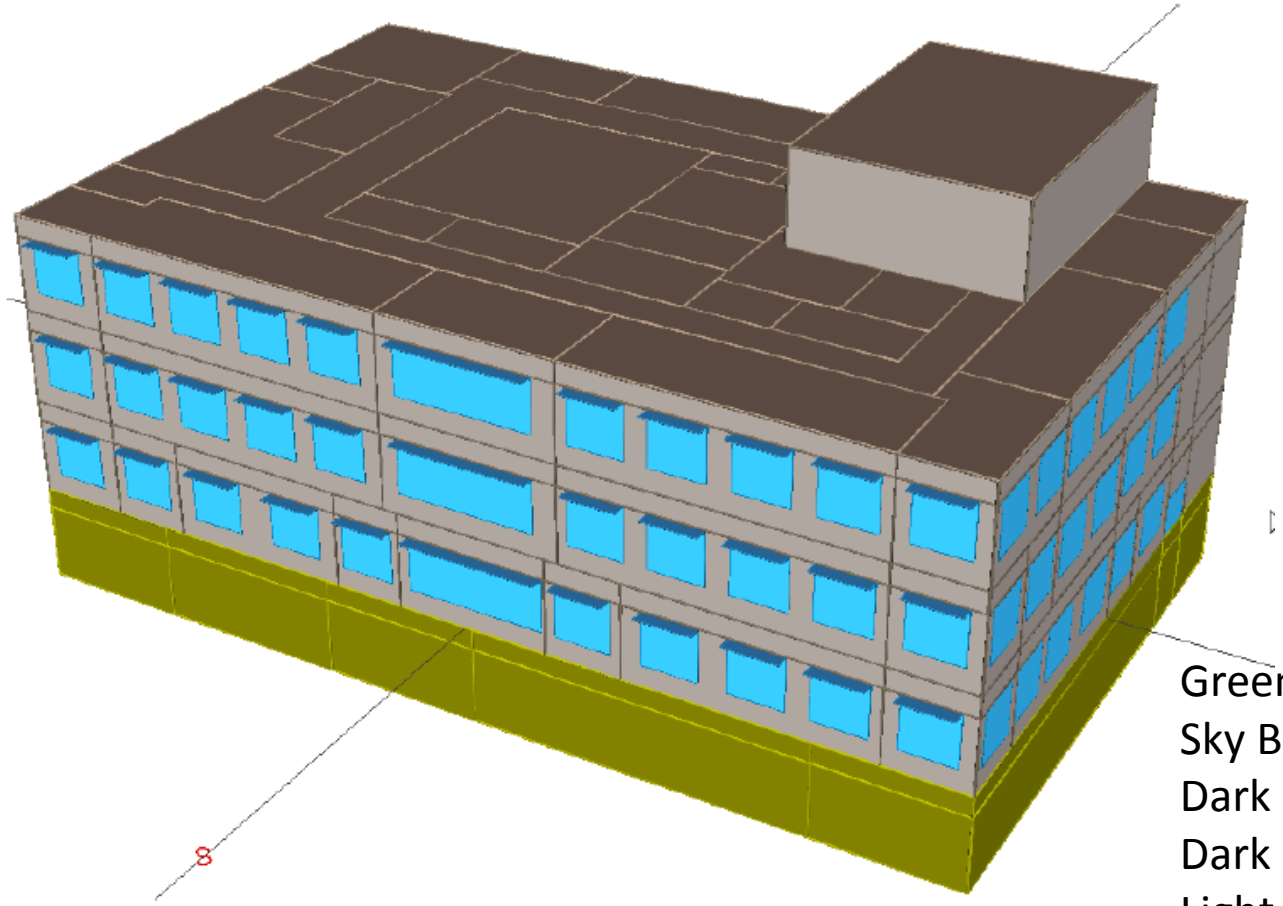
Oswego Wilber Hall MEP Meeting
6/20/16

PATHFINDER
ENGINEERS & ARCHITECTS LLP

Major MEP Issues
(Since our last Meeting)

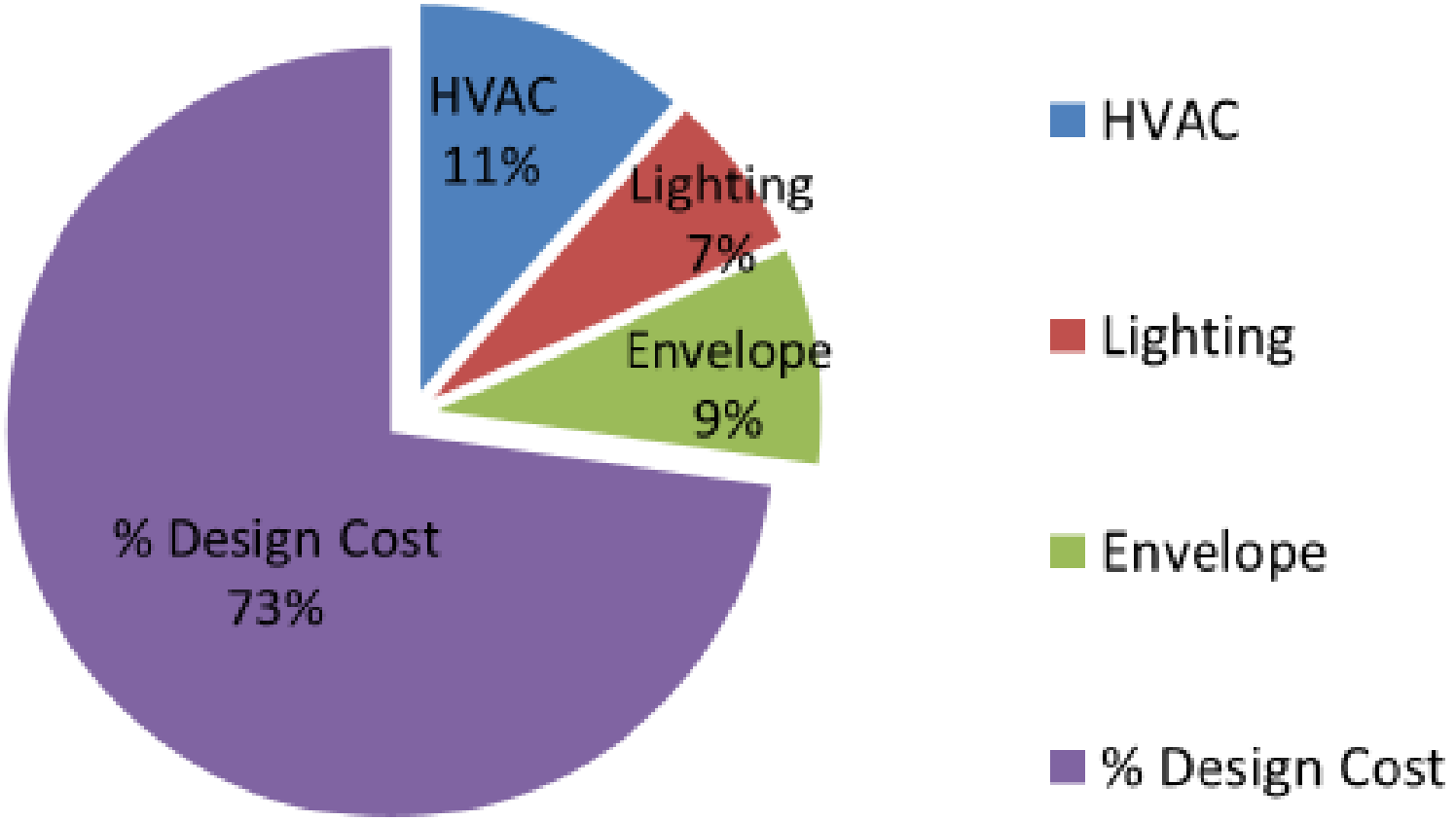
1. Changes to Proposed Alternates (Full Windows)
2. Fireproofing Respray on Basement and 1st Floor
3. Insulation added to Penthouse roof and walls
4. Relocation of Roof leaders inside envelope

Wilber Hall Energy Model Image



Green : Underground
Sky Blue: Windows
Dark Blue: Solar Shades
Dark Grey: Roof Insulation
Light Grey: Wall Insulation

Energy Cost Savings by ECM
SUNY OSWEGO Wilber Hall SOE Phase III



26% Energy Savings from ASHRAE 90.1 v2007 Baseline

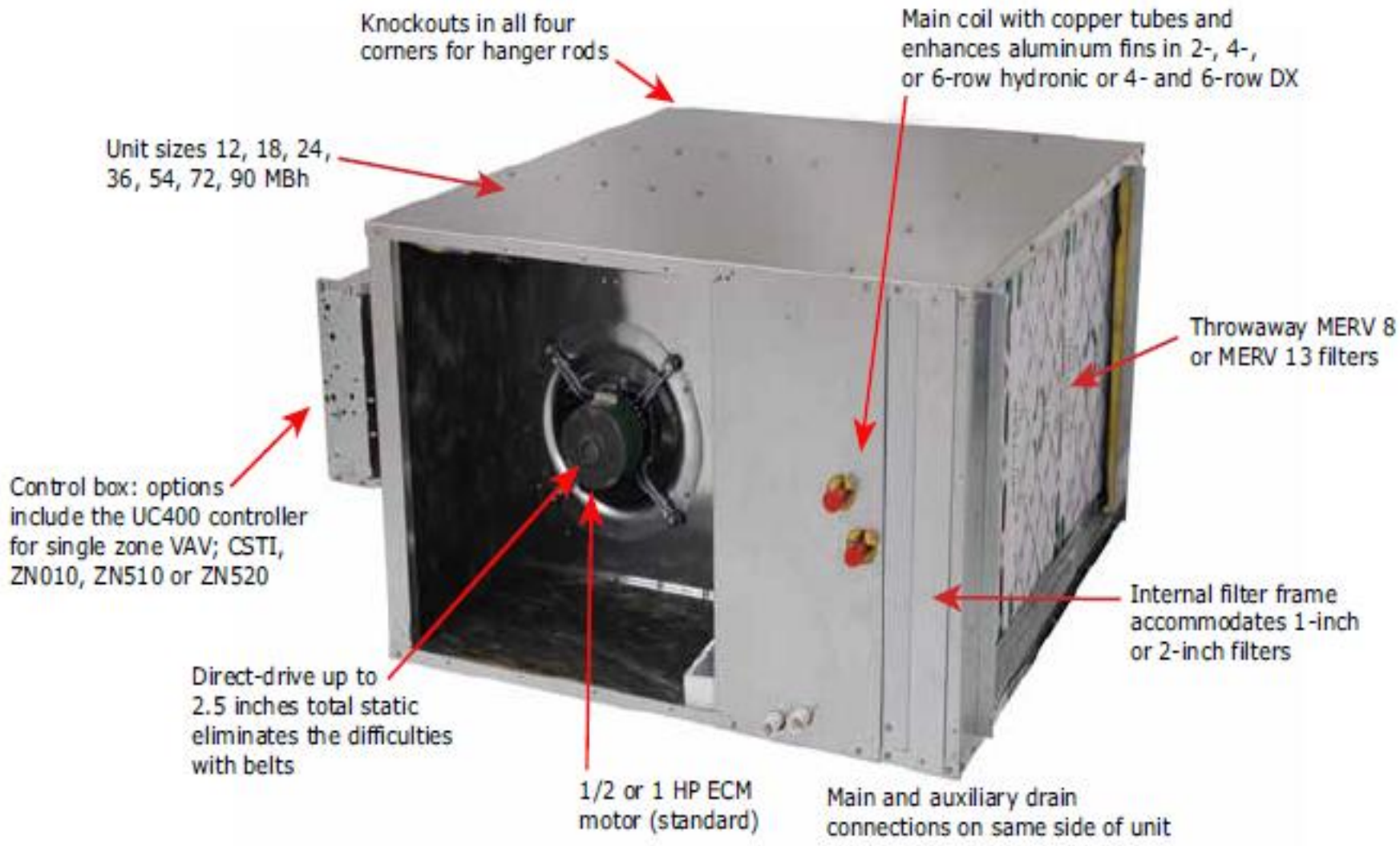
Basis of Design Fan Coils vs Chilled Beams

Note: The percentage displayed for the "Proposed/ Base %" column of the base case is actually the percentage of the total energy consumption.

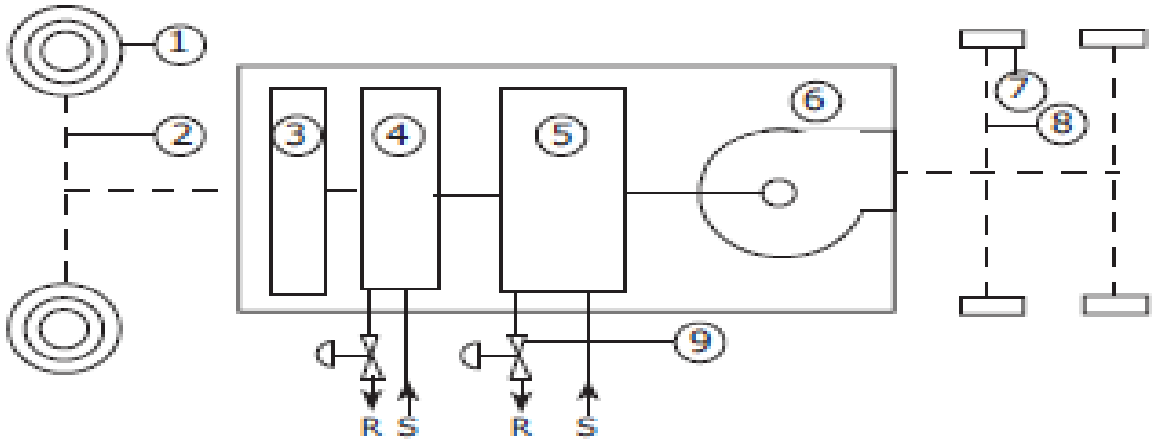
* Denotes the base alternative for the ECB study.

		* Alt-1 Wilber Hall FCU			Alt-2 Wilber Hall Chilled Beams		
		Energy 10^8 Btu/yr	Proposed / Base %	Peak kBtuh	Energy 10^8 Btu/yr	Proposed / Base %	Peak kBtuh
Lighting - Conditioned	Electricity	345.7	13	161	345.7	100	161
Space Heating	Electricity	49.5	2	8	51.6	104	8
	Gas	1,580.3	61	1,922	1,587.2	100	1,777
Space Cooling	Electricity	220.6	8	216	228.1	103	200
Pumps	Electricity	210.1	8	51	218.8	104	52
Heat Rejection	Electricity	83.9	3	31	87.5	104	32
Fans - Conditioned	Electricity	112.4	4	34	2.1	2	1
Total Building Consumption		2,602.5			2,521.0		

Trane High Performance ECM Fan Coils

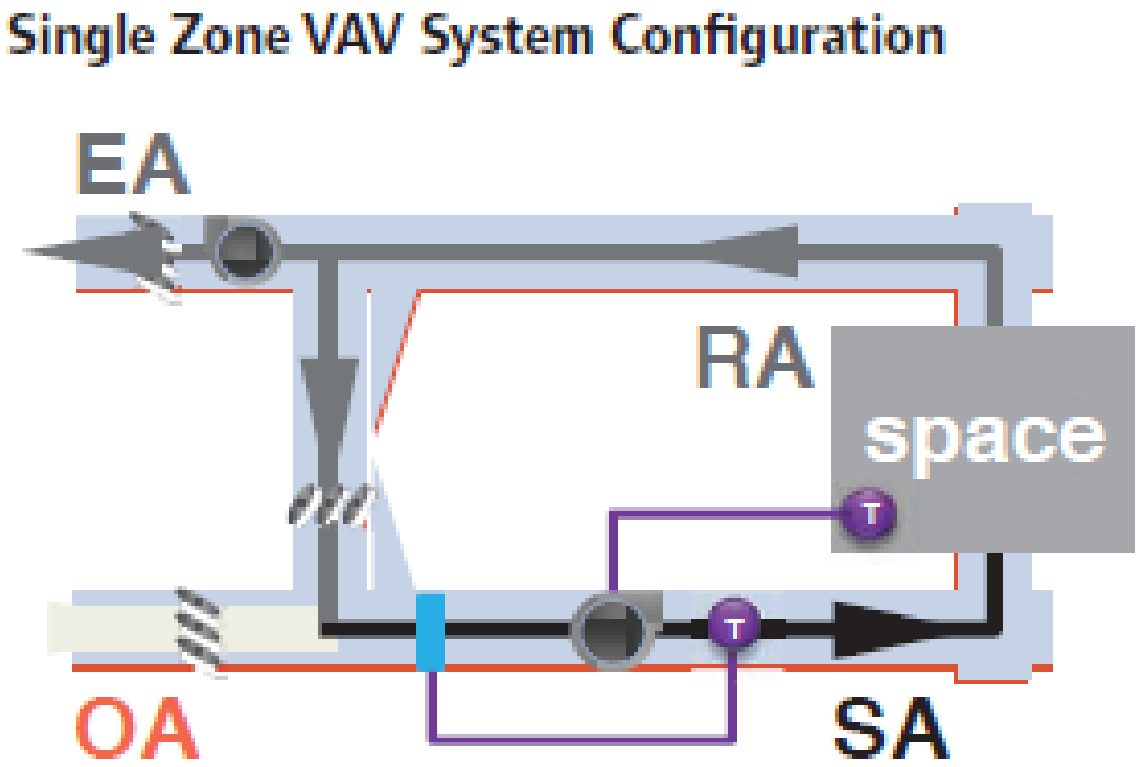


Typical 4 Pipe Blower Coil Elements



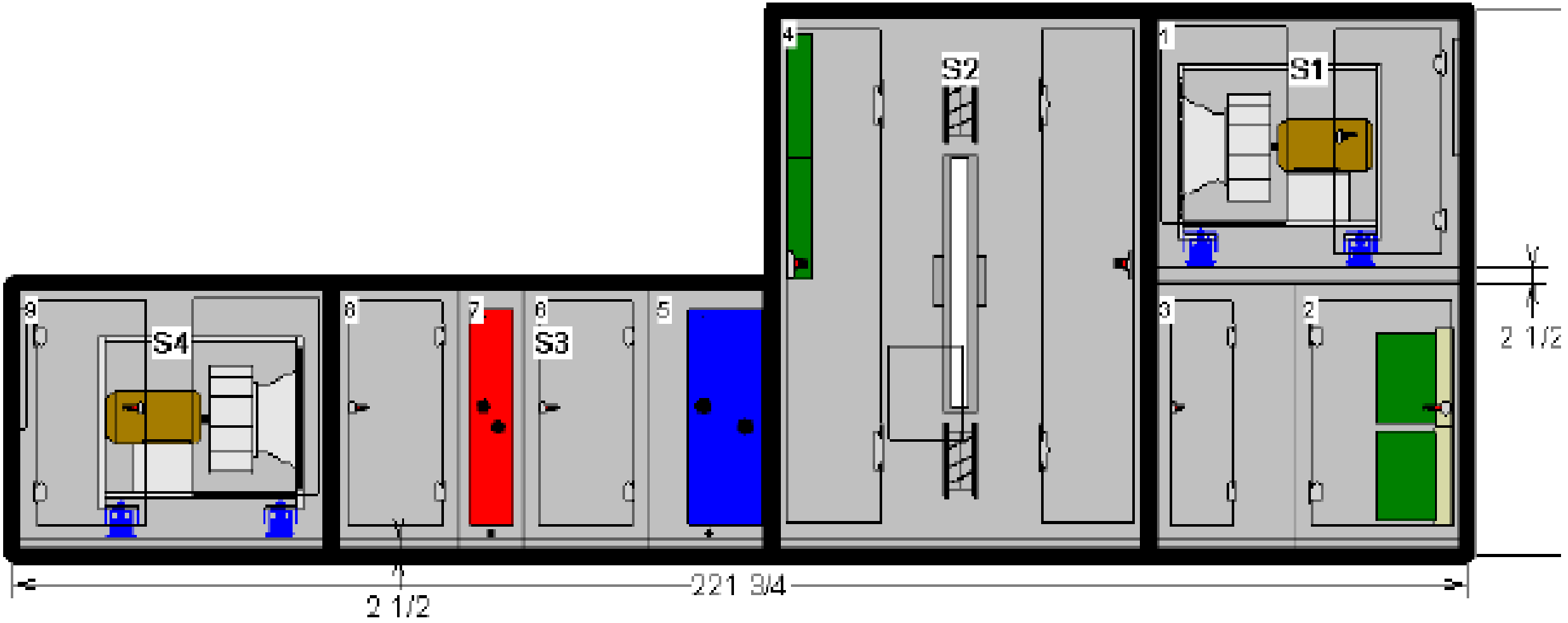
1	Return grille
2	Return ductwork
3	Filter
4	Auxiliary coil - 1 or 2 row
5	Main coil - 2, 4, or 6 row
6	Blower coil unit
7	Diffuser
8	Supply ductwork
9	2-way control valves - main and auxiliary coils

Proposed VAV / Fan Coil Control



In a Single Zone VAV system, the temperature sensor in the zone is used to vary the air temperature and the air volume in order to maintain the desired set point.

Typical Penthouse ERV (DOAS) Unit



Overall Elevation View: Right - Shipping splits indicated by bold outline. - Measurements in inches

MEP Information / Campus Input

Energy Model

- Information regarding the existing efficiencies of the chiller and central heating plant.

Fire Protection

- Hydrant Map / Correlation to flow test provided

HVAC

- Verify which existing pumps serve adjacent areas
- Preference for pump locations

MEP Information / Campus Input

Electrical

- Verify use of non Campus Standard LED light fixtures
- Verify Campus security system requirements for academic buildings
  (door access, security cameras)
- Confirm reuse of existing feeders to panelboards being replaced