2024 International Fire Code (IFC)Washington State Amendments

Cost-Benefit Analysis and Small Business Economic Impact Report

April 2026

EXECUTIVE SUMMARY

The 2024 Washington State International Fire Code (IFC) code change cycle addresses fire safety, emergency response preparedness, energy storage system (ESS) hazard management, life safety in assembly and residential occupancies, and coordination with related codes and referenced standards. The amendments adopted in this cycle reflect Washington's commitment to maintaining current fire protection practices that safeguard occupants, emergency responders, and the built environment, while ensuring that regulatory requirements remain economically feasible for the industries and communities they govern. Key substantive changes include updated requirements for bulk tire storage sprinkler systems, revised thresholds for crowd manager designations at assembly events, clarifications to lithium-ion battery and electrical energy storage system provisions, improved coordination of emergency responder communication coverage requirements, expanded electric vehicle charging station provisions, and updated exit sign accessibility standards. The remaining proposals consist of editorial corrections, reference updates, organizational changes to align the chapter structure with the model IFC, and language clarifications that eliminate ambiguity in existing requirements without altering substantive obligations.

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Legend for Proposals	
Positive Net-Cost	*
Neutral	Blank
Negative	**

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Overview

This document presents the cost-benefit analysis for the 2024 Washington State International Fire Code (IFC) amendments, prepared in support of the rulemaking process conducted by the Washington State Building Code Council (SBCC). The IFC establishes minimum fire safety requirements for the construction, alteration, and operation of buildings and facilities throughout Washington State, and is adopted by reference under Washington Administrative Code (WAC) Chapter 51-54A. The purpose of this analysis is to assess the economic impacts of each proposed IFC amendment on regulated parties — with particular attention to small businesses — and to document the SBCC's compliance with applicable statutory requirements under RCW 19.85 (the Regulatory Fairness Act) and RCW 34.05.328. The analysis evaluates each proposal considered in the 2024 IFC code change cycle, identifies those with substantive economic impacts, and presents cumulative findings on net costs, cost savings, and qualitative public benefits associated with the adopted amendments.

The methodology applied in this document follows the framework established for prior Washington State code adoption cost-benefit analyses and is adapted to the subject matter of the IFC. When quantitative cost data were submitted by proponents or derived from industry references, those figures are reported. Where no quantitative data were submitted, and no reliable cost basis could be independently established, the analysis characterizes the economic impact qualitatively and explains the basis for asserting that there is no net economic impact.

General Small-Business Engagement Statement

The SBCC conducted an open and transparent rulemaking process for the 2024 IFC adoption cycle consistent with the requirements of Washington's Administrative Procedure Act (RCW 34.05) and the Regulatory Fairness Act (RCW 19.85). Technical Advisory Group (TAG) meetings were held at regular intervals throughout the proposal review period and were open to all interested parties. Public listening sessions were convened to allow stakeholders, including small-business owners, contractors, fire officials, engineers, and building officials, to present testimony regarding proposed amendments. Stakeholders were notified of pending proposals through SBCC email distribution lists, direct outreach to relevant industry associations (including fire protection engineering associations, contractor trade associations, event industry organizations, and storage facility operators), and public posting of meeting agendas and proposal documents. Written comments were accepted from any member of the public throughout the comment period. The SBCC considered all submitted comments in its deliberations and specifically solicited information from small businesses on the quantitative economic impacts of the proposed amendments.

General Jobs-Impact Statement

During this rulemaking, the SBCC did not receive quantitative evidence demonstrating that the adopted IFC 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

The SBCC was unable to calculate a precise per-employee, per-hour, or per-dollar-of-sales cost for the 2024 IFC amendments applicable to small businesses as a class. This determination reflects the highly variable nature of fire code compliance obligations across occupancy types, business sizes, geographic locations, and specific activities subject to IFC requirements. Proposal submissions for the 2024 cycle did not include uniformly formatted quantitative cost data that would support such a calculation across the full amendment package. For the proposals that are substantively cost-neutral, which constitute no incremental compliance cost, any cost assessment would represent a measure of pre-existing compliance costs under unchanged requirements. For Proposal 24-GP1-039-R1, quantified installation and infrastructure costs are reported on a per-square-foot basis for new tire storage facilities meeting the size threshold, but these costs apply only to a narrow class of commercial operators and cannot be generalized to small businesses as a whole. The SBCC therefore evaluates the relative cost burden of IFC amendments qualitatively where quantitative data are insufficient, consistent with the approach used in prior Washington State code adoption analyses.

Key Findings

- 32 of 36 proposals (89%) have no substantive economic impact
- 24-GP1-039-R1: the one quantified cost increase (bulk tire storage sprinklers, $2.16–$2.93/sf)
- 24-GP1-013 and 24-GP1-091-R5 — the two cost-reducing proposals (crowd manager threshold + NFPA 13D credit)
- 24-GP1-082-R1 — de minimis cost ($60 CO detector)
- No job creation/loss data submitted
- Overall net economic impact: minimally positive

SMALL BUSINESS IMPACT SUMMARY

Affected NAICS Sectors

NAICS CODE	Industry	Proposals Affected
238220	Fire Sprinkler Contractors	7 of 36
238210	Electrical Contractors	12 of 36
541330	Engineering Services	23 of 36
541350	Building Inspection Services	21 of 36
493110	General Warehousing and Storage	1 of 36
441320	Tire Dealers	1 of 36
711310 / 711320	Event Promoters	2 of 36
722515	Event Venues / Food Service	2 of 36
722330 /722515	Mobile Food Services	2 of 36
221122 / 236220	Electric Power / Commercial Construction	4 of 36
236115	New Single-Family Housing Construction	3 of 36
236116	New Multifamily Housing Construction	2 of 36
236220	Commercial and Institutional Building Construction	3 of 36
237310	Highway, Street, and Bridge Construction	1 of 36
221122	Electric Power Distribution	6 of 36
447190	Other Gasoline Stations	2 of 36
423860 / 811310	Fire Equipment Maintenance	2 of 36
312140 / 424810	Distilleries / Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	1 of 36

CUMULATIVE ECONOMIC ANALYSIS

Overall Construction Cost Impact:

- 3 proposals to reduce construction cost.
- 33 proposals produce no net construction cost change.
- 1 proposal adds quantified construction cost for tire storage sprinklers.
- Overall, construction cost impact is minimal and slightly cost-reducing.

Overall Economic Benefits:

- Net economic effect of the IFC package is minimally positive.
- Most changes improve clarity and alignment without new burdens.
- A few targeted amendments to lower capital and life-cycle costs.
- Safety and operational benefits are achieved with narrowly focused new costs.

Small Business Impact Summary

Impact Category	Number of Proposals
Positive/cost-reducing impact	3
Neutral impact (no economic change)	33
Negative/cost-increasing impact	1

Proposal Identification
Log Number: 24-GP1-001
Code Section / Title: IFC 202 - General Definitions, Battery Types
Proponent/Author: Ken Brouillette, Code Development Coordinator, City of Seattle

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The existing IFC contains battery-related definitions that are outdated relative to current scientific terminology and do not reflect the full range of battery technologies now addressed in the IFC and NFPA 855. The definition of "stationary storage battery" is currently included but does not align with updated code provisions. Definitions for many modern battery chemistries (e.g., lithium-sulfur, iron-air, zinc-bromide, zinc-air, nickel-zinc, sodium-nickel-chloride, hybrid supercapacitor, EDLC, and others) are absent.

    B. Summary of Baseline with Changes:
        - The proposal updates existing battery definitions and adds new ones to correlate with current IFC provisions and NFPA 855 requirements. Specifically, it introduces or revises definitions for: flow battery, lead-acid battery, lithium-sulfur battery, lithium-ion battery, nickel-cadmium (Ni-Cd) battery, electrochemical double-layer capacitor (EDLC), hybrid supercapacitor, iron-air battery, nickel-iron (Ni-Fe) battery, nickel-hydrogen (Ni-H2) battery, nickel-zinc (Ni-Zn) battery, sodium-nickel-chloride (NaNiCl) battery, zinc-air battery, and zinc-bromide battery. The definition of "stationary storage battery" is deleted as it is superseded by the more precise chemistry-specific definitions.

    C. Rationale Statement:
        - As stated by the proponent, the existing definitions have become misaligned with current scientific descriptions and with the terminology used in the current

model IFC and NFPA 855. Editorial updating definitions to reflect modern battery technology nomenclature is necessary for internal code consistency and for accurate application by designers, engineers, and code officials. The proponent explicitly characterized this as an editorial update with no new technical requirements.

2. 2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. The proposal is editorial in nature; it updates definitions to reflect current scientific and code terminology. No new technical requirements, no new equipment mandates, and no additional compliance pathways are created. Accordingly, no increase in construction costs is anticipated.
    B. Implementation/Plan Review/Inspection Costs:
        - Because no new substantive requirements are introduced, plan review and inspection workloads are not expected to increase. Code officials and engineers will benefit from clearer, more precise definitions, which may marginally reduce ambiguity-related review time. No cost increase is projected.
    C. Life-Cycle Costs:
        - No life-cycle cost impacts are anticipated. The proposal does not mandate new equipment, systems, or maintenance obligations beyond what is already required.
    D. Other Costs:
        - No other costs are identified. Training costs for code officials and design professionals to become familiar with updated terminology are expected to be negligible, as the definitions align with terminology already in use in current editions of the IFC and NFPA 855.

3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Clarified definitions reduce the potential for misinterpretation of battery type classification, which can reduce disputes during plan review and permitting. While not quantified, reduced ambiguity supports more efficient code administration.
    B. Operational Benefits:
        - Accurate battery type definitions improve the ability of AHJs, engineers, and system installers to correctly identify applicable code sections for a given battery chemistry. This supports correct and efficient design and compliance verification.
    C. Other Benefits:
        - Alignment with NFPA 855 and current IFC terminology supports consistency across jurisdictions and reduces the potential for conflicting interpretations when projects cross jurisdictional lines or reference multiple standards.

4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):

- NAICS 238210: Electrical Contractors and Other Wiring Installation Contractors — small electrical contractors who design, install, or inspect battery energy storage systems will benefit from more precise definitions.
- NAICS 541330: Engineering Services — small engineering firms preparing permit applications for battery storage systems will encounter clearer definitional guidance.
- NAICS 221122: Electric Power Distribution (ESS owners/operators) — businesses operating stationary battery energy storage systems will be subject to more precisely defined code requirements, reducing uncertainty.

B. Compliance Burden Comparison:
- The proposal does not impose any new compliance obligations on small businesses. Businesses of all sizes will encounter the same definitional clarity without additional cost. There is no differential compliance burden between large and small entities.

C. Potential Disproportion/Mitigation:
- No disproportionate impact on small businesses is identified. Because the change is purely editorial and clarifying, no mitigation measures are necessary.

5. Least Burdensome Alternative
- The proposal represents the least burdensome approach to addressing outdated battery definitions. No new technical requirements are imposed; only terminology is updated. An alternative of leaving outdated definitions in place would perpetuate ambiguity and potential misapplication of code provisions — an outcome that could impose greater indirect costs on regulated parties than the proposed clarification.

6. Conclusion/Recommendation
- The proponent credibly asserts no economic impact. This proposal is an editorial update that aligns Washington State IFC battery definitions with current IFC and NFPA 855 terminology. It imposes no new compliance costs on any regulated party, and it provides modest qualitative benefits through improved definitional clarity. Adoption is recommended as a low-impact, code-quality improvement.

Proposal Identification
Log Number: 24-GP1-008-R1
Code Section / Title: IFC 104.2.3 — Alternative Materials, Design, and Methods
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale

A. Summary of Current Baseline (without proposal):
- The current IFC 104.2.3, as adopted in Washington State, contains a reference to the ICC Performance Code. The ICC Performance Code has not been adopted in Washington State and therefore has no legal force in WA jurisdiction.

B. Summary of Baseline with Changes:
- The proposal removes the reference to the ICC Performance Code from the alternative materials, design, and methods provision. The substantive authority

to approve alternative materials, designs, and methods remains intact; only the inapplicable cross-reference is deleted.

C. Rationale Statement:
    - The proponent identified that referencing a code not in effect in Washington State creates confusion and potential misapplication. Removing an inapplicable reference reduces interpretive uncertainty without altering the substantive scope of the alternative materials provision.

2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. Deleting a reference to a non-adopted code does not change any technical requirement, approval standard, or compliance pathway. Construction costs are unaffected.
    B. Implementation/Plan Review/Inspection Costs:
        - Removing a misleading reference to a non-adopted code may marginally reduce confusion during plan review, as AHJs and applicants will no longer encounter a reference to an inapplicable standard. No cost increase is anticipated.
    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified. The proposal has no bearing on system design, materials selection, or maintenance obligations.
    D. Other Costs:
        - No other costs are identified. The change is a straightforward deletion of an inapplicable reference.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Eliminating the reference to a non-adopted code removes a potential source of confusion for designers, owners, and AHJs who might otherwise research or attempt to apply a code that has no legal effect in Washington. This produces a minor but real administrative efficiency benefit.
    B. Operational Benefits:
        - Cleaner, accurate code text improves the reliability of code interpretation and reduces the risk of erroneous reliance on a non-adopted standard in alternative materials applications.
    C. Other Benefits:
        - Consistency with the actual regulatory environment in Washington State is improved. This supports public trust in the accuracy of the adopted code.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 541330: Engineering Services — small engineering firms that draft alternative materials/methods requests will encounter cleaner, less ambiguous code text.
        - NAICS 541350: Building Inspection Services — small inspection and plan review firms will benefit from removal of a reference to an inapplicable standard.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small and large businesses are equally unaffected in terms of compliance cost.
    C. Potential Disproportion/Mitigation:

- No disproportionate impact on small businesses is identified. No mitigation is required.

5. Least Burdensome Alternative
    - Deleting an inapplicable cross-reference is the most straightforward and least burdensome approach to resolving this error. No technical requirements are altered, and no regulated party incurs any additional cost. The status quo (retaining the inapplicable reference) is more burdensome in the aggregate because it perpetuates interpretive confusion.
6. Conclusion/Recommendation
    - The proponent credibly asserts no economic impact. This is a targeted correction of a code cross-reference error that removes a reference to an unadopted standard. It imposes no compliance costs and provides minor administrative clarity benefits. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-009-R1
Code Section / Title: IFC 909.20.5.4 (New) Separate Systems for Stairway/Ramp Shaft Fans
Proponent/Author: Dave Kokot, P.E., Spokane Fire Department

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current IFC smoke control provisions for stairway and ramp pressurization systems do not explicitly require a separate fan system for each shaft. This creates an ambiguity as to whether a single fan system may serve multiple shafts in a pressurization design.

    B. Summary of Baseline with Changes:
        - A new 909.20.5.4 is added, requiring that each stairway or ramp shaft in a smoke control pressurization system be served by its own dedicated fan system. This codifies what the proponent characterizes as the assumed design intent and the observed standard practice in the field.

    C. Rationale Statement:
        - The proponent noted that in practice, fan systems for stairway/ramp pressurization have consistently been designed on a one-fan-per-shaft basis. The absence of explicit code language creates an omission that could allow non-standard designs that deviate from the intended performance of the smoke control system. Adding this requirement corrects an apparent omission and codifies current best practice, supporting life safety objectives.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact, observing that current field practice already implements one fan system per shaft. To the extent that all compliant existing designs already meet this standard, no additional construction cost is imposed on conforming projects. For any project that was not already providing separate fan systems per shaft (a deviation from observed practice), the proposal would impose an incremental cost — but the proponent represents that such projects are not the norm. No dollar figures were provided.

    B. Implementation/Plan Review/Inspection Costs:

- The added explicit code language may simplify plan review by eliminating ambiguity about acceptable fan configurations. AHJs will have a clear standard against which to evaluate submittals. No cost increase for enforcement is anticipated; minor efficiency gains in plan review are possible.

C. Life-Cycle Costs:
- Dedicated fan systems per shaft may have marginally different maintenance profiles than shared systems, but as the proponent indicates this represents existing practice, no incremental life-cycle cost change is anticipated.

D. Other Costs:
- No other costs are identified.

3. Economic Benefit Analysis

A. Direct Cost Savings:
- Explicit code language reduces the possibility of costly design revisions or enforcement disputes arising from ambiguous provisions. Designers who proceed on the basis of clear requirements avoid rework.

B. Operational Benefits:
- Smoke control systems with dedicated fan systems per shaft are designed to maintain pressurization integrity independently for each egress path. This enhances the reliability of the life safety system during fire events.

C. Other Benefits:
- Codifying current best practice reduces jurisdictional inconsistency in how smoke control systems are reviewed and approved across Washington State.

4. Small Business Economic Impact

A. Small Business Categories Affected (with NAICS codes):
- NAICS 238220: Plumbing, Heating, and Air-Conditioning Contractors — small mechanical contractors who design and install smoke control systems will have clearer design requirements.
- NAICS 541330: Engineering Services — small engineering firms designing smoke control systems benefit from explicit code language.
- NAICS 238210: Electrical Contractors — fan systems require electrical installation; small electrical contractors benefit from clear system scope definitions.

B. Compliance Burden Comparison:
- Because the proposal codifies existing practice, small businesses already operating in conformance with best practice incur no additional burden. Any business that was not already providing dedicated fan systems per shaft would face an incremental compliance cost, but the proponent asserts this reflects a deviation from standard practice rather than a norm.

C. Potential Disproportion/Mitigation:
- No disproportionate impact on small businesses is identified. The requirement applies equally regardless of firm size.

5. Least Burdensome Alternative
- Codifying the existing standard practice (one fan per shaft) is the least burdensome approach to eliminating ambiguity. The alternative — issuing interpretive guidance rather than code language — would not have the same universal application and would perpetuate inconsistency. The proposal imposes no new technical burden on parties already following standard practice.

6. Conclusion/Recommendation

- The proponent credibly asserts no economic impact on parties already following standard industry practice. This proposal corrects a code omission by explicitly requiring what the proponent observes is already the norm in smoke control system design. It supports life safety objectives without imposing incremental costs on conforming projects. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-010-R1
Code Section / Title: IFC Chapter 80 — Referenced Standards
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale
   A. Summary of Current Baseline (without proposal):
      - Chapter 80 of the Washington State adopted IFC contains references to specific editions of NFPA and UL standards. Several of these references reflect older edition years or contain incorrect cross-reference section numbers (e.g., UL 2272/2849 cross-referencing 323.2 instead of 322.3).

   B. Summary of Baseline with Changes:
      - The proposal updates the edition years for the following standards: NFPA 13 (from 1922 edition reference to current), NFPA 33 (from 1821 edition reference to current), NFPA 96 (to 2021 edition), NFPA 130 (to 2023 edition), NFPA 855 (to 2023 edition), UL 142A (to 2018 edition), UL 2272 (to 2016 edition), and UL 2849 (to 2020 edition). It also corrects the internal cross-reference for UL 2272 and UL 2849 from 323.2 to 322.3.

   C. Rationale Statement:
      - The proponent characterizes this as an update to the adopted versions of standards that are already amended by the state. Referencing outdated standard editions or incorrect section numbers creates ambiguity about which edition's technical requirements apply and can create compliance uncertainty. The update brings the Chapter 80 table into alignment with the current state of the standards referenced elsewhere in the adopted code.

2. Economic Cost Analysis
   A. Construction Cost Impact:
      - The proponent indicated NO economic impact. Updating version references in Chapter 80 brings the table into alignment with standards already referenced in the body of the code. Any technical differences between the old and new editions of the referenced standards would have been addressed through other code change proposals; this proposal addresses only the administrative citation update. No new construction requirements result directly from this proposal.

   B. Implementation/Plan Review/Inspection Costs:
      - Correcting edition references and cross-reference section numbers reduces ambiguity for AHJs and plan reviewers, who will have clear guidance on which edition of each standard applies. This is expected to reduce plan review disputes rather than increase costs.

   C. Life-Cycle Costs:
      - No direct life-cycle cost impacts are anticipated from edition reference updates.

   D. Other Costs:
      - Design professionals and contractors may need to acquire current editions of updated standards if they do not already possess them. However, current-

edition standards are typically already in use in professional practice, making this a negligible cost.

3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Correcting cross-reference errors (UL 2272/2849: 323.2 → 322.3) eliminates a source of potential compliance errors that could require design revisions. Accurate citations reduce rework and correction costs.
    B. Operational Benefits:
        - Code officials, engineers, and contractors have accurate references to the applicable edition of each standard, supporting consistent application and reducing jurisdictional disputes.
    C. Other Benefits:
        - Alignment with current editions of NFPA and UL standards ensures that the referenced technical requirements reflect the current state of knowledge in fire protection engineering.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 541330: Engineering Services — small engineering firms rely on Chapter 80 to identify applicable standard editions; accurate citations reduce research and compliance uncertainty.
        - NAICS 541350: Building Inspection Services — AHJs and private inspection firms benefit from accurate standard edition references during plan review.
        - NAICS 238220: Fire Sprinkler Contractors — NFPA 13 and NFPA 130 edition updates are directly relevant to fire sprinkler system design and installation.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. The update to standard editions corrects administrative errors rather than imposing new technical requirements.
    C. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified. The correction benefits all regulated parties equally.
5. Least Burdensome Alternative
        - Updating standard edition references and correcting cross-reference errors is the only appropriate approach to this administrative correction. Leaving outdated or incorrect references in place perpetuates compliance uncertainty, which imposes greater indirect costs on regulated parties than the proposed correction.
6. Conclusion/Recommendation
        - The proponent credibly asserts no economic impact. This is an administrative update to standard edition references and a correction of internal cross-reference errors. It imposes no new compliance costs and provides modest benefits through improved accuracy and consistency. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-012.pdf
Code Section / Title: IFC 307.4.2 — Recreational Fires (SI Dimension)
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale

A. Summary of Current Baseline (without proposal):
    - IFC 307.4.2 currently states a 25-foot setback requirement for recreational fires, with a cross-reference to WAC 173-425 (the Washington State open burning rule). The section does not include the SI (metric) equivalent dimension that appears in the model IFC.

B. Summary of Baseline with Changes:
    - The proposal adds the SI equivalent measurement (7,620 mm) alongside the existing 25-foot setback requirement, consistent with the model IFC format. The WAC 173-425 cross-reference is retained unchanged. No substantive change to the setback distance or the requirements themselves is made.

C. Rationale Statement:
    - The proponent identifies this as a correction to align the Washington State IFC text with the model code's dual-unit format. Adding the SI dimension corrects an omission relative to the model code and supports users who may need to work in metric units.

2. Economic Cost Analysis

A. Construction Cost Impact:
    - The proponent indicated NO economic impact. Adding a parenthetical SI dimension to an existing setback requirement creates no new obligation and does not alter the setback distance. No construction cost impact results.

B. Implementation/Plan Review/Inspection Costs:
    - No change in enforcement or plan review activity is anticipated. The 25-foot setback requirement and its WAC cross-reference remain unchanged.

C. Life-Cycle Costs:
    - No life-cycle cost impacts are identified.

D. Other Costs:
    - No other costs are identified.

3. Economic Benefit Analysis

A. Direct Cost Savings:
    - No direct cost savings are identified; the change is purely presentational.

B. Operational Benefits:
    - Users working in SI units (metric) will have a directly usable dimension in the code text, reducing the need for manual unit conversion. This is a minor usability improvement.

C. Other Benefits:
    - Alignment with the model IFC dual-unit format supports consistency for users who reference both the Washington State adopted code and the model code.

4. Small Business Economic Impact

A. Small Business Categories Affected (with NAICS codes):
    - NAICS 541350: Building Inspection Services — code officials verifying setback compliance encounter no change in the substantive requirement.

B. Compliance Burden Comparison:
    - No new compliance obligations are created for any business category.

C. Potential Disproportion/Mitigation:
    - No disproportionate impact is identified. No mitigation is required.

5. Least Burdensome Alternative
    - Adding the SI dimension parenthetically is the minimal change necessary to achieve alignment with the model IFC. It imposes no burden on any regulated party.

6. Conclusion/Recommendation
    - The proponent credibly asserts no economic impact. This is a presentational correction adding an SI unit equivalent to an existing requirement. It imposes no compliance costs and provides a minor usability improvement. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-013
Code Section / Title: IFC 403.11.3 — Crowd Managers
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - Washington State currently has an amendment to IFC 403.11.3 that requires crowd managers at events with 500 or more persons. This is a more stringent threshold than the model IFC, which sets the threshold at 1,000 persons.
    B. Summary of Baseline with Changes:
        - The proposal repeals the existing Washington State amendment (500-person threshold) and replaces it with the model IFC language (1,000-person threshold). Events with 500 to 999 persons that currently require crowd managers would no longer be required to provide them under the revised provision.
    C. Rationale Statement:
        - The proponent seeks consistency with the model IFC. Raising the threshold from 500 to 1,000 persons reduces the crowd manager requirement for mid-size events, aligning Washington State with the model code and reducing regulatory burden on event organizers in the 500–999 person range.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - No construction cost impact is associated with this proposal. The requirement pertains to operational staffing (crowd managers), not physical construction.
    B. Implementation/Plan Review/Inspection Costs:
        - AHJs reviewing event permits for venues in the 500–999 person capacity range will no longer be required to verify compliance with the crowd manager requirement for those events. This modestly reduces enforcement workload for mid-size events.
    C. Life-Cycle Costs:
        - No life-cycle capital cost impacts are identified. Crowd manager staffing is an operational recurring cost, not a capital expenditure.
    D. Other Costs:
        - The primary cost impact is a reduction in recurring labor costs for crowd manager staffing at events between 500 and 999 persons. The proponent did not provide specific wage data or dollar figures, so no quantified cost reduction can be stated. The direction of the cost impact is unambiguously a decrease.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Event organizers for events with 500–999 persons will no longer incur the labor cost of employing or contracting crowd managers as mandated by the current WA amendment. The magnitude of savings depends on crowd manager

wages, the number of required crowd managers per event, and the number of affected events statewide — none of which were quantified by the proponent. The direction is clearly cost-reducing for affected event organizers.

B. Operational Benefits:
    - Reduced administrative and planning burden for event organizers hosting mid-size events (500–999 persons), who will no longer need to document crowd manager compliance for those events.

C. Other Benefits:
    - Alignment with the model IFC reduces inconsistency between Washington State requirements and those in neighboring jurisdictions, simplifying compliance for event producers who operate across state lines.

4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 711310: Promoters of Performing Arts, Sports, and Similar Events (with facilities) — event promoters at venues with 500–999 person capacity directly benefit from reduced crowd manager obligations.
        - NAICS 711320: Promoters of Performing Arts, Sports, and Similar Events (without facilities) — traveling promoters at mid-size venues similarly benefit.
        - NAICS 722515: Snack and Nonalcoholic Beverage Bars — food and beverage vendors at outdoor events and festivals in the 500–999 person range who are event organizers may benefit.
    B. Compliance Burden Comparison:
        - The proposal reduces compliance burden. Small event organizers — who often operate with thin margins and limited staff — disproportionately benefit from reduced mandatory staffing obligations relative to larger organizations with dedicated compliance infrastructure.
    C. Potential Disproportion/Mitigation:
        - The proposal reduces rather than increases burden. Any concern about disproportionate impact would relate to life safety, not economic harm to small business. The model IFC threshold of 1,000 persons represents the national consensus on appropriate crowd manager requirements, providing a reasonable safety baseline even at the higher threshold.
5. Least Burdensome Alternative
    - Adopting the model IFC threshold (1,000 persons) is the most straightforward approach to reducing regulatory burden while maintaining alignment with the national consensus safety standard. Alternative approaches (e.g., graduated thresholds or event-type exemptions) would add complexity without achieving the consistency objective.
6. Conclusion/Recommendation
    - This proposal has a confirmed positive economic impact — it reduces compliance costs for event organizers in the 500–999-person range by eliminating the crowd manager requirement for those events. The cost reduction is qualitatively significant for small event promoters, though the proponent did not quantify the specific dollar savings. The proposal also achieves alignment with the model IFC. Adoption is recommended as a measure to reduce regulatory burden.

Proposal Identification
Log Number: 24-GP1-014

Code Section / Title: IFC 406.1 — Fire and Life Safety Education
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - IFC 406.1 contains an existing Washington State amendment addressing fire and life safety education provisions. The current language may contain ambiguities in how the education requirement is applied or by whom.
    B. Summary of Baseline with Changes:
        - The proposal clarifies the existing WA amendment for fire and life safety education. No new substantive requirements are added; the revision is intended to improve the clarity and application of the existing provision.
    C. Rationale Statement:
        - Clarifying existing code provisions supports consistent application by fire departments and AHJs across the state. The amendment addresses the intent of the existing fire and life safety education requirement without expanding its scope.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. The proposal is a clarification of existing requirements, not an expansion. No new construction obligations result.
    B. Implementation/Plan Review/Inspection Costs:
        - No change in the enforcement burden is anticipated. Fire departments administering life safety education programs operate under the same substantive obligations as before; the clarification assists in consistent application without altering scope.
    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified.
    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Clearer language reduces the potential for inconsistent application across jurisdictions, which can result in either under-enforcement (reducing safety) or over-enforcement (imposing unnecessary costs). Improved clarity supports appropriate and consistent enforcement.
    B. Operational Benefits:
        - Fire departments and AHJs benefit from clearer standards for administering fire and life safety education programs.
    C. Other Benefits:
        - Consistent application of life safety education requirements across Washington State supports public safety objectives.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 541350: Building Inspection Services — fire departments and private inspection firms applying the clarified provision benefit from reduced interpretive ambiguity.
        - NAICS 922160: Fire Protection — government fire protection agencies administering life safety education programs are the primary implementers of this provision.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small businesses subject to fire safety inspections are not directly burdened by this clarification.
    C. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified.

5. Least Burdensome Alternative
    - Clarifying existing language is the appropriate and least burdensome approach. No alternative imposes less burden while achieving the same goal of interpretive consistency.
6. Conclusion/Recommendation
    - The proponent asserts no economic impact. This is a clarification of an existing WA amendment with no new substantive requirements. It imposes no additional compliance costs and supports consistent administration of fire and life safety education requirements. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-020-R1
Code Section / Title: IFC 5704.2.11 — Flammable/Combustible Liquids, Reference Correction
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - IFC 5704.2.11 contains an internal cross-reference that is incorrect, pointing to a section that does not contain the intended provision. This creates potential confusion in applying the flammable and combustible liquids requirements.
    B. Summary of Baseline with Changes:
        - The proposal corrects the internal cross-reference within 5704.2.11 to point to the correct section. No substantive change to the flammable/combustible liquids requirements is made.
    C. Rationale Statement:
        - Correcting a cross-reference error is necessary to ensure that the code operates as intended. An incorrect cross-reference may lead code users to apply the wrong provision or to be uncertain about which requirements govern a particular situation.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. This is a cross-reference correction only; no new technical requirements are imposed.
    B. Implementation/Plan Review/Inspection Costs:
        - Correcting the cross-reference eliminates a source of confusion for AHJs reviewing flammable/combustible liquid storage and handling projects. No cost increase results.
    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified.
    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - An accurate cross-reference reduces the risk of design errors caused by misidentification of the applicable code section, potentially avoiding costly design revisions.
    B. Operational Benefits:
        - Code users — including engineers, contractors, and AHJs — have access to accurate internal navigation within the code, reducing research time and compliance uncertainty.
    C. Other Benefits:
        - Code accuracy supports public confidence in the regulatory framework for hazardous materials handling.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):

- NAICS 541330: Engineering Services — small engineering firms preparing designs involving flammable/combustible liquid storage benefit from accurate code cross-references.
- NAICS 541350: Building Inspection Services — AHJs and private inspection firms reviewing such projects benefit similarly.

B. Compliance Burden Comparison:
- No new compliance obligations result. Small and large businesses are equally unaffected in terms of cost.

C. Potential Disproportion/Mitigation:
- No disproportionate impact on small businesses is identified.

5. Least Burdensome Alternative
- Correcting the cross-reference is the only appropriate action. Leaving an incorrect cross-reference in place imposes ongoing uncertainty costs on regulated parties.

6. Conclusion/Recommendation
- The proponent asserts no economic impact. This is a targeted correction of an internal cross-reference error. It imposes no compliance costs and improves code usability. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-021
Code Section / Title: IFC 5706.5.4.5 — Flammable Liquids, Model Code Correlation
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale

A. Summary of Current Baseline (without proposal):
- The Washington State IFC amendment for 5706.5.4.5 contains language addressing flammable liquids that diverges from the current model IFC language in ways that do not reflect an intentional state-specific policy choice, creating inconsistency between the WA-adopted text and the model code.

B. Summary of Baseline with Changes:
- The proposal correlates the WA amendment language with the current model IFC language for 5706.5.4.5. No new substantive technical requirements are imposed; the revision achieves consistency between the WA-adopted and model code provisions.

C. Rationale Statement:
- Aligning WA amendment language with the model IFC reduces unintended divergence. Unintended divergences from the model code can create compliance uncertainty, especially for businesses and designers operating across multiple jurisdictions.

2. Economic Cost Analysis

A. Construction Cost Impact:
- The proponent indicated NO economic impact. The correlation removes unintended divergence without imposing new technical requirements. No construction cost changes result.

B. Implementation/Plan Review/Inspection Costs:
- AHJs reviewing flammable liquid projects benefit from reduced inconsistency between the WA-adopted text and model code references. No cost increase is anticipated.

C. Life-Cycle Costs:
- No life-cycle cost impacts are identified.

D. Other Costs:
- No other costs are identified.

3. Economic Benefit Analysis

A. Direct Cost Savings:

- Reduced inconsistency between WA and model code language lowers the likelihood of compliance disputes and design revisions driven by interpretive differences.

B. Operational Benefits:
- Businesses and designers familiar with the model IFC will encounter fewer unexpected deviations when working in Washington State, reducing compliance research time.

C. Other Benefits:
- Consistency with the model code supports uniformity across jurisdictions and reduces compliance burden for multi-state operators.

4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
   - NAICS 541330: Engineering Services — small engineering firms handling flammable liquid facility projects benefit from aligned code language.
   - NAICS 541350: Building Inspection Services — plan reviewers benefit from reduced ambiguity.
   - NAICS 447190: Other Gasoline Stations — businesses handling flammable liquids in quantities subject to IFC 5706 may benefit from clearer, more consistent requirements.

   B. Compliance Burden Comparison:
   - No new compliance obligations are created. Alignment with the model code may reduce compliance burden for businesses already familiar with model IFC requirements.

   C. Potential Disproportion/Mitigation:
   - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
   - Correlating WA language with the model IFC is the least burdensome approach to achieving consistency. It eliminates unintended divergence without imposing new technical requirements.
6. Conclusion/Recommendation
   - The proponent asserts no economic impact. This proposal corrects unintended divergence between WA-adopted and model IFC language for flammable liquids provisions. It imposes no new compliance costs and supports consistency. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-022
Code Section / Title: IFC 5707 — Tank Vehicles, Reference Consistency
Proponent/Author: 2024 IFC Technical Advisory Group / Dave Kokot, Spokane Fire Department

1. Description & Rationale
   A. Summary of Current Baseline (without proposal):
   - IFC 5707 addresses tank vehicle requirements. The current adopted text contains cross-references that are inconsistent with the current code structure, creating navigational confusion for code users.

   B. Summary of Baseline with Changes:
   - The proposal updates cross-references within 5707 for consistency with the current code structure. No substantive change to tank vehicle requirements is made.

   C. Rationale Statement:
   - Accurate cross-references are necessary for proper code navigation. Inconsistent references create uncertainty about which requirements govern tank vehicle operations and could lead to misapplication of code provisions.
2. Economic Cost Analysis
   A. Construction Cost Impact:

- The proponent indicated NO economic impact. This is a cross-reference update only; no new technical requirements are imposed on tank vehicle operations.

B. Implementation/Plan Review/Inspection Costs:
- Corrected cross-references simplify code navigation for AHJs reviewing tank vehicle operations. No enforcement cost increase is anticipated.

C. Life-Cycle Costs:
- No life-cycle cost impacts are identified.

D. Other Costs:
- No other costs are identified.

3. Economic Benefit Analysis
   A. Direct Cost Savings:
   - Accurate cross-references reduce the risk of compliance errors from misidentification of applicable code sections, potentially avoiding costly operational changes driven by incorrect code interpretation.

   B. Operational Benefits:
   - Tank vehicle operators, engineers, and AHJs benefit from accurate code navigation.

   C. Other Benefits:
   - Consistent code structure supports public safety by ensuring that applicable requirements are correctly identified and applied.
4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
   - NAICS 541330: Engineering Services — small engineering firms advising on tank vehicle compliance benefit from accurate cross-references.
   - NAICS 484220: Specialized Freight Trucking — small tank vehicle operators benefit from clearer identification of applicable requirements.

   B. Compliance Burden Comparison:
   - No new compliance obligations result. The change benefits all regulated parties equally.

   C. Potential Disproportion/Mitigation:
   - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
   - Correcting cross-references is the only appropriate approach. The status quo perpetuates navigational confusion.
6. Conclusion/Recommendation
   - The proponent asserts no economic impact. This is an administrative cross-reference correction for tank vehicle provisions. It imposes no compliance costs and improves code usability. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-027
Code Section / Title: IFC 105.5.56 — Wildfire Risk Area Permits
Proponent/Author: 2024 IFC Technical Advisory Group

1. Description & Rationale
   A. Summary of Current Baseline (without proposal):
   - Washington State has existing permit requirements under IFC 105.5.56 for activities conducted in wildfire risk areas (wildland-urban interface zones). The current language may be ambiguous as to which activities require permits or how the permit requirements are applied.

   B. Summary of Baseline with Changes:
   - The proposal clarifies the permit requirements for activities in wildfire risk areas. No new permit categories are created and no new substantive requirements are imposed; the revision improves the clarity and application of existing requirements.

C. Rationale Statement:
    - Washington State has a significant wildland-urban interface (WUI) and is subject to recurring wildfire risk. Clarifying permit requirements for activities in these areas supports consistent AHJ administration and reduces ambiguity for property owners and contractors operating in WUI zones.

2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. The proposal is a clarification of existing requirements, not an expansion. No new construction or permit obligations result.
    B. Implementation/Plan Review/Inspection Costs:
        - Clearer permit requirements may reduce administrative back-and-forth between AHJs and permit applicants in WUI areas, modestly reducing compliance costs. No cost increase is anticipated.
    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified.
    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Clearer permit requirements reduce uncertainty for property owners and contractors in WUI areas, potentially reducing delays and costs associated with permit processing.
    B. Operational Benefits:
        - AHJs administering wildfire risk area permits benefit from more explicit guidance on which activities require permits.
    C. Other Benefits:
        - Consistent application of WUI permit requirements across Washington State supports wildfire risk reduction objectives.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 541350: Building Inspection Services — local fire marshals and private inspection firms administering WUI permits benefit from clearer requirements.
        - NAICS 236115: New Single-Family Housing Construction — small homebuilders and contractors working in WUI areas are directly subject to wildfire risk area permit requirements.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small contractors and homebuilders in WUI areas are not subject to any new requirements.
    C. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified. Clearer requirements may disproportionately benefit small contractors who lack dedicated compliance staff to navigate ambiguous provisions.
5. Least Burdensome Alternative
        - Clarifying existing requirements is the appropriate and least burdensome approach. No alternative imposes less burden while achieving the same clarity objective.
6. Conclusion/Recommendation
        - The proponent asserts no economic impact. This is a clarification of existing permit requirements for activities in wildfire risk areas, consistent with Washington State's unique WUI exposure. No new compliance costs result. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-039-R1
Code Section / Title: IFC 903.2.9.2 and 1103.5.7 — Bulk Storage of Tires, Sprinkler Requirement

Proponent/Author: Dave Kokot / Justin Cravalho, Spokane Fire Department

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - Washington State IFC does not currently include an explicit automatic sprinkler requirement for bulk tire storage facilities based solely on square footage. Tire storage occupancies of 20,000 square feet or greater are not uniformly required to be sprinklered under a specific bulk tire storage provision. Existing facilities that are not currently sprinklered remain unregulated by this provision.

    B. Summary of Baseline with Changes:
        - New 903.2.9.2 adds a sprinkler requirement for new bulk tire storage occupancies with a floor area of 20,000 square feet or greater. New 1103.5.7 adds a retroactive sprinkler requirement for existing bulk tire storage facilities of 20,000 square feet or greater that do not currently have automatic sprinkler systems. The applicable sprinkler standard is not specified in the proposal data beyond the general automatic sprinkler system requirement.

    C. Rationale Statement:
        - Tires represent an extremely high fuel-load commodity with unusual fire characteristics: burning tires produce intense heat, dense smoke, and run-off liquids that create secondary hazards. Fires in tire storage facilities are among the most challenging for fire suppression forces. The proponent identifies both a life/safety need and the unique character of these occupancies as justification for the sprinkler requirement.

2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent provided explicit cost data:
        - Sprinkler system installation cost: $2.16 to $2.93 per square foot (installed cost)
        - For a 20,000 sq ft facility (minimum threshold): estimated installation range of approximately $43,200 to $58,600
        - For larger facilities, costs scale proportionally with area
        - Water main extension cost (if water service is inadequate): $75 to $225 per linear foot — this is a potentially significant additional cost where adequate water supply is not available at the site
        - Life-cycle cost analysis (LCCA) estimate: $2.50 per square foot (incorporating maintenance, inspection, and operational costs over the life of the system)
        - For a 20,000 sq ft facility, LCCA cost estimate: approximately $50,000 over the system lifecycle
        - These are the figures provided by the proponent. The actual cost will vary based on facility size, configuration, water supply conditions, and sprinkler system design.
        - New construction (903.2.9.2): Costs are incurred at the time of construction and can be incorporated into project budgeting.
        - Existing facilities (1103.5.7 retroactive): Costs are imposed on existing facility owners and operators, who must retrofit sprinkler systems. Retrofitting an operating facility may involve additional disruption costs not captured in the per-square-foot installation estimate.

    B. Implementation/Plan Review/Inspection Costs:
        - Sprinkler system installations require plan review and permit issuance by AHJs. Fire sprinkler plan review fees represent an additional cost for facility owners. AHJ inspection workload increases for facilities in the 20,000+ sq ft category, though the number of affected facilities is not quantified in the proposal.

    C. Life-Cycle Costs:
        - The proponent provides a life-cycle cost estimate of $2.50 per square foot (for a 20,000 sq ft facility, approximately $50,000 over the system life). Annual

maintenance, inspection, and testing obligations under NFPA 25 will represent recurring costs to facility owners. Water supply infrastructure costs for inadequately served sites are a one-time capital cost.

D. Other Costs:
    - For the retroactive provision (1103.5.7): existing tire storage facilities must absorb retrofit costs, which may include business disruption, temporary relocation of inventory, and construction in an occupied facility. These costs are not quantified in the proposal.
    - Water main extensions at $75–$225/LF are potentially substantial for facilities in rural or industrial areas lacking adequate water supply infrastructure.

3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Automatic sprinkler systems are recognized as the most effective technology for controlling fires in their early stages. For tire storage facilities, early suppression can prevent loss of the entire inventory, structural damage, and environmental contamination from burning-tire runoff.
        - Tire inventory losses in unsprinklered facilities can be catastrophic; a single large tire storage fire can result in losses of millions of dollars in inventory, property, and business interruption. The cost of installing a sprinkler system must be weighed against these potential loss scenarios.
        - Insurance premium reductions are a commonly recognized benefit of sprinkler system installation. While no specific insurance data were provided by the proponent, insurance carriers typically offer reduced premiums for sprinklered occupancies with high-hazard commodities such as tires.
    B. Operational Benefits:
        - Sprinklered tire storage facilities present reduced fire risk to adjacent properties, reducing community exposure to large-scale tire fire events. Tire fires can produce significant air quality impacts affecting surrounding neighborhoods and businesses.
        - Reduced fire suppression demands on local fire departments translate to operational efficiency benefits for fire protection resources.
    C. Other Benefits:
        - NFIRS data and fire protection engineering literature consistently demonstrate that sprinkler systems significantly reduce fire fatalities, injuries, and property losses. While the proponent did not cite specific statistics on tire storage facilities, the general life-safety benefit of sprinkler systems is well established.
        - Environmental benefits from suppressing tire fires before they escalate include reduced toxic smoke production and prevention of tire-pyrolysis runoff contamination.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238220: Fire Sprinkler Contractors and Other Building Equipment Contractors — installation of new sprinkler systems represents additional revenue for this sector.
        - NAICS 493110: General Warehousing and Storage — small warehouse operators storing tires in 20,000+ sq ft facilities face both new construction and retrofit requirements.
        - NAICS 441320: Tire Dealers — tire retail/wholesale businesses with large storage areas of 20,000+ sq ft are directly affected.
        - NAICS 541330: Engineering Services — engineering firms designing sprinkler systems for tire storage facilities.
        - NAICS 541350: Building Inspection Services — AHJs reviewing and inspecting sprinkler system installations.
    B. Compliance Burden Comparison:
        - Small tire storage and dealer businesses may face a disproportionate compliance burden relative to large national retailers, because the capital cost

of sprinkler installation represents a larger share of their assets and cash flow. The 20,000 sq ft threshold is intended to focus the requirement on the larger storage facilities, where fire risk is greatest, thereby mitigating (though not eliminating) the burden on small operations.
    - The retroactive provision (1103.5.7) is particularly burdensome for small existing facility owners who did not anticipate this capital expense in their business planning.
  C. Potential Disproportion/Mitigation:
    - The proposal may disproportionately burden small existing tire storage facility owners subject to the retroactive requirement. Potential mitigation strategies — such as phased compliance timelines, small-business financial assistance, or area-based thresholds — are not addressed in the proposal form. AHJs administering the retroactive provision should be aware of the potential for disproportionate impact on small operators and consider whether amortization periods or phased compliance schedules are appropriate.
5. Least Burdensome Alternative
    - The proposal applies only to facilities of 20,000 square feet or greater, which limits compliance obligations to larger-footprint facilities where the fire risk is highest. For new construction, the cost can be incorporated into project budgets. For existing facilities, the retroactive provision represents a more significant burden; a phased compliance schedule (e.g., 2–3 year amortization period) would reduce the immediate financial impact on existing small-business owners while achieving the life safety objective. The proposal as submitted does not include a compliance phase-in period for the retroactive provision.
6. Conclusion/Recommendation
    - This proposal has a confirmed positive economic cost impact, with sprinkler installation costs of $2.16–$2.93/sq ft for new construction and retrofit costs for existing facilities. These costs are offset by meaningful life safety and property protection benefits in a high-hazard occupancy. The retroactive provision (1103.5.7) deserves particular scrutiny regarding the compliance timeline for existing small-business owners. The life safety rationale is strong given the severe fire characteristics of bulk tire storage. Adoption is supported, with a recommendation that the SBCC consider whether a phased compliance schedule for the retroactive provision would reduce disproportionate impacts on existing small-business operators.

Proposal Identification
Log Number: 24-GP1-040-R1
Code Section / Title: IFC 202 and 4004.4 — Definition of Bulk Storage of Spirits
Proponent/Author: Dave Kokot, Spokane Fire Department

1. Description & Rationale
  A. Summary of Current Baseline (without proposal):
    - The current IFC does not include a definition of "bulk storage of spirits" that is expressly correlated with federal Alcohol and Tobacco Tax and Trade Bureau (TTB) definitions. This creates potential inconsistency between how "bulk storage" is defined for fire code purposes and how federal alcohol regulations define the same term, leading to interpretive uncertainty for distillers and fire code officials.
  B. Summary of Baseline with Changes:
    - The proposal adds or clarifies the definition of "bulk storage of spirits" in 202 and correlates 4004.4 with the federal TTB definition. No new substantive fire code requirements are imposed; the revision provides a definition that aligns the fire code terminology with the existing federal regulatory framework for distilled spirits.
  C. Rationale Statement:

- Distilleries are subject to both federal TTB regulations and state fire code requirements. When the fire code uses terms without reference to their federal regulatory meaning, compliance is more difficult because regulated parties and AHJs must separately interpret the term in each regulatory context. Aligning the definition with the federal standard reduces this compliance complexity.

2. Economic Cost Analysis
   A. Construction Cost Impact:
      - The proponent indicated NO economic impact. The proposal adds/clarifies a definition; no new technical requirements for distillery construction or storage facility design result.
   B. Implementation/Plan Review/Inspection Costs:
      - AHJs reviewing distillery permit applications will have a clearer definition for bulk storage classification. This reduces ambiguity in plan review without increasing cost.
   C. Life-Cycle Costs:
      - No life-cycle cost impacts are identified.
   D. Other Costs:
      - No other costs are identified.
3. Economic Benefit Analysis
   A. Direct Cost Savings:
      - Alignment of fire code terminology with federal TTB definitions reduces the compliance research burden for distilleries seeking to determine how their operations are classified under both regulatory frameworks.
   B. Operational Benefits:
      - Distilleries benefit from a clear, consistent definition that bridges the gap between fire code and federal regulatory requirements, reducing the need for legal or technical interpretation.
   C. Other Benefits:
      - Consistent definitions across regulatory frameworks reduce the risk of conflicting determinations by different agencies, supporting regulatory coherence.
4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
      - NAICS 541330: Engineering Services — engineering firms preparing distillery fire code compliance documentation benefit from clearer terminology.
      - NAICS 312140: Distilleries — craft and small distilleries are directly affected; Washington State has a significant craft distillery industry where small-business operators are the norm.
      - NAICS 424810: Beer, Wine, and Distilled Beverages Merchant Wholesalers — wholesale distributors of spirits with bulk storage operations benefit from aligned definitions.
   B. Compliance Burden Comparison:
      - No new compliance obligations are created. Small distilleries — who typically lack dedicated regulatory compliance staff — may disproportionately benefit from clearer, aligned definitions that reduce the need for legal interpretation.
   C. Potential Disproportion/Mitigation:
      - No disproportionate negative impact on small businesses is identified. The clarification benefits small operators.
5. Least Burdensome Alternative
      - Adding a definition correlated with the existing federal standard is the least burdensome approach to resolving terminological inconsistency. It does not impose new technical requirements while improving compliance clarity.
6. Conclusion/Recommendation
      - The proponent asserts no economic impact. This proposal adds clarity to the definition of bulk storage of spirits by aligning it with existing federal TTB definitions, without imposing new technical requirements. It benefits

Washington's craft distillery industry and AHJs alike. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-041-R1
Code Section / Title: IFC 105.5.14.1, 320.4, 320.4.1- Lithium Battery Permits / Outdoor Storage (Editorial)
Proponent/Author: Ken Brouillette, City of Seattle

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current IFC contains provisions for lithium battery permits under 105.5.14.1 and outdoor storage requirements under 320.4 and 320.4.1. These provisions may contain editorial ambiguities or inconsistencies that create uncertainty about when permits are required or what outdoor storage configurations are permissible.

    B. Summary of Baseline with Changes:
        - The proposal makes editorial clarifications to lithium battery permit requirements and outdoor storage provisions. No new substantive permit requirements are created and no new technical requirements for outdoor storage are imposed.

    C. Rationale Statement:
        - Editorial clarity in permit and storage provisions supports consistent application by AHJs and reduces uncertainty for businesses operating lithium battery systems. As Washington State experiences rapid growth in battery energy storage deployment, code clarity in this area is increasingly important.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. This is an editorial clarification; no new technical requirements are imposed. No construction cost changes result.

    B. Implementation/Plan Review/Inspection Costs:
        - Clearer permit requirements reduce ambiguity for AHJs processing lithium battery permit applications. No cost increase is anticipated.

    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified.

    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Clearer permit language reduces the likelihood of permit application revisions and resubmissions due to ambiguous requirements, saving applicants time and money.

    B. Operational Benefits:
        - Businesses deploying outdoor lithium battery systems have clearer guidance on permit and storage configuration requirements.

    C. Other Benefits:
        - As EV adoption and battery energy storage deployment accelerate in Washington State, editorial clarity in lithium battery code provisions has increasing practical importance.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238210: Electrical Contractors — small electrical contractors installing lithium battery systems benefit from clearer permit requirements.

- NAICS 441310: Automotive Parts, Accessories, and Tire Stores — businesses involved in EV-related battery storage installations are affected by lithium battery permit provisions.
- NAICS 221122: Electric Power Distribution (ESS owners/operators) — businesses operating energy storage systems are directly subject to these provisions.

B. Compliance Burden Comparison:
- No new compliance obligations are created. Small businesses in the EV and ESS sectors benefit equally from editorial clarity.

C. Potential Disproportion/Mitigation:
- No disproportionate impact on small businesses is identified.

5. Least Burdensome Alternative
- Editorial clarification of existing provisions is the appropriate and least burdensome approach to resolving interpretive ambiguity without imposing new technical requirements.

6. Conclusion/Recommendation
- The proponent asserts no economic impact. This editorial clarification of lithium battery permit and outdoor storage provisions imposes no new compliance costs and reduces interpretive uncertainty in a rapidly growing sector. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-042-R1
Code Section / Title: IFC 320.4.3 and 320.4.3.1 — Outdoor Storage, Distance/Area Provisions
Proponent/Author: Ken Brouillette, City of Seattle

1. Description & Rationale

A. Summary of Current Baseline (without proposal):
- Current IFC 320.4.3 and 320.4.3.1 address outdoor lithium battery storage with distance and area requirements. The existing language may be ambiguous about what distance and area configurations are permissible, potentially restricting compliant storage options unnecessarily.

B. Summary of Baseline with Changes:
- The proposal editorially clarifies the distance and area provisions for outdoor lithium battery storage, potentially expanding the range of compliant storage configurations by removing ambiguity. No new substantive restrictions are imposed; rather, the clarification may allow configurations that were previously uncertain under the existing text.

C. Rationale Statement:
- Clarity in distance and area provisions for outdoor battery storage is essential given rapid growth in battery energy storage system (ESS) deployment. The proponent characterizes this as an editorial clarification that may expand compliant storage options, consistent with the safe deployment of outdoor battery systems.

2. Economic Cost Analysis

A. Construction Cost Impact:
- The proponent indicated NO economic impact. The clarification is editorial; if anything, it expands compliant storage options rather than restricting them. No new construction cost obligations result.

B. Implementation/Plan Review/Inspection Costs:
- Clearer distance and area requirements simplify AHJ review of outdoor ESS permit applications. No cost increase is anticipated.

C. Life-Cycle Costs:
- No life-cycle cost impacts are identified.

D. Other Costs:
- No other costs are identified.

3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Expanded clarity about compliant storage configurations may allow ESS operators to achieve code compliance with configurations that are less expensive or more operationally convenient than those required under a more restrictive interpretation.
    B. Operational Benefits:
        - ESS operators and their designers have greater certainty about what outdoor storage configurations are permissible, reducing the need for alternative method requests and associated AHJ review time.
    C. Other Benefits:
        - Supporting the compliant deployment of outdoor battery storage systems advances Washington State's clean energy and grid resilience objectives.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238210: Electrical Contractors — small contractors installing outdoor ESS benefit from clearer distance/area requirements.
        - NAICS 221122: Electric Power Distribution — small utilities and ESS operators benefit from expanded and clarified compliant storage options.
        - NAICS 531130: Lessors of Miniwarehouses and Self-Storage Units — operators of outdoor ESS adjacent to self-storage facilities are subject to outdoor distance requirements.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small ESS operators may disproportionately benefit from clarity that reduces the need for costly AHJ consultations and alternative method applications.
    C. Potential Disproportion/Mitigation:
        - No disproportionate negative impact on small businesses is identified. The clarification potentially reduces burden for all affected parties.
5. Least Burdensome Alternative
        - Editorial clarification that expands rather than restricts compliant configurations is by definition a least-burdensome approach.
6. Conclusion/Recommendation
        - The proponent asserts no economic impact. This editorial clarification of outdoor lithium battery storage distance and area provisions may expand compliant storage options and imposes no new compliance costs. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-045
Code Section / Title: IFC 1107, 1107.1, 1107.1.1, 1107.1.2 — Lithium-Ion ESS, Move to 1207 (Version B)
Proponent/Author: Ken Brouillette, City of Seattle

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - Same as Proposal 16 (IFC-2024-016): lithium-ion ESS provisions currently reside in 1107 rather than 1207 (the model IFC location), and conflicting provisions exist between the two sections in the current WA-adopted code.
    B. Summary of Baseline with Changes:
        - This proposal moves (1107 → 1207) but additionally eliminates conflicting provisions between the existing 1107 and 1207 languages. This is a more comprehensive resolution of the organizational inconsistency.
    C. Rationale Statement:

- Eliminating both the structural inconsistency (wrong chapter location) and any substantive conflicts between the two sections produces a cleaner, more internally consistent code. The proponent characterizes both versions as organizational/editorial with no substantive impact.

2. Economic Cost Analysis
   A. Construction Cost Impact:
      - The proponent indicated NO economic impact. No new technical requirements are imposed. No construction cost impacts result.
   B. Implementation/Plan Review/Inspection Costs:
      - Eliminating conflicting provisions reduces plan review ambiguity more effectively than the current code. AHJs will have a single, clear set of lithium-ion ESS requirements in 1207 with no competing 1107 language.
   C. Life-Cycle Costs:
      - No life-cycle cost impacts are identified.
   D. Other Costs:
      - No other costs are identified.
3. Economic Benefit Analysis
   A. Direct Cost Savings:
      - Eliminating conflicting provisions removes a source of compliance disputes that can result in costly design revisions and extended permit processing times.
   B. Operational Benefits:
      - A single, conflict-free set of ESS requirements in the expected code location provides the greatest clarity for designers, contractors, and AHJs.
   C. Other Benefits:
      - This proposal addresses both the organizational and substantive conflict issues simultaneously.
4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
      - NAICS 238210: Electrical Contractors — small contractors benefit more from conflict elimination than from relocation alone.
      - NAICS 221122: Electric Power Distribution — ESS operators benefit from a single, clear set of requirements.
      - NAICS 541330: Engineering Services — engineering firms designing ESS systems benefit from the elimination of potentially conflicting requirements.
   B. Compliance Burden Comparison:
      - Greater clarity on compliance for small businesses with limited resources to resolve conflicting code requirements.
   C. Potential Disproportion/Mitigation:
      - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
   - More complete resolution of the organizational and conflict issues, which creates the least burdensome approach.
6. Conclusion/Recommendation
   - The proponent asserts no economic impact. And also eliminating conflicting provisions, producing a cleaner, more internally consistent code. It imposes no new compliance costs.

Proposal Identification
Log Number: 24-GP1-046
Code Section / Title: IFC 611 (New) Electric Vehicle Charging Stations
Proponent/Author: Ken Brouillette, City of Seattle

1. Description & Rationale
   A. Summary of Current Baseline (without proposal):
      - The current Washington State IFC does not include a dedicated section for electric vehicle (EV) charging stations. Requirements for EV charging

installations are addressed through general electrical provisions and NFPA 70 (the National Electrical Code) without a specific IFC section that consolidates the applicable fire code requirements.

B. Summary of Baseline with Changes:
   - New 611 is added to the IFC to address EV charging stations. The section references NFPA 70 for installation requirements. The proponent characterizes this as a clarification that points to existing NFPA 70 requirements, without imposing new substantive requirements beyond what NFPA 70 already requires.

C. Rationale Statement:
   - As EV charging infrastructure expands rapidly in Washington State, having a dedicated IFC section for EV charging stations provides a clear code reference point for AHJs, designers, and building owners. The section directs users to the applicable electrical standard (NFPA 70) rather than creating redundant technical requirements.

2. Economic Cost Analysis
   A. Construction Cost Impact:
      - The proponent indicated NO economic impact. New 611 points to NFPA 70 requirements that already apply to EV charging installations; no new technical requirements are imposed. No additional construction cost is expected.
   B. Implementation/Plan Review/Inspection Costs:
      - A dedicated IFC section for EV charging stations provides a clear reference point for plan review, potentially reducing review time by consolidating applicable requirements in one location. No cost increase is anticipated.
   C. Life-Cycle Costs:
      - No life-cycle cost impacts are identified beyond existing NFPA 70 compliance obligations.
   D. Other Costs:
      - No other costs are identified.
3. Economic Benefit Analysis
   A. Direct Cost Savings:
      - A dedicated code section for EV charging stations reduces the research burden on designers and AHJs who must currently identify applicable requirements from general electrical provisions.
   B. Operational Benefits:
      - Clear code organization for a rapidly growing installation category (EV charging) reduces permitting uncertainty and supports consistent application across jurisdictions.
   C. Other Benefits:
      - Supports Washington State's EV infrastructure deployment objectives by reducing regulatory ambiguity for a critical clean transportation technology.
4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
      - NAICS 238210: Electrical Contractors — small electrical contractors installing EV charging stations benefit from a clear IFC reference section.
      - NAICS 221122: Electric Power Distribution — utilities and EV charging network operators benefit from clearer regulatory framework.
      - NAICS 236220: Commercial and Institutional Building Construction — contractors building commercial facilities with EV charging infrastructure benefit from consolidated requirements.
   B. Compliance Burden Comparison:
      - No new compliance obligations are created beyond existing NFPA 70 requirements. Small businesses installing EV charging equipment are not subjected to new technical demands.
   C. Potential Disproportion/Mitigation:

- No disproportionate impact on small businesses is identified. Small electrical contractors may disproportionately benefit from having a clear, consolidated code reference for EV charging work.

5. Least Burdensome Alternative
    - A code section that references an existing standard (NFPA 70) without creating redundant or additional requirements is the least burdensome approach to providing clear regulatory guidance for EV charging installations.
6. Conclusion/Recommendation
    - The proponent asserts no economic impact. Adding a new 611 for EV charging stations that references existing NFPA 70 requirements provides organizational clarity without imposing new technical costs. It supports Washington State's EV deployment objectives. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-048-R1
Code Section / Title: IFC 1207 — ESS, Remove Redundant Amendment
Proponent/Author: WABO Technical Code Development

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current Washington State IFC 1207 contains redundant or duplicate amendment language for energy storage system (ESS) provisions. This duplicate language creates potential confusion about which text governs, and may create apparent conflicts within the section.

    B. Summary of Baseline with Changes:
        - The proposal removes the redundant or duplicate WA amendment language from 1207, streamlining the section without changing its substantive requirements. The result is a cleaner, more readable code section.

    C. Rationale Statement:
        - Duplicate language in code provisions creates interpretive uncertainty and may result in inconsistent application across jurisdictions. Removing redundancy is standard code maintenance practice and supports the broader organizational improvements to Chapter 12 ESS provisions.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. Removing duplicate language does not change substantive ESS requirements. No construction cost impacts result.

    B. Implementation/Plan Review/Inspection Costs:
        - A streamlined 1207 reduces the interpretive burden on AHJs and designers, potentially reducing plan review time for ESS projects.

    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified.

    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Removing redundant language reduces interpretive uncertainty, potentially avoiding compliance disputes driven by apparent conflicts within the code section.

    B. Operational Benefits:
        - Cleaner code text supports more efficient plan review and consistent application of ESS requirements.

    C. Other Benefits:
        - Code maintenance of this type supports the overall quality and usability of the adopted IFC.

4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238210: Electrical Contractors — small contractors installing ESS systems benefit from cleaner, less ambiguous code text.
        - NAICS 541330: Engineering Services — engineering firms benefit from the removal of potentially conflicting duplicate language.
        - NAICS 541350: Building Inspection Services — AHJs benefit from a streamlined section with no duplicative or contradictory text.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small businesses benefit equally from improved code clarity.
    C. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
    - Removing duplicate language without altering substantive requirements is the most straightforward approach to this code maintenance task.
6. Conclusion/Recommendation
    - The proponent asserts no economic impact. Removing redundant amendment language from 1207 is a code maintenance action that improves clarity without imposing new obligations. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-059
Code Section / Title: IFC 319.1 and 4106.1 — Mobile Food Preparation Vehicles
Proponent/Author: 2024 IFC Technical Advisory Group

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - An existing Washington State amendment for mobile food preparation vehicles (food trucks) is currently located in 319.1. This placement may be organizationally inconsistent with the model IFC, which addresses mobile food preparation in Chapter 41 (4106.1).
    B. Summary of Baseline with Changes:
        - The proposal relocates the existing WA amendment from 319.1 to 4106.1 for organizational clarity and alignment with the model IFC structure. No new requirements are added; only the provision's location within the code changes.
    C. Rationale Statement:
        - Organizing Washington's mobile food preparation requirements in the same chapter location as the model IFC reduces confusion for users who reference both the model code and the WA-adopted version. The food truck industry has grown significantly in Washington State, making clear and accessible code provisions increasingly important.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. The existing requirements are relocated, not changed. No new technical requirements are imposed on food truck operators. No construction cost impacts result.
    B. Implementation/Plan Review/Inspection Costs:
        - AHJs reviewing food truck permit applications will find the applicable WA provisions in the chapter expected by users familiar with the model IFC. No cost increase is anticipated.
    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified.
    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis

A. Direct Cost Savings:
    - Consistent code organization reduces the time food truck operators and their advisors must spend locating applicable requirements.

B. Operational Benefits:
    - Food truck operators and AHJs benefit from consistent placement of mobile food preparation requirements in the expected code location.

C. Other Benefits:
    - Supports a growing small-business sector (mobile food service) by making applicable code requirements more accessible.

4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 722330: Mobile Food Services — food truck operators are directly subject to mobile food preparation vehicle provisions; this sector is dominated by small businesses.
        - NAICS 541350: Building Inspection Services — fire inspectors reviewing food truck permits benefit from consistent code organization.

    B. Compliance Burden Comparison:
        - No new compliance obligations are created. The organizational relocation has no differential impact between small and large businesses.

    C. Potential Disproportion/Mitigation:
        - No disproportionate impact is identified. Small food truck operators may disproportionately benefit from accessible, well-organized code provisions because they typically lack dedicated compliance staff.

5. Least Burdensome Alternative
    - Relocating existing provisions without changing their substance is the appropriate and least burdensome approach to achieving organizational consistency.

6. Conclusion/Recommendation
    - The proponent asserts no economic impact. Relocating the mobile food preparation vehicle amendment to 4106.1 improves code organization without imposing new requirements. Adoption is recommended, as it supports a growing small-business sector with clearer, more accessible code provisions.

Proposal Identification
Log Number: 24-GP1-062-R1
Code Section / Title: IFC 1008.2.1 (IFC/IBC) — Measurement of Illumination on Stairways
Proponent/Author: 2024 IFC Technical Advisory Group / WABO (Chappell, Haupt)

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current IFC and IBC contain provisions for stairway illumination, but the measurement point for determining compliance (whether illumination is measured at the tread nosing or at floor level) is ambiguous. This ambiguity results in inconsistent interpretation and application during plan review and inspection.

    B. Summary of Baseline with Changes:
        - The proposal clarifies that stairway illumination is measured at the tread nosing (rather than at floor level), aligning the IFC and IBC measurement standard. This resolves the interpretive ambiguity and provides a clear compliance reference point.

    C. Rationale Statement:
        - Consistent measurement methodology for stairway illumination is necessary for predictable compliance determinations. The clarification aligns IFC and IBC on this point and reduces inconsistency across jurisdictions and projects.

2. Economic Cost Analysis
    A. Construction Cost Impact:

- The proponent indicated NO economic impact. Clarifying the measurement point does not change the required illumination level; it only specifies where that level is measured. Designers who were already measuring at the tread nosing incur no change. Designers using a less precise measurement method may need to verify compliance at the correct location, but this is not expected to require additional equipment or construction cost.

B. Implementation/Plan Review/Inspection Costs:
- A clear measurement standard reduces debate during plan review and inspection about whether a design is compliant. This may modestly reduce plan review time and disputes. No cost increase is anticipated.

C. Life-Cycle Costs:
- No life-cycle cost impacts are identified. The illumination level requirements themselves are unchanged.

D. Other Costs:
- No other costs are identified.

3. Economic Benefit Analysis
   A. Direct Cost Savings:
   - Resolving the measurement ambiguity eliminates design revisions and plan review corrections driven by inconsistent interpretation. This is a tangible, if not quantifiable, compliance cost reduction.

   B. Operational Benefits:
   - Consistent application of the tread-nosing measurement standard across Washington State reduces the risk of differently-designed systems being required in different jurisdictions for the same type of stairway.

   C. Other Benefits:
   - Aligning IFC and IBC on stairway illumination measurement supports integrated code administration for mixed-occupancy projects reviewed under both codes.
4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
   - NAICS 238210: Electrical Contractors — small electrical contractors designing and installing lighting systems for stairways benefit from a clear measurement standard.
   - NAICS 541330: Engineering Services — small engineering firms preparing lighting compliance documentation benefit from an unambiguous measurement methodology.
   - NAICS 541350: Building Inspection Services — AHJs and private inspection firms benefit from a clear, enforceable standard.

   B. Compliance Burden Comparison:
   - No new compliance obligations are created. Small contractors and engineers benefit equally from reduced ambiguity.

   C. Potential Disproportion/Mitigation:
   - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
   - Specifying the measurement point in code text is the most straightforward approach to resolving this interpretive ambiguity. Administrative guidance or code commentary would be less authoritative and would perpetuate inconsistency.
6. Conclusion/Recommendation
   - The proponent asserts no economic impact. This clarification of stairway illumination measurement methodology resolves an interpretive ambiguity without imposing new costs. Adoption is recommended.

.

24-GP1-069-R2

Code Section / Title: IFC 104.2.4.2 — Individual Cases and Natural Disasters

Proponent/Author: Patrick Hanks, Policy and Research Manager, Building Industry Association of Washington (BIAW)

1. Description & Rationale
    a. Summary of Current Baseline (without proposal):
        - Under 104.2.4.2 of the 2024 model IFC, the fire code official has authority to issue written policies, procedures, or rules that modify the code during natural disaster events, without a defined duration limit. The model code language does not cap how long such modifications may remain in effect and includes the term 'rules,' which overlaps with formal rulemaking authority governed by the Administrative Procedure Act (RCW 34.05.630(2)).

    b. Summary of Baseline with Changes:
        - This proposal adopts IFC 104.2.4.2 with a Washington-specific amendment that: (1) removes the word 'rules' from the list of instruments the fire code official may issue, leaving 'written policies or procedures'; and (2) limits the duration of any issued modification to 180 days, extendable at the fire code official's discretion. The proposal makes no change to 104.2.4.1. All other model code provisions of 104.2.4.2 are retained as adopted.

    c. Rationale Statement:
        - This revision to the proponent's original petition (24-GP1-069) reflects feedback received at the Fire Code TAG meeting on October 1, 2024, where local officials noted that comparable provisions in the 2021 IFC proved important during the COVID-19 pandemic and helped reduce costs for businesses. The amendment addresses a potential conflict with the Administrative Procedure Act (RCW 34.05.630(2)): the model code term 'rules' could be read to authorize local officials to make rule changes outside the formal SBCC approval process and without the APA's procedural requirements. Removing 'rules' and adding a 180-day durational limit ensures that any local modification issued under this section remains a temporary operational response rather than a permanent code change, preserving statewide code consistency.

2. Economic Cost Analysis
    a. Construction Cost Impact:
        - The proponent states there is no direct economic impact because the proposal does not change material requirements, construction methods, or installed systems. No construction cost figures are provided in the proposal form. No cost-per-square-foot or cost-per-dwelling-unit estimate was submitted.

    b. Implementation/Plan Review/Inspection Costs:
        - The proponent states that any change to code enforcement will likely be negligible due to the minor nature of the technical change in code language. The proposal does not add any extra code enforcement time over the model code. No additional plan review or inspection hours were identified.

    c. Life-Cycle Costs:
        - No life-cycle cost analysis was submitted. The proponent marked the OFM Life Cycle Cost Analysis tool as N/A. Because no new materials, systems, or equipment are required, no ongoing maintenance or replacement costs are introduced.

    d. Other Costs:
        - No other costs are identified by the proponent. The proposal imposes no new obligations on building owners, occupants, contractors, or design professionals.

3. Economic Benefit Analysis
    a. Direct Cost Savings:
        - No direct cost savings are quantified. The proponent notes, based on TAG member feedback, that equivalent provisions in the 2021 IFC helped reduce costs for businesses during the COVID-19 pandemic by enabling temporary local modifications to code requirements. The 180-day durational limit preserves this cost-reduction potential while preventing indefinite local deviations from the statewide code.

    b. Operational Benefits:
        - Retaining the fire code official's authority to issue temporary written policies or procedures during natural disasters provides operational flexibility that can reduce compliance burden for businesses and construction projects during declared emergencies, consistent with the experience reported by local officials at the October 1, 2024, TAG meeting.

    c. Other Benefits:
        - The amendment aligns 104.2.4.2 with the Administrative Procedure Act (RCW 34.05.630(2)) by removing language that could be construed as authorizing informal rulemaking outside the SBCC approval process, thereby maintaining consistency of the statewide code and providing greater legal certainty for fire code officials, local governments, and regulated parties.

4. Small Business Economic Impact
    a. Small Business Categories Affected:
        - The proponent states that the small business economic impact is N/A. The proposal does not change material requirements, construction costs, or enforcement obligations applicable to any specific industry or business category. No NAICS codes were identified by the proponent as directly affected.

    b. Compliance Burden Comparison:
        - Because the proposal imposes no new compliance obligations on any regulated party, small or large, there is no differential compliance burden between small businesses and larger enterprises. The change affects only the procedural authority of the fire code official during declared natural disaster events.

    c. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified. The proposal does not alter any substantive technical requirement. No mitigation measures are necessary.

5. Least Burdensome Alternative
        - The proponent's original petition (24-GP1-069) proposed non-adoption of 104.2.4.1 and 104.2.4.2 entirely. Following TAG feedback that these provisions provided valuable emergency flexibility during COVID-19, the proponent revised the approach to retain both sections while narrowing 104.2.4.2 through targeted amendments (removal of 'rules' and addition of a 180-day limit). This revised approach is the least burdensome alternative that addresses the proponent's stated APA-conflict concern without eliminating the cost-reducing emergency flexibility that local officials and businesses have relied upon.

6. Conclusion/Recommendation

- Proposal 24-GP1-069-R2 adopts 2024 IFC 104.2.4.2 with a Washington-specific amendment that removes the term 'rules' and limits issued modifications to 180 days (extendable). The proponent determined that the proposal has no direct economic impact: it does not change material requirements, construction costs, or code enforcement workload. The amendment addresses a stated concern about APA compliance (RCW 34.05.630(2)) while preserving the emergency operational flexibility that TAG members reported reduced business costs during the COVID-19 pandemic. No quantitative cost or savings data were submitted. The overall economic impact is neutral.

Proposal Identification
Log Number: 24-GP1-071-R4
Code Section / Title: IFC 202, 915, 1103.9 & IBC 915 - Carbon Monoxide Requirements, Language Correction
Proponent/Author: Ken Brouillette, City of Seattle

1. Description & Rationale
   A. Summary of Current Baseline (without proposal):
      - Multiple sections of the Washington State IFC contain carbon monoxide (CO) detection and alarm requirements. The current language across these sections is inconsistent in terminology, phrasing, or cross-references, creating potential ambiguity about what is required and when.

   B. Summary of Baseline with Changes:
      - The proposal corrects and clarifies CO detection language across multiple IFC sections to achieve internal consistency. No new substantive CO detection requirements are added; the revision harmonizes existing language.

   C. Rationale Statement:
      - Consistent language for CO detection requirements across all applicable IFC sections reduces the risk of inconsistent application by AHJs and designers. Carbon monoxide is a critical life-safety hazard, and ensuring that all CO requirements are clearly and consistently expressed is an important code-quality objective.
2. Economic Cost Analysis
   A. Construction Cost Impact:
      - The proponent indicated NO economic impact. This is an editorial/clarification action; no new CO detection equipment is required beyond what is already mandated. No construction cost changes result.

   B. Implementation/Plan Review/Inspection Costs:
      - Consistent language across CO sections simplifies plan review verification, reducing the need to cross-check multiple sections with inconsistent phrasing. No cost increase is anticipated.

   C. Life-Cycle Costs:
      - No life-cycle cost impacts are identified beyond existing CO detection and testing requirements.

   D. Other Costs:
      - No other costs are identified.
3. Economic Benefit Analysis
   A. Direct Cost Savings:
      - Consistent CO terminology reduces design errors and plan review corrections driven by inconsistent section language.

   B. Operational Benefits:
      - Designers and AHJs encounter consistent, clear CO requirements across all applicable code sections, supporting accurate and efficient compliance verification.

C. Other Benefits:
    - Clarity in CO detection requirements directly supports life safety by ensuring that the code's protective intent is correctly understood and applied by all parties.

4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238210: Electrical Contractors — small contractors installing CO detection systems benefit from consistent code language.
        - NAICS 541350: Building Inspection Services — AHJs verifying CO compliance benefit from consistent terminology.
        - NAICS 236115/236116: Residential Construction (New Single-Family and Multifamily Housing) residential builders are primary subjects of CO detection requirements and benefit from consistent code language.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small businesses benefit equally from improved code consistency.
    C. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
    - Correcting and harmonizing existing language across multiple sections is the appropriate approach. Individual section corrections without cross-section harmonization would perpetuate inconsistency.
6. Conclusion/Recommendation
    - The proponent asserts no economic impact. This multi-section CO language correction improves code consistency without imposing new compliance costs. Given the critical life safety importance of CO detection, code clarity in this area is particularly valuable. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-072-R2
Code Section / Title: IFC WAC 51-54A-0904.1.1 — Certification of Service Personnel (Version A)
Proponent/Author: Jamie Knowles, Amerex Corporation / FEMA

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current Washington State IFC provisions for portable fire extinguisher service personnel include certification requirements, but the applicable certification standard or body may not be clearly identified. This creates uncertainty about what certification satisfies the code requirement.
    B. Summary of Baseline with Changes:
        - Version A clarifies that fire extinguisher service personnel must hold certification from ICC, NAFED (National Association of Fire Equipment Distributors), or equivalent recognized programs. The clarification points to existing certification standards without creating new credential requirements.
    C. Rationale Statement:
        - Clear identification of the applicable certification body ensures that fire extinguisher service work is performed by demonstrably qualified personnel. The proponent, representing a major fire equipment manufacturer and FEMA, identifies this as a life safety clarification that aligns with existing national certification practice.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. No construction requirements are affected. The proposal pertains to service personnel certification, not building systems or construction.
    B. Implementation/Plan Review/Inspection Costs:

- AHJs verifying fire extinguisher service compliance have a clear standard for evaluating service personnel credentials. This simplifies enforcement without imposing new requirements. No cost increase is anticipated.

C. Life-Cycle Costs:
- No new life-cycle costs are imposed. Service personnel who are already ICC/NAFED certified are unaffected. Personnel who currently service extinguishers without recognized certification may need to obtain certification, but this is an existing national industry standard and is not a new regulatory requirement specific to Washington State.

D. Other Costs:
- For service personnel who currently lack recognized certification, the cost of obtaining ICC or NAFED certification would be a one-time compliance cost. However, the proponent characterizes this as clarifying an existing requirement rather than creating a new one.

3. Economic Benefit Analysis

A. Direct Cost Savings:
- Certified service personnel are more likely to correctly service fire extinguishers, reducing the risk of equipment failure in a fire emergency. Functional extinguishers reduce property losses and potential liability costs.

B. Operational Benefits:
- Clear certification standards support consistent quality in fire extinguisher maintenance across Washington State, benefiting building owners, occupants, and fire protection outcomes.

C. Other Benefits:
- Alignment with national certification standards (ICC/NAFED) supports consistent practice for extinguisher service companies operating across multiple jurisdictions.

4. Small Business Economic Impact

A. Small Business Categories Affected (with NAICS codes):
- NAICS 811310: Commercial and Industrial Machinery and Equipment Maintenance and Repair — small fire extinguisher service companies are directly subject to this provision.
- NAICS 238290: Other Building Equipment Contractors — contractors providing fire extinguisher service as part of broader building maintenance contracts.
- NAICS 541350: Building Inspection Services — AHJs verifying service personnel credentials during fire safety inspections.
- NAICS 423860: Hardware and Plumbing and Heating Equipment and Supplies Merchant Wholesalers — fire equipment distributors employing service technicians.

B. Compliance Burden Comparison:
- For service companies whose personnel are already ICC/NAFED certified (the national industry standard), there is no new compliance burden. Small extinguisher service companies whose technicians lack recognized certification may incur compliance costs to obtain certification; these costs would fall more heavily on smaller operations.

C. Potential Disproportion/Mitigation:
- To the extent any technicians lack recognized certification, the cost of obtaining it may fall disproportionately on small one- or two-person service operations. However, because the proponent characterizes this as clarifying an existing national standard rather than creating a new requirement, the burden is mitigated by the fact that certified personnel are already the industry norm.

5. Least Burdensome Alternative
- Clarifying the applicable certification standard by referencing ICC/NAFED (existing national programs) is the least burdensome approach. Creating a new Washington-specific certification program would be more burdensome. Leaving the certification requirement undefined perpetuates inconsistent enforcement.

6. Conclusion/Recommendation
    - The proponent asserts no economic impact on parties already meeting the national certification standard. This clarification of fire extinguisher service personnel certification requirements supports life safety objectives without imposing new costs on certified technicians. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-074
Code Section / Title: IFC 909.12.2 / 512.12.2 — Fire Alarm Wiring, Smoke Control Survivability
Proponent/Author: David Mow, IFC Technical Advisory Group

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - Current IFC provisions for smoke control system wiring survivability require 2-hour fire-rated wiring as the only permissible method. This prescriptive requirement may not account for all available technologies capable of achieving the same survivability performance and may result in higher installation costs than alternatives.

    B. Summary of Baseline with Changes:
        - The proposal adds alternative wiring methods to the smoke control system survivability requirements, providing design flexibility beyond the currently required 2-hour fire-rated wiring. These alternatives can achieve equivalent survivability performance and may reduce installation costs in certain configurations.

    C. Rationale Statement:
        - The proponent characterizes this as a clarification that adds design options without reducing the survivability performance objective. Providing additional compliant methods supports both cost efficiency and design flexibility for smoke control system projects.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. The proposal adds options; no existing method is eliminated. Designers may select the lowest-cost compliant wiring method for their specific project configuration. In some configurations, alternative wiring methods may be less expensive than 2-hour fire-rated wiring, offering a previously unavailable cost reduction.

    B. Implementation/Plan Review/Inspection Costs:
        - Multiple approved wiring methods may require AHJs to evaluate a broader range of submittals, but the performance objective remains clear. No significant increase in plan review burden is anticipated.

    C. Life-Cycle Costs:
        - Different wiring methods may have different maintenance profiles. Designers selecting alternative wiring methods should evaluate life-cycle costs as part of design decisions.

    D. Other Costs:
        - No additional costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - For projects where alternative wiring methods are less costly than 2-hour fire-rated wiring, the proposal enables cost savings. The magnitude varies by project configuration; no specific dollar figure was provided by the proponent.

    B. Operational Benefits:
        - Design flexibility allows engineers to optimize smoke control system designs for their specific building configurations, potentially achieving both cost and performance improvements.

C. Other Benefits:
    - Expanding the toolbox of approved methods supports innovation in fire protection engineering practice.

4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238210: Electrical Contractors — small electrical contractors installing smoke control wiring benefit from additional approved methods that may reduce installation costs.
        - NAICS 541330: Engineering Services — small engineering firms designing smoke control systems gain design flexibility.
        - NAICS 541350: Building Inspection Services — AHJs reviewing smoke control wiring submittals must be familiar with multiple approved methods.
    B. Compliance Burden Comparison:
        - Adding options does not increase the compliance burden. Small contractors may disproportionately benefit from cost-effective wiring alternatives that reduce job costs and improve competitiveness.
    C. Potential Disproportion/Mitigation:
        - No disproportionate negative impact on small businesses is identified. The proposal reduces rather than increases the burden.
5. Least Burdensome Alternative
    - Adding alternative wiring methods while retaining the existing 2-hour fire-rated wiring option is by definition a least-burdensome approach, as it expands rather than restricts the available compliance methods.
6. Conclusion/Recommendation
    - The proponent asserts no economic impact (or a potential cost reduction). Adding alternative smoke-control wiring methods provides design flexibility and potential cost savings without compromising survivability. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-079-R1
Code Section / Title: IFC 3905.3.1 — Extraction Processes, Alternative Methods
Proponent/Author: 2024 IFC Technical Advisory Group

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current IFC provisions for extraction processes (used in cannabis, hemp, and botanical industries) may not explicitly allow the use of alternative methods consistent with the general alternative materials, design, and methods provisions of the IFC. This creates uncertainty about whether alternative extraction methods can be approved through the standard alternative methods pathway.
    B. Summary of Baseline with Changes:
        - The proposal adds language to 3905.3.1 explicitly allowing alternative methods for extraction processes, consistent with other IFC alternative method provisions. No new substantive requirements are imposed; the change clarifies that the existing alternative methods pathway applies to extraction processes.
    C. Rationale Statement:
        - The extraction process industry uses a variety of solvents, equipment, and processes that may not fit neatly within prescriptive code requirements. Explicitly allowing alternative method approvals for extraction processes provides a lawful pathway for innovative and potentially safer extraction technologies.
2. Economic Cost Analysis
    A. Construction Cost Impact:

- The proponent indicated NO economic impact. The proposal provides an additional compliance pathway; no new prescriptive requirements are imposed. Construction costs are not expected to increase.

B. Implementation/Plan Review/Inspection Costs:
- Alternative method applications for extraction processes will require AHJ review and evaluation. This is consistent with how alternative method applications work across the code and does not represent a new type of review burden.

C. Life-Cycle Costs:
- No life-cycle cost impacts beyond existing requirements are identified.

D. Other Costs:
- No other costs are identified.

3. Economic Benefit Analysis

A. Direct Cost Savings:
- Businesses using alternative extraction methods that are safe and effective but do not fit prescriptive code requirements gain a clear pathway to lawful operation, avoiding costly retrofits to prescriptive-code configurations.

B. Operational Benefits:
- Flexibility to use innovative extraction methods supports operational efficiency and competitiveness in the cannabis, hemp, and botanical extraction industries.

C. Other Benefits:
- Access to alternative methods may enable the adoption of safer extraction processes that reduce fire and explosion risk compared to some prescriptive solvent-based methods.

4. Small Business Economic Impact

A. Small Business Categories Affected (with NAICS codes):
- NAICS 541330: Engineering Services — small engineering firms advising extraction operations on code compliance benefit from a clear alternative method pathway.
- NAICS 111998: All Other Miscellaneous Crop Farming — hemp and botanical crop processors using extraction processes are directly affected.
- NAICS 325412: Pharmaceutical Preparation Manufacturing — small botanical extraction businesses may utilize alternative extraction methods.

B. Compliance Burden Comparison:
- No new compliance obligations are created. Small extraction businesses benefit from an expanded compliance pathway. Small businesses may disproportionately benefit because they are more likely to use novel or small-scale extraction methods that do not fit prescriptive requirements.

C. Potential Disproportion/Mitigation:
- No disproportionate negative impact on small businesses is identified.

5. Least Burdensome Alternative
- Explicitly referencing the existing alternative methods pathway is the least burdensome approach to resolving uncertainty about its applicability to extraction processes. Creating separate prescriptive requirements for every extraction method would be more burdensome.

6. Conclusion/Recommendation
- The proponent asserts no economic impact. Adding explicit alternative methods language to 3905.3.1 provides a clear compliance pathway for extraction process operations without imposing new costs. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-080
Code Section / Title: IFC 4101.1 — Temporary Structures, Definition Consistency
Proponent/Author: 2024 IFC Technical Advisory Group

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The IFC 4101.1 definition of "temporary structures" may differ from the IBC definition for the same term, creating inconsistency when projects are reviewed under both codes or when code officials must interpret the scope of IFC temporary structure requirements.
    B. Summary of Baseline with Changes:
        - The proposal aligns the IFC 4101.1 definition of temporary structures with the IBC definition, ensuring consistent interpretation across both codes. No new substantive requirements for temporary structures result.
    C. Rationale Statement:
        - Consistent definitions between the IFC and IBC reduce interpretive confusion for practitioners and code officials who apply both codes. Temporary structures are used for a wide range of events (concerts, fairs, markets, construction trailers), and definitional consistency is important for clear applicability determinations.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. Aligning definitions does not change the substantive requirements for temporary structures. No new construction cost obligations result.
    B. Implementation/Plan Review/Inspection Costs:
        - Consistent definitions reduce ambiguity in permit applications for temporary structures. No increase in enforcement cost is anticipated.
    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified.
    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Consistent definitions reduce legal and interpretive disputes about the scope of the temporary structure provisions, avoiding associated consulting costs.
    B. Operational Benefits:
        - Event organizers, tent contractors, and AHJs benefit from consistent terminology across IFC and IBC.
    C. Other Benefits:
        - Code consistency supports public confidence in the regulatory system.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238290: Other Building Equipment Contractors — tent and temporary structure installers are directly subject to temporary structure provisions.
        - NAICS 711310: Promoters of Performing Arts, Sports, and Similar Events — event promoters using temporary structures benefit from consistent definitional guidance.
    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small event organizers and tent companies benefit equally from definitional clarity.
    C. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
        - Aligning the IFC definition with the existing IBC definition is the most efficient approach to achieving consistency without imposing any new technical requirements.
6. Conclusion/Recommendation

- The proponent asserts no economic impact. Aligning the IFC temporary-structures definition with the IBC definition improves code consistency without imposing additional costs. Adoption is recommended.

Proposal Identification
Log Information: 24-GP1-081
Code Section / Title: IFC4101.8 Refueling of flammable and combustible liquid-fueled equipment
Proponent/Author: Hugo Sotelo/2024 International Fire Code Technical Advisory Group

1. Description & Rationale
    A. Summary of Current Baseline (without proposal)
        - Section 4101.8 of the 2024 IFC regulates refueling of flammable and combustible liquid-fueled equipment and devices. As proposed for amendment, item 3 changes the minimum separation distance for refueling operations conducted in a well-ventilated area from 10 feet to 20 feet from any building or structure.
    B. Summary of Baseline with Changes
        - Under the proposed amendment, refueling operations for liquid-fueled equipment or devices must occur at least 20 feet from any building or structure, rather than 10 feet, while the remaining requirements for trained personnel and equipment cool-down remain unchanged.
    C. Rationale Statement
        - The proposal states that the amendment is intended to align IFC4101.8 with 3108.13.3, which requires refueling in an approved location not less than 20 feet from tents or membrane structures. The stated purpose is to ensure code consistency for temporary membrane-structure contexts addressed in Chapters 31 and 41, rather than to introduce a new operational program or technical system.
2. Economic Cost Analysis
    A. Construction Cost Impact
        - No construction cost estimate was provided by the proponent, and the proposal form indicates there is no economic impact. Because the amendment changes only the required refueling setback distance during operations and does not require new materials, building elements, or permanently installed systems, no direct construction cost per square foot or per dwelling unit is evident from the proposal record.
    B. Implementation / Plan Review / Inspection Costs
        - The proposal does not identify any additional plan review, inspection, reporting, or permitting steps. Any enforcement impact appears minimal because the amendment modifies the operational separation distance from 10 feet to 20 feet and does not create a new inspection program or add measurable review hours for each permit application.
    C. Life-Cycle Costs
        - No life-cycle cost analysis was submitted with the proposal. Based on the amendment text, the change does not require new equipment, replacement cycles, maintenance activities, or recurring capital expenditures; therefore, no measurable increase in life-cycle costs is identified in the available materials.
    D. Other Costs
        - Potential indirect operational effects could occur where a site currently has workable refueling space between 10 and 20 feet from a building but lacks space at 20 feet, which could require a relocation of refueling activity on a temporary basis. However, the proposal record does not quantify these conditions, identify affected occupancy groups or industries, or expressly state that there is no economic impact.
3. Economic Benefit Analysis
    A. Direct Cost Savings

- No direct cost savings were quantified by the proponent. Any economic benefit described in the proposal is tied to improved consistency between code sections, which may reduce ambiguity in interpretation, but the record provides no measurable savings data.

B. Operational Benefits
- The principal operational benefit is consistency between IFC4101.8 and 3108.13.3 for refueling near temporary membrane structures. Greater consistency can improve enforceability and reduce confusion for operators and code officials when temporary heating, cooking, and related liquid-fueled equipment are used in areas associated with tents or membrane structures.

C. Other Benefits
- The proposal identifies a life-safety rationale by increasing the separation distance for refueling activities from buildings or structures. Although the proposal does not quantify risk reduction, a larger setback can reasonably support fire safety objectives by increasing separation between refueling operations and nearby structures.

4. Small Business Economic Impact

A. Small Business Categories Affected
- The proposal does not identify any specific small business categories or NAICS codes as affected, and no small business impact analysis was provided. Businesses that use temporary liquid-fueled equipment near buildings or temporary membrane structures may be subject to the revised operational distance requirement, but the available materials do not indicate industry- or sector-specific impacts.

B. Compliance Burden Comparison
- The amendment applies the same 20-foot refueling distance requirement regardless of business size. On that basis, no differential compliance burden between small businesses and larger entities is identified in the proposal record.

C. Potential Disproportion / Mitigation
- A disproportionate impact on small businesses is not demonstrated in the materials submitted. Because the proposal affects a temporary operational practice rather than installed construction, any burden would likely depend on site layout constraints rather than business size, and no mitigation measures were proposed.

5. Least Burdensome Alternative
- The least burdensome alternative reflected in the record would be to retain the current 10-foot separation distance, but that would not achieve the proponent's stated goal of consistency with 3108.13.3. The proposed 20-foot standard appears to be the narrowest amendment that aligns related fire code provisions without introducing new equipment mandates, permitting requirements, or construction specifications.

6. Conclusion / Recommendation
- Proposal 24-GP1-081 increases the minimum refueling distance for flammable and combustible liquid-fueled equipment from 10 feet to 20 feet from any building or structure in IFC4101.8. Based on the proposal form and the available record, the economic impact appears to be minimal to neutral because the change is operational in nature, does not require new materials or systems, and does not entail additional enforcement time or measurable compliance costs. The primary identified benefit is improved consistency with related IFC provisions for temporary membrane structures and a potentially clearer, more safety-aligned separation standard.

Proposal Identification
Log Number: 24-GP1-083-R1
Code Section / Title: IFC 503.1–503.4.1 — Fire Apparatus Access Roads

Proponent/Author: Ricky Campbell / 2024 IFC Technical Advisory Group

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current IFC 503.1–503.4.1 provisions for fire apparatus access roads are prescriptive in certain respects, potentially limiting design flexibility for access road configurations, surface materials, and turning radii. This can constrain site design options and impose costs where alternative configurations would achieve equivalent fire apparatus access.

    B. Summary of Baseline with Changes:
        - The proposal revises fire apparatus access road provisions to provide greater design flexibility, including alternative configurations, surface material options, and turning radii specifications. No new requirements that increase cost are imposed; rather, the revision expands the range of compliant configurations.

    C. Rationale Statement:
        - Design flexibility in fire apparatus access roads allows site planners and AHJs to achieve fire access objectives through a wider range of configurations, reducing the cost and land-use impact of access road requirements while maintaining fire department operational access.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact. The proposal provides design flexibility without imposing new requirements. To the extent that alternative configurations (materials, dimensions, turning radii) are less costly than previously required prescriptive configurations, the proposal enables cost reductions. No cost increase is anticipated.

    B. Implementation/Plan Review/Inspection Costs:
        - AHJs reviewing fire access road designs will encounter a broader range of potentially compliant configurations. AHJs must evaluate alternative configurations against the fire access performance objectives, which may require somewhat more detailed review in some cases. No significant increase in review burden is anticipated, as alternative configuration review is consistent with existing AHJ responsibilities.

    C. Life-Cycle Costs:
        - Alternative surface materials may have different maintenance profiles than traditional paved access roads. Designers selecting alternative materials should evaluate life-cycle maintenance costs as part of the design decision.

    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Design flexibility may reduce access road construction costs by allowing less expensive surface materials or more efficient configurations that require less land area and civil work. No specific dollar savings were quantified by the proponent.

    B. Operational Benefits:
        - More flexible access road standards support better site design and may reduce conflicts between fire access requirements and other land uses (parking, landscaping, stormwater management).

    C. Other Benefits:
        - Fire apparatus access remains the primary design objective; the proposal does not compromise fire department operational access while allowing more efficient design solutions.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):

- NAICS 541330: Engineering Services — small civil and fire protection engineers designing site access plans benefit from expanded design flexibility.
- NAICS 237310: Highway, Street, and Bridge Construction — small civil contractors constructing fire access roads may encounter both opportunities (alternative materials) and fewer constraints.
- NAICS 541350: Building Inspection Services — AHJs reviewing fire access road designs must be familiar with expanded compliance options.

B. Compliance Burden Comparison:
- The proposal reduces rather than increases compliance burden. Small developers and site planners benefit from greater flexibility in meeting fire access requirements. Small businesses may disproportionately benefit from reduced civil construction costs associated with flexible access road standards.

C. Potential Disproportion/Mitigation:
- No disproportionate negative impact on small businesses is identified. The proposal reduces burden overall.

5. Least Burdensome Alternative
- Expanding compliance options while maintaining fire access performance objectives is by definition less burdensome than the prescriptive-only status quo. The proposal correctly targets regulatory burden reduction without compromising life safety.

6. Conclusion/Recommendation
- The proponent asserts no economic impact (or a potential cost reduction). Providing design flexibility for fire apparatus access roads reduces compliance costs without compromising fire access objectives. Adoption is recommended to reduce the regulatory burden.

Proposal Identification
Log Number: IFC-2024-033
Code Section / Title: IFC 202 and 510 — Emergency Responder Communication Coverage
Proponent/Author: 2024 IFC Technical Advisory Group

1. Description & Rationale

A. Summary of Current Baseline (without proposal):
- Washington State IFC 202 and 510 address emergency responder radio coverage (in-building radio amplification) requirements. The current IFC terminology may not be fully aligned with NFPA 1225 definitions and terminology, creating potential inconsistency between the two standards when applied to in-building BDA (bidirectional amplifier) system design and review.

B. Summary of Baseline with Changes:
- The proposal correlates IFC emergency responder radio coverage provisions and definitions with NFPA 1225 terminology. No new substantive requirements are imposed; the revision achieves terminological consistency between the IFC and NFPA 1225.

C. Rationale Statement:
- NFPA 1225 is the primary national standard for in-building emergency responder communication enhancement (ERRCS). When IFC terminology diverges from NFPA 1225 terminology, BDA system designers, AHJs, and wireless telecommunications contractors must navigate potentially conflicting definitions. Correlation reduces this burden.

2. Economic Cost Analysis

A. Construction Cost Impact:
- The proponent indicated NO economic impact. This is a terminological correlation; no new technical requirements for BDA systems are imposed. No construction cost changes result.

B. Implementation/Plan Review/Inspection Costs:

- Consistent terminology between the IFC and NFPA 1225 simplifies plan review for BDA system installations. AHJs can apply a single definitional framework across both standards.

C. Life-Cycle Costs:
- No life-cycle cost impacts are identified.

D. Other Costs:
- No other costs are identified.

3. Economic Benefit Analysis
   A. Direct Cost Savings:
      - Consistent terminology reduces the risk of design errors driven by definitional mismatches between the IFC and NFPA 1225, potentially avoiding costly design revisions.
   B. Operational Benefits:
      - BDA system designers and AHJs benefit from consistent definitions that support accurate and efficient plan review.
   C. Other Benefits:
      - In-building emergency responder communication systems are critical life safety infrastructure; terminological clarity supports reliable system design and review.
4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
      - NAICS 238210: Electrical Contractors — small contractors installing BDA systems benefit from consistent code and standard terminology.
      - NAICS 517312: Wireless Telecommunications Carriers — BDA system providers and integrators benefit from aligned definitions.
      - NAICS 541330: Engineering Services — small engineering firms designing ERRCS systems benefit from consistent terminology.
   B. Compliance Burden Comparison:
      - No new compliance obligations are created. Small BDA system contractors and engineers benefit equally from improved terminological consistency.
   C. Potential Disproportion/Mitigation:
      - No disproportionate impact on small businesses is identified.
5. Least Burdensome Alternative
   - Correlating IFC terminology with NFPA 1225 is the most efficient approach to achieving consistency. Creating Washington-specific definitions that differ from both the IFC and NFPA 1225 would be more burdensome.
6. Conclusion/Recommendation
   - The proponent asserts no economic impact. Correlating IFC emergency responder communication terminology with NFPA 1225 definitions improves code consistency without imposing new compliance costs. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-091-R5
Code Section / Title: IFC 903.2.8.4, 903.2.8.5 (New); IBC Tables 504.3/504.4 — Group R-3 Occupancies, NFPA 13D Sprinkler Credit
Proponent/Author: Ken Brouillette, City of Seattle

1. Description & Rationale
   A. Summary of Current Baseline (without proposal):
      - Under current Washington State IFC/IBC provisions, Group R-3 occupancies (one- and two-family dwellings, townhouses) that seek height and area table increases tied to automatic sprinkler protection must install NFPA 13 systems (the commercial automatic sprinkler standard). NFPA 13 is a more comprehensive and costly system than NFPA 13D (the residential sprinkler standard), which is specifically designed for one- and two-family dwellings. The

higher cost of NFPA 13 systems in residential applications may discourage developers from utilizing the height/area bonus provisions, reducing housing density potential.

B. Summary of Baseline with Changes:
   - New 903.2.8.4 and 903.2.8.5 add provisions allowing Group R-3 occupancies to satisfy the height/area table (IBC Tables 504.3/504.4) sprinkler requirements using an NFPA 13D system rather than an NFPA 13 system, when qualifying conditions are met. This lowers the cost of the sprinkler system required to obtain height/area table benefits for residential occupancies.

C. Rationale Statement:
   - The proponent cites NFIRS data showing that residential sprinkler systems (NFPA 13D standard) provide 87–92% fire containment effectiveness. An NFPA 13D system in a Group R-3 occupancy provides a high level of fire protection appropriate for the occupancy type, at substantially lower cost than an NFPA 13 system. Allowing NFPA 13D to satisfy the sprinkler credit for height/area table increases achieves the fire protection objective while reducing the financial barrier to sprinkler installation, potentially increasing sprinkler adoption rates in new residential construction.

2. Economic Cost Analysis
   A. Construction Cost Impact:
      - The proponent confirmed that this proposal DECREASES construction cost. NFPA 13D residential sprinkler systems are substantially less costly than NFPA 13 commercial systems in residential occupancies. The cost difference stems from reduced pipe sizing, reduced water demand, simpler system design, and reduced installation complexity inherent in the NFPA 13D standard. No specific dollar per-square-foot figures were provided by the proponent, but the cost differential between NFPA 13 and NFPA 13D systems in residential applications is well-established in the fire protection industry.
      - For developers who choose to utilize the height/area table increase provisions, the adoption of this proposal reduces the sprinkler system cost compared to the current NFPA 13 requirement. For developers who do not seek height/area increases, no change results.

   B. Implementation/Plan Review/Inspection Costs:
      - NFPA 13D system submittals are generally less complex than NFPA 13 system submittals, potentially reducing plan review time and cost for residential sprinkler projects. AHJs familiar with NFPA 13D review from single-family residential projects will encounter a familiar system type.

   C. Life-Cycle Costs:
      - NFPA 13D systems have lower life-cycle maintenance costs than NFPA 13 systems due to their simpler design and fewer components. This provides additional ongoing cost savings to building owners over the life of the system.

   D. Other Costs:
      - No additional costs are identified. The proposal reduces rather than increases costs for the applicable project category.

3. Economic Benefit Analysis
   A. Direct Cost Savings:
      - Developers of Group R-3 occupancies seeking height/area table benefits realize direct construction cost savings by installing NFPA 13D rather than NFPA 13 systems. The magnitude of savings will depend on the size and configuration of the project, but the directional impact is unambiguously cost-reducing.
      - Building owners experience lower life-cycle maintenance costs for NFPA 13D systems.

   B. Operational Benefits:
      - The proponent cites NFIRS data showing 87–92% fire containment effectiveness for residential sprinkler systems. At this performance level, NFPA

13D systems provide meaningful fire protection benefit for residential occupants despite their lower cost.
    - Increased sprinkler adoption in new residential construction (facilitated by lower cost) supports broader fire loss reduction across the housing stock.

C. Other Benefits:
    - By reducing the financial barrier to sprinkler installation for height/area table benefits, the proposal may increase the number of residential projects that incorporate sprinkler systems, thereby improving overall residential fire safety in Washington State.
    - Increased housing density enabled by height/area table utilization (now at lower sprinkler cost) supports housing production objectives in Washington State.

4. Small Business Economic Impact

A. Small Business Categories Affected (with NAICS codes):
    - NAICS 238220: Fire Sprinkler Contractors — small sprinkler contractors may see changes in system scope (NFPA 13D vs. 13) for residential projects; NFPA 13D installations are simpler and may be more accessible to smaller contractors.
    - NAICS 541330: Engineering Services — small engineering firms designing residential sprinkler systems benefit from a less complex design standard for applicable projects.
    - NAICS 236115: New Single-Family Housing Construction — small homebuilders and developers of Group R-3 occupancies directly benefit from reduced sprinkler system costs when using height/area table provisions.
    - NAICS 236116: New Multifamily Housing Construction — small multifamily residential developers pursuing R-3-occupancy configurations benefit similarly.

B. Compliance Burden Comparison:
    - The proposal reduces rather than increases compliance burden. Small residential builders and developers — who are disproportionately represented among R-3 occupancy developers — benefit most directly from the cost reduction.

C. Potential Disproportion/Mitigation:
    - No disproportionate negative impact on small businesses is identified. Small residential builders may disproportionately benefit because the share of the total project cost accounted for by residential sprinkler costs is higher for smaller projects.

5. Least Burdensome Alternative
    - Allowing NFPA 13D (the residential-appropriate standard) to satisfy the height/area table sprinkler credit directly addresses the disproportionate cost burden of requiring NFPA 13 in residential occupancies. This is the least burdensome approach to achieving both the sprinkler protection and height/area flexibility objectives.

6. Conclusion/Recommendation
    - This proposal has a confirmed positive economic impact: it reduces construction and life-cycle costs for Group R-3 occupancies that use the height/area table provisions by allowing the less costly NFPA 13D sprinkler system instead of NFPA 13. The proponent cites NFIRS data (87–92% fire-containment effectiveness) that support the life-safety adequacy of NFPA 13D systems. The proposal reduces financial barriers to sprinkler adoption, supports small residential builders, and may increase overall residential sprinkler coverage. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-102-R1
Code Section / Title: IFC WAC 51-54A-0904 — Alternative Automatic Fire-Extinguishing Systems, Labor Standards

Proponent/Author: Ricky Campbell, UA Local 699

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - The current IFC WAC 51-54A-0904 provisions for alternative automatic fire-extinguishing systems do not include an explicit cross-reference to the applicable Washington State WAC labor standards governing installation of these systems. This creates a gap between the fire code technical requirements and the existing state labor law framework.

    B. Summary of Baseline with Changes:
        - The proposal adds a cross-reference to the applicable Washington State WAC labor standards within the alternative automatic fire-extinguishing systems provisions. No new technical requirements for the systems themselves are imposed; the cross-reference connects the fire code to existing labor regulations.

    C. Rationale Statement:
        - Washington State has existing WAC labor standards governing the installation of fire suppression and extinguishing systems. Referencing these standards in the IFC ensures that code users — including building owners, contractors, and AHJs — are aware of the applicable labor requirements and can verify compliance as part of the permitting and inspection process.
2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact from a technical standpoint. The cross-reference points to existing WAC labor standards that are already legally applicable; no new technical or labor requirements are created by this cross-reference. Construction costs under existing labor law remain unchanged.

    B. Implementation/Plan Review/Inspection Costs:
        - AHJs may include labor standard compliance verification as part of alternative fire-extinguishing system inspections; however, this is consistent with existing WAC requirements and does not represent a new regulatory obligation. No significant increase in enforcement cost is anticipated.

    C. Life-Cycle Costs:
        - No life-cycle cost impacts are identified. The cross-reference does not alter system design, installation requirements, or maintenance obligations.

    D. Other Costs:
        - No other costs are identified.
3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Ensuring that fire-extinguishing system installations meet applicable labor standards reduces the risk of substandard installations that may require costly remediation or increase liability exposure.

    B. Operational Benefits:
        - Clear cross-referencing of labor standards ensures that all parties in the permitting and installation process are aware of applicable requirements, reducing the risk of inadvertent non-compliance.

    C. Other Benefits:
        - Connecting fire code provisions with applicable labor standards supports the integrity of the overall regulatory framework for fire suppression system installation in Washington State.
4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238220: Fire Sprinkler Contractors — small fire suppression contractors are directly subject to both the fire code and WAC labor standards for system installation.

- NAICS 238290: Other Building Equipment Contractors — small contractors installing alternative fire-extinguishing systems are similarly affected.
- NAICS 541330: Engineering Services — small engineering firms advising on alternative system installations should be aware of applicable labor standards.

B. Compliance Burden Comparison:
- Because the cross-reference points to existing WAC requirements that are already legally applicable, no new compliance burden is created. The cross-reference may benefit small contractors by making them aware of existing requirements they are already obliged to follow.

C. Potential Disproportion/Mitigation:
- No disproportionate impact on small businesses is identified. The cross-reference to existing requirements does not change the relative compliance burden between large and small contractors.

5. Least Burdensome Alternative
- A cross-reference to existing, applicable WAC labor standards is the least burdensome approach to connecting the fire code to existing labor requirements. It creates no new obligations beyond awareness of currently applicable law.

6. Conclusion/Recommendation
- The proponent asserts no economic impact. This proposal adds a cross-reference to existing WAC labor standards in the alternative automatic fire-extinguishing systems provisions, creating no new technical or cost requirements. Adoption is recommended to improve code quality and regulatory coherence.

Proposal Identification
Log Number: 24-GP1-117-R2
Code Section / Title: IFC Chapter 12 / 1207 — Electrical Energy Storage Systems, Comprehensive Correlation
Proponent/Author: Ken Brouillette, City of Seattle

1. Description & Rationale

A. Summary of Current Baseline (without proposal):
- The current Washington State IFC Chapter 12 / 1207 ESS provisions contain redundant language, unclear requirements, and organizational inconsistencies that create ambiguity for designers and AHJs reviewing energy storage system installations. This ambiguity results in inefficiency in the design and plan review process.

B. Summary of Baseline with Changes:
- The proposal undertakes a comprehensive correlation and reorganization of Chapter 12 / 1207 ESS provisions. It eliminates redundant language, clarifies requirements, and reorganizes the chapter to improve usability. The expectation is that design time and AHJ plan review time for ESS projects will be reduced as a result of greater clarity.

C. Rationale Statement:
- Energy storage systems are a rapidly growing installation category in Washington State. The current Chapter 12/1207 provisions, accumulated through multiple amendment cycles, have become difficult to navigate. Comprehensive reorganization and clarification — without changing substantive requirements — reduces the regulatory burden on designers, AHJs, and ESS operators while maintaining the same technical standards.

2. Economic Cost Analysis

A. Construction Cost Impact:
- The proponent indicated NO economic impact from a construction cost standpoint. Substantive technical requirements are not changed; the

reorganization and clarification do not mandate new equipment or different construction methods. No construction cost increase results.

B. Implementation/Plan Review/Inspection Costs:
    - The proponent explicitly identifies a reduction in design and plan review time as an expected benefit. Clearer, more navigable code provisions reduce the time designers spend interpreting requirements and the time AHJs spend reviewing submittals. This represents a direct reduction in compliance-related costs, though no specific dollar savings were quantified.

C. Life-Cycle Costs:
    - No life-cycle cost impacts are identified. Existing ESS maintenance and inspection obligations remain unchanged.

D. Other Costs:
    - Designers and AHJs will need to familiarize themselves with the reorganized chapter structure. This one-time orientation cost is expected to be minimal and quickly recovered through efficiency gains in day-to-day code application.

3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - Reduced design time per ESS project translates to direct cost savings for ESS system designers and building owners. The magnitude of savings depends on the complexity and frequency of ESS permit applications in each jurisdiction; in jurisdictions with high ESS permitting activity (e.g., Seattle), the aggregate savings may be substantial.
        - Reduced plan review time benefits both public AHJs (reducing government labor cost per review) and applicants (reducing review cycle time and associated carrying costs).

    B. Operational Benefits:
        - A well-organized, clearly written ESS code chapter supports consistent interpretation across jurisdictions, reducing the risk of conflicting determinations for ESS projects that span multiple AHJ territories.

    C. Other Benefits:
        - Comprehensive code organization for the ESS chapter supports Washington State's energy storage deployment objectives by reducing the regulatory friction associated with ESS installations.

4. Small Business Economic Impact
    A. Small Business Categories Affected (with NAICS codes):
        - NAICS 238210: Electrical Contractors — small electrical contractors installing ESS systems benefit from clearer, more navigable code requirements.
        - NAICS 221122: Electric Power Distribution — small utilities and ESS operators benefit from reduced permit processing time and clearer compliance pathways.
        - NAICS 541330: Engineering Services — small engineering firms designing ESS installations benefit most directly from reduced design ambiguity and associated time savings.
        - NAICS 541350: Building Inspection Services — AHJs benefit from reduced plan review burden per ESS project.

    B. Compliance Burden Comparison:
        - No new compliance obligations are created. Small businesses may disproportionately benefit from reduced design and review time because compliance costs represent a larger share of project value for smaller ESS installations.

    C. Potential Disproportion/Mitigation:
        - No disproportionate negative impact on small businesses is identified. The comprehensive reorganization benefits all regulated parties, with potentially proportionally greater benefits for small businesses, where compliance overhead is a higher proportion of project costs.

5. Least Burdensome Alternative

- Comprehensive reorganization and clarification — as opposed to piecemeal section-by-section corrections — is the most effective approach to achieving code clarity for the ESS chapter. Piecemeal corrections would take longer to achieve the same result and would impose ongoing interpretive burdens in the interim.

6. Conclusion/Recommendation
    - The proponent asserts no economic impact in terms of new costs but explicitly anticipates a reduction in design and AHJ review costs. This comprehensive correlation of Chapter 12/1207 ESS provisions improves code usability, reduces regulatory friction for ESS installations, and supports Washington State's clean energy deployment objectives. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-119-R3
Code Section / Title: IFC WAC 51-54A-8000 — Internationally-Standardized Exit Sign Pictogram
Proponent/Author: Carsten Jonas (Individual)

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - Washington State IFC, consistent with the model IFC, currently requires text-based "EXIT" signs at required egress locations. The use of internationally standardized ISO exit sign pictograms (the running figure symbol, ISO 7010-E001/ANSI/NFPA 170) is not currently recognized as an alternative to the text-based sign in the Washington State adopted code.

    B. Summary of Baseline with Changes:
        - The proposal adds WAC 51-54A-8000 to allow the internationally standardized ISO running figure exit sign pictogram as an alternative to text-based "EXIT" signs. The proposal does not change the required number or locations of exit signs; it provides an alternative sign format. The proponent represents that pictogram sign products are available at a cost equivalent to or less than text-based signs.

    C. Rationale Statement:
        - Washington State has a large and growing population of non-English-speaking residents and visitors. Text-based "EXIT" signs may not be immediately comprehensible to individuals who do not read English. The internationally standardized ISO running figure pictogram is recognized in more than 100 countries and communicates egress direction without language dependence. Allowing the pictogram as an alternative improves the life-safety effectiveness of exit signage for non-English speakers without incurring additional cost.

2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent indicated NO economic impact, specifically noting that pictogram sign products are available at cost equivalent to or less than text-based "EXIT" signs. The proposal does not change the required number of exit signs or their locations; it only provides an alternative sign format. No increase in construction cost is anticipated.

    B. Implementation/Plan Review/Inspection Costs:
        - AHJs reviewing exit sign compliance will need to accept pictogram signs as an alternative format. This does not materially change the plan review process; verifying sign location and illumination compliance is the same regardless of sign format. No significant change in inspection cost is anticipated.

    C. Life-Cycle Costs:
        - Pictogram signs have equivalent or lower life-cycle costs relative to text signs, based on the proponent's representation of comparable product pricing. Maintenance and replacement costs are not expected to differ materially.

    D. Other Costs:

- No other costs are identified. Designers and AHJs will need to be familiar with the ISO pictogram standard, which is widely recognized and already in use in many jurisdictions and commercial environments globally.

3. Economic Benefit Analysis
   A. Direct Cost Savings:
      - For building owners who choose to use pictogram signs (the choice is voluntary), costs are equal to or lower than text signs. No mandatory cost increase results for any party.
   B. Operational Benefits:
      - Pictogram exit signs communicate egress direction to all building occupants regardless of language proficiency, improving the reliability of the egress notification system during fire emergencies.
   C. Other Benefits:
      - Pictogram signs may reduce the time non-English speakers take to identify and act on egress direction cues in emergency situations. For buildings with high proportions of non-English-speaking occupants (e.g., hotels, international transit facilities, healthcare facilities serving diverse populations, manufacturing facilities with multilingual workforces), this is a meaningful life safety improvement.
      - Allowing the ISO pictogram aligns Washington State with international practice and with the signage systems used in many commercial environments where the pictogram is already the standard.
4. Small Business Economic Impact
   A. Small Business Categories Affected (with NAICS codes):
      - NAICS 238210: Electrical Contractors — small electrical contractors installing exit sign systems are unaffected in terms of cost; they gain an additional compliant sign type option.
      - NAICS 561990: All Other Support Services — small sign installation and building service companies have an additional product option.
      - NAICS 541330: Engineering Services — small engineering firms specifying exit sign systems gain an additional code-compliant option to offer clients.
   B. Compliance Burden Comparison:
      - The proposal adds an option rather than a requirement. No business of any size is required to change existing exit sign practices. Small businesses benefit from having an additional compliant sign option at no additional cost.
   C. Potential Disproportion/Mitigation:
      - No disproportionate negative impact on small businesses is identified. The proposal is permissive rather than mandatory; it creates no new compliance obligations.
5. Least Burdensome Alternative
   - Allowing the internationally-standardized pictogram as an alternative — without mandating its use — is by definition the least burdensome approach. Building owners retain full freedom to use text-based "EXIT" signs if preferred.
6. Conclusion/Recommendation
   - The proponent asserts no economic impact. The proposal allows an internationally recognized exit sign pictogram as a voluntary alternative to text-based signs at an equivalent or lower cost. It addresses Washington State's unique multilingual population, improving the life-safety effectiveness of exit signage for non-English-speaking occupants without imposing any new compliance costs. Adoption is recommended.

Proposal Identification
Log Number: 24-GP1-029
Code Section / Title: IFC 5306.5 — Medical gas systems and equipment
Proponent/Author: 2024 International Fire Code Technical Advisory Group (TAG)

1. Description & Rationale
   A. Summary of Current Baseline (without proposal):

- Under current Washington amendments, 5306.5 contains state-specific language addressing maintenance and testing of medical gas systems in accordance with NFPA 99 and the general provisions of Chapter 53.

B. Summary of Baseline with Changes:
- The proposal deletes the Washington amendment and reverts to the 2024 IFC base text for 5306.5, which requires medical gas systems and equipment to be installed, tested, labeled, used, and maintained in accordance with NFPA 99 and Chapter 53, without any additional Washington-specific modification.

C. Rationale Statement:
- The proponent states that the existing state amendment is no longer needed and that reverting to the base IFC language clarifies the code and maintains reliance on NFPA 99 for medical gas systems and equipment, with no expected cost increase.

2. Economic Cost Analysis

A. Construction Cost Impact:
- The proposal form states that reverting to base IFC language 'will not increase the cost,' and no cost-per-square-foot or per-facility estimates are provided.
- Because both the current and proposed language reference NFPA 99 for installation, testing, and maintenance, no additional materials, equipment, or construction tasks are introduced, so direct construction cost impacts appear negligible.

B. Implementation/Plan Review/Inspection Costs:
- The proponent does not identify any added plan review or inspection hours related to this change.
- Enforcement remains focused on NFPA 99 compliance for medical gas systems; reverting to base text is expected to simplify interpretation rather than expand enforcement scope, so additional review or inspection time per permit is unlikely.

C. Life-Cycle Costs:
- No life-cycle cost analysis was submitted.
- Because the proposal does not require new equipment, altered maintenance intervals, or different testing frequencies beyond those already prescribed by NFPA 99, no incremental life-cycle costs are evident.

D. Other Costs:
- The proposal does not identify other qualitative costs for owners, occupants, or healthcare facilities, and staff review does not indicate new recurring operational obligations arising from the reversion to base language.

3. Economic Benefit Analysis

A. Direct Cost Savings:
- No direct cost savings are quantified in the proposal.
- Potential minor administrative savings may arise from eliminating a duplicative or unnecessary state amendment and relying solely on NFPA 99 and the IFC text, but these savings are not measured.

B. Operational Benefits:
- Aligning Washington's language with the base IFC can reduce confusion for designers, facility operators, and inspectors who already work with NFPA 99, potentially reducing time spent reconciling state and model text.

C. Other Benefits:

- The proposal supports code clarity by eliminating a redundant amendment, which can improve consistency of enforcement and reduce the risk of conflicting interpretations between state and model provisions.

4. Small Business Economic Impact
    A. Small Business Categories Affected:
        - The proposal does not identify specific small business categories or NAICS codes as affected.
        - Medical gas systems are primarily associated with health care occupancies; however, reverting to base IFC language does not introduce new technical requirements, so no targeted impact on specific small-business sectors is evident.
    B. Compliance Burden Comparison:
        - The requirements for installation, use, and maintenance of medical gas systems and equipment under NFPA 99 apply equally to facilities regardless of ownership size.
        - Because the proposal removes a state amendment rather than adding obligations, there is no indication of a differential burden between small and large entities.
    C. Potential Disproportion/Mitigation:
        - No disproportionate impact on small businesses is identified in the proposal materials, and no mitigation measures are proposed or appear necessary.
5. Least Burdensome Alternative
    - The primary alternative would be to retain the existing Washington amendment, but the proponent indicates it is no longer needed and that reverting to base IFC language will not increase cost.
    - Given that the base IFC already references NFPA 99 for both new and existing systems, adoption of the model text appears to be the least burdensome approach that maintains appropriate safety standards while simplifying the code.
6. Conclusion/Recommendation
    - Proposal 24-GP1-029 deletes the Washington amendment to IFC 5306.5 and restores the 2024 IFC base language for medical gas systems and equipment. Based on the proposal record, the economic impact is neutral because no new materials, systems, or enforcement activities are introduced; the change primarily improves code clarity and consistency without measurable cost increases.

Proposal Identification
Log Number: 24-GP1-082-R1
Code Section / Title: IFC 4106.6 — Solid fuel in mobile food preparation vehicles
Proponent/Author: 2024 International Fire Code Technical Advisory Group (TAG)

1. Description & Rationale
    A. Summary of Current Baseline (without proposal):
        - Under the 2024 IFC as adopted, 4106.6 regulates solid fuel use in mobile food preparation vehicles but does not specifically require installation of a listed carbon monoxide (CO) alarm when solid fuels are used.
    B. Summary of Baseline with Changes:
        - The proposal requires that, where solid fuels are used within mobile food preparation vehicles, a listed CO alarm must be installed in accordance with the manufacturer’s recommendations.

C. Rationale Statement:
    - The stated rationale is to address a critical life-safety need by protecting owners and operators from hazardous CO accumulation associated with solid fuel appliances used for mobile food cooking, especially when equipment is stored after use or during transport.

2. Economic Cost Analysis
    A. Construction Cost Impact:
        - The proponent identifies an upfront cost for a battery-powered CO detector, with the highest cost found online at 60 dollars and an assumed ten-year life span.
        - No additional construction or vehicle modification is required beyond installing a listed CO alarm per the manufacturer's instructions, so construction cost impacts are limited to the purchase and installation of the alarm device.
    B. Implementation/Plan Review/Inspection Costs:
        - The proposal does not identify additional plan review or inspection hours, and no new permitting category is proposed.
        - Any incremental enforcement cost would likely consist of verifying the presence of a listed CO alarm during existing mobile food preparation vehicle inspections, which should add minimal time per inspection and can be integrated into current checklists.
    C. Life-Cycle Costs:
        - The proponent provides a simple life-cycle table indicating a single 60-dollar expenditure in 2025 for a CO detector with a ten-year service life and no additional discounted costs in subsequent years.
        - Over a ten-year horizon, the life-cycle cost of compliance is therefore approximately 60 dollars per vehicle, excluding any battery replacement or device replacement beyond the stated life span.
    D. Other Costs:
        - The proposal does not quantify potential indirect costs such as training or minor operational adjustments, and no other ongoing costs are identified in the materials.

3. Economic Benefit Analysis
    A. Direct Cost Savings:
        - No direct monetary cost savings are quantified.
        - Potential avoided costs—such as medical expenses, lost business, or liability from CO exposure incidents—are qualitatively implied but not estimated.
    B. Operational Benefits:
        - Installation of CO alarms provides an early warning of hazardous CO accumulation within mobile food preparation vehicles, enhancing occupant safety during cooking, storage, and transport of solid fuel equipment.
    C. Other Benefits:
        - The proposal notes that burning solid fuels like wood or coal produces smoke and CO that can cause respiratory issues, including asthma and pneumonia, and implies health protection benefits for workers and the public.
        - Reducing the likelihood of CO incidents can also support business continuity and public confidence in mobile food operations.

4. Small Business Economic Impact
    A. Small Business Categories Affected:

- The primary affected entities are mobile food preparation businesses, many of which operate small businesses.
- Each affected unit using solid fuel will incur the one-time cost of a listed CO alarm; no NAICS codes are specified in the proposal.

B. Compliance Burden Comparison:
- The requirement applies uniformly to all mobile food preparation vehicles using solid fuel, regardless of business size.
- Because the cost per vehicle is relatively low and the same for small and large operators, there is no clear differential compliance burden indicated in the record.

C. Potential Disproportion/Mitigation:
- Although many mobile food businesses are small enterprises, the modest one-time cost per vehicle and long service life of the alarm limit the potential for disproportionate economic impact.
- No specific mitigation measures are proposed, and none appear necessary based on the available cost information.

5. Least Burdensome Alternative
- Alternatives could include relying solely on existing ventilation and equipment requirements without mandating CO alarms, but this would not address the identified life-safety concern about CO accumulation in enclosed mobile units.
- Requiring a listed CO alarm is a targeted, low-cost safety measure that directly addresses the hazard with minimal operational change, suggesting it is the least-burdensome approach to achieving the safety objective.

6. Conclusion/Recommendation
- Proposal 24-GP1-082-R1 amends IFC 4106.6 to require a listed CO alarm in mobile food preparation vehicles that use solid fuel, at an estimated cost of about 60 dollars per vehicle over a ten-year period.
- The economic impact is modest and focused on a one-time equipment purchase, while the potential life-safety and health benefits from early CO detection are significant; overall, the cost-benefit balance favors adoption from a safety standpoint.

Log Number: 24-GP1-084-R2
Code Section / Title: WAC 51-54A-0202, WAC 51-54A-0510 — General definitions; Emergency responder communication coverage
Proponent/Author: 2024 International Fire Code Technical Advisory Group (TAG)

1. Description & Rationale

A. Summary of Current Baseline (without proposal):
- Existing Washington amendments to IFC 202 and 510 define emergency responder communication terminology and establish requirements for emergency responder communication coverage, including performance criteria, system design, testing, and permitting for in-building communication enhancement systems.

B. Summary of Baseline with Changes:
- The proposal revises and expands several definitions and updates 510 to better correlate with NFPA 1225, including clarifying when radio frequency (RF) evaluations are required, listing requirements, performance metrics,

system design provisions, monitoring, testing, and documentation requirements.
    - The proposal also clarifies exceptions, technical design criteria, and responsibilities of the fire code official and frequency license holders, while maintaining that improvement of the public safety communications system itself is not required by this section.
  C. Rationale Statement:
    - The proponent identifies the purpose as code correlation with NFPA 1225 and clarification of emergency responder communication system requirements to align state amendments with current national standards and federal licensing practices.
    - The economic statement in the proposal indicates that the code change 'will not increase or decrease the cost of construction' because it is primarily a correlation and clarification update rather than a new construction mandate.
2. Economic Cost Analysis
  A. Construction Cost Impact:
    - The proposal form explicitly states that the code change 'will not increase or decrease the cost of construction' and does not provide cost-per-square-foot estimates.
    - The revised language continues to require emergency responder communication enhancement systems where already required by the IFC and Chapter 11; the changes focus on terminology, performance metrics, and correlation with NFPA 1225 rather than introducing new occupancies or thresholds that would newly trigger system installation.
  B. Implementation/Plan Review/Inspection Costs:
    - The amendments maintain existing permitting provisions in 510.3 and related inspection/testing requirements, while clarifying documentation, RF evaluation, and acceptance testing procedures.
    - Because the proposal aligns state language with NFPA 1225 and clarifies expectations, any change in plan review or inspection time is expected to be marginal and may be offset by clearer technical criteria that reduce re-review or redesign.
  C. Life-Cycle Costs:
    - No life-cycle cost analysis is included in the proposal.
    - The underlying requirement to install, operate, and maintain ERCES where mandated already exists; updating definitions and performance references to match NFPA 1225 does not, by itself, add new equipment categories or maintenance obligations beyond those generally associated with compliant ERCES systems.
  D. Other Costs:
    - The proposal does not identify additional qualitative costs to owners, occupants, or public agencies.
    - Any incremental design or engineering effort needed to meet clarified criteria reflects alignment with current industry practice and is not presented as a new economic burden.
3. Economic Benefit Analysis
  A. Direct Cost Savings:
    - No direct cost savings are quantified.

- Potential administrative or design savings may arise from clearer correlation with NFPA 1225 and listing requirements, which can reduce confusion and rework for system designers and code officials, but these are not measured.

B. Operational Benefits:
- Aligning Washington amendments with NFPA 1225 and clearly defining responsibilities for the fire code official and frequency license holders can improve reliability and performance of ERCES installations, supporting more effective emergency responder communication in buildings.
- Clearer testing, monitoring, and documentation provisions may reduce the risk of system failure or non-performance during emergencies, benefiting both public safety agencies and building occupants.

C. Other Benefits:
- The proposal supports consistency with federal licensing requirements and national consensus standards, which benefits multi-jurisdictional designers and owners by reducing variation between Washington and other jurisdictions.
- Improved correlation can also reduce disputes about technical criteria, helping streamline project approvals.

4. Small Business Economic Impact

A. Small Business Categories Affected:
- Buildings that require ERCES may be owned or occupied by entities of various sizes, including some small businesses, but the proposal does not identify specific NAICS sectors.
- Because the underlying requirement to provide ERCES in certain buildings is unchanged, the proposal does not newly subject additional small-business occupancies to system installation solely due to the text revisions.

B. Compliance Burden Comparison:
- The technical and performance requirements for ERCES apply uniformly to all covered buildings irrespective of ownership size.
- The correlation with NFPA 1225 is intended to clarify expectations rather than increase system capacity or complexity, so no differential compliance burden between small and large entities is apparent in the record.

C. Potential Disproportion/Mitigation:
- No disproportionate impacts on small businesses are identified, and no mitigation measures are proposed.
- Because the proposal refines existing requirements instead of expanding the scope of buildings that must install ERCES, any cost effects are expected to be similar across business sizes.

5. Least Burdensome Alternative
- One alternative would be to retain the existing Washington amendments without updating terminology and correlations, but this would leave state requirements out of alignment with NFPA 1225 and current industry standards.
- Updating definitions and technical provisions to match NFPA 1225 while explicitly stating that construction costs are not increased appears to be the least burdensome way to maintain contemporary, enforceable communication coverage standards.

6. Conclusion/Recommendation

- Proposal 24-GP1-084-R2 revises definitions and technical requirements for emergency responder communication coverage to correlate with NFPA 1225 and clarify expectations for ERCES design, installation, and testing.
- The proponent states that the change will not increase or decrease construction cost, and the available record supports the conclusion that economic impacts are minimal and primarily administrative, while public safety and code consistency benefits are enhanced.

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: • **Public Health and Safety: Protect building occupants, emergency responders, neighboring properties, and the public from fire and explosion hazards through technically current minimum fire safety standards.** • **Uniform Statewide Standards: Maintain consistent, predictable fire code requirements across Washington so that regulated parties and local jurisdictions operate under a common statewide framework.** • **Technical Currency and Regulatory Clarity: Keep Washington's fire code aligned with the current model IFC and current referenced standards, including NFPA, UL, and related consensus standards, so that enforcement and compliance remain clear and defensible.** • **Economic Feasibility and Least Burden: Achieve fire and life safety objectives in a manner that avoids unnecessary compliance costs and does not impose disproportionate burdens on small businesses.**
Explain why this rulemaking is needed to achieve the goals and objectives of the statute. RCW 34.05.328(1)(b)
This rulemaking is needed because the existing Washington State IFC, without the 2024 amendments, cannot fully achieve the Legislature's goals of safety, uniformity, technical currency, and economic feasibility. **Without these amendments, Washington would continue to diverge from the current model IFC and current referenced standards, creating interpretive difficulties for fire officials, design professionals, contractors, and regulated parties working across jurisdictions. Non-adoption would also forgo life-safety improvements for large tire storage occupancies, perpetuate ambiguity in ESS provisions, and miss cost-reduction opportunities reflected in Proposals**
Describe alternatives to rulemaking and the consequences of not adopting this rule. RCW 34.05.328(1)(b)
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)

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)

SBCC ensures coordination through the statewide building code adoption process authorized by RCW 19.27 and by reviewing the relationships among Washington amendments, the model IFC, and applicable federal frameworks. As described in Section 8.4, the rulemaking considers interactions with OSHA, EPA, and other applicable legal frameworks while maintaining a statewide code structure administered locally by fire and building officials.
The 2024 amendments also improve coordination by reducing unnecessary divergence from the model IFC and by identifying Washington-specific amendments only where state conditions, practices, or policy objectives warrant them, such as crowd manager thresholds, Group R-3 sprinkler provisions, certification of service personnel, and exit sign pictograms.