UVM
Roofing 101

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Roofing Systems

Regardless of the building they top, all roofing systems have basic components:
Basic Components

Conventional roofing system:
- Top cover
- Roofing membrane
- Thermal insulation
- Vapour barrier
- Deck

Protected membrane system:
- Top cover
- Thermal insulation
- Roofing membrane
- Deck
Other Roof Features

- **Drainage**: The features of the roof's design such as slope, shape, layout, etc., that determine its ability to shed water.

- **Gutters**: Direct water away from the building to prevent water in the basement.

- **Snow Guard**: Holds snow and ice in place on the roof to prevent large chunks of snow and ice from sliding off.
Components

**Flashing:** Sheet metal laid into the various walls and valleys of a roof system to prevent water leaks.
Slate – 80-100 year life expectancy: The shingles outlive their fastening mechanisms. Old Mill, Williams, Waterman
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Asphalt Shingle—20 year life expectancy: wind damage, miss-installation, bad flashing. Grassemount, Nicholson, 622 Main St.
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Standing Seam—60 year life expectancy: Main issues are wind damage and flashing details. Ferrell Hall, Gutterson Field House.
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Metal Stamp—60 year life expectancy: Wind damage and oxidization. 481 Main St.
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Cedar Shingle—20 year life expectancy: Drying, cracking, moisture curling, and flashing. Redstone Lodge.
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EPDM (Ethylene Propylene Diene Terpolymer)—life expectancy 20 years: Shrinkage, flashing curling, susceptible to punctures. 284 East Ave, Given, Votey, Billings Patios.
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PVC (Polyvinyl Chloride) – 20 year life expectancy: Shrinkage, shattering, flashing issues, sharp objects.
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TPO (Thermoplastic Polyolefin)—20 year life expectancy: Shrinkage, flashing, sharp objects. Mercy Hall
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Built Up Roof– 20 Year life expectancy: drying out and cracking, sheet separation, odor. Waterman
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Half-lap—10 year life expectancy: Shrinkage, wind lifting. 70 South Williams
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Flat Lock—60 year life expectancy: Mechanical fastener failure, seam splitting. Ira Allen Chapel Steeple
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Glass—20 year life expectancy: Glazing failure, wind, breakage, guano. Aiken
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Clay Tile—80-100 year life expectancy: Fragile, outlast their fasteners, wind displacement. Morrill Hall.
“Mobile Roof Rescue Unit” (MRRU)
Mobile Roof Rescue Unit (MRRU)

- Needed a way to respond to a leak or issue quickly
- Many of the jobs need staging
- SOOOO many roof types SOOOO many different materials needed
- On site storage unit
MRRU FEATURES

- Break (metal bender)
- Shear (metal cutter)
- AM/FM radio with two speakers
- Exterior hooks to carry a ladder
- Multiple shelving units
- Standing room
- With no staging an excellent DRY workspace
- Lovely UVM green
Future Additions to the MRRU

- Yellow flashing emergency light
- CD player
- Air conditioning
- Additional shelving
- Better seating
- Another set of ladder hooks
- Cigarette lighter for charging cell phones and powering laptops for when we go paperless