**Project Name:** Click or tap here to enter text.

Compliance Path: Choose an item.

Date Submitted: Click or tap to enter a date.

Date Reviewed: Click or tap to enter a date.

**Review Outcome**

|  |  |
| --- | --- |
|  | **Accepted:** The project has met all requirements for earning the Zero Energy Ready Home Multifamily National Version 2 Certification. |
|  | **Not Accepted:** Must correct and resubmit. |

Partner must provide a DOE ZERH Multifamily Version 2 certificate for each unit. Partner may optionally provide a whole-building DOE ZERH Multifamily Version 2 certificate.

Please note that the MRO for ZERH reserves the right to perform on-site quality assurance for any project, at its discretion.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contents** | | *Page* | Section Complete | Section N/A for Compliance Path |
| **A** | Documentation Collection | *2* |  |  |
| **B** | Validation of Submission Documentation | *3* |  |  |
| **C** | Multifamily Workbook with ZERH Addenda and Photo Documentation | *4* |  |  |
| **D** | Verification of Prescriptive Path Performance | *6* |  |  |
| **E** | DOE ASHRAE Standard 90.1 Performance-Based Compliance Form | *7* |  |  |
| **F** | DOE ASHRAE Standard 90.1 Companion Tool | *8* |  |  |
| **G** | PHIUS Alternative Performance Target | *8* |  |  |

**A. Documentation Collection**

*This section is required for all paths.*

Purpose: This section ensure that the As-Built Submittal is complete and contains all the documentation specified in Exhibit 4 of the ZERH Multifamily Version 2 National Program Requirements.

*Instructions: Construction documents do not need to be collected/verified if previously collected or verified as part of the Proposed Design Submittal (PDS) review. If construction documentation is not collected as part of the As-Built Submittal (ABS) review, mark as “N/A.”*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Documentation Required for All Paths** | | | | |
|  | Construction Documents | *Mark here if N/A* **→** | | |
|  | Multifamily Workbook with ZERH Addenda | | | |
|  | Proposed Design Review responses (if applicable) | | | |
|  | ZERH Multifamily Version 2 Photo Documentation Checklist | | | |
| **Documentation Required for ASHRAE Path Only** | | *Mark here if N/A* **→** | | |
|  | DOE ASHRAE Standard 90.1 Performance-Based Compliance Form | | | |
|  | DOE ASHRAE Standard 90.1 Companion Tool for ESMFNC and ZERH MF | | | |
|  | Modeling file ***or*** modeling input and output files | | | |
| **Documentation Required for PHIUS Alt. Path Only** | | *Mark here if N/A* **→** | | |
|  | PHIUS Core or PHIUS Zero 2021 Certification Documentation | | | |
|  | | | | |
| *The submission is complete, including all documents noted above based on chosen compliance path.* | | | Yes: | No: |
| Notes: | | | | |
| Reviewed by: Click or tap here to enter text. Date: Click or tap to enter a date. | | | | |

**B. Validation of Submission Documentation**

*This section is required for all paths.*

Purpose: This section validates that the submittal is eligible for certification under ZERH Multifamily Version 2 based on building type and prerequisite certification, and that all participating partners have completed required agreements and training.

*Instructions: Items marked with an asterisk (\*) do not need to be collected/verified if previously collected or verified as part of the PDS review. Any items where documentation is not collected as part of the ABS review should be marked, “N/A.”*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table B** | | | Y | N | | N/A |
| 1 | **An ENERGY STAR MFNC As-Built Submittal for this building has been reviewed and accepted by the project’s EPA-approved MRO.** | |  |  | |  |
| 2\* | The submittal meets the building eligibility requirements in Section 1 of the ZERH Multifamily Version 2 National Program Requirements. | |  |  | |  |
| 3\* | The submittal does not include townhouses. | |  |  | |  |
| 4 | Based on building’s Permit Date and DOE’s [Implementation Timeline](https://www.energy.gov/eere/buildings/doe-zero-energy-ready-home-zerh-program-requirements), the project is using the appropriate program version (and revision). | |  |  | |  |
| 5\* | Documentation collected that the builder or developer is a registered DOE ZERH Partner. | |  |  | |  |
| 6\* | The Rater Company (or companies) listed on the Rater Checklist is (are) [listed online as DOE ZERH Verifier Partner](https://www5.eere.energy.gov/buildings/residential/locator)(s). | |  |  | |  |
| 7\* | The Rater(s) signing the National Rater Checklist, PV-Ready, and EV-Ready Checklists has (have) completed the [required DOE ZERH training](https://www.energy.gov/eere/buildings/doe-recognized-zerh-certification-organizations). | |  |  | |  |
| 8 | Project is certified under ENERGY STAR Multifamily New Construction Version 1.2. | |  |  | |  |
| 9 | Project is certified under appropriate version of Indoor AirPlus (version determined by permit date). | |  |  | |  |
| 10\* | *ASHRAE path onl*y: Documentation collected that ASHRAE modeler is listed in the ENERGY STAR [online directory](https://www.energystar.gov/partner_resources/residential_new/working/other_participants/ashrae_modeler_directory). | |  |  | |  |
|  | | | | | | |
| *The submission documentation has been validated according to the items listed above.* | | Yes: | | | No: | |
| Notes: | | | | | | |
| Reviewed by: Click or tap here to enter text. Date: Click or tap to enter a date. | | | | | | |

**C. Multifamily Workbook with ZERH Addenda and Photo Documentation**

*This section is required for all paths.*

Purpose: This section confirms that all ZERH Multifamily National Version 2 Checklist items (Rater, PV-Ready, and EV-Ready) are complete, reported correctly in the appropriate tabs of the Multifamily Workbook with ZERH Addenda, and that photo documentation corroborates reported efficiencies and other required measures.

*Instructions: Any items marked as “N” indicate that the submittal does not demonstrate that the measure listed meets the requirements of the DOE ZERH program or inconsistencies were observed. A submittal may be approved, with inconsistencies noted, if the requirement can still be confirmed to comply. More information on each non-compliant measure should be documented in the notes section below. The Submitter is responsible for making sure that each requirement is met.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table C** | | | Y | N | | N/A |
| 1 | Rater name(s) and inspection dates are recorded for the National Rater Checklist, the PV-Ready Checklist, and the EV-Ready Checklist. | |  |  | |  |
| *National Rater Checklist* | | | | | | |
| 2 | If the National Rater Checklist includes any items that are “Verified by Builder or Licensed Professional,” Builder Employee, Builder Inspection Date and Builder Initials are recorded and/or Licensed Professional (LP) name, LP Inspection Date(s), and LP Initials are recorded. | |  |  | |  |
| 3 | The National Rater Checklist is complete, any items marked “N/A” are appropriate, no items indicate “Must Correct,” and no items conflict with data in other worksheets or photo documentation. | |  |  | |  |
| 4 | Any exemptions/alternatives used to comply with the National Rater Checklist are documented with additional documentation collected where required. | |  |  | |  |
| 5 | Envelope assembly layers are fully described in appropriate workbook tabs and meet ZERH Multifamily Version 2 National Rater Checklist (either 3.1a or 3.1b).  *Note: PASS/FAIL are manually entered by user and not automatically checked. When Prescriptive path projects use the UA method, workbook must indicate dwelling unit opaque assemblies use U factors from 2021 IECC Residential Chapter.* | |  |  | |  |
| 6 | Fenestration table is complete and windows meet or exceed ZERH Multifamily Version 2 National Rater Checklist Item 3.2 as demonstrated by photo documentation. | |  |  | |  |
| 7 | Photo documentation provided shows ducts and air-handling equipment installed in accordance with the DOE ZERH Multifamily National Rater Checklist, Item 4.1. | |  |  | |  |
| 8 | Documentation (cut sheet or directory reference) provided confirming WaterSense certified dwelling unit showerheads, bath faucets, and aerators. Photo documentation confirms installed models match documentation. | |  |  | |  |
| 9 | Reported refrigerators, dishwashers, clothes washers, clothes dryers, and bathroom ventilation fans are listed in the ENERGY STAR product directory and match photo documentation provided. | |  |  | |  |
| 10 | The Lighting tab in the workbook shows 100% of in-unit lamps/bulbs are LED and photo documentation is included. | |  |  | |  |
| 12 | For projects located in Climate Zones 6-8, H/ERV equipment reported in the workbook matches the model number(s) visible in installed photo documentation. Documented efficiency is confirmed based on model number and meets the requirements of DOE ZERH Multifamily Version 2 Rater Checklist Item 7.2. | |  |  | |  |
| 13 | Photo documentation provided shows electric-ready features consistent with DOE ZERH Multifamily Version 2 National Rater Checklist, Items 10.1, 10.2, and 11.1. | |  |  | |  |
| 14 | *Prescriptive path Track A projects only:* Workbook documents HVAC grading consistent with DOE ZERH Multifamily Version 2 National Rater Checklist Items 12a.1 and 12a.2 and photo documentation is provided. | |  |  | |  |
| 15 | *Prescriptive path Track B projects only:* Workbook documents installation of a heat pump water heater or infiltration testing results consistent with DOE ZERH Multifamily Version 2 National Rater Checklist Item 12b.1. For either option, photo documentation is provided. | |  |  | |  |
| *EV-Ready Checklist* | | | | | | |
| 16 | If the EV-Ready Checklist includes any items that are “Verified by Builder or Licensed Professional,” Builder Employee, Builder Inspection Date and Builder Initials are recorded and/or Licensed Professional (LP) name, LP Inspection Date(s), and LP Initials are recorded. | |  |  | |  |
| 17 | The EV-Ready Checklist is complete, all items are marked “Verified,” and no items conflict with data in other worksheets, checklists, or photo documentation. | |  |  | |  |
| 18 | If an exemption is used to comply with the EV-Ready Checklist, additional documentation is collected as required. | |  |  | |  |
| 19 | Photo documentation is included showing compliance with Items 1, 2a, 2d, 3a, 3c, and 4a on the EV-Ready Checklist (as applicable). | |  |  | |  |
| 20 | Photo documentation or construction documents provided show compliance with items 2b, 2c, 3b, 4b, 4c, and 4d (as applicable). | |  |  | |  |
| *PV-Ready Checklist* | | | | | | |
| 21 | The PV-Ready Checklist is complete, all items are marked “Verified,” and no items conflict with data in other worksheets, checklists, or photo documentation. | |  |  | |  |
| 22 | If an exemption is used to comply with the PV-Ready Checklist, additional documentation is collected as required. | |  |  | |  |
| 23 | Photo documentation is included showing compliance with Items 7 and 8 on the PV-Ready Checklist. | |  |  | |  |
| 24 | Construction documents provided show compliance with Items 1 through 6 on the PV-Ready Checklist. | |  |  | |  |
|  | | | | | | |
| *Data from the Multifamily Workbook with ZERH Addenda is consistent with the ZERH Multifamily Version 2 Checklist tabs and photo documentation.* | | Yes: | | | No: | |
| Notes: Click or tap here to enter text. | | | | | | |
| Reviewed by: Click or tap here to enter text. Date: Click or tap to enter a date. | | | | | | |

**D. Verification of Prescriptive Path Performance**

*This section is required for Prescriptive path projects only.*

Purpose: This section verifies that all installed efficiency measures (excluding items covered in section C) meet the ZERH Multifamily Version 2 Exhibit 2 requirements, are documented correctly in the Multifamily Workbook with ZERH Addenda, and that photo documentation corroborates reported efficiencies.

*Instructions: For all items in this section, marking “Y” indicates the following:*

* *Efficiencies documented in the Multifamily Workbook with ZERH Addenda match efficiency levels required by Exhibit 2 of the Multifamily Version 2 National Program Requirements.*
* *Photo documentation is provided showing equipment model number or testing results (where applicable).*
* *Documented efficiency is confirmed based on model number (where applicable).*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table D** | | | Y | N | | N/A |
| 1 | Residential cooling equipment efficiency | |  |  | |  |
| 2 | Residential heating equipment efficiency | |  |  | |  |
| 3 | HVAC grading results | |  |  | |  |
| 4 | Infiltration rate | |  |  | |  |
| 5 | Mechanical ventilation equipment heat recovery | |  |  | |  |
| 6 | Residential water heating efficiency | |  |  | |  |
|  | | | | | | |
| *Data from the Multifamily Workbook with ZERH Addenda is consistent with ZERH Multifamily Version 2 National Program Requirements Exhibit 2 and photo documentation.* | | Yes: | | | No: | |
| Notes: Click or tap here to enter text. | | | | | | |
| Reviewed by: Click or tap here to enter text. Date: Click or tap to enter a date. | | | | | | |

**E. DOE ASHRAE Standard 90.1 Performance-Based Compliance Form**

*This section is required for ASHRAE path projects only.*

Purpose: This section verifies that all installed efficiency measures (excluding items covered in section C) are documented correctly in the Multifamily Workbook with ZERH Addenda, represented accurately in the ASHRAE 90.1 Performance-Based Compliance Report, and that photo documentation corroborates reported efficiencies. This section also verifies that all ASHRAE 90.1 modeling is done in accordance with the requirements established by the ENERGY STAR Multifamily New Construction program.

*Instructions: For all items in this section, marking “Y” indicates that for the measure in question:*

* *Efficiencies documented in the Multifamily Workbook with ZERH Addenda match efficiency levels in the Compliance Form.*
* *Photo documentation is provided showing equipment model number.*
* *Documented efficiency is confirmed based on model number.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table E** | | | Y | N | | N/A |
| 1 | Residential cooling equipment efficiency | |  |  | |  |
| 2 | Residential heating equipment efficiency | |  |  | |  |
| 3 | Mechanical ventilation equipment heat recovery | |  |  | |  |
| 4 | Residential water heating efficiency | |  |  | |  |
|  | | | | | | |
| *Data from the Multifamily Workbook with ZERH Addenda is consistent with the DOE ASHRAE Standard 90.1 Performance-Based Compliance Form and photo documentation.* | | Yes: | | | No: | |
| ***DOE ASHRAE Standard 90.1 Performance-Based Compliance Form meets all modeling and QA requirements established by the ENERGY STAR Multifamily New Construction program and the ENERGY STAR Multifamily Simulation Guidelines.*** | | Yes: | | | No: | |
| Notes: Click or tap here to enter text. | | | | | | |
| Reviewed by: Click or tap here to enter text. Date: Click or tap to enter a date. | | | | | | |

**F. DOE ASHRAE Standard 90.1 Companion Tool**

*This section is required for ASHRAE path projects only.*

Purpose: This section verifies that the submitted project meets the required efficiency levels in Exhibit 3 of the ZERH Multifamily Version 2 National Program Requirements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table F** | | | Y | | N |
| 1 | Companion Tool has the ZERH program selected and BPFs shown match those in Exhibit 3 of the ZERH Multifamily Version 2 National Program Requirements. | |  | |  |
| 2 | Building achieves at least 20% energy cost savings or source energy savings above ASHRAE 90.1-2019. | |  | |  |
| 3 | On-site renewable energy does not contribute to meeting the performance target. | |  | |  |
|  | | | | | |
| *Data from the DOE ASHRAE Standard 90.1 Companion Tool developed for use with the ESMFNC and ZERH MF programs confirms that the submitted projects meets required efficiency levels.* | | Yes: | | No: | |
| Notes: Click or tap here to enter text. | | | | | |
| Reviewed by: Click or tap here to enter text. Date: Click or tap to enter a date. | | | | | |

**G. PHIUS Alternative Performance Target**

*This section is required for PHIUS Alternative projects only.*

Purpose: This section verifies that the submitted project meets the required efficiency levels in Section 3.3 of the ZERH Multifamily Version 2 National Program Requirements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table F** | | | Y | | N |
| 1 | Building is certified as PHIUS CORE 2021 or PHIUS ZERO 2021. | |  | |  |
| 2 | Building achieves 20% less energy use than the PHIUS CORE 2021 source energy criteria, without renewables. | |  | |  |
|  | | | | | |
| *Building qualifies for the PHIUS Alternative path and meets required efficiency in the* | | Yes: | | No: | |
| Notes: Click or tap here to enter text. | | | | | |
| Reviewed by: Click or tap here to enter text. Date: Click or tap to enter a date. | | | | | |