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## PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C

| Project Name | | | Date |
|---|---|---|---|
| New Common Building - Rolling Hills Apartments | | | 5/13/2010 |
| **Project Address** | **Climate Zone** | **Total Cond. Floor Area** | **Addition Floor Area** |
| Templeton | CA Climate Zone 04 | 2,954 | n/a |

**GENERAL INFORMATION**

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Relocatable - indicate ☐ specific climate zone ☐ all climates
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration

**STATEMENT OF COMPLIANCE**

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a Building using the performance compliance approach.

The documentation author hereby certifies that the documentation is accurate and complete.

**Documentation Author**

| | | | |
|---|---|---|---|
| Name | James L. Van De Vanter, P.E. | Signature | (signed) |
| Company | JVA Mechanical Engineering | Date | 5/13/2010 |
| Address | 1023 Nipomo Street, Suite 200 | Phone | (805) 543-3190 |
| City/State/Zip | San Luis Obispo, Ca 93401 | | |

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:

| ENV. | LTG. | MECH. | |
|---|---|---|---|
| ☑ | ☐ | ☑ | I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect. |
| ☐ | ☐ | ☐ | I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work. |
| ☐ | ☐ | ☐ | I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1. |

**Principal Envelope Designer**

| | | | |
|---|---|---|---|
| Name | | Signature | |
| Company | Fraser Seiple Architects | Date | |
| Address | 971 Osos Street | License # | |
| City/State/Zip | San Luis Obispo, Ca 93401 | Phone | (805) 544-6161 |

**Principal Mechanical Designer**

| | | | |
|---|---|---|---|
| Name | | Signature | |
| Company | JVA Mechanical Engineering | Date | 5/13/2010 |
| Address | 1023 Nipomo Street, Suite 200 | License # | M31205 |
| City/State/Zip | San Luis Obispo, Ca 93401 | Phone | (805) 543-3190 |

**Principal Lighting Designer**

| | | | |
|---|---|---|---|
| Name | | Signature | |
| Company | Lighting Compliance Not In The Scope Of This Submittal | Date | |
| Address | | License # | |
| City/State/Zip | | Phone | |

**INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)**

| | | | | | |
|---|---|---|---|---|---|
| ☑ | ENV-1C | Certificate of Compliance. Required on plans. | ☑ | MECH-1C | Certificate of Compliance. Required on plans. |
| ☐ | LTG-1C | Certificate of Compliance. Required on plans. | ☑ | MECH-2C | Air/Water Side/Service Hot Water & Pool Requirements. |
| ☐ | LTG-2C | Lighting Controls Credit Worksheet. | ☑ | MECH-3C | Mechanical Ventilation and Reheat. |
| ☐ | LTG-3C | Indoor Lighting Power Allowance. | ☑ | MECH-5C | Mechanical Equipment Details. |



## PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERF-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010

**ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)**

| Energy Component | Standard Design | Proposed Design | Compliance Margin |
|---|---|---|---|
| Space Heating | 5.69 | 4.98 | 0.72 |
| Space Cooling | 99.40 | 92.03 | 7.37 |
| Indoor Fans | 66.74 | 68.43 | -1.68 |
| Heat Rejection | 0.00 | 0.00 | 0.00 |
| Pumps & Misc. | 0.00 | 0.00 | 0.00 |
| Domestic Hot Water | 14.19 | 12.74 | 1.45 |
| Lighting | 67.79 | 67.79 | 0.00 |
| Receptacle | 63.85 | 63.85 | 0.00 |
| Process | 0.00 | 0.00 | 0.00 |
| Process Lighting | 0.00 | 0.00 | 7.86 |
| TOTALS | 317.68 | 309.82 | |
| Percent better than Standard | | 2.5 % | ( 2.5 % excluding process) |

### BUILDING COMPLIES

**GENERAL INFORMATION**

| | | | |
|---|---|---|---|
| Building Orientation | (NE) 30 deg | Conditioned Floor Area | 2,954 sqft. |
| Number of Stories | 1 | Unconditioned Floor Area | 345 sqft. |
| Number of Systems | 3 | Conditioned Footprint Area | 2,954 sqft. |
| Number of Zones | 7 | Natural Gas Available On Site | Natural Gas |

| | Orientation | Gross Area | Glazing Area | Glazing Ratio |
|---|---|---|---|---|
| Front Elevation | (NE) | 713 sqft. | 281 sqft. | 39.5 % |
| Left Elevation | (SE) | 440 sqft. | 37 sqft. | 8.4 % |
| Rear Elevation | (SW) | 800 sqft. | 115 sqft. | 14.4 % |
| Right Elevation | (NW) | 771 sqft. | 115 sqft. | 14.9 % |
| Total | | 2,724 sqft. | 548 sqft. | 20.1 % |
| Roof | | 2,954 sqft. | 0 sqft. | 0.0 % |

| | Standard | Proposed |
|---|---|---|
| Lighting Power Density | 1.088 W/sqft. | 1.088 W/sqft. |
| Prescriptive Envelope TDV Energy | 111,947 | 115,318 |

**Remarks:**



## PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010

**ZONE INFORMATION**

| System Name | Zone Name | Occupancy Type | Floor Area (sqft.) | Inst. LPD (W/sf)[1] | Ctrl. Credits (W/sf)[2] | Allowed LPD Area (W/sf)[3] | Allowed LPD Tailored (W/sf)[4] | Proc. Loads (W/sf) |
|---|---|---|---|---|---|---|---|---|
| AC-1 | Multi-Purpose Room | Civic Meeting Place | 1,250 | *1.300 | | | | |
| AC-2 | Kitchen | Kitchen, Food Preparation | 248 | *1.600 | | | | |
| | Classroom | Classroom, Lecture, Training | 340 | *1.200 | | | | |
| AC-3 | Corridor/Restroom/Support | Corridor/Restroom/Support | 730 | *0.600 | | | | |
| | Offices | Office > 250 sqft | 386 | *0.900 | | | | |
| | Elec/Mech | Electrical, Mechanical Room | 164 | *0.700 | | | | |
| | Laundry | Laundry | 181 | *0.900 | | | | |

Notes: 1. See LTG-1C (items marked with asterisk, see LTG-1-C by others) 2. See LTG-2C 3. See LTG-3C (by others) 4. See LTG-4C Items above require special documentation

**EXCEPTIONAL CONDITIONS COMPLIANCE CHECKLIST**

**The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.**

*The DHW System A O Smith FCG-75 is a non-NAECA large storage gas water heater. Verify DHW details.*

**The exceptional features listed in this performance approach application have specifically been reviewed. Adequate written justification and documentation for their use have been provided by the applicant.**

Authorized Signature or Stamp ____________________



## CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010
Project Address: Templeton Climate Zone: 4 Total Cond. Floor Area: 2,954 Addition Floor Area: 2,954

**GENERAL INFORMATION**

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 30 deg

**FIELD INSPECTION ENERGY CHECKLIST**

| Tag/ID[1] | Assembly Frame Type[2] | Surface Area (ft²) | Surface Orientation N, E, S, W | Cavity R-Value | Continuous R-Value | Furring[3] | Furring R-Value[4] | Condition Status[5] | Special Feature[6] | Pass | Fail[7] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Slab | Unheated Slab-on-Grade | 1,250 | (N) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Roof | Wood Framed Attic | 590 | (NW) | R-30 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Roof | Wood Framed Attic | 660 | (SE) | R-30 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 38 | (NE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Door | Opaque Door | 8 | (NE) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 111 | (SE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 513 | (SW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 244 | (NW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Wall -1, Ceiling-1, Roof -1, and Floor- 1).
2. Indicate type of Assembly Type such as Wood 2x4 or LW CMU 8". For additional other assembly types see Reference Joint Appendix, JA4-1.
3. If furring is checked refer to ENV-2C Mass and Furring Strips Construction worksheet.
4. Indicate furring R-value when furred wall are being used.
5. Indicate Status of fenestration (New, Existing or Upgrade).
6. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
7. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

**FENESTRATION SURFACE DETAILS**

| Tag/ID[1] | Fenestration Type[2] | Surface Area | Surface Orientation N, E, S, W | # of Panes | Max U-Factor | Source[3] | Max (R)SHGC | Source[3] | Overhang | Conditions Status[4] | Special Feature[5] | Pass | Fail[6] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Window | 13 | (NE) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 2 | Window | 102 | (SW) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 3 | Window | 59 | (NW) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 4 | Window | 23 | (NW) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 5 | Window | 50 | (NE) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 6 | Window | 13 | (SW) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 7 | Window | 33 | (NW) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 8 | Window | 219 | (NE) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Window #1).
2. Indicate type of construction Type such, Window, Glass Door, Curtain wall, Skylight, or other.
3. Indicate if the efficiency values are from the NFRC Label Certificate or from the CEC Default Values. Enter NFRC or CEC (FC-1 and FC-2).
4. Indicate Status of fenestration (New, Existing or Upgrade).
5. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
6. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.



## CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010
Project Address: Templeton Climate Zone: 4 Total Cond. Floor Area: 2,954 Addition Floor Area: 2,954

**GENERAL INFORMATION**

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 30 deg

**FIELD INSPECTION ENERGY CHECKLIST**

| Tag/ID[1] | Assembly Frame Type[2] | Surface Area (ft²) | Surface Orientation N, E, S, W | Cavity R-Value | Continuous R-Value | Furring[3] | Furring R-Value[4] | Condition Status[5] | Special Feature[6] | Pass | Fail[7] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Demising | Wood Framed | 173 | (N) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Slab | Unheated Slab-on-Grade | 248 | (N) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Roof | Wood Framed Attic | 248 | (NE) | R-30 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 117 | (NW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Slab | Unheated Slab-on-Grade | 340 | (N) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Roof | Wood Framed Attic | 340 | (NE) | R-30 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 157 | (NE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 91 | (SE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Wall -1, Ceiling-1, Roof -1, and Floor- 1).
2. Indicate type of Assembly Type such as Wood 2x4 or LW CMU 8". For additional other assembly types see Reference Joint Appendix, JA4-1.
3. If furring is checked refer to ENV-2C Mass and Furring Strips Construction worksheet.
4. Indicate furring R-value when furred wall are being used.
5. Indicate Status of fenestration (New, Existing or Upgrade).
6. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
7. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

**FENESTRATION SURFACE DETAILS**

| Tag/ID[1] | Fenestration Type[2] | Surface Area | Surface Orientation N, E, S, W | # of Panes | Max U-Factor | Source[3] | Max (R)SHGC | Source[3] | Overhang | Conditions Status[4] | Special Feature[5] | Pass | Fail[6] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Window | 27 | (SE) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| 10 | Window | 10 | (SE) | | 0.710 | Default | 0.730 | Default | ☑ | New | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Window #1).
2. Indicate type of construction Type such, Window, Glass Door, Curtain wall, Skylight, or other.
3. Indicate if the efficiency values are from the NFRC Label Certificate or from the CEC Default Values. Enter NFRC or CEC (FC-1 and FC-2).
4. Indicate Status of fenestration (New, Existing or Upgrade).
5. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
6. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.



## CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010
Project Address: Templeton Climate Zone: 4 Total Cond. Floor Area: 2,954 Addition Floor Area: 2,954

**GENERAL INFORMATION**

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 30 deg

**FIELD INSPECTION ENERGY CHECKLIST**

| Tag/ID[1] | Assembly Frame Type[2] | Surface Area (ft²) | Surface Orientation N, E, S, W | Cavity R-Value | Continuous R-Value | Furring[3] | Furring R-Value[4] | Condition Status[5] | Special Feature[6] | Pass | Fail[7] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | Wood Framed | 62 | (SW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Door | Opaque Door | 8 | (SW) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 221 | (NW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Slab | Unheated Slab-on-Grade | 730 | (N) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Roof | Wood Framed Attic | 730 | (NE) | R-30 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 22 | (NE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 54 | (SE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Door | Opaque Door | 8 | (SE) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Wall -1, Ceiling-1, Roof -1, and Floor- 1).
2. Indicate type of Assembly Type such as Wood 2x4 or LW CMU 8". For additional other assembly types see Reference Joint Appendix, JA4-1.
3. If furring is checked refer to ENV-2C Mass and Furring Strips Construction worksheet.
4. Indicate furring R-value when furred wall are being used.
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7. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

**FENESTRATION SURFACE DETAILS**

| Tag/ID[1] | Fenestration Type[2] | Surface Area | Surface Orientation N, E, S, W | # of Panes | Max U-Factor | Source[3] | Max (R)SHGC | Source[3] | Overhang | Conditions Status[4] | Special Feature[5] | Pass | Fail[6] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Window #1).
2. Indicate type of construction Type such, Window, Glass Door, Curtain wall, Skylight, or other.
3. Indicate if the efficiency values are from the NFRC Label Certificate or from the CEC Default Values. Enter NFRC or CEC (FC-1 and FC-2).
4. Indicate Status of fenestration (New, Existing or Upgrade).
5. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
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## CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010
Project Address: Templeton Climate Zone: 4 Total Cond. Floor Area: 2,954 Addition Floor Area: 2,954

**GENERAL INFORMATION**

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 30 deg

**FIELD INSPECTION ENERGY CHECKLIST**

| Tag/ID[1] | Assembly Frame Type[2] | Surface Area (ft²) | Surface Orientation N, E, S, W | Cavity R-Value | Continuous R-Value | Furring[3] | Furring R-Value[4] | Condition Status[5] | Special Feature[6] | Pass | Fail[7] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | Wood Framed | 41 | (SW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Demising | Wood Framed | 171 | (N) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Demising | Wood Framed | 131 | (N) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Slab | Unheated Slab-on-Grade | 386 | (N) | None | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Roof | Wood Framed Attic | 386 | (NE) | R-30 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 206 | (NE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 139 | (SE) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| Wall | Wood Framed | 61 | (SW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Wall -1, Ceiling-1, Roof -1, and Floor- 1).
2. Indicate type of Assembly Type such as Wood 2x4 or LW CMU 8". For additional other assembly types see Reference Joint Appendix, JA4-1.
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4. Indicate furring R-value when furred wall are being used.
5. Indicate Status of fenestration (New, Existing or Upgrade).
6. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
7. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

**FENESTRATION SURFACE DETAILS**

| Tag/ID[1] | Fenestration Type[2] | Surface Area | Surface Orientation N, E, S, W | # of Panes | Max U-Factor | Source[3] | Max (R)SHGC | Source[3] | Overhang | Conditions Status[4] | Special Feature[5] | Pass | Fail[6] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Window #1).
2. Indicate type of construction Type such, Window, Glass Door, Curtain wall, Skylight, or other.
3. Indicate if the efficiency values are from the NFRC Label Certificate or from the CEC Default Values. Enter NFRC or CEC (FC-1 and FC-2).
4. Indicate Status of fenestration (New, Existing or Upgrade).
5. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
6. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.



## CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010
Project Address: Templeton Climate Zone: 4 Total Cond. Floor Area: 2,954 Addition Floor Area: 2,954

**GENERAL INFORMATION**

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 30 deg

**FIELD INSPECTION ENERGY CHECKLIST**

| Tag/ID[1] | Assembly Frame Type[2] | Surface Area (ft²) | Surface Orientation N, E, S, W | Cavity R-Value | Continuous R-Value | Furring[3] | Furring R-Value[4] | Condition Status[5] | Special Feature[6] | Pass | Fail[7] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | Wood Framed | 75 | (NW) | R-19 | 0.0 | ☐ | | New | ☐ | ☐ | ☐ |
| | | | | | | ☐ | | | ☐ | ☐ | ☐ |
| | | | | | | ☐ | | | ☐ | ☐ | ☐ |
| | | | | | | ☐ | | | ☐ | ☐ | ☐ |
| | | | | | | ☐ | | | ☐ | ☐ | ☐ |
| | | | | | | ☐ | | | ☐ | ☐ | ☐ |
| | | | | | | ☐ | | | ☐ | ☐ | ☐ |
| | | | | | | ☐ | | | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Wall -1, Ceiling-1, Roof -1, and Floor- 1).
2. Indicate type of Assembly Type such as Wood 2x4 or LW CMU 8". For additional other assembly types see Reference Joint Appendix, JA4-1.
3. If furring is checked refer to ENV-2C Mass and Furring Strips Construction worksheet.
4. Indicate furring R-value when furred wall are being used.
5. Indicate Status of fenestration (New, Existing or Upgrade).
6. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
7. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

**FENESTRATION SURFACE DETAILS**

| Tag/ID[1] | Fenestration Type[2] | Surface Area | Surface Orientation N, E, S, W | # of Panes | Max U-Factor | Source[3] | Max (R)SHGC | Source[3] | Overhang | Conditions Status[4] | Special Feature[5] | Pass | Fail[6] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |
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| | | | | | | | | | ☐ | | ☐ | ☐ | ☐ |

1. Indicate the identifying name of the frame type (i.e. Window #1).
2. Indicate type of construction Type such, Window, Glass Door, Curtain wall, Skylight, or other.
3. Indicate if the efficiency values are from the NFRC Label Certificate or from the CEC Default Values. Enter NFRC or CEC (FC-1 and FC-2).
4. Indicate Status of fenestration (New, Existing or Upgrade).
5. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
6. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.



## CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 3) ENV-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010

**ROOFING PRODUCT (COOL ROOFS)**

(Note if the roofing product is not CRRC certified, this compliance approach cannot be used). Go to Overall Envelope Approach or Performance Approach.

| CHECK APPLICABLE BOX BELOW IF EXEMPT FROM THE ROOFING PRODUCT "COOL ROOF" REQUIREMENTS: | Pass | Fail[1] | N/A |
|---|---|---|---|
| ☐ Roofing compliance not required in Climate Zones 1 and16 with a Low-Sloped. 2:12 pitch or less. | | | |
| ☐ Roofing compliance not required in Climate Zone 1 with a Steep-Sloped with less than 5 lb/ft². Greater than 2:12 pitch. | | | |
| ☐ Low-sloped Wood framed roofs in Climate Zones 3 and 5 are exempted. Solar reflectance and thermal emittance or SRI that have a U-factor of 0.039 or lower, see Opaque Surface Details roof assembly, Column H of ENV-2C. | ☐ | ☐ | ☐ |
| ☐ The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempted. Solar reflectance and thermal emittance or SRI, see spreadsheet calculator at www.energy.ca.gov/title24/ | ☐ | ☐ | ☐ |
| ☐ Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft² are exempt from the Cool Roof criteria below. | ☐ | ☐ | ☐ |
| ☐ High-rise residential buildings and hotels and motels with low-sloped roofs in Climate Zones 1 through 9, 12 and 16 are exempted from the low-sloped roofing criteria. | ☐ | ☐ | ☐ |

1. If Fail then describe on this page of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

| CRRC Product ID Number[1] | Roof Slope ≤ 2:12 | Roof Slope > 2:12 | Product Weight < 5lb/ft² | Product Weight ≥ 5lb/ft² | Product Type[2] | Aged Solar Reflectance[3] | Thermal Emittance | SRI[5] | Special Feature[6] | Pass | Fail[7] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ☐ | ☐ | ☐ | ☐ | | ☐ 4 | | | ☐ | ☐ | ☐ |
| | ☐ | ☐ | ☐ | ☐ | | ☐ 4 | | | ☐ | ☐ | ☐ |
| | ☐ | ☐ | ☐ | ☐ | | ☐ 4 | | | ☐ | ☐ | ☐ |
| | ☐ | ☐ | ☐ | ☐ | | ☐ 4 | | | ☐ | ☐ | ☐ |
| | ☐ | ☐ | ☐ | ☐ | | ☐ 4 | | | ☐ | ☐ | ☐ |
| | ☐ | ☐ | ☐ | ☐ | | ☐ 4 | | | ☐ | ☐ | ☐ |

1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at www.coolroofs.org/products/search.php
2. Indicate the type of product is being used for the roof top, i.e. single-ply roof, asphalt roof, metal roof, etc.
3. If the Aged Reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation $(0.2+0.7(\rho_{initial} - 0.2)$ to obtain a calculated aged value. Where $\rho$ is the Initial Solar Reflectance from the Cool Roof Rating Council's Rated Product Directory.
4. Check box if the Aged Reflectance is a calculated value using the equation above.
5. The SRI value needs to be calculated from a spreadsheet calculator at http://www.energy.ca.gov/title24/
6. Indicate Special Feature on Page 2 of the Inspection Checklist Form below.
7. If Fail then describe on this page of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

To apply **Liquid Field Applied Coatings**, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §118(i)4. Select the applicable coating:

☐ Aluminum-Pigmented Asphalt Roof Coating ☐ Cement-Based Roof Coating ☐ Other ______________

**SPECIAL FEATURES INSPECTION CHECKLIST**

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

**Discrepancies:**



## CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 3) ENV-1C

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010

**Required Acceptance Tests**

**Designer:**

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for Envelope Fenestrations system. The designer is required to check the acceptance tests and list all the fenestration products that require an acceptance test. If all the site-built fenestration of a certain type requires a test, list the different fenestration products and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

**Enforcement Agency:**

**Systems Acceptance**. Before Occupancy Permit is granted for a newly constructed building or space or whenever new fenestration is installed in the building or space shall be certified as meeting the Acceptance Requirements. The ENV-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the ENV-2A for each different fenestration product line must be provided to the owner of the building for their records.

| Test Description: Fenestration Products Name or ID Requiring Testing or Verification | Area of like Products | ENV-2A Building Envelope Acceptance Test | Test Performed By: |
|---|---|---|---|
| Double Metal Clear | 548 | ☑ | |
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## ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL ENV-MM

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010

**DESCRIPTION**

**Building Envelope Measures:**

| | |
|---|---|
| §118(a): | Installed insulating material shall have been certified by the manufacturer to comply with the California Quality Standards for insulating material, Title 20 Chapter 4, Article 3. |
| §118(c): | All Insulating Materials shall be installed in compliance with the flame spread rating and smoke density requirements of Sections 2602 and 707 of Title 24, Part 2. |
| §118(f): | The opaque portions of framed demising walls in nonresidential buildings shall have insulation with an installed R-value of no less than R-13 between framing members. |
| §117(a): | All Exterior Joints and openings in the building that are observable sources of air leakage shall be caulked, gasketed, weatherstripped or otherwise sealed. |
| §116(a) 1: | Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft.² of window area, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft.² for nonresidential double doors (swinging). |
| §116(a) 2: | Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. |
| §116(a) 3: | Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration, or the applicable default SHGC. |
| §116(b): | Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the building, and shall be weatherstripped (except for unframed glass doors and fire doors). |



## MECHANICAL MANDATORY MEASURES: NONRESIDENTIAL MECH-MM

Project Name: New Common Building - Rolling Hills Apartments Date: 5/13/2010

**Equipment and System Efficiencies**

| | |
|---|---|
| §111: | Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard. |
| §115(a): | Fan type central furnaces shall not have a pilot light. |
| §123: | Piping, except that conveying fluids at temperatures between 60 and 105 degrees Fahrenheit, or within HVAC equipment, shall be insulated in accordance with Standards Section 123. |
| §124: | Air handling duct systems shall be installed and insulated in compliance with Sections 601, 602, 603, 604, and 605 of the CMC Standards. |

**Controls**

| | |
|---|---|
| §122(e): | Each space conditioning system shall be installed with one of the following: |
| 1A. | Each space conditioning system serving building types such as offices and manufacturing facilities (and all others not explicitly exempt from the requirements of Section 112 (d)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends and have program backup capabilities that prevent the loss of the device's program and time setting for at least 10 hours if power is interrupted; or |
| 1B. | An occupancy sensor to control the operating period of the system; or |
| 1C. | A 4-hour timer that can be manually operated to control the operating period of the system. |
| 2. | Each space conditioning system shall be installed with controls that temporarily restart and temporarily operate the system as required to maintain a setback heating and/or a setup cooling thermostat setpoint. |
| §122(g): | Each space conditioning system serving multiple zones with a combined conditioned floor area more than 25,000 square feet shall be provided with isolation zones. Each zone: shall not exceed 25,000 square feet; shall be provided with isolation devices, such as valves or dampers that allow the supply of heating or cooling to be setback or shut off independently of other isolation areas; and shall be controlled by a time control device as described above. |
| §122(c): | Thermostats shall have numeric setpoints in degrees Fahrenheit (F) and adjustable setpoint stops accessible only to authorized personnel. |
| §122(b): | Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone |
| §122(a&b): | Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower. For cooling, the control shall be adjustable up to 85 degrees F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5 degrees F within which the supply of heating and cooling is shut off or reduced to a minimum. |

**Ventilation**

| | |
|---|---|
| §121(e): | Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rates as specified on these plans. |
| §122(f): | All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings. |
| §121(f): | Ventilation System Acceptance. Before an occupancy permit is granted for a newly constructed building or space, or a new ventilating system serving a building or space is operated for normal use, all ventilation systems serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance |

**Service Water Heating Systems**

| | |
|---|---|
| §113(c) | Installation |
| 3. | Temperature controls for public lavatories. The controls shall limit the outlet Temperature to 110°F. |
| 2. | Circulating service water-heating systems shall have a control capable of automatically turning off the circulating pump when hot water is not required. |



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**PROJECT TITLE:**
**NEW COMMON BUILDING**
ROLLING HILLS APARTMENTS
TEMPLETON, CA

**CLIENT:**
FRASER SEIPLE ARCHITECTS
971 OSOS STREET
SAN LUIS OBISPO, CA
(805) 544-6161

**SHEET TITLE AND DESCRIPTION:**
# TITLE 24 COMPLIANCE DOCUMENTATION

| DATE | REMARKS |
|---|---|
| 04.15.2010 | DESIGN DEVELOPMENT |
| 05.17.2010 | FIRST SUBMITTAL |
| 08.16.2010 | △1 PLAN CHECK 1 |
| | |

PLOT DATE: 8/16/2010 8:00 AM
DRAWN BY: TDR
JVA JOB #: M10024

SHEET: TITLE 24 COMPLIANCE DOCUMENTATION
**T24**

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