CITY OF ASPEN

Commercial and Multifamily Building Submittal Guide

A description of permit requirements for Commercial, Multifamily, and Mixed-Use Buildings under the 2021 Codes as adopted by Ordinance No. 1, Series of 2023.

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Documents

Planning Approvals

Check with the Planning Department to see if your project requires land use review. Any of the following documents that are specific to your project must be submitted with your application:

- Resolutions
- Decisions
- Ordinances
- Development Orders
- Other Land Use Approvals

Permit Application Signatures Packet

This is required for every type of building permit application* and can be found in the City's Document Library. The COA Permit Application Signature Packet is comprised of the following forms:

- **Building Permit Contact Sheet**
- **Homeowner Association Compliance Form**
- **Valuation Affidavit**
- **Asbestos Verification and Checklist**
- **Zoning Compliance Verification Policy**

Each page of the Signature Packet must be filled out entirely with appropriate signatures where required. Incomplete pages in this application packet will be rejected. **If you have been approved to apply for an EPIC permit, you must use the EPIC Permit Application Signatures Packet instead.*

Asbestos Test and Asbestos Clearance Reports

If '**YES** is checked on any of the questions on the Asbestos Verification and Checklist (above), you must provide an asbestos test report. The report must include the following:

1. Inspector's narrative including sampling locations
2. Inspector's certificate
3. Lab data

If Asbestos is found and you will be disturbing it, you must submit a final air clearance asbestos abatement report prior to permit issuance.

State Asbestos Demolition Approval Notice

This document is required if you are demolishing an entire building. One notice is required for each separate building, including outbuildings. You must submit the original license, not a copy. The Asbestos Verification and Checklist has information on how to acquire one.

Fireplace Registration and Installation Instructions

The **Fireplace Registration Form** can be found in the Document Library and is required if you are adding or altering a fireplace. You must enter details for all fireplaces and fire pits existing and proposed associated with the unit.

For factory-built wood and gas log fireplaces, provide the **manufacturer's installation instructions** for each factory-built component

Fireplace Restrictions:

- Wood burning: No wood burning fireplaces indoors. EPA certified wood burning stoves permitted.
- Gas burning: Only direct vent fireplaces indoors (no gas log or other gas fireplaces that atmospherically communicate with the interior).
    - **Interior and exterior gas fireplaces and firepits are subject to REMP** (described later).
    - Interior and exterior gas fireplaces and firepits require either **occupancy sensor or automatic timer shutoff controls**.

The following must be included in the installation instructions:

- Appliance/stove clearances and required supports
- Flue/termination clearances
- Hearth Extension requirements (if any)
- Exterior air requirements

Energy Code Compliance

(Use the Aspen Energy Code)

Residential Buildings

R-2, R-3 and R-4 buildings (three stories or less in height above grade) and residential portions of mixed-use buildings (three stories or less in height above grade) must use the Residential portion of the 2021 Aspen Energy Code. Residential portions of a 4 story or greater mixed use building must comply with the Commercial provisions. There are three compliance paths: Prescriptive, Performance, and ERI. **You must note on the plans which approach you are taking.** This guide focuses on the Prescriptive path.

Envelope:

There are three options for demonstrating compliance for the thermal envelope under the prescriptive path: R-value Table, U-factor Table, and Total UA alternatives. Each of these is described below:

1. **R-value Table Alternative:** Use the values out of Table R402.1.3 for insulation and fenestration (printed below). These R values are for the insulation product used, not for the entire assembly. There are two rows, New/Additions and Alterations, use the row applicable to your project. Your details, sections, and/or schedules must be noted with these R and U values.

TABLE R402.1.3

INSULATION MINIMUM *R*-VALUES AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

WORK TYPE	FENESTRATION *U*-FACTOR[b, i]	SKYLIGHT[b] *U*-FACTOR	GLAZED FENESTRATION SHGC[b, e]	CEILING *R*-VALUE	WOOD FRAME WALL *R*-VALUE[g]	MASS WALL *R*-VALUE[h]	FLOOR *R*-VALUE	BASEMENT[c,g] WALL *R*-VALUE	SLAB[d] *EDGE R*-VALUE & DEPTH	CRAWL SPACE[c,g] WALL *R*-VALUE
New Construction & Additions	0.26[i,j,k]	0.44	0.35	60	~~hhh~~ 34+12ci or 20 + 20ci or 13 + 25ci	25ci	38	20ci or 5 + 15ci or 13 + 10ci	10ci, 4 ft	20ci or + 15ci or 13 + 10ci
Alterations	0.28[k]	0.50	0.35	49	30 or 20+5ci[hg] or 13+10ci[hg] or 0+20ci[hg]	19/21	38	10ci or 13	10ci, 4 ft	10ci or 13

For SI: 1 foot = 304.8 mm. NR = Not Required.

ci = continuous insulation.

a. *R*-values are minimums. *U*-factors and SHGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall be not less than the *R*-value specified in the table.

b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. R-10 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation *R*-value for slabs as indicated in the table. The slab-edge insulation for heated slabs shall not be required to extend below the slab.

d. The first value is cavity insulation; the second value is continuous insulation. Therefore, as an example, "13 + 5" means R-13 cavity insulation plus R-5 continuous insulation.

e. Mass walls shall be in accordance with Section R402.2.5. The second *R*-value applies where more than half of the insulation is on the interior of the mass wall.

Vertical fenestration shall also comply with R402.3.6 and R402.3.7.Doors may have a U-factor of 0.28 or less.

2. **U-factor Table Alternative:** Use the values out of table R402.1.2 from the 2021 IECC as amended. There are two rows, New/Additions and Alterations, use the row applicable to your project. This table is factoring in the total U-factor of an entire assembly, not just the insulation, so you must demonstrate your calculations of the U-factor of any assemblies using this alternative, including the effects of thermal bridging from framing materials. Your details, sections, and/or schedules must be noted with these values. You may mix this approach with the prescriptive one above.

3. **Total UA Alternative:** This option allows for the trading of assemblies to have a higher performing R or U value to offset an assembly with a lower performing R or U value. Use REScheck (available at www.energycodes.gov), Ekotrope, REMrate, or other approved software. The proposed design must be a minimum of 23% more efficient than the standard reference design to accommodate for Aspen's amended prescriptive provisions.

Be sure to address the following in your REScheck (or other software):

- □ Select 2021 IECC as the code.
- □ Under Options, choose Compliance Method: UA trade-off.
- □ Fill out all info on the Project tab, including Project Details (not optional).
- □ Fill out the Envelope tab with all of your assemblies and fenestration. See the Help section for guidance.
- □ The makeup and area of all assemblies must match the plans.
- □ Cavity insulation is insulation installed in the framing cavities between studs and joists. Continuous insulation is installed outside of framing and runs past it.
- □ Include thermal bridging if applicable as described in section on Construction Drawings: Details
- □ Sign the report.

Interior and Exterior Lighting:

For all prescriptive paths, indicate the following on **lighting plans**:

- ☐ Dimmer or auto shutoff controls for all lighting in habitable spaces
- ☐ Auto shutoff controls for all lighting in garage, laundry rooms, utility rooms, storage rooms, attics, crawlspaces, and unfinished basements.
- ☐ Daylight sensor + manual controls for all exterior lighting if total exterior lighting >30W.
- ☐ Total wattage of exterior lighting

Mechanical:

For all paths,

- ☐ See requirements in Mechanical Plans.

Additional Efficiency Package:

For all prescriptive paths, as well as the performance path, the project must:

- ☐ Choose one of the additional efficiency package options from section R408.
- ☐ Provide documentation/drawings to allow for verification. If using REScheck, the report should indicate the credit taken.

Commercial Buildings

Any building or portion of a mixed-use building that is not residential must use the Commercial portion of the 2021 Aspen Energy Code. Residential portions of a mixed use building must comply with the Residential provisions unless the building is greater than 3 stories. There are two compliance paths: Aspen IECC Prescriptive or ASHRAE Standard 90.1 Appendix G Performance. **You must note on the plans which approach you are taking.** This guide focuses on the Aspen IECC Prescriptive path.

Envelope:

There are three options for demonstrating compliance for the thermal envelope under the prescriptive path: R-value method, U-factor method, and Component Performance Alternative. Each of these is described below. You must note on the plans which approach you are taking.

1. **R-value method (C402.1.3):** Use the values out of Table C402.1.3 and C402.4 from the 2021 IECC for climate zone 7. Your details, sections, and window/door/insulation schedules must be noted with these values.

2. **U-factor method (C402.1.4):** Same as above but use the values out of table C402.1.4 from the 2021 IECC for climate zone 7. You must demonstrate your calculations of the U-factor of any assemblies using this alternative, including the effects of thermal bridging from framing materials. You may mix this approach with the Prescriptive one above.

3. **Component Performance Alternative (C402.1.5):** Use **COMcheck**, available at www.energycodes.gov.

   You must submit 2 versions of COMcheck Envelope:
   1. **Your Proposed Design.**
   2. **Equivalent Prescriptive Design with same areas but using prescriptive values from Tables C402.1.3 and/or C402.1.4.**

   The Proposed Design must be the same or greater percentage better than code as the Equivalent Prescriptive Design.

Be sure to address the following in your COMcheck:

- ☐ Select 2021 IECC or ASHRAE 90.1 Appendix G (2019) Standard as the code (no mixing and matching)
- ☐ Fill out all info on the Project tab, including Project Details (not optional!)
- ☐ Fill out the Envelope tab with all of your assemblies and fenestration. See the Help section for guidance.
- ☐ The makeup and area of all assemblies must EXACTLY match the plans and insulation schedule.
- ☐ Cavity insulation is insulation that sits in the framing cavities between studs and joists. Continuous insulation is insulation that sits beyond framing and runs past it.
- ☐ Include thermal bridging if applicable as described in section on Construction Drawings: Details
- ☐ Sign the COMcheck.

Interior and Exterior Lighting:

For all prescriptive paths, use **COMcheck**, available at www.energycodes.gov. Follow the COMcheck instructions above, as well as:

- ☐ Create a labeling system to ease comparison between the COMcheck, lighting plans, lighting schedule, and specs. All must match exactly.
- ☐ Provide spec sheets for all fixtures listing wattages.
- ☐ Only take exemptions and allowances as allowed by 2021 IECC sections C405.5.1, Table C405.5.2, C503.5, C504.2.

Mechanical:

For all prescriptive paths, use **COMcheck**, available at www.energycodes.gov. Follow the COMcheck instructions above, as well as:

- ☐ Create a labeling system to ease comparison between the COMcheck, equipment schedule and plans. All must match exactly.

Additional Efficiency Credits:

For all prescriptive paths, the project must score 10 credits from section C406. Provide documentation/drawings to allow for verification. If using COMcheck, all reports (envelope, mechanical, and lighting) must be coordinated for credits.

Non-Vented Roof Assemblies

Unvented roof assemblies that do not meet the requirements of IBC 1202.3 (minimum R-30 vapor impermeable insulation) shall be designed to avoid the likelihood of fungal growth or the accumulation of moisture on the linings and other building elements. The applicant shall submit **calculations and/or supporting proof** that the building systems will perform to avoid the accumulation of fungal growth and moisture in the roof assembly. The proposed roof assembly will be reviewed and approved by the building official and demonstrate compliance to the alternate method of roof ventilation.

The calculations must show that the temperature of the condensing surface (T interface) is greater than 45 degrees F at 35% relative humidity. You may use the following equation in accordance with IBC 1202.3 item 5.1.4:

T(interface) = R(exterior) / R(total) x [T(inside) – T(outside)] + T(outside)

Where:
T(interface) = temperature at the sheathing/insulation interface or the temperature of the first condensing surface. Must be greater than 45 deg F.
R(exterior) = the R-value of the exterior sheathing
R(total) = the total R-value of the entire assembly
T(inside) = 68 deg F
T(outside) = 19.8 deg F (mean daily temp)

U-Factor Fenestration Documentation

All new windows, skylights, and glazed doors must have a factory applied NFRC stickered label listing the U-factor of the entire assembly. This **U-factor must match what you selected in the Energy Code Compliance section above**. You must **note on the plans** that all new fenestration on the project will comply with this.

If new windows, skylights, or doors do not come with a factory applied NFRC stickered label listing the U value of the entire assembly, you must demonstrate the U value using one of the options in the **City of Aspen Fenestration U-Factor Policy** which can be found in the policy manual.

Residential windows: Projects that use the prescriptive path must provide a cutsheet or other documentation that all windows are either:

- Triple pane with at least one low e coating, or
- Have a U-factor of 0.26 with an air fill (no gas fill)
  (2021 IECC R402.3.7)

Renewable Energy Mitigation Program (REMP) Documents

Snowmelt, hot tubs, outdoor pools, heat tape, outdoor heaters, outdoor fireplaces and firepits, and indoor fireplaces are required to comply with the Renewable Energy Mitigation Program (REMP). Residential Renewable Energy Mitigation Program (RREMP) guidelines apply to residential buildings three stories or less in height above grade and residential portions of mixed-use buildings (Groups R-2, R-3, and R-4). Commercial Renewable Energy Mitigation Program (CREMP) guidelines apply to all other types of buildings and commercial portions of mixed-use buildings. For further information on the REMP program, refer to Appendix RD in the City of Aspen's adoption of the 2021 IECC.

In addition to the **full size REMP plan sheets** mentioned later, you must submit the following to demonstrate compliance:

All:

- ☐ Completed REMP calculator Excel worksheet, in .xls or .xlsx format and available in the Document Library.

- ☐ **Provide specs on boiler** (the boiler/heating unit for the snowmelt, pool, and/or spa), showing AFUE (annual fuel utilization efficiency).
- ☐ If using solar renewable credits: The renewable credit will be determined by the system kW capacity multiplied by the efficiency of the system as calculated on the REMP calculator. Be sure to include this tab from the worksheet.
    - Provide **specs on solar panels**, showing dimensions, and if Photovoltaic, kW per panel (panel rating).

Spa (Hot Tub):-

☐ **Portable spas** must be APSP-14 (Association of Pool and Spa Professionals) or CEC (California Energy Commission) certified: provide specs showing certification**.** A maximum of one certified portable spa per property is exempt from REMP.

☐ **Permanent spas** require an **APSP-15 checklist** to be submitted. This form can be found in the Document Library.

☐ **All spas: Provide specs on a safety cover listed to ASTM F 1346** (unless an enclosure barrier is used per 2021 International Swimming Pool and Spa Code 305). Cover must also be **insulated to a minimum of R-12**.

Outdoor Pool:

☐ **Provide specs on a cover meeting the following:**

☐ **Safety cover listed to ASTM F 1346** (unless an enclosure barrier is used per 2021 International Swimming Pool and Spa Code 305).

☐ **Insulated to minimum R-2** and vapor-retardant (2021 IECC R403.10.3).

☐ Pools require an APSP-15 checklist to be submitted. This form can be found in the Document Library.

Outdoor electric heat mats:

☐ Provide cutsheet and installation instructions indicating wattage and controls.

Heat Tape:

☐ Provide cutsheets for controls and heat tape. May alternatively communicate it clearly on the plans.

Outdoor Heaters:

☐ Installation instructions/cutsheet indicating wattage and required clearances to combustibles, and controls. Must be electric; gas heaters are prohibited.

Outdoor Gas Fireplaces and Firepits:

☐ Installation instructions/cutsheet indicating input BTUs and required clearances to combustibles, and automatic timer shutoff controls.

Indoor Gas Fireplaces and Firepits:

☐ Installation instructions/cutsheet indicating input BTUs, required clearances to combustibles and venting requirements, and automatic timer shutoff controls.

For prorated credit for existing systems that are replaced, relocated, or removed:

Provide the following to document existing REMP energy uses (this information can be researched on the public computer by the building department front desk):

☐ Old REMP worksheet or old approved REMP plans.

☐ Receipt for past REMP payments

☐ Certificate of Occupancy or Letter of Completion for the old REMP energy use

Line Grade Verification Form

If the project proposes additional square footage (additions and new construction), you must include this form with your submission. It can be found in the City's Document Library. Fill out part A and show horizontal ties to the property line on Site Plan.

Verification of Structural Integrity

For alteration, demolition and repair work minor in nature; if any walls, or other potentially structural elements are being altered, whether bearing or non-bearing, verification in one of the following forms may be accepted in lieu of a structural plan prior to demo:

Stamped Letter Option: A letter stamped and signed by a structural engineer or architect stating that they will be involved with the project and certifying the structural integrity of the proposed demolition or other work. Once finishes have been removed, if it is determined that structural bearing components will be altered, a structural plan will be required.

Original Framing Plans Option: Provide the original framing plans demonstrating that the elements you are proposing to alter are non-bearing and not part of the structural frame. If during construction it is determined that the existing structure does not match the original plans, a new structural plan or stamped letter will be required.

Structural Calculations

Large projects must provide a report of the structural calculations and assumptions made in the structural design. Must be stamped and signed by the structural engineer.

Soils Report

Must comply with the City of Aspen Soils Report Requirements. Alternatively, a letter from a geotechnical engineer committing to excavate and then confirm assumptions or a letter from a geotechnical engineer to use a soils report from an adjacent property may be submitted if approved by the building official.

Special Inspection and Testing Agreement

Work that includes any of the following requires special inspection per 2021 IBC section 1705:

- □ High strength bolting
- □ Epoxy anchors
- □ Structural steel welding
- □ Pre and post stressed tendons
- □ Permanent micropiles, helical piers
- □ Sprayed fireresistant materials
- □ Mastic and intumescent fireresistant coatings
- □ Firestop penetrations in the following buildings:
    - Risk category III or IV

- Group R occupancies over 250 occupants

The Special Inspection and Testing Agreement may be turned in later in the submittal process; it is not required at submittal but is required prior to sign off and issuance. The applicant must submit the most current version of the agreement, which can be found in the City's Document Library. The agreement must be signed by the following entities:

- ☐ Special Inspection Agency
- ☐ Owner
- ☐ Engineer/Architect
- ☐ Contractor
- ☐ Fabricator (either approved or inspected)*

*Approved fabricators may inspect their own shop fabrication but must have their field work inspected by the special inspector. Inspected fabricators must have all their work inspected by the special inspector.

Photos

For existing construction such as additions and alterations, provide photographs of the proposed work areas. **Photos are a requirement for roof and repair permits,** but optional for other permit types to aid plans examiner in better understanding the existing conditions.

Unit/Building Relationship

For alterations and additions to multi-unit buildings only. Provide an elevation, section, or photograph clearly showing the relationship of the unit being remodeled to the remainder of the building. Highlight your unit and show neighboring units. Note the occupancy type of the neighboring units (residential, business, retail, restaurant, etc).

Miscellaneous cutsheets/specs/install instructions:

- ☐ **Class A Fire Rated Roof Assembly:** Provide an ES-Report or UL listing for the roof assembly or assemblies to demonstrate that the entire buildup is Class A rated.
- ☐ **Automatic Garage Door opener battery backup (residential):** Provide a cutsheet or indicate requirement on the plans.
  - All automatic garage door openers installed in Group R occupancies shall have a battery backup function that is designed to operate when activated by an interruption of the electrical service to the opener. The battery backup function shall operate in a manner so that the automatic garage door opener is operational without interruption.

Energy Assessment

- ☐ Required prior to permit issuance for the following residential projects:
  - New residential construction
  - Residential additions
  - Level 4 residential alterations (See Alterations Guide)

Benchmarking Energy Reporting Agreement

- □ **Benchmarking Agreement:** Signed agreement required prior to permit issuance. Available in the document library.

Construction Drawings Set

Drawing Standards

- ☐ All drawing sets must be submitted virtually in 24”x 36” size format. For full electronic submittal standards, see the Electronic File Preparation Standards for the City of Aspen.
- □ All sheets in a drawing set must be the same size, sequentially labeled, dated and have a page title/description.
- ☐ Include North arrow and the scale [standard architectural or engineering scales (1/4”=1’, etc)].
- ☐ 1/4” scale is preferred. Minimum scale is 3/16”.
- □ Title block with project name, project address and legal description.
- □ Include matching gridlines on all drawings.
- □ All structural, mechanical, electrical, and plumbing plans, details and calculations must be prepared, stamped, and signed by a professional engineer or architect licensed in the state of Colorado (digital copy of seal and signature is sufficient).
- □ Architectural drawings are required to be stamped unless they meet one of the following exemptions:
    - 1) One, two, three, and four unit family dwelling including accessory buildings associated with such dwellings
    - 2) Garages, industrial buildings, offices, farm buildings, and buildings for the marketing, storage, or processing of farm products, and warehouses, which do not exceed one story in height, exclusive of a one-story basement, and which under applicable building code, are not designed for occupancy by more than ten persons
    - 3) Additions, alterations or repairs to the foregoing buildings which do not cause the completed building to exceed the applicable limitations
    - 4) Nonstructural alterations of any nature to any building if such alterations do not affect the life safety of the occupants of the building.
- □ **Existing/Demolition plans** shall be printed on the same sheet as the proposed plans. Where there is not enough room, the existing/demolition plans should be grouped prior to the proposed plans.**All drawings must differentiate between existing and proposed construction**.
- □ Provide **floor plans of the entire unit**, not just the area of work.
- □ The floor plans should be ordered from lowest floor to the highest floor (i.e. basement, first floor, second floor).
- □ All Change Orders shall highlight with clouds or bubbles all areas changed and **include a bulleted list of the changes**. All changes must be identified in this manner. Corrections made to a permit during the review process shall not have clouds or bubbles, only change orders should have revision clouds.
- □ The sheets must be in the order shown below.

Note: Some items below are repeated on different sheets. It is not required to have these items shown multiple times, just be sure to show in one of the listed locations.

Cover Sheet

- □ List code editions (2021 IBC, 2021 IECC, 2021 IMC, 2021 IPC, 2021 IFGC, 2021 IEBC (if existing), 2020 NEC, and City of Aspen Municipal Code Title 8)
- □ Note if a Fire Sprinkler system is existing and if one will be installed and whether it is NFPA 13, NFPA 13D or NFPA 13R.
- □ Address and unit #
- □ Parcel ID #
- □ Owners Name
- □ Contact Info for all involved parties, Designer or Architect, Structural Engineer, Mechanical Engineer, Civil Engineer, Contractor, Owner and if Owners Representative
- ☐ Table of Contents, index of sheets in this order, cover sheet, survey, site plan, zoning sheets, civil sheets, landscape sheets, architectural sheets, MEP's, structural sheets, stabilization sheets
- □ List required types of special inspections
- □ Note which path of energy code compliance you are taking
- □ **Planning approvals**. Print *every page of every approval* on the cover sheet.

Survey

For new construction and additions. Must be drawn per the Compliant City of Aspen Survey Checklist in the Document Library.

Excavation/Earth Retention Plans

(Under Chapter 18 & 33 of the 2021 IBC and City of Aspen Engineering Standards)

- □ Plans for Temporary and/or Permanent Soil Nails and Micropiles (must be stamped by engineer) or a site plan showing that there is adequate space on site for a one-to-one layback (the proposed foundation walls are within a horizontal distance less that the vertical depth of excavation of any existing travel way, structure, or property line.)

Site Plan

For new construction, additions, and exterior alterations. Include the following:

- □ Property lines, building setbacks, building envelopes, and easements
- □ Exterior walls, roof lines, and overhead building projections with dimensions that tie the building to the property line and other buildings on the same lot.
- ☐ Provide the equivalent grade to architectural 100'. (i.e. 100' = 7495.5')
- □ All development, including: Structures, decks, patios, walls, retaining walls, fences, gates, walkways, fire pits, water features, railings, pergolas, trellises, vehicular access, parking areas, vehicular turn-arounds, driveways, carports, condensers, equipment, etc
- □ Fire truck access, including distance and width, and turnarounds
- □ Adjacent streets, alleys, adjacent building properties
- □ Existing and proposed grades including spot elevations

- □ Locations of all utility meters and shutoffs
- □ Design flood elevations, flood hazard areas, and floodways (if applicable)

Renewable Energy Mitigation Program (REMP) Plan

Provide all of the below information, ideally on a single plan, but ensure that if information is duplicated across various drawings that it is coordinated:

- □ Snowmelt:
  - o Show all snowmelt areas in plan, provide individual area square footages and the total square footage.
  - o R-10 insulation detail under snowmelt. Must be rigid foam, no bubble wrap.
  - o Controls configured to shut off system when snowmelted surface temp is above 40°F and precipitation is not falling, and an automatic or manual control that is configured to shut off when the outdoor temperature is above 40°F.
  - o You may choose to show snowmelt only on the Mechanical drawings
- □ Portable spas:
  - o Location and, if more than one spa, square footage of water surface.
  - o If above grade:
    - Structural drawings must indicate ability to support load
    - Provide guards and indicate guard height above top of spa. See Aspen code amendment IBC 1015.3
- □ Pools and permanent spas:
  - o Location and square footage of water surface.
  - o Details showing compliance with:
    - 2021 ISPSC
    - R-15 insulation required on sides and bottom (C404.8.4/R403.14)
  - o Enclosure barrier (fence) or reference ASTM F1346 listed cover for pools and spas (provide cut sheet)
- □ Outdoor electric heat mats:
  - o Location, square footage, and controls
- □ Electric Heat Tape:
  - o Locations, heat tape rating (w/ft), length of heat tape, total wattage
  - o Controls: 40deg temperature shutoff plus one of the following:
    - Moisture sensor or daylight sensor or timer to shutoff at night
  - o Show all heat tape. This counts towards the Residential REMP budget so consider a roof design and/or vented roof assembly to minimize the amount of heat tape. Coordinate with your roofer.
- □ Exterior Heaters:
  - o Location and automatic timer shutoff controls
- □ Exterior Gas Fireplaces and Firepits:
  - o Location, clearances to combustibles dimensioned, and automatic timer shutoff controls.
- □ Indoor Gas Fireplaces:
  - o Location, any information necessary to determine compliance with installation instructions, and automatic timer shutoff controls.
- □ Solar panels: location, number of panels, orientation, slope, and height above roof.

- Indicate snow shedding hinderances such as snow fences.
- Indicate pathways and setbacks per IFC 1205

□ You may choose to put all of this on the Site Plan if it can be done clearly and legibly.

Area Sheet

Illustrate and calculate building gross floor area as defined by 2015 IBC section 202 for all structures.

> **FLOOR AREA, GROSS.** The floor area within the inside perimeter of the *exterior walls* of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding *exterior walls* shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.
>
> Commentary: Gross floor area is that area measured within the perimeter formed by the inside surface of the exterior walls. The area of all occupiable and nonoccupiable spaces, including mechanical and elevator shafts, toilets, closets, mechanical equipment rooms, etc., is included in the gross floor area. This area could also include any covered porches, carports or other exterior space intended to be used as part of the building's occupiable space.

Work Area / Demo Plans

For alterations to existing buildings, See the Aspen Alterations Guide in the Document Library. Provide plans (and elevations/sections as necessary) indicating the following:

- □ Hatch all areas that meet the definition of 'work area' and add up the totals. Indicate the percentage of total work area to building or unit gross floor area.
- □ Removed/replaced roofing. Also indicate any existing insulation (whether demoed or left in place)
- □ Removed ceiling finish/drywall, dropped ceilings.
- □ Siding/exterior veneers that are removed or replaced.
- □ Fenestration (windows, doors, and skylights) that is removed or replaced.
- □ Removed/replaced interior wall finish/drywall (including in basements).
- □ Where floors over unconditioned space have cavities exposed.
- □ Indicate air sealing (provide notes and details) at all disturbed walls, ceilings, and floors in thermal envelope (this may be shown on proposed plans/sections/details).
- □ Removed/replaced/repaired REMP items (snowmelt, pool, spa, heat tape, exterior fireplaces, firepits, exterior heaters.
- □ If electrical service is replaced
- □ Any added or altered on-site parking

Fenestration Area Drawings

- ☐ **Vertical Fenestration to Above Grade Wall ratio.** If adding fenestration (window or door) or increasing fenestration size:
    - Graphically demonstrate and provide calculations showing the following. If using UA tradeoff, component or performance paths, the areas should match those on the report.
        - Square footage of all **vertical fenestration** (windows and doors) in the thermal envelope. This includes:
            - Doors with >50% glazing (not opaque doors)
            - Measured to outside of frame of window or door unit (not just the glass).
        - Square footage of all **above grade exterior walls** that are part of the thermal envelope.
            - If a wall meets the definition of *Above grade wall (see below)*, count the entire wall, including the portion that is below grade. If a wall is not an *Above grade wall*, don't count that wall area (or the glazing in it).
                - *Above grade wall* definition for **residential**: A wall more than 50 percent above grade and enclosing conditioned space. This includes between-floor spandrels, peripheral edges of floors, roof and basement knee walls, dormer walls, gable end walls, walls enclosing a mansard roof and skylight shafts.
                - *Above grade wall* definition for **commercial**: A wall associated with the basement or first story of the building that is part of the building thermal envelope, is not less than 85 percent below grade and is on the exterior of the building.
            - Break up walls by story, so for example, a 2 story wall should be broken into two walls. The break between stories should happen at the floor sheathing line. Wall area includes the rim of the joist/rafter above.
            - Wall area is inclusive of the area of doors and windows that are in it, not the area of wall with windows subtracted.
        - Sum up the areas and provide **the total percentage of fenestration to wall**. Must be 30% or less (IECC C402.4.1 & R402.3.6).
- ☐ **Skylight to Roof ratio**. If adding skylights, or increasing skylight size:
    - Graphically demonstrate and provide calculations showing the following. If using UA tradeoff, component or performance paths, the areas should match those on the report.
        - Square footage of all **skylights** in the thermal envelope. This includes:
            - Measured to outside of frame of the skylight unit (not just the glass).
        - Square footage of all **roofs, decks, patios, etc** that are part of the thermal envelope.
            - Measure to the inside of exterior thermal envelope walls below (don't include area over thickness of exterior walls or overhangs).
        - Sum up the areas and provide **the total percentage of skylight to roof**. Must be 3% or less (IECC C402.4.1 & R402.3.6).

Occupancy/Means of Egress Plan

- □ Type of construction (i.e. Type VA, VB, IIIA, etc) Find this in the building address file or provide a calculation per 2021 IBC chapter 5.
- □ Building height, stories, area
- ☐ Note any increases or 'buy downs' used, such as sprinkler or frontage increases.
- □ Note if there is an existing fire sprinkler system, the type, and its extent (entire building? partial?).
- □ All occupancies and incidental/accessory uses with square footages
- □ Proposed method of occupancy separation/non-separation
- □ Occupant load calculations
- □ Travel paths and distances
- □ Common path of egress measured rectilinearly
- □ Separation of exits
- □ Exit enclosures, exit passageways, corridors, lobbies, discharges, etc. labeled
- □ Exit illumination and signs, emergency power
- □ Seating, furniture, fixture, and/or merchandise display layout if applicable

Fire Resistance Plans & Details

- □ Occupancy separations
- □ Type of Construction separations
- □ Means of Egress separations
- □ Fire resistive (and STC/IIC) walls, floors, ceilings, roofs, and shafts
- □ Dash/highlight all rated assemblies in plan view and section. Must show continuity (rating must not start and stop).
- □ Label all rated assemblies (walls, floor/ceilings, roof/ceilings, shafts, etc) to reference a detail and a listed and tested assembly. Print out the full installation instructions of each listed and tested assembly on the plans. Listed and tested assemblies can be from one of the following:
    - o UL Listings
    - o Gypsum Manual (GA-600 Fire Resistance Design Manual)
    - o From a manufacturer if the assembly was tested to UL 263 or ASTM 119.
    - o 2021 IBC section 721
    - o 2021 IBC section 722
- □ Label all fire rated doors, windows, and hatches with the minute fire rating (may show this on the door/window schedule alternatively)
- □ Show all penetrations through fire resistive assemblies and provide listed product specs (no penetrations are permitted in exit enclosures). Note that all penetrations of fire rated assemblies must comply with 2021 IBC 714
- □ Note where fireblocking and draftstopping will be installed. Show in any details as necessary.
- □ Provide the distance to property line of all exterior walls. If facing a street or alley, provide the distance to the centerline of the street or alley.
- □ Provide elevations of all exterior walls that are less than 30 feet from the property line or centerline of street or alley. Show the following on the elevations:
    - o Hatch the area of each portion of wall in a single plane on a single floor. Label the square footage.
    - o Hatch the aggregate area of all doors and windows (full frame size) on each wall portion

above. Label the square footage.
    - Provide calculations demonstrating compliance with 2021 IBC 705.8.
- □ Where interior finish materials are applied on walls, ceilings or structural elements required to have a fire-resistance rating or to be of noncombustible construction, clearly show the furred or set out construction with materials and dimensions shown in details. (803.15)

Accessibility Plans & Details

- ☐ Show accessible entrances and routes from public way throughout site and facility
    - Show door maneuvering clearances
    - Include route to toilet/bathing facilities
- ☐ Show accessible means of egress
- ☐ If any of the following are provided, some or one must be accessible (see IBC chapter 11). Show in plan and clearly show all required clearances and dimensions.
    - Parking, Toilet or Bathing facility, Sinks, Dressing room, POS counter, workspace, seating, dining, kitchen/kitchenette, drinking fountain, elevator, storage, controls, switches and outlets.
        - Bar eating/drinking surfaces must provide an accessible location with a companion space.
- ☐ Show all required accessibility signage
- ☐ If four or more dwelling units, they must all be Type B accessible. If a unit is exempted from Type B, it must be Type C (Aspen amendment IBC 1108.6.2.3.3).
    - State whether using option A or B for bathrooms and show all required elements with dimensions.
    - Reach ranges for controls and outlets
    - Door clear opening widths to all rooms
- ☐ Grab bar reinforcement in all bathrooms.
- ☐ Show travel route and distance to toilet facilities.
- ☐ Existing buildings: If modifying a space containing a primary function, then an accessible route, accessible toilet facilities and drinking fountain must be provided.
- □ **Accessibility details**
    - ☐ Details and elevations showing clearances and dimensions for all accessible elements
    - ☐ Toilet and bathing room fixture clearances
    - ☐ Grab bars, mirrors, dispensers
    - ☐ Point of sale counters
    - ☐ Counters for dining and work surfaces, including bars. Include companion space.
    - ☐ (Note: new construction clear spaces and turnaround sizes have changed!)

Floor plans

Required for all permits

- □ **Existing drawings** preceding proposed drawings
- □ Room uses labeled
- □ Gridlines
- □ Section, detail, and assembly callouts
- ☐ Provide the equation comparing site (surveyed) elevation to structure/ architectural plan elevation: (i.e., 100' first floor elev = 7962.50')
- □ Floor finish material

- ☐ Carbon monoxide and smoke detector locations
- ☐ Door swings with floor levels shown on both sides including exterior landings
- ☐ Stairs: direction of travel, handrails with extensions and returns, rise/run
- ☐ Emergency Escape and rescue openings with height of sill above finish floor
- ☐ Emergency escape and rescue opening window wells:
    - Grates/grilles/covers not permitted. Provide guards where adjacent to walking surfaces (Aspen amended IBC 1031.6)
    - Window well dimensions, show ladder.
- ☐ Guard rail locations
- ☐ All appliances and equipment labeled
- ☐ Attic and crawlspace access, with dimensions
- ☐ Dashed outline of roof overhangs above

Roof Plan

Applicable to new construction and roof work

- ☐ **Existing drawings** preceding proposed drawings
- ☐ Drains and secondary drains/scuppers
- ☐ Skylights with labels matching schedule
- ☐ Flue, exhaust, and chimney terminations and outside air intakes with dimensions to property lines and openings.
- ☐ Roof pitches shown as x:12
- ☐ Solar panels with orientation, slope, and height above roof
- ☐ Roofing material (Class A assembly required)
- ☐ Roof/attic ventilation
- ☐ Show exterior walls below with dashed line.
- ☐ Show parapets
- ☐ Show all heat tape. This counts towards the Residential REMP budget so consider a roof design and/or vented roof assembly to minimize the amount of heat tape. Coordinate with your roofer.
- ☐ Snow stop locations. These are required anywhere a roof could shed ice and snow onto potentially occupied areas such as a walkway, stairway, alley, deck, pedestrian and vehicular exit from buildings or areas where there is potential for personal injury or property damage and areas directly above or in front of gas utility or electric utility meters.
- ☐ FYI (this does not need to be on plans but must be installed): Ice dam barrier of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall extend from the roof eave edge at least six feet inside the exterior wall line as measured along the roof surface, eighteen inches from the centerline of the valley and up twenty-four inches on the vertical wall at a roof and wall juncture.

Elevations

- ☐ **Existing drawings** preceding proposed drawings
- ☐ Show grade, underground structure and window wells
- ☐ Windows and doors (show operable vs. fixed) label to match schedules
    - Dimension operable window sill heights above finish floor. Operable windows within 24” of finish floor and more than 72” above the exterior surface below require an opening limiting device. (IBC 1015.8)

- ☐ Interior finish floor levels as dashed lines, including stairs
- ☐ Dimension all guard heights
- ☐ Egress windows labeled, bottom of opening heights dimensioned
- ☐ Safety glazing labeled on windows
- ☐ Vents, intakes, and exhausts with distances to openings and property lines
- ☐ Chimneys and flues with heights 3' at roof penetrations and 2' above building elements within 10'
- ☐ Label all finish materials and claddings. Must meet wildfire resiliency requirements of Aspen amended IBC chapter 34. See Details section.
- ☐ Protection from decay, wood to earth separations 6" min above grade
- ☐ Landings at doors and stairways
- ☐ Electric service and gas and water meter locations
- ☐ Snow stops (see requirements in Roof Plan section)

Sections

- ☐ **Detail and assembly callouts**
- ☐ Headroom height, including at dropped ductwork.
- ☐ Show the location of the thermal envelope and demonstrate continuity: show all insulation and avoid breaks.
- ☐ Identify all thermal bridges and detail them. See Details section below.
- ☐ Skylights with dimension above finish floor
- ☐ Roof and crawlspace ventilation
- ☐ Separations and all fire rated assemblies
    - Fire resistive (and STC/IIC) walls, floors, ceilings, roofs, and shafts
    - Extents clearly shown
    - Callouts referencing details
- ☐ Fire rated openings, doors, windows.
- ☐ Show all penetrations and transfer openings through fire resistive assemblies and provide listed product specs.
- ☐ Note where fireblocking and draftstopping will be installed. Show in any details as necessary.
- ☐ Note exterior projections and/or concealed construction requiring sprinkler protection.
- ☐ Dropped ceilings and furred walls: indicate dimensions and framing materials
    - Dropped ceilings beneath fire rated or required non-combustible assemblies must be framed with non-combustible materials. IBC 803.15.
- ☐ Concealed combustible spaces in sprinklered buildings
    - Concealed spaces of combustible construction require fire sprinklers unless filled with non-combustible insulation or are less than 6" deep. See NFPA 13-8.15.1 for additional exceptions.
- ☐ Emergency escape and rescue openings below grade:
    - Sill height above finish floor.
    - 7' headroom required under decks, overhangs.
    - Grates/grilles/covers not permitted. Guards required adjacent to walking surfaces.

Details

- □ All wall, floor, ceiling, roof assemblies (A series of Approved Assemblies is forthcoming)
  - Insulation materials and R-values
  - Vapor barrier if required
- □ Demonstrate compliance with Aspen amended IBC Ch34 Ignition Resistant Construction:
  - Exterior walls must meet one of the following:
    - Exterior cladding/siding/material that meets one of the following:
      - Ignition resistant: ASTM E84 flame spread 25 or less
      - Noncombustible
      - Fire retardant treated
      - Heavy timber or log wall
    - 1 hour fire rated assembly rated from the exterior. Provide listing per below section on Fire resistive assemblies.
  - Roofs: Class A rated assembly. Assembly must match a submitted ES-Report or UL Listing.
  - Eaves:
    - Enclosed with ¾" solid material
  - Overhangs must meet one of the following:
    - 1 hour fire rated horizontal assembly
    - Exterior material that meets one of the following:
      - Heavy timber
      - Fire retardant treated wood
  - Projections must meet one of the following:
    - 1 hour fire rated assembly
    - Exterior material that meets one of the following:
      - Heavy timber
      - Noncombustible
      - Fire retardant treated wood
      - Ignition resistant: ASTM E84 flame spread 25 or less
- □ Fire resistive assemblies, fire resistive joint systems, and firestop systems
  - Sound rated STC/IIC assemblies (at dwelling and sleeping room separations)
  - Include the full listing installation instructions on the plans. If options are presented, you must note which specific option
- □ Intersections of assemblies, walls, floors, roofs, parapets, eaves, ceilings, dissimilar materials, corners, ends:
  - Demonstrate continuity of:
    - fire rated assemblies
      - joint systems
      - top of wall interaction with roof/ceiling
    - thermal envelope
    - air barrier
    - waterproofing
- □ Control joints
- □ All insulation (rim joists, slab edge, etc.).
  - Avoid thermal bridging.
  - Detail the following thermal bridges (C402.6.2 & R402.2.13):
    - Balconies and concrete floor decks penetrating the thermal envelope:
      - Include penetrated portion in COMcheck or REScheck
      - Detail and document a thermal break device of at least R-10
    - Cladding supports penetrating thermal envelope:

- Offset linear supporting elements that allow continuous insulation to pass behind, or
- Include penetrated portion in COMcheck or REScheck
- Penetrating structural beams and columns (steel or concrete only):
  - Cover penetrating member with R-5 insulation for 2 feet, or
  - Include penetrated portion in COMcheck or REScheck, or
  - Detail and document a thermal break device

- □ Air barrier and air sealing details, including the location of the air barrier.
- □ Air sealing locations (Aspen amended IECC R402.4):
  - o All joints, seams and penetrations
  - o Site built windows, doors and skylights
  - o Openings between window and door assemblies and their respective jambs and framing
  - o Utility penetrations
  - o Dropped ceilings or chases adjacent to the thermal envelope
  - o Knee walls
  - o Walls and ceilings separating a garage from conditioned spaces
  - o Behind tubs and showers on exterior walls
  - o Common walls between dwelling units
  - o Attic access openings
  - o Rim joist junction
  - o Other sources of infiltration
- □ Waterproofing, flashing, means of drainage
- □ Details around openings such as windows and doors
- □ Door thresholds (level floor on each side with ½" max up to threshold)
- □ Finishes with schedule of flame spread index and smoke-development index
- □ Masonry veneer assembly, support and weep holes.
- □ Protection of foam plastic
- □ Note where fireblocking and draftstopping will be installed. Show in any details as necessary.
- □ Clearly show all furred walls, dropped ceilings, and soffits with materials and dimensions shown in details.

Stairs

- □ Rise and run
- □ Vertical rise
- □ Headroom
- □ Fire protection for enclosed usable space under stairs
- □ Handrails, returns, extensions
- □ Guards
- □ Landings

Ramps

- □ Slope and cross slope in % or 1:12
- □ Vertical rise
- □ Handrails, returns, extensions
- □ Guards
- □ Edge protection
- □ Landings

Fireplace Details

- ☐ Interior fireplaces:
  - Note type of appliance (if gas, must be direct vent)
  - Installation per manufacturer's instructions
    - Clearances to combustibles
    - Flue termination location
- ☐ Exterior fireplaces:
  - Note type of appliance
  - Flue termination location per manufacturer's instructions
  - Firebox and chimney/flue clearances to combustibles
  - Dimensions, including firebox opening
  - Hearth extension dimensions, construction, and support
  - Firebox and hearth extension support
- ☐ All gas fireplaces: note automatic timer shutoff controls

Schedules

- ☐ Window: size, U factor, SHGC, emergency escape, safety glazing, fire rating, window opening limiting device (IBC 1015.8)
- ☐ Skylight: glazing materials, laminates, interlayer thickness, curb height, U factor, fire rating
- ☐ Door: size, clear opening width, U factor, fire rating, hardware
- ☐ Finishes – include flame spread index and smoke-development index

Reflected Ceiling Plans

- ☐ Permanently installed light fixtures
- ☐ Skylights
- ☐ Soffits and furred/**dropped ceilings**
- ☐ Attic access with dimensions

Lighting Plans

- ☐ Show all light fixtures, controls, and sensors
- ☐ Emergency power lighting
- ☐ Any fixtures projecting into the means of egress must be dimensioned
- ☐ Location of daylight zones on floor plans.
- ☐ Lighting fixture schedule with wattage and control narrative.
  - Clearly explain how each lighting control requirement is achieved
- ☐ Each fixture type must be labeled and these labels must be consistent and match across the COMcheck, lighting schedule, and fixture cutsheets.
- ☐ See residential specific requirements under the Energy Code Compliance section

Electrical Plans

- □ Details for additional electric infrastructure, including branch circuits, conduit, pre-wiring, panel capacity, and electrical service capacity, as well as interior and exterior spaces designated for future or installed electric equipment, including:
  - o Location of branch circuits for residential cooking appliances and clothes dryers.
  - o Location of pathways for routing of raceways, cable, or piping from the solar ready zone to the electrical distribution equipment.
  - o Location reserved for inverters, metering equipment, ESS, and a pathway reserved for routing of raceways or conduit from the renewable energy system to the point of interconnection with the electrical service and the ESS.
  - o Rated energy capacity and rated power capacity of the installed or planned ESS.
  - o Location of and electrical system sizing for designated EVSE spaces, EV Ready spaces, and EV Capable spaces in parking facilities.
- □ Location and size of all panel boards, electric service, service disconnect, and transformers with clearances
- □ Panel board schedule
- □ Receptacles, switches, circuits
- □ Heat tape- locations, heat tape rating (w/ft), length of heat tape, total wattage, controls (see REMP section)
- □ Grounding and bonding
- □ Electrical load calculations per NEC
- □ Emergency power lighting
- □ Height AFF of all controls, switches and outlets required to be accessible.
- □ Any fixtures projecting into the means of egress must be dimensioned.

Commercial Kitchen Plans

- □ Commercial kitchen layout, equipment, and schedules
- □ Kitchen hoods with clearances
- □ Washable surfaces

Mechanical Plans

- □ Basic one-line schematic drawing of the HVAC system
- □ Show all equipment, ductwork, and venting
- □ Show all intake, exhaust, flue, and vent outlets with dimensions to openings and property lines
- □ Equipment layout with access, working space, and clearances
- □ Equipment schedule with mechanical and service water-heating systems and equipment types, sizes, airflow rates, and efficiencies.
- □ Description of all systems and sequence of operation
- □ Mechanical system design criteria, including winter/summer indoor and outdoor design temperatures listed on the plan. Must fit within the following parameters:
  - o Winter indoor temp may not be above 72 deg F (2021 IECC R302.1)
  - o Winter indoor temp may not be below 68 deg F (2021 IBC 1203.1)
  - o Summer indoor temp may not be below 75 deg F (2021 IECC R302.1)
  - o Summer outdoor design temp: 82 deg F (Ordinance 1, 2023)
  - o Winter outdoor design temp: -15 deg F (Ordinance 1, 2023)

- □ Commissioning Plan required for heating systems greater than 250,000 Btuh and cooling systems greater than 60,000 Btuh. See C408.2.1 for details.
- □ Economizer description
- □ Equipment and system controls
- □ Fan motor horsepower (hp) and controls
- □ Duct sealing, duct and pipe insulation and location (one-line drawings are sufficient)
- □ Show calculations used to provide ventilation per 2021 IMC 403 as amended in Ordinance 1, 2023.

  **Group R-2, R-3, and R-4 occupancies (dwelling units) require balanced and distributed ventilation systems. A ducted system shall supply air directly to each bedroom and to one or more of the following rooms:

  1. Living room
  2. Dining room
  3. Kitchen

  The outdoor air balanced ventilation system shall be designed to provide the required rate of outdoor air continuously during the period that the building is occupied. The minimum continuous outdoor airflow rate shall be determined in accordance with the following equation:

  Qr = ((0.01 x Afloor) + [7.5 x (Nbr + 1)]) x Sc

  where:

  Qr = ventilation flow rate, cubic feet per minute (cfm) Afloor = floor area in square feet (ft2)

  Nbr = number of bedrooms, not less than one

  Sc = 0.70 (system coefficient for balanced systems)
- □ Heat pump and supplemental heat controls description demonstrating compliance with R403.1.2 or C403.4.1.1 as applicable
- □ Residential only: Cooling must be by heat pump. Must be sized to provide primary heat for forced air heating systems. Provide schedule, sizing, cut sheets, and description to demonstrate compliance with R403.7.
- □ All fireplaces, sizes, types, exterior/combustion air, and venting – all interior fireplaces must be sealed combustion
- □ Fire/smoke dampers, radiation dampers
- □ Height AFF of all controls required to be accessible
- □ Radiant floor piping in slab – show R5 insulation
- □ Snowmelt
  - o Show and tabulate areas, coordinated with REMP worksheet
  - o R10 insulation detail
  - o Controls: shut off when surface temp above 40°F and no precip, and shut off when air temp above 40°F
- □ Exterior heaters: electric radiant only
  - o Controls: occupancy sensor or timer switch
- □ Commercial kitchen layout, equipment, and schedules
- □ Kitchen hoods with clearances and cfm
- □ Make up air
- □ Dryer duct length, CFMs and makeup air
- □ Note fuel type and combustion air requirements for existing equipment to remain.
- □ Equipment in garages: indicate elevation of ignition source and protection from damage from vehicles.

Plumbing Plans

- □ DWV, water piping, storm water
- □ Roof drains, overflow drains or scuppers
- □ Discharge location for overflow drains
- □ Protection from freezing
- □ Below grade ejectors
- □ Condensate disposal method and termination location
- □ Gas piping
- □ Gas meter location (including protection from falling snow)
- □ Grease interceptors, sand and oil interceptors

Structural Plans

- □ Reference to soils report or soils bearing capacity assumption signed letter from structural engineer
- □ Design load criteria, wind speed & exp. category, ground snow load, and seismic category. See City's amended design criteria in IBC 1601.2
- □ Foundation plan: footing, pad and foundation wall sizes, steps, and elevations; cross sections showing reinforcement
- □ Frost protection depth
- □ Roof and floor framing plans
- □ Locations and sizes of all framing components
- □ Hangers
- □ Header sizing
- □ Fasteners and welds
- □ Shear walls/bracing locations and nailing requirements
- □ Material types, grades and species identified
- □ Details referenced in plans
- □ Masonry and stone veneer Support
- □ Special inspections program, list the elements and periodic or continuous inspections required

Radon Plan

(Per Aspen amended 2021 IBC appendix P)
For new residential (Group R2 & R3) construction & additions

- ☐ Details for membrane under slabs and crawl spaces
- ☐ Radon Vent location
- ☐ Power to location and access for future fan

Additional Information

Adopted Codes & Standards

As amended by Ordinance 1, 2023:

- 2021 IPC (International Plumbing Code)
- 2021 IMC (International Mechanical Code)
- 2021 IFGC (International Fuel Gas Code)
- 2021 IECC (International Energy Conservation Code)
- 2021 IFC (International Fire Code)
- 2021 IEBC (International Existing Building Code)
- 2021 ASPEN IECC
- 2021 ISPSC (International Swimming Pool and Spa Code)
- 2021 ISEP (International Solar Energy Provisions)
- 2020 NEC (National Electrical Code)

Design Criteria

As adopted by Ordinance 1, 2023:

TABLE 1601.2
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD[o]	WIND DESIGN				SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			ICE BARRIER UNDERLAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
	Speed[d] (mph)		special wind region[l]	windborne debris zone[m]		Weathering[a]	Frost line depth[b]	Termite[c]				
100	89/B	-	-	-	C	Severe	36"	None to slight	Yes	See Sec 1612.3	2000	40°F

DESIGN CRITERIA 2						
Elevation	Altitude correction factor[e]	Coincident wet bulb	Indoor winter design relative humidity	Indoor winter design dry-bulb temperature	Outdoor winter design dry-bulb temperature	Heating temperature difference
7820'	.745	54	30%	70°F	-15°F	85°F
Latitude	Daily Range	Indoor summer design relative humidity	Summer design gains	Indoor summer design dry-bulb temperature	Outdoor summer design dry-bulb temperature	Cooling temperature difference
39.64°N	H	50%	-33 to -53	75°F	82°F	7°

Fire Sprinklers

As adopted by Ordinance 1, 2023:

- Automatic fire sprinkler systems are required for any of the following:
    - All structures 3,000 square feet or greater as defined by fire area.
    - All Group R occupancies of any size.
    - Any location that is difficult to access, as determined by the fire code official.
- A minimum of three-sprinkler head hydraulic calculation shall be submitted for approval by fire code official.

Carbon Monoxide Detectors

All owners of existing residential occupancies shall come into compliance with the requirements of Chapter 8.15 Carbon Monoxide Detectors. The ordinance became effective on March 2, 2009 and applies to all existing, new and altered dwelling units.

Inspections

For a list of potential inspections your project may require, click here. For more information about inspections through City of Aspen, visit our Inspections page.

Final Inspection Expectations

Prior to Final inspection, you must have/complete the following:

1. Have final signoffs from each applicable review agency, including:
    a. Zoning
    b. HPC
    c. Engineering
    d. Fire
    e. Water
    f. Sanitation
    g. Parks
    h. Environmental Health
2. Manuals for all appliances and equipment must be compiled together in one location for the owner.
3. In residential construction, a certificate must be permanently affixed on or in the electric panel with the following information per 2021 IECC R401.3
    a. List all insulation R values and fenestration U factors.
    b. Results from any required duct system and building envelope air leakage test.
    c. List types and efficiencies of all heating, cooling, and service water heating equipment.
    d. Location of on-site photovoltaic panel system(s), array capacity, inverter capacity, panel tilt, and orientation.
    e. Energy rating index determined by 2021 IECC R406, with or without any on-site generation.
    f. Code edition under which the structure was permitted, and compliance path used.
4. Submit a complete set of as-built drawings for the project.

Permit Application Process: What to Expect

Consider a Pre-submittal Meeting

If you are unfamiliar with the City's permit application requirements, it is recommended that you schedule a pre-submittal meeting so that you have a clear understanding of what documents and plans you will need to submit. The purpose of a pre-submittal meeting is to identify a project's major areas for improvement through a high-level completeness assessment prior to a submission for building permit. As the applicant, you will be expected to present your drawings to plans examiners so that they can provide feedback. Prior to the meeting, you should review all applicable building and zoning checklists in the Document Library to ensure you have the required documents ready for reference at this meeting. You may reach out to the building support specialist to schedule a pre-submittal meeting: buildingsupport@aspen.gov.

Permit Review

Once your application is submitted, your permit will move through the various referral agencies' review queues. Different referral agencies have different queues and therefore not all agencies review a permit at the same time. The building support specialist be your point of contact for status inquiries.

Receive Comment Letter(s)

You may receive comments from review agencies as they review your permit. The comments will require you to edit your plans or documents and re-submit the revised documents as a part of a formal response to comments.

Create Your Response to Comments

If you receive comments during permit review, you will address all referral agency comments by providing a written response to each comment as well as revised plan sets and other documents as necessary. Please note: individual plan sheets will not be accepted at response to comments. **Each response should include a description of how the comment has been resolved and which drawing(s) or document(s) has been revised**. **You may not submit any response to comments until all agencies have reviewed in the current review round**. If desired, you may schedule a re-submittal meeting for review of your response to comments through the building support specialist prior to submitting your response. Please reach out to the building support specialist if you have any questions about this process.

Permit Review and Issuance

When an acceptable response to comments has been submitted, the permit will be entered back into the queue for re-review. This process continues until all Review Agencies have signed off. Once all reviews are approved, you will be contacted to pay for your permit. After you've paid issuance fees, the permit will be issued to you. Please allow 1-2 business days from fee payment to issuance.

Changes to Submitted and/or Approved Plans

If changes are made to a project's design such that the drawings no longer match the proposed work, contact the building support specialist or the plans reviewer working on you project. Depending on the scope of the change, a change order permit may be required; if the changes are minor in scope, it may be sufficient to simply submit the updated documents as additional information. **You may not submit changes to any permit, whether in review or issued status, without the consent of a plans**

examiner or building support specialist.

How to Apply for a Permit

All permit applications are submitted virtually through Salesforce, the City's online permitting platform. Here are the steps to submit an application in Salesforce:

- ☐ Visit the Salesforce Support page and use the "REGISTER HERE" link to create a Salesforce account.
- ☐ Once you receive your Salesforce login credentials (via email), you may login using the link on the Salesforce Support page.
- ☐ Follow the instructions on the screen to start a new permit application.