

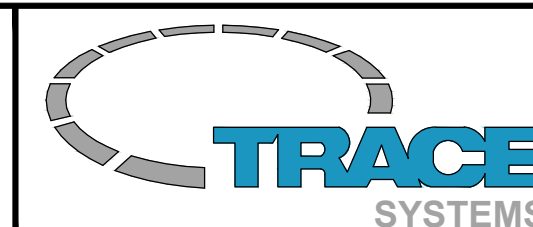


MORALE, WELFARE, AND RECREATION (MWR) GLOBAL INTERNET CAFÉ PROGRAM (ICP)

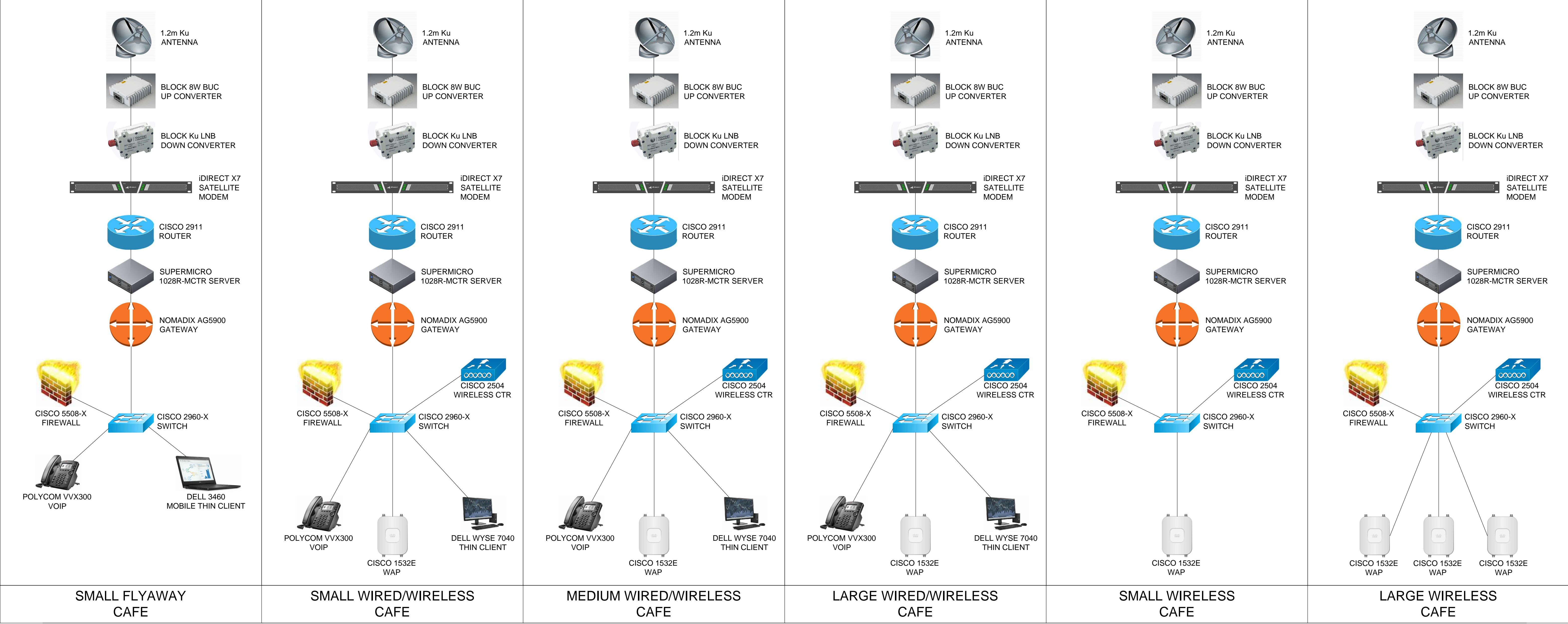
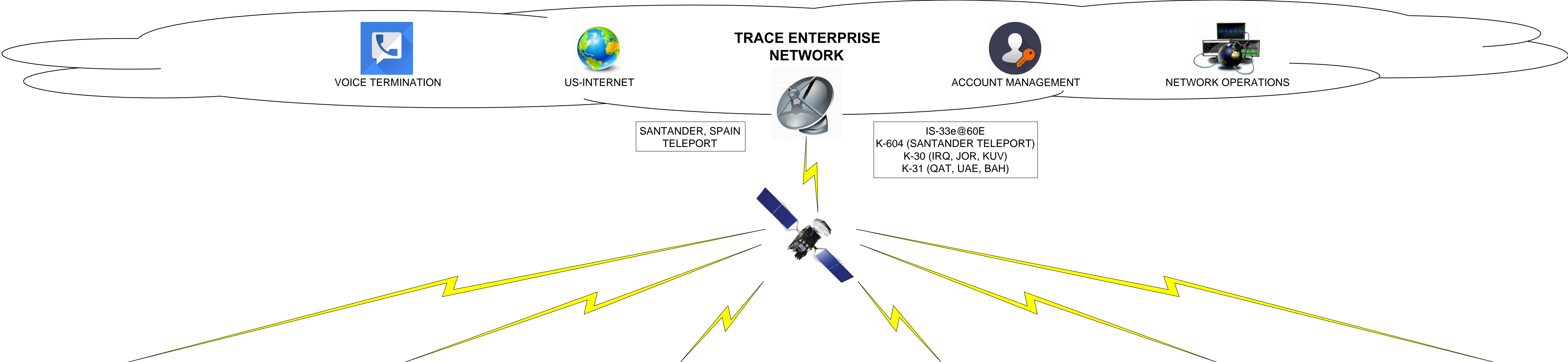
UNITED ARAB EMIRATES AL MINHAD REDLEG 1
UAE-LW-N-001
DRAFT INSTALLATION DESIGN PACKAGE

TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT

REVISIONS:			
NO.	DATE:	BY:	DESCRIPTION:
1	00/00/00	WRW	REV. NO. 1



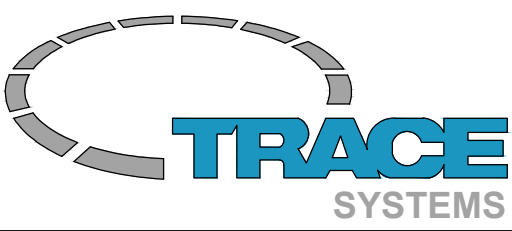
PROJECT: MWR DRAWING PACKAGE	DRAWN BY: WINSTON R. WILBECK	DATE: 3/8/17	SHEET NUMBER 01
DRAWING TITLE: COVER SHEET	REVIEWED BY: MWR TEAM	SCALE: NOT TO SCALE	



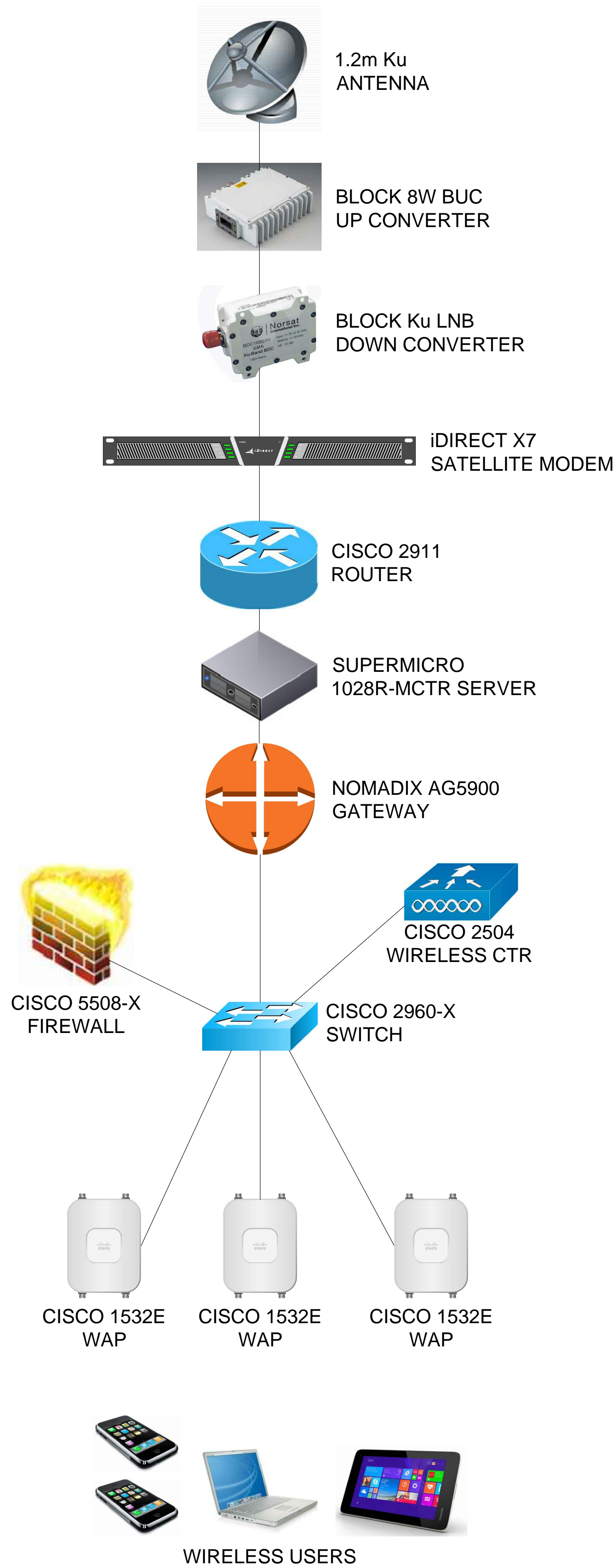
MWR OVERALL ARCHITECTURE
SCALE: NOT TO SCALE

TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT

REVISIONS:			
NO:	DATE:	BY:	DESCRIPTION:
1	00/00/00	WRW	REV. NO. 1



PROJECT: MWR DRAWING PACKAGE	DRAWN BY: WINSTON R. WILBECK	DATE: 3/8/17	SHEET NUMBER 03
DRAWING TITLE: MWR OVERALL ARCHITECTURE	REVIEWED BY: MWR TEAM	SCALE: NOT TO SCALE	



SITE ANTENNA DATA	
BUC FREQ. RANGE	14.0-14.5GHZ
LNB FREQ. RANGE	10.7-11.7GHZ
BUC L.O.	12800MHZ
LNB L.O.	9750MHZ
ANTENNA AZ (TRUE)	169.1
ANTENNA AZ (MAG)	166.9
ANTENNA ELEVATION	60.3
COMMITTED INFORMATION RATE	
RX AT REMOTE (KBPS)	3840
TX AT REMOTE (KBPS)	1920

LARGE WIRELESS HIGH LEVEL DESIGN

SCALE: NOT TO SCALE

TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT

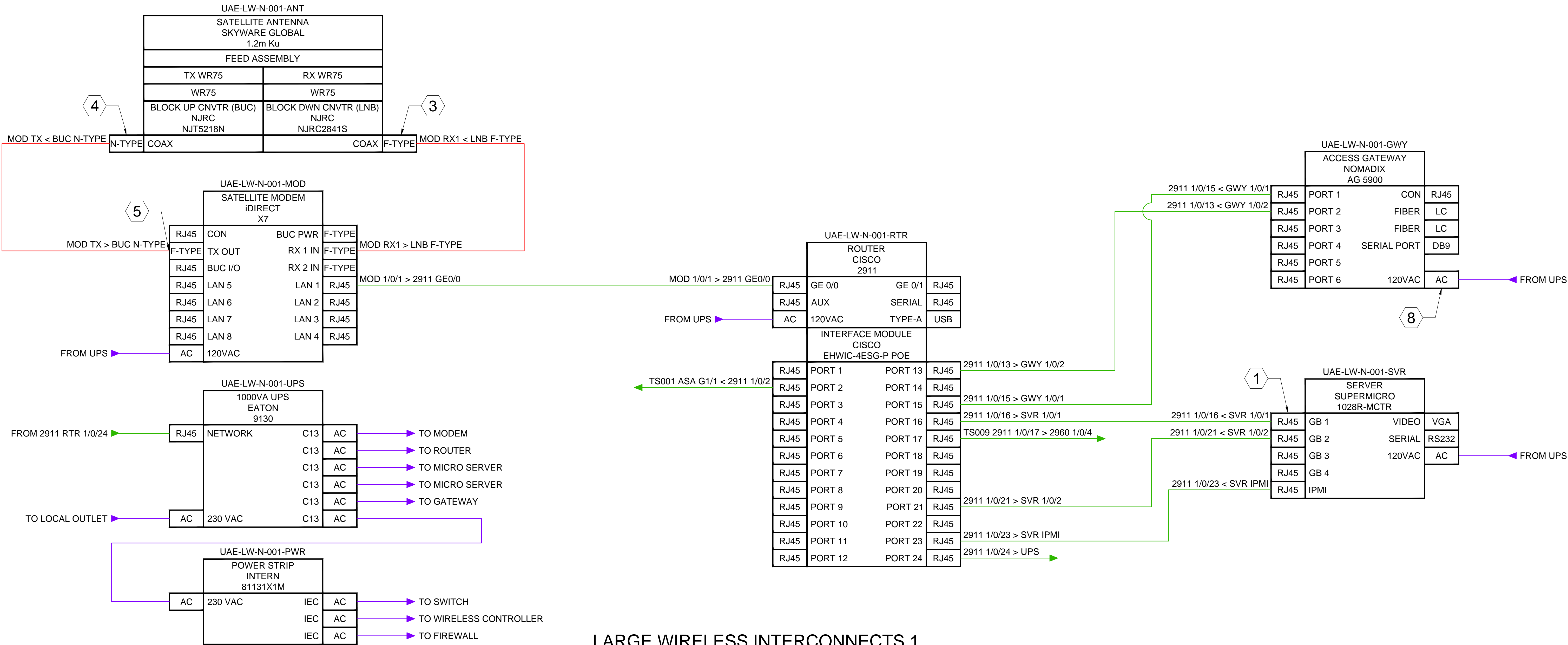
REVISIONS:			
NO:	DATE:	BY:	DESCRIPTION:
1	00/00/00	WRW	REV. NO. 1



PROJECT: MWR DRAWING PACKAGE	DRAWN BY: WINSTON R. WILBECK	DATE: 3/8/17
DRAWING TITLE: MWR HIGH LEVEL DESIGN	REVIEWED BY: MWR TEAM	SCALE: NOT TO SCALE

CABLE LEGEND:	
—	LMR CABLE
—	CAT5 CABLE
—	USB CABLE
—	HDMI CABLE
—	POWER CABLE

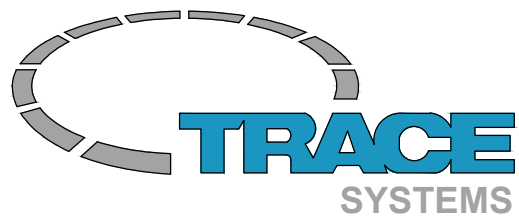
IPs AND VLANs LEGEND:	
THIN CLIENT VLAN 5: 10.10.151.0/24	
VOICE VLAN 6: 10.10.161.0/24	
BYOD VLAN 7: 10.10.171.0/24	
MGT VLAN 777:10.7.7.0/24	
DHCP POOLS FOR VLAN 5.6.7	
NOMADIX 10.10.140.1/28	
DEFAULT ROUTE OUT OF FIREWALL TO 10.10.140.1 NO NAT	
IMAGE ARCHIVE AND LOGGING SERVER 10.10.151.254	
FIREWALL IS DEFAULT GW FOR BYOD AND THIN CLIENTS VIA DHCP LEASE	
NOMADIX HOSTS WEB SPLASH PAGE AND QUERIES RADIUS FOR USER AAA.	



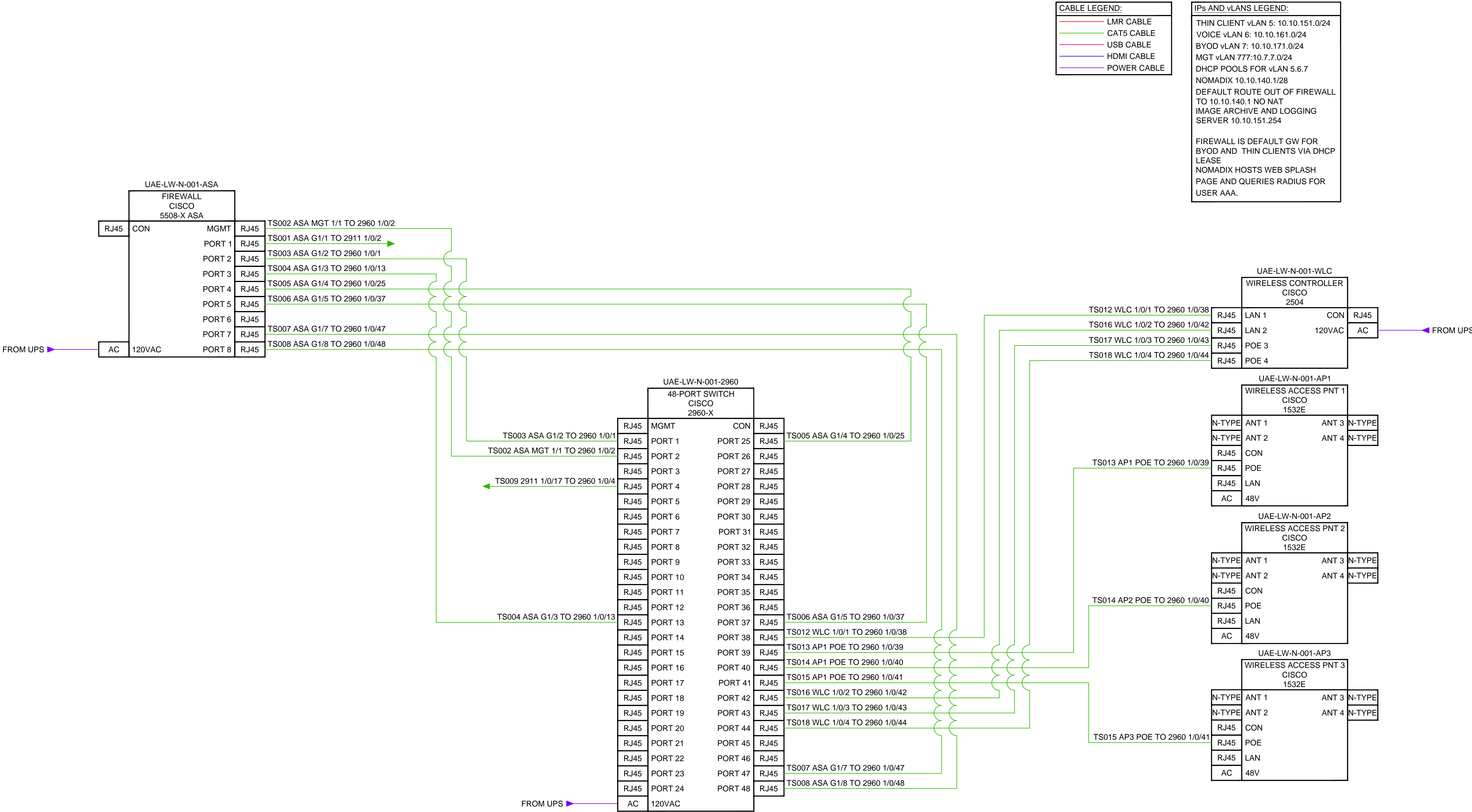
LARGE WIRELESS INTERCONNECTS 1
SCALE: NOT TO SCALE

TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT

REVISIONS:			
NO:	DATE:	BY:	DESCRIPTION:
1	00/00/00	WRW	REV. NO. 1



PROJECT: MWR DRAWING PACKAGE	DRAWN BY: WINSTON R. WILBECK	DATE: 3/8/17
DRAWING TITLE: LARGE WIRELESS INTERCONNECTS	REVIEWED BY: MWR TEAM	SCALE: NOT TO SCALE



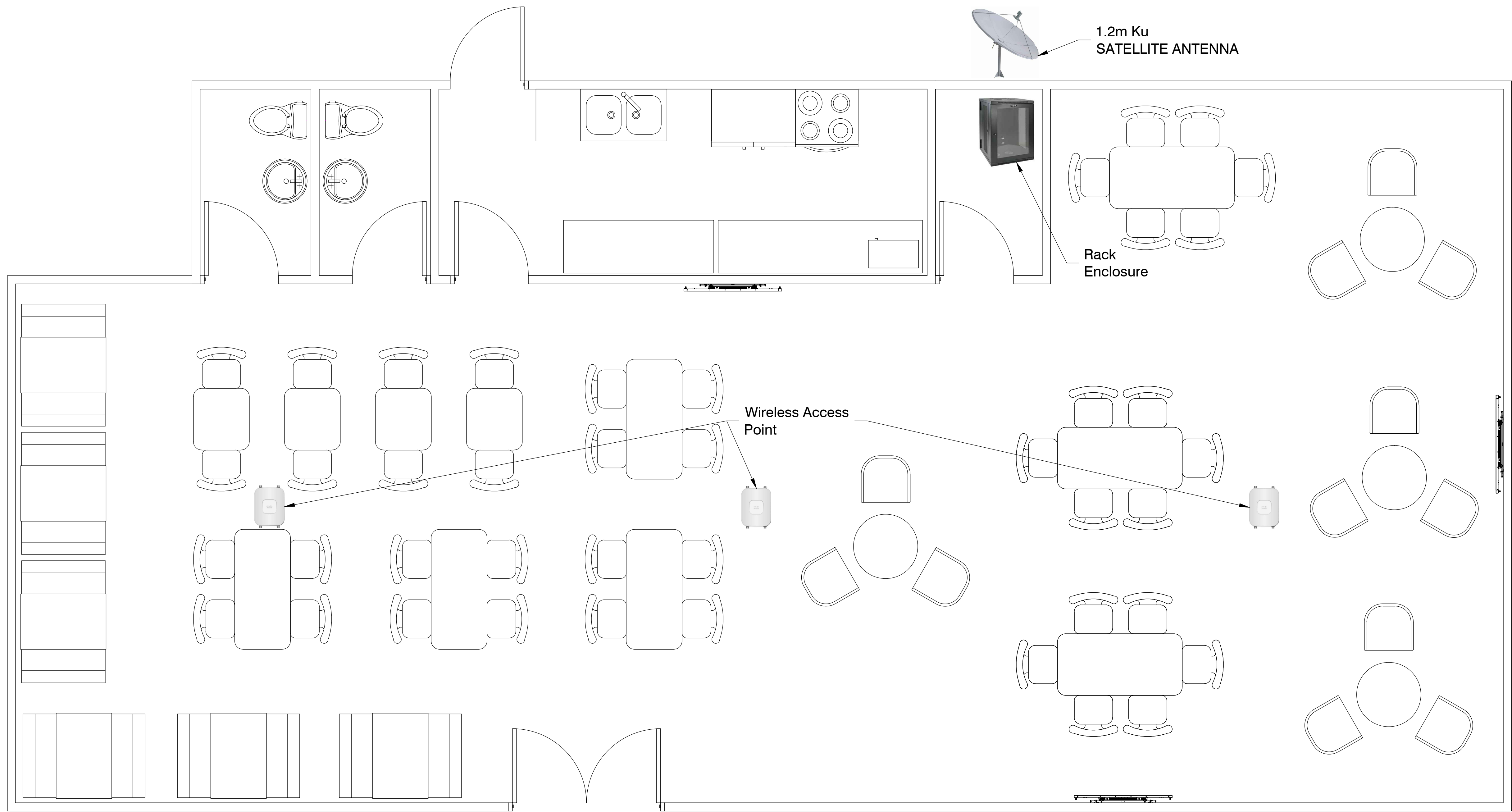
UAE Al Minhad / Camp Redleg / Living Tent Area 1 TYPE LARGE WIRELESS										
Network Description	Subnet	Bit Mask	VLAN ID	Device	Interface	Addresss	Mask	Gateway	Hostname	Notes
ICS & FW Connection-Data	10.10.12.0	28	10	ASA	G1/1.10	10.10.12.2	255.255.255.240	10.10.12.1 (ICS)	UAE-LW-N-001-ASA	Default route out for user data
ICS & FW Connection Management	10.10.12.32	28	12	ASA	G1/1.12	10.10.12.34	255.255.255.240	10.10.12.33 (ICS)	UAE-LW-N-001-ASA	
BYOD	10.112.7.0	24	7	ASA	G1/5	10.112.7.1		NA	UAE-LW-N-001-ASA	
	10.112.7.0	24	7	2540 WLC	Port1 BYOD	10.112.7.254		10.112.7.1	UAE-LW-N-001-WLC	
	10.112.7.0	24	7	User Devices	WLAN1	Dynamic		10.112.7.1	NA	DHCP Scope 10.112.6.2-71, SSID MWRCAFE, No Security
Mgmt	10.112.99.0	24	99	ASA	G1/1	10.112.99.1		NA	UAE-LW-N-001-ASA	
	10.112.99.0	24	99	Firepower	MGT1/1	10.112.99.2		10.112.99.1	UAE-LW-N-001-SFR	Requires connection from Mgt1/1 to switch VLAN 99
	10.112.99.0	24	99	2504 WLC	Port1 Mgt	10.112.99.6		10.112.99.1	UAE-LW-N-001-WLC	
	10.112.99.0	24	99	C2960	VLAN 99	10.112.99.8		10.112.99.1	UAE-LW-N-001-2960	
	10.112.99.0	24	99	C1532E WAP	BVI1	10.112.99.10		10.112.99.1	UAE-LW-N-001-AP1	
	10.112.99.0	24	99	C1532E WAP	BVI1	10.112.99.11		10.112.99.1	UAE-LW-N-001-AP2	
	10.112.99.0	24	99	C1532E WAP	BVI1	10.112.99.12		10.112.99.1	UAE-LW-N-001-AP3	
	10.112.99.0	24	99	ICS VM Server Image (win	eth0	10.112.99.253		10.112.99.1		Local Logging and Management
	10.112.99.0	24	99	Dell Server	eth0	10.112.99.254		10.112.99.1	UAE-LW-N-001-SVR	

P1 connection	Wire Number	P2 Connection	Length
ASA G1/1	W-TS001	ICS Switchport	2ft
ASA Mgt 1/1	W-TS002	2960 1/0/2	1ft
ASA G1/2	W-TS003	2960 1/0/1	1ft
ASA G1/3	W-TS004	2960 1/0/13	1ft
ASA G1/4	W-TS005	2960 G1/0/25	1ft
ASA G1/5	W-TS006	2960 G1/0/37	1ft
ASA G1/7	W-TS007	2960 G1/0/47	1ft
ASA G1/8	W-TS008	2960 G1/0/48	1ft
2960 G1/0/4	W-TS009	ICS Management VM Server	1ft
2960 G1/0/3	W-TS010	Server Ethernet0	3ft
2960 G1/0/4	W-TS011	Server Ethernet1	3ft
2960 G1/0/38	W-TS012	WLC Port1	1ft
2960 G1/0/39	W-TS013	AP1 POE Port	TBD
2960 G1/0/40	W-TS014	AP2 POE Port	TBD
2960 G1/0/41	W-TS015	AP3 POE Port	TBD
2960 G1/0/42	W-TS016	WLC Port2	1ft
2960 G1/0/43	W-TS017	WLC Port3	1ft
2960 G1/0/44	W-TS018	WLC Port4	1ft

LARGE WIRELESS SITE IP SPACE & WIRE MAP

SCALE: NOT TO SCALE

TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT



Component/Description	Large Wireless Qty
Router: Cisco 2911 Modular Router with Security Bundle	1
Switch: Cisco 2960-X Gigabit	N/A
Firewall: Cisco 5508-X	1
Hotspot Gateway Controller: Nomadix AG5900	1
Wireless Controller: Cisco 2504	1
Wireless Access Points: Cisco CAP 1532E Rugged Outdoor	3
VoIP Phones: Polycom VVX300	N/A
Dell Thin Clients: Dell WYSE 7040 AiO Thin Client	N/A
Webcam: Havit HD Webcam HV-N5086 720p	N/A
Headset: PLANTRONICS C320	N/A
UPS: Eaton 9130 230V, 50/60Hz 1000VA/900W	1
Rack Case: QUEST 20RU Rack Enclosure	1
Cable Kit: 100ft of Dual RG-6 with connectors plus Ethernet patch cables	1

MWR DRAFT LARGE WIRELESS FLOOR PLAN
SCALE: NOT TO SCALE

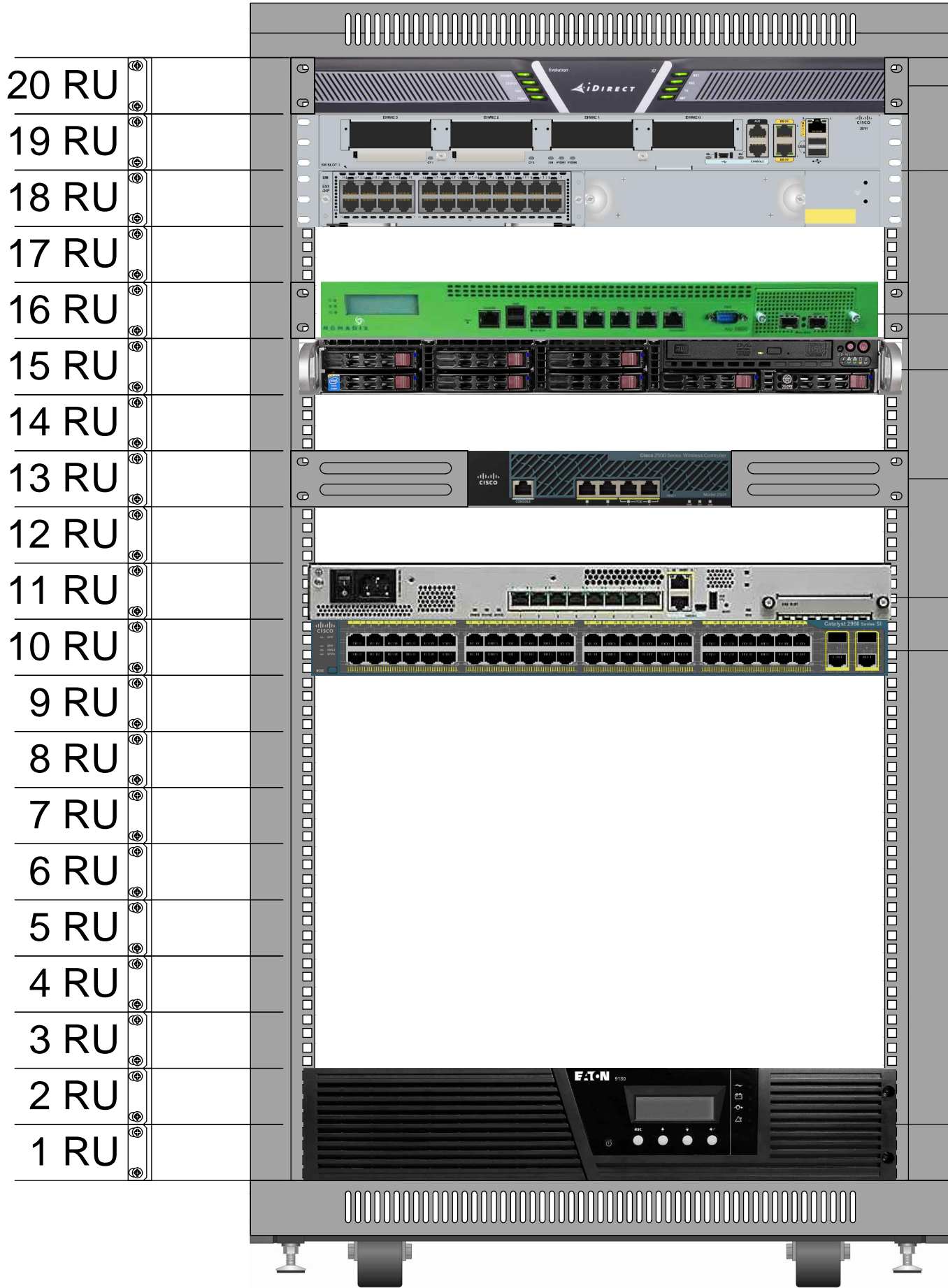
TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT

REVISIONS:			
NO:	DATE:	BY:	DESCRIPTION:
1	00/00/00	WRW	REV. NO. 1



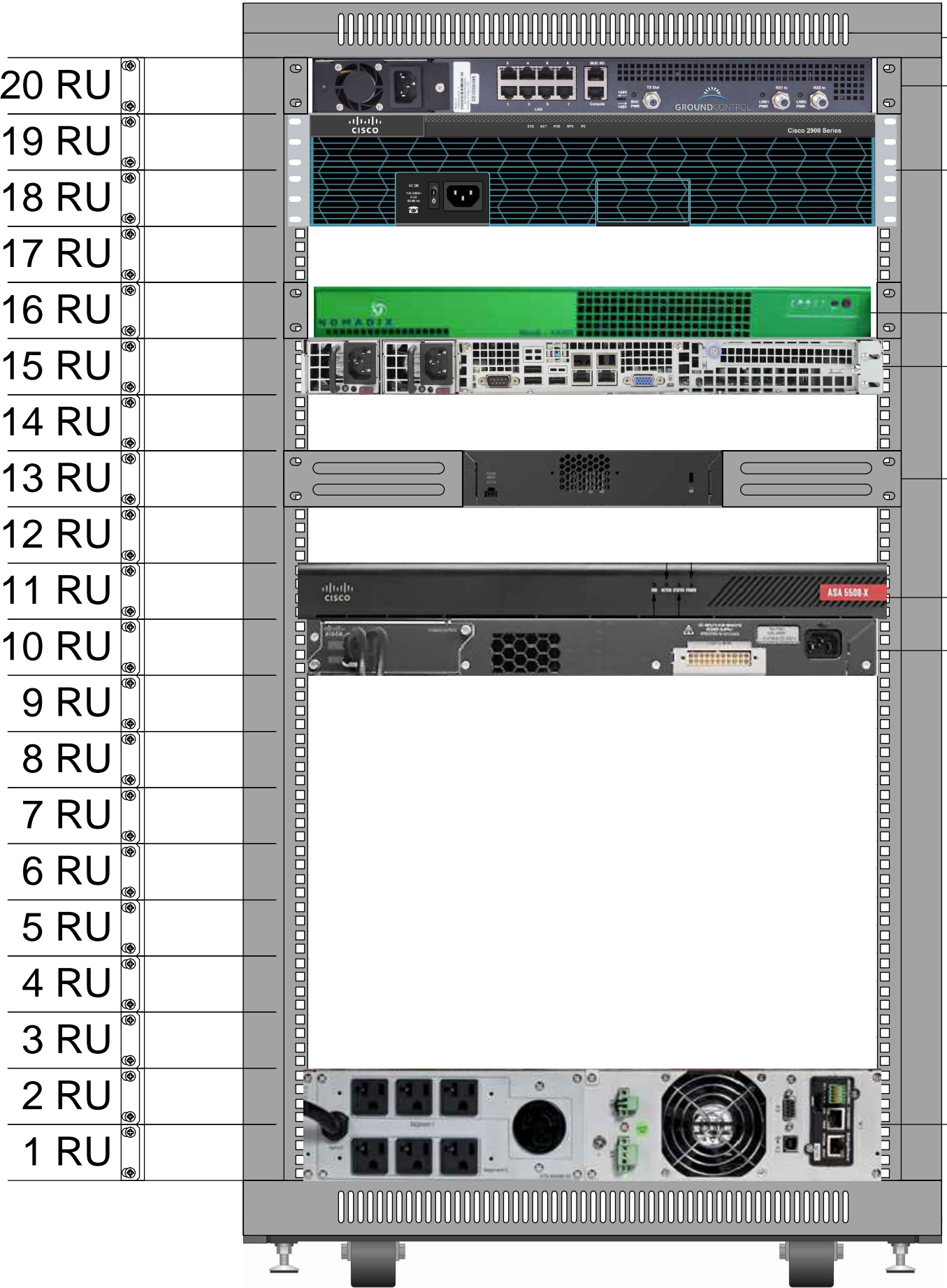
PROJECT: MWR DRAWING PACKAGE	DRAWN BY: WINSTON R. WILBECK	DATE: 3/8/17	SHEET NUMBER 09
DRAWING TITLE: MWR EXAMPLE FLOOR PLAN	REVIEWED BY: MWR TEAM	SCALE: NOT TO SCALE	

RACK 1: FRONT



- QUEST 20RU RACK
- iDIRECT X7 MODEM
- CISCO 2911 ROUTER
- NOMADIX AG5900 GATEWAY
- SUPER MICRO SERVER
- CISCO 2504 WIRELESS CONTROLLER
- CISCO 5508-X ASA FIREWALL
- CISCO 48 PORT SWITCH
- EATON 9130 UPS

RACK 1: BACK

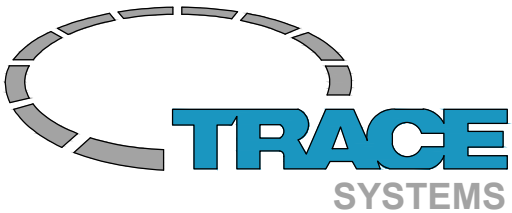


- QUEST 20RU RACK
- iDIRECT X7 MODEM
- CISCO 2911 ROUTER
- NOMADIX AG5900 GATEWAY
- SUPER MICRO SERVER
- CISCO 2504 WIRELESS CONTROLLER
- CISCO 5508-X ASA FIREWALL
- CISCO 48 PORT SWITCH
- EATON 9130 UPS

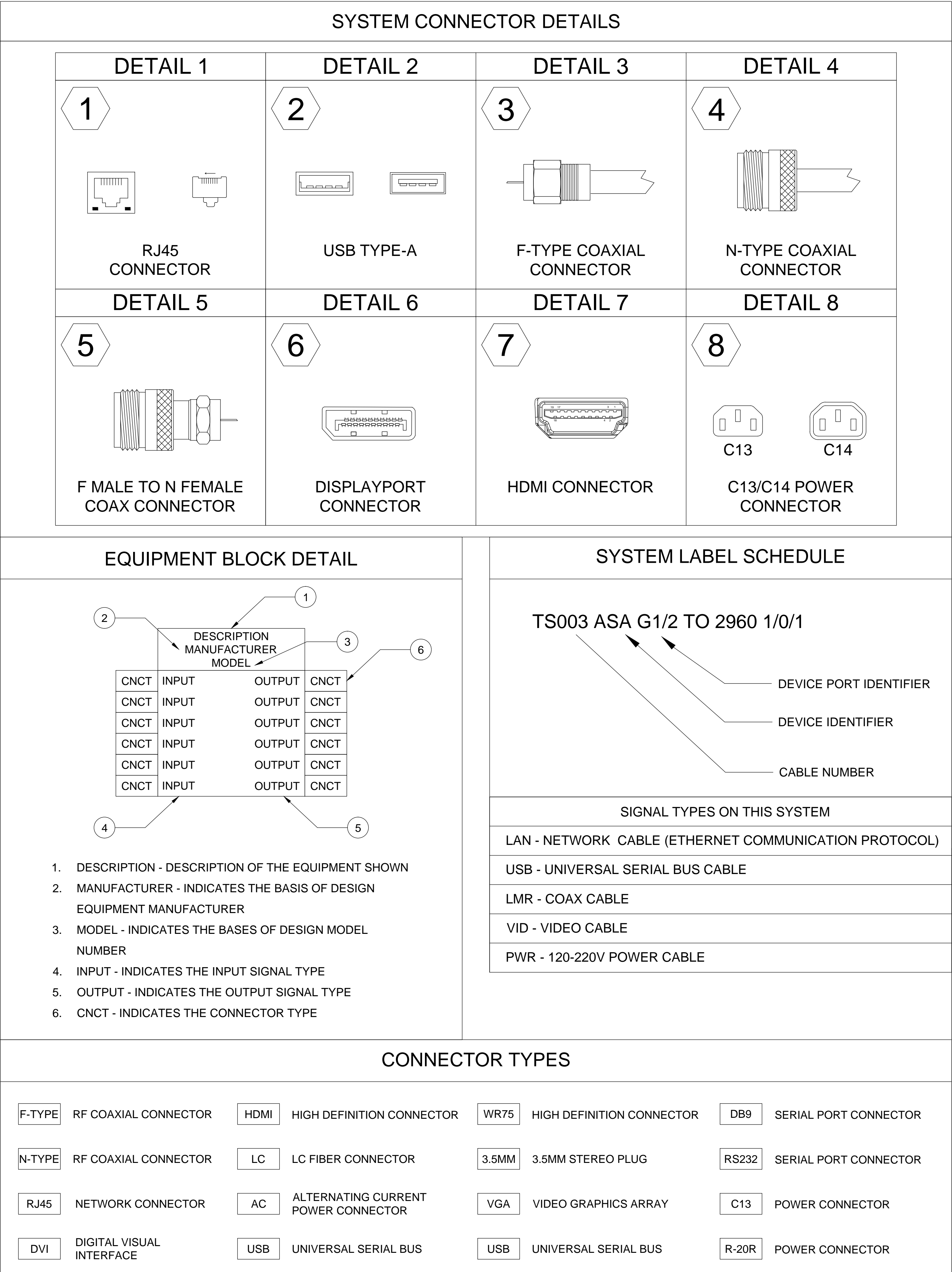
LARGE WIRLESS RACK ELEVATION
SCALE: NOT TO SCALE

TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT

REVISIONS:			
NO:	DATE:	BY:	DESCRIPTION:
1	00/00/00	WRW	REV. NO. 1

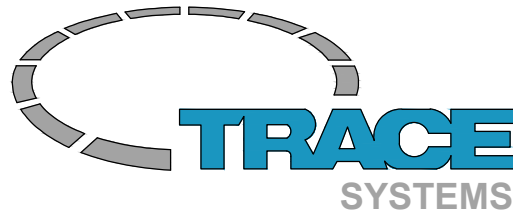


PROJECT: MWR DRAWING PACKAGE	DRAWN BY: WINSTON R. WILBECK	DATE: 3/8/17
DRAWING TITLE: MWR DRAFT RACK ELEVATIONS	REVIEWED BY: MWR TEAM	SCALE: NOT TO SCALE



TRACE SYSTEMS PROPRIETARY. THIS DOCUMENT INCLUDES DATA THAT SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED--IN WHOLE OR IN PART--FOR ANY PURPOSE OTHER THAN TO MONITOR THIS CONTRACT

REVISIONS:			
NO:	DATE:	BY:	DESCRIPTION:
1	00/00/00	WRW	REV. NO. 1



PROJECT: MWR DRAWING PACKAGE	DRAWN BY: WINSTON R. WILBECK	DATE: 3/8/17
DRAWING TITLE: DETAILS/APPENDIX	REVIEWED BY: MWR TEAM	SCALE: NOT TO SCALE