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PHIUS+ Rating for MF Buildings in OR

- 4 Projects:
- Stellar PH Project – Eugene OR = 6 units, 2 floors
- Kiln PH Project – Portland OR = 19 units, 4 floors + 1 penthouse (5th fl)
- Orchards at Orenco PHase 1 – Hillsboro OR = 57 units, 3 floors
- Orchards at Orenco PHase 2 – Hillsboro OR = 58 units, 3 floors

Lessons Learned: Successes

- Engaged Project Team
- Early Design Meetings
- “Belt & Suspenders” Air Barriers
- Clear Expectations / Ownership / Scheduling / Testing / Reporting
- Willingness to ask questions
- “There is no NORMALLY on this job”
- “We’re going to do your job before you get here”

Lesson Learned: Failures

- Self balancing register grill dampers & self balancing ERV's
- Duct Testing (technically not required until final inspection)
- Backed out "shiners" = 3 days of BD + IR to diagnose / fix
- Parapet wall details overlooked
- Discontinuity of air barrier / not fully adhered TPO
- Moving the air barrier / thermal barrier from the roofdeck to ceiling
- Uninsulated "ventilation" ducts outside of conditioned space
- Multiple Site Supers = no ownership

Lessons Learned: Unforeseen Challenges

- ADA compliant / air tight door thresholds
- Elevator smoke dampers (required to be 5% open)
- Duct smoke dampers
- Trash rooms & mech rooms that require dedicated ventilation
- Different duct testing standards for commercial vs residential
- Building in phases: when do you conduct prelim BD tests?
- How to conduct final blower door tests w/o common hallways / stairs

Lessons Learned: Remarkable Success'

- Prelim Blower Door = .075 ACH50 (.055 ACH50 negative)
- Final Blower Door = .13 ACH50 (Phase 2 = .42 ACH50)
- TFA: 42,500 sq ft, Trad sq ft = 58,000
- Testable with one blower door fan (confirmed at extreme corners)
- Could have tested with a duct blaster (max flow rate = 1500 CFM)
- Equipment field calibrated yearly, submitted to HERS / PHIUS QA