

Completed by: **Jon Loutensock**Completion date: 09/16/2025

#### 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.

Interior wall material was set as hollow block (cinderblock).

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

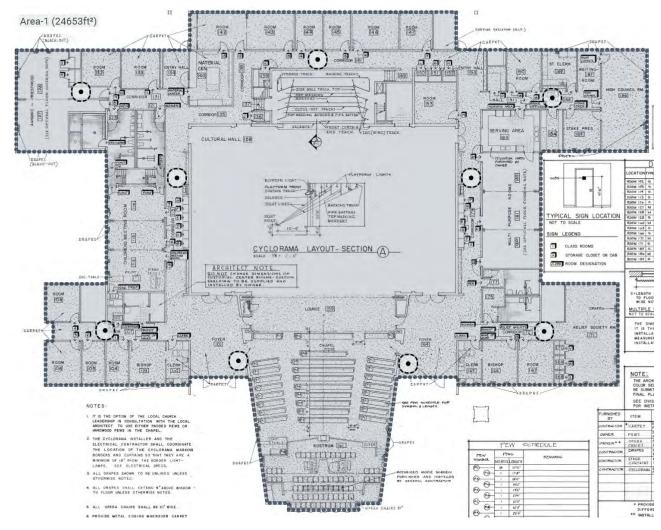
The AP placement was made based on optimizing 5 GHz signals for primary signal strength. Secondary coverage was not a requirement.

The C9172I access point is represented in this prediction.

NOTE: There is a "Plan B" version of this building. The shape and wall locations are generally the same. The function is different in different areas between the two plans. The placement of the access points in either plan should meet the signal strength requirements.

## Stevens - Standard Plan A - Floor Plan

Survey routes and Access Points for Stevens - Standard Plan A - Floor Plan



View as / Project Offset:	Mobile Device

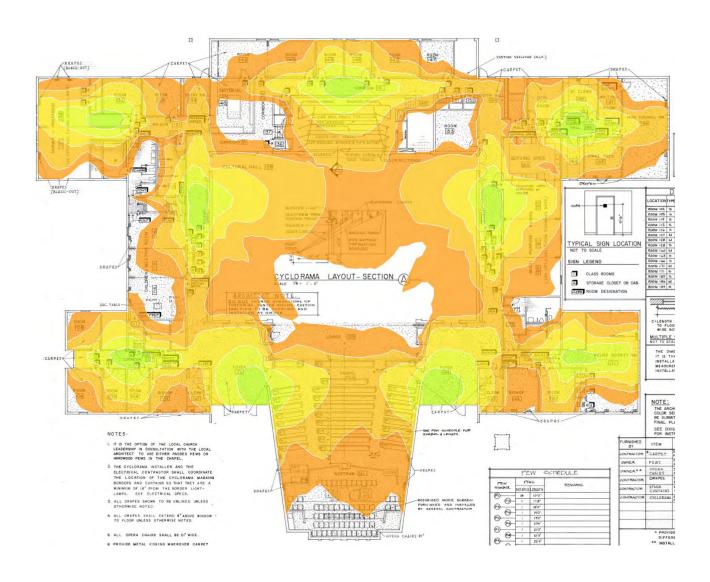
#### Area-1 (24,653 ft<sup>2</sup>)

Coverage Requirement: Ekahau Best Practices			
2.4 GHz	Signal Strength Min	-67.0 dBm	
	Signal-to-Noise Ratio Min	20.0 dB	
	Data Rate Min	24 Mbps	
	Channel Interference Max	2 at min85.0 dBm	
	Round Trip Time (RTT) Max	200 ms	

	Packet Loss Max	0.0 %
5 GHz	Signal Strength Min	-67.0 dBm
	Secondary Signal Strength Min	-67.0 dBm
	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
6 GHz	Signal Strength Min	-67.0 dBm
	Secondary Signal Strength Min	-67.0 dBm
	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
Capacity Requirement		
	No capacity devices for this area	
Notes		

## Signal Strength for Stevens - Standard Plan A - Floor Plan on 2.4 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.



-75 dBm ≥ -30 dBm

## Signal Strength for Stevens - Standard Plan A - Floor Plan on 5 GHz band

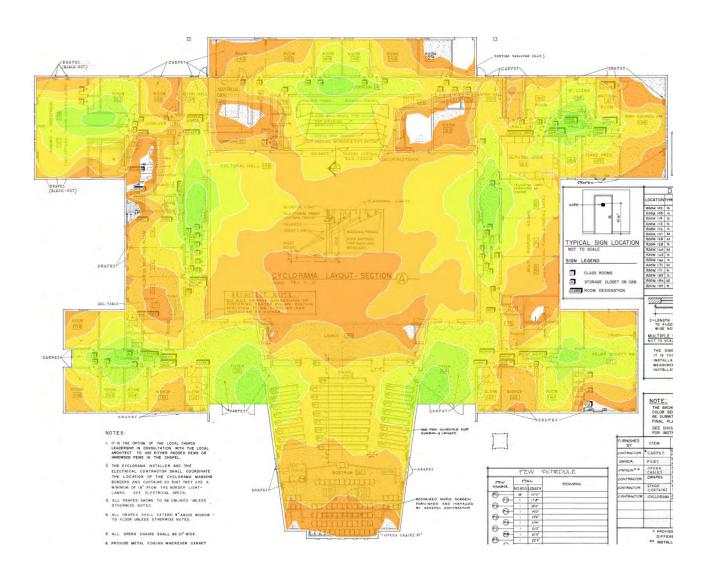
Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



-75 dBm ≥ -30 dBm

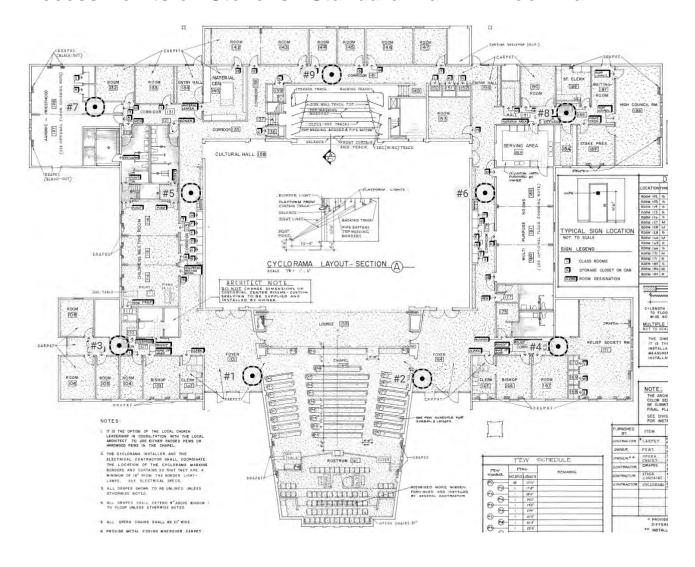
## Signal Strength for Stevens - Standard Plan A - Floor Plan on 6 GHz band

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.



-75 dBm ≥ -30 dBm

## Access Points on Stevens - Standard Plan A - Floor Plan



## Access Points on Stevens - Standard Plan A - Floor Plan

## Simulated Access Points on Stevens - Standard Plan A - Floor Plan

AP#	Access Point				
1	Simulated AP-001		Cisco CW9172I		
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz	
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz	
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz	
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE	
2	Simulated AP-002		Cisco CW9172I		
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz	
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz	
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz	
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE	
3	Simulated AP-003		Cisco CW9172I		
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz	
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz	
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172l 6GHz	
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE	
4	Simulated AP-004		Cisco CW9172I		
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz	
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz	
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172l 6GHz	
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE	
5	Simulated AP-005		Cisco CW9172I		
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz	
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz	
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz	

	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
6	Simulated AP-006		Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
7	Simulated AP-007		Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
8	Simulated AP-008		Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
9	Simulated AP-009		Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE