

DAS))) (((Simplified

INDIGO HAMMOND + PLAYLE ARCHITECTS
909 5TH ST
DAVIS, CA 95616

STOCKTON WATER FRONT TOWERS
501 WEST WEBER AVE
STOCKTON, CA 95203

SITE COVERAGE SURVEY

JULY 13, 2020
V1

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1. Scope of Work

Preparation

Pre-survey floor plan review and processing

Mobilization

1 day on-site coverage survey for 11 floors with appropriate manpower and test equipment

Deliverables

Report submittal for building owner or manager's submission to the city fire marshal

2. Emergency Responder Coverage Assessment

Site Survey

The site survey is the foundation of any good radio coverage assessment. Our clearly structured DAS Simplified survey process coupled with our highly trained technicians, engineers and project managers will help establish a proactive, yet cost-effective, system to ensure IFC and NFPA compliance along with insight into the need to enhance cellular signals in all new facilities. Our site survey process is outlined below.

Interior Survey Existing Building

Per IFC and NFPA described coverage testing procedures we divided each building floor plan into 20 roughly equal test grid rectangles. Following a pre-determined walk route within each grid, our Anritsu Certified technician recorded radio signal levels with a spectrum analyzer. In radio systems without a control channel measurements of activity of any of the required channels in the same frequency band will be used for the assessment.

Exclusions

Providing the results of this coverage survey does not compel or require either INDIGO HAMMOND + PLAYLE ARCHITECTS or DAS Simplified to cooperate further on radio remediation engineering, design, prefabrication, or coordination services for STOCKTON WATER FRONT TOWERS or any other project.

3. Final Assessment

Frequency Bands:

UHF - STOCKTON FIRE/PD - MARGINAL

Pass - Good

A Passing Assessment means that based on our analysis the building in its current configuration provides adequate signal coverage and should not need any additional DAS infrastructure. As signal propagation is affected by many factors, including environmental conditions, new construction in the area and seasonal changes, future assessments may have a different outcome.

Marginal - Fair



A Marginal Assessment means that the building area provides fair signal coverage, but may need additional DAS infrastructure to improve signal strength and meet customer's coverage requirements. In this instance we will recommend a contractor-friendly turn-key DAS Simplified solution.

Fail - Poor

A Failing Assessment means that the building area provides poor signal coverage and may need additional DAS infrastructure. In this instance, the DAS Simplified engineers will have the necessary information to design an active DAS that will address the cell coverage and needs. The capability to expand the DAS to accommodate future expansion (e.g. major cellular carriers, paging or other radio systems) can be included upon request.

The lower levels of both buildings, in particular the basement of building 2 are at the very edge of functionality. As construction progresses with more material clutter added, and especially the addition of low-e glass windows coverage will continue to deteriorate to the point of unusable. Our recommendation for this project moving forward is the inclusion of a UHF emergency responder radio coverage system.

4. General Radio Operator's License Signoff

Serial Number	Grant Date	Expiration Date	File Number	Print Date	Effective Date
PG00052195	08-04-2016		0007364864	08-04-2016	08-04-2016
Date of Birth	FCC Registration Number (FRN)		THIS LICENSE IS NOT TRANSFERABLE		
05-28-1984	0025748104		Special Conditions / Endorsements:		
WATLEY, CREIGHTON S 3817 EVANSTON AVE N 302 SEATTLE, WA 98103			NONE		
General Radiotelephone Operator License			 (Licensee's Signature) FEDERAL COMMUNICATIONS COMMISSION		
FCC 605-FRC - May 2007					

5. Test Equipment Cut Sheet

Quick Fact Sheet

Site Master™ S33xE and S36xE



S331E	S332E	S361E	S362E	
2 MHz to 4 GHz	2 MHz to 4 GHz 9 kHz to 4 GHz	2 MHz to 6 GHz	2 MHz to 6 GHz 9 kHz to 6 GHz	Cable & Antenna Analyzer Spectrum Analyzer

Compact Handheld Cable and Antenna Analyzer with Spectrum Analyzer

Everything you need to meet the challenges of today and tomorrow in a sleek, compact instrument that's less than 6 lbs.

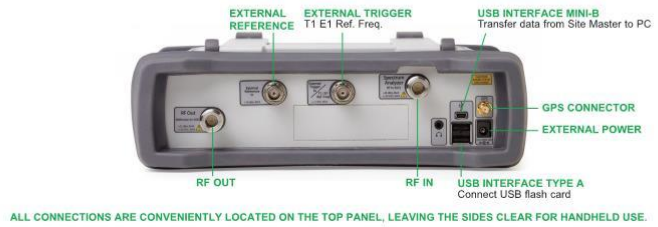
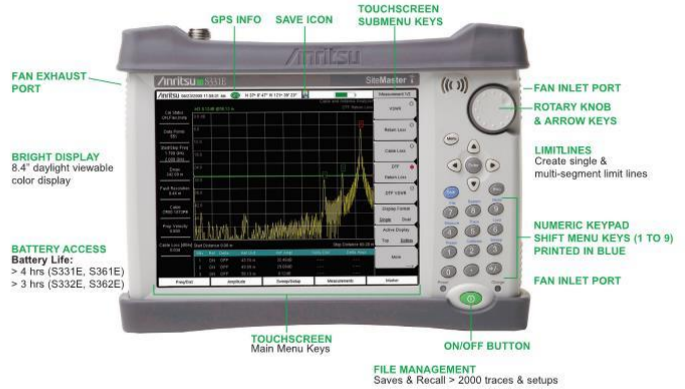
Site Master™ is the preferred Cable and Antenna Analyzer of wireless service providers, contractors and installers. It is the most integrated Cable and Antenna Analyzer in the world.

Cable and Antenna Analyzer Key Features

- > Measurements: Return Loss, VSWR, Cable Loss, Distance-To-Fault, 1-port Phase, Smith Chart
- > 2-port Transmission Measurement: High/Low Power
- > Sweep Speed: 1 msec/data point, typical
- > Display: Single or Dual Measurement Touchscreen
- > Calibration: OSL, InstaCal, and FlexCal
- > Bias Tee: 32 V internal

Spectrum and Interference Analyzer Key Features

- > Measurements: Occupied Bandwidth, Channel Power, ACP, C/I, Spectral Emission Mask
- > Interference Analyzer: Spectrogram, Signal Strength, RSSI, Signal ID, Interference Mapping
- > Coverage Mapping
- > Channel Scanner
- > AM/FM/PM Analysis
- > Dynamic Range: > 95 dB in 10 Hz RBW
- > DANL: -152 dBm in 10 Hz RBW
- > Phase Noise: -100 dBc/Hz max @ 10 kHz offset at 1 GHz
- > Frequency Accuracy: < ± 50 ppb with GPS On



Key Specifications

Cable & Antenna Analyzer	
Frequency	2 MHz to 4 GHz (S331E, S332E), 2 MHz to 6 GHz (S361E, S362E)
Sweep Time	1 msec/data point, typical
Directivity	> 42 dB, OSL Calibration, > 38 dB, InstaCal™ Calibration
Dynamic Range	> 95 dB in 10 Hz RBW
Spectrum Analyzer	
Frequency	9 kHz to 4 GHz (S332E), 9 kHz to 6 GHz (S362E) (usable to 0 Hz)
DANL	-152 dBm in 10 Hz RBW
Phase Noise	-100 dBc/Hz max @ 10 kHz offset at 1 GHz
General	
Internal Trace	2,000 traces, 2,000 Setups
External Trace	Limited by size of USB Flash drive
Connectivity	Ethernet, USB cable, USB Memory Stick, and RS-232 Serial Null Modem cable
Display	Resistive Touchscreen, 8.4" daylight viewable color LCD, resolution 800 x 600
Temperature	Operating Temperature -10 °C to 55 °C
Battery	Li-Ion, 4.0 hours, typical (S331E, S361E), 3.0 hours, typical (S332E, S362E)
Dimensions	273 mm x 199 mm x 91 mm, (10.7 in x 7.8 in x 3.6 in)
Weight	2.71 kg, (6.0 lbs), (S331E, S361E), 3.71 kg, (8.2 lbs), (S332E, S362E)

Options

Option Number	Description
Option 0021	2-Port Transmission Measurement
Option 0010	Bias-Tee (requires Option 0021 for S331E/S361E)
Option 0031	GPS Receiver (requires Antenna P/N 2000-1528-R)
Option 0019	High Accuracy Power Meter (requires External Power Sensor)
Option 0029*	Power Meter
Option 0025*	Interference Analysis (Option 0031 recommended)
Option 0027*	Channel Scanner
Option 0431*	Coverage Mapping (requires Option 0031)
Option 0090*	Gated Sweep
Option 0028*	C/W Signal Generator (requires C/W Signal Generator Kit, P/N 69793)
Option 0509*	AM/FM/PM Analyzer
Option 0411	Ethernet Connectivity
Option 0098	Standard Calibration (ANSI 2540-1-1994)
Option 0099	Premium Calibration to Z540 plus test data

*Available in the S332E and S362E Only

Standard Accessories

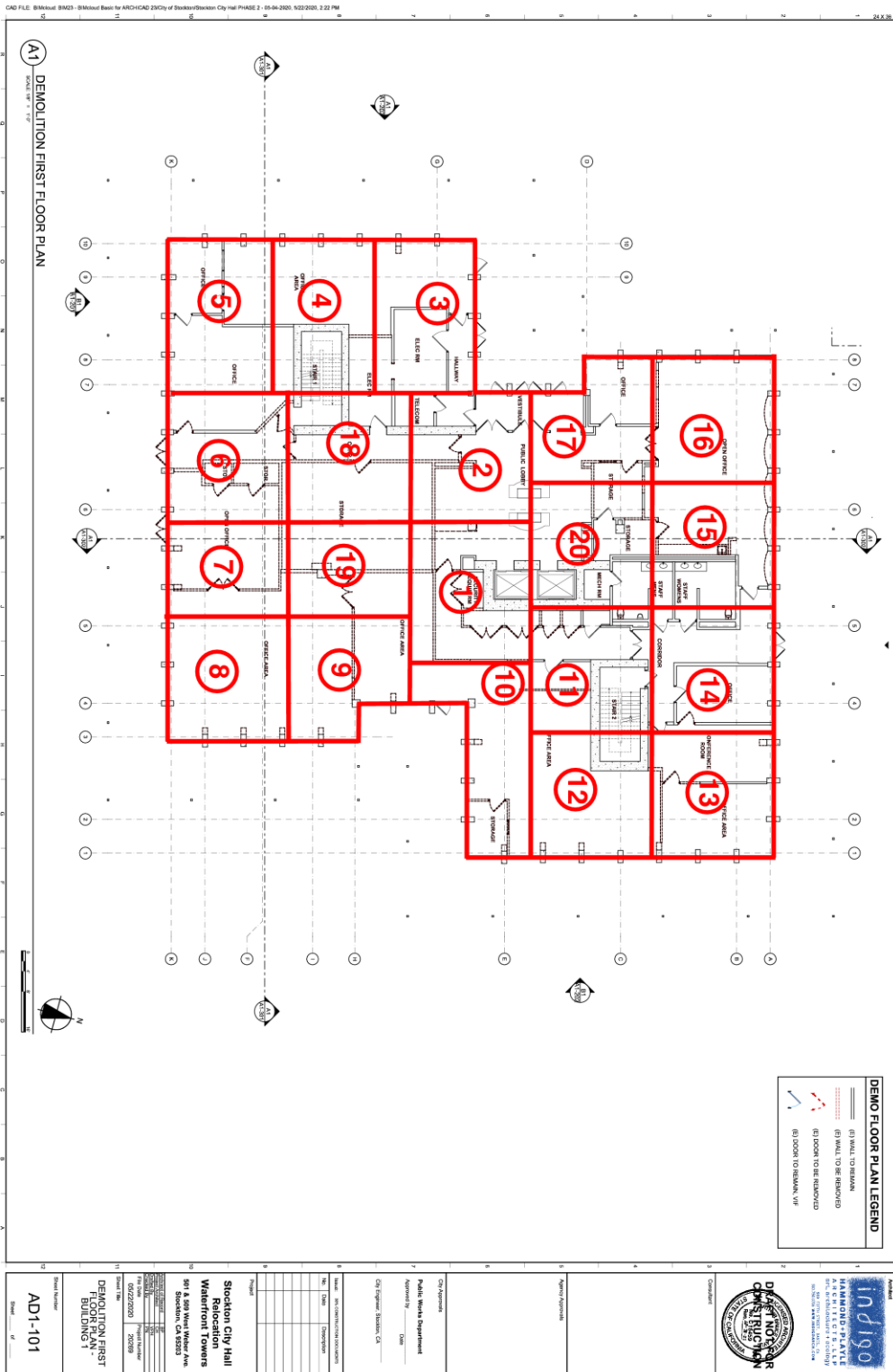
Part Number	Description
10920-00060	Handheld Instruments Documentation Disc
10580-00252	Site Master User Guide
3-68736	Soft Carrying Case
2300-498	Master Software Tools (MST) CD Disc
2300-530	Anritsu Tool Box with Line Sweep Tools (LST) DVD Disc
40-187-R	AC-DC Adapter
806-141-R	Automotive Cigarette Lighter 12 VDC Adapter
3-2000-1498	USB A/5-pin mini-B Cable, 10 feet/305 cm
11410-00484	Site Master S331E/S32E/61E/62E Technical Data Sheet
	One Year Warranty (including battery, firmware, and software)
	Certificate of Calibration and Conformance

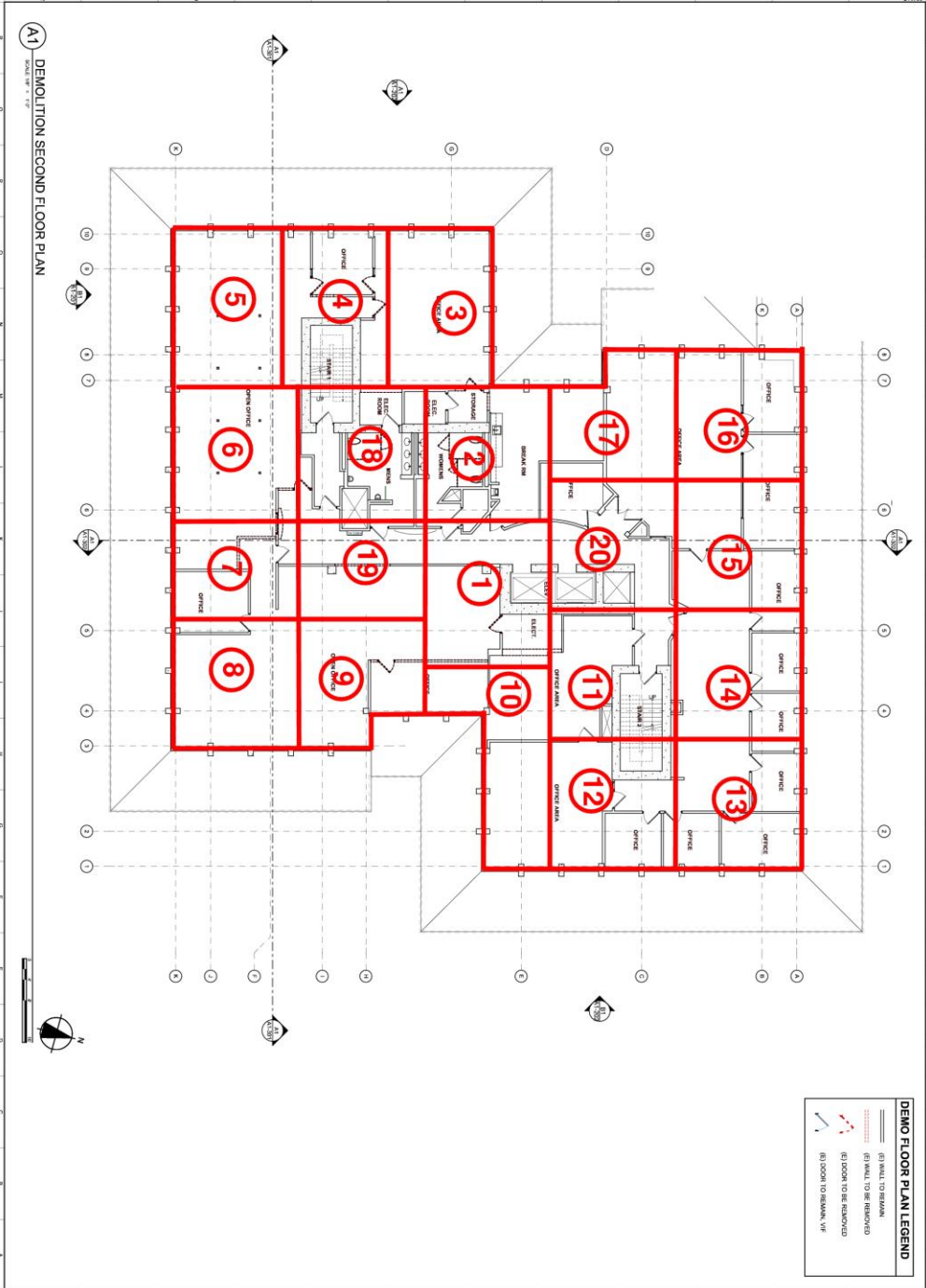
Optional Accessories

<p>Calibration Components, 50 Ω</p>	<p>Phase-Stable Test Port Cables, Armored w/ Reinforced Grip</p>
<p>Calibration Components, 75 Ω</p>	<p>InterChangeable Adaptor Phase Stable Test Port Cables, Armored w/ Reinforced Grip</p>
<p>Adapters</p>	<p>Phase-Stable Test Port Cables, Armored</p>
<p>Pricing Ordering Training Support</p>	

www.anritsu.com or 1-800-267-4878

6. Building 1 Grid Drawings

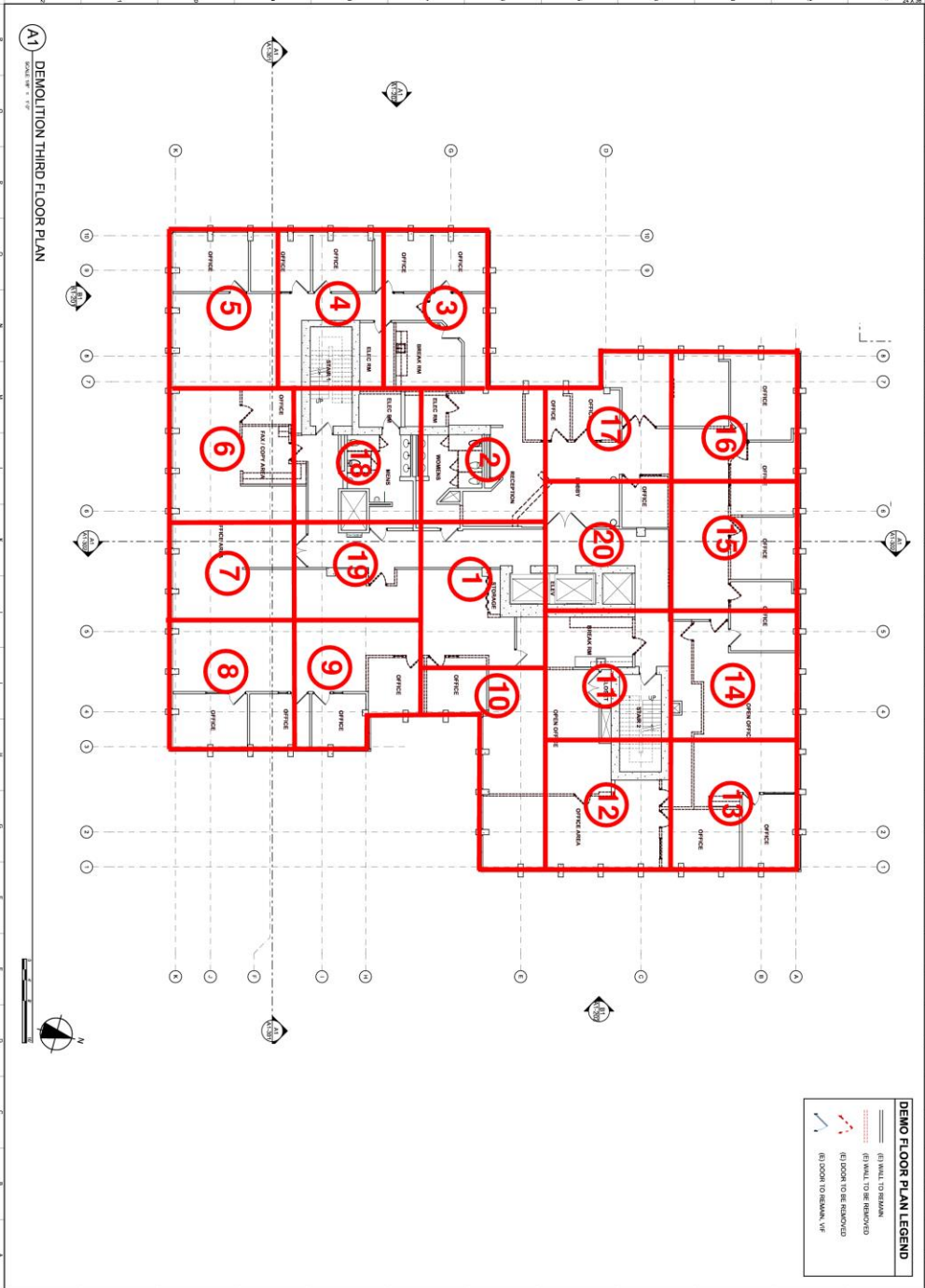




DEMO FLOOR PLAN LEGEND

- (1) WALL TO REMAIN
- (2) WALL TO BE REMOVED
- (3) FLOOR TO BE REMOVED
- (4) DOOR TO REMAIN, VF

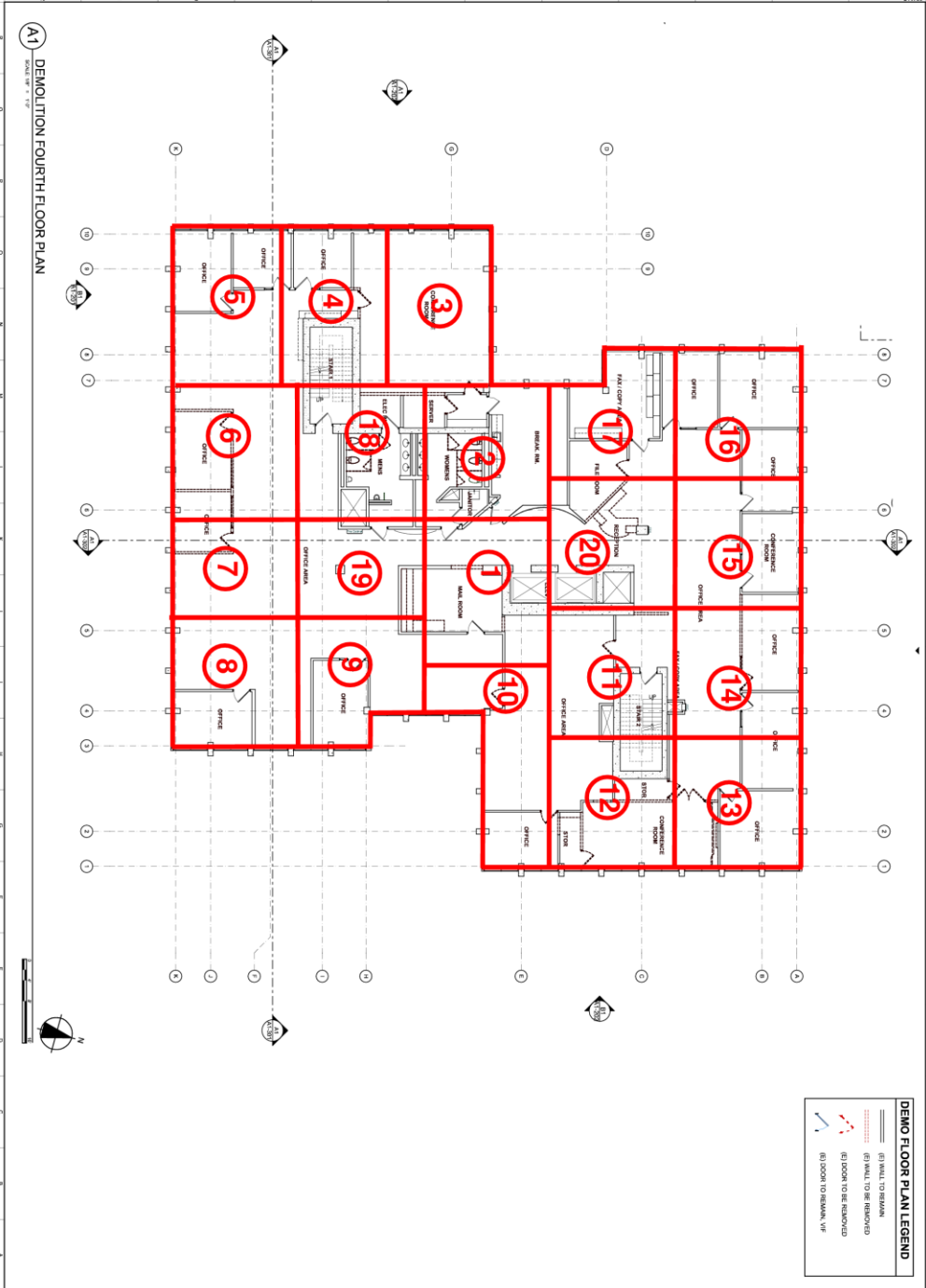
1	<p>INDIGO CONSTRUCTION 1400 W. WALTON AVENUE SUITE 100 STOCKTON, CA 95210 (209) 944-1111</p>
2	<p>DEMOLITION CONSTRUCTION 1400 W. WALTON AVENUE SUITE 100 STOCKTON, CA 95210 (209) 944-1111</p>
3	<p>Contractor:</p>
4	<p>Agency/Department:</p>
5	<p>City/Approver:</p>
6	<p>Public Works Department</p>
7	<p>Approved By: <i>[Signature]</i></p>
8	<p>City Engineer: <i>[Signature]</i></p>
9	<p>Stockton City Hall Waterfront Towers 501 S. Main Street Stockton, CA 95202</p>
10	<p>Project Name:</p>
11	<p>Project Number:</p>
12	<p>Project Title:</p>
13	<p>Project Location:</p>
14	<p>Project Date:</p>
15	<p>Project Status:</p>
16	<p>Project Description:</p>
17	<p>Project Budget:</p>
18	<p>Project Manager:</p>
19	<p>Project Engineer:</p>
20	<p>Project Architect:</p>



DEMO FLOOR PLAN LEGEND

- (1) WALL TO REMAIN
- (2) WALL TO BE REMOVED
- (3) FLOOR TO BE REMOVED
- (4) DOOR TO REMAIN, VP

<p>INDIGO MANAGED + PLAYS DESIGN + CONSTRUCTION + MAINTENANCE 1000 W. WALTON AVENUE, SUITE 200 STOCKTON, CA 95210 TEL: (209) 951-1100</p>	<p>DEMOLITION CONSTRUCTION 1000 W. WALTON AVENUE, SUITE 200 STOCKTON, CA 95210 TEL: (209) 951-1100</p>	<p>City Approved Public Works Department Approved By: [Signature] Date: [Date] City Engineer: [Signature], CA</p>	<p>Stockton City Hall Waterfront Towers 501 S. Washington Ave Stockton, CA 95203</p>	<p>Project Number: AD1-103</p>
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DEMO FLOOR PLAN LEGEND

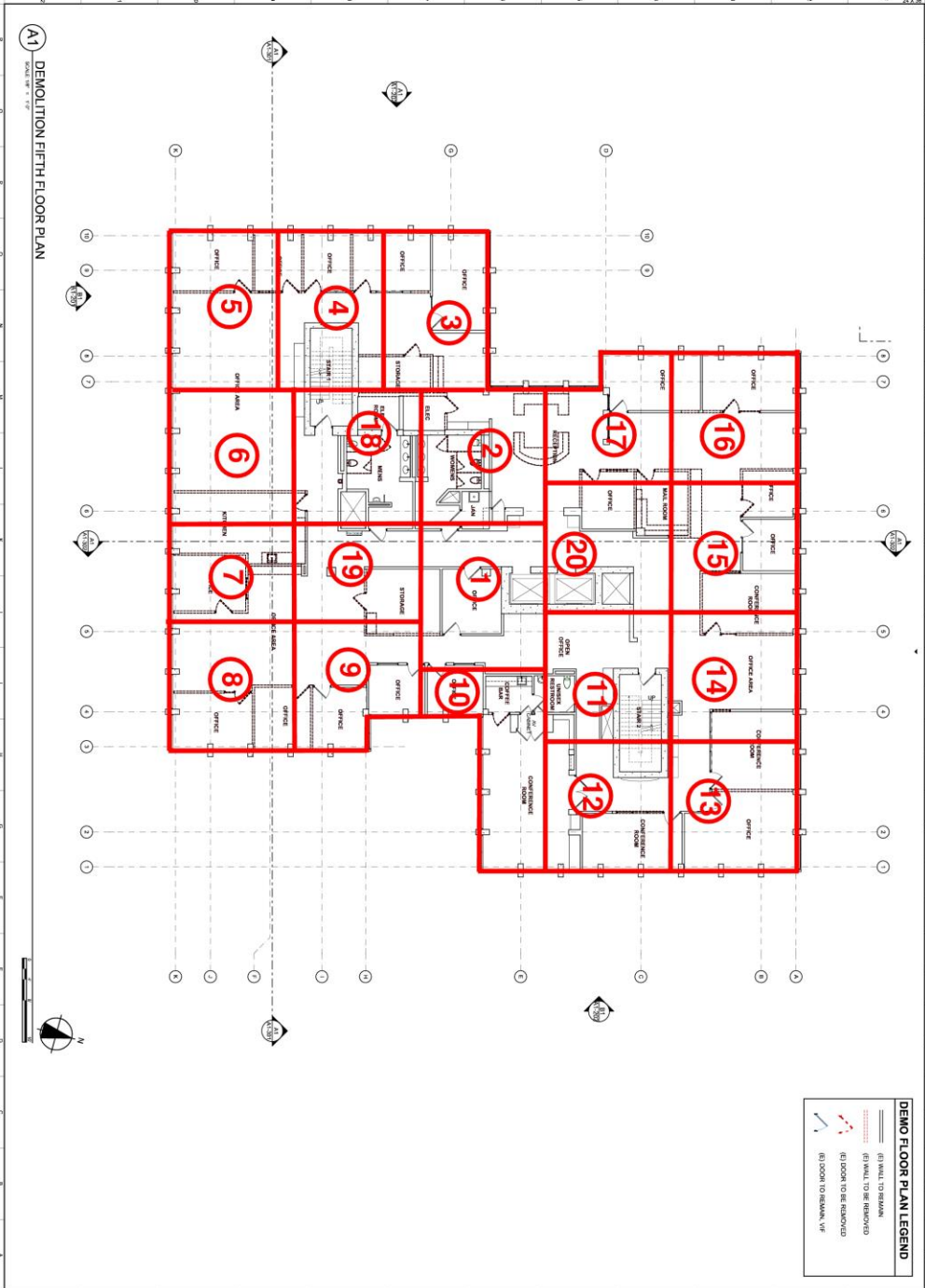
- (1) WALL TO REMAIN
- (2) WALL TO BE REMOVED
- (3) FLOOR TO BE REMOVED
- (4) DOOR TO REMAIN, VF

indigo
 HANDED - PLYME
 10101 STOCKTON AVENUE, SUITE 100
 STOCKTON, CA 95210
 TEL: (209) 944-4444
 WWW.INDIGOCORPORATION.COM

DEVELOPMENT
 10101 STOCKTON AVENUE, SUITE 100
 STOCKTON, CA 95210
 TEL: (209) 944-4444
 WWW.INDIGOCORPORATION.COM

Stockton City Hall
 Waterfront Towers
 501 S. State Street
 Stockton, CA 95202

AD1-104



7. Building 1 Summary of Results

Stockton Water Front Towers Building 1



Acceptance Survey					NOTES
DATE		7/10/2020			
FIRE/PD UHF					
	Floor	Point	Received Signal Level (dBm)	Pass/Fail	
1	L1	1	-80.82	PASS	
2	L1	2	-78.676	PASS	
3	L1	3	-80.104	PASS	
4	L1	4	-80.104	PASS	
5	L1	5	-79.472	PASS	
6	L1	6	-75.504	PASS	
7	L1	7	-76.316	PASS	
8	L1	8	-71.208	PASS	
9	L1	9	-73.14	PASS	
10	L1	10	-65.96	PASS	
11	L1	11	-74.808	PASS	
12	L1	12	-76.724	PASS	
13	L1	13	-78.092	PASS	
14	L1	14	-74.676	PASS	
15	L1	15	-75.492	PASS	
16	L1	16	-76.472	PASS	
17	L1	17	-74.416	PASS	
18	L1	18	-75.052	PASS	
19	L1	19	-75.068	PASS	
20	L1	20	-75.668	PASS	
21	L2	1	-62.94	PASS	
22	L2	2	-62.528	PASS	
23	L2	3	-62.316	PASS	
24	L2	4	-70.112	PASS	
25	L2	5	-78.504	PASS	
26	L2	6	-78.388	PASS	
27	L2	7	-68.168	PASS	
28	L2	8	-67.44	PASS	
29	L2	9	-64.968	PASS	
30	L2	10	-79.276	PASS	
31	L2	11	-79.952	PASS	
32	L2	12	-79.76	PASS	
33	L2	13	-80.208	PASS	
34	L2	14	-79.568	PASS	
35	L2	15	-79.372	PASS	

Stockton Water Front Towers Building 1



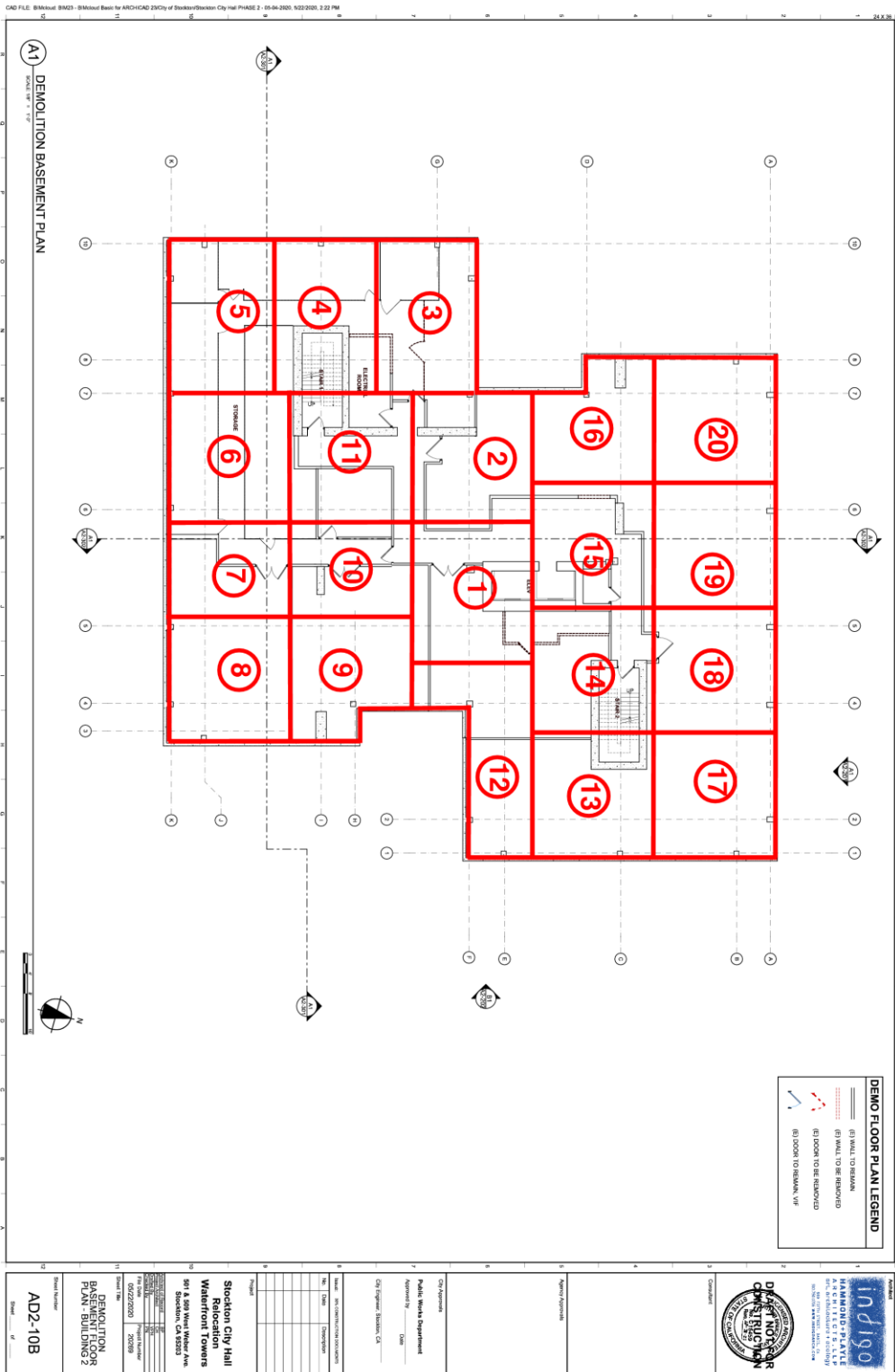
Acceptance Survey					NOTES
DATE		7/10/2020			
FIRE/PD UHF					
	Floor	Point	Received Signal Level (dBm)	Pass/Fail	
36	L2	16	-80.02	PASS	
37	L2	17	-80.964	PASS	
38	L2	18	-80.868	PASS	
39	L2	19	-79.496	PASS	
40	L2	20	-80.452	PASS	
41	L3	1	-74.372	PASS	
42	L3	2	-73.74	PASS	
43	L3	3	-72.356	PASS	
44	L3	4	-77.864	PASS	
45	L3	5	-69.24	PASS	
46	L3	6	-70.676	PASS	
47	L3	7	-70.676	PASS	
48	L3	8	-72.752	PASS	
49	L3	9	-73.096	PASS	
50	L3	10	-71.904	PASS	
51	L3	11	-65.364	PASS	
52	L3	12	-64.512	PASS	
53	L3	13	-76.244	PASS	
54	L3	14	-76.908	PASS	
55	L3	15	-84.4	PASS	
56	L3	16	-79.784	PASS	
57	L3	17	-77.656	PASS	
58	L3	18	-74.976	PASS	
59	L3	19	-77.732	PASS	
60	L3	20	-79.812	PASS	
61	L4	1	-71.9	PASS	
62	L4	2	-74.376	PASS	
63	L4	3	-75.116	PASS	
64	L4	4	-78.588	PASS	
65	L4	5	-80.868	PASS	
66	L4	6	-76.744	PASS	
67	L4	7	-78.612	PASS	
68	L4	8	-79.204	PASS	
69	L4	9	-73.644	PASS	
70	L4	10	-79.348	PASS	

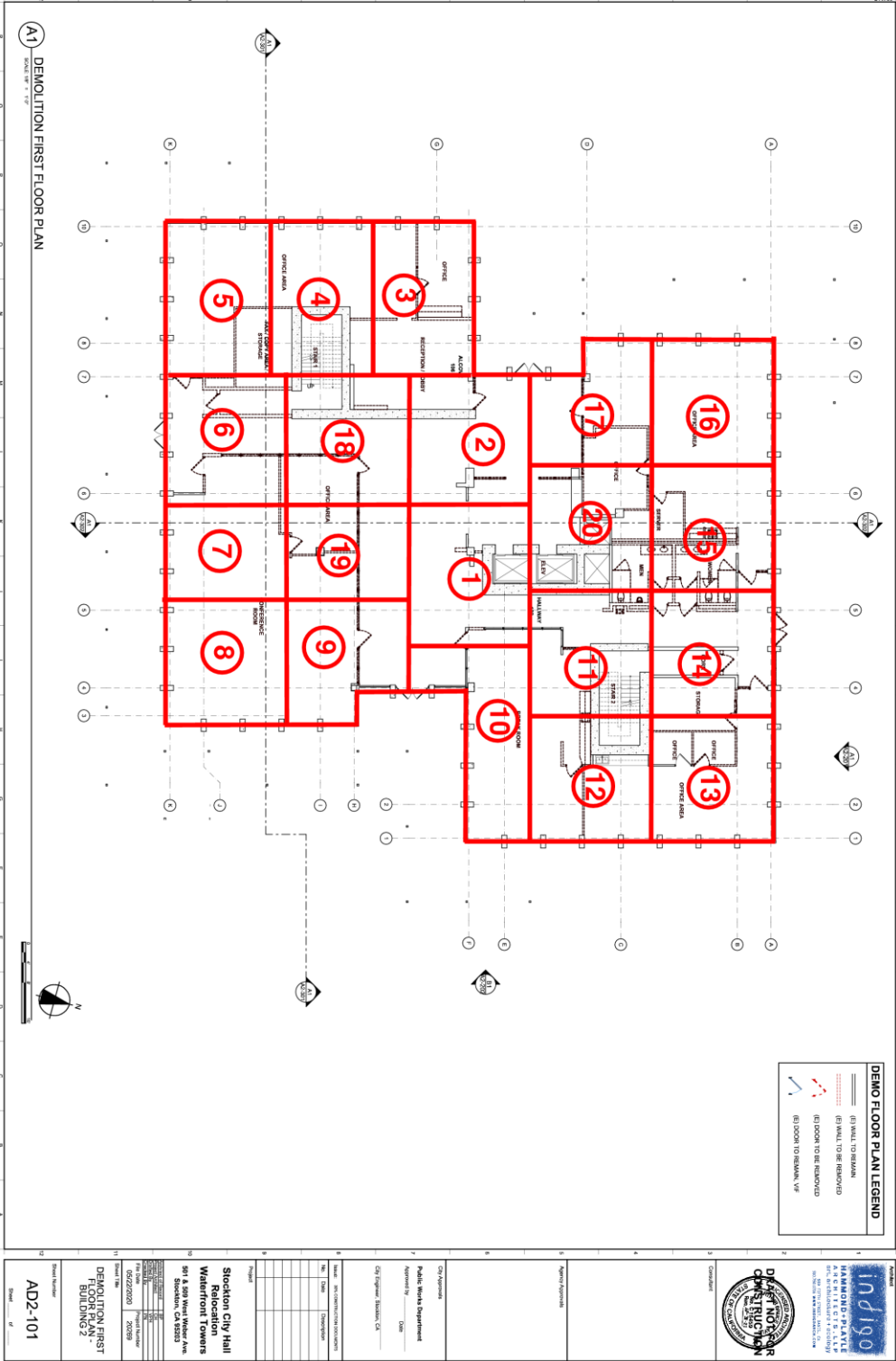
Stockton Water Front Towers Building 1

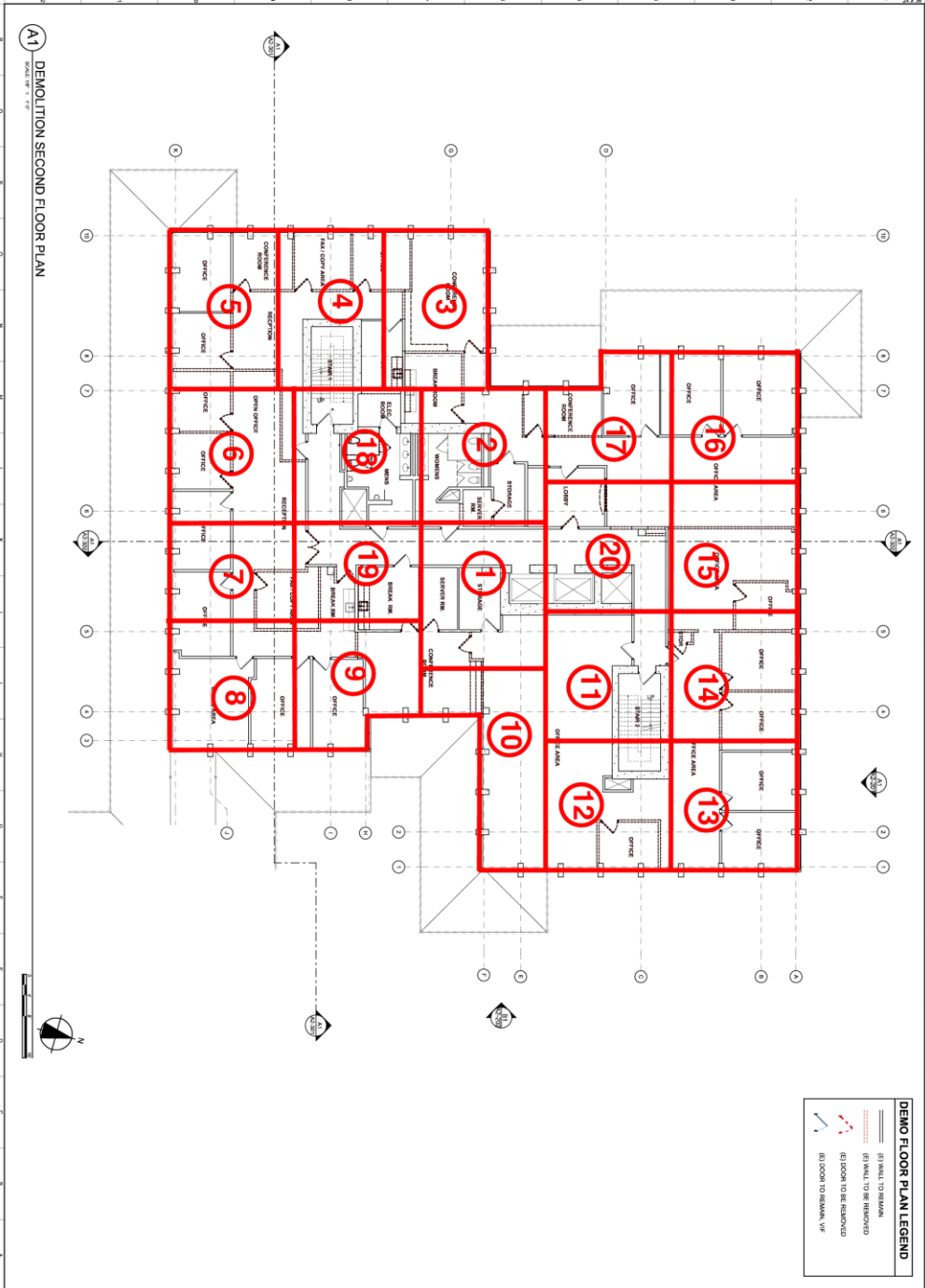


Acceptance Survey					NOTES
DATE		7/10/2020			
FIRE/PD UHF					
Floor	Point	Received Signal Level (dBm)	Pass/Fail		
71	L4	11	-79.144	PASS	
72	L4	12	-74.808	PASS	
73	L4	13	-74.636	PASS	
74	L4	14	-82.728	PASS	
75	L4	15	-76.18	PASS	
76	L4	16	-76.056	PASS	
77	L4	17	-77.312	PASS	
78	L4	18	-71.168	PASS	
79	L4	19	-65.528	PASS	
80	L4	20	-65.628	PASS	
81	L5	1	-61.992	PASS	
82	L5	2	-57.596	PASS	
83	L5	3	-65.196	PASS	
84	L5	4	-62.24	PASS	
85	L5	5	-74.404	PASS	
86	L5	6	-73.528	PASS	
87	L5	7	-72.828	PASS	
88	L5	8	-85.036	PASS	
89	L5	9	-77.108	PASS	
90	L5	10	-75.52	PASS	
91	L5	11	-67.02	PASS	
92	L5	12	-73.36	PASS	
93	L5	13	-72.452	PASS	
94	L5	14	-74.788	PASS	
95	L5	15	-68.6	PASS	
96	L5	16	-69.048	PASS	
97	L5	17	-68.572	PASS	
98	L5	18	-66.816	PASS	
99	L5	19	-63.1	PASS	
100	L5	20	-63.1	PASS	

8. Building 2 Grid Drawings







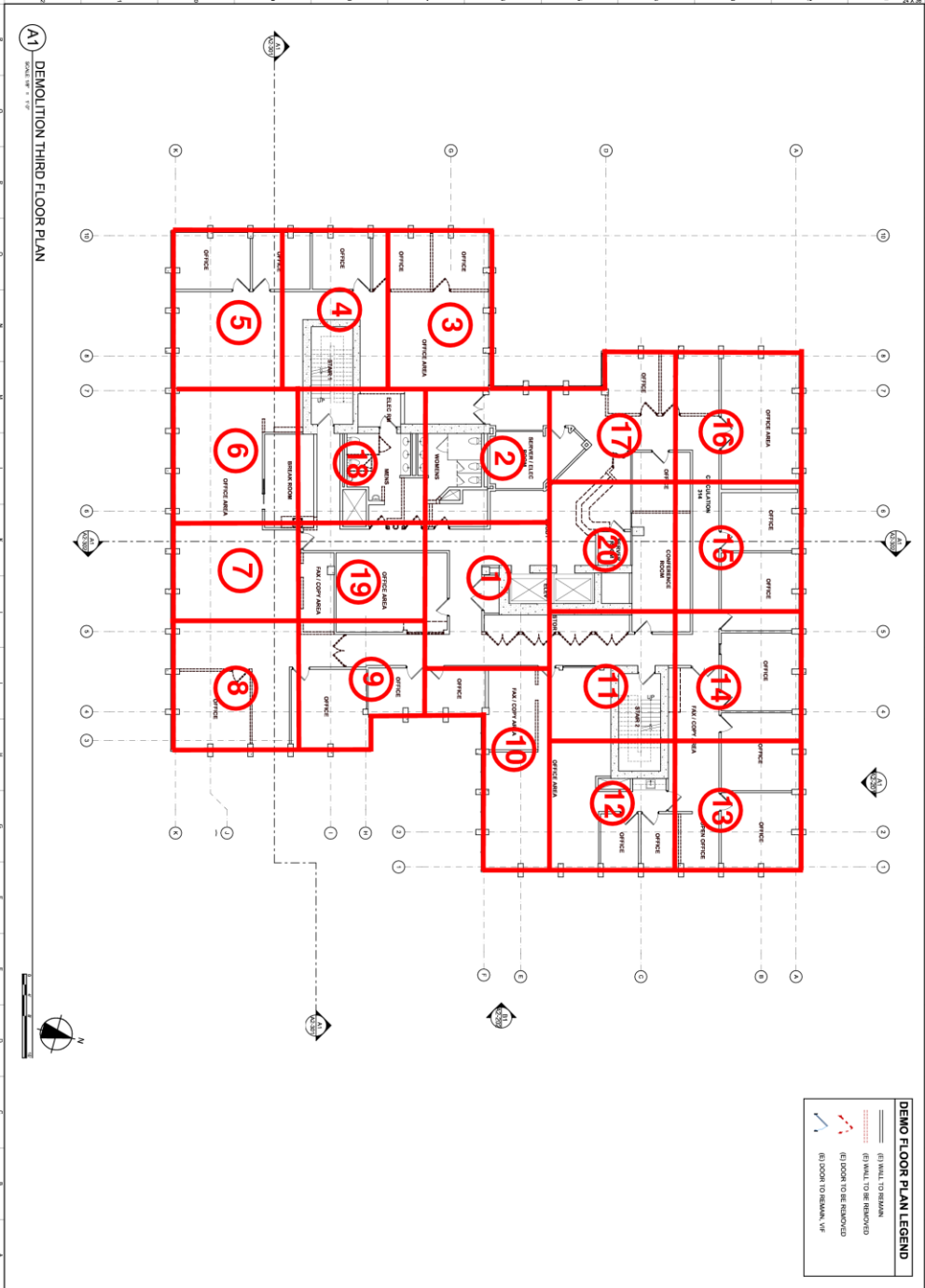
Stockton City Hall
Waterfront Towers
501 S. Washington Ave
Stockton, CA 95203

DEMOLITION SECOND FLOOR PLAN - BUILDING 2

Project Number: **AD2-102**

DEMO FLOOR PLAN LEGEND

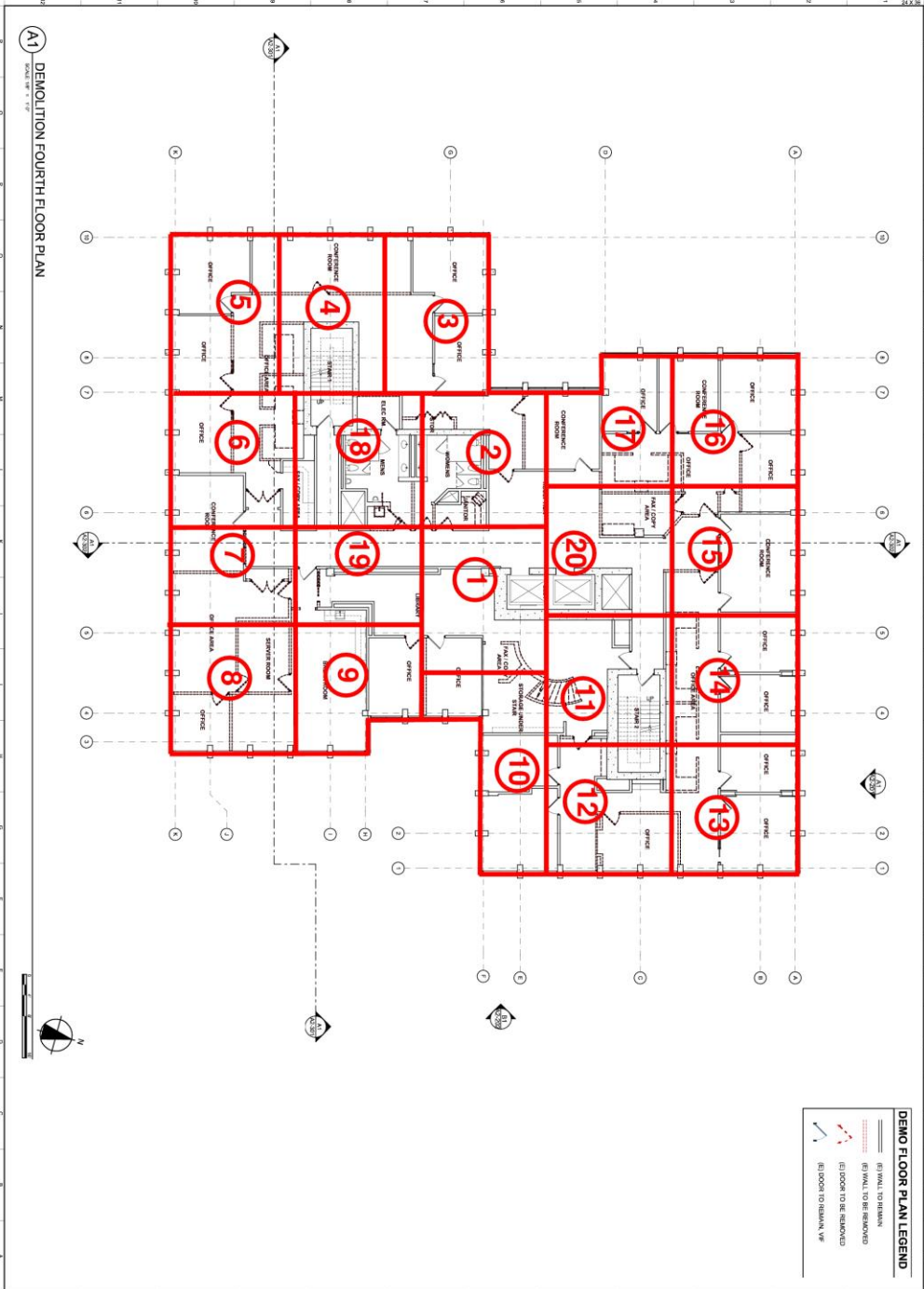
- (1) WALL TO REMAIN
- (2) WALL TO BE DEMOLISHED
- (3) FLOOR TO BE DEMOLISHED
- (4) DOOR TO REMAIN, VP



DEMO FLOOR PLAN LEGEND

- (1) WALL TO REMAIN
- (2) WALL TO BE REMOVED
- (3) FLOOR TO BE REMOVED
- (4) ROOM TO REMAIN, V/F

<p>INDIGO MANAGED + PLATE INC. A DIVISION OF INDIGO 100 WEST WALTON AVENUE, SUITE 200 STOCKTON, CA 95210 TEL: (209) 951-1100</p>	<p>CITY OF STOCKTON OFFICE OF THE CITY CLERK</p>	<p>Stockton City Hall Waterfront Towers 501 S. 10th Street - 1st Fl. Stockton, CA 95202</p>	<p>AD2-103</p>
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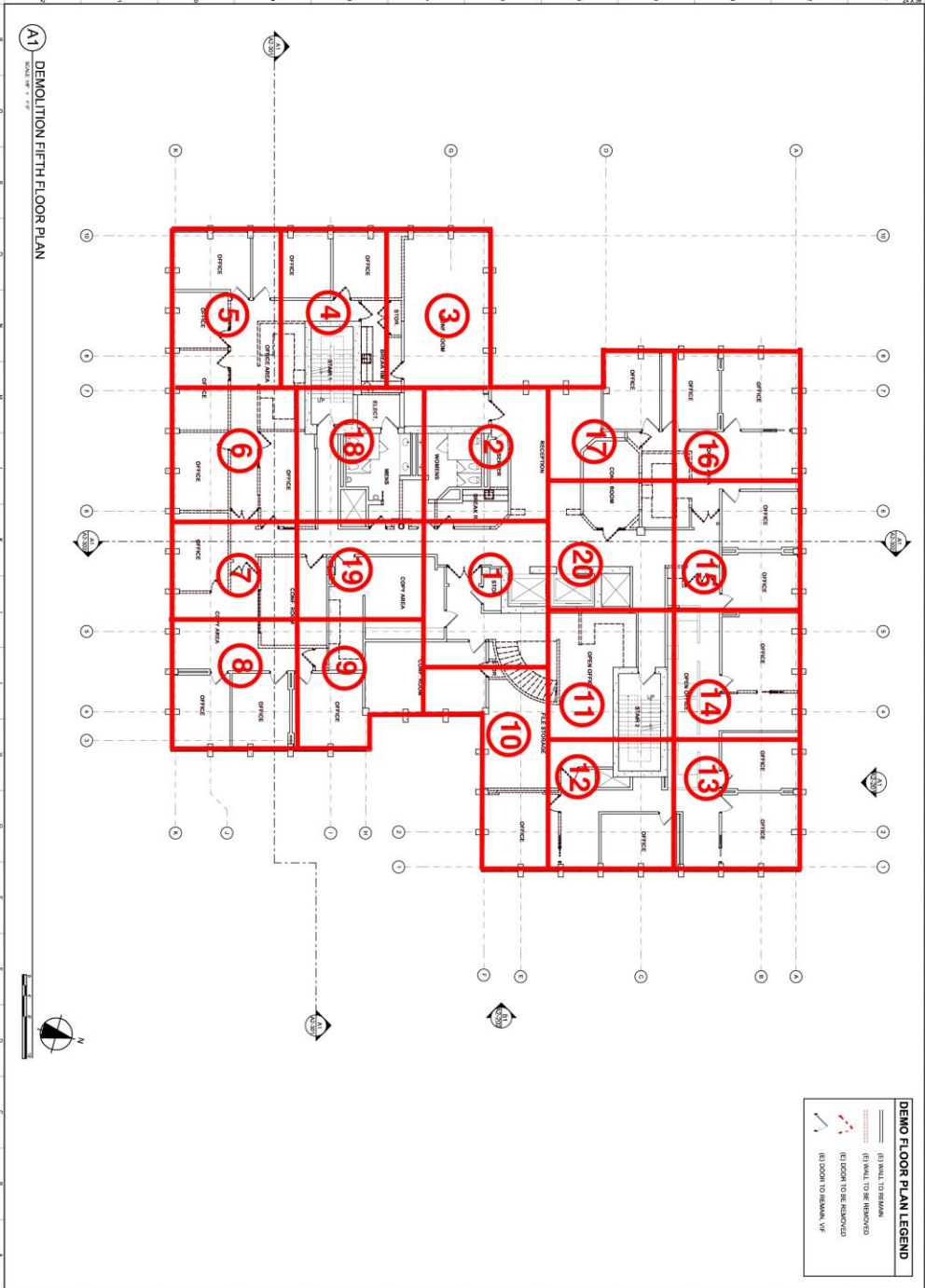
Stockton City Hall Waterfront Towers
501 S. Washington Ave
Stockton, CA 95203

DEMOLITION FLOOR PLAN - BUILDING 2

Project Number: **AD2-104**

DEMOLITION FLOOR PLAN LEGEND

- RETURN TO REMAIN
- - - RETURN TO BE REMOVED
- / ROOMS TO BE REMOVED
- • ROOMS TO REMAIN, VP



<p>INDIGO MANAGED + PLAYS THE CONSTRUCTION SOFTWARE FOR THE 21ST CENTURY</p>	<p>STOCKTON CITY OFFICE OF THE CITY CLERK</p>	<p>Stockton City Hall Waterfront Towers 501 S. Washington Ave Stockton, CA 95203</p>	<p>AD2-105</p>
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9. Building 2 Summary of Results

Stockton Water Front Towers Building 2



Acceptance Survey					NOTES
DATE		7/10/2020			
FIRE/PD UHF					
	Floor	Point	Received Signal Level (dBm)	Pass/Fail	
36	L1	16	-76.984	PASS	
37	L1	17	-76.172	PASS	
38	L1	18	-74.216	PASS	
39	L1	19	-71.444	PASS	
40	L1	20	-78.18	PASS	
41	L2	1	-76.804	PASS	
42	L2	2	-75.86	PASS	
43	L2	3	-74.888	PASS	
44	L2	4	-73.472	PASS	
45	L2	5	-69.66	PASS	
46	L2	6	-61.94	PASS	
47	L2	7	-67.176	PASS	
48	L2	8	-70.632	PASS	
49	L2	9	-60.92	PASS	
50	L2	10	-69.644	PASS	
51	L2	11	-76.6	PASS	
52	L2	12	-78.708	PASS	
53	L2	13	-68.22	PASS	
54	L2	14	-76.908	PASS	
55	L2	15	-74.124	PASS	
56	L2	16	-83.968	PASS	
57	L2	17	-78.588	PASS	
58	L2	18	-77.784	PASS	
59	L2	19	-81.76	PASS	
60	L2	20	-78.364	PASS	
61	L3	1	-72.976	PASS	
62	L3	2	-72.24	PASS	
63	L3	3	-71.692	PASS	
64	L3	4	-71.488	PASS	
65	L3	5	-72.46	PASS	
66	L3	6	-67.668	PASS	
67	L3	7	-72.78	PASS	
68	L3	8	-70.976	PASS	
69	L3	9	-70.976	PASS	
70	L3	10	-75.852	PASS	

Stockton Water Front Towers Building 2



Acceptance Survey						NOTES
DATE		7/10/2020				
FIRE/PD UHF						
Floor	Point	Received Signal Level (dBm)	Pass/Fail			
71	L3	11	-75.096	PASS		
72	L3	12	-75.696	PASS		
73	L3	13	-73.536	PASS		
74	L3	14	-73.536	PASS		
75	L3	15	-75.956	PASS		
76	L3	16	-68.56	PASS		
77	L3	17	-69.352	PASS		
78	L3	18	-69.952	PASS		
79	L3	19	-70.672	PASS		
80	L3	20	-77.024	PASS		
81	L4	1	-69.676	PASS		
82	L4	2	-66.68	PASS		
83	L4	3	-63.8	PASS		
84	L4	4	-59.724	PASS		
85	L4	5	-72.864	PASS		
86	L4	6	-64.236	PASS		
87	L4	7	-52.068	PASS		
88	L4	8	-58.396	PASS		
89	L4	9	-63.964	PASS		
90	L4	10	-62.976	PASS		
91	L4	11	-61.976	PASS		
92	L4	12	-62.536	PASS		
93	L4	13	-63.184	PASS		
94	L4	14	-63.776	PASS		
95	L4	15	-63.776	PASS		
96	L4	16	-71.64	PASS		
97	L4	17	-72.472	PASS		
98	L4	18	-75.332	PASS		
99	L4	19	-72.928	PASS		
100	L4	20	-74.14	PASS		
101	L5	1	-68.524	PASS		
102	L5	2	-51.22	PASS		
103	L5	3	-54.868	PASS		
104	L5	4	-64.132	PASS		
105	L5	5	-63.296	PASS		



Acceptance Survey				
DATE		7/10/2020		
FIRE/PD UHF				
	Floor	Point	Received Signal Level (dBm)	Pass/Fail
106	L5	6	-62.572	PASS
107	L5	7	-62.572	PASS
108	L5	8	-64.864	PASS
109	L5	9	-60.56	PASS
110	L5	10	-74.576	PASS
111	L5	11	-78.12	PASS
112	L5	12	-78.396	PASS
113	L5	13	-70.68	PASS
114	L5	14	-60.404	PASS
115	L5	15	-75.948	PASS
116	L5	16	-69.024	PASS
117	L5	17	-69.024	PASS
118	L5	18	-75.516	PASS
119	L5	19	-65.968	PASS
120	L5	20	-69.676	PASS

NOTES