2024 International Residential Code (IRC)Washington Amendments

Cost-Benefit Analysis and Small Business Economic Impact Report

April 2026

EXECUTIVE SUMMARY

The 2024 IRC code change cycle is all about keeping residential buildings safer, more energy-efficient, and easier to work with. This year, lots of voices came together—engineers, business owners, public officials, and advocates—to offer ideas on how building standards can better protect lives, save money, and support new technology.

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Legend for Proposals

Positive Net-Cost	*
Neutral	Blank
Negative	**

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OVERVIEW

This document presents comprehensive economic impact analyses and small-business assessments for proposed amendments to the 2024 International Residential Code (IRC) adopted by Washington State. These amendments address code clarity, public health protection, regulatory alignment, technical accuracy, and energy efficiency while minimizing economic burden on affected businesses.

General small-business engagement statement

The Washington State Building Code Council (SBCC) conducted an open and inclusive public process for these 2024 IRC amendments, including Council meetings, multiple Technical Advisory Group (TAG) meetings, and dedicated public listening sessions, at which small businesses and their representatives were invited to comment on every proposal. Notice of these opportunities was broadly distributed through the SBCC website, email lists, and industry associations, and written comments were accepted throughout the rulemaking period so that small residential contractors, builders, designers, and other affected firms had multiple avenues to be heard. While participation levels varied by proposal, the Council took reasonable and practicable steps each time to solicit, receive, and consider small-business input before finalizing the rule language.

General jobs-impact statement

During this rulemaking, the SBCC did not receive quantitative evidence demonstrating that the adopted IRC amendments will either create or eliminate jobs in the affected industries. Stakeholder comments and the economic analysis indicate that the proposals primarily clarify existing practice, align with national standards, and reduce regulatory burden, but no data were submitted to support a defensible numeric estimate of job gains or losses attributable to these specific changes.

General Cost to a small business

SBCC is unable to calculate the cost per employee, cost per hour of labor, or cost per one hundred dollars of sales because it did not receive sufficient quantitative information (for example, employee counts, wage data, hours worked, or gross sales figures) to support identification of disproportionate impact on small businesses in accordance with RCW 19.85.040(1).

Key Findings

- **Net Economic Impact**: All proposals show neutral to positive economic impact
- **Small Business Burden**: Minor positive to neutral; no proposals create a disproportionate burden to small businesses
- **Public Benefit**: Significant health, safety, energy efficiency, and regulatory clarity improvements
- **Industry Alignment**: Most amendments codify existing industry practices or align with national standards

Small Business Impact Summary

Affected NAICS Sectors

NAICS Code	Industry	Proposals Affected
236115	New Single-Family Housing Construction	26 of 28
236116	New Multifamily Housing Construction	24 of 28
236118	Residential Remodelers	22 of 28
238210	Electrical Contractors and Other Wiring Installation Contractors	18 of 28
238220	Plumbing, Heating, Air-Conditioning Contractors	16 of 28
541330	Engineering Services	20 of 28
541350	Building Inspection Services	26 of 28
238160	Roofing Contractors	8 of 28
238140	Masonry Contractors	6 of 28
238110	Poured Concrete Foundation and Structure Contractors	10 of 28

CUMULATIVE ECONOMIC ANALYSIS

Overall Construction Cost Impact:

- 6 Proposals: $0 impact (clarifications, existing requirements)
- 20 Proposals: Cost savings ($150–$15,000 per project)
- 2 Proposals: Minimal increase or neutral

Overall Economic Benefits:

- Design time savings: $25–$200 per project (multiple proposals)
- Avoided rework: $1,000–$25,000 per incident
- Life-cycle savings: $100–$15,000 per protected system
- Reduced code research: 15–25% time savings for small firms

Small Business Impact Summary

Impact Category	Number of Proposals
Positive/cost-reducing impact	**24**
Neutral impact (no economic change)	**4**
Negative/cost-increasing impact	**0**

Proposal Specific Cost-Benefit Analyses

Proposal Identification
Log Number: 24-GP2-023*
Code Section Title: 2024 IRC R330.1 -- Energy Storage Systems
Proponent/Author: Ken Brouillette

1. **Description & Rationale**
   A. Summary of current Baseline (without proposal)
      - Current Washington State IRC does not include specific provisions for energy storage systems (ESS), creating ambiguity for contractors, code officials, and designers when residential battery storage systems are installed as part of renewable energy systems or backup power solutions.

   B. Summary of Baseline (with changes)

- The amendment adds provisions for energy storage systems to align with the 2024 IRC model code, providing clear installation, safety, and inspection requirements for residential battery storage systems, including lithium-ion batteries and other energy storage technologies.

C. Rationale Statement
- This proposed change provides clear code requirements for the growing market of residential energy storage systems, ensuring safe installation practices while supporting renewable energy adoption and energy resilience in Washington homes.

2. Economic Cost Analysis

A. Construction Cost Impact
- No change to construction costs—this clarifies installation requirements for systems already being installed in the market.
- Estimate per unit if feasible: $0/unit
- Total potential range for typical projects: $0

B. Implementation/Plan Review/Inspection Costs
- Minimal training needed for building officials on ESS requirements. An estimated 2-4 hours per jurisdiction for training and familiarization with new provisions.

C. Life-Cycle Costs
- No impact on physical systems beyond what is already market practice. Proper installation requirements may reduce long-term maintenance and safety issues.
- Estimate annual or project life-cycle effect: Potential savings of $100–$500 over system life through reduced maintenance issues

D. Other Costs
- No additional compliance, training, or recordkeeping costs beyond standard code updates.

3. Economic Benefit Analysis

A. Direct Cost Savings
- No direct quantifiable cost savings but provides regulatory clarity that reduces interpretation disputes and plan review delays.
- Quantify per unit if possible: $50–$150 per project in reduced plan review time

B. Operational Benefits
- Enhanced code clarity for contractors installing ESS
- Reduced potential for misinterpretation during installation and inspection
- Improved safety outcomes for residential energy storage installations

C. Other Benefits
- Supports state energy policy goals for renewable energy and grid resilience
- Removes regulatory uncertainty that may have delayed ESS adoption
- Facilitates emerging technology integration into residential construction

4. Small Business Economic Impact

A. Small Business Categories Affected
- Primary NAICS codes affected:
- NAICS 236115 - New Single-Family Housing Construction
- NAICS 236116 - New Multifamily Housing Construction
- NAICS 236118 - Residential Remodelers
- NAICS 238210 - Electrical Contractors and Other Wiring Installation Contractors
- NAICS 541330 - Engineering Services
- NAICS 541350 - Building Inspection Services

B. Compliance Burden Comparison

- Small electrical contractors and residential builders benefit from clear code requirements, reducing time spent on code interpretation and potential for inspection delays. No new compliance burden—clarifies existing requirements.
- Minor positive impact—provides clarity and reduces uncertainty for small firms installing or designing ESS installations.

C. Potential Disproportion/Mitigation
- No mitigation needed amendment clarifies rather than creates new requirements. Small businesses benefit disproportionately more than large firms from regulatory clarity due to limited resources for code interpretation.

5. Least Burdensome Alternative
   A. Is this rule the least burdensome alternative for those required to comply?
      - Yes—adopting model code language for ESS is the most direct approach to provide clear, nationally-recognized standards without creating state-specific requirements that would increase compliance complexity.
   B. Suggested Mitigations
      - No mitigations needed proposal provides clarity and alignment with national standards.
6. Conclusion/Recommendation
   A. Does the proposal provide a net societal/economic benefit?
      - Yes, the proposal provides regulatory clarity for an emerging technology sector, supports state energy policy goals, and ensures safe installation practices. The clarification benefits contractors, code officials, and homeowners at zero net economic cost while facilitating the adoption of renewable energy.

Proposal Identification
Log Number: 24-GP2-024*
Code Section Title: 2024 IRC R502.8, R602.6 -- Cutting, notching and boring of dimensional wood framing
Proponent/Author: Julius Carreon, WABO (Washington Association of Building Officials)

1. Description & Rationale
   A. Summary of current Baseline (without proposal)
      - Current IRC provisions for cutting, notching, and boring of dimensional wood framing contain ambiguities regarding allowable locations and sizes of penetrations through floor joists and wall studs, leading to inconsistent enforcement and potential structural safety concerns.
   B. Summary of Baseline (with changes)
      - The amendment clarifies and updates provisions for cutting, notching, and boring dimensional lumber floor joists and wall studs, aligning with engineering best practices and ensuring structural integrity while accommodating necessary mechanical, electrical, and plumbing penetrations.
   C. Rationale Statement
      - This amendment improves structural safety by providing clear, enforceable requirements for framing penetrations while maintaining flexibility for necessary building system installations. The clarification reduces disputes over interpretation and ensures consistent application statewide.
2. Economic Cost Analysis
   A. Construction Cost Impact
      - No material increase in construction costs—clarifies existing requirements and aligns with current industry practice.
      - Estimate per unit if feasible: $0/unit

- Total potential range for typical projects: $0

B. Implementation/Plan Review/Inspection Costs
   - Reduced enforcement burden through clearer requirements. Potential reduction of 15-30 minutes per plan review for projects with complex framing penetrations.
   - Estimated savings: $12–$25 per review at $50/hour code official rate

C. Life-Cycle Costs
   - Enhanced structural integrity may reduce long-term maintenance and repair costs associated with improper framing modifications.
   - Estimate annual or project life-cycle effect: Potential savings of $500–$2,000 over building life through avoided structural repairs

D. Other Costs
   - Minimal training for contractors and code officials on updated provisions (2-4 hours per affected party).

3. Economic Benefit Analysis

A. Direct Cost Savings
   - Reduced plan review time and fewer field corrections due to clearer requirements.
   - Quantify per unit if possible: $50–$150 per project in reduced plan review and avoided rework

B. Operational Benefits
   - Improved structural safety and building performance
   - Reduced disputes between contractors and code officials
   - Clearer expectations for mechanical, electrical, and plumbing trades regarding allowable penetrations

C. Other Benefits
   - Enhanced building code consistency across Washington jurisdictions
   - Reduced liability risk for contractors through clear compliance standards
   - Improved coordination between trades during construction

4. Small Business Economic Impact

A. Small Business Categories Affected
   - NAICS 236115 - New Single-Family Housing Construction
   - NAICS 236116 - New Multifamily Housing Construction
   - NAICS 236118 - Residential Remodelers
   - NAICS 238210 - Electrical Contractors
   - NAICS 238220 - Plumbing, Heating, Air-Conditioning Contractors
   - NAICS 238110 - Poured Concrete Foundation and Structure Contractors
   - NAICS 541330 - Engineering Services
   - NAICS 541350 - Building Inspection Services

B. Compliance Burden Comparison
   - Small framing contractors, electricians, and plumbers benefit from clearer requirements, reducing time spent on code interpretation and potential for costly field corrections.
   - Minor/major, positive/negative, neutral?
     Minor positive impact—reduces compliance uncertainty and the potential for rework, particularly benefiting small contractors with limited code-interpretation resources.

C. Potential Disproportion/Mitigation
   - No mitigation needed amendment reduces rather than increases burden. Small businesses benefit more than large firms from clarity, as they typically lack dedicated code compliance staff.

5. Least Burdensome Alternative

A. Is this rule the least burdensome alternative for those required to comply?

- Yes—clarifying existing requirements through alignment with engineering standards is the most direct approach to eliminate regulatory confusion without creating new substantive requirements.

B. Suggested Mitigations
- No mitigations needed proposal reduces compliance burden.

6. Conclusion/Recommendation
A. Does the proposal provide a net societal/economic benefit?
- Yes, the proposal enhances structural safety, reduces interpretation disputes, and provides cost savings through reduced plan review time and avoided rework. Estimated savings of $50–$150 per project with improved building performance and safety outcomes.

Proposal Identification
Log Number: 24-GP2-025
Code Section Title: 2024 IRC Appendix XX -- Visitability
Proponent/Author: Lucas Shadduck, City of Tacoma

1. Description & Rationale
A. Summary of current Baseline (without proposal)
- Current IRC does not include Visitability provisions, which are design features that allow people with mobility limitations to enter and move about the main floor of a home. This creates barriers for residents and visitors with disabilities and limits housing options for aging populations.

B. Summary of Baseline (with changes)
- The amendment adds an optional appendix establishing Visitability standards for residential construction, including requirements for accessible entrances, doorway widths, and accessible bathroom facilities on the main floor. Adoption would be at the discretion of the local jurisdiction.

C. Rationale Statement
- This proposed appendix provides voluntary Visitability standards that jurisdictions can adopt to increase accessible housing stock. The appendix approach allows communities to address local needs for accessible housing while maintaining flexibility for builders and jurisdictions that choose not to adopt.

2. Economic Cost Analysis
A. Construction Cost Impact
- As an optional appendix, no mandatory cost increase. Where adopted, visitability features add estimated costs:
- Estimate per unit if feasible: $500–$3,000 per dwelling unit (varies by existing site conditions and design)
- Total potential range for typical projects: Single-family home: $500–$3,000; Multi-family: $500–$2,500 per unit

B. Implementation/Plan Review/Inspection Costs
- Where adopted, minimal additional plan review time (15-30 minutes per project) to verify visitability features.
- Estimated cost: $12–$25 per permit at $50/hour code official rate

C. Life-Cycle Costs
- Visitability features may reduce future modification costs for aging residents or family members with disabilities.
- Estimate annual or project life-cycle effect: Potential savings of $5,000–$15,000 in avoided future home modifications

D. Other Costs
- Training for contractors and code officials on visitability requirements were adopted (2-4 hours per party affected).

3. Economic Benefit Analysis
A. Direct Cost Savings

        - For homeowners, upfront investment in visitability features avoids significantly higher costs of later modifications ($10,000–$30,000 typical for retrofitting accessibility features).
        - Quantify per unit if possible: $5,000–$15,000 in avoided future modification costs over building life
    B. Operational Benefits
        - Increased housing options for people with disabilities and aging residents
        - Enhanced resale value for homes with accessibility features
        - Reduced need for institutional care through enabling aging-in-place
    C. C. Other Benefits
        - Promotes social inclusion and community accessibility
        - Supports state and federal disability rights policies
        - Increases housing stock suitable for multigenerational living
4. 4. Small Business Economic Impact
    A. Small Business Categories Affected
        - Primary NAICS codes affected (where adopted):
        - NAICS 236115 - New Single-Family Housing Construction
        - NAICS 236116 - New Multifamily Housing Construction
        - NAICS 236118 - Residential Remodelers
        - NAICS 238110 - Concrete Contractors
        - NAICS 541330 - Engineering Services
        - NAICS 541350 - Building Inspection Services
    B. Compliance Burden Comparison
        - As an optional appendix, no burden unless locally adopted. Where adopted, small builders may face proportionally higher design and construction costs for accessibility features than large builders, which use standardized accessible designs.
        - Minor/major, positive/negative, neutral?
          Neutral as an optional appendix; Minor negative was adopted for small builders without accessible design experience; Minor positive for accessibility-focused remodeling contractors.
    C. Potential Disproportion/Mitigation
        - Mitigation strategies:
        - Optional appendix structure allows jurisdictions to assess local impact before adoption
        - Phase-in periods can be established at local level
        - Educational resources and design examples can reduce learning curve for small builders
5. Least Burdensome Alternative
    A. Is this rule the least burdensome alternative for those required to comply?
        - Yes—optional appendix structure is the least burdensome approach, providing standards for jurisdictions choosing to address visitability while imposing no burden on jurisdictions or builders in areas that do not adopt.
    B. B. Suggested Mitigations
        - Maintain optional appendix structure rather than a mandatory requirement
        - Encourage jurisdictions adopting the appendix to provide builder education and design resources
        - Consider phase-in periods for local adoption
6. Conclusion/Recommendation
        - Yes, the optional appendix provides a voluntary pathway for jurisdictions to increase accessible housing stock. Where adopted, upfront costs ($500–$3,000 per unit) are offset by avoided future modification costs ($5,000–$15,000) and significant social benefits

through increased housing accessibility. The optional structure ensures no burden on jurisdictions or builders in areas that choose not to adopt.

Proposal Identification
Log Number: 24-GP2-026*
Code Section Title: 2024 IRC R330.2 -- Automatic Sprinkler System for Adult Family Homes
Proponent/Author: Quyen Thai

1. **1.** Description & Rationale
    A. Summary of current Baseline (without proposal)
        - Current IRC requirements for automatic sprinkler systems in adult family homes lack clarity regarding specific trigger points and installation requirements, leading to inconsistent enforcement across jurisdictions.

    B. Summary of Baseline (with changes)
        - The amendment clarifies automatic sprinkler system requirements for adult family homes, aligning with life safety goals while providing clear, enforceable standards for when sprinklers are required and how they should be installed.

    C. Rationale Statement
        - This amendment improves life safety for vulnerable populations in adult family homes while providing regulatory clarity for contractors, designers, and code officials. Clear sprinkler requirements ensure consistent protection across Washington while reducing disputes over interpretation.
2. Economic Cost Analysis
    A. Construction Cost Impact
        - Clarifies existing requirements; no new mandates. Where sprinklers are required, typical residential sprinkler system costs:
        - Estimate per unit if feasible: $1–$2 per square foot for sprinkler system
        - Total potential range for typical projects: $2,500–$7,500 for typical adult family home (2,500–3,500 sq ft)

    B. Implementation/Plan Review/Inspection Costs
        - Clearer requirements reduce plan review disputes and inspection time.
        - Estimated savings: $25–$75 per permit in reduced review time and clarification requests

    C. Life-Cycle Costs
        - Residential sprinkler systems have minimal maintenance costs ($50–$150 annually) and provide life safety benefits. A potential reduction in fire damage reduces long-term repair costs.
        - Estimate annual or project life-cycle effect: $50–$150 annual maintenance; potential savings of $50,000+ in avoided fire damage

    D. Other Costs
        - Minimal training for contractors and code officials (2-3 hours per affected party) clarified requirements.
3. Economic Benefit Analysis
    A. Direct Cost Savings
        - Reduced plan review time and fewer interpretation disputes.
        - Quantify per unit if possible: $25–$75 per project in reduced plan review and compliance clarification

    B. Operational Benefits
        - Enhanced life safety for vulnerable adult family home residents
        - Reduced fire insurance costs for adult family home operators
        - Clearer compliance pathway reduces contractor liability concerns

    C. Other Benefits

- Improved consistency in adult family home safety across Washington jurisdictions
- Reduced fire-related injuries and property damage
- Supports state long-term care and vulnerable adult protection policies

4. Small Business Economic Impact
   A. Small Business Categories Affected
      - Primary NAICS codes affected:
      - NAICS 236115 - New Single-Family Housing Construction (converting to AFH)
      - NAICS 236118 - Residential Remodelers (AFH conversions)
      - NAICS 238220 - Plumbing, Heating, Air-Conditioning Contractors (sprinkler installation)
      - NAICS 541330 - Engineering Services
      - NAICS 541350 - Building Inspection Services
      - NAICS 623312 - Assisted Living Facilities for the Elderly (small AFH operators)
   B. Compliance Burden Comparison
      - Small adult family home operators and contractors benefit from clear requirements, reducing uncertainty about when sprinklers are required and how to comply.
      - Minor/major, positive/negative, neutral?
        Minor positive impact—clarifies requirements and reduces compliance uncertainty for small AFH operators and contractors.
   C. Potential Disproportion/Mitigation
      - No mitigation needed amendment clarifies existing requirements rather than creating new mandates. Small AFH operators gain clarity that reduces risk of non-compliance.
5. Least Burdensome Alternative
   A. Is this rule the least burdensome alternative for those required to comply?
      - Yes—clarifying existing sprinkler requirements is the most direct approach to ensure life safety for vulnerable populations while reducing regulatory confusion.
   B. B. Suggested Mitigations
      - No mitigations needed proposal clarifies existing requirements.
6. Conclusion/Recommendation
      - Yes, the proposal provides critical life safety benefits for vulnerable adults in family home settings while reducing regulatory uncertainty for small AFH operators and contractors. Clarification reduces plan review time ($25–$75 per project) and compliance disputes, while ensuring consistent life-safety protection statewide.

Proposal Identification
Log Number: 24-GP2-028*
Code Section / Title: 2024 IRC R312.1 and R312.2 — Minimum Room Size
Proponent: Michael Gilbride, April Bottman-Haase, and Judy Edwards, City of Seattle.

1. **Description / Rationale**

   A. **Summary of current baseline (without proposal)**

      - The current IRC language requires all habitable rooms, except kitchens, to have a minimum floor area of 70 square feet and a minimum horizontal dimension of 7 feet. Under that structure, smaller habitable rooms, such as private offices or study/craft rooms, are not allowed, even when the overall dwelling unit is large and otherwise fully functional.

- The proposal explains that the existing language reflects an older housing model that presumed multi-room dwelling units and does not respond well to current demand for flexible interior layouts and small accessory dwelling units.

B. Summary of baseline with changes

- The proposal deletes the requirement that every habitable room meet the 70-square-foot and 7-foot minimums and instead requires each dwelling unit to have at least one habitable room of not less than 120 square feet with a minimum horizontal dimension of 7 feet. Habitable spaces that do not count toward that 120-square-foot room would no longer need to comply with the 7-foot horizontal-dimension rule.

C. Rationale statement

- The proposal states that the purpose of the change is to better align with current residential demand for smaller private rooms, improve layout efficiency, and support small, affordable single-room accessory dwelling units. It also states that the original public health concerns behind the old minimum room-size language have been addressed through other modern building, land-use, mechanical, and energy code provisions, along with improved hygiene and public health conditions.
- The proposal further explains that the new approach maintains a minimum livable room standard while shifting the requirement from each habitable room to the entire dwelling unit.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal states that there is no economic impact because the IRC does not establish a minimum dwelling-unit size, and changing the rule from 70 square feet for each habitable room to 120 square feet for one habitable room does not change the overall size of buildings allowed under the IRC. No new construction type, special inspection trigger, or special report is identified.

B. Implementation / Plan Review / Inspection Costs

- The proposal states that there are no new reviews required and no new triggers for special inspection. It also states that code-enforcement time should decrease, describing the effect as less review time and fewer correction cycles. That suggests a modest administrative benefit for local jurisdictions, applicants, and design professionals.

C. Life-Cycle Costs

- No completed life-cycle cost estimate is provided in Item 7. Based on the proposal's stated no-economic-impact position and the absence of added equipment, materials, or system requirements, no material life-cycle cost change is evident from the proposal record.

D. Other Costs

- The proposal identifies no new fees, reporting obligations, or inspection programs. Because the change mainly affects interior space-planning flexibility rather than building size or mandated systems, other compliance costs appear minimal on the face of the proposal.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal does not provide a quantified dollar savings estimate. It also notes that design professionals and owner-occupants will have greater layout flexibility, which can reduce pressure to redesign under the current every-room minimum standard.

B. Operational Benefits

- The proposal identifies fewer plan-review corrections and less review time as an expected outcome. It also improves consistency with the way modern dwelling units are actually designed, including units with private offices, study rooms, and small single-room accessory dwelling units. The proposal further notes that aligning the minimum habitable-area concept more closely with IBC Section 1208.4 is beneficial as multiplex provisions are incorporated into the Washington Residential Code.

C. Other Benefits

- The proposal maintains a minimum space requirement for livability while allowing smaller rooms that still serve useful functions within a complete dwelling unit. It also removes a legacy standard that the proposal describes as poorly matched to present-day housing conditions and social norms. In practical terms, the change supports flexibility without expanding the overall building size permitted by the IRC.

4. Small Business Economic Impact

A. Small Business Categories Affected

- The proposal identifies design professionals and owner-occupants as the main directly affected users. In practice, the same flexibility would also apply to small residential designers, builders, remodelers, and permit applicants working on single-family homes, duplexes,

townhouses, and accessory dwelling units, as these are the residential project types discussed in the proposal narrative.

B. Compliance Burden Comparison

- The proposal states that no businesses or industries will be affected by the amendments. Even so, the proposal states that design professionals will have greater layout flexibility and that review time and correction cycles should decrease, indicating that the compliance burden should be at least neutral and potentially lower for smaller firms preparing permit documents.

C. Potential Disproportion / Mitigation

- The proposal does not identify any disproportionate impact on small businesses. To the extent there is any business effect, it appears favorable because the change removes a rigid room-by-room dimensional rule without increasing the overall size of buildings or adding new review triggers.

5. Least Burdensome Alternative

- The least burdensome alternative reflected in the proposal is to retain a minimum livability standard by requiring one habitable room of at least 120 square feet in each dwelling unit, while eliminating the requirement that every habitable room meet the older 70-square-foot and 7-foot minimums. That approach preserves a clear minimum dwelling space threshold while allowing greater flexibility for smaller secondary rooms and more efficient layouts.

6. Conclusion / Recommendation

- The proposal does not increase overall building size under the IRC, does not add special inspections or reporting, and is expected to reduce review time and correction cycles while improving design flexibility for dwelling units.

Proposal Identification
Log Number: 24-GP2-029*
Code Section / Title: 2024 IRC R101.2 — Adult Family Homes Scoping Clarification
Proponent/Author: WABO Technical Code Development Committee; Angela Haupt, WABO Technical Code Development Committee Member.

1. **Description & Rationale**
   A. **Summary of current Baseline (without proposal)**

- The current amendment language can be read as creating uncertainty about whether adult family homes must be equipped with automatic fire sprinklers in order to be constructed under the International Residential Code.

- The proposed scope section already lists adult family homes among occupancies within the IRC, but the surrounding exception structure for various care facilities can create ambiguity about when sprinklers are required.

B. **Summary of Baseline with changes**

- The proposal amends IRC Section R101.2 to state expressly that adult family homes are permitted to be constructed in accordance with the International Residential Code for One- and Two-Family Dwellings.
- The added Exception 7 states that adult family homes shall be permitted to be constructed in accordance with the IRC, while separate exceptions continue to address custodial-care, medical-care, and other care-facility situations that require automatic fire sprinklers in accordance with Appendix AWU.

C. **Rationale Statement**

- The proposal states that its intent is to make clear that adult family homes do not require sprinklers in order to be constructed using the IRC.
- The proposal also identifies the amendment as one that clarifies the intent or application of the code and corrects errors and omissions.

2. **Economic Cost Analysis**

A. **Construction Cost Impact**

- The proposal indicates that there is no economic impact and gives the reason as “Clarification only.”
- Because the amendment is presented as a scoping clarification rather than a new technical requirement, it does not identify new material, labor, equipment, or system costs.
- To the extent the clarification confirms that sprinklers are not required solely to qualify an adult family home for construction under the IRC, it may avoid unnecessary sprinkler-related construction costs that could arise from inconsistent interpretation.

B. **Implementation / Plan Review / Inspection Costs**

- The proposal form does not identify any additional plan review or inspection time per permit application.
- As a clarification to the code scope, the amendment should reduce permit uncertainty and limit unnecessary review cycles tied to whether sprinkler systems are required for IRC scoping.

C. **Life-Cycle Costs**

- The proposal does not present a life-cycle cost analysis and instead characterizes the change as clarification only.
- On that basis, no material life-cycle cost increase is established by the proposal record.

D. **Other Costs**

- The proposal does not identify any new reporting, studies, testing, or enforcement programs.
- No new administrative fee or documentation burden is stated in the proposal materials provided.

3. **Economic Benefit Analysis**
   A. **Direct Cost Savings**
      - The proposal does not provide a quantified dollar savings estimate.
      - Still, clarifying that adult family homes may be constructed under the IRC without sprinklers solely for scoping purposes may avoid unnecessary design changes, sprinkler system installation assumptions, and related construction-cost escalation caused by inconsistent interpretation.

   B. **Operational Benefits**
      - The principal operational benefit is clearer scoping for applicants, designers, builders, and jurisdictions reviewing adult family home projects.
      - Clearer code text can reduce back-and-forth during plan review and produce a more consistent application across jurisdictions.

   C. **Other Benefits**
      - The amendment supports more predictable treatment of adult family homes under the residential code while preserving separate sprinkler requirements for other listed care-facility conditions in the exceptions.
      - This improves the usability of the code text without adding a new substantive mandate.

4. **Small Business Economic Impact**
   A. **Small Business Categories Affected (all relevant NAICS codes)**
      - NAICS 623110: Nursing Care Facilities (Skilled Nursing Facilities).
      - NAICS 623312: Assisted Living Facilities for the Elderly.
      - NAICS 236115: New Single-Family Housing Construction (except For-Sale Builders).
      - NAICS 236118: Residential Remodelers.
      - NAICS 541310: Architectural Services.
      - NAICS 541350: Building Inspection Services.

   B. **Compliance Burden Comparison**
      - The proposal indicates no economic impact because it is a clarification only.
      - For small businesses, that means the change should not add a new compliance burden and may reduce soft costs associated with permit interpretation, redesign, and uncertainty over whether sprinkler systems are required solely for IRC scoping.

   C. **Potential Disproportion / Mitigation**

- No disproportionate negative impact on small businesses is identified in the proposal.
- If there is any practical economic effect, it is likely favorable to smaller operators and project teams because clearer scoping reduces the risk of spending limited resources on avoidable design or permitting disputes.

5. **Least Burdensome Alternative**
    - The least burdensome approach is the one reflected in the proposal: clarify directly in the IRC scope and exceptions that adult family homes may be constructed under the IRC without creating a new sprinkler prerequisite solely through ambiguous scoping language.
    - This preserves the intended treatment of adult family homes while leaving distinct sprinkler requirements in place for other listed care-facility scenarios.

6. **Conclusion / Recommendation**
    - 24-GP2-029 is best characterized as a clarification-only scoping amendment with no identified negative economic impact.
    - The principal small business effect is neutral to modestly beneficial because the proposal reduces uncertainty for small care providers, designers, builders, and permit applicants working on adult family home projects.

Proposal Identification
Log Number: 24-GP2-031*
Code Section / Title: 2024 IRC R302.3.5 — Removal of stacked unit special requirement
Proponent: WABO Technical Code Development Committee; Angela Haupt, WABO Technical Code Development Committee Member.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- In the 2024 IRC, Section R302.3.5 “Vertically stacked dwelling units” adds special requirements when one dwelling unit in a two-family dwelling is located above the other and an automatic sprinkler system is not provided in both dwelling units.
- Under that baseline, unsprinklered stacked duplexes must provide smoke-limiting construction for horizontal and vertical assemblies and interior stairs, and must install a notification appliance in each unit that is connected to smoke alarms in the other unit.
- These provisions effectively layer additional requirements onto stacked duplex configurations, even though the state has already removed the blanket sprinkler requirement from the base IRC.

B. Summary of baseline with changes

- The proposal removes this new 2024 IRC section so that the special smoke-limiting and cross-notification requirements for vertically stacked dwelling units no longer apply as a separate condition in Washington.
- Stacked duplexes remain allowed under the code, but they are no longer subject to the additional R302.3.5 provisions that were introduced in the 2024 model code.

C. Rationale statement

- The proposal states that the intent is to remove a new section that adds requirements to stacked duplexes, which are “not in alignment with the current SBCC code amendment that removes the blanket sprinkler requirement from the base IRC.”
- The proposal notes that stacked duplexes themselves remain allowed; the amendment simply deletes the added 2024 IRC requirements for this specific configuration.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal form identifies an estimated construction cost effect of **$1–$2 per square foot**, referencing information from the National Fire Sprinkler Association.
- Removing the special R302.3.5 requirements therefore represents a cost savings of approximately $1–$2 per square foot for two-family dwellings that would otherwise be designed to comply with the added 2024 IRC conditions.
- The savings are associated with not having to provide the additional smoke-limiting construction and notification appliance interconnection prescribed for unsprinklered vertically stacked dwelling units.

B. Implementation / Plan Review / Inspection Costs

- The proposal states that there is no additional time required for code enforcement and that the change “saves time.”
- Eliminating R302.3.5 should simplify plan review and inspection for stacked duplexes by removing a specialized subsection that otherwise

would require additional checks for smoke-limiting details and cross-unit notification appliances.

C. Life-Cycle Costs

- The proposal does not provide a separate life-cycle cost analysis.
- Because the amendment removes additional construction and system features rather than adding new ones, its effect on life-cycle costs is best characterized as neutral to slightly positive in the form of avoided installation, maintenance, and replacement costs for the special measures captured in the deleted section.

D. Other Costs

- No new reporting, testing, or special inspection programs are introduced.
- The proposal instead removes a specific set of requirements from the 2024 IRC as applied in Washington, so there are no additional administrative or compliance costs identified in the submission.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal explicitly estimates a construction cost impact of $1–$2 per square foot and describes the effect as savings associated with removing a blanket-type requirement that the state has already removed at the base IRC level.
- For stacked two-family dwellings, those savings can improve project feasibility and reduce the cost of providing housing in this configuration compared to the unamended 2024 IRC baseline.

B. Operational Benefits

- By eliminating a specialized section that is not aligned with the state's existing sprinkler policy, the proposal simplifies design and code interpretation for stacked duplexes.
- Building departments may see fewer questions about how to implement R302.3.5 in the context of Washington's broader approach to sprinklers, which supports more straightforward plan review and inspection.

C. Other Benefits

- The amendment supports consistency between Washington's residential code and prior state decisions regarding sprinkler requirements in one- and two-family dwellings.
- It also reduces the risk that stacked duplex projects will be discouraged or made less economically attractive solely due to the additional provisions that were introduced in the 2024 model code for this configuration.

4. Small Business Economic Impact

A. Small business categories affected

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors that build new one- and two-family dwellings, including stacked duplexes.
- NAICS 236118 – Residential Remodelers: small firms converting or reconfiguring existing residential structures into two-family dwellings or stacked duplexes.
- NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small mechanical contractors affected by whether sprinkler-related or smoke-control provisions apply to stacked duplex projects.
- NAICS 238210 – Electrical Contractors and Other Wiring Installation Contractors: small firms that may otherwise be required to install and interconnect additional notification appliances between dwelling units.
- NAICS 541310 – Architectural Services: small residential design firms preparing stacked duplex plans and code documentation.

B. Compliance burden comparison

- The proposal states that the economic impact to small businesses is "None," indicating that it does not increase small-business compliance burden.
- Because it removes an additional requirement rather than adding new obligations, the amendment should reduce both the direct cost and

complexity associated with designing and permitting stacked duplexes for small firms.

C. Potential disproportion/mitigation

- The proposal does not identify any disproportionate negative impact on small businesses.
- Any change in burden is expected to be favorable, as avoiding the extra R302.3.5 measures benefits smaller builders and design firms that have less capacity to absorb incremental cost and complexity on duplex projects.

5. Least Burdensome Alternative

- The proposal uses the least burdensome approach by simply removing the 2024 IRC section that introduced the special requirements for vertically stacked dwelling units.
- This approach restores alignment with existing state sprinkler policy without creating replacement criteria or new administrative mechanisms.

6. Conclusion / Recommendation

- This amendment eliminates a new 2024 IRC requirement that imposed additional cost and complexity on unsprinklered stacked duplexes and was not consistent with Washington's existing approach to sprinklers in one- and two-family dwellings.
- Based on the proponent's estimate and rationale, the proposal provides construction cost savings on the order of $1–$2 per square foot for affected projects, saves enforcement time, and does not increase small-business burden, while maintaining the underlying allowance for stacked duplexes in the residential code.

Proposal Identification
Log Number: 24-GP2-032*
Code Section / Title: 2024 IRC R302.3 and R302.3.1 — Accessory dwelling unit within an existing two-family dwelling (fire separation and smoke alarm interconnection)
Proponent: WABO Technical Code Development Committee; Angela Haupt, WABO Technical Code Development Committee Member.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- Under current Washington amendments, the IRC uses the term "accessory dwelling" in the two-family dwelling separation and smoke

alarm provisions, even though “accessory structure” is defined as a structure incidental to the dwelling, and the term “accessory dwelling” is not defined in the IRC.

- Existing language allows an accessory dwelling unit created within an existing single-family dwelling to be exempt from fire-rated separation where all smoke alarms are interconnected, but the terminology and cross-references can create confusion about which unit requirements still apply and how the exception interacts with the model code text.

B. Summary of baseline with changes

- The proposal removes the undefined term “accessory dwelling” and instead uses “new dwelling unit” and “existing dwelling unit” to describe the condition where a new unit is created within an existing dwelling to form a two-family dwelling.
- It clarifies that only the dwelling unit separation may be exempted when alarms are interconnected and that all other individual dwelling-unit requirements remain in force, while updating the R302.3, R302.3.1, R314.2.2, and R314.4 text so the language is consistent and clear.

C. Rationale statement

- The proposal explains that “accessory dwelling” is not a meaningful term in the IRC, because a dwelling is not incidental to another dwelling, and that the only uses of the term appear in existing Washington amendments.
- The stated purpose is to remove all occurrences of “accessory dwelling,” make the language consistent with IRC definitions, and make it clear that all individual dwelling-unit requirements continue to apply, with only the separation requirement exempted when alarms are interconnected.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal form does not claim any change in square-foot or per-unit construction cost; no numerical estimate is provided.
- Because the amendment primarily clarifies terms and confirms that only the separation requirement is exempted where alarms are interconnected, it does not add new materials, systems, or performance criteria, and therefore does not identify any increase in construction cost.

B. Implementation / Plan Review / Inspection Costs

- No additional plan review time, inspections, or special reports are identified on the proposal form.
- Clarifying the language and removing an undefined term should simplify code interpretation for building officials and designers, which can reduce review time and the number of correction cycles for projects involving new dwelling units within existing two-family dwellings.

C. Life-Cycle Costs

- The proposal does not include a life-cycle cost analysis.

- Since it does not introduce new building systems or change the underlying smoke alarm interconnection condition, no life-cycle cost increase is evident from the proposal record.

D. Other Costs

- The amendment does not create new reporting requirements, special inspections, or third-party documentation obligations.
- It is limited to clarifying and revising existing state amendment language, so no additional administrative costs are described.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal does not provide quantified dollar savings.
- Any direct savings are indirect and stem from avoiding design confusion or rework when applying the separation exception and smoke alarm interconnection provisions to new dwelling units created within existing two-family dwellings.

B. Operational Benefits

- Clearer terminology (“new dwelling unit” and “existing dwelling unit”) and explicit confirmation that all other individual dwelling-unit requirements still apply support more consistent application of the exception across jurisdictions.
- This can reduce time spent on interpretations and plan revisions and make it easier for design professionals and builders to document compliance for new units within existing two-family dwellings.

C. Other Benefits

- Removing an undefined and misleading term improves the internal consistency of the residential code and its alignment with existing definitions for “accessory structure” and “dwelling.”
- The amendment also helps ensure that life-safety expectations for each individual dwelling unit remain clear when the separation requirement is exempted in favor of interconnected alarms.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors that create or alter one- and two-family dwellings, including adding new dwelling units within existing buildings.[3]
- NAICS 236118 – Residential Remodelers: small firms that remodel existing houses to add additional dwelling units within two-family dwellings.[4][5]
- NAICS 541310 – Architectural Services: small residential design practices preparing plans and code documentation for projects that rely on the R302.3/R314 interconnection provisions.[6]
- NAICS 541350 – Building Inspection Services: small code-consulting and inspection firms that assist owners and builders in demonstrating compliance with separation and smoke alarm requirements.[6]

B. Compliance burden comparison

- The proposal does not add new requirements and therefore does not increase compliance burden on small businesses.
- By clarifying terminology and the scope of the separation exception, it can reduce the time and effort small firms spend interpreting the existing amendments and revising drawings or applications to meet local interpretation of the current language.

C. Potential disproportion/mitigation

- The proposal does not identify any disproportionate negative impact on small businesses.
- To the extent it affects small firms, the impact is favorable, because clearer code language particularly benefits smaller contractors and design offices that have fewer resources to devote to resolving ambiguous terms.

5. Least Burdensome Alternative

- The proposal takes a minimal-change approach by replacing an undefined term with clearer terminology and confirming the intended scope of the separation exception, rather than adding new technical requirements or alternative compliance paths.
- This approach corrects the identified problem while avoiding additional regulatory burden.

6. Conclusion / Recommendation

- The amendment is a clarifying change to existing Washington IRC amendments for two-family dwellings and new dwelling units within existing dwellings; it does not identify increased construction, enforcement, or life-cycle costs.
- The expected economic effect is neutral to slightly positive, through clearer application of the separation exception, reduced interpretation and rework for affected projects, and improved usability of the residential code for small residential builders, remodelers, and design professionals.

Proposal Identification
Log Number: 24-GP2-033-R1*
Code Section / Title: 2024 IRC R301.2.2.1.1 — Alternate determination of seismic design category
Proponent: Riley Helean, Building Industry Association of Washington (BIAW). External Affairs Coordinator.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- The current 2024 IRC text for R301.2.2.1.1 sends users to IBC Section 1613, which in turn allows use of the IBC seismic maps or ASCE 7 to determine the seismic design category (SDC) and SDS.
- The IBC maps referenced only provide a generalized SDC “D” and do not distinguish D0, D1, and D2, even though IRC tables (such as R602.10.3(3)) require that level of detail for compliance.
- In addition, the 2024 IRC introduces new seismic maps and R301.2.2.1.2 that can suggest a full engineered analysis is required or

show SDC values that do not align with the SDS-based categories from ASCE 7, creating confusion and the potential for over- or under-classification.

B. Summary of baseline with changes

- The amendment removes the reference to IBC Section 1613 and instead allows the seismic design category and SDS to be determined directly in accordance with ASCE 7.
- SDS values from ASCE 7 are then used to set SDC in accordance with IRC Table R301.2.2.1.1 and to interpolate between values in IRC tables such as R602.10.3(3) and R603.9.2(1), ensuring the IRC's own seismic requirements are applied with consistent, site-specific data.

C. Rationale statement

- The proposal explains that because the IBC maps do not distinguish between D0, D1, and D2, they are "not usable for code compliance" where the IRC requires a specific D0/D1/D2 designation.
- It further notes that the 2024 IRC seismic maps were simplified nationally and sometimes assign more conservative or less precise SDCs than ASCE-7-based values, disproportionately affecting states like Washington with pronounced regional seismic variation.
- The stated purpose is to remove an ineffective reference, direct users straight to ASCE 7 where the authoritative hazard data reside, improve clarity, and avoid unnecessary engineering or over-design that may result from map discrepancies.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal indicates that the amendment does not change seismic hazard values or design requirements themselves; it changes the method of determining SDC by directing users to ASCE 7 rather than through the IBC maps.
- The narrative explains that using ASCE 7 directly supports "cost mitigation" by reducing the risk that projects will be designed to more conservative SDCs than warranted or pushed into the IBC when the IRC path remains appropriate, thereby avoiding unnecessary upgrades and associated cost.
- No per-square-foot or per-dwelling-unit number is provided, but the submission states that the added life-cycle cost from misclassified SDCs will vary with contractor proximity, building size/complexity, and material availability, implying that misclassification can be costly, especially in higher SDC categories.

B. Implementation / Plan Review / Inspection Costs

- The proposal does not anticipate additional enforcement time and notes that the change "simplifies enforcement by improving consistency and usability in the code."
- Directly using ASCE 7 hazard data reduces the back-and-forth caused by conflicting SDC indications between the IRC maps and ASCE 7 and can reduce plan review time spent resolving which SDC governs for a given site.

C. Life-Cycle Costs

- The submittal acknowledges that an exact estimate of added life-cycle cost when SDC is elevated (for example, from D to E) depends on contractor availability, building size and complexity, and material costs.
- By avoiding over-conservative SDC classifications that require more robust detailing and systems than warranted, the amendment is expected to help contain life-cycle costs for residential projects without reducing safety, since it continues to rely on ASCE-7-based hazard data.

D. Other Costs

- The proposal does not introduce new reporting, testing, or inspection programs.
- No new design submittals beyond those needed to document SDS and SDC per ASCE 7 are identified; instead, the amendment removes duplicative and confusing references that currently can lead to redundant analysis.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal describes economic benefit in terms of avoided "unnecessary engineering evaluations or plan revisions" that result from confusing or inaccurate SDC determinations under the current text.
- It also notes that keeping residential projects within the IRC envelope when appropriate helps avoid the added complexity and cost associated with moving to IBC-based design unnecessarily, which can reduce both design and construction cost for affected homes.

B. Operational Benefits

- Directly referencing ASCE 7 supports more accurate, site-specific hazard classification, reducing confusion for code users and enforcement officials and making the seismic design provisions more straightforward to apply.
- The amendment can shorten design timelines and reduce the likelihood of rework where initial SDC assumptions based on generalized maps later conflict with ASCE-7-derived values.

C. Other Benefits

- The rationale notes that the national decision to simplify IRC seismic maps "disproportionately affects states like Washington," where precision matters more; the amendment restores that precision for Washington users.
- Aligning IRC practice with ASCE 7 improves confidence in seismic design decisions for owners, designers, and officials, and helps avoid environmental and resource costs associated with overbuilding driven by overly conservative map designations.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors constructing detached one- and two-family dwellings whose structural systems and detailing depend on SDC classification.[3]
- NAICS 236118 – Residential Remodelers: small firms engaged in additions and structural alterations to existing homes where correct SDC classification affects design choices and cost.[4][5]

- NAICS 541310 – Architectural Services: small residential design practices that must determine and document SDC and SDS and choose the appropriate IRC or IBC path based on those values.[6]
- NAICS 541330 – Engineering Services: small structural engineering firms performing seismic analysis and detailing for low-rise residential projects.[6]
- NAICS 541350 – Building Inspection Services: small consulting and inspection firms that support jurisdictions and builders in applying seismic design criteria and verifying compliance.[6]

B. Compliance burden comparison

- The amendment does not add new technical requirements; it clarifies where users obtain SDC and SDS and thus is not expected to increase compliance burden for small businesses.
- By reducing confusion and the chance of misclassification, it can lower the incidence of redesign, additional engineering analysis, or plan revisions that small builders and design firms would otherwise bear as soft costs.

C. Potential disproportion/mitigation

- The proposal does not identify any disproportionate negative impact on small businesses.
- To the extent there is an impact, it is favorable, because clearer, more accurate SDC determination helps small residential builders and their design teams avoid both unnecessary over-design and the cost of navigating conflicting map and hazard-tool information, particularly in more remote or lower-income markets.

5. Least Burdensome Alternative

- The amendment takes a minimal approach by revising R301.2.2.1.1 to point directly to ASCE 7, without creating new map sets, additional tables, or alternative compliance procedures.
- This corrects the identified confusion and improves precision while relying on existing, widely used hazard tools and data, avoiding more complex or prescriptive alternatives.

6. Conclusion / Recommendation

- The proposal is a clarity and precision amendment that aligns residential SDC determination with ASCE 7 without changing underlying seismic requirements or hazard data.
- On the record provided, the economic effect is expected to be neutral to positive: reducing unnecessary engineering and plan revisions, helping avoid over-conservative design driven by generalized maps, and improving housing affordability and small-business viability in regions where misclassification would otherwise increase construction cost without added safety benefit.

Proposal Identification
Log Number: 24-GP2-034-R1*
Code Section / Title: 2024 IRC Table R301.2 and Figure R301.2(2) — Special Wind Regions in Washington State
Proponent: R. Scott Douglas, PE, SE, representing the Structural Engineers Association of Washington (SEAW) Wind Engineering Committee.

1. Description / Rationale
    1. Summary of current baseline (without proposal)

1. Under the current 2024 IRC text, Figure R301.2(2) identifies special wind regions (SWRs), but in Washington State the basic wind speed magnitudes and the exact SWR boundaries within those regions are established independently by each county authority having jurisdiction, based on local knowledge and experience.
2. As a result, SWR wind speeds and boundaries are estimates that are not consistent from county to county and are not based on a single, up-to-date statewide analysis.

2. Summary of baseline with changes
    1. The proposal revises Table R301.2 footnotes and Figure R301.2(2) to reference a new Figure R301.2(2.1), which defines special wind region boundaries in Washington State and sets the ultimate design wind speed in the special wind region at 120 mph for IRC risk category II structures.
    2. It allows site-specific values in special wind regions to be determined using the ASCE Wind Design Geodatabase, and it clarifies that special wind regions in Washington State are as shown in Figure R301.2(2.1), replacing locally defined county boundaries.
3. Rationale statement
    1. SEAW engaged CPP Wind Engineering Consultants to study Washington's special wind regions in accordance with ASCE 7-22 Section 26.5.3, using up-to-date climatic data and state-of-the-art analysis techniques; CPP's study recommended the SWR boundaries shown in Figure R301.2(2.1) and an ultimate wind speed of 120 mph for IRC risk category II structures.
    2. The proposal states that adopting these recommendations will provide accurate, consistent, and complete SWR boundaries and magnitudes statewide and will synchronize SWR wind speeds between the Washington Building Code and the Washington State Residential Code.

2. Economic Cost Analysis
    1. Construction Cost Impact
        1. The proposal states that adoption of this amendment "will not result in a per square foot cost increase" and that cost savings per square foot "will be negligible or very minor for all structures designed per the IRC."
        2. It notes that the proposed special wind region speeds will generally be reduced in magnitude, particularly in areas where special wind regions have been removed, so the economic effect is a small positive savings rather than an increase in construction cost.
    2. Implementation / Plan Review / Inspection Costs
        1. The proposal states explicitly that it "will not require any additional time for plan review or inspections."
        2. Because the amendment replaces a patchwork of county-established SWR values with a single, statewide figure based on CPP's analysis, it should simplify plan review by providing a clear reference for wind speed and boundaries rather than requiring local interpretation.
    3. Life-Cycle Costs
        1. The proposal states that "the minor reduction in cost is insignificant and does not initiate or change any Life Cycle Costs."

2. On that basis, the amendment is not expected to materially change life-cycle costs; any effect would be small positive savings where reduced wind speeds or eliminated SWRs translate to slightly less robust wind design demands.

4. Other Costs

1. The submittal does not identify any new reporting requirements, testing, or special inspection obligations.

2. No additional fees or third-party services are described; the primary change is to replace locally defined SWR boundaries and speeds with those from the CPP study.

3. Economic Benefit Analysis

1. Direct Cost Savings

1. The proposal notes a “nominal cost benefit” associated with reduced special wind region speeds and removal of some SWR areas, leading to negligible or very minor per-square-foot savings for structures designed under the IRC.

2. While savings are not quantified numerically, the statewide reduction or elimination of some special wind conditions can reduce the amount of wind-resisting detailing or hardware required in those locations.

2. Operational Benefits

1. Using a single, CPP-derived figure for SWR boundaries and wind speeds provides designers and building officials with a consistent reference, improving predictability for design and review.

2. Synchronizing the SWR treatment between the Washington Building Code and the Washington State Residential Code reduces the likelihood of conflicting wind design assumptions when a project intersects both code frameworks.

3. Other Benefits

1. The proposal emphasizes that the amendment is based on updated climatic data and advanced analysis techniques, which improves the reliability of wind design criteria used for residential structures.

2. Providing complete, consistent SWR boundaries and magnitudes supports public safety by basing wind design on a comprehensive statewide study rather than disparate local estimates.

4. Small Business Economic Impact

1. Small business categories affected (NAICS)

1. NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors designing and constructing one- and two-family dwellings in areas affected by special wind region designations.

2. NAICS 236118 – Residential Remodelers: small firms performing additions and alterations to existing homes where wind design criteria affect structural scope.

3. NAICS 541310 – Architectural Services: small residential design practices using the wind design tables and figures to size members and connections for housing projects.

4. NAICS 541330 – Engineering Services: small structural engineering firms that apply wind loads per the IRC and ASCE-based data for residential projects.
5. NAICS 541350 – Building Inspection Services: small inspection and code-consulting firms that verify compliance with wind design criteria in plan review and field inspections.

2. Compliance burden comparison
    1. The proposal states that there will not be any impact to small businesses and that no additional plan review or inspection time is required.
    2. In practice, standardizing wind speeds and SWR boundaries statewide can slightly reduce compliance burden by eliminating the need to reconcile differing county practices and by providing a single, authoritative figure for design.
3. Potential disproportion / mitigation
    1. No disproportionate negative impact on small businesses is identified in the proposal.
    2. To the extent there is an impact, it is modestly favorable: small firms gain more predictable wind criteria and may see minor construction cost savings in locations where special wind speeds are reduced or SWRs are removed.

5. Least Burdensome Alternative
    1. The amendment adopts the CPP Wind study's recommended SWR boundaries and wind speeds through a simple figure and footnote update, rather than imposing new calculation methods or additional submittal requirements on designers.
    2. This approach corrects inconsistencies and modernizes wind criteria using existing national standards and tools (ASCE Wind Design Geodatabase) without adding procedural complexity.
6. Conclusion / Recommendation
    1. The proposal modernizes and standardizes special wind region criteria in Washington by adopting CPP's ASCE-compliant study results, improving consistency and reliability without increasing construction or enforcement costs.
    2. Economic impacts are described as negligible or very minor per-square-foot savings, with no additional enforcement time and no identified negative effects on small businesses, while providing clearer, statewide wind-design guidance for residential construction.

Proposal Identification
Log Number: 24-GP2-035*
Code Section / Title: 2024 IRC Table R301.2 - Ground snow load reference to Section R301.2.3
Proponent: Structural Engineers Association of Washington (SEAW). The proposal clarifies the ground snow load reference for Washington State.

1. Description / Rationale
    A. Summary of current baseline (without proposal)

- Under the current 2024 IRC, Table R301.2 includes a ground snow load entry and a footnote “o” that references Section R301.2.3, but Washington’s adoption history and IBC-linked amendments have resulted in some ambiguity about how and where Washington-specific ground snow loads are to be obtained.
- Users may see conflicting signals between the IRC table, older footnote language, and the Washington IBC-based provisions that already establish state-specific ground snow load criteria, leading to possible confusion about which reference governs.

B. Summary of baseline with changes

- The proposal revises Table R301.2 footnote “o” so that for Washington State, ground snow loads are determined in accordance with Section R301.2.3, cleanly tying the IRC table to the Washington-specific ground snow load provisions.
- The change is editorial and cross-reference-oriented; it does not itself change underlying ground snow load magnitudes or the method by which they are established.

C. Rationale statement

- The stated intent of the amendment is to align the IRC table reference with the updated IBC-based ground snow load provisions already adopted in Washington, so that designers consistently look to Section R301.2.3 and the associated state criteria rather than to legacy or ambiguous references.
- The proposal characterizes the change as a clarification that improves internal consistency between the residential code and existing Washington ground snow load practice.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal does not identify any per-square-foot or per-dwelling-unit cost impact and indicates that the amendment does not change the actual ground snow load values used in Washington.
- Because the underlying snow loads and design methods remain unchanged, no increase in material, labor, or system costs is anticipated; any cost effect is limited to avoiding misinterpretation that could lead to over- or under-design in isolated cases.

B. Implementation / Plan Review / Inspection Costs

- The proposal does not list any additional plan review or inspection time per permit application.
- By clarifying where ground snow loads are determined for Washington, the amendment can modestly reduce enforcement effort by steering designers and reviewers to a single, correct cross-reference, rather than requiring resolution of conflicting or unclear citations.

C. Life-Cycle Costs

- No life-cycle cost analysis is provided with the proposal.
- As the amendment does not change the snow loads themselves or introduce new systems, there is no basis in the record to conclude that life-cycle costs will increase; to the extent it prevents misinterpretation,

it may help avoid unnecessary over-sizing of structural members in some cases, but that effect is not quantified.

D. Other Costs

- The proposal does not add new reporting, testing, or special inspection requirements.
- No fees, third-party studies, or additional documentation burdens are described; the change is limited to clarifying the reference path for ground snow load determination.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The amendment does not include a numeric savings estimate.
- Any direct savings would arise from reducing the chance that designers or officials use an incorrect or outdated snow load source, which could otherwise result in over-conservative designs and additional structural material and detailing beyond what the Washington-specific criteria require.

B. Operational Benefits

- Clarifying that ground snow loads in Washington are determined in accordance with Section R301.2.3 aligns residential practice with the state's established snow load framework, improving predictability for design professionals.
- This can reduce time spent on code interpretations or reconciliation between IRC table entries and separate Washington amendments, both in design offices and in building departments.

C. Other Benefits

- The proposal improves the internal consistency of the Washington State Residential Code by making the IRC table footnote match the state's actual snow load provisions.
- It supports public safety by reinforcing the use of the correct, state-adopted ground snow load criteria, rather than leaving room for reliance on incomplete or generic national values.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors whose structural designs depend on correct ground snow load values.
- NAICS 236118 – Residential Remodelers: small firms designing additions or structural alterations in regions where snow load is a governing factor.
- NAICS 541310 - Architectural Services: small residential design practices responsible for applying the IRC snow load provisions to one- and two-family dwellings.
- NAICS 541330 – Engineering Services: small structural engineering firms that calculate snow loads and size members for residential projects using the state's ground snow load criteria.

- NAICS 541350 – Building Inspection Services: small inspection and code-consulting firms assisting jurisdictions and builders in verifying compliance with snow load requirements.

B. Compliance burden comparison

- The proposal does not add new technical requirements and does not identify additional compliance steps for small businesses.
- By pointing clearly to Section R301.2.3 for Washington ground snow loads, it can slightly reduce compliance burden by eliminating ambiguity and reducing the likelihood of rework caused by reliance on incorrect references.

C. Potential disproportion/mitigation

- No disproportionate negative impact on small businesses is identified in the proposal.
- Any impact is neutral to favorable: clearer references help smaller builders and design firms, which often have fewer internal resources for resolving code-reference discrepancies, apply the correct snow load criteria efficiently.

5. Least Burdensome Alternative

- The amendment takes a minimal approach by revising an existing footnote to direct users to Section R301.2.3, rather than introducing new tables or calculation methods.
- This corrects the identified cross-reference issue while avoiding any increase in regulatory complexity or documentation requirements.

6. Conclusion / Recommendation

- The proposal is a clarifying change that aligns IRC Table R301.2 with Washington's existing ground snow load provisions without changing snow load magnitudes, design methods, or enforcement procedures.
- On the record provided, economic impacts are best characterized as neutral with potential minor positive effects from improved clarity: no increased construction or enforcement costs, and modest benefits for small businesses and jurisdictions through reduced confusion and more consistent application of the state-adopted ground snow load criteria.

Proposal Identification
Log Number: 24-GP2-038*
Code Section / Title: 2024 IRC R324/R329 — Solar photovoltaic (PV) systems, roof access, and structural requirements
Proponent: Solar Energy Industries Association (SEIA) and associated stakeholders.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- Under the current 2024 IRC as amended in Washington, provisions for rooftop solar PV systems in IRC Sections R324/R329 include some legacy text and cross-references that do not fully align with the latest IFC and IBC provisions or with current industry practice for residential PV design.
- Existing language can make roof access, pathways, and structural requirements for small residential systems more restrictive or less clear than necessary, creating uncertainty for installers and building officials.

B. Summary of baseline with changes

- The proposal revises the IRC solar PV provisions to correct errors, align with updated IFC/IBC language, and clarify roof access and pathway rules, particularly for smaller residential PV systems.
- It also provides additional structural flexibility under defined conditions (such as low snow load locations and smaller array sizes), while retaining core safety protections for fire-fighter access and structural performance.

C. Rationale statement

- The proposal explains that the changes are intended to correct discrepancies and omissions in the IRC solar sections, harmonize requirements with the fire and building codes, and remove unintended barriers to the deployment of residential rooftop PV.
- The stated purpose is to preserve life-safety objectives (including fire-fighter roof access) while allowing code-compliant PV installations that better reflect how systems are actually designed and installed in Washington.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal does not identify an increase in per-square-foot or per-system construction cost; instead, it indicates that the clarifications and added flexibility can avoid unnecessary structural upgrades or layout changes for qualifying PV arrays.
- By aligning IRC solar provisions with IFC/IBC and current practice, the amendment can reduce instances where conservative interpretations require more expensive roof reinforcements, array reconfiguration, or additional hardware beyond what is necessary for safety.

B. Implementation / Plan Review / Inspection Costs

- The proposal does not specify added plan review or inspection hours per permit.
- Clearer and better-aligned solar provisions should reduce interpretation questions and correction cycles, which can slightly reduce enforcement time for both building and fire officials reviewing residential PV projects.

C. Life-Cycle Costs

- No life-cycle cost analysis is provided in the submittal.
- Because the amendment does not increase required equipment or introduce new mandatory maintenance obligations, and may reduce over-design, there is no evidence of increased life-cycle cost; any effect is likely neutral to modestly positive where avoided structural over-design also avoids long-term ownership costs.

D. Other Costs

- The proposal does not add new reporting, special inspection, or third-party certification requirements for residential rooftop PV.
- It instead refines existing code text, so no additional administrative or compliance programs are described.

3. Economic Benefit Analysis

A. Direct Cost Savings

- Although no specific dollar savings are quantified, the proposal indicates that clarifying and easing structural requirements under defined low-risk conditions can reduce the need for structural upgrades or array downsizing that would otherwise increase costs or reduce system output.
- Projects that qualify for the clarified pathways may see lower engineering, material, and labor costs compared to designs driven by more restrictive or ambiguous current language.

B. Operational Benefits

- Better alignment among IRC, IFC, and IBC solar provisions can streamline design and permit workflows for PV installers and design professionals, reducing rework and delays due to conflicting code interpretations.
- For jurisdictions, clearer provisions support more consistent review, which can improve permit turnaround times for residential solar projects.

C. Other Benefits

- The proposal supports broader deployment of rooftop PV by removing code inconsistencies that may otherwise discourage or complicate installations, while maintaining fire-fighter access and structural safety.
- Increased rooftop PV deployment can provide indirect public benefits, such as reduced greenhouse-gas emissions and greater energy resilience at the household level, though these outcomes are not quantified in the proposal.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small contractors engaged in PV-related mechanical and electrical work for residential systems.
- NAICS 238210 – Electrical Contractors and Other Wiring Installation Contractors: small firms that specialize in solar PV electrical installation and interconnection.
- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors coordinating PV installations as part of new home construction.
- NAICS 236118 – Residential Remodelers: small firms adding solar PV to existing homes as part of remodel or retrofit projects.siccode+1
- NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design and engineering firms preparing structural and electrical documents for PV installations.

B. Compliance burden comparison

- The proposal does not add new mandatory reports or inspections and is not expected to increase compliance burden for small businesses.
- By correcting errors and aligning solar provisions across codes, it can lower compliance costs by reducing uncertainty, design changes, and the need for additional engineering triggered solely by ambiguous or inconsistent text.

C. Potential disproportion / mitigation

- The proposal does not identify any disproportionate negative impact on small businesses.
- Any impact is likely favorable for small PV installers and residential contractors, who benefit most from clearer, more predictable rules and from the reduced risk of costly redesign or structural upgrades late in the permitting process.

5. Least Burdensome Alternative
    - The amendment uses targeted text changes in the IRC solar sections to fix errors and provide flexibility, rather than creating new layers of prescriptive requirements or complex alternative compliance paths.
    - This approach addresses the identified coordination and clarity issues while avoiding additional regulatory burden or specialized submittal requirements.
6. Conclusion / Recommendation
    - The proposal refines and aligns the 2024 IRC rooftop solar PV provisions with related fire and building code requirements, without adding new construction or enforcement costs.
    - Economic effects are expected to be neutral to positive, with potential savings from avoided over-design and streamlined permitting, and with particular benefits for small PV installers and residential construction firms that are most sensitive to design changes, delays, and added soft costs.

Proposal Identification
Log Number: 24-GP2-039*
Code Section / Title: 2024 IRC R311.1 (and deletion of WAC 51-51-0315 R315) — Carbon Monoxide Alarms
Proponent: Jill Vartan, Technical Code Coordinator, City of Seattle.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - Under the current Washington amendments, carbon monoxide alarm requirements for dwellings are contained in WAC 51-51-0315 (R315) as a state-specific amendment, separate from the reorganized 2024 IRC text.
        - Having a standalone WAC section rather than integrated IRC language can cause confusion for designers, builders, and code officials regarding which provisions apply, how they relate to R311, and how to interpret requirements for fuel-burning appliances, attached garages, and sleeping areas.
    B. Summary of baseline with changes
        - The proposal deletes WAC 51-51-0315 (R315) and incorporates updated carbon monoxide alarm requirements directly into IRC Section R311.1, including triggers for alarms where there are fuel-burning appliances or attached garages and detailed provisions for location, power, and interconnection.
        - The integrated language clarifies when alarms are required, how they must be powered and interconnected, and how they are to be located in relation to bedrooms and other spaces,

consolidating all CO alarm requirements within the IRC chapter dealing with means of egress and life-safety features.

C. Rationale statement
    - The proposal's stated intent is to improve clarity by moving carbon monoxide alarm requirements into the appropriate IRC section and updating the language to match current life-safety practice and risk patterns.
    - It is also intended to address documented CO poisoning risks within dwelling units, particularly in relation to sleeping areas, fuel-burning appliances, and attached garages, by ensuring that robust and clearly understood alarm requirements are in the core residential code text.

2. Economic Cost Analysis

A. Construction Cost Impact
    - The proposal form does not provide a numerical per-square-foot or per-dwelling-unit cost estimate.
    - Because carbon monoxide alarms are already required under existing Washington amendments, and the proposal primarily relocates and updates requirements into R311.1, the direct construction cost impact is expected to be limited to any incremental changes in the number, placement, or interconnection of alarms required by the clarified text, which are not quantified in the submission.

B. Implementation / Plan Review / Inspection Costs
    - Consolidating CO alarm provisions into R311.1 and deleting a separate WAC section should simplify enforcement by giving building officials a single, coherent set of requirements to apply during plan review and inspection.
    - The proposal does not identify additional plan review hours or inspection visits; instead, it is expected that clearer, integrated language will reduce time spent on interpretation and corrections regarding CO alarm location and power arrangements.

C. Life-Cycle Costs
    - No life-cycle cost analysis is included with the proposal.
    - CO alarms are already a standard component of residential life-safety systems; to the extent the updated language leads to more reliable installation in high-risk locations, there may be non-monetized life-safety benefits (reduced injury, death, and associated costs), but these are not quantified.

D. Other Costs
    - The proposal does not create new reporting, special inspection, or third-party certification requirements for CO alarms.
    - It is limited to code text reorganization and clarification; any additional cost would stem from incremental alarm devices or wiring required to meet the clarified standard, which is not numerically estimated in the proposal.

3. Economic Benefit Analysis
    A. Direct Cost Savings
        - The proposal does not identify direct monetary savings.
        - Administrative savings may arise from fewer misunderstandings or corrections relating to CO alarm requirements, since designers and builders will be able to rely on a single, integrated IRC section rather than cross-referencing a separate WAC provision.
    B. Operational Benefits
        - Improved clarity about location, interconnection, and power supply for CO alarms can enhance their effectiveness in warning occupants of hazardous conditions, particularly during sleeping hours.
        - For building departments, having a consolidated code section can streamline inspection checklists and reduce variability in enforcement from project to project.
    C. Other Benefits
        - The proposal directly addresses significant life-safety risks associated with carbon monoxide exposure in dwellings by ensuring that alarm requirements are up-to-date and clearly integrated into the IRC.
        - Clearer rules help owners and occupants better understand expectations for CO alarm presence and maintenance, supporting long-term public health and safety benefits that go beyond immediate construction costs.
4. Small Business Economic Impact
    A. Small business categories affected (NAICS)
        - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors responsible for installing and coordinating CO alarms in new dwellings.
        - NAICS 236118 – Residential Remodelers: small firms performing alterations that trigger CO alarm upgrades or additions.
        - NAICS 238210 – Electrical Contractors and Other Wiring Installation Contractors: small electrical firms installing, interconnecting, and powering CO alarms in dwellings.
        - NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small HVAC firms whose work introduces fuel-burning appliances that in turn trigger CO alarm requirements.
        - NAICS 541350 – Building Inspection Services: small inspection and consulting firms assisting with verification of CO alarm installation and code compliance.
    B. Compliance burden comparison
        - Because CO alarms are already required in Washington, and the proposal primarily relocates and updates the requirements into

R311.1, it does not introduce an entirely new compliance obligation for small businesses.

- Clearer, integrated language should reduce compliance burden by making it easier for small contractors and designers to determine where CO alarms are required and how they must be installed, thereby reducing correction cycles and associated soft costs.

C. Potential disproportion / mitigation

- The proposal does not identify any disproportionate negative impact on small businesses.
- To the extent there is any incremental cost from clarifying or expanding alarm coverage, those costs are justified in the proposal by the life-safety need and are applied uniformly, while the clarity benefits particularly assist smaller firms that have fewer resources to manage ambiguous requirements.

5. Least Burdensome Alternative

- The amendment uses a least-burdensome approach by relocating and updating CO alarm text into an existing IRC section, rather than creating new Washington-specific technical standards or stand-alone administrative programs.
- It builds on widely accepted CO alarm practice and existing statutory requirements, correcting and consolidating language without adding complex alternative compliance paths.

6. Conclusion / Recommendation

- The proposal modernizes and consolidates Washington's carbon monoxide alarm requirements by moving them into IRC R311.1 and deleting a separate WAC section, without documenting increased construction or enforcement costs.
- On the record provided, economic impacts are best characterized as neutral to modestly positive: some potential incremental device or wiring cost may be offset by reduced administrative confusion and improved life-safety performance of CO alarm systems in dwellings, with no identified disproportionate effect on small businesses

Proposal Identification
Log Number: 24-GP2-040*
Code Section / Title: 2024 IRC M1401.1 and Chapter 44 — Heating and Cooling Equipment, Refrigerants
Proponent: Eric Vander Mey, PE, Principal, Delta E Consulting.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- Under the current Washington-amended IRC, M1401.1 requires heating and cooling equipment to be installed per manufacturer instructions and code, and M1301.1 already directs that mechanical appliances, equipment, and systems not addressed by the IRC comply with the IMC, which includes Washington amendments requiring compliance with ASHRAE 15-2022.

- However, M1401.1 and the referenced standards do not yet explicitly require ASHRAE 15.2 for residential refrigeration systems, do not directly address systems using carbon dioxide (CO_2) in relation to IMC Chapter 11, and still reference older ASHRAE 34 editions.

A. Summary of baseline with changes

- The proposal amends M1401.1 so that heating and cooling equipment using a refrigeration system must be installed in accordance with ASHRAE 15.2, and systems using CO_2 as the refrigerant must be installed in accordance with IMC Chapter 11.
- An exception is added so that systems using other than A1 or A2L refrigerants must be installed in accordance with the IMC, and Chapter 44 is updated to reference ASHRAE 15.2-2024 and ASHRAE 34-2024 as the current editions.

B. Rationale statement

- The proposal explains that it is intended to align the 2024 Washington State Residential Code with the 2027 IRC code change proposal and to require use of ASHRAE 15.2, which is the latest safety standard for refrigeration systems in residential applications.
- It also clarifies requirements for CO_2 systems, provides an exception path for refrigerants other than A1 and A2L through the IMC and ASHRAE 15, and updates referenced standards to their 2024 editions to support a more cost-effective transition away from high-GWP refrigerants.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal marks “No” for economic impact and explains that IMC-based requirements already apply, because IRC Section M1301.1 requires mechanical appliances, equipment, and systems not addressed by the IRC to comply with the IMC, and the 2021 IMC with Washington amendments already requires compliance with ASHRAE 15-2022.
- As a result, explicitly referencing ASHRAE 15.2 and updated ASHRAE 34 in the IRC is not expected to increase construction cost; rather, it codifies an existing practice framework and supports consistent application of refrigerant safety standards already in effect through the mechanical code.

D. Implementation / Plan Review / Inspection Costs

- The proposal states that enforcement is simplified by clarifying the IRC, and it does not identify any added plan review or inspection time per permit.
- Tying M1401.1 directly to ASHRAE 15.2 and IMC Chapter 11 for CO_2 systems can reduce interpretation time and coordinate enforcement expectations between residential and mechanical code reviewers.

E. Life-Cycle Costs

- No specific life-cycle cost analysis is provided.
- Since the IMC already drives compliance with ASHRAE 15 for refrigeration systems, and the proposal primarily updates IRC cross-references and editions, no life-cycle cost increase is evident; if anything, more efficient adoption of A2L and other alternative refrigerants may moderate equipment and operating costs over time, but that effect is not quantified.

F. Other Costs

- The amendment does not create new reporting, testing, or special inspection requirements beyond those already implied by the IMC and referenced ASHRAE standards.
- No new fees or third-party documentation programs are described; the change is focused on aligning IRC text with the existing mechanical code framework and updated national standards.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal does not provide a dollar estimate of savings.
- It notes, however, that clarifying the use of ASHRAE 15.2 and allowing transition to A2L and other refrigerants is intended to enable a more cost-effective refrigerant transition to meet Washington Department of Ecology and U.S. EPA requirements, which can prevent piecemeal or inconsistent upgrades that would otherwise increase costs.

E. Operational Benefits

- Clearer cross-references reduce ambiguity for designers and contractors choosing refrigerants and documenting safety compliance, which can shorten design and review cycles.
- Harmonizing the IRC with current IMC and ASHRAE requirements supports smoother adoption of new refrigerants, reducing the risk of late design changes or field corrections driven by conflicting code interpretations.

F. Other Benefits

- The proposal supports environmental and regulatory goals by facilitating transition to lower-GWP refrigerants under a consistent safety framework, as required by state and federal agencies.
- It also enhances safety by ensuring that residential refrigeration systems are governed by the most current ASHRAE 15.2 and ASHRAE 34 standards for classification and installation.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small mechanical contractors that install and service residential heating and cooling equipment using refrigerants.
- NAICS 238210 – Electrical Contractors and Other Wiring Installation Contractors: small firms wiring and connecting equipment that relies on compliant refrigeration systems.
- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors coordinating HVAC installations in new homes.
- NAICS 236118 – Residential Remodelers: small firms installing or replacing residential HVAC equipment in existing homes.
- NAICS 541330 – Engineering Services: small mechanical/energy engineering practices that design and specify residential refrigerant-bearing systems.

D. Compliance burden comparison

- The proposal explains that there is “No impact” on small businesses because the underlying ASHRAE compliance requirements already apply through the 2021 IMC and existing Washington amendments.
- By clarifying IRC text and updating referenced standards, the amendment may slightly reduce compliance burden for small firms by making the applicable refrigerant safety path more explicit in the residential code, reducing the need to cross-navigate multiple sources.

E. Potential disproportion/mitigation

- The proposal does not identify any disproportionate negative impact on small businesses.
- To the extent there is any effect, it is expected to be neutral to favorable, because clearer alignment with IMC and ASHRAE requirements helps smaller HVAC contractors and design firms manage the refrigerant transition with less risk of misinterpretation and rework.

5. Least Burdensome Alternative

- The amendment uses the least burdensome approach by revising M1401.1 and the referenced standards list to incorporate ASHRAE 15.2, call out CO_2 systems under IMC Chapter 11, add an exception for non-A1/A2L refrigerants, and update ASHRAE 34, without creating new Washington-specific technical criteria.
- This strategy relies on national consensus standards and existing IMC provisions instead of introducing additional local requirements or new compliance procedures.

6. Conclusion / Recommendation

- The proposal is a coordination and clarity amendment that aligns the Washington IRC with existing IMC and ASHRAE refrigerant safety requirements, without increasing construction or enforcement costs.
- Economic effects are reasonably characterized as neutral, with potential modest benefits from a clearer, more cost-effective transition to A2L and other refrigerants under consistent state and federal regulatory expectations, particularly for small HVAC and residential construction businesses.

Proposal Identification
Log Number: 24-GP2-041*
Code Section / Title: 2024 IRC M1505 — Whole-House and Local Mechanical Ventilation
Proponent: Eric Vander Mey, PE, Principal, Delta E Consulting.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- Under the 2024 IRC as adopted, whole-house and local mechanical ventilation requirements are not fully aligned with Washington’s mechanical practice, including how whole-house rates are adjusted for system type, how intermittent operation is handled, how local exhaust airflow is verified, and how prescriptive duct sizing relates to delivered airflows.
- Existing text can leave ambiguity around quality-adjusted ventilation rates, runtime factors, delivered airflow verification, and allowable duct lengths, which complicates design, installation, and enforcement for residential ventilation systems.

B. Summary of baseline with changes

- The proposal revises M1505.4.3.1 to define a “ventilation quality adjustment” using the equation $Q_v = Q_r \times C_{system}$ and introduces Table M1505.4.3(2), which sets system coefficients for balanced/not balanced and distributed/not distributed whole-house systems.
- It clarifies intermittent-off-operation in M1505.4.3.2 by specifying required runtime percentages within each four-hour segment and giving a factor table, and it revises M1505.4.4 through M1505.4.4.3 to require HVI-rated fans, delivered airflow verification (with a prescriptive duct-sizing exception), sound limits, and detailed prescriptive duct-length and duct-sizing criteria for local exhaust systems.

C. Rationale statement

- The stated intent is to align IRC Section M1505 with tested and verifiable ventilation practice, including HVI 915/916/920 procedures, and to make sure that whole-house and local exhaust systems deliver required airflows in the field.
- By clarifying formulas, coefficients, testing expectations, and duct-length limits, the amendment aims to improve indoor air quality outcomes, reduce confusion, and harmonize residential ventilation design and enforcement with Washington’s mechanical code.

2. Economic Cost Analysis

A. Construction Cost Impact

- The proposal does not quantify a per-square-foot or per-dwelling-unit cost impact.
- Because the revisions primarily clarify performance-based and prescriptive paths for systems that are already required, construction cost changes are expected to be modest; clearer HVI-aligned sizing and verification can reduce both under-performance and unnecessary over-sizing, limiting rework.

D. Implementation / Plan Review / Inspection Costs

- The proposal introduces explicit expectations for field verification of local exhaust airflow (using flow hoods, flow grids, or similar devices) but also provides a prescriptive duct-sizing table that can be used in lieu of field testing when specific conditions are met.
- This should make review and inspection more predictable: enforcement agencies can rely on either verified performance or prescriptive compliance, reducing interpretive disputes and correction cycles.

E. Life-Cycle Costs

- No life-cycle cost analysis is included.
- Ensuring that ventilation systems deliver their intended airflow can help prevent moisture problems, IAQ complaints, and associated maintenance or remediation costs; these potential savings are qualitative and not monetized in the proposal.

F. Other Costs

- The amendment does not create new permit types, reporting programs, or third-party certification requirements; it refines criteria for systems that are already mandated.
- Any added cost from testing or more careful duct design is likely to be offset by fewer failed inspections and less need for post-installation corrections.

3. Economic Benefit Analysis

A. Direct Cost Savings
    - The proposal does not state a dollar savings figure.
    - By providing clear formulas, system coefficients, and prescriptive duct tables, it reduces the risk that contractors will need to resize ductwork or replace fans after inspection due to inadequate airflow, thereby avoiding labor and material rework costs.

A. Operational Benefits
    - Better-defined ventilation quality adjustments and runtime factors help ensure that installed systems actually provide adequate ventilation, supporting occupant health and comfort.
    - Aligning IRC requirements with HVI testing and sizing guidance simplifies equipment selection and design for contractors and designers, supporting smoother plan review and fewer revisions.

B. Other Benefits
    - The proposal improves consistency between the Washington State Residential Code and related mechanical-code ventilation practices, which reduces conflicting interpretations for practitioners and code officials.
    - More reliable ventilation performance contributes to long-term public health and building durability, although these benefits are not quantified.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)
    - NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small HVAC contractors designing, installing, and testing residential ventilation systems.
    - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors responsible for ventilation compliance in new dwellings.
    - NAICS 236118 – Residential Remodelers: small firms adding or upgrading ventilation systems in existing homes.
    - NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design firms specifying ventilation systems and documenting code compliance.
    - NAICS 541350 – Building Inspection Services: small consulting and testing firms that may conduct or assist with airflow verification and inspection.

B. Compliance burden comparison
    - The proposal does not identify new documentation or inspection burdens that would materially increase small-business compliance costs.
    - By clarifying requirements and offering both performance-verified and prescriptive paths, it can reduce the risk of failed inspections, redesigns, and unplanned site visits, which are disproportionately costly for small firms.

C. Potential disproportion/mitigation
    - The proposal does not indicate any disproportionate negative impact on small businesses.

- Any impact is likely neutral to slightly favorable, since small contractors and design firms benefit from clearer, more predictable ventilation rules and inspection criteria.

5. Least Burdensome Alternative
    - The amendment addresses identified gaps using targeted changes to formulas, tables, and verification requirements instead of introducing new programs or complex alternative compliance schemes.
    - It retains flexibility by allowing both field-verified and prescriptive compliance options, which is consistent with a least-burdensome approach.
6. Conclusion / Recommendation
    - The proposal updates and clarifies the 2024 IRC ventilation section to better ensure delivered whole-house and local exhaust airflow, harmonize with HVI methods, and support consistent enforcement without major new costs.
    - Based on the record, the economic impact is best described as neutral to modestly positive, with potential savings from reduced rework and more reliable system performance, particularly for small HVAC and residential construction businesses.

Proposal Identification
Log Number: 24-GP2-042*
Code Section / Title: 2024 IRC M2001.1 and M2005.1 — Boilers and Water Heaters Using Refrigeration Systems
Proponent: Eric Vander Mey, PE, Principal, Delta E Consulting.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - Under the current Washington-amended IRC, boilers and water heaters are governed by M2001.1 and M2005.1 and by general provisions that send unaddressed mechanical systems to the IMC, which already requires compliance with ASHRAE 15, ASHRAE 15.2, and ASHRAE 34 under the 2021 IMC with Washington amendments.
        - However, the IRC boiler and water heater sections do not clearly state how appliances that include refrigeration systems must comply with ASHRAE 15.2, IMC Chapter 11, or ASHRAE 15, particularly for different refrigerant classifications such as A1, A2L, and others.
    B. Summary of baseline with changes
        - The proposal amends M2001.1 to require that boilers using a refrigeration system be installed in accordance with ASHRAE 15.2 or IMC Chapter 11, with a specific clause that refrigeration systems containing carbon dioxide must comply with IMC Chapter 11, and an exception that boilers using refrigerants other than A1 or A2L must be installed in accordance with the IMC.
        - It similarly amends M2005.1 to require that water heaters using a refrigeration system be installed in accordance with ASHRAE 15.2 or IMC Chapter 11, again specifying IMC Chapter 11 for CO_2 systems and providing the same exception for refrigerants other than A1 or A2L.
    C. Rationale statement
        - The stated purpose is to clarify that boilers and water heaters using refrigeration systems must follow the appropriate ASHRAE and IMC

provisions that already apply under mechanical code, closing a gap in the IRC text.

- The proposal also aims to allow the use of refrigerants other than A1 and A2L by referencing the IMC path, and to support a more cost-effective transition to alternative refrigerants while maintaining safety through ASHRAE 15, 15.2, and IMC Chapter 11 requirements.

2. Economic Cost Analysis
    A. Construction Cost Impact
        - The proposal marks “No” for economic impact and explains that IRC M1301.1 already requires mechanical appliances, equipment, and systems not addressed by the IRC to comply with the IMC, and the 2021 IMC with Washington amendments already requires compliance with ASHRAE 15, 15.2, and 34.
        - Since the proposal codifies in the IRC what is already required through the IMC pathway, it is not expected to increase construction costs; any system installed today should already be designed to these standards.
    C. Implementation / Plan Review / Inspection Costs
        - The proposal states that it “simplifies code enforcement by clarifying the IRC.”
        - Codifying the refrigerant safety path directly in M2001.1 and M2005.1 reduces ambiguity and interpretation time during plan review and inspections, without adding new inspection tasks or additional plan review hours per permit.
    D. Life-Cycle Costs
        - No life-cycle cost analysis is provided.
        - Because the underlying refrigerant safety obligations already exist via the IMC, the proposal does not change expected life-cycle costs; it simply clarifies which standards apply to certain boiler and water heater configurations.
    E. Other Costs
        - The amendment does not introduce new reporting, special inspection, or third-party certification requirements for these appliances.
        - No additional fees or documentation burdens are described; the change focuses on clarity and alignment with existing mechanical and ASHRAE requirements.
3. Economic Benefit Analysis
    A. Direct Cost Savings
        - The proposal does not provide quantified savings.
        - Clearer direction can reduce the risk of misinterpretation and redesign related to refrigerant classification and safety compliance, avoiding soft costs associated with corrections and delays, particularly as manufacturers transition to different refrigerants.
    B. Operational Benefits
        - The amendment supports consistent application of ASHRAE 15, 15.2, and IMC Chapter 11, which can streamline design and approval processes for boilers and water heaters that use refrigeration systems.

- It also helps align residential and mechanical code expectations, reducing friction for designers and contractors working across both codes.

C. Other Benefits

- The proposal facilitates a more cost-effective and orderly transition to A2L and other refrigerants mandated by Washington Department of Ecology and U.S. EPA requirements, under a clearly defined safety framework.
- It supports life-safety by making explicit in the IRC that these appliances must follow the most current refrigerant safety standards already adopted in the mechanical code.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small mechanical contractors that install boilers and water heaters using refrigeration systems in residential applications.
- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small general contractors coordinating installation of such systems in new dwellings.
- NAICS 236118 – Residential Remodelers: small firms installing or replacing these appliances in existing homes.
- NAICS 541330 – Engineering Services: small mechanical engineering firms specifying refrigerant-bearing boiler and water-heating systems.
- NAICS 541350 – Building Inspection Services: small inspection firms assisting jurisdictions in applying ASHRAE/IMC requirements to residential projects.

B. Compliance burden comparison

- The proposal states that there is “No impact as already required by 2021 WSMC.”
- Clarifying the path in the IRC slightly reduces compliance burden by making it easier for small firms to identify which standards apply without having to infer the IMC requirements indirectly.

C. Potential disproportion / mitigation

- No disproportionate negative impact on small businesses is identified.
- To the extent any impact exists, it is neutral to slightly favorable because clearer requirements reduce the risk of costly misinterpretations for smaller HVAC and plumbing contractors.

5. Least Burdensome Alternative

- The amendment uses the least burdensome option by editing M2001.1 and M2005.1 to reference existing ASHRAE and IMC standards instead of introducing new Washington-specific technical criteria.
- This approach resolves ambiguity while relying entirely on existing, nationally recognized standards and already-adopted mechanical code provisions.

6. Conclusion / Recommendation

- The proposal clarifies refrigerant safety requirements for boilers and water heaters using refrigeration systems by explicitly tying them to ASHRAE 15.2, ASHRAE 15, and IMC Chapter 11, with no documented increase in construction or enforcement costs.

- Economic impacts are best characterized as neutral, with modest benefits from improved clarity and a more efficient refrigerant transition, especially for small mechanical contractors and residential builders.

Proposal Identification
Log Number: 24-GP2-044-R1*
Code Section / Title: 2024 IRC R325 — Light, Ventilation, and Heating (relocation of former Section 303 amendments)
Proponent: Washington State Building Code Council.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - In the 2021 IRC as amended in Washington, state-specific provisions addressing habitable room light and ventilation, bathrooms, mechanical systems, stair illumination, heating requirements, and exhaust openings were located in Section 303.
        - The 2024 IRC reorganized these topics, creating new Section R325 and relocating related mechanical provisions (such as exhaust openings) to M1504.3, so Washington's existing amendments no longer align cleanly with the revised structure.
    B. Summary of baseline with changes
        - The proposal relocates and updates the existing Washington amendments so they now appear under 2024 IRC Section R325 rather than under the former Section 303, following the model code reorganization.
        - It also updates cross-references (such as exhaust openings now in M1504.3) and makes editorial adjustments to ensure that all previously adopted state light, ventilation, and heating provisions are preserved in the correct locations under the new numbering.
    C. Rationale statement
        - The proposal is explicitly described as an editorial update needed because of the model code's reorganization, with no substantive change to the technical requirements that Washington has already adopted.
        - The intent is to maintain continuity of Washington's existing policy decisions on light, ventilation, and heating while ensuring the code is coherent and user-friendly under the 2024 IRC structure.
2. Economic Cost Analysis
    A. Construction Cost Impact
        - The proposal states that there is no economic impact and characterizes the change as an editorial relocation of existing amendments.
        - Because it does not alter the technical thresholds for light, ventilation, heating, or exhaust openings, no change in construction or material costs is anticipated.
    B. Implementation / Plan Review / Inspection Costs
        - By aligning Washington amendments with the new IRC section numbering, the proposal reduces confusion for plan reviewers and inspectors who might otherwise have to reconcile outdated section references.

- It does not introduce new inspection tasks or additional plan review time; it simply ensures that existing provisions are in the correct place, which should make enforcement slightly more efficient.

C. Life-Cycle Costs

- No life-cycle cost analysis is provided.
- Since technical requirements are unchanged, life-cycle costs for building systems related to light, ventilation, and heating remain as previously established in Washington's amendments.

D. Other Costs

- The proposal does not add any reporting, testing, or specialized inspection requirements beyond those already associated with the existing provisions.
- There are no new fees or external documentation burdens described.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal does not claim direct monetary savings.
- Minor administrative savings may occur because designers and code users can find Washington's amendments in the correct sections, reducing time spent tracking down relocated provisions.

B. Operational Benefits

- The reorganization maintains continuity of Washington policy decisions while aligning with the 2024 IRC, making the code easier to navigate for design professionals and enforcement staff.
- This improved usability can reduce the risk of misapplying or overlooking state-specific requirements during design and review.

C. Other Benefits

- Ensuring that state amendments are properly relocated supports transparency and clarity for the public and industry stakeholders.
- It also helps avoid disputes about which section applies when interpreting the 2024 IRC in Washington.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders who rely on clear light, ventilation, and heating requirements.
- NAICS 236118 – Residential Remodelers: small firms applying these provisions in additions and alterations.
- NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small mechanical contractors providing heating and ventilation systems that must comply with these provisions.
- NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design firms that must locate and apply the correct state-specific IRC provisions.
- NAICS 541350 – Building Inspection Services: small inspection firms that depend on coherent section numbering for efficient enforcement.

B. Compliance burden comparison

- The proposal states there is no economic impact, which implies no increase in small-business compliance burden.

- Clearer organization may marginally reduce time and effort for small firms that would otherwise need to cross-map old section numbers to the 2024 IRC layout.

C. Potential disproportion / mitigation

- No disproportionate negative impact on small businesses is identified.
- Any effect is likely slightly positive, as small firms benefit from a more navigable, internally consistent code.

5. Least Burdensome Alternative

- The amendment uses the least burdensome approach by relocating existing amendments to their new section numbers, rather than altering substantive requirements or adding new procedures.
- This keeps Washington policy intact while minimizing disruption to users transitioning from the 2021 to 2024 IRC.

6. Conclusion / Recommendation

- The proposal is an editorial reorganization required by the model code changes, with no change in technical requirements or documented cost impacts.
- Economic effects are neutral, with potential minor administrative benefits from improved clarity and easier code navigation for both industry and enforcement professionals.

Proposal Identification
Log Number: 24-GP2-045*
Code Section / Title: 2024 IRC P2904 — Fire Sprinkler Systems in One- and Two-Family Dwellings and Townhouses
Proponent: Washington State Building Code Council.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- Under the current Washington-amended IRC, requirements for residential fire sprinklers are split between Section P2904 and Appendix AWU (or equivalent prior appendices), resulting in overlapping, duplicative, and sometimes confusing provisions for one- and two-family dwellings and townhouses.
- This fragmented structure can make it harder for designers, installers, and code officials to determine which provisions govern a given installation and increases the risk of inconsistent enforcement.

B. Summary of baseline with changes

- The proposal streamlines the residential fire sprinkler requirements by consolidating them into Section P2904, removing redundant or conflicting language from the appendix, and organizing the remaining provisions for clearer application.
- It retains Washington's policy decisions regarding when sprinklers are required and how they must be designed and installed, while simplifying the code structure so that users can rely primarily on P2904.

C. Rationale statement

- The stated intent is to simplify and clarify the IRC residential fire sprinkler requirements in Washington by removing redundancies and consolidating the applicable provisions into a single, coherent section.

- This is intended to make the code easier to understand and enforce without changing the underlying sprinkler performance or design criteria already adopted by the state.

2. Economic Cost Analysis
    A. Construction Cost Impact
        - The proposal does not identify a specific per-square-foot or per-dwelling-unit cost change and characterizes the amendment as a reorganization and simplification.
        - Because it does not relax or tighten the fundamental technical requirements for sprinkler systems, construction costs for systems that would have been required under existing rules are expected to remain essentially unchanged; some projects may see reduced soft costs due to less confusion and redesigning.
    B. Implementation / Plan Review / Inspection Costs
        - Consolidating redundant sprinkler provisions into P2904 should reduce plan review and inspection complexity by giving officials a single primary reference section.
        - The proposal does not claim any added plan review or inspection hours and is expected to marginally reduce enforcement time spent reconciling between section and appendix language.
    D. Life-Cycle Costs
        - No life-cycle cost analysis is provided.
        - Because system performance requirements remain consistent, long-term maintenance and replacement costs for sprinkler systems are not expected to change as a result of this editorial consolidation.
    E. Other Costs
        - The amendment does not add new testing, certification, or special inspection programs for residential sprinklers.
        - It also does not create new documentation or reporting obligations beyond those inherent in existing sprinkler installation practice.
3. Economic Benefit Analysis
    A. Direct Cost Savings
        - The proposal does not provide a numerical estimate of savings.
        - However, by eliminating duplicative and overlapping text, it can reduce the likelihood of design revisions or inspection corrections triggered by misreading or misapplying multiple sections, thereby lowering soft costs for design teams and contractors.
    B. Operational Benefits
        - A single, streamlined sprinkler section improves usability for designers, installers, and code officials, supporting more consistent application of the requirements.
        - This can shorten the learning curve for smaller firms and help ensure that sprinkler requirements are applied uniformly across jurisdictions.
    C. Other Benefits
        - Clarifying and consolidating sprinkler provisions supports life-safety by reducing the risk that critical requirements will be missed due to fragmented code language.

- It also aids public understanding of when and how residential sprinklers are expected to be provided in Washington.

4. Small Business Economic Impact
    A. Small business categories affected (NAICS)
        - NAICS 238220 – Plumbing, Heating, and Air-Conditioning Contractors: small firms that install and service residential fire sprinkler systems.
        - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders whose projects may include sprinkler systems under Washington policy.
        - NAICS 236118 – Residential Remodelers: small remodelers who may trigger sprinkler work in additions or substantial alterations.
        - NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design firms that must interpret and apply P2904 sprinkler requirements.
        - NAICS 541350 – Building Inspection Services: small inspection firms assisting jurisdictions in verifying sprinkler compliance.
    B. Compliance burden comparison
        - The proposal is described as a simplification, not as a change in technical requirements, so it is not expected to increase compliance burden for small businesses.
        - By consolidating requirements into one section and removing redundancy, it may slightly reduce the time and effort small firms spend navigating the code and reconciling overlapping provisions.
    C. Potential disproportion / mitigation
        - No disproportionate negative impact on small businesses is identified.
        - Any impact is likely favorable for small contractors and design firms, which benefit from reduced complexity and a clearer path to compliance for residential sprinkler systems.
5. Least Burdensome Alternative
        - The amendment uses an editorial, least-burdensome approach, consolidating existing requirements into P2904 rather than creating new prescriptive criteria or additional enforcement processes.
        - This addresses confusion and redundancy while preserving Washington's current sprinkler policy.
6. Conclusion / Recommendation
        - The proposal simplifies the 2024 IRC residential sprinkler provisions in Washington by consolidating redundant requirements into Section P2904, without changing underlying technical standards or increasing costs.
        - Economic impacts are neutral with potential modest benefits from reduced design and enforcement complexity, particularly for small sprinkler contractors and residential builders who must apply these provisions in practice.

Proposal Identification
Log Number: 24-GP2-046-R1*
Code Section / Title: 2024 IRC R202, R310.3, R314, R315, R319.1, R321.1.2, R333 — Lofts, Mezzanines, Sleeping Lofts
Proponent: Jen Eliuk, City of Bellevue, on behalf of Washington State Building Code Council.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - The 2024 IRC introduces new model provisions for mezzanines and sleeping lofts, but Washington's existing amendments and terminology around "lofts" are based on earlier code cycles, including a separate Section R333.
        - This creates overlapping and potentially conflicting definitions and requirements for loft-like spaces, including egress, guards, smoke and CO alarms, and application of other residential provisions.
    B. Summary of baseline with changes
        - The proposal updates and harmonizes definitions and requirements for lofts, sleeping lofts, and mezzanines across R202, R310.3, R314, R315, R319.1, and R321.1.2, retaining the term "loft" familiar in Washington practice while integrating the 2024 IRC model provisions.
        - It repeals Section R333 as redundant, relocating and updating applicable provisions into the main body of the code so that loft-related requirements are coordinated and consolidated.
    C. Rationale statement
        - The stated purpose is to incorporate the 2024 IRC changes on lofts and mezzanines while keeping Washington's established "loft" terminology and ensuring that all related requirements—definitions, egress, guards, alarms—are consistent and up to date.
        - Removing R333 avoids conflicting or duplicative requirements and places loft provisions where code users expect to find them in the reorganized IRC.
2. Economic Cost Analysis
    A. Construction Cost Impact
        - The proposal does not provide a quantified cost impact per square foot or per dwelling.
        - Because it primarily reorganizes and modernizes provisions rather than significantly changing when lofts are allowed or what structural/life-safety measures they require, the direct construction cost impact is expected to be minimal; any changes are associated with aligning to current model standards for egress, guards, and alarms.
    B. Implementation / Plan Review / Inspection Costs
        - Consolidating loft requirements into the main code sections and eliminating R333 should simplify plan review and inspection by giving clear, unified criteria for these spaces.
        - The proposal does not identify additional review hours or inspections; it is expected to reduce the time spent resolving conflicting loft requirements spread across multiple sections.
    C. Life-Cycle Costs
        - No life-cycle cost analysis is provided.
        - To the extent updated provisions clarify guard, egress, and alarm requirements, long-term safety and usability of loft spaces may improve without materially affecting maintenance costs.
    D. Other Costs

- The amendment does not add new testing or third-party certification requirements specific to lofts.
- Any additional cost would stem from specific safety features required by the harmonized provisions (for example, alarms, guards), which largely reflect existing Washington policy and model code practice.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal does not quantify direct savings.
- However, eliminating conflicting loft provisions and placing all requirements in coordinated sections can reduce redesign and correction costs for projects that include loft or mezzanine spaces.

B. Operational Benefits

- Designers and code officials gain a clearer framework for classifying and regulating lofts, sleeping lofts, and mezzanines, which can shorten review timelines and reduce disputes.
- Builders can more reliably plan loft spaces knowing that Washington's terminology and the 2024 IRC provisions have been reconciled.

C. Other Benefits

- Clarified loft provisions enhance safety for occupants using these spaces as sleeping or habitable areas by ensuring consistent application of egress, guard, and alarm standards.
- Public and industry understanding of how lofts are regulated is improved by removing a separate, potentially outdated R333 section.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders creating dwellings with loft or mezzanine spaces.
- NAICS 236118 – Residential Remodelers: small firms adding lofts or converting existing spaces into sleeping lofts.
- NAICS 238130 – Framing Contractors: small firms framing loft and mezzanine structures.
- NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design firms planning loft layouts and documenting compliance.
- NAICS 541350 – Building Inspection Services: small inspection firms applying the updated loft requirements.

B. Compliance burden comparison

- The proposal is primarily a coordination and cleanup action and is not expected to increase compliance burden for small businesses.
- By resolving conflicting text and centralizing loft requirements, it can reduce the time small firms spend interpreting how Washington-specific "loft" language interacts with model mezzanine provisions.

C. Potential disproportion/mitigation

- No disproportionate negative impact on small businesses is identified.

- Any effect is likely neutral to slightly positive, as small builders and designers benefit from clearer, unified loft requirements and fewer surprises during review or inspection.

5. Least Burdensome Alternative
    - The amendment revises existing sections and deletes R333 rather than adding new, Washington-specific technical requirements, which is the least-burdensome way to harmonize with the 2024 IRC.
    - It accomplishes the goal of clarity and consistency with minimal structural change to the code and without new administrative procedures.
6. Conclusion / Recommendation
    - The proposal updates and consolidates Washington's loft provisions in line with the 2024 IRC while retaining familiar terminology, with no documented increase in construction or enforcement costs.
    - Economic impacts are expected to be neutral, with potential administrative savings from clearer, less conflicting requirements for loft, mezzanine, and sleeping loft spaces.

Proposal Identification
Log Number: 24-GP2-047*
Code Section / Title: 2024 IRC R302.3 — Two-Family Dwelling Separation
Proponent: Washington State Building Code Council.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - The 2024 IRC R302.3 provides general requirements for fire-resistance-rated separation between dwelling units in two-family dwellings, but Washington's existing amendments and practice include additional detail on continuity, openings, and shared spaces.
        - Without a coordinated state amendment, there can be ambiguity regarding how Washington treats vertical/horizontal separation, penetrations, and shared building elements between two dwelling units.

    B. Summary of baseline with changes
        - The proposal amends R302.3 to adopt updated fire-resistance separation requirements for two-family dwellings and to introduce Washington-specific modifications addressing continuity of rated assemblies, treatment of openings, and shared spaces such as stairways or attics.
        - It aligns the separation provisions with Washington's policy decisions while preserving the core structure of the 2024 IRC section.

    C. Rationale statement
        - The stated intent is to provide clear, Washington-specific separation provisions for two-family dwellings that reflect state experience and policy while maintaining compatibility with the 2024 IRC framework.
        - This includes ensuring that separation details adequately address fire spread pathways in common or shared building parts.
2. Economic Cost Analysis
    A. Construction Cost Impact

- The proposal does not include quantified per-square-foot or per-unit costs.
- Because two-family dwellings already require rated separation under the IRC, and the amendment refines but does not introduce the basic separation obligation, net construction cost impacts are expected to be limited to specific details where Washington's modifications differ from the base text; these are not monetized in the proposal.

B. Implementation / Plan Review / Inspection Costs

- Providing a clear, state-specific R302.3 reduces interpretation work for plan reviewers and inspectors by clarifying how to handle shared spaces, penetrations, and continuity in two-family dwellings.
- The proposal does not claim added hours per permit; if anything, clearer text can reduce review time spent on case-by-case determinations.

C. Life-Cycle Costs

- No life-cycle cost analysis is provided.
- More robust or better-defined separation details may have minor impacts on material quantity and maintenance but also provide life-safety and property-protection benefits in the event of a fire; these tradeoffs are not quantified.

D. Other Costs

- The amendment does not add new inspection programs or certifications beyond those normally associated with fire-resistance construction.
- It does not create new reporting or documentation requirements beyond typical plans and inspection records for rated assemblies.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal does not cite direct cost savings.
- However, clear guidance on acceptable separation details can reduce design and construction uncertainty, potentially avoiding redesigns or field corrections where assemblies previously did not meet Washington expectations.

B. Operational Benefits

- Better-defined separation requirements improve consistency across jurisdictions, which helps builders and design professionals anticipate the state's expectations for two-family projects.
- Improved separation can reduce damage and loss of use in the event of a fire in one dwelling unit, although these benefits are not monetized.

C. Other Benefits

- Enhanced clarity and effectiveness of separation provisions contribute to life-safety for occupants and firefighters, and to property protection in attached dwellings.
- State-specific provisions ensure that Washington's particular policy and risk considerations for two-family dwellings are reflected in the code text.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)
    - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders constructing two-family dwellings.
    - NAICS 236118 – Residential Remodelers: small firms modifying existing two-family dwellings where separation needs to be preserved or upgraded.
    - NAICS 238310 – Drywall and Insulation Contractors: small contractors installing fire-resistance-rated wall and ceiling assemblies.
    - NAICS 238130 – Framing Contractors: small firms framing separated assemblies and structural elements.
    - NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design firms responsible for separation detailing and documentation.

B. Compliance burden comparison
    - The proposal does not indicate a new compliance burden beyond existing IRC separation requirements.
    - Clearer, state-specific criteria can reduce time small firms spend clarifying expectations, thus moderating soft costs associated with uncertainty.

C. Potential disproportion/mitigation
    - No disproportionate negative impact on small businesses is identified.
    - Any impact is likely neutral or mildly positive, as small firms benefit from predictable and well-defined separation rules.

5. Least Burdensome Alternative
    - The amendment modifies an existing section rather than creating standalone Washington provisions, which is a relatively low-burden way to incorporate state policy into the model text.
    - It focuses on clarifying key issues like continuity and shared spaces rather than layering on separate procedural requirements.

6. Conclusion / Recommendation
    - The proposal refines R302.3 to better address two-family dwelling separations under Washington policy, without documenting increased construction or enforcement costs.
    - Economic impacts appear neutral, with potential administrative benefits from clearer requirements and practical life-safety gains in the event of a fire.

Proposal Identification
Log Number: 24-GP2-048-R1*
Code Section / Title: 2024 IRC R322.3 — Accessibility Exceptions for Certain Care Facilities
Proponent: Washington State Building Code Council.

1. Description / Rationale

A. Summary of current baseline (without proposal)
    - Under current Washington practice, Adult Family Homes and Family Home Child Care facilities located in dwelling units are subject to IBC Chapter 11 accessibility requirements when

classified as care or I-occupancies, even when constructed under the IRC.

- This can impose accessibility obligations that may be disproportionate to the scale and resources of small, in-home care operations, potentially increasing construction and retrofit costs for such facilities.

B. Summary of baseline with changes

- The proposal amends IRC R322.3 to add exceptions for Adult Family Homes and Family Home Child Care facilities from the requirement to comply with IBC Chapter 11 accessibility provisions, when constructed under the IRC.
- Existing accessibility standards and protections that already apply to such facilities through other laws and codes are maintained; the amendment focuses on removing an additional layer of IBC-based accessibility requirements for these small, IRC-scoped care occupancies.

C. Rationale statement

- The stated intent is to reduce construction costs and regulatory burden on small in-home care facilities by not subjecting them to full IBC Chapter 11 accessibility requirements when built under the IRC, while maintaining existing state standards for such uses.
- The proposal notes that this supports continued availability of small, home-based care options without compromising safety.

2. Economic Cost Analysis

A. Construction Cost Impact

- The amendment is expected to reduce construction or retrofit costs for affected home care facilities by eliminating the need to meet certain IBC Chapter 11 accessibility features that can be costly in small residential settings (for example, some dimensional or system requirements).
- The proposal does not quantify these savings per square foot or per facility but frames the exceptions as a cost-reduction measure that eases the financial burden of providing small-scale care.

B. Implementation / Plan Review / Inspection Costs

- Clarifying that certain facilities under the IRC are exempt from IBC Chapter 11 requirements simplifies plan review and inspection, as officials will not need to apply the more complex IBC accessibility framework to these small projects.
- The proposal does not identify added plan review or inspection hours; instead, it is expected to reduce complexity in enforcement for these specific occupancies.

C. Life-Cycle Costs

- No life-cycle cost analysis is provided.
- Reduced up-front construction requirements can lower life-cycle costs for small care providers by avoiding ongoing maintenance of certain accessibility features that would have been required under the IBC but are not mandated by other applicable standards in these settings.

D. Other Costs

- The amendment does not introduce new reporting or inspection programs.
- It is limited to modifying the scope of IBC Chapter 11 applicability for specific IRC-regulated care facilities.

3. Economic Benefit Analysis
   A. Direct Cost Savings
      - While not numerically estimated, the proposal's main benefit is direct cost savings for Adult Family Homes and Family Home Child Care providers who would otherwise have to meet IBC Chapter 11 accessibility requirements when building under the IRC.
      - Lower construction and retrofit costs can improve the financial viability of these small care operations, potentially increasing supply.
   B. Operational Benefits
      - Reducing up-front regulatory barriers can make it easier for small care providers to open or maintain facilities in existing homes, supporting community care options.
      - Building departments benefit from clearer scoping rules distinguishing when IRC versus IBC accessibility standards apply.
   C. Other Benefits
      - The proposal is intended to support housing and care affordability by removing a layer of cost while maintaining existing life-safety and accessibility protections mandated elsewhere.
      - It helps preserve small, home-like care environments without imposing full commercial accessibility standards where they may not be necessary.
4. Small Business Economic Impact
   A. Small business categories affected (NAICS)
      - NAICS 624120 – Services for the Elderly and Persons with Disabilities: small Adult Family Home providers operating out of dwelling units.
      - NAICS 624410 – Child Day Care Services: small Family Home Child Care providers.
      - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders constructing homes intended for use as these care facilities.
      - NAICS 236118 – Residential Remodelers: small firms retrofitting existing homes for care use.
   B. Compliance burden comparison
      - By exempting these IRC-regulated facilities from IBC Chapter 11, the proposal reduces compliance burden and cost for small care businesses without removing other applicable state standards.
      - This can make it more feasible for small providers to enter or remain in the market.
   C. Potential disproportion/mitigation
      - The amendment is explicitly targeted at alleviating a disproportionate burden on small, in-home care providers who

may lack the resources to meet full commercial accessibility standards.

- It is presented as a mitigation measure that lowers costs while preserving safety and existing accessibility obligations.

5. Least Burdensome Alternative
    - The proposal uses a narrow exception in R322.3 rather than broader changes to accessibility policy, making it a focused, least-burdensome method of addressing cost concerns for specific small facilities.
    - It leaves in place all other applicable state requirements for these care settings.
6. Conclusion / Recommendation
    - The proposal adds targeted exceptions from IBC Chapter 11 accessibility requirements for Adult Family Homes and Family Home Child Care facilities built under the IRC, with the intent of reducing construction cost and regulatory burden.
    - Economic impacts are expected to be positive for small care providers and builders supporting them, while maintaining existing safety and accessibility standards imposed by other laws and codes.

Proposal Identification
Log Number: 24-GP2-049-R1*
Code Section / Title: 2024 IRC R317 — Protection of Wood and Wood-Based Products Against Decay
Proponent: Washington State Building Code Council/state amendment proposal for IRC R317.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - The current 2024 IRC R317 contains general model-code requirements for protection of wood and wood-based products against decay, but Washington's moisture, rainfall, and marine climate conditions create state-specific durability concerns that are more acute than in many jurisdictions.
        - Without a Washington-specific amendment, designers and builders may rely on baseline national text that does not fully reflect the state's wet-climate exposure risks for sill plates, framing members, and related wood components.

    B. Summary of baseline with changes
        - The proposal revises IRC R317 to maintain or refine Washington's state-specific decay-protection requirements so that wood framing in identified exposure conditions is better aligned with local climate and durability needs.
        - The amendment is intended to clarify when preservative-treated or naturally durable materials are required and how the provisions apply in Washington construction practice.

    C. Rationale statement

- The proposal is intended to address Washington's unique environmental conditions and to preserve appropriate moisture-related protection of wood framing in the residential code.
- Its purpose is primarily durability and clarity: helping to ensure the code better reflects the state's long-term decay risks while making the rules more usable for designers, builders, and inspectors.

2. Economic Cost Analysis

   A. Construction Cost Impact

      - The proposal does not provide a quantified per-square-foot cost estimate in the record available here.
      - Any direct first-cost impact would typically come from use of preservative-treated lumber or other qualifying materials in specified locations, but those costs are limited to discrete components rather than broad whole-building cost increases.

   B. Implementation / Plan Review / Inspection Costs

      - The proposal does not identify added plan review hours or inspection visits.
      - Clearer Washington-specific decay-protection rules can reduce interpretation time for inspectors and limit corrections where builders might otherwise apply only the base IRC language.

   C. Life-Cycle Costs

      - No OFM life-cycle analysis is included in the available record.
      - Even if certain components carry a modestly higher upfront material cost, the amendment is aimed at reducing long-term deterioration, repair, and replacement costs associated with moisture-related decay in Washington conditions.

   D. Other Costs

      - The proposal does not identify new reporting, certification, or special inspection programs.
      - Compliance would occur through ordinary material selection and normal residential inspection processes.

3. Economic Benefit Analysis

   A. Direct Cost Savings

      - The proposal does not quantify savings, but its primary economic benefit is avoided future repair and replacement of decayed framing or trim components in wet-exposure locations.
      - Avoiding premature deterioration can reduce owner costs and contractor callbacks, especially in high-moisture areas of the state.

   B. Operational Benefits

      - Builders and inspectors benefit from clearer state-specific rules for where treated or durable wood is required.
      - Better durability provisions also improve predictability for maintenance and reduce the likelihood of concealed moisture damage becoming a larger structural issue.

C. Other Benefits

- The amendment supports building longevity and protects housing stock in Washington's climate.
- It also can reduce waste associated with premature replacement of decayed materials, creating a modest environmental benefit.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders selecting compliant framing and sill materials.
- NAICS 236118 – Residential Remodelers: small remodelers repairing or replacing affected wood components in existing homes.
- NAICS 238130 – Framing Contractors: small framing firms installing treated or protected wood members where required.
- NAICS 444180 – Other Building Material Dealers: small suppliers selling treated lumber and related decay-resistant materials.

B. Compliance burden comparison

- The proposal does not appear to create a major new administrative burden; compliance is mainly material-based.
- Small businesses may see modest material-cost effects in some assemblies, but clearer state guidance can reduce rework and inspection corrections.

C. Potential disproportion / mitigation

- No disproportionate negative impact on small businesses is identified in the available record.
- Any added material cost is moderated by the proposal's durability benefit and by limiting the requirements to conditions with higher decay exposure.

5. Least Burdensome Alternative

- The amendment addresses decay risk through targeted requirements in R317 rather than broader prescriptive moisture-control mandates.
- That makes it a relatively narrow and practical way to address Washington's wet-climate durability concerns.

6. Conclusion / Recommendation

- The proposal is best understood as a Washington-specific durability amendment aimed at aligning wood decay protection with local climate exposure. Economic effects are likely to be neutral to modestly positive over time: limited potential first-cost impacts for some materials, offset by improved durability and lower long-term repair risk.

Proposal Identification

Log Number: 24-GP2-050-R1*
Code Section / Title: 2024 IRC Appendix BB — Washington state residential appendix amendment.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - Appendix BB is an optional appendix framework within the IRC, and without state amendment its use, scope, or Washington-specific content may be unclear or incomplete for local adoption and enforcement.
        - Where appendix language is not clearly integrated into Washington practice, designers, builders, and jurisdictions can face uncertainty about applicability, adoption status, and technical expectations.
    B. Summary of baseline with changes
        - The proposal amends Appendix BB for Washington application, updating or clarifying the appendix language so it fits the state's current residential code structure and policy choices.
        - The proposal appears intended to make Appendix BB usable and internally consistent in Washington rather than leaving it in a partially unadapted model-code form.
    C. Rationale statement
        - The amendment is intended to clarify the appendix's application and improve usability for Washington stakeholders.
        - Its core rationale is code coordination and state-specific implementation rather than creation of an entirely new technical regime.
2. Economic Cost Analysis
    A. Construction Cost Impact
        - The available record does not provide a quantified construction cost figure. Because appendix amendments often clarify optional or specialized provisions rather than impose broad, statewide mandatory requirements, any cost impact is likely to be project-specific and depends on whether and how the appendix is used locally.
    B. Implementation / Plan Review / Inspection Costs
        - Clearer appendix language can reduce uncertainty for jurisdictions that choose to apply or adopt the appendix provisions. The proposal does not identify additional inspection or reporting burdens in the available record.
    C. Life-Cycle Costs
        - No life-cycle cost analysis is available in the record provided here. If the appendix clarification improves the correct application of the provisions, it may reduce downstream correction or retrofit costs resulting from inconsistent interpretation.
    D. Other Costs
        - No new special programs, reporting requirements, or third-party approvals are identified in the available record. The proposal appears primarily organizational and clarifying in nature.
3. Economic Benefit Analysis

A. A. Direct Cost Savings
    - No direct numerical savings are provided. The main likely savings are administrative: reduced confusion, fewer interpretation disputes, and lower rework risk where Appendix BB applies.

B. Operational Benefits
    - Builders, designers, and officials benefit from clearer Washington-specific appendix language and better understanding of how Appendix BB should function in the state code structure. More coherent appendix provisions improve predictability for any jurisdiction or project electing to use them.

C. Other Benefits
    - The proposal strengthens code usability and consistency.
    - It may also improve transparency for local governments deciding whether and how to implement the appendix.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)
    - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small residential builders affected where Appendix BB is used on projects.
    - NAICS 236118 – Residential Remodelers: small firms applying appendix-based provisions in additions or alterations, if adopted locally.
    - NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design firms interpreting Appendix BB requirements.
    - NAICS 541350 – Building Inspection Services: small code consulting and inspection firms helping apply appendix provisions.

B. Compliance burden comparison
    - Based on the available record, the proposal appears more likely to reduce compliance uncertainty than increase burden. Any burden would depend on project use of the appendix, but the amendment's apparent purpose is to make that use clearer and more manageable.

C. Potential disproportion/mitigation
    - No disproportionate negative impact on small businesses is identified in the available record. Smaller firms may benefit the most from added clarity because they often have fewer resources to resolve ambiguous language appendix.

5. Least Burdensome Alternative
    - A targeted appendix amendment is a low-burden way to improve usability without broadly altering main-body residential code requirements. It preserves flexibility while addressing state-specific coordination issues.

6. Conclusion / Recommendation

A. The proposal appears to be a Washington-specific clarification and coordination amendment for IRC Appendix BB. Economic impacts are best characterized as neutral to mildly positive, primarily through reduced ambiguity and improved usability rather than major changes in construction cost.

Proposal Identification
Log Number: 24-GP2-051*
Code Section / Title: 2024 IRC R101.2 — Scope of the International Residential Code in Washington.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - IRC R101.2 establishes the scope of buildings and occupancies regulated under the residential code, and in Washington, that scope interacts with state-specific treatment of care uses, congregate arrangements, and buildings that may otherwise shift into IBC classification. Without a clarifying amendment, code users may be uncertain about which residentially scaled occupancies remain within the IRC and which must instead comply with the IBC.

    B. Summary of baseline with changes
        - The proposal amends R101.2 to clarify Washington's intended scope for IRC applicability and the treatment of specific residential or care-related uses within that scope. The change is intended to preserve continuity with Washington practice and reduce uncertainty about whether certain small-scale residential occupancies are required to be moved into the IBC.

    C. Rationale statement
        - The amendment is intended to clarify scoping and align the 2024 IRC with Washington's policy decisions on residential occupancy classification. Its purpose is to improve consistency, predictability, and code usability for jurisdictions and project applicants.

2. Economic Cost Analysis
    A. Construction Cost Impact
        - The available record does not provide a quantified construction cost estimate. Scope clarifications can have significant indirect economic consequences because shifting a project from IRC to IBC often changes design, accessibility, fire protection, and engineering requirements; this proposal appears intended to avoid unnecessary escalation in those cases where Washington intends IRC use to remain available.

    B. Implementation / Plan Review / Inspection Costs
        - Clearer scope rules can materially reduce plan review disputes over whether a project is under the IRC or IBC. The proposal does not identify added inspection tasks; rather, it is likely to reduce administrative time spent resolving scoping disagreements.

    C. Life-Cycle Costs
        - No formal life-cycle analysis is available in the record provided here. By keeping eligible projects within the IRC as intended, the amendment may avoid unnecessary first cost and maintenance burdens associated with more intensive code regimes, though this is not quantified.

    D. Other Costs

- No new reporting or certification programs are identified. The proposal's main effect is scoping clarity, not procedural expansion.

3. Economic Benefit Analysis
   A. Direct Cost Savings
      - The proposal does not provide a direct savings figure. Its likely economic benefit is the avoidance of unnecessary code-triggered cost escalation, allowing projects to remain appropriately under the IRC rather than shifting to the IBC framework.
   B. Operational Benefits
      - Builders, designers, and jurisdictions benefit from earlier and clearer determination of applicable code path. This reduces redesign risk and shortens permitting timelines for borderline or specialized residential uses.
   C. Other Benefits
      - The amendment supports housing and care-provider project viability, where Washington intends IRC applicability. It also improves consistency in statewide interpretation of residential code scope.
4. Small Business Economic Impact
   A. Small business categories affected (NAICS)
      - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders whose projects depend on whether the IRC remains available.
      - NAICS 236118 – Residential Remodelers: small firms working on conversions or additions with occupancy-scope implications.
      - NAICS 624120 – Services for the Elderly and Persons with Disabilities: small residential care providers affected by scope classification.
      - NAICS 624410 – Child Day Care Services: small home-based care providers whose facility classification may depend on R101.2 interpretation.
      - NAICS 541310 – Architectural Services and NAICS 541330 – Engineering Services: small design firms advising clients on IRC versus IBC applicability.
   B. Compliance burden comparison
      - A scoping clarification generally lowers compliance burden by reducing uncertainty and avoiding unnecessary redesign under the wrong code. This is especially helpful for small projects and small operators who are more sensitive to classification-driven cost increases.
   C. Potential disproportion/mitigation
      - The proposal appears intended in part to mitigate disproportionate impacts on small residential or care-related projects that might otherwise be pushed into more burdensome IBC requirements.

- No separate negative small-business impact is identified in the available record.

5. Least Burdensome Alternative
    - Clarifying scope directly in R101.2 is a focused, low-burden way to address occupancy-path confusion. It avoids layering on separate guidance documents or ad hoc interpretation practices.
6. Conclusion / Recommendation
    - The proposal is a scope clarification aimed at maintaining predictable IRC applicability in Washington for designated residential uses. Economic impacts are likely neutral to positive, especially where the clarification avoids unnecessary movement into more costly IBC compliance pathways.

Proposal Identification
Log Number: 24-GP2-052
Code Section / Title: 2024 IRC R403.1.1 — Minimum Size of Concrete and Masonry Footings.

1. Description / Rationale
    A. Summary of current baseline (without proposal)
        - IRC R403.1.1 governs minimum footing size, and the 2024 model provisions rely on presumptive tables and assumptions that may not fully reflect Washington practice, local soils, frost considerations, or common foundation design conditions.
        - Without clarification or amendment, designers and builders may encounter uncertainty or overly conservative outcomes in applying presumptive footing rules.

    B. Summary of baseline with changes
        - The proposal amends R403.1.1 to clarify or adjust how presumptive footing sizing is applied for Washington residential foundations. The change appears intended to better align footing requirements with Washington's construction practice and related footing table provisions.

    C. Rationale statement
        - The proposal is intended to improve clarity and practical application of residential footing requirements in Washington.
        - It likely addresses mismatch between the 2024 IRC presumptive footing framework and Washington-specific implementation needs.
2. Economic Cost Analysis
    A. Construction Cost Impact
        - No quantified cost figure is provided in the available record. Depending on the direction of the amendment, clearer footing sizing can either avoid overbuilding or prevent undersized footings that later require correction; in either case, the proposal is likely aimed at more appropriate and predictable construction cost outcomes.

    B. Implementation / Plan Review / Inspection Costs

- Clearer footing rules can streamline plan review and field inspection by giving building officials a more direct basis for checking footing dimensions. The proposal does not identify added review or inspection hours in the available record.

C. Life-Cycle Costs

- No life-cycle analysis is available. Properly sized footings help reduce settlement-related repair risks and improve long-term foundation performance, which can have positive lifecycle implications even when upfront costs change modestly.

D. Other Costs

- No special reporting or third-party certification requirements are identified. Compliance would occur through standard plan and inspection processes.

3. Economic Benefit Analysis

A. Direct Cost Savings

- The proposal does not quantify savings. If it reduces unnecessary conservatism in footing sizing, it may lower concrete volume and excavation cost; if it improves clarity, it may also reduce field corrections and redesign.

B. Operational Benefits

- Builders gain more predictable footing requirements at the design stage. Inspectors benefit from clearer presumptive criteria, improving consistency across projects and jurisdictions.

C. Other Benefits

- Better footing clarity supports structural reliability and may reduce disputes over foundation sizing in permit review. It also helps keep simple residential projects within presumptive code paths when appropriate.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)

- NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders constructing homes on standard residential foundations.
- NAICS 236118 – Residential Remodelers: small firms working on additions requiring new footings.
- NAICS 238110 – Poured Concrete Foundation and Structure Contractors: small foundation contractors placing residential footings.
- NAICS 238910 – Site Preparation Contractors: small excavation firms preparing footing trenches.
- NAICS 541330 – Engineering Services: small firms consulted when presumptive footing provisions are unclear.

B. Compliance burden comparison

- The proposal appears intended to reduce uncertainty rather than add burden. Small builders and foundation contractors may benefit from less guesswork and fewer correction notices tied to footing dimensions.

C. Potential disproportion / mitigation

- No disproportionate negative impact on small businesses is identified in the available record. If the amendment reduces unnecessary conservatism, smaller contractors may benefit disproportionately because material and excavation efficiencies matter more on tight margins.

5. Least Burdensome Alternative
    - Adjusting R403.1.1 is a direct and narrow way to improve footing practice without requiring a broad engineered design for routine homes. It preserves the presumptive residential footing path while making it more usable in Washington.
6. Conclusion / Recommendation
    - The proposal appears to refine Washington application of IRC footing sizing in R403.1.1. Economic impacts are best described as neutral to slightly positive, with likely benefits in clarity, reduced correction risk, and potentially more efficient footing construction.

Proposal Identification
Log Number: 24-GP2-053
Code Section / Title: 2024 IRC Table F403.1.1 / R403.1.1 — Footing Dimensions and Related Foundation Prescriptive Criteria.

1. Description / Rationale

A. Summary of current baseline (without proposal)

- The 2024 IRC footing table framework provides presumptive dimensions for concrete and masonry footings, but state application can create confusion if table assumptions do not fully align with local construction practice or with other Washington-specific foundation provisions. Where presumptive footing tables are unclear or mismatched, small residential projects may be pushed toward unnecessary engineering or inconsistent field interpretation.

B. Summary of baseline with changes

- The proposal amends the footing table and/or its related application language to clarify acceptable footing dimensions and use conditions in Washington residential construction. It appears intended to coordinate the table with Washington Foundation practice and improve the usability of the presumptive path.

C. Rationale statement

- The proposal's rationale is to make footing-dimensional requirements clearer and more practical for Washington users of the IRC. It also supports consistent plan review and field application of the footing table provisions.

2. Economic Cost Analysis

A. Construction Cost Impact

- No specific per-square-foot or per-foundation cost estimate is provided in the available record. Better-tailored footing tables can affect concrete, excavation, and reinforcing quantities, but the main economic effect here appears to be ensuring that footing

dimensions are neither unnecessarily conservative nor inadequately small for presumptive residential work.

B. Implementation / Plan Review / Inspection Costs
    - Clearer footing tables can reduce back-and-forth during plan review and make inspections more straightforward. The proposal does not identify new inspections or added enforcement time.

C. Life-Cycle Costs
    - No formal life-cycle analysis is available. More accurate footing dimensions can reduce both future settlement risk and unnecessary initial material use, contributing to better long-term value even if not monetized in the proposal.

D. Other Costs
    - No new reporting, testing, or certification obligations are identified in the available record. The change operates within ordinary foundation design and inspection practices.

3. Economic Benefit Analysis

A. Direct Cost Savings
    - Direct savings are not quantified. If the table reduces overdesigned footing dimensions, it may lower concrete and excavation costs; if it improves clarity, it may also reduce redesign and failed inspection costs.

B. Operational Benefits
    - Designers and builders gain a more reliable presumptive footing reference. Jurisdictions benefit from clearer table-based review criteria, which promotes more consistent enforcement.

C. Other Benefits
    - The amendment supports better coordination within the foundation chapter and reduces ambiguity in residential foundation work. Keeping projects in the presumptive path when appropriate can improve housing production efficiency.

4. Small Business Economic Impact

A. Small business categories affected (NAICS)
    - NAICS 236115 – New Single-Family Housing Construction (except For-Sale Builders): small builders relying on table-based residential foundation design.
    - NAICS 236118 – Residential Remodelers: small firms placing new footings for additions and alterations.
    - NAICS 238110 – Poured Concrete Foundation and Structure Contractors: small concrete contractors constructing residential footings.
    - NAICS 238910 – Site Preparation Contractors: small excavation firms affected by footing size and trenching dimensions.
    - NAICS 541330 – Engineering Services: small firms consulted where footing-table application is uncertain.

B. Compliance burden comparison

- The amendment appears aimed at reducing interpretive burden rather than increasing it. Small businesses may benefit from clearer table use and fewer costly field or plan-review disputes.

C. Potential disproportion / mitigation

- No disproportionate negative impact on small businesses is identified in the available record. If the proposal improves table clarity or reduces unnecessary conservatism, small contractors may receive outsized benefit because they are more affected by wasted concrete, excavation time, and redesign effort.

5. Least Burdensome Alternative

- Revising the footing table directly is a focused way to improve prescriptive foundation design without forcing routine homes into engineered solutions. It preserves a simple compliance path for residential projects while addressing state-specific application issues.

6. Conclusion / Recommendation

- The proposal appears to refine Washington's use of the IRC footing table so that presumptive foundation design is clearer and more practical. Economic impacts are likely neutral to modestly positive through better clarity, fewer corrections, and possible material efficiency in residential footing construction

Proposal Identification
Multiplex Housing: HB 2071*
Code Section / Title: IRC Appendix WD: Multiplex Buildings
Proponent/Author: SBCC Single Exit/Multiplex Housing TAG

1. **Description & Rationale**
   a. **Summary of Current Baseline (without proposal):**
      - The 2021 Washington Residential Code is limited in its application to one- and two-family dwellings, adult family homes, and townhouses not more than 3 stories above grade plane. Town houses are contained units' side by side and two-family dwellings may be stacked.

   b. **Summary of Baseline with Changes:**
      - The new appendix allows more than two units to be placed vertically and offers an option that would otherwise require design from the Washington Building Code.

   c. **Rationale Statement:**
      - The SBCC was directed by the 2024 Washington Legislature and HB 2071 to create modifications to the 2024 Washington Residential Code that would allow a building with up to six dwelling units and up to three stories to be constructed in accordance with the 2024 Washington Residential Code.

2. **Economic Cost Analysis**
   a. **Construction Cost Impact:**
      - The new appendix allows single-stair configurations, whereas the IBC usually requires two exits for buildings with this density, eliminating the cost of a second stairway.

b. Implementation/Plan Review/Inspection Costs:

- Designing a six-unit multiplex using the new appendix rather than the International Building Code shifts the project from a commercial regulatory framework to a more prescriptive framework. This shift alters plan review and inspection protocols, prioritizing simpler prescriptive requirements over complex engineering and fire-rated assembly documentation.

c. Life-Cycle Costs:

- Designing a multiplex building using the new appendix generally results in lower initial construction costs but higher long-term life cycle costs due to fire safety, accessibility, and utility requirements.

d. Other Costs:

- No new fees or record-keeping burdens.

3. Economic Benefit Analysis

a. Direct Cost Savings:

- For a 6-unit multiplex (~24,000 sq ft), a beneficial cost difference is realized by avoiding the "commercial-level" demands of the IBC. While exact figures depend on location, analysis of code changes shows that shifting from IBC to IRC reduces the overall cost-per-square-foot.

b. Operational Benefits:

- Designing a multiplex building using the new appendix instead of the International Building Code offers operational and construction efficiencies, primarily by treating the building as a series of connected single-family homes rather than a complex commercial apartment building.

c. Other Benefits:

- The new appendix allows for individual, residential-grade MEP systems for each unit. Builders can use standard, residential equipment instead of more expensive commercial equipment.

4. Small Business Economic Impact

a. Small Business Categories Affected:

- NAICS 236116: New Multifamily Housing Construction
- NAICS 541310: Architectural Services
- NAICS 541330: Engineering Services
- NAICS 531110: Lessors of Residential Buildings and Dwellings

b. Compliance Burden Comparison:

- Small businesses would expect to see a positive impact to their compliance burden when comparing construction of a multiplex building in accordance with the International Building Code. Use of the new appendix results in lower design costs, shorter approval times, and decreased construction material expenses.

c. Potential Disproportion/Mitigation:

- Disproportionate effects are positive when considering small businesses.

5. Least Burdensome Alternative

a. This proposal is the least burdensome approach. The new appendix creates a pathway to achieve the goals of legislative direction, while adding consistency and clarity across the state.

6. **Conclusion/Recommendation**
    - This appendix achieves the goals of the 2024 bill HB 2071.

Appendix A: Documentation of Determinations Required under RCW 34.05.328

Describe the general goals and specific objectives of the statute that this rule implements. RCW 34.05.328(1)(a)
The Washington State Building Code Act (RCW 19.27), together with RCW 34.05.328 and RCW 19.85, establishes the following general goals and specific objectives for this rulemaking: 1. **Public Health and Safety**: Protect building occupants and the general public from hazards related to residential construction, fire, structural failure, and environmental health issues 2. **Statewide Uniformity**: Establish consistent building standards across all Washington jurisdictions to ensure predictable compliance requirements 3. **Energy Efficiency**: Promote energy-efficient construction practices that reduce environmental impact and lower operating costs 4. **Economic Efficiency**: Minimize unnecessary regulatory burden on businesses, contractors, property owners, and enforcement agencies while maintaining essential safety and performance standards
Explain why this rulemaking is needed to achieve the goals and objectives of the statute. RCW 34.05.328(1)(b)
Safety and Structural Integrity (RCW 19.27.020(1) Without these amendments, the Washington code would remain misaligned with current engineering standards and risk assessment methodologies. **Statewide Uniformity** (RCW 19.27.031(1) These amendments eliminate inconsistencies between: • National IRC model code and Washington State requirements • Different interpretations across jurisdictions • Building and fire code jurisdictional conflicts (24-GP2-027) Uniform standards reduce compliance costs for contractors working across multiple jurisdictions. **Energy Efficiency and Environmental Goals** (RCW 19.27.031(3)) Several proposals support state energy and environmental policies: • Energy storage systems (24-GP2-023) • Solar energy systems (24-GP2-038) • Electric vehicle charging infrastructure (24-GP2-049) • Ventilation and indoor air quality (24-GP2-041, 24-GP2-044) • Heating and cooling equipment refrigerants (24-GP2-040) **Economic Efficiency** (RCW 19.27.031(4)) The amendments reduce regulatory burden through: • Clarification of ambiguous provisions (reducing interpretation disputes)

- Alignment with national standards (reducing state-specific compliance costs)
- Elimination of unnecessary restrictions (expanding compliant product options)

Describe alternatives to rulemaking and the consequences of not adopting this rule. RCW 34.05.328(1)(b)

Alternative 1: No Rulemaking (Status Quo)

- **Consequence:** Washington would remain 3-6 years behind national residential building standards, hindering the adoption of modern construction practices and creating market barriers for innovative building products and technologies
- **Impact on Small Business:** Increased confusion, variable interpretation, and inability to predict compliance costs across jurisdictions

Alternative 2: Guidance Documents Instead of Formal Rulemaking

- **Consequence:** Guidance documents lack the legal force necessary to ensure uniform statewide application. This would perpetuate inconsistent enforcement and compliance disputes
- **Impact on Small Business:** Continued uncertainty and potential for jurisdiction-specific interpretations that increase costs

Alternative 3: Delayed Adoption (Wait for 2027 IRC)

- **Consequence:** Washington would continue with outdated provisions for an additional 3 years, delaying critical safety improvements and maintaining code conflicts
- **Impact on Small Business:** Continued use of outdated requirements that conflict with current products and practices

A preliminary cost-benefit analysis was made available. RCW 34.05.328(1)(c)

Yes. The preliminary cost-benefit analysis was made available through this document, and Sections 1 through 6 provide the comprehensive cost-benefit analysis supporting these determinations.

Do the probable benefits of this rulemaking outweigh the probable costs, considering both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented? RCW 34.05.328(1)(d)

See sections 2-6

Is this rule the least burdensome alternative for those required to comply? RCW 34.05.328 (1)(e)

Yes. Each individual proposal analysis (see section 6) includes a "Least Burdensome Alternative" determination. Rulemaking as a whole represents the least burdensome approach for the following reasons:

The proposed rulemaking is the least burdensome alternative that achieves the statutory goals of safety, uniformity, energy efficiency, and economic efficiency.

Does this rule require those to whom it applies to take an action that violates the requirements of another federal or state law?

Yes ☐

No ☒

Explain how that determination was made. RCW 34.05.328(1)(f)

No. This rulemaking does not conflict with or violate any federal or state law. On the contrary, it harmonizes Washington State mechanical code requirements with multiple federal and state legal frameworks.

Does this rule impose more stringent performance requirements on private entities than on public entities? RCW 34.05.328 (1)(g)

Yes. ☐ **Provide a citation. Explain.**

No ☒

No. The 2024 IFC amendments apply uniformly based on occupancy, use, condition, or hazard classification rather than on whether the owner or operator is a public or private entity. Public agencies and private parties are subject to the same statewide minimum fire safety requirements where the same regulated conditions exist.

Do other federal, state, or local agencies have the authority to regulate this subject? List below.

Yes. ☐

No ☒

Is this rule different from any federal regulation or statute on the same activity or subject?

Yes ☐

No ☒

If yes, check all that apply. The difference is justified because:

A state statute explicitly allows SBCC to differ from federal standards. (If checked, provide the citation.)

Yes ☐

No ☒

There is substantial evidence that the difference is necessary to achieve the statute's general goals and objectives. (If checked, explain.)

RCW 34.05.328 (1)(h)

The 2024 IRC amendments differ from the unamended model code only where Washington-specific conditions or policies make it necessary, for example, updated seismic/wind/snow data, carbon monoxide and ventilation provisions, and treatment of small in-home care uses. The proposal forms and economic impact statements show that these changes are needed to meet the Legislature's life-safety, structural performance, and reasonable housing and care objectives in Washington, and that there is substantial evidence that the remaining differences are necessary to achieve the statute's goals.

Explain how SBCC ensures that the rule is coordinated with other federal, state, and local agencies, laws, and rules. RCW 34.05.328 (1)(i)

The Washington State Building Code Council coordinates rulemaking through:

1. **Inter-Agency Coordination**
    - **Follows the Administrative Procedure Act 34.05 RCW**
    - **Regular consultation with Department of Ecology (refrigerants, energy)**

- **Coordination with Department of Health (adult family homes, indoor air quality)**
- **Collaboration with State Fire Marshal's Office (fire safety provisions)**

2. **Technical Advisory Group (TAG) Process**
   - **Multi-stakeholder groups including contractors, engineers, code officials, and agency representatives**
   - **Review and comment on all proposals for conflicts and coordination issues**
3. **Public Comment Process**
   - **Notice to affected federal, state, and local agencies**
   - **Public hearings and written comment periods**
   - **Response to agency comments and concerns**
4. **Model Code Alignment**
   - **Base amendments on nationally recognized IRC model code**
   - **Coordinate with the International Code Council development process**
   - **Minimize state-specific deviations unless justified by local conditions**