

# Aspen Meetinghouse Predictive Wireless Design Report V2



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Completion Date: 2/7/2025

Review Date: 02/10/2025

## Project Description

The AP placement and signal strength predictions are based on assumptions made for signal propagation through interior wall materials.

Based on those assumptions there will be a greater margin of error between the prediction and what may be experienced.

The AP placement was made based on optimizing for 5 GHz signals for both primary and secondary signal strength.

The APs will be assigned a channel for both 2.4 GHz and 5 GHz based on what is detected and reported to the controller. The controller manages channel adjustments as information is reported by each AP.

The Meraki Managed CW9162 access points are represented in this prediction.

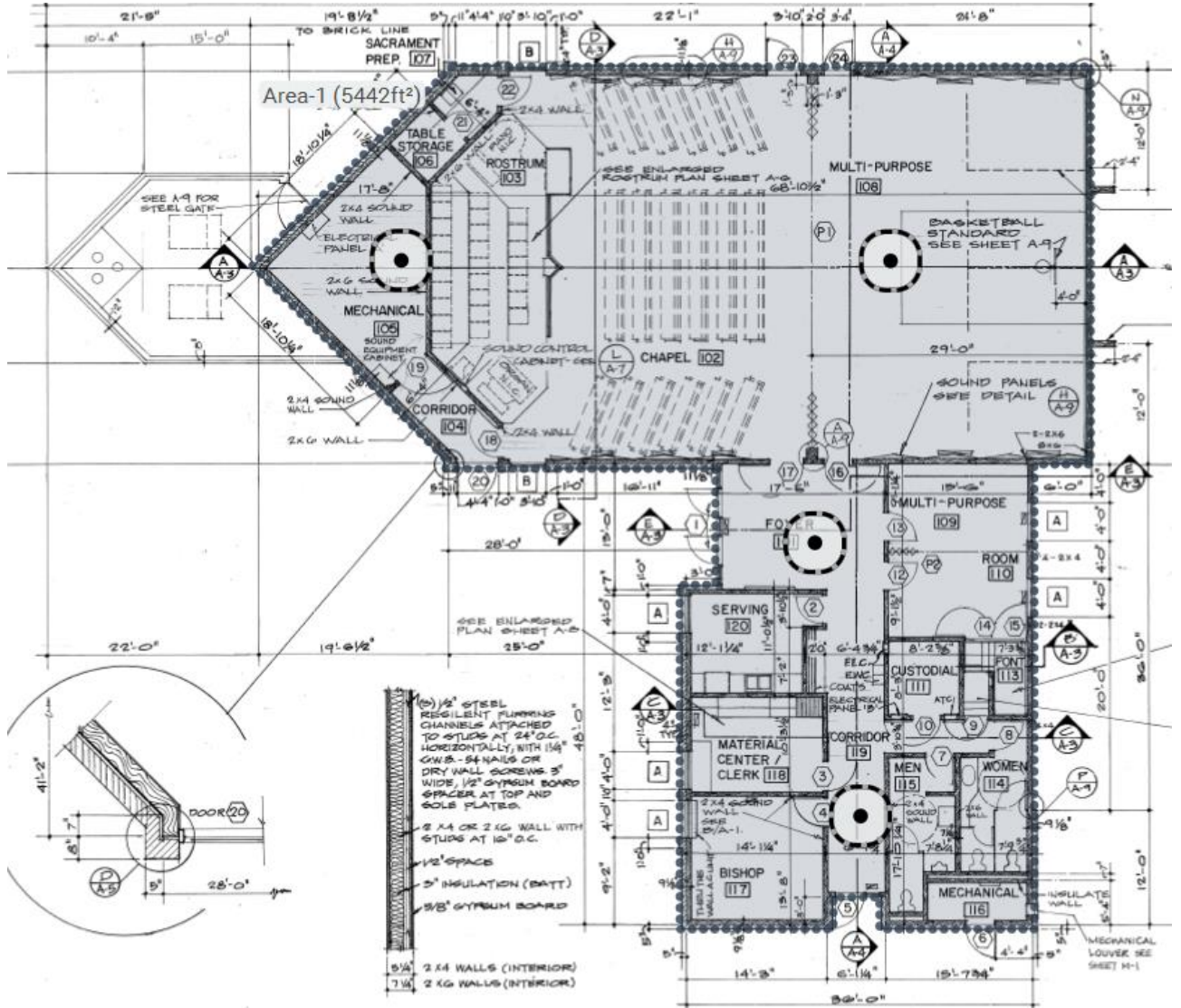
Without measured attenuation and AP signal deviation measurements, the actual signal propagation will vary.

Version 2:

Minor shifts to all AP locations and altered AP in Multi-purpose room to a 20ft elevation.

# Aspen

## Survey routes and Access Points for Aspen



View as / Project Offset:	Generic Laptop (-3 dB/-3 dB/-)
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### Area-1 (5,442 ft²)

Coverage Requirement: Ekahau Best Practices		
2.4 GHz	Signal Strength Min	-75.0 dBm
	Secondary Signal Strength Min	-75.0 dBm
	Signal-to-Noise Ratio Min	20.0 dB
	Data Rate Min	24 Mbps

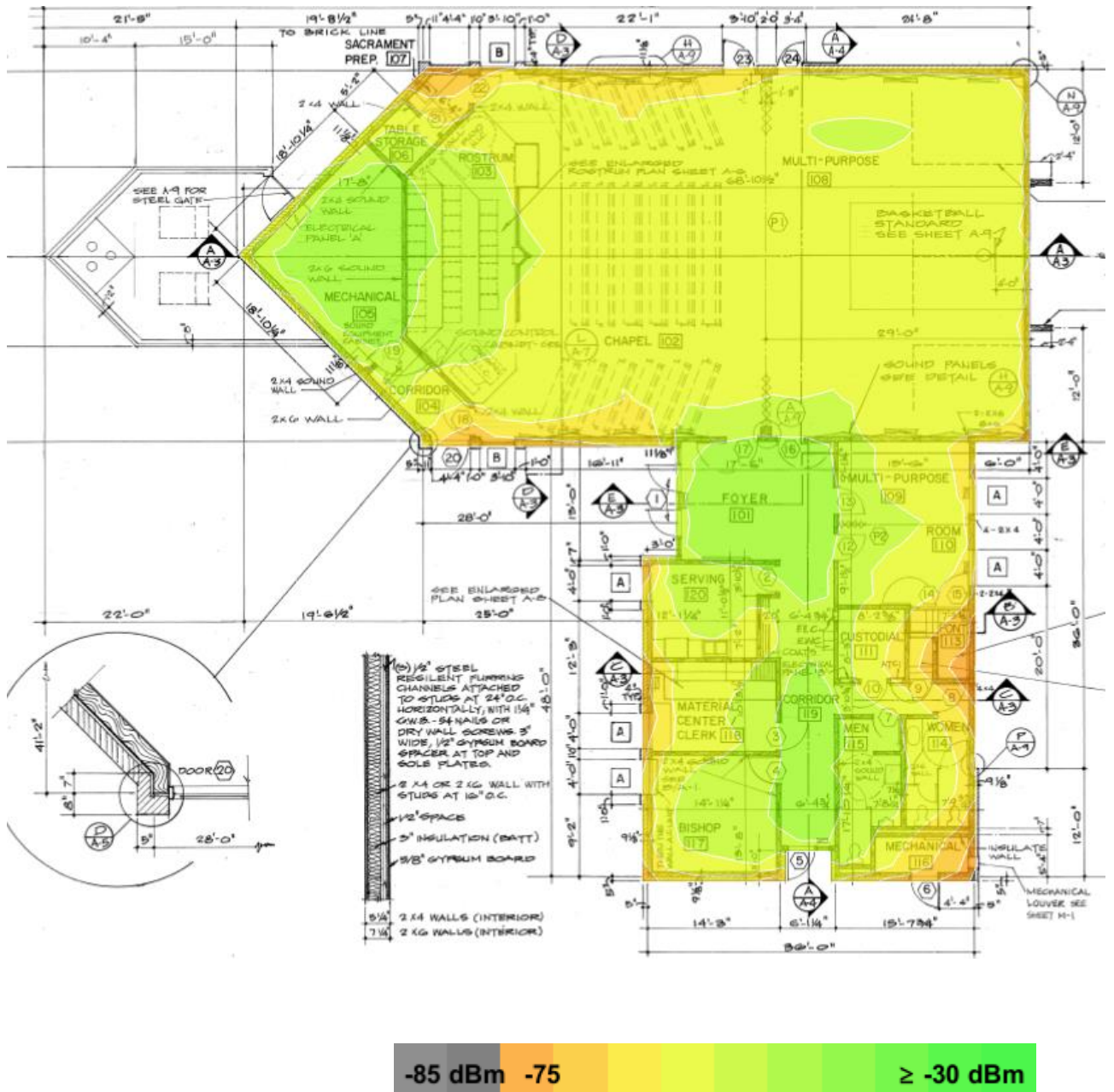
## Aspen Meetinghouse Predictive Wireless Design Report V2

	Channel Interference Max	<b>2 at min. -85.0 dBm</b>
	Round Trip Time (RTT) Max	<b>200 ms</b>
	Packet Loss Max	<b>0.0 %</b>
<b>5 GHz</b>	Signal Strength Min	<b>-75.0 dBm</b>
	Secondary Signal Strength Min	<b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min	<b>25.0 dB</b>
	Data Rate Min	<b>24 Mbps</b>
	Channel Interference Max	<b>1 at min. -85.0 dBm</b>
	Round Trip Time (RTT) Max	<b>200 ms</b>
	Packet Loss Max	<b>0.0 %</b>
<b>6 GHz</b>	Signal Strength Min	<b>-75.0 dBm</b>
	Secondary Signal Strength Min	<b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min	<b>25.0 dB</b>
	Data Rate Min	<b>24 Mbps</b>
	Channel Interference Max	<b>1 at min. -85.0 dBm</b>
	Round Trip Time (RTT) Max	<b>200 ms</b>
	Packet Loss Max	<b>0.0 %</b>
<b>Capacity Requirement</b>	No capacity devices for this area	
<b>Notes</b>		



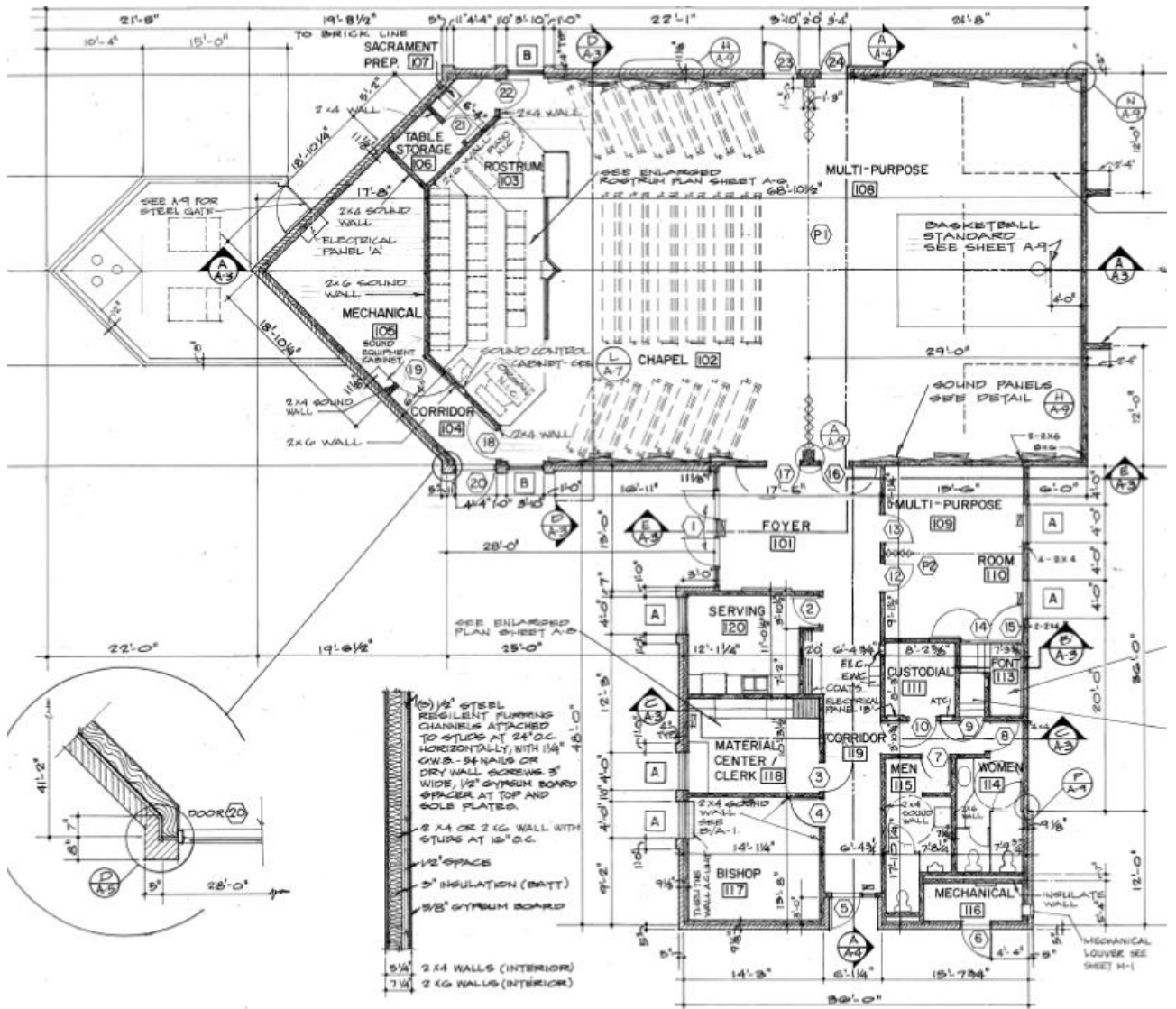
### Signal Strength for Aspen on 5 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.

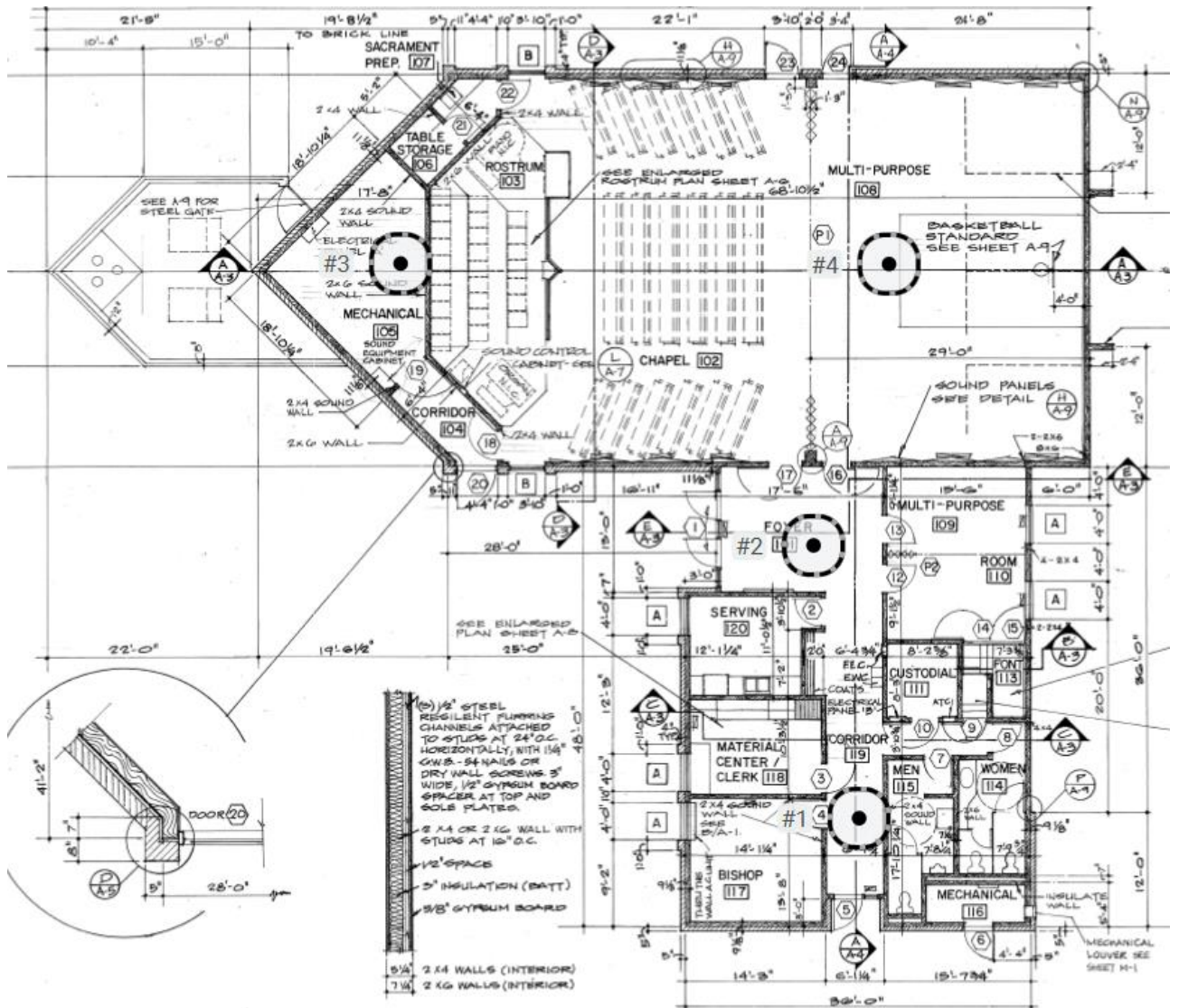


### Signal Strength for Aspen on 6 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



## Access Points on Aspen



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### Simulated Access Points on Aspen

AP #	Access Point		
1	Simulated AP-001		Cisco Meraki Catalyst 9162
	Wi-Fi 6	1	6 mW
	Wi-Fi 6	36	25 mW
	Wi-Fi 6E	1@80 (6 GHz)	25 mW
	Bluetooth	-	1 mW
2	Simulated AP-002		Cisco Meraki Catalyst 9162
	Wi-Fi 6	1	6 mW
	Wi-Fi 6	36	25 mW
	Wi-Fi 6E	1@80 (6 GHz)	25 mW
	Bluetooth	-	1 mW
3	Simulated AP-003		Cisco Meraki Catalyst 9162
	Wi-Fi 6	1	6 mW
	Wi-Fi 6	36	25 mW
	Wi-Fi 6E	1@80 (6 GHz)	25 mW
	Bluetooth	-	1 mW
4	Simulated AP-004		Cisco Meraki Catalyst 9162
	Wi-Fi 6	1	6 mW
	Wi-Fi 6	36	25 mW
	Wi-Fi 6E	1@80 (6 GHz)	25 mW
	Bluetooth	-	1 mW

### Measured Access Points on Aspen

None.