Passive Survey

Prepared for:	Your Organization
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Location:	Your City, MO
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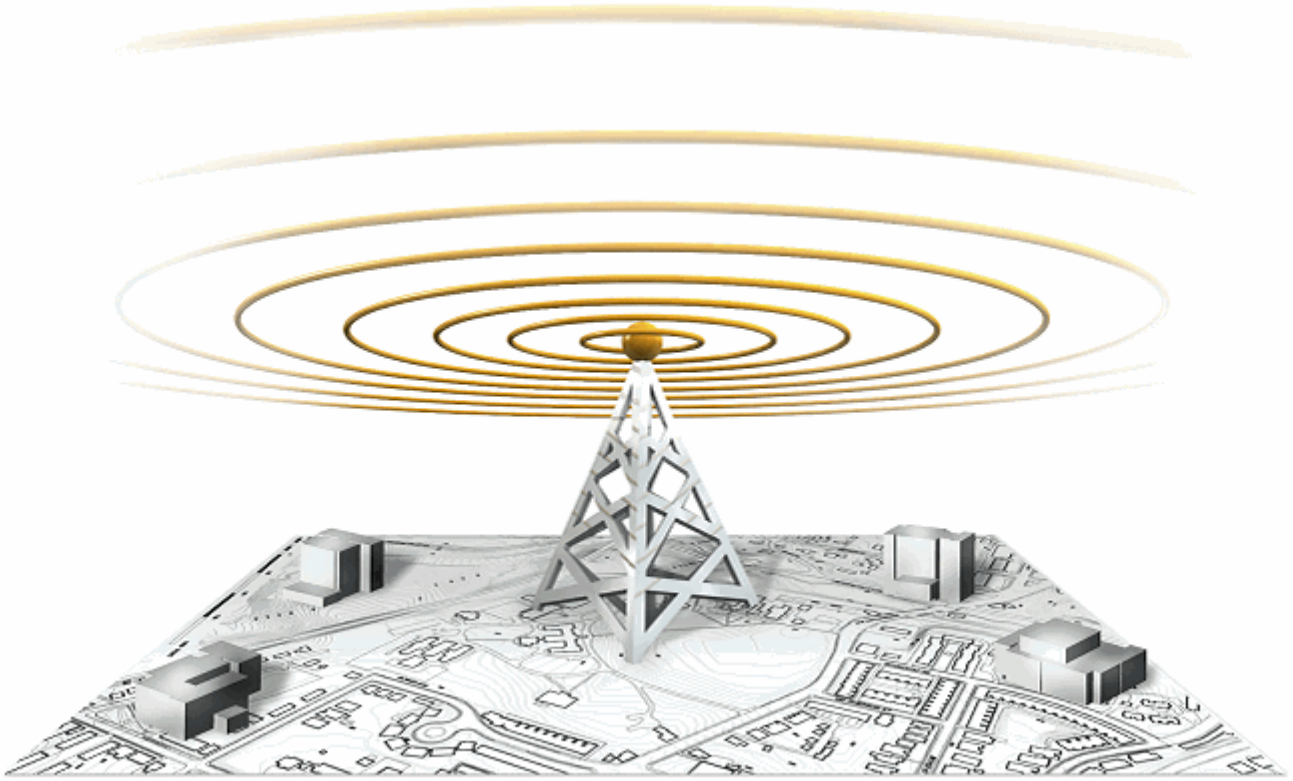

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1 Executive Summary

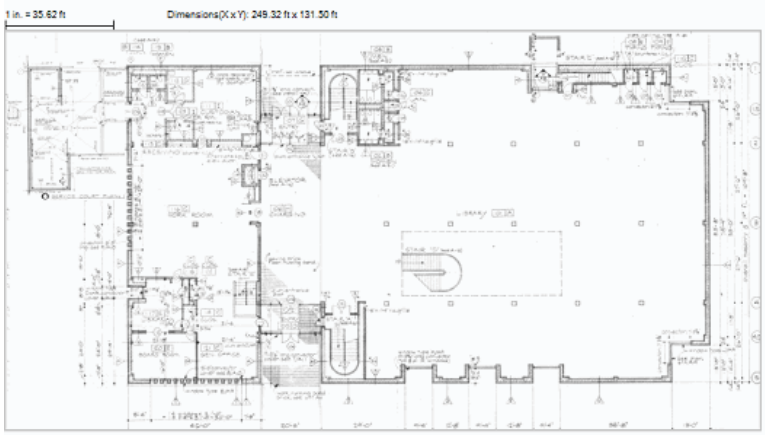
This wireless site survey and RF analysis were performed in order to gain an in-depth understanding of present RF interference sources and to meet overall wireless coverage requirements. The primary goal and subsequent objectives were designed with coverage, desired throughput and usability as primary driving requirements from the business group. This survey was created using an industry standard set of AirMagnet Survey PRO wireless tools and software, which are used for building and securing wireless networks. This survey encompasses site surveying, RF spectrum analysis surveying and real time active site surveying techniques. This document includes site survey specific information, Access Point configuration and installation data sheets, and RF coverage pattern maps. A wireless survey was performed at the customer site. The purpose of the survey is to determine the number and placement of wireless access points necessary to provide ubiquitous coverage for the entire building.

1.1 Survey Overview

1.1.1 Floor Plan Overview

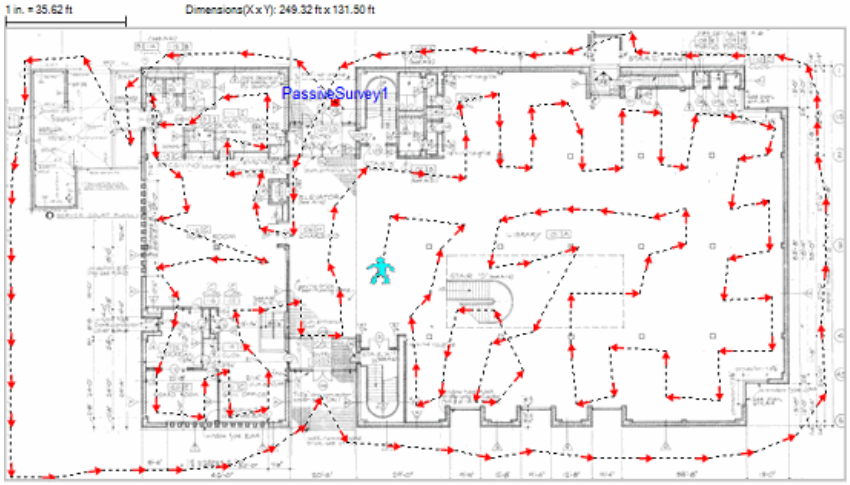
The image below details the area that was surveyed. It includes the floor plan and the dimensions of the building. It can be useful to refer back to this view from some of the other graphs to help orient yourself.

Dimensions	
X	249.32 ft
Y	131.50 ft



1.1.2 Survey Path

This image displays the path taken during the survey process. The red dots indicate points that were clicked during the survey, whereas the blue ones represent sampling points taken by the application automatically.



2 Introduction

In some instances, this document contains text descriptions of unique characteristics of the sites surveyed. These descriptions give context to the Access Point (AP) configuration data sheets and coverage maps by offering suggestions for enhancing coverage of the RF network as facilities change over time.In addition to textual descriptions and RF coverage maps (overlaid on facility blueprints) are provided. The Access Point configuration data sheets include Access Point placement and configuration details such as location, transmit power, RF channel, antenna placement, and special Access Point and antenna mounting procedures. The RF coverage maps include the 2D spatial coverage pattern for the Access Points, an indication of the Access Point locations, the RF channel configuration for the Access Points within the facility.

2.1 Objective

2.1.1 Pre-Install/Post-Install Survey-Checkup

The stated objective of this survey is to perform a spot-check of the existing deployment in order to establish that the current wireless infrastructure meets the needs of the users present. The requirements against which these results will be compared are stated in the WLAN Deployment Requirements section detailed later in this report.

3 Methodology

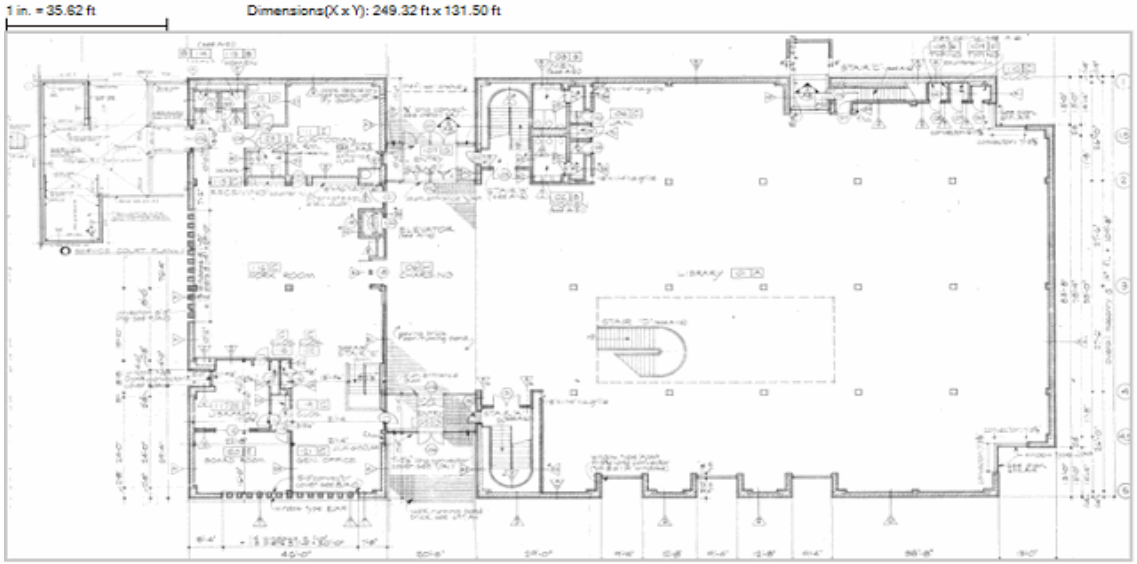
Multiple surveys were performed to allow finer detail and comprehensive data gathering. The process used to determine the existing RF data coverage in the facility is outlined below:

Passive surveys were conducted throughout the facility to gather RF data (signal strength, noise level, signal-to-noise ratio, SSID and MAC addresses)

4 Current AP Placement and Configuration

The floor plan below shows the locations of the currently installed APs or desired if this is a new deployment. The specific details for each AP are described in the section labeled "AP Detail Breakdown".Note: Only the AP's that were placed on the floor plan prior to running the report will be shown on the floor plan image.

4.1 AP Placement Overview



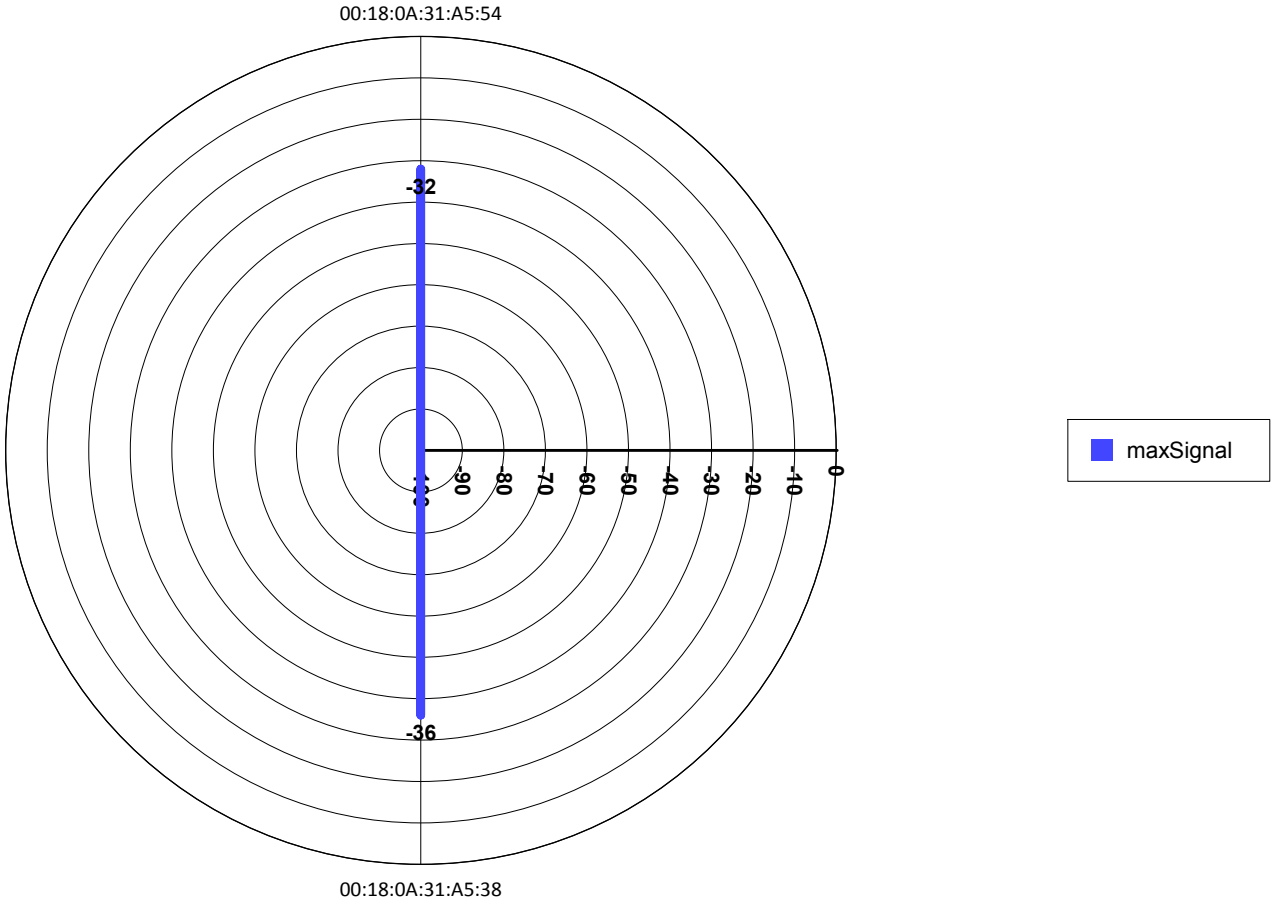
4.2 AP Detail Breakdown

Access Points

APName	Media Type	MAC Address	Channel	SSID	Power, mw	Max Signal
Non ACL, Neighborings, Rogues						
00:18:0A:31:A5:38	802.11gn-2.4 GHz	00:18:0A:31:A5:38	11	Meraki MR16	10	-36
00:18:0A:31:A5:54	802.11gn-2.4 GHz	00:18:0A:31:A5:54	1	Meraki MR16	10	-32
Number of AP	**2**					

Total APs **2**

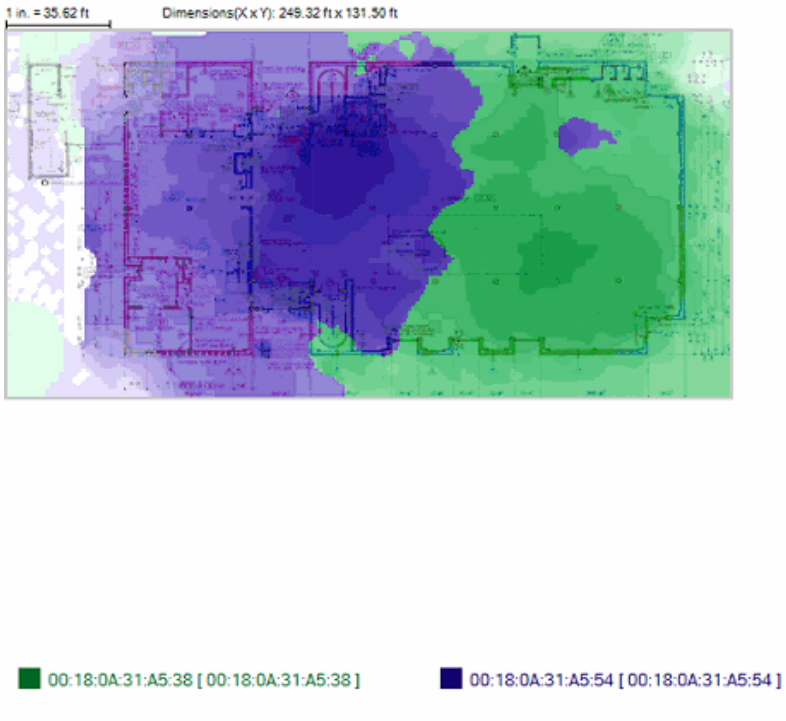
AP Signal Strength (dBm)



5 Current Deployment Site Survey

5.1 Access Point Coverage Regions

The image below shows the areas covered by the access points (in dBm). The color shown represents the AP with the strongest signal in any given area.This map will give you a visual representation of the Wi-Fi coverage area for the AP's.



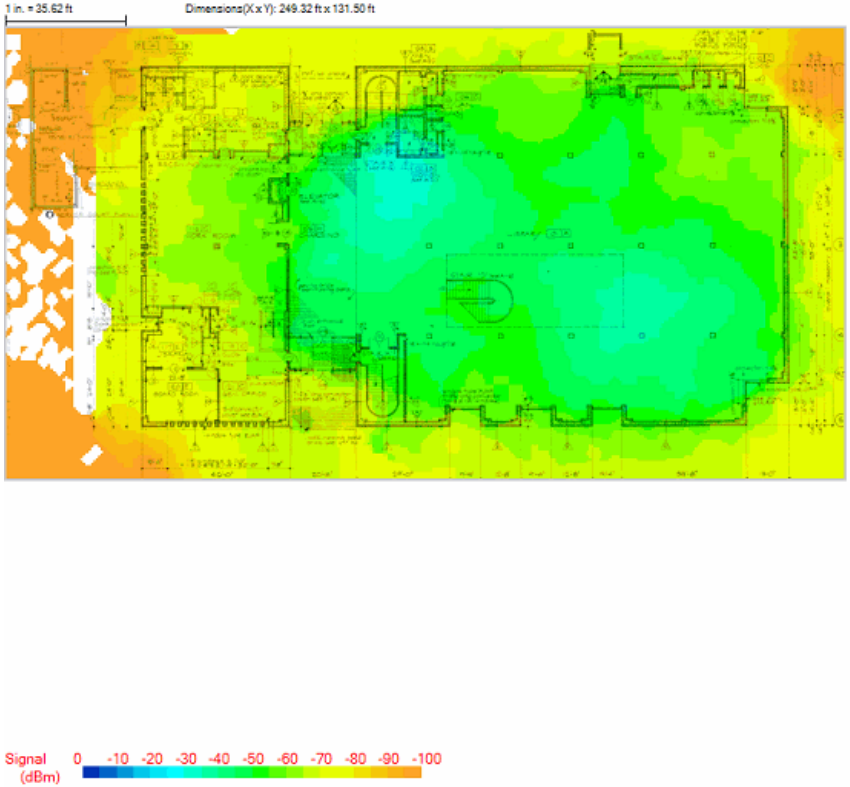
5.2 Overall Signal Coverage

The image below displays the signal coverage (in dBm) at each point in the map layout. As a general rule, regions with signal levels below -67 dBm provide insufficient coverage for standard use (this value may vary depending on user requirements, service level agreements, applications used, number of users serviced, etc.).

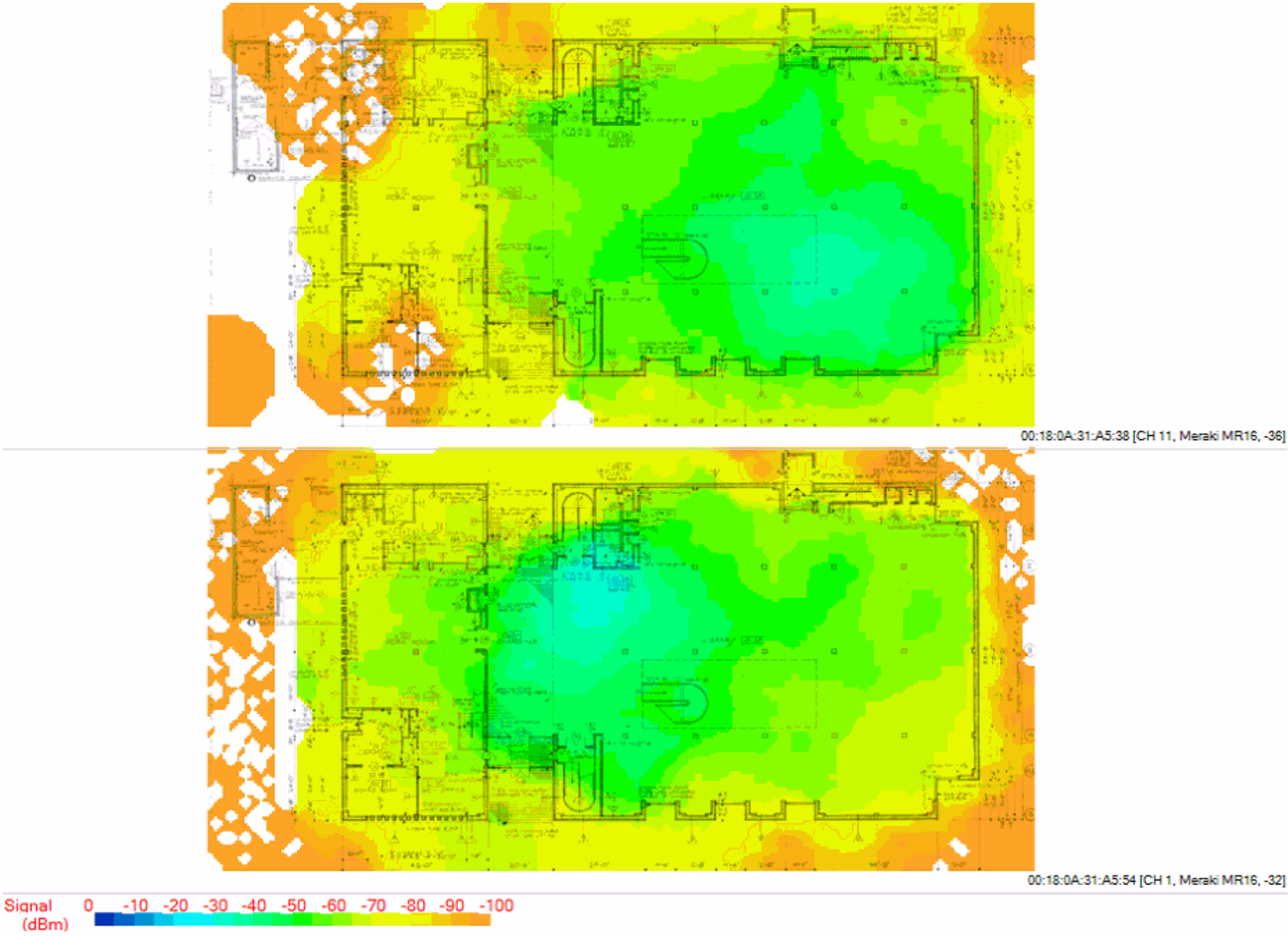
APs are displayed in their detected locations (and reflect the existing power and antenna properties).

Note: An active Wi-Fi area can incorporate a variety of environmental factors that can vary throughout the day and may adversely affect RF coverage.

Note: Only the AP's that were placed on the floor plan prior to running the report will be shown on the floor plan image

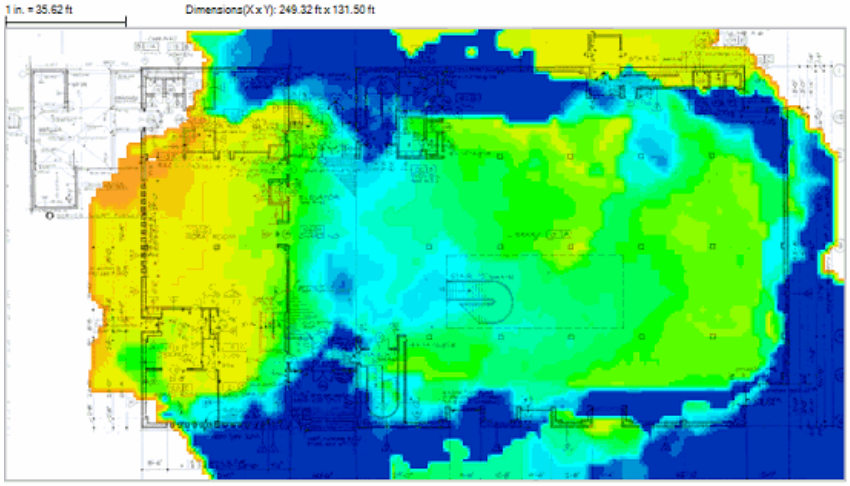


Individual Signal Distribution



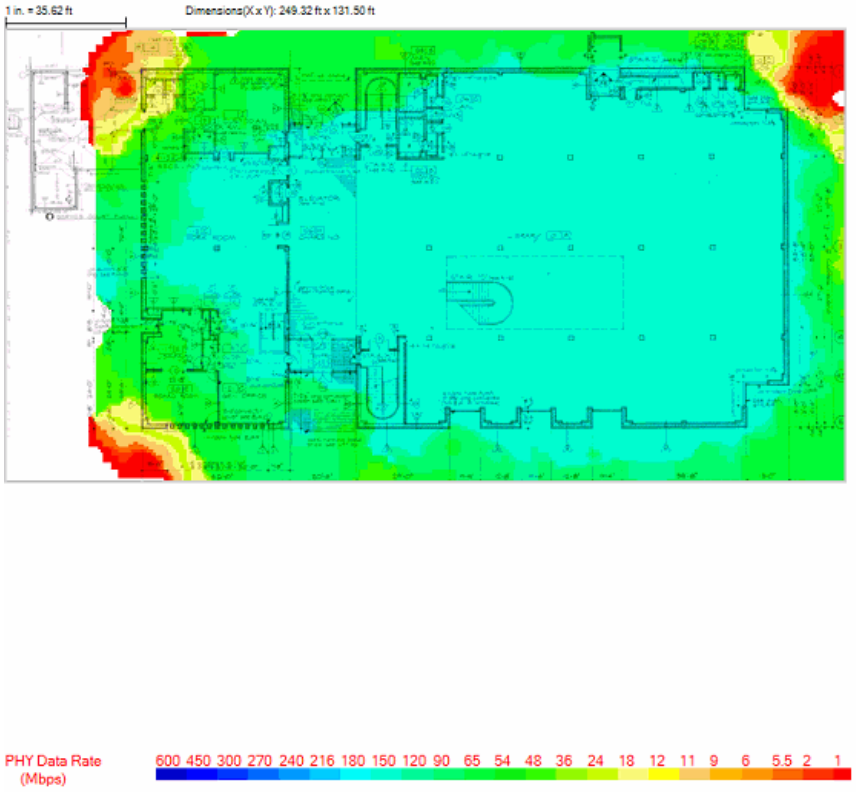
5.3 Channel Interference

The image below displays the interference level (in percentage) at each point on the map layout.
APs are displayed in their detected locations and reflect the existing power and antenna properties. Note that the interference levels present in the environment can vary depending on several factors, such as the number of APs on a single channel, number of devices present, non-802.11 interferers, etc.
Note: Only the AP's that were placed on the floor plan prior to running the report will be shown on the floor plan image.



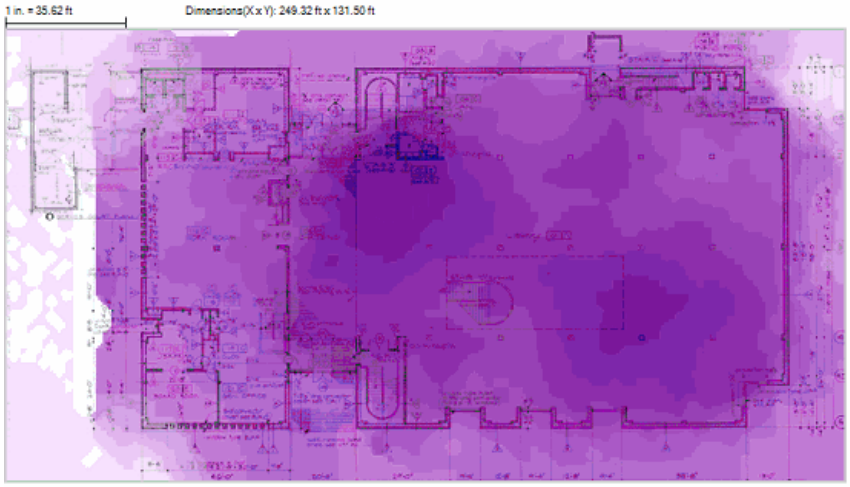
5.4 Predictive PHY Data Rate (Downlink)

The image below displays the predictive PHY data rate connection downlink at each point in the map layout.
Connection Rates provides a direct insight into how well the network will support a real-world end-user client. When doing a Passive survey the ability to see the actual Data rate is not available. In order to provide Data Rates while doing a Passive survey we use Signal Strength to Data Rate mapping table. We take the detected signal strength and map it to a known Data Rate. A low Data Rate connection directly translates to lower throughput and performance for an end-user. Consistently low connection Rates are indicative of insufficient signal coverage, interference, noise, or miss-configured wireless devices.



5.5 Operating Mode

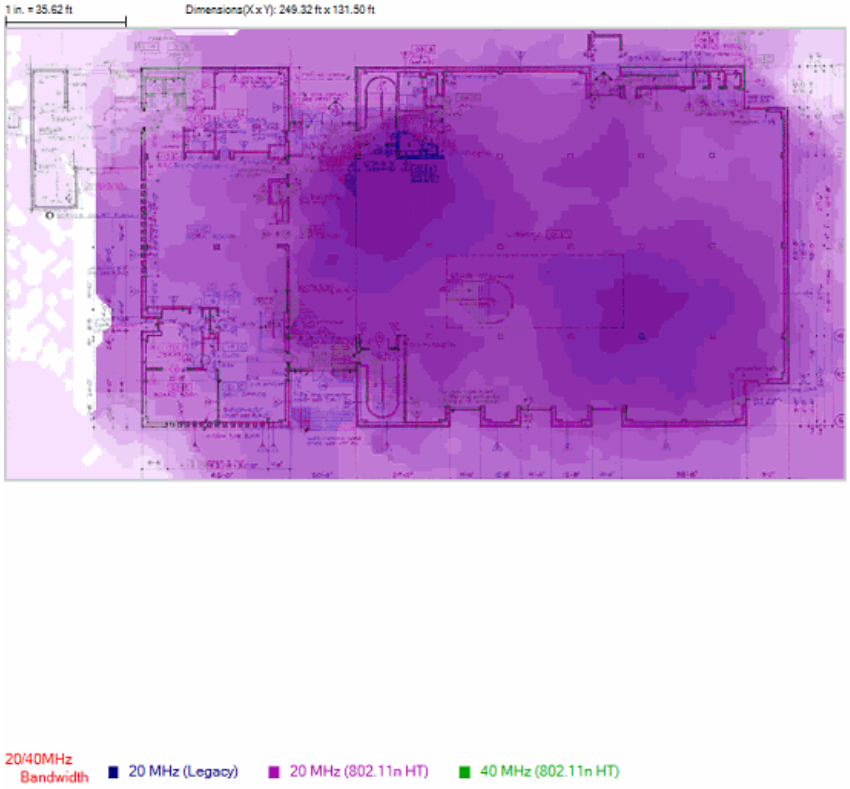
The image below displays the breakdown of the operating modes.
The color shown represents the operating mode of the AP with the strongest signal in any given area.
Like the present 802.11g networks that are backward-compatible to the 802.11b networks, the new 802.11n networks will and must be backward-compatible with stations that are built upon the legacy 802.11a/b/g standards. Towards that end, 802.11n wireless access points must be able to interoperate smoothly in a mixed WLAN environment to the extent that they can support both legacy 802.11a/b/g transmissions over 20-MHz channels and high-throughput transmissions over 40-MHz channels.



5.6 Channel Width

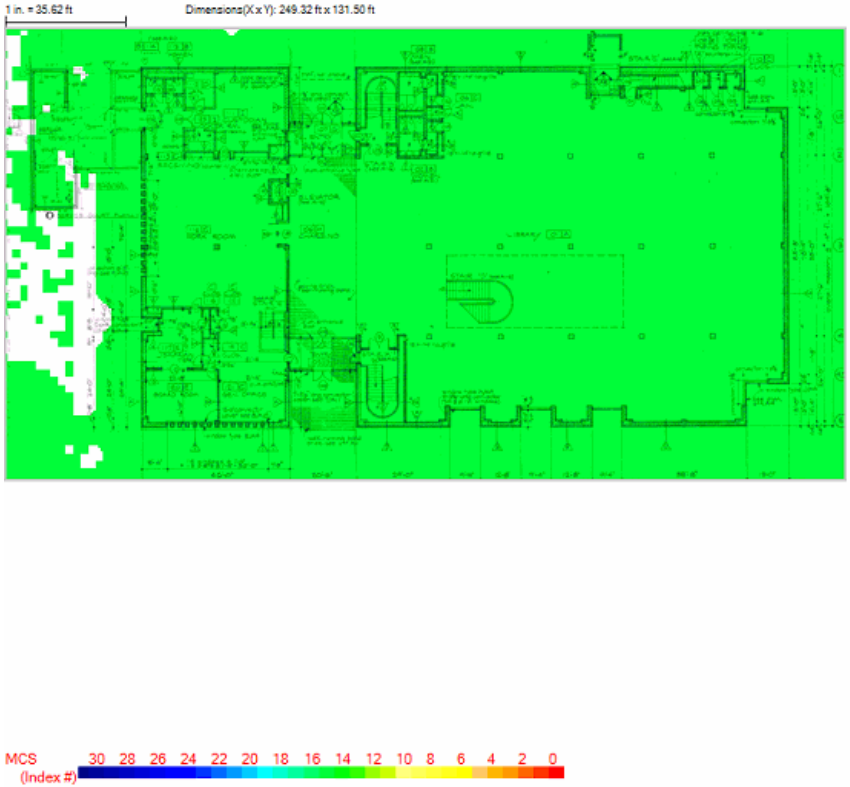
The image below displays the breakdown of the detected channel width.

The color shown represents the Channel Width of the AP with the strongest signal in any given area.



5.7 Max MCS (AP Tx)

The image below displays the AP's detected MCS Transmission Rates.
This heatmap reflects the AP MCS Transmit mode that was detected.



5.8 Max MCS (AP Rx)

The image below displays the AP's detected MCS Receive Rates.