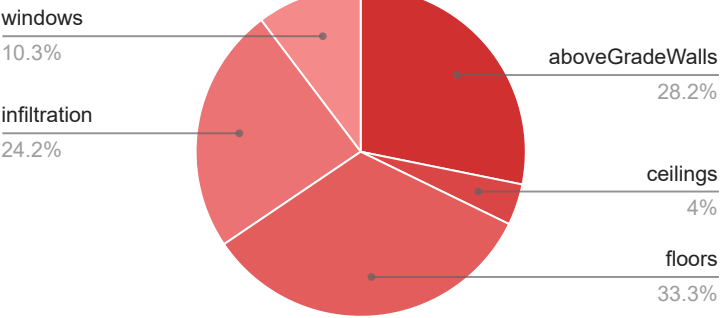
Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building heat loss.



HEATING AND COOLING LOADS

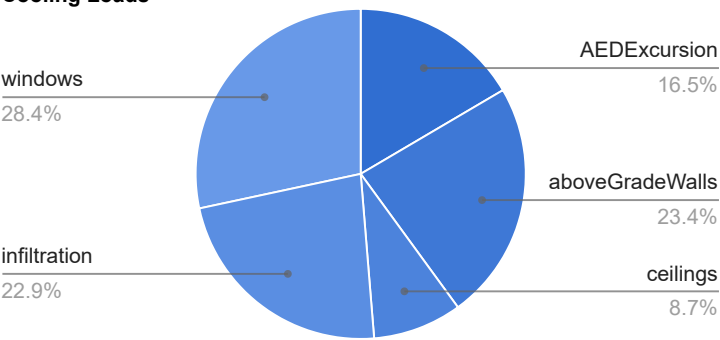
HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	237	621
ceilings	183	89
floors	183	734
infiltration	0	532
skylights	0	0
windows	24	227
Totals		2,202

Heating Loads



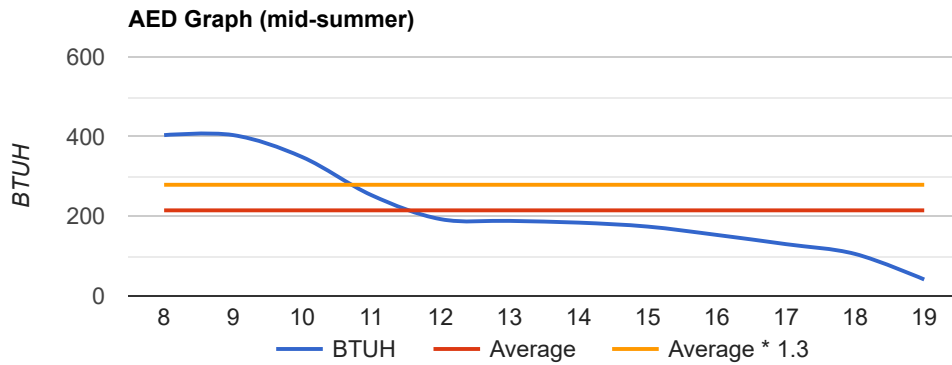
COOLING LOADS			
SECTION	AREA	SENSIBLE	LATENT
AEDExcursion	0	125	0
aboveGradeWalls	237	177	0
ceilings	183	66	0
floors	183	0	0
infiltration	0	52	121
skylights	0	0	0
windows	24	214	0
Totals		634	121

Cooling Loads

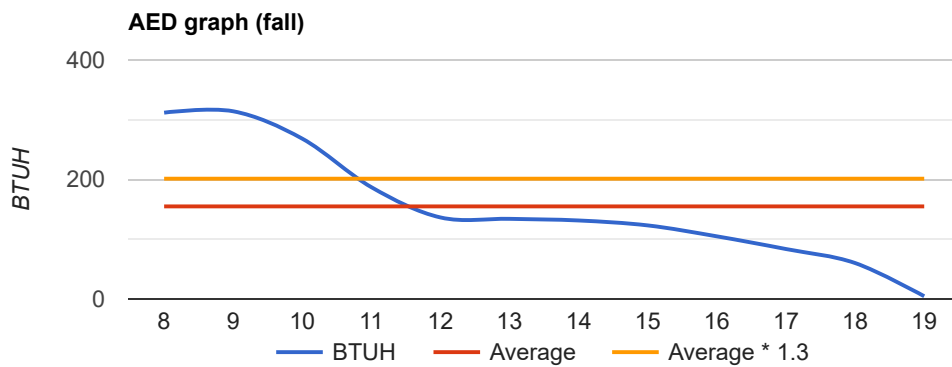


FENESTRATION LOADS

Warning (0): This application has glass areas that produced large cooling loads for part of the day. Zoning may be required to overcome solar load spikes for one or more rooms. Consider a zoned system, or provide zone control (individual, motorized, thermostatically controlled dampers) for problem rooms. Single speed equipment may not be suitable for the application.



This graph represents hourly aggregate fenestration loads in mid-summer.



This graph represents hourly aggregate fenestration loads in October.

COMPONENT LOADS

ABOVE GRADE WALLS					
System generated wall - N Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr:	12B-0b w	Exposure:	N	Heating BTUH: 409
	U Value:	0.097	Area:	156	Cooling BTUH: 117
System generated wall - E Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr:	12B-0b w	Exposure:	E	Heating BTUH: 212
	U Value:	0.097	Area:	81	Cooling BTUH: 60

BELOW GRADE WALLS
There are no components for this section.

WINDOWS					
Default small windows for wall id 11664560 Window, NFRC rated, Clear glass.	Construction nr:	1G	U Value:	0.35	Heating BTUH: 57
	Area:	6	SHGC:	0.25	Cooling BTUH: 25
	Exposure:	N			
Default small windows for wall id 11664561 Window, NFRC rated, Clear glass.	Construction nr:	1G	U Value:	0.35	Heating BTUH: 170
	Area:	18	SHGC:	0.25	Cooling BTUH: 189
	Exposure:	E			

Window cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

CEILINGS					
System generated ceiling. Ceiling under attic or attic knee wall, Tile, Dark, R-56.	Construction nr:	16ER-56 td	Area:	183	Heating BTUH: 89
	U Value:	0.018			Cooling BTUH: 66

SKYLIGHTS
There are no components for this section.

Skylight cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

DOORS
There are no components for this section.

FLOORS					
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10pl	Heating U Value:0	Heating BTUH:	734
	Area:	183	Cooling U Value:0	Cooling BTUH:	0
				F Value:	0.937

VENTILATION
There are no components for this section.

HOT WATER PIPING
There are no components for this section.

DUCTS
There are no components for this section.



INFILTRATION						
Leakage Category:	Average	NCFM Heating:	77	Heating BTUH:	532	
		NCFM Cooling:	40	Sensible BTUH:	52	
				Latent BTUH:	121	

BLOWER MOTOR					
There are no components for this section.					

WINTER HUMIDIFICATION					
There are no components for this section.					

OCCUPANTS					
There are no components for this section.					

APPLIANCES					
There are no components for this section.					

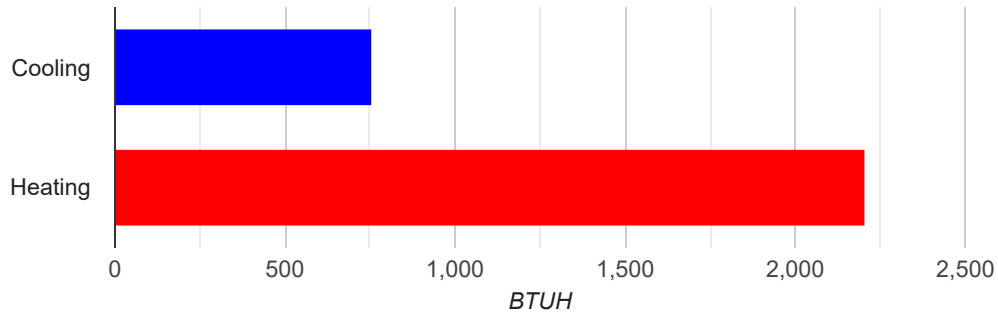
PLANTS					
There are no components for this section.					

ROOM DETAIL

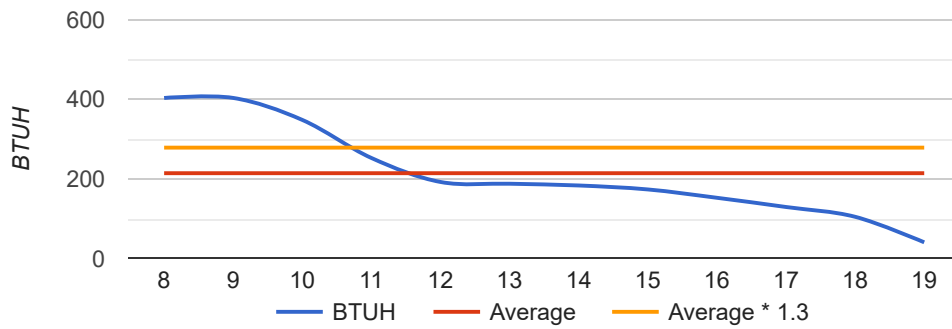
Room name: BEDROOM 2

Heated square footage:	183	Total Cooling BTUH:	755
Cooled square footage:	183	Total Heating BTUH:	2,202
Heated volume (above grade CF):	1,647	CFM:	28
Cooled volume (above grade CF):	1,647		
Exposed wall area (SF):	261		

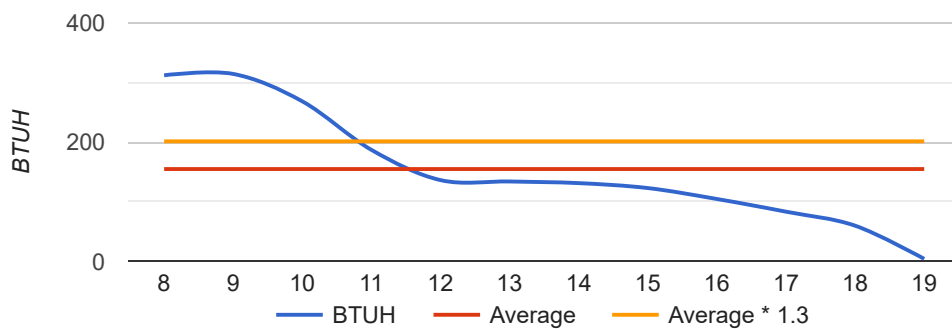
Load Calculation



AED Graph (mid-summer)



AED graph (fall)



Project Name: Ariks Prefab

Address: 9744 Wilshire Boulevard, Beverly Hills, CA

OUTDOOR DESIGN CONDITIONS

Weather station: Santa Monica CO

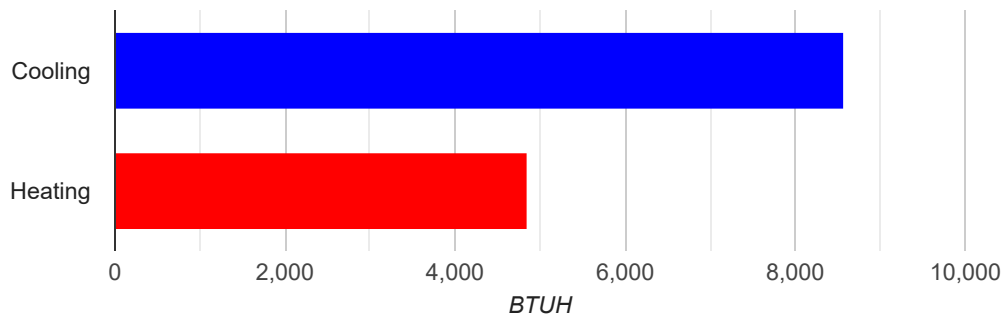
Summer Outdoor F:	80	Summer Indoor F:	75	Design Grains:	19	Daily Range:	Medium
Winter Outdoor F:	43	Winter Indoor F:	70	Cooling RH:	50	Elevation (Ft):	236

LOAD CALCULATION TOTALS

HVAC System: AC 1.3

Heated square footage:	385	Heating BTUH:	4,839
Cooled square footage:	385	Cooling BTUH:	8,557
Heated volume (above grade CF):	3,465	CFM:	320
Cooled volume (above grade CF):	3,465	Sensible cooling:	7,060
Exposed wall area (SF):	513	Latent cooling:	1,497
		SHR:	0.825

Load Calculation



Approved ACCA MJ8 Calculations

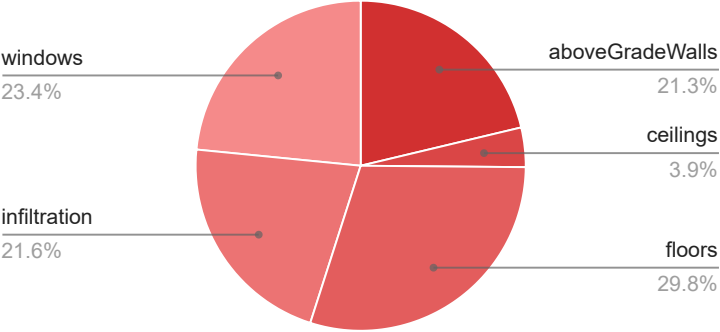
Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building heat loss.



HEATING AND COOLING LOADS

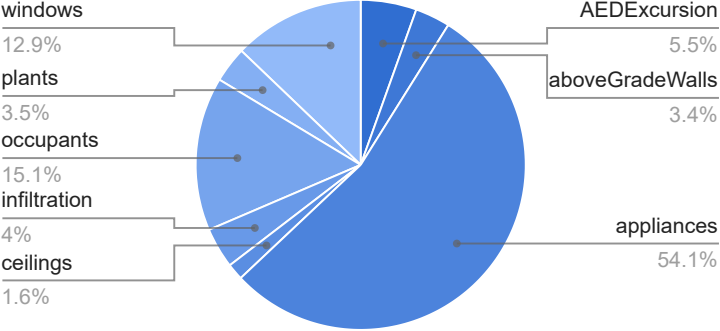
HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	393	1,029
ceilings	385	187
floors	385	1,442
infiltration	0	1,046
skylights	0	0
windows	120	1,134
Totals		4,839

Heating Loads



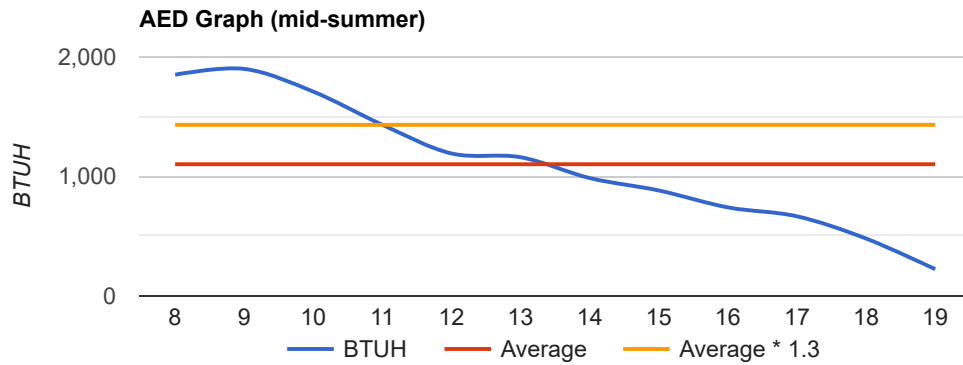
COOLING LOADS			
SECTION	AREA	SENSIBLE	LATENT
AEDExcursion	0	468	0
aboveGradeWalls	393	294	0
appliances	0	4,268	358
ceilings	385	139	0
floors	385	0	0
infiltration	0	102	239
occupants	0	690	600
plants	0	0	300
skylights	0	0	0
windows	120	1,100	0
Totals		7,060	1,497

Cooling Loads

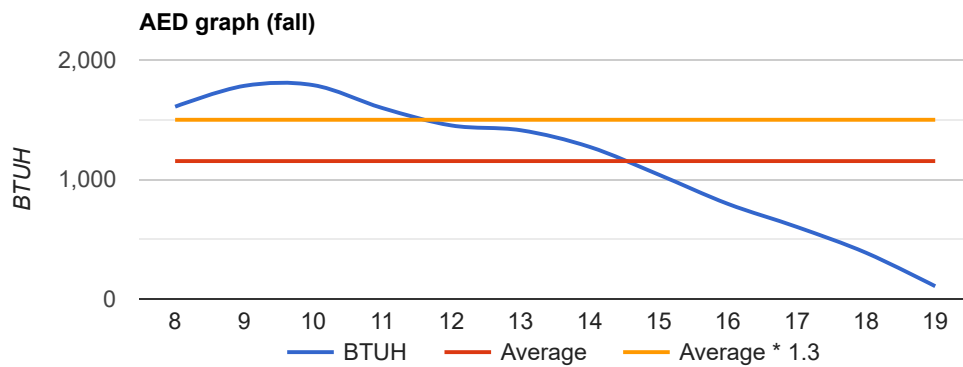


FENESTRATION LOADS

Warning (0): This application has glass areas that produced large cooling loads for part of the day. Zoning may be required to overcome solar load spikes for one or more rooms. Consider a zoned system, or provide zone control (individual, motorized, thermostatically controlled dampers) for problem rooms. Single speed equipment may not be suitable for the application.



This graph represents hourly aggregate fenestration loads in mid-summer.



This graph represents hourly aggregate fenestration loads in October.

COMPONENT LOADS

ABOVE GRADE WALLS					
System generated wall - S Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	S 81	Heating BTUH: 212 Cooling BTUH: 60
System generated wall - W Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	W 90	Heating BTUH: 236 Cooling BTUH: 67
System generated wall - E Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	E 141	Heating BTUH: 369 Cooling BTUH: 105
System generated wall - S Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	S 81	Heating BTUH: 212 Cooling BTUH: 60

BELOW GRADE WALLS					
There are no components for this section.					

WINDOWS					
Default small windows for wall id 11664566 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 18 S	U Value: SHGC:	0.35 0.25	Heating BTUH: 170 Cooling BTUH: 110
Default medium windows for wall id 11664564 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 E	U Value: SHGC:	0.35 0.25	Heating BTUH: 340 Cooling BTUH: 377
Default large windows for wall id 11664564 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 E	U Value: SHGC:	0.35 0.25	Heating BTUH: 340 Cooling BTUH: 377
Default small windows for wall id 11664564 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 E	U Value: SHGC:	0.35 0.25	Heating BTUH: 113 Cooling BTUH: 126
Default small windows for wall id 11664565 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 18 S	U Value: SHGC:	0.35 0.25	Heating BTUH: 170 Cooling BTUH: 110

Window cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

CEILINGS					
System generated ceiling. Ceiling under attic or attic knee wall, Tile, Dark, R-56.	Construction nr: U Value:	16ER-56 td 0.018	Area:	110	Heating BTUH: 53 Cooling BTUH: 40
System generated ceiling. Ceiling under attic or attic knee wall, Tile, Dark, R-56.	Construction nr: U Value:	16ER-56 td 0.018	Area:	275	Heating BTUH: 134 Cooling BTUH: 99

SKYLIGHTS					
There are no components for this section.					

Skylight cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

DOORS					
There are no components for this section.					

FLOORS				
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10pl	Heating U Value:0	Heating BTUH: 531
	Area:	110	Cooling U Value:0	Cooling BTUH: 0
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10pl	Heating U Value:0	Heating BTUH: 911
	Area:	275	Cooling U Value:0	Cooling BTUH: 0
				F Value: 0.937

VENTILATION
There are no components for this section.

HOT WATER PIPING
There are no components for this section.

DUCTS
There are no components for this section.

INFILTRATION				
Leakage Category:	Average	NCFM Heating:	77	Heating BTUH: 1,046
		NCFM Cooling:	40	Sensible BTUH: 102
				Latent BTUH: 239

BLOWER MOTOR
There are no components for this section.

WINTER HUMIDIFICATION
There are no components for this section.

OCCUPANTS				
Nr. Occupants:	3	Sensible BTUH:	690	Latent BTUH: 600

APPLIANCES				
Range with hood and exhaust to outdoors	Quantity:	1	Sensible BTUH:	0
			Latent BTUH:	0
Dishwasher	Quantity:	1	Sensible BTUH:	1,024
			Latent BTUH:	358
Refrigerator or Freezer - 16CuFt	Quantity:	1	Sensible BTUH:	1,000
			Latent BTUH:	0
Color television	Quantity:	1	Sensible BTUH:	683
			Latent BTUH:	0
Computer and monitor	Quantity:	1	Sensible BTUH:	538
			Latent BTUH:	0
Light Fixture - 100W	Quantity:	3	Sensible BTUH:	1,023
			Latent BTUH:	0

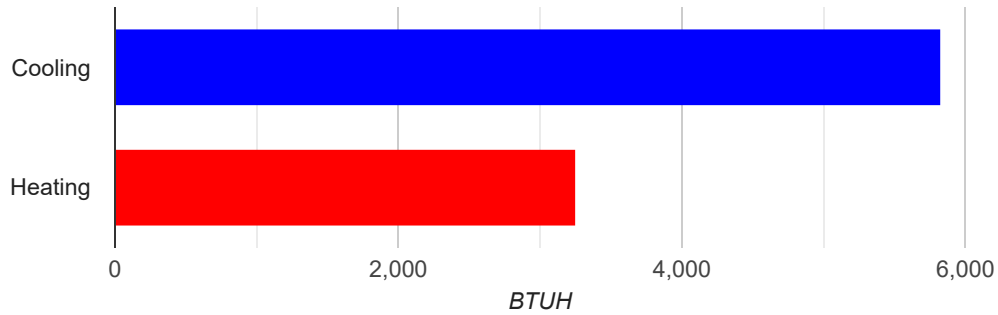
PLANTS				
Plant Size:	small	Quantity:	5	Latent BTUH: 50
Plant Size:	medium	Quantity:	5	Latent BTUH: 100
Plant Size:	large	Quantity:	5	Latent BTUH: 150

ROOM DETAIL

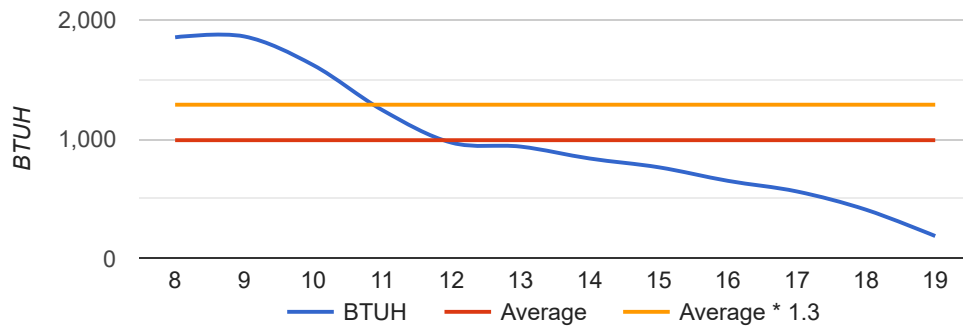
Room name: LIVING ROOM

Heated square footage:	275	Total Cooling BTUH:	5,826
Cooled square footage:	275	Total Heating BTUH:	3,251
Heated volume (above grade CF):	2,475	CFM:	219
Cooled volume (above grade CF):	2,475		
Exposed wall area (SF):	324		

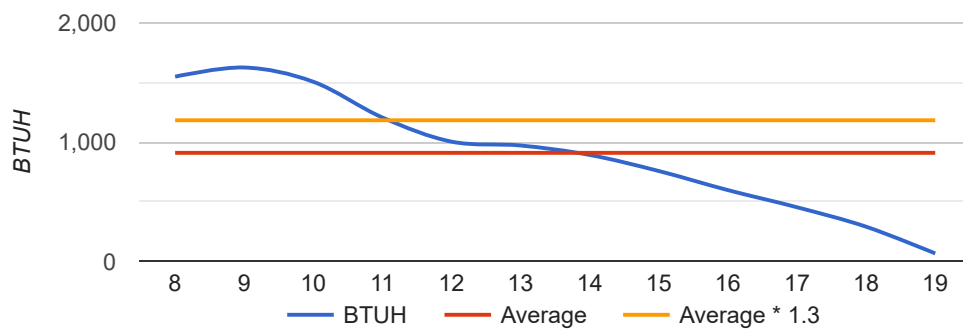
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

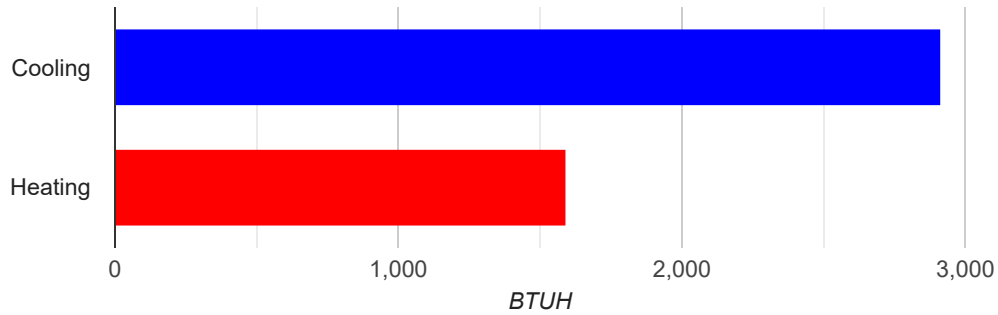


ROOM DETAIL

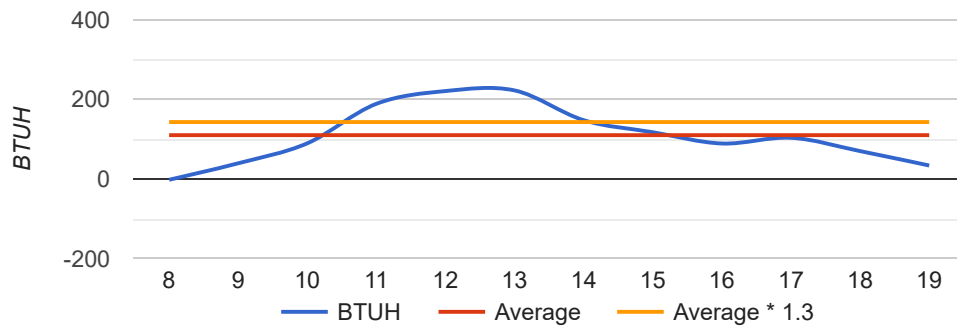
Room name: KITCHEN

Heated square footage:	110	Total Cooling BTUH:	2,914
Cooled square footage:	110	Total Heating BTUH:	1,588
Heated volume (above grade CF):	990	CFM:	109
Cooled volume (above grade CF):	990		
Exposed wall area (SF):	189		

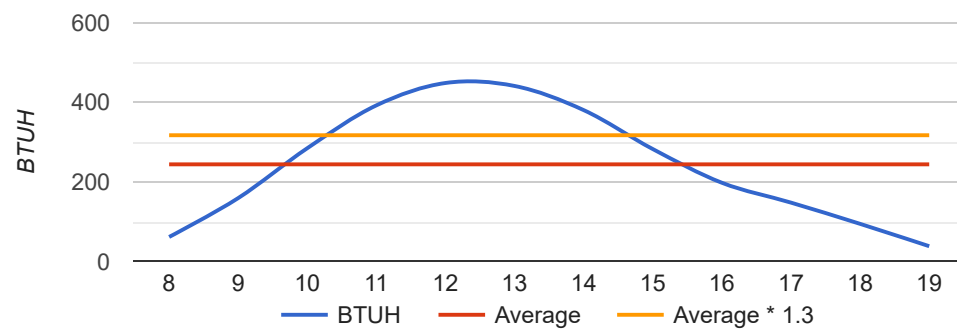
Load Calculation



AED Graph (mid-summer)



AED graph (fall)



Test Report

Original Issue Date: 2024-02-05 Intertek Report No. 231115006SHF-003

Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Attn: Lianghui Zhang
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Product Type: Dual-action Window
Product Model: W75H
Primary product designator: Class CW - PG50 - Size Tested 1200 × 2500 mm (47.24 × 98.43 in.) - Type DAW
Optional secondary designator: Positive Design Pressure = +2400 Pa (50.13 psf)
Negative Design Pressure = -2400 Pa (50.13 psf)
Water penetration resistance test pressure = 440 Pa (9.19 psf)

SUBJECT: Performance testing
Dual-action Window

Product Information

Product Name	Model	Specification
Dual-action Window	W75H	1200mm(Width) x 2500mm(Height)
Sample ID	Sample Amount	Sample Received Date
S231115006SHF.003	1 Set	2023-11-15
Brand	Sample Description	
PASSIVE	Completely assembled, glazed, functional product (including hardware) and fully operable, fitted in the test apparatus in accordance with documented instructions.	

Test Methods And Standards

Test Standard	ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F588-17; AAMA/WDMA/CSA101/I.S.2/A440-17 Clause 9.3.1, Clause 9.3.6.4.3, Clause 9.3.6.5.3
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS 2017 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 9.3.1, Clause 9.3.2, Clause 9.3.3, Clause 9.3.4, Clause 9.3.5, Clause 9.3.6.4.3 and Clause 9.3.6.5.3;
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-17 requirements specified on Dual-action Window, and the results were shown in the following page.

Note:
1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized

Fred Bao

Name: Fred Bao
Title: Approver

Gio Liu

Name: Gio Liu
Title: Reviewer

Martin Zhu

Name: Martin Zhu
Title: Project Engineer

Test Report

Original Issue Date: 2024-02-05 Intertek Report No. 231115006SHF-006

Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Attn: Lianghui Zhang
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Product Type: Fixed Window
Product Model: W75H
Primary product designator: Class CW - PG50 - Size Tested 1500 x 2500 mm (59.06 x 98.43 in.) - Type FW
Optional secondary designator: Positive Design Pressure = +2400 Pa (50.13 psf)
Negative Design Pressure = -2400 Pa (50.13 psf)
Water penetration resistance test pressure = 580 Pa (12.11 psf)
SUBJECT: Performance testing
Fixed Window

Product Information

Product Name	Model	Specification
Fixed Window	W75H	1500mm(Width) x 2500mm(Height)
Sample ID	Sample Amount	Sample Received Date
S231115006SHF.006	1 Set	2023-11-15
Brand	Sample Description	
PASSIVE	Completely assembled, glazed, functional product, fitted in the test apparatus in accordance with documented instructions.	

Test Methods And Standards

Test Standard	ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F588-17
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS 2017 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 9.3.2, Clause 9.3.3, Clause 9.3.4, Clause 9.3.5
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-17 requirements specified on Fixed Window, and the results were shown in the following page.

Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized

Name: Fred Bao
Title: Approver

Name: Gio Liu
Title: Reviewer

Name: Martin Zhu
Title: Project Engineer

Test Report

Original Issue Date: 2024-02-05 Intertek Report No. 231115006SHF-005

Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Attn: Lianghui Zhang
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Product Type: Sliding Door
Product Model: SD95
Primary product designator: Class CW - PG30 - Size Tested 3100 x 2400mm (122.04 x 94.49 in.) - Type SD
Optional secondary designator: Positive Design Pressure = +1440 Pa (30.08 psf)
Negative Design Pressure = -1440 Pa (30.08 psf)
Water penetration resistance test pressure = 220 Pa (4.59 psf)
SUBJECT: Performance testing
Sliding Door

Product Information

Product Name	Model	Specification
Sliding Door	SD95	3100mm(Width) x 2400mm(Height)
Sample ID	Sample Amount	Sample Received Date
S231115006SHF.005	1 Set	2023-11-15
Brand	Sample Description	
PASSIVE	Completely assembled, glazed, functional product (including hardware) and fully operable, fitted in the test apparatus in accordance with documented instructions.	

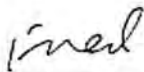
Test Methods And Standards

Test Standard	ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F588-17; AAMA/WDMA/CSA 101/I.S.2/A440-17 Clause 9.3.1, Clause 9.3.6.3
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS 2017 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 9.3.1, Clause 9.3.2, Clause 9.3.3, Clause 9.3.4, Clause 9.3.5, Clause 9.3.6.3
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-17 requirements specified on Sliding Door, and the results were shown in the following page.

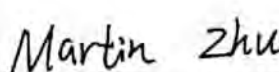
Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized


Name: Fred Bao
Title: Approver


Name: Gio Liu
Title: Reviewer


Name: Martin Zhu
Title: Project Engineer

Test Report

Original Issue Date: 2024-02-05 Intertek Report No. 231115006SHF-001

Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Attn: Lianghui Zhang
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Product Type: Awning Window
Product Model: OW75
Primary product designator: Class CW - PG50 - Size Tested 1500 x 900 mm (59.06 x 35.43 in.) - Type AP
Optional secondary designator: Positive Design Pressure = +2400 Pa (50.13 psf)
Negative Design Pressure = -2400 Pa (50.13 psf)
Water penetration resistance test pressure = 580 Pa (12.11 psf)
SUBJECT: Performance testing
Awning Window

Product Information

Product Name	Model	Specification
Awning Window	OW75	1500mm(Width) x 900mm(Height)
Sample ID	Sample Amount	Sample Received Date
S231115006SHF.001	1 Set	2023-11-15
Brand	Sample Description	
PASSIVE	Completely assembled, glazed, functional product (including hardware) and fully operable, fitted in the test apparatus in accordance with documented instructions.	

Test Methods And Standards

Test Standard	ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F588-17; AAMA/WDMA/CSA101/I.S.2/A440-17 Clause 9.3.1, Clause 9.3.6.5.5
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS 2017 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 9.3.1, Clause 9.3.2, Clause 9.3.3, Clause 9.3.4, Clause 9.3.5, Clause 9.3.6.5.5
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-17 requirements specified on Awning Window, and the results were shown in the following page.

Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized

Name: Fred Bao
Title: Approver



Name: Gio Liu
Title: Reviewer

Name: Martin Zhu
Title: Project Engineer

Test Report

Original Issue Date: 2024-02-05 Intertek Report No. 231115006SHF-002

Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Attn: Lianghui Zhang
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Product Type: Casement Window
Product Model: OW75
Primary product designator: Class CW - PG50 - Size Tested 900 x 1500 mm (35.43 x 59.06 in.) - Type C
Optional secondary designator: Positive Design Pressure = +2400 Pa (50.13 psf)
Negative Design Pressure = -2400 Pa (50.13 psf)
Water penetration resistance test pressure = 440 Pa (9.19 psf)
SUBJECT: Performance testing
Casement Window

Product Information

Product Name	Model	Specification
Casement Window	OW75	900mm(Width) x 1500mm(Height)
Sample ID	Sample Amount	Sample Received Date
S231115006SHF.002	1 Set	2023-11-15
Brand	Sample Description	
PASSIVE	Completely assembled, glazed, functional product (including hardware) and fully operable, fitted in the test apparatus in accordance with documented instructions.	

Test Methods And Standards

Test Standard	ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F588-17; AAMA/WDMA/CSA101/I.S.2/A440-17 Clause 9.3.1, Clause 9.3.6.4.2, Clause 9.3.6.5.2
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS 2017 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 9.3.1, Clause 9.3.2, Clause 9.3.3, Clause 9.3.4, Clause 9.3.5, Clause 9.3.6.4.2 and Clause 9.3.6.5.2
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-17 requirements specified on Casement Window, and the results were shown in the following page.

Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized


Name: Fred Bao Title: Approver
Name: Gio Liu Title: Reviewer
Name: Martin Zhu Title: Project Engineer

Test Report

Original Issue Date: 2024-02-05 Intertek Report No. 231115006SHF-004

Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027,Dongtai Road, Dongcheng Street, Linq County, Weifang City, Shandong Province
Attn: Lianghui Zhang
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027,Dongtai Road, Dongcheng Street, Linq County, Weifang City, Shandong Province
Product Type: Side-hinged Door
Product Model: OD75F
Primary product designator: Class CW - PG30 - Size Tested 1200 × 2400 mm (47.24 × 94.49 in.) - Type SHD
Optional secondary designator: Positive Design Pressure = +1440 Pa (30.08 psf)
Negative Design Pressure = -1440 Pa (30.08 psf)
Water penetration resistance test pressure = 290 Pa (6.06 psf).
SUBJECT: Performance testing
Side-hinged Door

Product Information

Product Name	Model	Specification
Side-hinged Door	OD75F	1200mm(Width) x 2400mm(Height)
Sample ID	Sample Amount	Sample Received Date
S231115006SHF.004	1 Set	2023-11-15
Brand	Sample Description	
PASSIVE	Completely assembled, glazed, functional product (including hardware) and fully operable, fitted in the test apparatus in accordance with documented instructions.	

Test Methods And Standards

Test Standard	ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); AAMA 920-16; AAMA 1304-18; AAMA/WDMA/CSA101/I.S.2/A440-17 Clause 6.4.5.1, Clause 6.4.5.2
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS 2017 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 6.4.5.1, Clause 6.4.5.2, Clause 6.4.7, Clause 7.3.7, Clause 9.3.2, Clause 9.3.3, Clause 9.3.4 and Clause 9.3.5
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-17 requirements specified on Side-hinged Door, and the results were shown in the following page.

Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized


Name: Fred Bao Title: Approver
Name: Gio Liu Title: Reviewer
Name: Martin Zhu Title: Project Engineer

Test Report

Original Issue Date: 2024-04-16 Intertek Report No. 240307006SHF-001

Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Attn: Zhang Lianghui
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027,Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Product Type: Sliding Door
Product Model: PS150
Primary product designator: Class AW - PG40 - Size Tested 3100 x 2400mm (122.05 x 94.49 in.) - Type SD
Optional secondary designator: Positive Design Pressure = +1920 Pa (40.10 psf)
Negative Design Pressure = -1920 Pa (40.10 psf)
Water penetration resistance test pressure = 390 Pa (8.15 psf)

SUBJECT: Performance testing
Sliding Door

Product Information

Product Name	Model	Specification
Sliding Door	PS150	3100mm(Width) x 2400mm(Height)
Sample ID	Sample Amount	Sample Received Date
S240307006SHF.001	1 Set	2024-03-07
Brand	Sample Description	
PASSIVE	The sample was a completely assembled, glazed, functional product (including hardware) and fully operable, fitted in the test apparatus in accordance with documented instructions.	

Test Methods And Standards

Test Standard	ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E331-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F842-17; AAMA 501.5-07; AAMA 910-16 Clause 5.2, Clause 5.3 and Clause 5.6
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-22 (NAFS 2022 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 8.3.1, Clause 8.3.2, Clause 8.3.3, Clause 8.3.4, Clause 8.3.5 and Clause 8.3.6.2; AAMA 910-16 Voluntary "Life Cycle" Specifications and Test Methods for AW Class Architectural Windows and Doors
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-22 and AAMA 910-16 requirements specified on Sliding Door, and the results were shown in the following page.

Note: 1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized

Name: Fred Bao
Title: Approver



Name: Gio Liu
Title: Reviewer

Name: Martin Zhu
Title: Project Engineer

Test Report

Original Issue Date: 2024-04-16 Intertek Report No. 240307006SHF-002
Applicant: Shandong New Passive System Windows & Doors Co., Ltd.
Applicant Address: No.7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Attn: Zhang Lianghai
Manufacturer: Shandong New Passive System Windows & Doors Co., Ltd.
Manufacturer Address: No.7027, Dongtai Road, Dongcheng Street, Linqu County, Weifang City, Shandong Province
Product Type: Sliding Door
Product Model: PS150
Primary product designator: Class CW - PG40 - Size Tested 3100 x 2400mm (122.05 x 94.49 in.) - Type SD
Optional secondary designator: Positive Design Pressure = +1920Pa (40.10 psf)
Negative Design Pressure = -1920Pa (40.10 psf)
Water penetration resistance test pressure = 720 Pa (15.04 psf)
SUBJECT: Performance testing
Sliding Door

Product Information

Product Name	Model	Specification
Sliding Door	PS150	3100mm(Width) x 2400mm(Height)
Sample ID	Sample Amount	Sample Received Date
S240307006SHF.001	1 Set	2024-03-07
Brand	Sample Description	
PASSIVE	The sample was a completely assembled, glazed, functional product (including hardware) and fully operable, fitted in the test apparatus in accordance with documented instructions.	

Test Methods And Standards

Test Standard	ASTM E283/E283M-19; ASTM E547-00(R2016); ASTM E330/E330M-2014 (R2021); ASTM F842-17; AAMA/WDMA/CSA101/I.S.2/A440-22 Clause 8.3.1 and Clause 8.3.6.2
Specification Standard	AAMA/WDMA/CSA 101/I.S.2/A440-22 (NAFS 2022 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 8.3.1, Clause 8.3.2, Clause 8.3.3, Clause 8.3.4, Clause 8.3.5 and Clause 8.3.6.2
Test Conclusion	The results met AAMA/WDMA/CSA 101/I.S.2/A440-22 requirements specified on Sliding Door, and the results were shown in the following page.

Note: 1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized

Name: Fred Bao
Title: Approver

Name: Gio Liu
Title: Reviewer

Name: Martin Zhu
Title: Project Engineer



Moyu Technology Co., Ltd. Zhuhai

Add: Room 01, A3 building, No. 1099 Jinzhou Road, Tangjiawan Town, High-tech Zone, Zhuhai City, Guangdong Province, China.
E-mail: fongson@zhmoyutech.com

To:	Arik	PI No.:	MOYUFS2026042009
Company name:		From:	Fongson
Address:	Xixindian Township, Botou City, Cangzhou City, Hebei	Date:	2026/4/20

Conditions:

Incoterms:

Payment Terms:

Spare parts:

Assembly Form:

Port of Loading:

Country of Origin:

FCA	30%+70%	
CBU	ZHUHAI	CHINA

Series	Model	Description of Goods	Qty (Pcs)	Unit Price (USD)	Amount (USD)
Multiple zone unit for 1 BED	28000btu=2*12000btu (MYTM28NA23BCH18-O=2*MYTW12NA23BCH-I)	R454B, 208-230V/1N/60Hz, cooling and heating, 20 seer2, with ETL and AHRI certificate 	1	\$822.00	\$822.00
Multiple zone unit for 3 BED	45000btu=3*9000btu (MYTM45NA23BCH18-O=3*MYTW09NA23BCH-I+1*MYTW18NA23BCH-I)	R454B, 208-230V/1N/60Hz, cooling and heating, 20 seer2, with ETL and AHRI certificate 	2	\$1,400.00	\$2,800.00
Accessories For 1 BED	copper pipe and wire	12k indoor use 32.8ft (65usd) +26.25ft (34usd) 	1	\$99.00	\$99.00
Accessories For 3 BED	copper pipe and wire	18k indoor use 32.8ft (65usd), 9k indoor use 16.4ft (35usd) *2+ 10ft (22usd) 	2	\$157.00	\$314.00
Accessories		install bracket	2	\$10.00	free
Freight to Cangzhou City, Hebei					\$120.00
Total Amount					\$4,155.00

Remarks:

(1) Payment Terms: 30%+70% T/T
(2) Loading Port: ZHUHAI, GUANGDONG, CHINA
(3) Price valid till May.10th.2026
(4) Lead Time: Within 45 working days after receiving deposit. (official holiday excluded)
(5) The proforma invoice shall be subjected to MOYU TECHNOLOGY CO.,LTD
(6) Customized products cannot be refunded or changed once sold without the seller's consent.
(7) The balance payment should be made within the production finished half month.
Otherwise inventory fee will be charged by 1%*Total Amount/day, it should be paid together with balance payment.

Bank Information

Beneficiary's Name:	Moyu Technology Co., Ltd. Zhuhai
Beneficiary Address:	8 Shenton Way, 45-01, AXA Tower, Singapore 068811
Bank:	JPMorgan Chase Bank N.A., Singapore Branch
Beneficiary Bank Address:	168 Robinson Road, Capital Tower 17-00, Singapore 068912
Beneficiary Account Number:	10141740320529
SWIFT CODE:	CHASSGSG

THE SELLER:

THE BUYER:

Q235 and ASTM A36 Steel Equivalency Report

This report provides a brief equivalency summary between **Q235 structural steel** and **ASTM A36 steel** for use in the structural framing of a **single-story residential prefab ADU** designed by **Casden ADU**.

Material Comparison

Both Q235 and A36 are **mild carbon structural steels** commonly used for beams, columns, and framing in low-rise buildings. They share similar mechanical properties and performance characteristics.

Q235 shows slightly lower minimum yield strength but higher ductility, while tensile strength ranges overlap significantly. Both materials provide adequate strength, weldability, and structural performance for residential prefabricated construction.

Application in Casden ADU Project

For the **single-story ADU** structure, design loads and stress ratios calculated using Q235 are well within acceptable safety margins and code-required performance limits.

The use of Q235 steel in primary framing members, floor and roof systems, and connection points is structurally appropriate and functionally equivalent to A36 steel for this project's scope.

Based on mechanical properties and performance analysis, **Q235 is considered equivalent to ASTM A36** for the purposes of this **single-story residential prefab ADU**. Its use meets the structural requirements for strength, ductility, and safety when fabricated and certified according to applicable standards.

Prepared by: Travis Airola P.E.



Q235 Material Properties

E Material Property Data ✕

General Data

Material Name

Q235

Material Type

Steel

▼

Directional Symmetry Type

Isotropic

▼

Material Display Color

Change...

Material Notes

Modify/Show Notes...

Material Weight and Mass

☒ Specify Weight Density

☐ Specify Mass Density

Weight per Unit Volume

77

kN/m³

Mass per Unit Volume

7850

kg/m³

Mechanical Property Data

Modulus of Elasticity, E

206000

MPa

Poisson's Ratio, U

0.3

Coefficient of Thermal Expansion, A

0.000012

1/C

Shear Modulus, G

79230.77

MPa

Design Property Data

Modify/Show Material Property Design Data...

Advanced Material Property Data

Nonlinear Material Data...

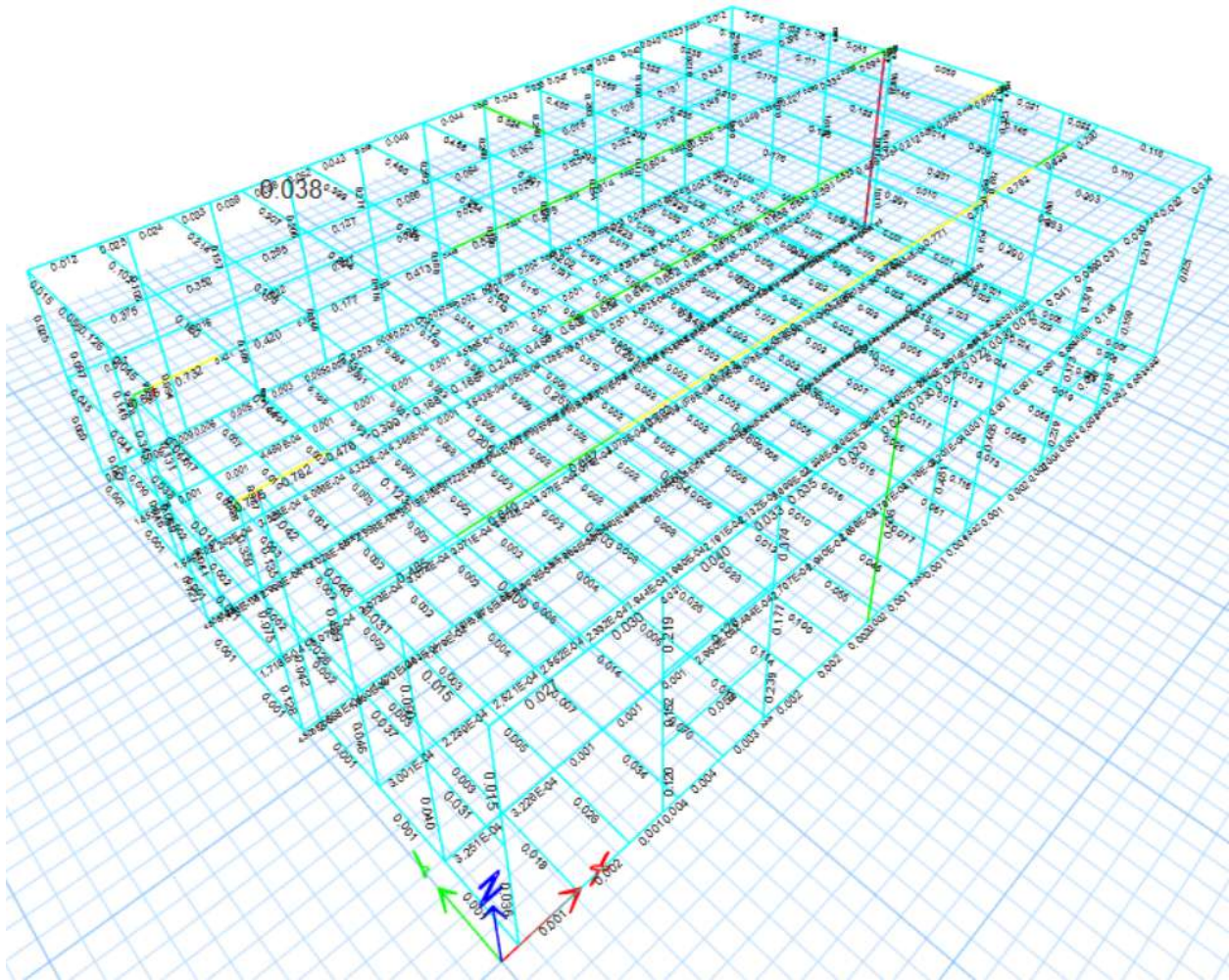
Material Damping Properties...

Time Dependent Properties...

OK

Cancel

Stress ratios of structural members with Q235 Material



A36 Material Properties

E Material Property Data ✕

General Data

Material Name

A36

Material Type

Steel

▼

Directional Symmetry Type

Isotropic

▼

Material Display Color

Change...

Material Notes

Modify/Show Notes...

Material Weight and Mass

☒ Specify Weight Density

☐ Specify Mass Density

Weight per Unit Volume

76.9729

kN/m³

Mass per Unit Volume

7849.047

kg/m³

Mechanical Property Data

Modulus of Elasticity, E

199947.98

MPa

Poisson's Ratio, U

0.3

Coefficient of Thermal Expansion, A

0.0000117

1/C

Shear Modulus, G

76903.07

MPa

Design Property Data

Modify/Show Material Property Design Data...

Advanced Material Property Data

Nonlinear Material Data...

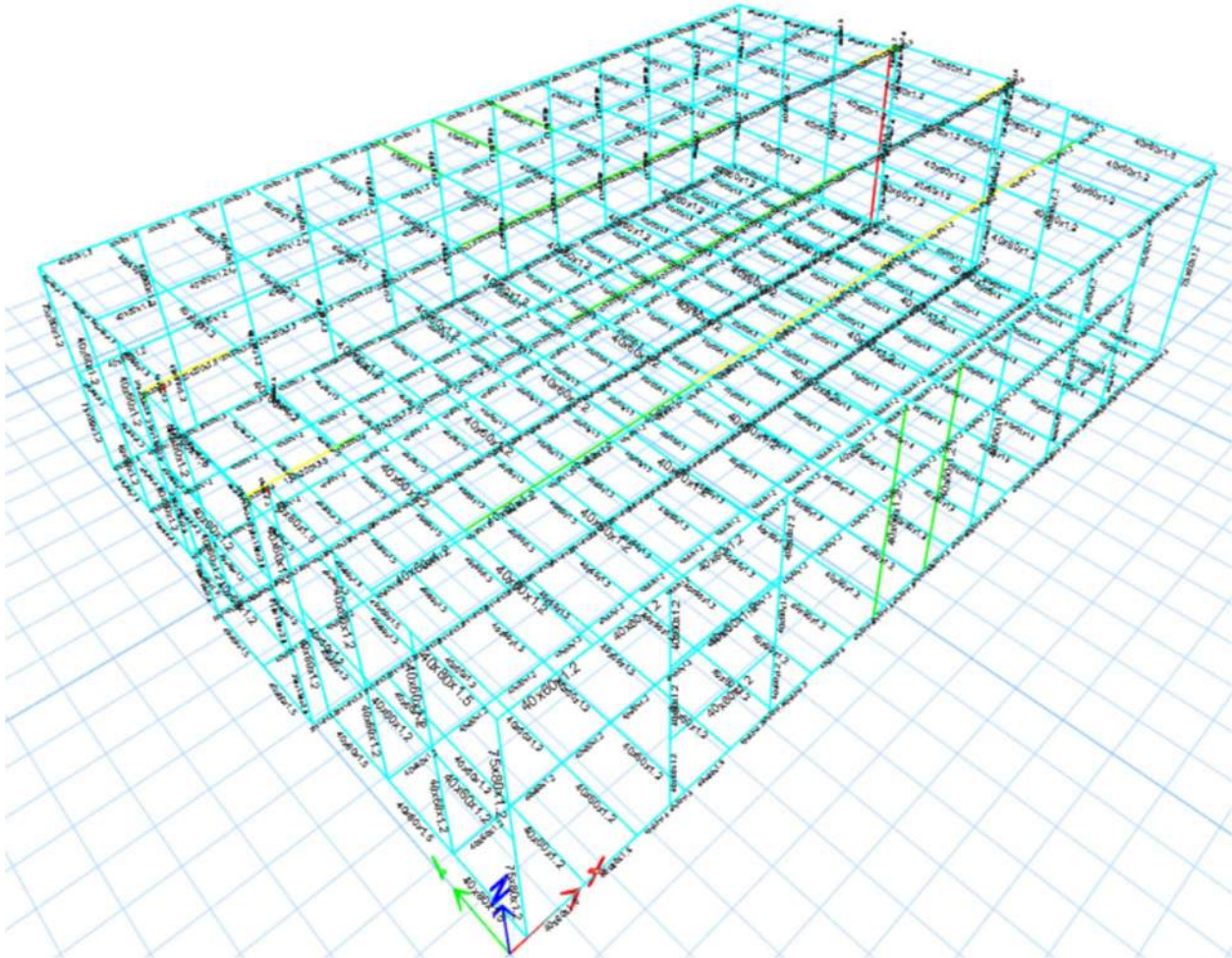
Material Damping Properties...

Time Dependent Properties...

OK

Cancel

Stress ratios of structural members with Q235 Material



RIGID CLICK FLOORING INSTALLATION INSTRUCTIONS

SUITABLE SURFACES

Lightly textured or porous surfaces; well-bonded solid floors; dry, clean well-cured concrete (cured for at least 60 days prior); wood floors with plywood on top. All surfaces must be clean and dust free. Can be installed over radiant heated floors (do not turn heat above 29° C or 85° F).

UNSUITABLE SURFACES

Rough, uneven surfaces including carpet and underlay. Rough, heavy textured and/or uneven surfaces may telegraph through the vinyl and distort the finished surface. This product is not suitable in rooms that could potentially flood or rooms that have damp concrete or saunas. Do not install this product in areas which are exposed to long term direct sunlight such as sun rooms or solariums.

PREPARATION

The rigid planks and tiles should be allowed to acclimatize at room temperature (approx 20 °C) for 48 hours prior to installation. Carefully check the floor for any defects before installation. Check that all BATCH NUMBERS and ITEM NUMBERS are the same and that you have purchased sufficient material to complete the job. Remove any traces of glue or residue from the previous flooring.

New concrete floors need to dry out for at least 60 days prior to installation. Wood plank floors require a plywood subfloor. All nail heads must be driven down below the surface. Securely nail all loose boards. Scrape, plane or fill uneven boards, holes or cracks using floor-leveling compound if subfloor is uneven - over 1/8 in (3.2 mm) within a span of 4ft (1.2 m). If installing over existing tile, use a floor leveling compound to skim coat grout lines. Make sure the floor is smooth, clean, and free of wax, grease, oil or dust and sealed as necessary before laying planks.

TOOLS AND SUPPLIES:

Utility knife, spacers, pencil, tape measure, ruler and safety goggles.

INSTALLATION:

Start in a corner by placing the first plank with the tongue side facing the wall. Use spacers along each wall to maintain an expansion space of 8-12 mm (5/16 in - 3/8 in) between the wall and the flooring. Diagram 1.

To attach the second plank, insert the end tongue into the end groove of the very first plank at an angle of approx. 15-20 degrees. When lowered, the plank will click into place. Line up edges carefully. The planks should be flat to the floor. Diagram 2.

Continue connecting the first row until you reach the last full plank. Fit the last plank by rotating the plank 180° with the pattern side upward, place beside row. Measure and mark, then using a ruler and utility knife, score the plank and snap off. Attach as described above. Diagram 3.

Begin the next row with the off cut piece from the previous row to stagger the pattern. Pieces should be a minimum of 20 cm (8 in) long and joint offset should be at least 40 cm (16 in). Diagram 4.

NOTE: It is faster to assemble planks into a new row at the ends and then attach the entire row to the previous row on the long sides. To start your second row, lay your first plank on the subfloor. Take your second plank, insert the end tongue into the end groove of the first plank at an angle of approx. 15-20 degrees. When lowered, the plank will click into place with light pressure. The planks should be flat to the floor. Make sure gaps are as small as possible. Continue assembling the planks this way until you have your second row complete.

To attach the second row to the first row, tilt and push the side tongue into the side groove of the first panel at an angle of approx. 15-20 degrees. Lower and click into place lining the edges up carefully. Continue laying remaining planks in this manner. Diagram 5.

To fit the last row, lay a plank on top of the previous row. With the tongue to the wall, lay another plank upside down on the one to be measured and use it as a ruler. Don't forget to allow room for spacers. Cut the plank and attach into position. Diagram 6.

Door frames and heating vents also require expansion room. First cut the plank to the correct length. Then place the cut plank next to its actual position and use a ruler to measure the areas to be cut out and mark them. Cut out the marked points allowing the necessary expansion distance on each side. Diagram 7.

You can trim door frames by turning a plank upside down and using a handsaw to cut away the necessary height so that planks slide easily under the frames. Diagram 8.

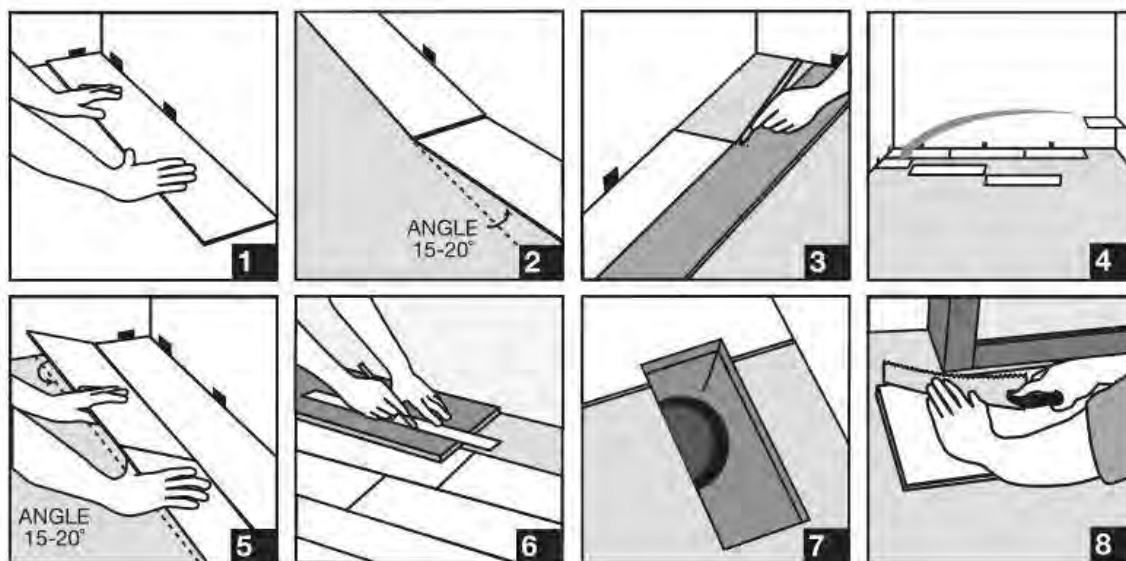
CARE AND MAINTENANCE

Sweep regularly to remove surface grit and dust. Use a damp cloth or mop to clean up any dirt and footprints but avoid using excessive moisture. All spills should be cleaned up immediately. CAUTION: Planks are slippery when wet.

Do not use a wet spray micro fiber mop. Never use wax, polish, abrasive cleaners or scouring agents as they may dull or distort the finish. High heels can damage floors. Use protective pads under furniture. Use doormats at entrance ways to protect floor from discoloring. Do not allow pets with unclipped nails to scratch or damage the floor.

Avoid exposure to direct sunlight for prolonged periods of time. Use drapes or blinds to minimize direct sunlight during peak sunlight hours.

It's a good idea to save a few planks in case of accidental damage. Planks can be replaced or repaired by a flooring professional.





ZHEJIANG KINGDOM NEW MATERIAL GROUP CO., LTD.

Technical sheet for SPC

Testing Performances

Property	Test Method/Standard	Result
Class	ASTM F3261	Class I, Type B, Grade 1, Backing Class B
Impact Insulation Class	ASTM E492-09 / ASTM E989-06	65
Residual Indentation:	ASTM F1914	PASS, <0.007 in.
Dimensional Stability	ASTM F2199-18	Passes, <0.2% / lin. ft.
Curling		Pass, <0.08 in.
Chemical Resistance	ASTM F925-13 & ASTM F1303-04(2014)	Rating 0: No change
Heat Color Stability:	ASTM F1514	PASS, < Δ8E
Light Color Stability:	ASTM F1515	PASS, < Δ8E
Static Load Limit:	ASTM F970	PASS, 250 lbs.
Critical Radiant Flux	ASTM E648 (NFPA 253)	Class I, >0.45 W/cm ²
Smoke Density	ASTM E662 (NFPA 258)	PASS, <450
Slip Resistance	ASTM C1028-07	>0.6 (dry 0.79. wet 0.72)
Soluble heavy metal	ASTM F 963-17	Not Detected
Phthalates	CPSC-CH-C1001-09.4	Not Detected
Effect of a Castor Chair	NALFA LF01-2011 Section 3.9	No visible damage
FloorScore		Certified
Water-Proof		100%, Lifetime
Virgin PVC		100%

Notes:

- * Technical changes reserved by Kingdomfloors.
- * Lt. Guarantee to kingdomfloors products

SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Product Name: PVC resilient flooring product under Kingdom floor
 Synonyms: SPC
 Recommended Use: Flooring
 Manufacturer Name: Vytec Floor Co.,Ltd
 Address: 55/9 MOO 7 THA BUNMEE
 SUBDISTRICT, KO CHAN DISTRICT,
 CHONBURI 20240
 Telephone: 090 978 3668
 Emergency Assistance: 090 978 3668

This document has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication standard, 29 Code of Federal Regulations (CFR) 1910.1200(g), Safety Data Sheets.

2. HAZARDS IDENTIFICATION

Hazards Description: None for product as sold. This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard in the form in which it is shipped.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization

Description: Thickness: 5-10mm

Hazardous ingredients: None

Composition	CAS#	Estimated % by Wt.
Polyvinyl Chloride	9002-86-2	25-28%
Dioctyl Terephthalate		0.8-1.2%
Calcium Carbonate	471-34-1	68-72%
Processing Aid	64754-90-1, 9003-54-7	1.5-2.5%
Lubricants	115-83-3, 9002-88-4	0.5-1%
Stabilizer	1592-23-0	2-3%
IXPE Foam	9002-88-4	0.1-0.5%

4. FIRST AID MEASURES

None for the product as-shipped. Downstream activities like sawing, cutting, and sanding can generate dust. To avoid health hazards during downstream activities, note the following measures.

Generated from Installation:

Dust Hazard: Inhalation of excessive amounts of dust may cause temporary upper respiratory irritation and/or congestion, irritation of the eyes and skin or asthma.

Inhalation: None for product as sold. Dust generated from installation operations may cause irritation to the respiratory tract. Prolonged and repeated inhalation of dust may lead to chronic respiratory irritation. Asthmatic conditions may be aggravated by uncontrolled airborne dust exposure.

Skin Contact: None for product as sold. Dust generated from installation operations may cause irritation of the skin.

Eye Contact: None for product as sold. Dust generated from installation operations may cause irritation of the eye.

Ingestion: Not an expected route of entry.

5. FIRE-FIGHTING MEASURES AND INFORMATION

Suitable extinguishing agents: Adjust the extinguishing measures based on the environment. CO₂, extinguishing powder, water spraying jet or alcohol steady foam.

Unsuitable fire extinguishing agent for safety reasons: Full jet of water; Cool closed containers with water spray.

LVT/WPC flooring is not an explosion hazard as-shipped. Sawing, cutting, sanding, or machining can result in by-product dust. Dust may present a strong to severe explosion hazard if a dust cloud contacts an ignition source.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Not applicable to product as-shipped. Do not breathe dust generated by from sawing, cutting, sanding, or machining. Such dust may be vacuumed or shoveled for recovery, removal, or disposal. A NIOSH approved respirator should be worn if dust exposure limits are exceeded.

Environmental measures: No extra measures necessary.

Procedures for cleaning /Absorption: Take up the substance mechanically. Dispose of the material as instructed.

See section 7, 8, and 13 for further information on safe handling, personal protective equipment, and disposal information.

7. HANDLING AND STORAGE

This product should be stored, handled, and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. Minimize dust generation and accumulation.

Storage:

Information for safe handling: No extra measures necessary to handle the product. Minimize dust generation and accumulation. Keep away from ignition source.

Requirements for storage rooms and containers: No special requirements.

Information for storage together with other products: Not necessary.

Further information for storage conditions: Dry storage.

Storage class: VCI-storage class: 10 – 13

VbF-class: Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical facilities: No further details. See item 7.

Ingredients with limit values that require monitoring at the workplace: The product does not contain relevant quantities of materials with workplace-related exposure limits.

DNELs: Not available

PNECs: Not available

Personal protection equipment:

General protection and hygiene measures: Wash your hands before breaks and after work. During work do not eat, drink, smoke or take snuff.

Work/Hygiene Practices: Clean up settled dust to avoid slippery areas and accumulation of combustible materials. Avoid or minimize practices that generate high air-borne dust particles.

Respiratory protection: Not required to handle product as-shipped. A NIOSH approved respirator should be worn when sawing, cutting, sanding, or machining.

With continuous mechanical treatment, a dust respirator is recommended.

Protection of hands: Not necessary.

Material of gloves: No gloves necessary.

Penetration time of the glove material: No gloves necessary.

Eye protection: With continuously mechanical treatment, eye protection glasses are recommended.

Body protection: Protective clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:

Form:	Firm
Color:	Various
Smell:	No Smell

Change in condition:

Melting point/Melting area:	Not available
Boiling point/Boiling area:	Not available
Flaming point:	Not available
Self-inflammability:	The product is not self-inflammable
Explosion danger:	The product is not explosion dangerous
Density: Not defined	
Solubility in / Miscibility with water:	Insoluble
pH-value:	Not applicable
Segregation coefficient (n-octanol/ water):	Not applicable
Viscosity:	Not applicable
Dynamic:	Not applicable

10. STABILITY AND REACTIVITY

Conditions to be avoided:	No dissolution when used for the intended purpose.
Dangerous reactions:	No dangerous reactions known.
Hazardous decomposition products:	No hazardous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Not applicable in as-shipped form. Wood dust has been evaluated by the International Agency for Research on Cancer (IARC) as group 1, carcinogenic to humans.	
Primary irritant effect:		
On the skin:	No irritation.	
On the eyes:	Irritation through dust particles is possible.	
Sensitizing:	No sensitizing effect known.	
Toxicokinetics, metabolism and distribution:	Not available	
Acute effects (acute toxicity, irritation and corrosivity):	Not available	
Repeated dose toxicity:	Not available	
CMR effects (carcinogenicity, mutagenicity, and toxicity for reproduction):	Not available	

12. ECOLOGICAL INFORMATION

Information about elimination (persistence and degradability):	Not available
Behavior in environmental system:	
Mobility and bioaccumulation potential:	Not available
Ecotoxic effects:	

Aquatic toxicity:
General notes:
PBT assessments:

Not available
No water endangerment known
Not available

13. DISPOSAL CONSIDERATIONS

Follow applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

Not regulated as hazardous material by the U.S. Department of Transportation.

15. REGULATORY INFORMATION

Not a controlled product

16. ADDITIONAL INFORMATION

The contents and format of this MSDS/SDS are in accordance with REGULATION(EC) No 1907/2006, EU Commission Directive 1999/45/EC, 67/548/EEC.

DISCLAIMER OF LIABILITY

The information in this MSDS/SDS was obtained from sources that we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use, or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling., storage, use, or disposal of the product. This MSDS/SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS/SDS information may not be applicable.

Date of Preparation: December 10, 2025

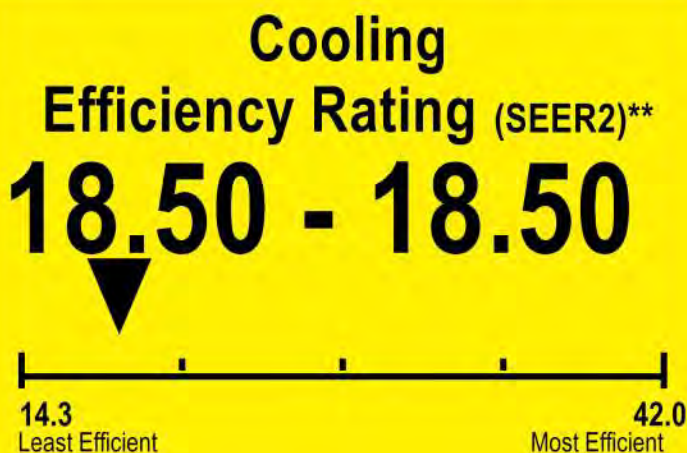
U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Heat Pump
Cooling and Heating
Split System

Bestcold
Model MYUA36NA23BCH19-O



Range of Similar Models
** Seasonal Energy Efficiency Ratio 2



Range of Similar Models
** Heating Seasonal Performance Factor 2

▼ This system's efficiency ratings depend on the coil your contractor installs with this unit. The heating efficiency rating varies slightly in different geographic regions. Ask your contractor for details.

For energy cost info, visit
productinfo.energy.gov

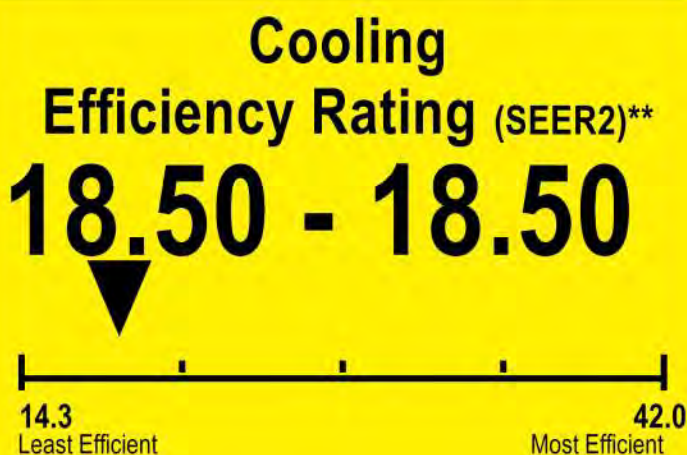
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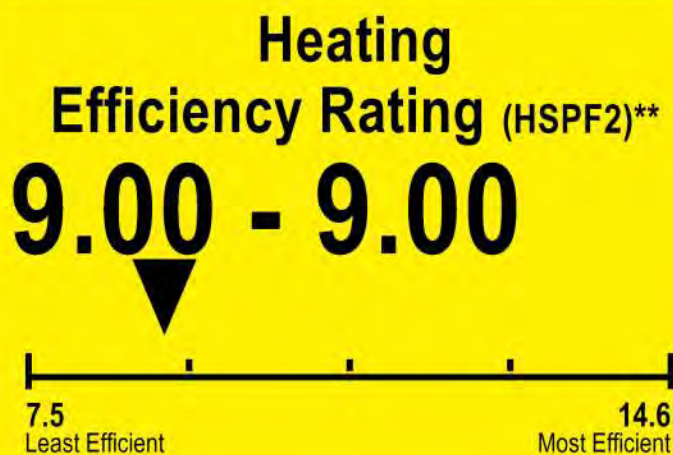
ENERGYGUIDE

Heat Pump
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Bestcold
Model MYUA36NA23BCH19-O



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** Seasonal Energy Efficiency Ratio 2



Range of Similar Models
** Heating Seasonal Performance Factor 2

▼ This system's efficiency ratings depend on the coil your contractor installs with this unit. The heating efficiency rating varies slightly in different geographic regions. Ask your contractor for details.

For energy cost info, visit
productinfo.energy.gov



MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
Province, China
+86 15011966448

Compliance Assurance Program For Factory Built Housing (FHB)

Cal. Code Regs. Tit. 25, § 3033 - Quality Assurance Manual Requirements

QUALITY ASSURANCE PROGRAM OVERSIGHT

Casden Development, LLC

RESPONSIBLE OFFICER / QA PROGRAM MANAGER CONTACT:

Arik Casden
+1 (310) 295-0927
Arik@casdendevlopment.com

MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd.
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town,
Gaoming District, Foshan City, Guangdong Province, China
+86 15011966448

FACTORY GENERAL MANAGER / QA CONTACT:

Zheng Chaorong
+86 15011966448
gzhhouse@gmail.com

CA-FBH Third Party:

Design Approval Agency (DAA): Intertek
Quality Assurance / Inspection Agency: Intertek

Responsible Officer / Quality Assurance Program Manager approval:

This Quality Assurance Manual has been reviewed and approved.

Approved By: (Name / Title)	Arik Casden, Responsible Officer / Quality Assurance Program Manager
--------------------------------	--

MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
Province, China

Quality Compliance Program

Signature:	<i>Arik Casden</i>	Date:	March 16, 2026
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MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
 Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
 Province, China

Quality Compliance Program

Revision History

DATE	DOCUMENT#	VERSION REVISION	COMMENTS	APPROVED BY
March 16, 2026	QA Manual	1.0	Initial Draft Issue	Arik Casden
March 19, 2026	QA Manual	1.1	- Added authority independence statement to org. chart. - Changed QC to report to Arik Casden - Added China factory name address and personnel to org. chart and Plant information area.	Arik Casden
March 25, 2026	QA Manual	2	- Major revision to define and differentiate responsibilities between Casden Development and the Foshan Shenglei Integrated Housing Technology Co., Ltd. - Added a Line Traveler to the forms section	Arik Casden

MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
 Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
 Province, China

Quality Compliance Program

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MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
 Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
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MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
 Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
 Province, China

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MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
Province, China

Quality Compliance Program

1. PROGRAM STRUCTURE AND USE OF CONTRACT MANUFACTURING

Casden Development is the approval holder for CA code compliant structures to be sold for use in the state of CA-FBH program that are addressed by this manual. The structures are manufactured by Foshan Shenglei Integrated Housing Technology Co., Ltd. (a contracted factory-built housing manufacturer) located Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong Province, China.

Foshan Shenglei Integrated Housing Technology Co., Ltd. is responsible for establishing and maintaining the approved quality program in compliance with the California FBH Program applicable to units sold or offered for sale in California by Casden Development.

The contracted factory is responsible for the day-to-day production, workmanship, internal inspections, and implementation of the approved manufacturing and quality control procedures at the plant.

Intertek serves as the approved third-party Quality Assurance Agency responsible for independent in-plant inspections and related reporting/certification activities required by California.

MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
Province, China

Quality Compliance Program

2. CASDEN DEVELOPMENT QUALITY POLICY

Casden Development is committed to maintaining an effective quality assurance program for CA code compliant structures to be sold for use in the state of CA-FBH program. The code compliant units are manufactured by Foshan Shenglei Integrated Housing Technology Co., Ltd. under approved plans and approved procedures. Foshan Shenglei Integrated Housing Technology Co., Ltd. is responsible for day-to-day production and internal factory quality control.

Casden Development, through the Responsible Officer / Quality Assurance Program Manager, is responsible for program oversight, maintenance of this manual, coordination with Intertek, and requiring correction of quality deficiencies affecting compliance. Intertek performs independent third-party quality assurance activities as required by California. The objective of this program is to ensure that units sold or offered for sale in California conform to approved plans, applicable requirements, and required inspection and certification controls.

MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
Province, China

Quality Compliance Program

3. ORGANIZATIONAL STRUCTURE

3.1. ORGANIZATIONAL STRUCTURE AND REPORTING RELATIONSHIPS

Casden Development Program Oversight

Arik Casden is the Responsible Officer / Quality Assurance Program Manager

Contract Manufacturing Plant Foshan Shenglei Integrated Housing Technology Co., Ltd.– China

- Factory general manager
- Production manager
- Technical manager
- Factory quality control manager
- Quality control inspectors
- Production Supervisor(s)
- Technical engineer / designer
- Production work crews

3.2. ORGANIZATIONAL CHART PROCEDURE

The organization chart shall clearly distinguish:

- Casden Development program oversight roles
- Factory management and factory internal quality control roles

Solid reporting lines shall be used within the factory's internal management structure. Dotted or non-managerial coordination lines may be used to show coordination between Casden Development and the factory, and between the factory and Intertek. The chart shall not show Intertek as part of the factory production management chain.

The organization chart and assigned personnel shall be reviewed and updated whenever there is a significant organizational change and at least annually.

MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
Province, China

Quality Compliance Program

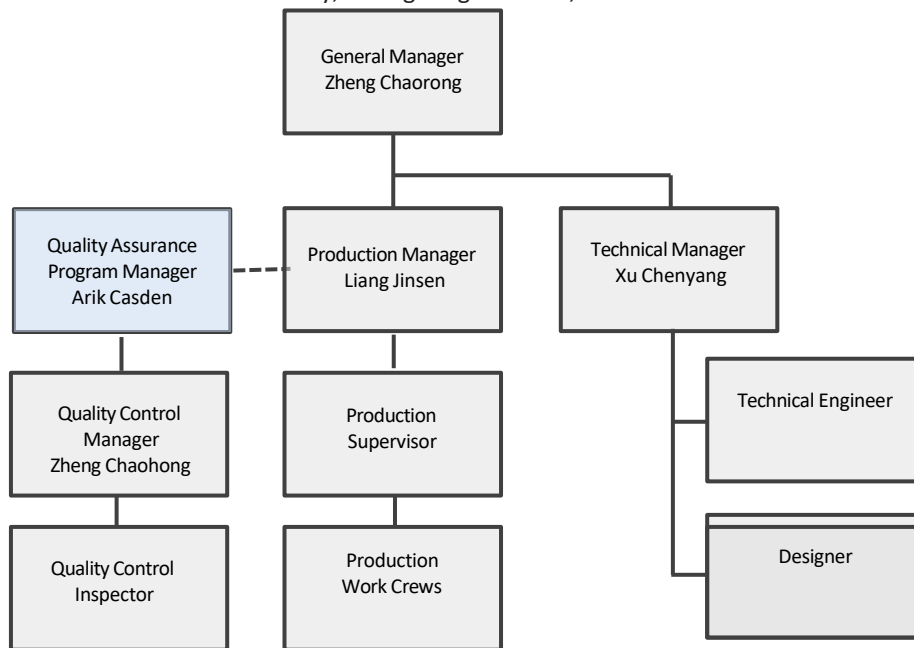
3.3. ORGANIZATION CHART

Figure 3-1

ORGANIZATION CHART

FBH Manufacturer

Foshan Shenglei Integrated Housing Technology Co., Ltd.
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District,
Foshan City, Guangdong Province, China



Blue shaded box indicates Casden Development personnel

Grey shaded box indicates Foshan Shenglei Integrated Housing Technology Co., Ltd. personnel

MANUFACTURER

Foshan Shenglei Integrated Housing Technology Co., Ltd
Workshop 5 (Workshop A-B), No.20 Renjing Road, Yanghe Town, Gaoming District, Foshan City, Guangdong
Province, China

Quality Compliance Program

4. MANAGEMENT RESPONSIBILITY

4.1. OVERVIEW

Responsibilities for quality are established so that compliance with approved plans, California Factory-Built Housing requirements, this Quality Assurance Manual, and applicable inspection and certification requirements is clearly assigned and not left to informal interpretation. Casden Development, the contract manufacturing plant, and Intertek each have distinct responsibilities within the overall quality system.

4.2. QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

Each job position has specific duties, responsibilities, and authorities defined as follows.

4.2.1. RESPONSIBLE OFFICER / QUALITY ASSURANCE PROGRAM MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

Arik Casden, on behalf of Casden Development, is the Responsible Officer and Quality Assurance Program Manager for the California Factory-Built Housing Quality Assurance Program.

Regardless of other duties, the Responsible Officer / Quality Assurance Program Manager is responsible for:

- Establishing, approving, and maintaining the Quality Assurance Manual and associated quality procedures applicable to CA code compliant structures to be sold for use in the state of CA-FBH program.
- Ensuring that approved plans, specifications, identification procedures, inspection procedures, records, and forms are established and maintained.
- Ensuring that the contracted manufacturing facility is qualified and contractually required to implement the approved manufacturing and quality control procedures.
- Ensuring that an agreement with the approved third-party Quality Assurance Agency is in force and effect as required for plan approval.
- Coordinating with the factory and Intertek on implementation of the approved quality program.
- Reviewing quality system performance, nonconformances, inspection results, corrective actions, and needed improvements.
- Ensuring that quality records, insignia-use records, and required compliance documentation are maintained.
- Ensuring that significant quality issues affecting compliance are addressed and escalated as necessary.

The Responsible Officer / Quality Assurance Program Manager has authority to require corrective action, suspend release of nonconforming units, require revision of quality

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procedures, and require the factory to address quality deficiencies affecting compliance with approved plans or California requirements.

This role is programmatic and administrative in nature and does not replace the factory's responsibility for daily plant management and internal quality control.

4.2.2. FACTORY GENERAL MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Factory General Manager of the contracted manufacturing plant in China is responsible for day-to-day manufacturing operations and implementation of the approved production and internal quality control procedures at the plant.

Regardless of other duties, the Factory General Manager is responsible for:

- Ensuring that production is carried out in accordance with approved plans, specifications, and this Quality Assurance Manual.
- Assigning qualified production, technical, and quality control personnel.
- Providing resources, facilities, equipment, and support necessary for proper manufacturing and inspection.
- Supporting internal quality control inspections and third-party inspections performed by Intertek.
- Ensuring that discrepancies identified by factory QC personnel or Intertek are properly controlled, corrected, and documented.
- Preventing shipment or release of units that do not meet approved requirements.

The Factory General Manager has authority to stop production, hold nonconforming work, reassign personnel, and direct corrective action within the factory.

4.2.3. FACTORY QUALITY CONTROL MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Factory Quality Control Manager is the person responsible for internal factory quality control implementation.

Regardless of other duties, the Factory Quality Control Manager is responsible for:

- Incoming material and component verification.
- In-process inspection and monitoring of manufacturing activities.
- Final inspection of units prior to release for third-party approval and shipment.
- Identification, segregation, documentation, and control of nonconforming work.
- Maintenance of inspection and test records for each unit.
- Verification of correction and closure of internal quality issues.
- Coordination with Intertek during required third-party in-plant inspections.
- Maintaining traceability between units, approved plans, inspection records, and identification markings.

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The Factory Quality Control Manager has authority to stop work, place items or units on hold, reject nonconforming work, and require corrective action before work continues.

4.2.4. PRODUCTION MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Production Manager is responsible for coordinating production activities to ensure that work proceeds in accordance with approved plans, process controls, and production schedules.

The Production Manager is responsible for:

- Ensuring work is performed in the proper manufacturing sequence.
- Coordinating production resources and supervision.
- Supporting quality hold points and inspection access.
- Preventing work from bypassing required inspections or approvals.
- Ensuring that corrected work is resubmitted for required inspection when applicable.

4.2.5. TECHNICAL MANAGER / TECHNICAL ENGINEER / DESIGNER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

Technical personnel are responsible for ensuring that production information used at the plant matches the approved plans and approved revisions applicable to the unit being manufactured.

Technical responsibilities include:

- Control of approved drawings, specifications, and revisions
- Support for production clarifications
- Coordination of technical corrections
- Ensuring that unit configuration, model, floor plan, and design criteria correspond to approved documents and unit identification records

4.2.6. QUALITY CONTROL INSPECTORS: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

Factory Quality Control Inspectors are responsible for performing the internal inspections assigned by the factory quality control program, documenting results, identifying discrepancies, and verifying completion of corrective actions within their authorized scope.

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5. FACTORY BUILT HOUSING PROCESSES

5.1. MANUFACTURING PLANT FACILITY INFORMATION

Foshan Shenglei Integrated Housing Technology Co.,
Ltd.

Contact Name: Zheng Chaorong

Job Title: General Manager

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Guangdong Province, China

5.2. MANUFACTURING PLANT LAYOUT

A schematic layout showing the physical arrangement of the manufacturing operations and clearly identified inspection and testing stations for mandatory inspections. The layout includes clearly marked zones for:

- Raw materials and storage area
- Welding workshop
- Painting workshop
- Installation area
- Inspection and Testing Area
- Storage areas for completed and Loading Area

5.2.1. FLOOR PLAN

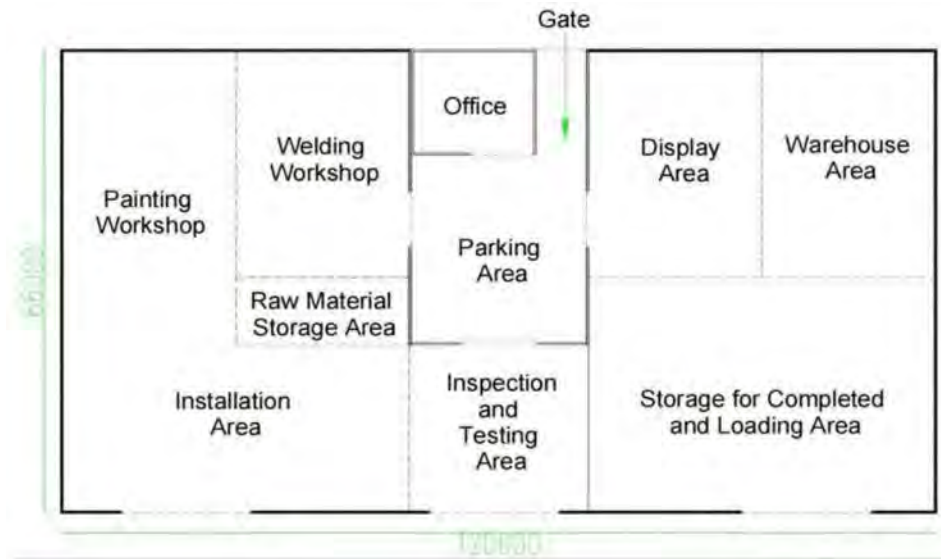
Diagram 1 includes a schematic plan of the factory-built housing operation showing location and testing stations for mandatory inspections.

Diagram 1.

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5.3. FACTORY BUILT HOUSING PROCESSES

The contracted manufacturing plant in China, Foshan Shenglei Integrated Housing Technology Co., Ltd., shall manufacture each Factory-Built Housing unit in accordance with the approved plans, California approved specifications, this Quality Assurance Manual, and the factory's-controlled production and inspection procedures. The manufacturing process shall follow an established sequence so that work is performed in a controlled manner, inspections are completed at required stages, and nonconforming work is identified before it is concealed, incorporated into later work, or released for shipment.

At minimum, the factory-built housing manufacturing process shall include the following controlled stages:

5.3.1. INITIAL ORDER REVIEW AND TECHNICAL PREPARATION

Before production is released, the factory shall confirm customer requirements, applicable unit dimensions, internal layout, structural configuration, insulation and waterproofing requirements, and approved design details. The factory technical staff shall complete drawing review and technical briefing activities so that production personnel understand the current approved requirements, critical dimensions, workmanship expectations, inspection points, and any special California compliance requirements applicable to the unit.

The initial order review and technical preparation stage shall include, as applicable:

- Confirmation of approved drawings and revision status;
- Confirmation of structural framing requirements;

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- Review of expansion or movable wall details where applicable;
- Review of plumbing, electrical, and enclosure requirements;
- Review of required inspection points and acceptance criteria; and
- Formal release of the unit to production only after technical requirements have been communicated to the responsible production and quality control personnel.

5.3.2. INCOMING MATERIAL RECEIPT, INSPECTION, AND RELEASE

All incoming materials and components shall be received, identified, inspected, and accepted prior to release for use in manufacturing. Materials and components that do not conform to approved requirements shall be segregated and prevented from use until properly dispositioned.

Incoming material inspection shall include, as applicable to the product received:

- Verification against purchase documents and approved specifications;
- Review of certificates, conformity documentation, or product identification;
- Verification of dimensions, type, grade, and configuration;
- Visual inspection for rust, deformation, cracking, damage, contamination, deterioration, or shelf-life expiration; and
- Verification that the material is suitable for the intended application in the approved unit design.

Core material categories subject to incoming inspection shall include, as applicable:

- Main steel materials, including channel steel, square tube, and steel plate;
- Enclosure materials, including wall panels, insulation materials, and sheathing or finish materials;
- Hardware accessories, including bolts, hinges, fasteners, seals, and connection hardware;
- Waterproofing and sealing materials, including sealants, waterproof membranes, and waterproof strips;
- Auxiliary materials, including paint, electrical wires, conduit, water piping, drainage piping, and similar production materials; and
- Expansion mechanism components and related moving or connecting parts where the unit design includes expandable features.

5.3.3. MAIN STEEL PROCESSING

Main steel processing shall be performed in accordance with approved drawings and controlled fabrication practices. This stage may include cutting, bending, punching, corner cutting, grinding, burr removal, rust removal, and other required preparation of steel members used in the frame and related structural assemblies.

Quality control inspections during steel processing shall verify:

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- Cut dimensions;
- Bending angles and formed geometry;
- Location and size of holes and cutouts;
- Compatibility of fabricated parts with mating assemblies;
- Removal of burrs, sharp edges, and surface conditions that would adversely affect fit-up, welding, or coating; and
- Conformance to approved fabrication requirements before parts are released to assembly.

5.3.4. MAIN FRAME WELDING AND ASSEMBLY

The bottom frame, top frame, columns, reinforcement members, and related structural components shall be welded and assembled in accordance with the approved plans and controlled work instructions. Welded assemblies shall be inspected before subsequent operations conceal or reduce access to the welds or frame geometry.

Quality control inspections during frame welding and assembly shall verify, as applicable:

- Correct member type, size, and location;
- Fit-up and alignment of mating parts;
- Weld quality, including freedom from unacceptable cracks, porosity, slag inclusion, undercut, lack of fusion, or other visible weld defects;
- Frame butt-joint accuracy and absence of unacceptable offset;
- Levelness, straightness, squareness, and verticality of the frame; and
- Overall structural robustness and readiness for subsequent manufacturing operations.

5.3.5. SURFACE PREPARATION AND COATING

Where coating is required, surfaces shall be cleaned and prepared before primer and finish coating are applied. Coating materials shall be those specified or approved for the application, and coating operations shall be carried out using controlled methods that achieve the required protective performance.

Quality control inspections during surface preparation and coating shall verify:

- Surface cleanliness and readiness for coating;
- Correct coating materials and application sequence;
- Uniformity of primer and finish coat application;
- Absence of missed areas, excessive runs, blistering, peeling, or other coating defects;
- Coating thickness where thickness verification is required; and
- Satisfactory drying or curing before the coated components are released to the next stage.

5.3.6. WALL PANEL, DOOR, WINDOW, AND CEILING INSTALLATION

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Fixed wall assemblies, movable or expandable wall assemblies where applicable, ceiling components, doors, windows, and related opening preparations shall be installed in accordance with approved details and controlled assembly procedures.

Quality control inspections during wall, opening, and ceiling installation shall verify:

- Proper material type and location;
- Flatness and fit of enclosure materials;
- Splicing and joint gap acceptability;
- Correct interface between fixed and movable or expandable portions of the unit;
- Proper installation, anchorage, and operation of doors and windows; and
- Readiness of the assembly for sealing and waterproofing.

5.3.7. SEALING AND WATERPROOFING

Sealing and waterproofing shall be applied to joints, openings, top and bottom interfaces, and other required locations to provide the required weather resistance and serviceability of the unit. Special attention shall be given to interfaces affected by movement, expansion, contraction, transport, or installation conditions.

Quality control inspections during sealing and waterproofing shall verify:

- Sealant continuity and fullness;
- Proper installation of waterproofing strips, membranes, or related materials;
- Complete sealing around doors, windows, and penetrations;
- Proper treatment of expansion or movement-related gaps where applicable; and
- Absence of visible gaps, loose material, missed areas, or other conditions that would impair performance.

5.3.8. INTERIOR, PLUMBING, AND ELECTRICAL INSTALLATION

Interior finish work, plumbing installation, electrical installation, and related component installation shall be performed in accordance with approved plans, approved specifications, code requirements applicable to the approved design, and controlled factory work instructions. Where the unit design includes movement or expansion features, installations shall accommodate those conditions without damage to systems or loss of function.

Quality control inspections during interior, plumbing, and electrical installation shall verify, as applicable:

- Routing, support, and protection of piping and electrical wiring;
- Conformance of installed materials and components to the approved design;
- Adequate space and detailing at joints or interfaces affected by movement;
- Proper connection and sealing at plumbing and electrical interfaces;
- Installation of fixtures, devices, and equipment in the correct location; and

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- Satisfactory completion of required utility and functional checks.

5.3.9. COMPLETE UNIT INSPECTION, RECTIFICATION, AND RELEASE

Each completed unit shall undergo final internal factory inspection before release for third-party Quality Assurance Agency inspection, packaging, shipment, or storage as a completed unit. Final internal inspection shall verify that the unit complies with approved requirements, that required in-process inspections have been completed, and that all identified discrepancies have been corrected or otherwise properly dispositioned.

Complete unit inspection shall include, as applicable:

- Structural review of the main frame and assembled unit;
- Confirmation that welds, connectors, and locking features are complete and acceptable;
- Review of door and window operation;
- Review of sealing and waterproofing completion;
- Verification of plumbing and electrical completion and required tests;
- Visual review of surface condition, markings, and overall workmanship;
- Verification that required records are complete and traceable to the unit; and
- Confirmation that the unit is suitable for presentation to Intertek for required third-party inspection activities and, when accepted, for packaging, warehousing, and shipment.

No unit shall be released as complete until required internal inspections are complete, identified nonconformances have been addressed, and the unit is in a condition suitable for required third-party Quality Assurance Agency activities.

5.4. PROCESS CONTROL STANDARDS

The factory shall maintain controlled production methods so that each Housing unit to be sold in California is manufactured in accordance with California Factory-Built Housing Program standards, approved plans, approved specifications, this Quality Assurance Manual, and applicable approved procedures. Process control shall be implemented at the point of work and shall include document control, material control, workmanship control, inspection checkpoints, nonconformance control, and release controls.

5.4.1. PRODUCTION RELEASE CONTROLS

Production shall not begin on a unit until the current approved drawings, specifications, and applicable work instructions are available at the point of use. Obsolete, superseded, or unapproved documents shall not be used for production. The technical review and production briefing required for the unit shall be completed before work is released to the shop.

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5.4.2. CONTROL OF WORK SEQUENCE

Work shall proceed in the established manufacturing sequence unless an approved change is made by authorized technical or quality personnel. Work shall not advance to the next stage when acceptance of the prior stage is required and has not been completed.

5.4.3. IN-PROCESS INSPECTION HOLD POINTS

The factory shall maintain required inspection points during production so that quality characteristics are verified before they are concealed, incorporated into later work, or made inaccessible for inspection. At minimum, required inspection points shall include, as applicable:

- Incoming material acceptance;
- Steel processing verification;
- Frame welding and structural assembly verification;
- Coating verification where coatings are required;
- Wall, opening, and ceiling installation verification;
- Sealing and waterproofing verification;
- Plumbing and electrical installation verification; and
- Final complete-unit inspection.

Where required by the approved program or coordination with Intertek, work shall be held at designated stages for third-party observation, verification, or release before concealment or progression.

5.4.4. WORKMANSHIP AND ACCEPTANCE CONTROLS

Production personnel shall perform work only in accordance with approved drawings, approved procedures, applicable work instructions, and specified workmanship requirements. The factory Quality Control Manager and assigned quality control inspectors shall monitor workmanship and verify conformance to required acceptance criteria during production.

5.4.5. NONCONFORMING WORK CONTROLS

Nonconforming materials, components, assemblies, and completed work shall be identified, segregated, documented, and controlled to prevent unintended use, concealment, shipment, or release. Corrections and rework shall be performed in a controlled manner. Repaired or corrected work shall be reinspected before release to the next stage or final acceptance.

5.4.6. TRACEABILITY AND RECORD CONTROLS DURING PRODUCTION

Inspection and production records shall be traceable to the applicable unit, lot, batch, or material group as appropriate to the type of item being controlled. The factory shall maintain sufficient identification and record linkage so that incoming materials, in-process inspections,

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corrective actions, final inspection results, and release status can be associated with the affected unit.

5.4.7. PROTECTION OF WORK IN PROCESS AND COMPLETED WORK

Materials, components, work in process, and completed units shall be protected from damage, contamination, corrosion, deformation, moisture intrusion, and other adverse conditions that could impair compliance. Protective measures shall be appropriate to the material and stage of manufacture and shall continue through packaging, storage, handling, and shipment.

5.4.8. FINAL RELEASE CONTROLS

A completed unit shall not be released for shipment, storage as a finished unit, or certification-related processing until:

- Required internal inspections have been completed;
- Identified discrepancies have been corrected or otherwise properly dispositioned;
- Required records are complete;
- The unit has been made available for required third-party Quality Assurance Agency activities; and
- The unit is determined acceptable for release under the approved quality program.

5.5. TESTING EQUIPMENT CONTROLS

5.5.1. EQUIPMENT CONTROL, MAINTENANCE, AND CALIBRATION PROCEDURE

Purpose:

To ensure that measuring, inspection, and test equipment used to verify quality characteristics of California Factory-Built Housing units is properly selected, maintained, calibrated or otherwise verified as appropriate, and controlled so that inspection and test results are reliable.

Procedure:

The factory shall identify and control the measuring, inspection, and test equipment used for receiving inspection, in-process inspection, final inspection, and required testing of factory-built housing units. Equipment subject to this section includes equipment used to verify acceptance-related characteristics, dimensions, alignment, coating application, fit, function, and utility system performance.

Controlled equipment may include, as applicable:

- Dimensional measuring devices;
- Squares, levels, and alignment verification devices;
- Coating thickness gauges, where used;

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- Electrical test devices, where used;
- Pressure, leak, or other plumbing test devices, where used; and
- Other inspection or test devices used to determine conformance of materials, components, assemblies, or completed units.

5.5.2. SETUP AND USE OF TESTING DEVICES

The Production Supervisor or other qualified person shall ensure that testing and inspection devices are set up, adjusted, used, and maintained in accordance with the equipment manufacturer's instructions, approved procedures, or other recognized verification methods applicable to the device.

Only personnel trained in the setup, use, and, where applicable, calibration or verification of the equipment shall be authorized to perform these functions.

5.5.3. EQUIPMENT CONTROL, MAINTENANCE, AND CALIBRATION REQUIREMENTS

The Quality Assurance Program Manager shall identify, for each type of controlled measuring, inspection, or test equipment, as applicable:

- The type of equipment and intended use;
- Any restrictions or limitations on use;
- The required maintenance method and interval;
- The required calibration or verification method and interval, where applicable;
- Any acceptance tolerance or required performance standard; and
- The conditions requiring recalibration, reverification, repair, replacement, or removal from service.

The Production Supervisor shall ensure that controlled measuring, inspection, and test equipment is maintained in serviceable condition and is calibrated or otherwise verified at established intervals appropriate to the equipment type and its intended use.

Where applicable, calibration or verification shall be performed using standards, reference devices, manufacturer procedures, or methods traceable to recognized measurement standards.

5.5.4. EQUIPMENT MAINTENANCE AND CALIBRATION

Measuring, inspection, and test equipment used to accept or reject materials, verify process conformance, or determine final unit acceptability shall be calibrated or otherwise verified at intervals established by the factory's-controlled equipment log, the equipment manufacturer's recommendations, or documented internal procedures.

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Damaged, defective, malfunctioning, or suspect equipment shall be removed from service until repaired, recalibrated, reverified, or replaced, as appropriate. Equipment that has been repaired shall not be returned to service until its acceptable operating condition has been confirmed.

5.5.5. MAINTENANCE AND CALIBRATION IDENTIFICATION

Each item of controlled equipment shall be identified by a label, tag, log entry, or other controlled method showing its current status. Status identification shall indicate, as applicable:

- The equipment identification or serial number;
- The date of last calibration, verification, or maintenance;
- The due date for the next required action; and
- The current service status.

The Production Supervisor shall ensure that the identification status on the equipment matches the status shown on the Controlled Equipment Calibration Plan and Log or equivalent controlled record.

5.5.6. VERIFICATION OF EQUIPMENT STATUS PRIOR TO USE

Before use, the Production Supervisor or other qualified inspection or test personnel shall verify that the controlled equipment is in suitable working condition and is within its required maintenance, calibration, or verification interval.

Depending on the equipment type, this verification may include:

- Visual condition check;
- Functional check;
- Zero or baseline confirmation;
- Calibration status check;
- Verification against a reference standard or known value; and
- Confirmation that the equipment is appropriate for the required inspection or test.

5.5.7. OUT-OF-TOLERANCE OR UNRELIABLE EQUIPMENT

Equipment is considered out of tolerance or unreliable when it fails calibration or verification, does not meet the manufacturer's published performance requirements, is damaged, or otherwise cannot be relied upon to provide accurate results.

Equipment found to be out of tolerance or unreliable shall be immediately removed from service and clearly identified to prevent use. When such equipment has been used for acceptance-related inspection or testing, the Quality Assurance Program Manager shall evaluate whether prior inspection or test results may have been affected and shall determine whether reinspection or retesting is required.

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5.5.8. MAINTENANCE AND CALIBRATION RECORDS

A record of all controlled measuring, inspection, and test equipment shall be maintained on the Controlled Equipment Calibration Plan and Log or equivalent controlled record included in the Standard Operating Procedures and Forms section of this Manual.

At minimum, the controlled equipment record shall include, as applicable:

- Equipment type;
- Equipment identification or serial number;
- Intended use;
- Calibration or verification frequency;
- Required tolerance or acceptance basis;
- Date of last calibration, verification, or maintenance;
- Next due date; and
- Reference standard, method, service provider, or procedure used.

Calibration, verification, maintenance, repair, and status records shall be controlled and maintained in accordance with the Document Control procedures.

5.5.9. CALIBRATION SCHEDULE

The Production Supervisor shall maintain a schedule for all controlled measuring, inspection, and test equipment using the next due date shown on the Controlled Equipment Calibration Plan and Log or equivalent record. The Quality Assurance Program Manager shall review the equipment control records at least annually to verify that required maintenance, calibration, and verification activities are being completed and recorded.

5.6. CONTROLLED EQUIPMENT AND MATERIAL PRODUCT USE

All production equipment, measuring equipment, testing devices, materials, and installed products used in the manufacture of CA code compliant structures to be sold for use in the state of CA-FBH program shall be suitable for their intended use and used only in accordance with approved requirements, manufacturer instructions where applicable, and established factory procedures.

The Production Manager and Factory Quality Control Manager shall ensure that:

- Only approved and accepted materials are released for use in production;
- Only properly maintained and, where applicable, calibrated equipment is used for measuring, testing, or inspection activities affecting quality;
- Personnel use current product data, work instructions, installation requirements, and approved drawings applicable to the work being performed;
- Materials subject to shelf-life, environmental, or handling limitations are used only within those limitations;

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- Materials or equipment that are damaged, defective, expired, malfunctioning, or otherwise unsuitable are identified and removed from service or segregated from acceptable stock; and
- Substitution of materials, components, or methods affecting approved unit compliance is not permitted unless reviewed and approved through the applicable controlled process.

Controlled use applies to, at minimum, the following:

- Structural steel and related fabricated members;
- Welding consumables and welding-related equipment;
- Coating and surface treatment materials;
- Enclosure materials and insulation products;
- Sealants, membranes, waterproofing strips, and related weatherproofing materials;
- Electrical wires, fittings, devices, and accessories;
- Plumbing pipes, fittings, fixtures, and accessories;
- Doors, windows, hardware, and connection accessories; and
- Measuring, inspection, and test devices used to verify conformance.

Equipment and materials found to be out of compliance with usage requirements shall not be used until the condition has been corrected and acceptance for use has been re-established.

5.7. MATERIAL CONTROL PROCEDURE

Purpose:

To ensure that all materials and components used in the manufacture of CA code compliant structures to be sold for use in the state of CA-FBH program conform to approved requirements, remain identifiable and protected through storage and handling, and are not released for use unless accepted for the intended application.

Procedure:

All materials and components shall be subject to controlled receipt, inspection, storage, issuance, use, and nonconformance control. The material control system shall prevent unapproved, damaged, deteriorated, expired, or otherwise unsuitable items from being incorporated into a unit.

5.7.1. MATERIAL RECEIPT AND VERIFICATION

Upon receipt, materials and components shall be checked against purchase documents, approved specifications, and any applicable certificates or supplier documentation. Receiving verification shall confirm, as applicable:

- Item identity and description;

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- Quantity and condition;
- Size, grade, model, or specification;
- Traceability information where required;
- Certificate or conformity documentation where required; and
- Absence of visible damage, deterioration, contamination, or other nonconforming conditions.

5.7.2. INCOMING INSPECTION BY MATERIAL TYPE

Incoming inspection shall be performed as applicable to the type of material received.

Inspection categories shall include, at minimum when applicable to the unit design:

- Main steel materials;
- Enclosure materials;
- Hardware accessories;
- Waterproofing and sealing materials;
- Auxiliary materials such as paint, wires, pipes, and related items; and
- Expansion mechanism parts and related movement components where applicable.

The level of inspection shall be sufficient to verify that the received material is acceptable for its intended use in the approved unit.

5.7.3. ACCEPTANCE, REJECTION, AND QUARANTINE

Accepted materials shall be identified and released to stock or point-of-use storage. Rejected, suspect, or conditionally held materials shall be clearly identified and physically segregated in a designated hold or quarantine area to prevent inadvertent use. Unqualified materials shall be returned, exchanged, reworked, or otherwise dispositioned in accordance with the nonconformance control process.

5.7.4. STORAGE AND PRESERVATION

Materials and components shall be stored in designated areas and protected from physical damage, corrosion, moisture intrusion, contamination, UV exposure, distortion, and other conditions that could adversely affect suitability for use. Storage methods shall be appropriate to the item and may include racks, pallets, shelving, dunnage, protective coverings, and environmental controls where required.

Time-sensitive, shelf-life-controlled, or environmentally sensitive products, including sealants, membranes, coatings, adhesives, wires, electrical components, and similar items, shall be stored and monitored in accordance with manufacturer requirements and shall not be used beyond their acceptable condition or expiration limits.

5.7.5. ISSUANCE AND POINT-OF-USE CONTROL

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Only accepted materials shall be issued to production. Materials shall remain identifiable as necessary to maintain traceability and correct application. The Production Supervisor shall ensure that the material issued for use matches the approved drawings, specifications, and current production requirements for the unit.

5.7.6. USE OF NONCONFORMING OR DAMAGED MATERIALS PROHIBITED

Materials or components that are damaged, deteriorated, out of specification, expired, improperly identified, or otherwise unsuitable shall not be used in production. Such items shall be identified and controlled until properly dispositioned.

5.7.7. MATERIAL CONTROL RECORDS

The factory shall maintain records of receiving inspection, material acceptance or rejection, quarantine status where applicable, and disposition of nonconforming materials. Records shall be retained in a manner that supports traceability to the applicable unit, product type, lot, batch, or purchase source as appropriate.

5.8. PACKAGING, SHIPPING, AND HANDLING PROCEDURES

Purpose:

Ensure factory-built housing units are adequately packaged, safely handled, and securely transported, maintaining product integrity from manufacturing to final delivery and installation.

Procedure:

- Develop packaging methods and materials designed to protect factory-built housing units from damage during handling, shipping, and storage.
- Clearly label all factory-built housing units with identification tags including the unit serial number, certification labels, and handling instructions.
- Verify that factory-built housing units are fully inspected and meet all quality standards before packaging and shipment.
- Use handling equipment appropriate for the size, weight, and sensitivity of factory-built housing units to prevent damage during loading, unloading, and transport.
- Conduct a documented inspection immediately before loading to confirm the integrity and condition of packaging and labeling.
- Ensure transportation arrangements comply with applicable regulations and standards for safety, securing loads, and preventing damage in transit.
- Document shipping records, including inspection results, transportation details, delivery destinations, and any incidents or damages occurring during transit.

5.9. STORAGE AND PRESERVATION OF COMPLETED FBH UNITS

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Purpose:

Ensure the quality, integrity, and compliance of completed factory-built housing units during storage by preventing deterioration, damage, and contamination prior to delivery and installation.

Procedure:

- Identify appropriate storage locations that provide adequate protection from environmental factors (e.g., moisture, temperature extremes, UV exposure).
- Establish and document clear handling and storage requirements for factory-built housing units, consistent with manufacturer guidelines and industry best practices.
- Conduct periodic inspections (at defined intervals) of stored factory-built housing units, assessing condition and documenting findings.
- Immediately correct any conditions or issues identified during inspections that could compromise quality or lead to damage.
- Clearly label stored modules, maintaining identification tags and traceability, ensuring each unit can be quickly located and identified.
- Implement protective measures, including coverings, protective coatings, and supports as necessary, to maintain module integrity during storage.
- Maintain detailed storage records, documenting storage locations, duration, inspection results, and any corrective actions undertaken.

5.9.1. STORAGE OF COMPLETED FACTORY-BUILT HOUSING UNITS

Foshan Shenglei Integrated Housing Technology Co., Ltd. shall store completed factory-built housing units in a manner that maintains structural integrity, dimensional stability, weather resistance, and protection of finishes until shipment and installation. Storage methods shall be defined for the manufacturing plant, temporary storage yards, transport staging areas, and the project site prior to installation.

5.9.1.1. MINIMUM CONTROLS

Designated Unit Storage Areas: Completed units shall be placed only in designated storage locations with controlled access, adequate clearance for handling, and suitable ground conditions to prevent settlement or instability.

Weather Protection and Openings: Units shall be protected from precipitation, standing water, and UV exposure as needed. All penetrations and openings (doors, windows, MEP rough openings, temporary access points) shall be secured and weather tight. Temporary coverings shall be installed to prevent water intrusion during storage and prior to set.

Finish and Interior Protection: Interior finishes, fixtures, and equipment shall be protected from dust, moisture, and impact. Manufacturer protective films and corner guards shall remain in place where practical until final installation activities.

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Drainage and Ground Conditions: Storage surfaces shall provide positive drainage away from units. Units shall not be stored where water can pond under or against the unit. When stored outdoors, units shall be elevated on stable supports to keep the understructure clear of standing water and to promote ventilation.

Inspection During Storage: Stored units shall be inspected at defined intervals (minimum weekly, and after significant weather events or handling moves) for water intrusion, damage, cover integrity, and support condition. Deficiencies shall be documented and corrected promptly.

Identification and Traceability: Unit identification (serial number/label control) shall remain visible and linked to storage location records so units can be located and matched to inspection records and approved plans.

Responsibilities and Records: The Production Supervisor is responsible for proper placement and protection of stored units and for conducting storage inspections. The Quality Assurance Program Manager is responsible for oversight, record review, and ensuring any storage-related nonconformances are controlled and corrected.

5.9.2. SUPPORT OF COMPLETED FACTORY-BUILT HOUSING UNITS PRIOR TO INSTALLATION

Foshan Shenglei Integrated Housing Technology Co., Ltd. shall support completed factory-built housing units using methods that maintain alignment, prevent twisting/racking, avoid concentrated point loads, and preserve the unit's structural design intent prior to installation. Support methods shall be suitable for the manufacturing plant, transport staging, off-site storage, and jobsite pre-set staging.

5.9.2.1. MINIMUM CONTROLS

Support Design Basis: Units shall be supported at manufacturer-defined bearing points or other engineered support locations consistent with the approved building system. Supports shall be placed to maintain unit level and to prevent differential settlement.

Support Materials and Configuration: Supports shall consist of stable, load-rated blocking, cribbing, or stands on firm ground or paved surfaces. Dunnage shall be of sufficient size and strength to distribute loads and prevent crushing of framing members. Point loading on non-bearing elements is prohibited.

Level and Plumb Verification: After placement on supports and after any move or significant weather event, the unit shall be checked for level and signs of distortion (racking, misaligned openings, binding doors/windows). Adjustments shall be made immediately to restore proper support.

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Wind and Uplift Protection: Where exposure requires, units shall be secured against movement from wind or impact using approved tie-down or stabilization methods that do not damage unit components or finishes.

Site Staging Prior to Set: At the jobsite, pre-set staging supports shall be coordinated with site logistics and crane/set plans to avoid re-handling damage and to maintain safe clearances. Supports shall not interfere with lifting points, rigging, or set operations.

Responsibilities and Records: The Production Supervisor is responsible for ensuring correct support placement and verification checks. The Quality Assurance Program Manager verifies support methods during audits and reviews any support-related nonconformances and corrective actions.

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6. INSPECTIONS AND TESTS

6.1. GENERAL

The contracted manufacturing plant in China shall maintain and implement a controlled inspection and testing program for CA code compliant structures to be sold for use in the state of CA-FBH program to verify that materials, components, assemblies, systems, and completed units conform to approved plans, approved specifications, this Quality Assurance Manual, and applicable approved procedures.

Inspections and tests shall be performed at the receiving, in-process, final, and functional stages necessary to verify compliance before work is concealed, incorporated into later work, released for third-party quality assurance inspection, or shipped. The inspection and testing program shall be coordinated with the factory's manufacturing process controls and shall support the approved Quality Assurance Agency activities performed by Intertek.

Inspection and testing shall be sufficient to verify, as applicable:

- Compliance of incoming materials and components before use;
- Compliance of work in process at required manufacturing stages;
- Compliance of completed systems and assemblies before concealment or release;
- Satisfactory completion of required functional or utility tests; and
- Final compliance of the completed unit before presentation for Quality Assurance Agency inspection, certification-related processing, storage, or shipment.

No material, component, assembly, or completed unit shall be accepted for progression, release, or final disposition unless required inspections and tests have been completed and the item has been found acceptable or has been properly dispositioned through the nonconformance control process.

6.2. INSPECTION AND TEST PLANNING

The Quality Assurance Program Manager shall establish and maintain inspection and test requirements for the manufacturing stages applicable to the approved unit designs. Inspection and test requirements shall be based on approved drawings, approved specifications, this Manual, approved procedures, manufacturer requirements where applicable, and applicable acceptance criteria for the work or material being controlled.

Inspection and test planning shall identify, as applicable:

- The item or process to be inspected or tested;
- The stage at which the inspection or test is required;
- The acceptance criteria;

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- The inspection or test method;
- The person responsible for performing the inspection or test;
- Any required witness, hold, or release point;
- The required inspection or test record; and
- The status or disposition method for accepted and nonconforming work.

The inspection and test program shall, at minimum, address the following stages where applicable to the unit design:

- Initial order review and technical preparation;
- Incoming material receipt and inspection;
- Main steel processing;
- Main frame welding and assembly;
- Surface preparation and coating;
- Wall panel, ceiling, door, and window installation;
- Sealing and waterproofing;
- Interior, plumbing, and electrical installation;
- Complete-unit final inspection; and
- Required functional and utility testing.

6.3. INITIAL ORDER REVIEW AND TECHNICAL PREPARATION INSPECTION

Before a unit is released to production, the factory shall verify that technical preparation activities have been completed and that production personnel have the current approved information required to manufacture the unit correctly.

This inspection stage shall verify, as applicable:

- Approved drawings and current revision status are available;
- Applicable design requirements have been reviewed;
- Structural, enclosure, waterproofing, plumbing, electrical, and movement-related requirements have been addressed;
- Required inspection and hold points have been identified; and
- The technical briefing or production release communication has been completed.

A unit shall not be released to production until this preparatory review is complete.

6.4. INCOMING MATERIAL AND COMPONENT INSPECTION

All incoming materials and components shall be inspected before acceptance for use in production. Incoming inspection shall verify that the received items conform to approved requirements and are suitable for their intended use.

Incoming inspection shall include, as applicable:

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- Verification of item identity, quantity, specification, and condition;
- Review of certificates, product data, or conformity documentation;
- Verification of dimensions, type, grade, or model;
- Visual inspection for damage, rust, deformation, deterioration, contamination, or shelf-life expiration; and
- Verification that special items intended for expansion, movement, waterproofing, plumbing, or electrical use are appropriate to the approved design.

Incoming inspection categories shall include, as applicable:

- Main steel materials;
- Enclosure materials;
- Hardware accessories;
- Waterproofing and sealing materials;
- Auxiliary materials such as paint, wires, and pipes; and
- Expansion mechanism parts and related accessories where applicable.

Materials or components that fail incoming inspection shall be identified, segregated, and controlled as nonconforming product and shall not be released for use.

6.5. IN-PROCESS INSPECTION OF MAIN STEEL PROCESSING

Main steel processing operations shall be inspected to verify conformance with approved fabrication requirements before the fabricated parts are released to frame assembly.

In-process inspection of steel processing shall verify, as applicable:

- Cutting dimensions;
- Bending angle accuracy;
- Location and size of holes and cutouts;
- Compatibility of fabricated parts with associated assemblies;
- Adequacy of burr removal and rust removal; and
- Overall readiness of fabricated parts for assembly and welding.

Fabricated steel parts that do not meet acceptance requirements shall be identified and controlled before release to the next manufacturing stage.

6.6. IN-PROCESS INSPECTION OF MAIN FRAME WELDING AND ASSEMBLY

Main frame welding and assembly shall be inspected during and after assembly to verify structural conformance before subsequent work reduces access to the frame, welds, or structural geometry.

Inspections at this stage shall verify, as applicable:

- Correct member type, size, and location;

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- Proper fit-up and alignment of components;
- Visible weld quality;
- Butt-joint accuracy;
- Frame levelness, straightness, squareness, and verticality; and
- Overall structural robustness of the assembled frame.

Where welds, frame interfaces, or critical structural features may later become concealed or less accessible, inspection shall be completed before the work proceeds to the next stage.

6.7. INSPECTION OF SURFACE PREPARATION AND COATING

Where surface coating is required, inspection shall verify that surfaces have been properly prepared and that coating application satisfies the approved requirements.

Inspection of surface preparation and coating shall verify, as applicable:

- Cleanliness and condition of the substrate before coating;
- Correct coating material and application sequence;
- Uniformity of coating application;
- Absence of missed areas, runs, blistering, peeling, or other visible coating defects;
- Coating thickness where thickness verification is required; and
- Adequate drying or curing before release of the coated item.

Components shall not be released from this stage until coating acceptance requirements have been met.

6.8. INSPECTION OF WALL, CEILING, DOOR, AND WINDOW INSTALLATION

Wall assemblies, ceiling assemblies, doors, windows, and related installation work shall be inspected to verify conformance before sealing and finishing operations obscure the work.

Inspection at this stage shall verify, as applicable:

- Correct materials and locations;
- Flatness and fit of installed enclosure materials;
- Acceptability of joints and splicing gaps;
- Proper interface between fixed and movable or expandable portions of the unit;
- Proper installation and anchorage of doors and windows; and
- Proper operation of doors and windows prior to final sealing.

Any condition that may impair enclosure integrity, movement, fit, operation, or later waterproofing performance shall be corrected before progression.

6.9. INSPECTION OF SEALING AND WATERPROOFING

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Sealing and waterproofing work shall be inspected before the unit is released from this stage to verify that joints, interfaces, penetrations, and movement areas have been properly treated.

Inspection at this stage shall verify, as applicable:

- Continuity and fullness of sealant;
- Proper installation of waterproofing strips, membranes, or related materials;
- Proper sealing around doors, windows, and penetrations;
- Adequacy of treatment at expansion or contraction interfaces where applicable; and
- Absence of visible gaps, missed areas, loose materials, or other deficiencies that would impair performance.

Where the approved design includes movement or expansion features, inspection shall specifically verify that sealing and waterproofing details will remain effective through intended operation of the unit.

6.10. INSPECTION OF INTERIOR, PLUMBING, AND ELECTRICAL INSTALLATION

Interior, plumbing, and electrical installation work shall be inspected in process and at completion to verify conformance with approved requirements before final acceptance of the unit.

Inspection at this stage shall verify, as applicable:

- Routing, support, and protection of piping and wiring;
- Conformance of installed components to approved requirements;
- Adequacy of space and detailing at joints and interfaces affected by movement or expansion;
- Proper connection and sealing of plumbing and electrical interfaces;
- Correct location and installation of fixtures, devices, and related components; and
- Readiness for required water, electrical, and other functional testing.

Any installation that is not compliant or that may be damaged or rendered inaccessible by later work shall be corrected before progression.

6.11. FUNCTIONAL AND UTILITY TESTS

Functional and utility tests shall be performed as required to verify satisfactory operation of completed systems before final acceptance of the unit.

Functional and utility tests may include, as applicable:

- Water system testing;
- Drainage or plumbing leakage checks;
- Electrical function or continuity checks;
- Operation of switches, receptacles, fixtures, and connected devices;

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- Operation of doors, windows, and movement-related features; and
- Other tests necessary to verify that the completed unit performs as intended.

Each required test shall have defined acceptance criteria and shall be documented. Test failures shall be recorded and corrected before retesting and acceptance.

6.12. COMPLETE UNIT FINAL INSPECTION

Each completed unit shall receive a final internal factory inspection before it is presented for Intertek inspection, certification-related processing, packaging, warehousing, or shipment.

The complete-unit final inspection shall verify, as applicable:

- Structural completeness and condition;
- Acceptable weld and connector condition;
- Reliability of locking or movement-related features where applicable;
- Proper operation of doors and windows;
- Completion and acceptability of sealing and waterproofing;
- Acceptable completion and operation of plumbing and electrical systems;
- Acceptable visual appearance and workmanship;
- Proper unit identification and markings; and
- Completion of required inspection, test, and correction records.

A unit shall not be released from final internal inspection status until identified discrepancies have been corrected or otherwise properly dispositioned.

6.13. INSPECTION OF SPECIAL OR CONCEALED WORK

Where the results of a manufacturing activity cannot be fully verified by later inspection or testing, or where later work will conceal the item, the factory shall perform inspection at the point in time necessary to verify compliance before the item becomes inaccessible.

The Quality Assurance Program Manager shall identify special or concealed work inspection requirements applicable to the product and shall ensure that required inspections are completed before the work is covered, enclosed, or incorporated into later stages.

Where required by the approved quality program or coordination with Intertek, the factory shall hold work for designated witness or release points before concealment or progression.

6.14. INDEPENDENT QUALITY VERIFICATION

The Quality Assurance Program Manager shall perform, or cause to be performed, independent verification of selected inspections and tests to confirm that the factory's inspection and testing program is functioning effectively.

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Independent verification may include review of:

- Incoming material inspections;
- Selected in-process inspections;
- Selected final inspections;
- Selected functional or utility tests;
- Inspection and test records;
- Status identification methods; and
- Correction and reinspection of identified discrepancies.

Any identified weakness or inconsistency in the inspection process shall be addressed through corrective action and follow-up verification.

6.15. INSPECTION AND TEST STATUS IDENTIFICATION

The inspection and test status of materials, components, assemblies, systems, and completed units shall be identifiable by tags, markings, records, travelers, logs, hold points, or other controlled methods appropriate to the item and stage of manufacture.

Status identification shall distinguish, as applicable:

- Accepted items;
- Items pending inspection or test;
- Rejected or nonconforming items;
- Items on hold;
- Items requiring reinspection or retest; and
- Completed units released for the next stage or final internal acceptance.

Only items with acceptable status shall be released for use, progression, final presentation, or shipment.

6.16. INSPECTION AND TEST RECORDS

The factory shall maintain inspection and test records sufficient to demonstrate that required inspections and tests were performed and that the acceptance status of the item or unit can be determined.

Inspection and test records shall include, as applicable:

- Identification of the unit, item, lot, or batch inspected or tested;
- Date of inspection or test;
- Stage of manufacture or activity inspected;
- Reference to the applicable drawing, specification, checklist, or procedure;
- Inspection or test results;
- Acceptance criteria or basis;

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- Identification of nonconformances, if any;
- Correction and reinspection or retest results, if applicable; and
- Identity of the inspector or tester.

Inspection and test records shall be maintained in a controlled manner and retained in accordance with the record control requirements of this Manual. These records shall be available to support Intertek inspections, discrepancy follow-up, monthly reporting support, certification-related review, and verification of unit compliance.

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7. NONCONFORMANCES AND CORRECTIVE ACTIONS

7.1. OVERVIEW

The contracted manufacturing plant shall maintain and implement a systematic method to identify, control, document, correct, and prevent recurrence of nonconforming materials, components, assemblies, systems, workmanship, and completed units. The purpose of this section is to ensure that factory-built housing quality is not adversely affected by the use, concealment, shipment, or release of nonconforming work.

For purposes of this Manual, a nonconformance is any material, component, assembly, system, test result, record, or completed work item that does not conform to approved plans, approved specifications, this Quality Assurance Manual, applicable approved procedures, or other applicable acceptance requirements.

The factory's internal nonconformance control process is separate from Intertek discrepancy reporting. Intertek discrepancy records do not replace the factory's obligation to identify, document, correct, and control internal nonconformances. Likewise, closure of an internal factory nonconformance does not eliminate the requirement to correct and clear any discrepancy identified by Intertek in accordance with the approved Quality Assurance Agency procedures.

7.2. IDENTIFICATION AND MARKING OF NONCONFORMANCES

When a nonconformance or observation is identified by the Factory Quality Control Manager, Production Manager, Production Supervisor, inspector, tester, or other authorized factory personnel, the affected item shall be promptly identified and clearly marked to prevent inadvertent use, concealment, further incorporation into the unit, or shipment.

Identification may be by tag, tape, mark, traveler notation, inspection record, hold designation, or other clearly visible and controlled method appropriate to the item and manufacturing stage.

The identification method shall indicate, as applicable:

- The item or area affected;
- The nature of the nonconformance or observation;
- The date identified;
- The person identifying the item; and
- Whether the item is on hold pending disposition.

7.3. CONTROL OF CONTINUATION OF WORK

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After the nonconforming item is identified, the Factory Quality Control Manager or Production Manager shall determine whether work may continue in the affected area pending final disposition.

CONTINUE WORK:

When continuation of work will not adversely affect quality, hide the defect, impair later inspection, or incorporate the nonconforming item into additional work, work may continue subject to any stated limitations.

STOP WORK / HOLD POINT:

When continuation of work could adversely affect quality, conceal the defect, make correction more difficult, impair required inspection or testing, or result in shipment or further incorporation of nonconforming work, work shall stop in the affected area until the item is properly dispositioned and released.

The Production Manager shall identify the limits of the affected area and ensure that production personnel understand any hold, restriction, or stop-work boundary applicable to the item.

7.4. NONCONFORMANCE REPORTING

Nonconformances identified during receiving inspection, in-process inspection, final inspection, testing, handling, storage, or shipment preparation shall be documented on a Nonconformance Report or equivalent controlled factory record.

The Nonconformance Report shall include, as applicable:

- Unit identification, product identification, lot, batch, or material reference;
- Description of the requirement or specification not met;
- Description of the nonconformance;
- Location and extent of the affected area;
- Marking or hold status;
- Date identified;
- Name of the person preparing the report;
- Recommended disposition, if applicable;
- Final disposition decision;
- Corrective action taken;
- Reinspection or retest results; and
- Closure status.

The factory shall maintain a Nonconformance Report Control Log or equivalent record to track the status of open and closed nonconformances.

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7.5. DISPOSITION OF NONCONFORMANCES

The Factory Quality Control Manager shall review each reported nonconformance and determine, or obtain, the appropriate disposition based on the effect of the nonconformance on compliance, form, fit, function, durability, safety, and intended use.

Disposition shall be documented on the Nonconformance Report. Acceptable dispositions may include:

REPLACE:

The nonconforming item is removed and replaced with a conforming item.

REPAIR:

The nonconforming item is brought into conformance with the original approved requirements through a defined repair process.

REWORK:

The nonconforming item is reworked in accordance with defined requirements so that the item will conform to the approved requirements.

USE AS-IS / ACCEPT AS-IS:

This disposition may be used only when the item is determined to be acceptable for its intended use without adversely affecting compliance, safety, function, durability, or required quality. Any use-as-is disposition affecting approved-plan compliance, regulatory compliance, or customer acceptance requirements shall not be used unless the required approval has been obtained and documented.

REJECT / SCRAP / RETURN:

The item is rejected from use and removed from production, returned to the supplier, or otherwise disposed of so it cannot be inadvertently incorporated into the unit.

Nonconforming materials and components shall not be released for use, and nonconforming work shall not be concealed, shipped, or presented as acceptable, until disposition has been determined and implemented.

7.6. CORRECTION OF NONCONFORMANCES AND REINSPECTION

The Production Manager shall ensure that the dispositioned corrective work is completed in accordance with the approved disposition and any applicable repair, replacement, or rework requirements.

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After corrective action is completed, the Factory Quality Control Manager or qualified factory inspector shall reinspect or retest the affected item, as applicable, to verify that:

- The nonconformance has been corrected;
- The corrected item meets the applicable acceptance requirements;
- No additional nonconformances were introduced by the corrective work; and
- The item is acceptable for release to the next stage.

Nonconformance markings, hold tags, or status restrictions shall not be removed until required correction and reinspection or retesting have been completed and documented.

Where a nonconformance suggests that similar conditions may exist in previously completed work, the Production Manager and Factory Quality Control Manager shall determine whether additional inspection or review of similar work is required.

7.7. CORRECTIVE ACTION AND PREVENTION OF RECURRENCE

When a nonconformance is significant, repeated, systemic, or likely to recur, the factory shall initiate corrective action to address the underlying cause and prevent recurrence.

The Factory Quality Control Manager shall identify the need for corrective action based on factors such as:

- Frequency of occurrence;
- Severity of the issue;
- Effect on safety, function, durability, code compliance, or approved-plan compliance;
- Detectability of the issue before concealment or release; and
- Recurrence of similar nonconformances in materials, production stages, inspections, or completed units.

Corrective action may include, as applicable:

- Revision of work instructions;
- Clarification of acceptance criteria;
- Additional training or retraining of production or inspection personnel;
- Increased inspection or verification at affected stages;
- Revision of material control methods;
- Correction of equipment, tools, or fixtures contributing to the issue;
- Revision of inspection checklists, travelers, or test forms; and
- Review of supplier-provided materials or components associated with the issue.

The factory shall document the corrective action taken and evaluate whether the action is effective.

7.8. FACTORY CORRECTIVE ACTION TRAINING AND FOLLOW-UP

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When corrective action requires changes in factory practice, the Production Manager and Factory Quality Control Manager shall ensure that affected production and inspection personnel are informed of the revised requirements and, where necessary, trained or retrained before continuing the affected work.

Follow-up inspections shall be used, as appropriate, to verify that revised requirements are understood and implemented and that the corrective action is effective in preventing recurrence.

7.9. CASDEN DEVELOPMENT OVERSIGHT OF SIGNIFICANT OR REPEATED NONCONFORMANCES

Casden Development, through the Responsible Officer / Quality Assurance Program Manager, shall provide program-level oversight of the factory's nonconformance and corrective action process.

This oversight shall include, as applicable:

- Review of significant, repeated, or systemic nonconformances;
- Review of corrective action responses for adequacy;
- Review of trends indicating weakness in production controls, inspections, records, or material control;
- Requiring broader corrective action where factory issues indicate a program-level weakness; and
- Determining whether revisions to the Manual, procedures, forms, or oversight methods are necessary.

Casden Development's oversight role does not replace the factory's responsibility to operate and close its internal nonconformance process. The factory remains responsible for prompt identification, control, correction, reinspection, and closure of plant nonconformances.

7.10. RELATIONSHIP TO INTERTEK DISCREPANCIES

Nonconformances identified internally by the factory shall be managed under this Section 7. Discrepancies identified by Intertek shall be managed in accordance with the Quality Assurance Agency discrepancy procedures elsewhere in this Manual.

Where the same issue is identified both as an internal factory nonconformance and as an Intertek discrepancy, the factory shall ensure that both tracking and closure requirements are satisfied. Closure of an internal Nonconformance Report does not by itself close the related Intertek discrepancy unless Intertek has also verified or accepted the correction as required by the approved agency process.

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7.10.1. NONCONFORMANCE RECORDS

The factory shall maintain records sufficient to demonstrate identification, control, disposition, correction, reinspection, and closure of nonconforming materials and work.

Nonconformance records shall include, as applicable:

- Nonconformance reports;
- Nonconformance report control logs;
- Supporting inspection or test records;
- Repair, replacement, or rework records;
- Reinspection or retest records;
- Documented approvals required for special disposition decisions;
- Corrective action records; and
- Closure status records.

These records shall be controlled and retained in accordance with the record control requirements of this Manual and shall be available to support Casden Development oversight, Intertek review, discrepancy follow-up, reporting support, and verification of unit compliance.

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8. DOCUMENT CONTROL

8.1. OVERVIEW

Casden Development and the contracted manufacturing plant shall maintain document controls sufficient to ensure that CA code compliant structures to be sold for use in the state of CA-FBH program are manufactured, inspected, tested, and released using current approved requirements.

Document control under this Manual applies to the Quality Assurance Manual, approved plans, approved specifications, controlled work instructions, inspection and test documents, nonconformance and corrective action forms, record forms required by this Manual, and other controlled documents necessary to manufacture and inspect the units covered by this program.

The document control system shall ensure that:

- Documents are reviewed and approved before issue or reissue;
- Current applicable documents are available at the point of use;
- Obsolete or superseded documents are removed from active use or otherwise clearly identified to prevent unintended use;
- Revisions are identified and controlled; and
- Documents used to manufacture and inspect units remain consistent with approved plans and approved program requirements.

8.2. CONTROL OF THE QUALITY ASSURANCE MANUAL

Casden Development, through the Responsible Officer / Quality Assurance Program Manager, shall control this Quality Assurance Manual and its revisions.

The Quality Assurance Program Manager shall:

- Maintain the current approved version of the Manual;
- Review proposed revisions for adequacy and impact on the approved program;
- Ensure revisions are identified in a revision history record;
- Distribute current revisions to the factory, Intertek as applicable, and other persons requiring controlled access to the Manual; and
- Ensure obsolete versions are removed from use or clearly marked as obsolete.

Final approval of revisions to the Quality Assurance Manual shall be by the General Manager or other authorized responsible management representative of Casden Development.

8.3. REVISION AND CONTROL OF THE QUALITY ASSURANCE MANUAL

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All proposed revisions to the Quality Assurance Manual shall be submitted in writing or other controlled form and shall identify the reason for the revision.

The Quality Assurance Program Manager shall review each proposed revision to determine whether the change affects:

- Approved manufacturing procedures;
- Inspection or testing requirements;
- Nonconformance or corrective action procedures;
- Records or forms;
- Serial number, insignia, or traceability controls;
- Coordination with Intertek; or
- Other approved California Factory-Built Housing program requirements.

Approved revisions shall be entered into the revision history record and distributed promptly to affected users. Obsolete copies shall be removed from use or clearly marked to prevent unintended use.

8.4. CONTROL OF FACTORY PRODUCTION AND INSPECTION DOCUMENTS

The contracted manufacturing plant shall control the production and inspection documents used at the factory to manufacture and inspect units covered by this Manual.

Factory-controlled documents shall include, as applicable:

- Approved drawings and drawing revisions;
- Approved specifications;
- Technical preparation and production release documents;
- Controlled work instructions;
- Material inspection and receiving documents;
- In-process inspection documents;
- Inspection and test reports;
- Nonconformance reports and logs;
- Controlled equipment calibration or verification records used for inspection and test activities; and
- Final inspection and release documents.

The Factory Quality Control Manager and Production Manager shall ensure that only current approved production and inspection documents are used for work performed at the factory.

8.5. AVAILABILITY OF CURRENT DOCUMENTS AT POINT OF USE

Current approved documents applicable to the work being performed shall be available to factory personnel at the point of use.

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This includes, as applicable:

- Current drawings and dimensions;
- Current technical requirements for the unit;
- Current inspection and test requirements;
- Current acceptance criteria;
- Current repair, rework, or corrective action instructions where applicable; and
- Current forms or records required to document the work.

The factory shall not perform production or inspection activities using obsolete, superseded, or unapproved documents.

8.6. CONTROL OF OBSOLETE AND SUPERSEDED DOCUMENTS

When a document is revised, replaced, or withdrawn, the prior version shall be removed from active use or clearly identified as obsolete.

Obsolete or superseded documents may be retained for reference or record purposes only if they are clearly identified and controlled so they cannot be inadvertently used for current production, inspection, testing, or release activities.

The Factory Quality Control Manager and Quality Assurance Program Manager shall ensure that obsolete documents are not available at active points of use in a manner that could cause confusion or improper work.

8.7. CONTROL OF EXTERNAL REFERENCE DOCUMENTS

External reference documents used under this program, including approved plans, applicable approved specifications, manufacturer installation instructions where applicable, and other approved technical reference documents, shall be controlled to ensure that the current applicable version is available where needed.

Where revised external documents affect manufacturing, inspection, testing, or release requirements, the Factory Quality Control Manager and Quality Assurance Program Manager shall ensure that affected personnel are provided the updated requirements and that obsolete versions are removed from active use.

8.8. DOCUMENT DISTRIBUTION AND ACCESS

The Quality Assurance Program Manager shall maintain control over distribution of the Quality Assurance Manual and other program-level controlled documents.

The Factory Quality Control Manager shall maintain control over distribution or access to current factory production and inspection documents used at the plant.

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Distribution control may be maintained by hard-copy issuance, controlled electronic access, controlled posting, controlled work packets, or other methods that ensure users have access to the current applicable documents and can distinguish them from obsolete versions.

8.9. DOCUMENT CONTROL RECORDS

Records of document revision, approval, and distribution shall be maintained as necessary to demonstrate control of current program documents and factory production/inspection documents.

At minimum, document control records shall include, as applicable:

- Document title or identification;
- Revision number or date;
- Approval date;
- Approving authority;
- Date issued or distributed; and
- Method or location of controlled access.

Document control records shall be retained in accordance with the record control provisions of this Manual.

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9. RECORDS MANAGEMENT

9.1. USE OF FACTORY AND AGENCY FORMS

The contracted manufacturing plant may use its own internal production, inspection, testing, nonconformance, corrective action, and production-control forms, and Intertek may use its own agency inspection and discrepancy forms, provided such forms capture the information required by this Quality Assurance Manual and applicable California Factory-Built Housing requirements.

Casden Development is not required to control the exact layout, branding, or format of the factory's internal forms or Intertek's agency forms. However, Casden Development shall ensure that the forms and records used for units covered by this manual are sufficient to document, as applicable:

- Unit identification;
- Type of inspection or test performed;
- Date of inspection or test;
- Stage of manufacture;
- Discrepancies or nonconformances identified;
- Corrective action and reinspection or retest status; and
- Final compliance or release status.

Representative sample forms or facsimiles are included in the appendices to demonstrate the minimum record content required for this program. Equivalent factory or agency forms may be used in practice, provided they contain the required information and support the approved quality assurance program, required reporting, and certification activities.

9.2. RECORD CONTROLS

The contracted manufacturing plant shall create and maintain the factory production, inspection, testing, nonconformance, corrective action, and release records for units manufactured under this manual.

Casden Development, through the Responsible Officer / Quality Assurance Program Manager, shall oversee the record control system for the approved California Factory-Built Housing program and shall ensure that required records are:

- Complete and legible;
- Traceable to the correct unit;
- Retrievable when needed;
- Protected from loss, damage, or unauthorized alteration; and
- Retained for the required period.

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Records demonstrating conformance with, and operation of, the approved quality program shall be retrievable for at least five years.

9.3. QUALITY RECORDS

The record system shall be sufficient to show the production and inspection history of each unit covered by this manual.

Quality records shall include, as applicable:

- Approved drawings or approved plan reference for the unit;
- Production release or technical preparation records;
- Incoming material inspection records;
- In-process inspection records;
- Inspection and test reports;
- Nonconformance reports and logs;
- Corrective action, repair, replacement, or rework records;
- Reinspection or retest records;
- Final internal inspection and release records;
- Serial number and unit identification records;
- Insignia status records;
- First destination or shipment records, where applicable; and
- Records necessary to support Intertek inspection, discrepancy follow-up, reporting, and certification activities.

Where applicable, records shall be linked to the assigned unit serial number so that the unit can be identified throughout production, inspection, certification, shipment, and final disposition.

9.4. METHOD OF RECORDING AND STORING RECORDS AND DOCUMENTS

Quality records may be maintained in paper form, electronic form, or a combination of both, provided they remain legible, secure, and retrievable.

Paper records shall be stored in designated controlled file locations. Paper records may be scanned into electronic format, provided the scanned record is complete and legible. Electronic records shall be stored in controlled electronic file locations with appropriate protection against loss, deterioration, or unauthorized alteration.

The Quality Assurance Program Manager shall assign record-control responsibilities and record-storage locations applicable to the units covered by this manual.

Where records are maintained in more than one location, including factory locations and Casden Development program files, the record system shall be managed so that the records

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remain traceable, complete, and retrievable by unit serial number or other controlled identification.

9.5. RECORD RETENTION AND AVAILABILITY

Quality records for units covered by this manual shall be maintained for a minimum of five years, or longer if required by applicable program requirements.

The contracted manufacturing plant and Casden Development shall maintain records needed to support the approved quality program and shall make those records available, as applicable, for:

- Internal program review;
- Intertek inspection support;
- Discrepancy verification;
- Monthly reporting support;
- Certification support; and
- Verification of compliance of a specific unit.

Records needed to support required Quality Assurance Agency reporting and certification activities shall be made available to Intertek upon request.

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10. FACTORY-BUILT HOUSING INSIGNIA OF APPROVAL AND IDENTIFICATION

10.1. INSIGNIA OF APPROVAL

Prior to release from the factory, all FBH units will be affixed with a Factory-Built Housing Insignia of Approval.

The Insignia of Approval must be placed in a visible location (as indicated on the DAA approved plans) on the FBH unit or building component pursuant to Title 25, CCR Section 3028(f). The Insignia of Approval must be affixed to each FBH unit or building component prior to shipment by the manufacturer (Title 25, CCR section 3039). The Insignia of Approval displayed on the product informs the local building official that the FBH unit or building component was inspected and conforms to California laws and regulations, including the applicable building standards.

The third-party Quality Assurance Agency (Intertek) will provide the Insignia of Approval once the FHB unit passes a final compliance inspection.

10.2. SERIAL NUMBERING SYSTEM IDENTIFICATION

Each factory-built housing unit covered by this manual shall have a permanent unit serial number assigned and attached to the unit. The unit serial number shall be visible throughout all phases of construction, including installation at the site, and shall be used to identify the unit during production, inspection, recordkeeping, insignia control, shipment, and final installation. California requires the manual to specify how units are identified during production for the purposes of inspection relative to the approved plans, and to indicate the model, floor plan, and design loading, as applicable.

The Production Manager, in coordination with the Factory Quality Control Manager, shall ensure that each unit is marked with its assigned serial number in a visible location and that the serial number is linked in the production and inspection records to the following, as applicable:

- Model designation
- Floor plan designation
- Approved plan approval reference
- Design loading information
- Production status
- Inspection status
- Insignia status

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- Shipment status

The permanent manufacturer's data plate located in the vicinity of the insignia of approval shall include the required identification information for the unit, including the unit serial number and other information required by the approved plans and applicable California requirements. The serial number used on the data plate, production records, inspection records, and insignia records shall be the same serial number assigned under this section.

Units produced outside of California that are to be sold or offered for sale in California under the applicable department plan approval shall be specifically identified under this serial numbering and record system. Building components, where applicable, shall also be identified for the purpose of in-plant and on-site inspection.

10.3. SERIAL NUMBERING SYSTEM

Casden Development shall maintain a serial numbering system for factory-built housing units manufactured under this program that complies with applicable California Factory-Built Housing identification requirements. Each unit shall be assigned one permanent serial number that is unique, traceable, and used consistently on the unit, the production records, inspection records, discrepancy records, insignia records, shipping records, and other quality documentation applicable to that unit.

10.3.1. SINGLE-UNIT FACTORY-BUILT HOUSING

For factory-built housing consisting of a single unit, the unit shall be assigned a single serial number. California provides the example format of a single serial number such as 1000. Casden Development may use any internal numbering progression for single-unit buildings provided that the number is unique, permanent, and consistently used throughout the quality, inspection, and identification records for that unit.

10.3.2. MULTI-UNIT / GROUPED FACTORY-BUILT HOUSING

For factory-built housing consisting of two or more units that form part of a specific group, the serial numbering system shall conform to the California format:

x-y(z)

where:

- **X** = the serial number common to each unit in the group
- **Y** = a number or letter identifying the specific unit within the group
- **Z** = an optional number denoting the total number of units in the group

An example for a two-unit building is:

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- 1000-1(2)
- 1000-2(2)

Casden Development shall use this grouped-unit format for all multi-unit factory-built housing covered by this manual so that each individual unit remains identifiable as both a separate unit and as part of a specific grouped building.

10.3.3. ASSIGNMENT AND CONTROL OF SERIAL NUMBERS

Serial numbers shall be assigned before or at the start of production and shall remain associated with the unit throughout fabrication, inspection, shipment, site delivery, and installation. The assigned serial number shall appear, as applicable, on:

- The physical unit marking
- The manufacturer's data plate
- Production travelers or production status logs
- Factory quality control inspection records
- Intertek inspection and discrepancy records, where applicable
- Insignia control records
- Shipping and destination records

The Factory Quality Control Manager shall verify that serial numbers are legible, correctly applied, and matched to the applicable unit records before the unit is presented for final approval actions or shipment.

10.3.4. RELATIONSHIP TO MODEL, FLOOR PLAN, AND DESIGN LOADING

The serial number alone is not intended to replace the unit's approved technical identification. Production and inspection records shall link each serial number to the applicable model designation, floor plan designation, and design loading information so the unit can be inspected relative to the approved plans during all stages of production. This is required because the quality manual must specify how units are identified during production for inspection relative to the approved plans, including model, floor plan, and design loading, as applicable.

10.3.5. UNITS MANUFACTURED OUTSIDE CALIFORNIA FOR SALE IN CALIFORNIA

Units manufactured outside California for sale or offer for sale in California under the applicable department plan approval shall be specifically identified through this serial numbering system and related records. The serial number and associated production and inspection records shall clearly distinguish those units as units produced under the California-approved program.

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11. QA AGENCY IN-PLANT INSPECTION FREQUENCY

Intertek, as the approved third-party Quality Assurance Agency, shall perform independent in-plant inspections of factory-built housing units manufactured for Casden Development at the contracted manufacturing plant in China to verify that the units are produced in accordance with the approved plans, this Quality Assurance Manual, and applicable California Factory-Built Housing requirements. Intertek inspections are independent of the factory's internal production inspections and internal quality control activities. Internal factory inspections do not replace Intertek inspections, and Intertek inspections do not replace the manufacturer's obligation to maintain an effective internal quality control program.

11.1. INITIAL INSPECTION FREQUENCY FOR NEW MODEL PRODUCTION

For at least the first ten (10) units of each model produced at the manufacturing location, Intertek shall inspect all systems, including structural, electrical, mechanical, and plumbing systems. For purposes of this requirement, the first-ten-unit inspection frequency applies separately to each model and each manufacturing location. No reduction from this initial inspection level shall be made unless and until allowed by the department in writing.

11.2. INSPECTION FREQUENCY AFTER APPROVAL OF THE FIRST TEN UNITS

After inspection and approval of the first ten (10) units of a model produced at the manufacturing location, Intertek shall inspect each system in at least twenty-five percent (25%) of all units of that model produced thereafter. The twenty-five percent inspection frequency is the minimum ongoing inspection level unless a different level is approved in writing by the department as permitted by regulation.

11.3. REDUCED INSPECTION FREQUENCY FOR BUILDING COMPONENTS OR BUILDING SYSTEMS

The manufacturer may request written approval from the department to reduce the inspection level from the initial one hundred percent (100%) inspection to ten percent (10%) for eligible building components or building systems, where permitted by California requirements. No reduced inspection frequency shall be used unless the department has granted written approval. Intertek shall continue inspections at the otherwise required inspection level until written approval for reduction has been received and implemented.

The manufacturer may also request written approval from the department for a further reduced inspection frequency for building components when it can be demonstrated that the nature of the product, its end use, or the manufacturing process warrants a lesser inspection frequency.

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Any such lesser inspection frequency shall be used only when specifically approved in writing by the department.

11.4. BASIS FOR DETERMINING INSPECTION POPULATION

For inspection-frequency purposes, the unit population shall consist only of factory-built housing units or approved building components produced under the approved California plan approval and quality program applicable to Casden Development. Inspection frequency shall be tracked by model and manufacturing location. Where two or more units form part of one grouped or multi-unit building, each unit shall remain individually identifiable by serial number for inspection, recordkeeping, and certification purposes.

11.5. COORDINATION WITH FACTORY PRODUCTION AND INTERNAL QUALITY CONTROL

The factory shall provide Intertek with reasonable access to production areas, work in process, completed work, inspection records, identification markings, approved plans, revisions, and internal quality control records necessary for Intertek to perform the required in-plant inspections. The factory shall schedule production and hold points so that structural, electrical, mechanical, plumbing, and other required work can be observed by Intertek at the applicable inspection frequency before such work is concealed or made inaccessible.

The Factory Quality Control Manager shall maintain an inspection status log or equivalent production tracking method showing:

- Unit serial number
- Model designation
- Production stage
- Date available for inspection
- Date inspected by factory qc
- Date inspected by Intertek, where applicable
- Inspection result
- Discrepancy report reference, if applicable

This tracking system shall be used to ensure that the required percentage of units and systems is inspected by Intertek and that no unit is released with unresolved discrepancies affecting compliance.

11.6. INCREASED INSPECTION FREQUENCY WHEN NEEDED

If Intertek identifies recurring discrepancies, breakdowns in factory quality control, repeated nonconforming work, missing records, failure to follow approved plans, or any other condition

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indicating that the established inspection frequency is no longer sufficient to verify compliance, Intertek may require additional inspections, expanded witness points, or intensified oversight pending correction of the condition. When required by regulation or department direction, the manufacturer shall request or obtain department review and approval of any revised inspection approach. This increased inspection activity is in addition to, and not in lieu of, the minimum inspection frequencies established by California requirements.

11.7. NO SHIPMENT PRIOR TO REQUIRED INSPECTION AND APPROVAL

No unit requiring Intertek inspection under the applicable inspection frequency shall be released for shipment, labeled with an insignia, or represented as compliant until the required Intertek inspection activities have been completed, discrepancies affecting compliance have been corrected, and the unit is otherwise eligible for approval under the approved quality program. California also requires the quality assurance agency to notify the department in writing within 24 hours of discovering units shipped from the place of manufacture without required inspection or insignia, or otherwise not in compliance.

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12. QA AGENCY DISCREPANCY RECORDING, MARKING, AND CORRECTION

Intertek, as the approved third-party Quality Assurance Agency, shall document discrepancies identified during in-plant inspections of factory-built housing units manufactured for Casden Development at the contracted manufacturing plant in China. For purposes of this section, a discrepancy is any condition observed by Intertek that indicates the unit, building component, material, workmanship, installation, or related record does not conform to the approved plans, this Quality Assurance Manual, applicable California Factory-Built Housing requirements, or approved inspection/certification requirements.

12.1. RECORDING OF DISCREPANCIES

When Intertek identifies a discrepancy, the Intertek inspector shall record the discrepancy on the applicable Intertek inspection report, discrepancy report, or other approved quality assurance form. The report shall identify, as applicable:

- Date of inspection
- Manufacturing plant location
- Model designation
- Unit serial number
- Area or system inspected
- Description of the discrepancy
- Reference to the applicable approved plan, procedure, or requirement
- Disposition or required corrective action
- Date correction is due or required before release, where applicable
- Date of reinspection or verification of correction
- Final status of the discrepancy

The discrepancy record shall be sufficiently detailed to allow the factory, Casden Development, Intertek, and the department to determine what condition was found, where it was found, what correction was required, and whether the discrepancy was satisfactorily resolved. Intertek shall maintain written reports of inspection activities as required by California.

12.2. MARKING AND IDENTIFICATION OF DISCREPANCIES

When a discrepancy affecting compliance is identified, the affected item, component, assembly, work area, record set, or unit shall be clearly identified to prevent inadvertent acceptance, concealment, shipment, or further processing without proper review. Identification may be by hold tag, rejection tag, colored tape, marked inspection status, notation on the traveler or

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inspection log, physical segregation, or other clearly visible method appropriate to the condition.

Where the discrepancy affects an entire unit or a major system, the unit shall be placed in a hold status in the factory production/inspection tracking system until correction and acceptance are verified. Where the discrepancy is limited to a specific item or area, the factory shall clearly mark and control only the affected scope, unless broader control is needed to prevent nonconforming work from proceeding.

12.3. FACTORY RESPONSIBILITY FOR CORRECTION

The contracted manufacturing plant is responsible for correcting all discrepancies identified by Intertek. The Factory General Manager and Factory Quality Control Manager shall ensure that discrepancies are communicated to the responsible production personnel, that affected work is controlled from further progression where necessary, and that correction is completed in accordance with approved plans and applicable requirements.

Intertek may identify the discrepancy and required result, but the means and methods of performing the corrective work remain the responsibility of the factory, subject to compliance with approved plans and applicable requirements. If a proposed correction would deviate from the approved plans or approved design basis, the correction shall not be accepted unless the required approval or plan revision has been obtained through the applicable approval process.

12.4. CONTROL OF WORK PENDING CORRECTION

When continuation of work could conceal the discrepancy, prevent proper reinspection, affect compliance of related work, or permit shipment of a nonconforming unit, the affected work or unit shall be held until the discrepancy is corrected and Intertek has verified the correction as required. When continuation of unrelated work will not impair correction or verification, work may continue in unaffected areas provided the discrepancy remains clearly identified and controlled.

The factory shall not cover, close, ship, label, or release affected work requiring Intertek verification until the discrepancy has been corrected and accepted by Intertek, where such acceptance is required under the approved quality assurance program.

12.5. REINSPECTION AND VERIFICATION OF CORRECTION

After the factory completes the corrective work, the Factory Quality Control Manager shall notify Intertek and make the corrected work available for verification. Intertek shall review the correction and perform reinspection, record review, or other verification appropriate to the discrepancy. A discrepancy shall not be considered closed until Intertek has determined that the

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corrective action satisfactorily resolves the noted condition and the affected work complies with approved requirements.

Intertek shall document the disposition and closure status of the discrepancy on the applicable report or discrepancy record. If the correction is incomplete or unacceptable, the discrepancy shall remain open and additional corrective action shall be required.

12.6. RELATIONSHIP TO FACTORY INTERNAL NONCONFORMANCE CONTROLS

The factory's internal nonconformance and corrective action procedures remain in effect for all work. Intertek discrepancy reporting is an independent third-party quality assurance function and does not replace the factory's obligation to identify, document, control, and correct its own nonconforming work. Likewise, closure of an internal factory nonconformance does not eliminate the need for Intertek verification when Intertek identified the discrepancy or when third-party verification is otherwise required.

12.7. EFFECT ON APPROVAL, SHIPMENT, AND INSIGNIA

No unit or building component with an unresolved discrepancy affecting compliance shall be approved for shipment, represented as compliant, or issued/affixed with a California insignia of approval until the discrepancy has been corrected and verified in accordance with the approved quality assurance program. If Intertek discovers that a unit has been shipped from the place of manufacture without required inspection or insignia, or is otherwise not in compliance, Intertek shall notify the department in writing within 24 hours of discovery as required by California reporting requirements.

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13. QA AGENCY INSPECTION REPORTING TO THE DEPARTMENT

13.1. OVERVIEW

For units covered by this manual, inspection reporting to the California Department of Housing and Community Development will be performed by Intertek, as the approved Quality Assurance Agency, in accordance with applicable California Factory-Built Housing requirements and Intertek's approved agency procedures. This section describes how that reporting interfaces with the Casden Development quality program and the contracted manufacturing plant's records and inspection support activities.

13.2. MONTHLY REPORTING TO THE DEPARTMENT

Intertek's inspection activities for units manufactured under this program shall be reported to the California Department of Housing and Community Development at least monthly, in accordance with applicable California requirements. The monthly report is to summarize the prior month's inspection activities for Casden Development as the client manufacturer. California requires that each Quality Assurance Agency submit its monthly report to the department by the fifteenth day of each month using Form HCD 309(B), Factory-Built Housing Quality Assurance Agency Monthly Report, or the current department-authorized equivalent.

13.3. INSPECTION RECORDS SUPPORTING MONTHLY REPORTING

To support required monthly reporting, the contracted manufacturing plant and Casden Development shall maintain records in a form that allows the applicable units, inspections, and status of corrections to be identified and made available to Intertek upon request. These records shall support identification of the unit inspected, the date and type of inspection, discrepancies noted, corrections made, and other information necessary for required agency reporting. This requirement is in addition to the manufacturer's separate obligation to maintain records showing the type and date of inspections performed on each unit.

13.4. FORMS USED FOR REPORTING

Representative sample forms or facsimiles used to support Quality Assurance Agency reporting shall be included in the manual appendices. These appendix forms are provided to demonstrate the minimum information required for reporting under the approved program and do not require the contracted manufacturing plant or Intertek to use a specific Casden Development

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form format in practice. Equivalent agency or factory forms may be used, provided they contain the information necessary to support required reporting to the department.

At a minimum, the appendices should include a sample or facsimile of Form HCD 309(B), a representative Intertek inspection report form, and a representative discrepancy tracking or deficiency form if separate from the inspection report. California requires that the manual include details of how inspection reports are to be made to the department together with samples of forms to be used.

13.5. NOTIFICATION OF SERIOUS NONCOMPLIANCE

If units covered by this program are discovered to have been shipped from the place of manufacture without required inspection or insignia, or are otherwise found not to comply with applicable Factory-Built Housing requirements, notification to the department will be made by Intertek in accordance with applicable California requirements and Intertek's approved procedures. The factory and Casden Development shall cooperate fully in providing records, unit identification, shipment information, and corrective action information needed to support that notification and any resulting follow-up actions.

13.6. RECORD AVAILABILITY AND RETENTION

Casden Development and the contracted manufacturing plant shall maintain records needed to support the approved quality program and required agency reporting for the units covered by this manual and shall make those records available to Intertek as necessary for reporting and compliance verification. Intertek's retention of its required reports shall be governed by applicable California requirements and Intertek's approved procedures.

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14. QA AGENCY CERTIFICATION OF FACTORY-BUILT HOUSING

14.1. OVERVIEW

For units covered by this manual, certification activities associated with California Factory-Built Housing approval will be performed through the approved Quality Assurance Agency process applicable to the program. Intertek, as the approved Quality Assurance Agency, will carry out certification-related actions in accordance with applicable California Factory-Built Housing requirements and Intertek's approved procedures. This section describes how certification interfaces with the Casden Development quality program, the contracted manufacturing plant's records, and the control of units prior to release.

14.2. BASIS FOR CERTIFICATION

Certification shall be based on compliance of the unit with the approved plans, this Quality Assurance Manual, applicable California Factory-Built Housing requirements, completion of required inspections at the applicable frequency, and correction of discrepancies affecting compliance. No unit shall be presented for certification unless required manufacturing, inspection, identification, and recordkeeping activities have been completed and any required corrections have been made and verified through the approved quality assurance process.

14.3. RELATIONSHIP TO INSIGNIA OF APPROVAL

Certification under this section is directly tied to the unit's eligibility for California insignia of approval. No unit shall be issued, affixed, released, or represented as having a California Factory-Built Housing approval insignia unless the unit is eligible under the approved quality assurance program and certification-related requirements have been satisfied. The factory and Casden Development shall maintain controls to ensure that insignia are applied only to units that have successfully completed the required approval process.

14.4. FACTORY AND CASDEN SUPPORT FOR CERTIFICATION

To support certification, the contracted manufacturing plant and Casden Development shall maintain and make available to Intertek, upon request, the records necessary to identify the unit and verify its compliance status. These records shall include, as applicable:

- Unit serial number
- Model designation or approved plan reference

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- Inspection status
- Discrepancy/correction status
- Records supporting insignia usage
- Shipment or destination records, where applicable

The factory shall not release a unit for shipment or final approval action unless the unit's status has been reviewed and the unit is eligible under the approved quality assurance process.

14.5. FORMS AND FACSIMILES

Representative sample forms or facsimiles of the certification-related documents, approval records, labels, insignia control documents, or other certification records used in connection with the approved Quality Assurance Agency process shall be included in the appendices to this manual. These samples are included to demonstrate the minimum documentation content required for the program and do not require Intertek or the contracted manufacturing plant to use a specific Casden Development form format in practice.

If certification is documented through department-approved agency forms, records, labels, or insignia control documents, the current approved form or facsimile may be included for reference. California requires that the manual include details of how certification is to be made, including a sample of the certification document or a facsimile thereof.

14.6. CONTROL OF NONCOMPLIANT UNITS

Any unit with unresolved discrepancies affecting compliance, missing required inspections, incomplete records necessary to support approval, or other conditions preventing certification shall be placed in hold status and shall not be released as certified or represented as eligible for California approval until the condition has been resolved through the approved quality assurance process. Where required by applicable California requirements, Intertek will make any necessary notification or follow-up action through its approved procedures, and the factory and Casden Development shall cooperate in providing records and corrective action information.

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15. QA AGENCY DESIGNATED INSPECTOR(S) AND AGENCY AGREEMENT

15.1. APPROVED QUALITY ASSURANCE AGENCY

For units covered by this manual, Intertek ATI (Architectural Testing, Inc.) is the approved third-party Quality Assurance Agency identified for in-plant inspections and related quality assurance activities required by the California Factory-Built Housing program. Intertek's activities for this program shall be performed in accordance with applicable California requirements and Intertek's approved agency procedures.

15.2. DESIGNATED QUALITY ASSURANCE INSPECTOR(S)

The specific Intertek quality assurance inspector(s) assigned to perform in-plant inspections for units covered by this manual shall be designated by Intertek and identified in the current project or program records maintained with this manual, or in an attached appendix maintained as part of the controlled quality documentation. If a designated Intertek quality assurance inspector identified for this program is no longer assigned, the department shall be notified within forty-eight (48) hours of such termination, and a replacement inspector shall be designated in accordance with applicable California requirements and Intertek's approved procedures.

15.3. FACTORY AND CASDEN SUPPORT FOR DESIGNATED INSPECTOR ACCESS

Casden Development and the contracted manufacturing plant shall provide the designated Intertek inspector(s) reasonable access to the manufacturing facility, work in process, completed units, approved plans, inspection records, discrepancy records, unit identification information, and related quality documents necessary to perform the required in-plant inspections and associated quality assurance activities for this program.

15.4. AGREEMENT WITH APPROVED QUALITY ASSURANCE AGENCY

Casden Development shall maintain an agreement in force and effect with Intertek as the approved Quality Assurance Agency for the units covered by this manual. In accordance with California requirements, the manual shall include either:

- A copy of the contract between the manufacturer and the Quality Assurance Agency, or
- A signed statement by a responsible officer of the manufacturing company that such an agreement is in force and effect prior to granting of plan approval.

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15.5. MANUAL ATTACHMENT / APPENDIX REQUIREMENT

For this manual, compliance with the Quality Assurance Agency appendix requirement shall be satisfied by including controlled appendix documents or facsimiles that demonstrate the current approved agency relationship and designated inspector arrangement applicable to this program. These appendix materials may include current copies, facsimiles, representative samples, or controlled reference documents, as applicable.

At a minimum, the appendices shall include one of the following:

- A copy of the agreement with Intertek, or
- A signed statement that the agreement is in force and effect

The appendices should also include, as applicable to the current program, a current identification of designated Intertek inspector(s) or a controlled reference identifying where that current designation is maintained.

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16. APPENDIX

16.1. APPENDIX USE NOTE

The appendices to this manual contain representative sample forms, facsimiles, and controlled reference documents included to demonstrate the minimum documentation content required by the approved California Factory-Built Housing quality program. The contracted manufacturing plant and Intertek may use their own internal or agency forms in practice, provided the forms used contain the required information and support compliance with this manual, approved plans, inspection requirements, reporting requirements, and certification requirements.

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CONTRACT BETWEEN MANUFACTURING FACILITY AND INTERTEK

We have not received a contract from Intertek to do the certifications at the factory.

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SIGNED STATEMENT – AGREEMENT WITH APPROVED QUALITY ASSURANCE AGENCY

I, Arik Casden, as the Responsible Officer / Quality Assurance Program Manager for Casden Development, hereby certify that an agreement is in force and effect between Casden Development and Intertek ATI (Architectural Testing, Inc.) for Quality Assurance Agency services applicable to the factory-built housing units covered by this Quality Assurance Manual, prior to granting of plan approval.

Name: Arik Casden

Title: Responsible Officer / Quality Assurance Program Manager

Signature: Arik Casden

Date: 4/14/2026

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Line Traveler

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Unit Serial No	Traveler No.:	Drawing Revision:	Date Released:

Status Key: A = Accept | R = Reject | H = Hold | N/A = Not Applicable

Instructions: This traveler shall accompany the unit or major assembly through production. All listed **HOLD POINTS** are mandatory. Work shall not be covered, enclosed, sealed, painted over, or moved to the next workstation until QC inspection is completed, accepted, and signed off.

Factory Area	Stage	QC Checkpoint	Hold Point / Release Rule	Status	Prod. Initial / Date	QC Initial / Date
Office	Technical Preparation	Approved drawings and technical briefing verified	HOLD – Do not start production until accepted			
Raw materials and storage area	Incoming Materials	Material identity, specification, condition, and certificates verified	HOLD – Do not release materials to production until accepted			
Welding Workshop	Steel Processing	Cutting, bending, hole location, burr/rust removal verified	HOLD – Do not release fabricated steel to assembly until accepted			
Welding Workshop	Frame Welding / Assembly	Weld quality, fit-up, alignment, levelness, and verticality verified	HOLD – Do not cover or continue until accepted			
Painting Workshop	Surface Preparation / Coating	Surface prep, coating appearance, thickness/cure verified where applicable	HOLD – Do not move to enclosure installation until accepted			

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Factory Area	Stage	QC Checkpoint	Hold Point / Release Rule	Status	Prod. Initial / Date	QC Initial / Date
Installation Area	Wall / Ceiling Installation	Flatness, fit, joint gaps, and interface accuracy verified	HOLD – Do not continue to openings or sealing until accepted			
Installation Area	Doors / Windows	Installation secure; opening/closing operation verified	HOLD – Do not proceed to final sealing until accepted			
Installation Area	Sealing / Waterproofing	Sealant continuity, waterproof strips, and movement-area treatment verified	HOLD – Do not cover or proceed to interior close-up until accepted			
Installation Area	Plumbing / Electrical Rough-In	Routing, support, interfaces, and clearances verified	HOLD – Do not conceal or close up until accepted			
Installation Area	Utility / Functional Checks	Water and electrical tests completed; fixtures/devices function verified	HOLD – Do not release to final inspection until accepted			
Inspection and Testing Area	Final Unit Inspection	Structure, systems, doors/windows, sealing, appearance, and markings verified	HOLD – Do not release to packaging, warehousing, shipment, or Intertek inspection until accepted			
Inspection and Testing Area	Documentation Closeout	Required records complete; discrepancies corrected; traceability confirmed	HOLD – Do not move to storage until accepted			
Storage areas for completed and Loading Area	Storage / Staging	Unit supports, weather protection, opening protection, identification, and storage condition verified	HOLD – Do not leave unit in storage/staging status unless supports, covers, and identification are acceptable			
Storage areas for completed and Loading Area	Pre-Load Inspection	Packaging, labeling, visible condition, and readiness for transport verified	HOLD – Do not move to loading area or load for shipment until pre-load inspection is accepted			

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Factory Area	Stage	QC Checkpoint	Hold Point / Release Rule	Status	Prod. Initial / Date	QC Initial / Date
Storage areas for completed and Loading Area	Loading Release	Proper lifting/handling method, load support, securement points, and shipping release verified	FINAL HOLD – Do not release unit for shipment until loading inspection is accepted			

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NCR / Reinspection

NCR No.(s): _____

Corrective Action / Reinspection Notes:

Final Release

Production Supervisor: _____ **Date:** _____

QC Inspector: _____ **Date:** _____

Factory Quality Control Manager: _____ **Date:** _____

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Production Process and Inspection Checklist
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Quality Compliance Program

Detailed Production Process and Inspection Checklist

(A) Initial Order and Technical Preparation Stage

(1) Process Steps: Customer needs confirmation (expanded dimensions, internal layout) → Scheme design (main structure, insulation and waterproofing) → Drawing review → Technical briefing (clarifying production standards and process requirements) → Place production order

(2) Inspection checklist:

1. Drawing review and confirmation (verify the load-bearing limit, and structural adaptability of the expansion mechanism to ensure compliance with safety regulations);
2. Technical briefing confirmation (workshop personnel clearly understand the core requirements of each process without omissions).

(B) Raw material incoming and material inspection stage

(1) Process steps: Core raw material procurement → Incoming inventory → Material inspection → Qualified materials are put into storage/unqualified materials are returned or exchanged

(2) List of core materials and inspection items

1. Main steel materials (channel steel, square tube, steel plate): Check material certificates and specifications, ensure the surface is free of rust and bending, dimensional deviations meet specifications, and strength meets standards;
2. Enclosure materials (color steel plate, insulation board): Check the material, thickness, fireproof/insulation performance test report, surface is free of damage and color difference, and there are no defects at the splicing points;
3. Hardware accessories (high-strength bolts, hinges, seals): Check for specification matching, rust prevention treatment, no deformation or damage, and bolt strength meets the load-bearing requirements;
4. Waterproof/sealing materials (special sealant, waterproof membrane, waterproof strip): Check the production date and shelf life, ensure there is no deterioration or damage, and that the waterproof performance meets outdoor use standards and is suitable for sealing expansion gaps;
5. Auxiliary materials (paint, wires, pipes): Inspection certificate of conformity, paint is free of lumps and deterioration, wires meet specifications and are undamaged, pipes are free of cracks and suitable for outdoor use.
6. Key inspections: Material inspection records are archived; unqualified materials are strictly prohibited from being used on site; the quality of expansion mechanism parts is checked in detail to ensure that core components meet the standards.

(C) Core production processes and inspection stages

(1) Main steel processing

1. Process steps: Steel cutting (cutting the main frame and extension frame steel according to the drawings) → Bending the installation parts → Punching/corner cutting → Grinding and rust removal (removing burrs and rust to facilitate welding and painting)

2. Inspection checklist:

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1. Check the cutting dimensions (error $\leq 1\text{mm}$);
2. check the accuracy of bending angles;
3. check the position and size of holes to ensure the compatibility of expansion mechanism accessories;
4. check the thoroughness of rust removal, with no residual rust or burrs.

(2) Main frame welding and assembly

1. Process steps: Bottom frame welding → Top frame welding → Column welding → Weld reinforcement → Overall grinding and straightening

2. Key inspections

Frame welding quality inspection (no slag inclusions, porosity, cracks, weld height meets requirements);

Frame butt joint accuracy inspection, no offset;

Frame levelness and verticality inspection (deviation $\leq 3\text{mm/m}$);

Overall structural robustness inspection.

(3) Surface coating treatment

1. Process steps: Surface dust removal → Primer spraying (rust prevention) → Topcoat spraying (color as required) → Drying and curing

2. Key inspections

Spray uniformity inspection, no missed sprays, runs, or color differences;

Paint film thickness inspection, meeting rust prevention requirements;

Drying and curing effect inspection, no peeling or wrinkling, suitable for outdoor corrosion resistance requirements.

(4) Wall panel installation

1. Process steps: Fixed wall installation → Extended wall (movable wall) installation → Ceiling installation → Door and window opening preparation and installation → Door and window sealing treatment

2. Key inspections

Flatness of enclosure material installation and inspection of splicing gaps (gap $\leq 2\text{mm}$);

Accuracy of connection between expansion wall and fixed wall, ensuring no jamming or collision during expansion;

Firmness of door and window installation and flexibility of opening and closing;

Uniformity of sealant application (no missed areas or bubbles, with a focus on sealing expansion gaps).

(5) Sealing and waterproofing treatment

1. Process steps: Seal gaps with caulking compound → Reinforce and seal around doors and windows → Waterproofing top and bottom slabs → Install waterproofing strips

2. Key inspections

Check the fullness of the sealant to ensure there are no gaps;

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Check the firmness of the waterproof strip installation to ensure there are no loose parts;

Focus on inspecting the waterproofing of expansion and contraction areas to ensure there are no leaks after expansion and contraction.

(6) Interior decoration and plumbing/electrical installation

1. Process steps: Laying the floor → Piping installation (electrical wires, water pipes, drainage pipes, with allowance for expansion joints) → Interface connection → Electrical appliance installation (switches, sockets, light fixtures) → Sanitary ware installation → Water and electricity testing

2. Key inspections

Check pipeline routing and specifications, ensure adequate space for expansion and contraction, and prevent compression;

Check interface sealing (no water or electrical leakage);

Ensure water and electricity supply tests are normal, and that pipelines are not damaged during expansion and contraction.

(D) Complete Unit Inspection Stage

1. Process Steps: Comprehensive inspection (structure, expansion, water and electricity) → Visual inspection → Rectification and improvement → Acceptance and filing → Packaging and warehousing/shipping

2. Key checks:

Structural safety: The main frame is free from deformation, the welds are free from cracks, the locking is reliable, and the connectors are not loose;

Functionally sound: The water and electricity systems are working properly, doors and windows open and close smoothly, and the sealing and waterproofing meet standards;

Appearance quality: The surface is free of scratches, rust, and paint peeling; the joints are flat and the markings are clear.

Complete documentation: Production drawings, instruction manuals, etc. are all properly archived.

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Material Inspection and Receiving Report**Foshan Shenglei Integrated Housing Technology Co., Ltd.**

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Product ID	Product Name	Purchase Order No.	Supplier			Bill of Lading No.	Date	
Item No.	Stock/Part No.	Description	Quantity Received	Condition	Marking	Accept	Conditional Use	Reject
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐

Receiving Quality Assurance**ACCEPTANCE**

Listed items have been accepted by me or under my supervision

- ☐ Conform to contract specifications EXCEPT as noted herein or on supporting documents.
- ☐ Received in apparent good condition EXCEPT as noted

Signature of authorized person and date: _____

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EXCEPTIONS:

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Inspection and Test Report**Foshan Shenglei Integrated Housing Technology Co., Ltd.**

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Inspection Report ID #	Product ID	Product Name	Preparer Signature	Date		
Work Activity:			Item inspected and/or tested:			
Ref#	Specification reference documents (titles or description with version/date)					
Inspection/Test Record (additional items on next page)						
Inspection/ Test/ ID #	Inspection/Test Points/Location	Acceptance Criteria / Ref#	Test Result, Nonconformance	Non-conformance Disposition rework/reject/Non- conformance Report	Corrections Made / Final Acceptance	
					Initial	Date
Acceptance of completed work activity (sign and date)						
Inspector/Tester		Subcontractor and Supplier/Supplier		Production Manager		

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Nonconformance Report

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Nonconformance Report Control ID	Product ID	Product Name
Preparer Signature/ Submit Date		Factory Quality Control Manager Signature / Disposition Date
Description of the requirement or specification		
Description of the nonconformance, location, affected area, and marking		
Disposition	☐ Replace ☐ Repair ☐ Rework ☐ Use As-is	
	Approval required? Yes ☐ No ☐	
	If yes, approving party / date: _____	
Corrective Actions	☐ Corrective actions completed by /Date: _____	
	☐ Verification of correction by /Date: _____	
Preventive Actions		
	☐ Preventive actions completed Name/Date: _____	

Approved for Factory Built Housing Only
 Approved by: State of California
 Factory Built Housing – DAA #DF1507648
 Intertek (Intertek-ATI)
 Plan Approval: #R-22348
 Approval Date: 2026-07-15
 Expiration Date: 2029-07-14
Without Foundation / Site Work Approval

 1748 33rd Street
 Orlando, FL 32839

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