

MIDATLANTICBROADBAND

Lodging OSP and WiFi Upgrade
Malmstrom Air Force Base – Great Falls, MT

100% Design Document

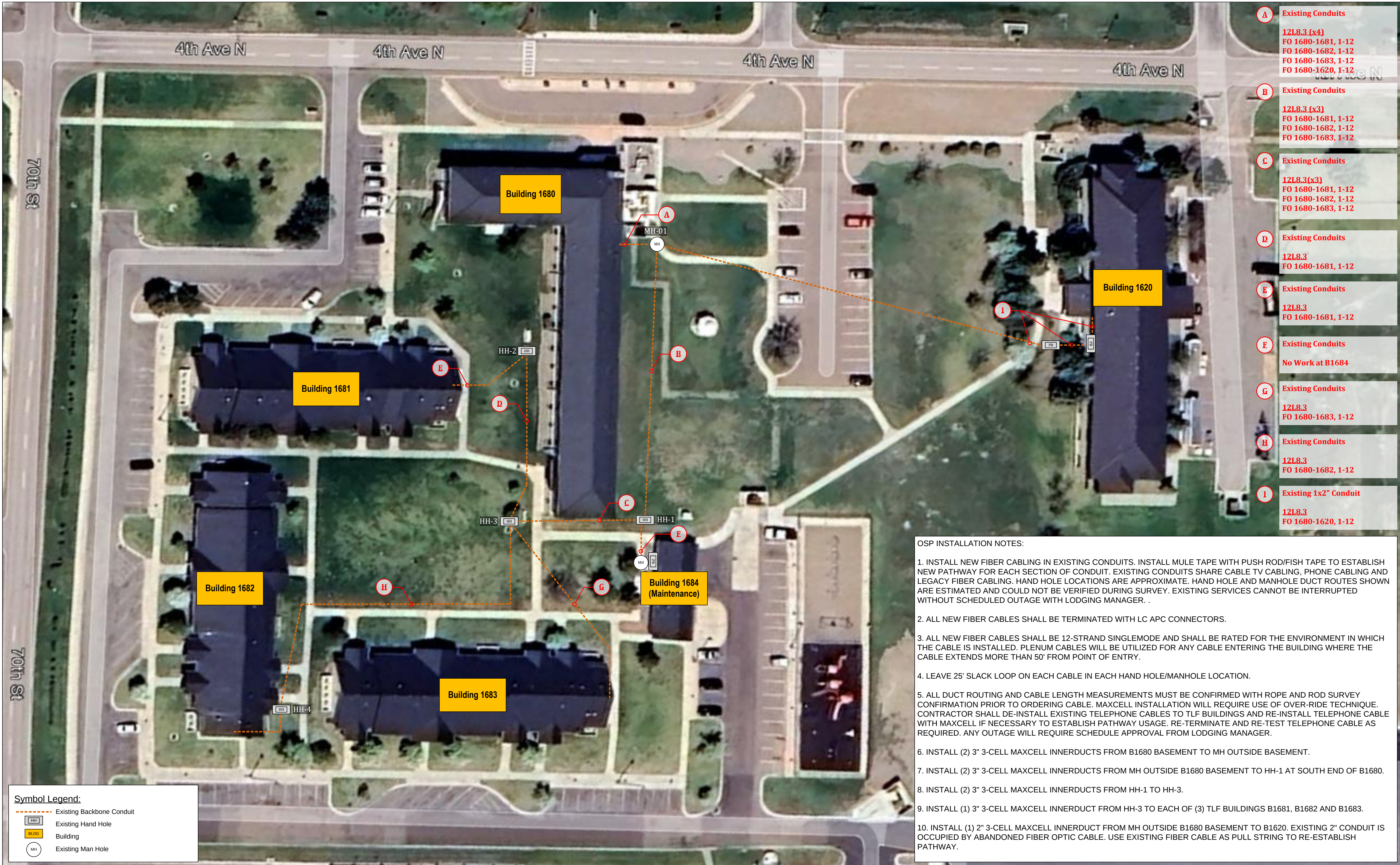
Drawn By: Josh Bowie, RCDD

Revision Number: 00

Print Date: 10/23/2024

Total Pages: 14

Malmstrom AFB
Lodging OSP and WiFi Upgrade
OSP Conduit and Fiber Route



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SNS
SOUTHERN NETWORK SERVICES
P.O. Box 1242
Ocean Springs, MS 39566
USA
Phone: (228) 875-7336
Fax: (228) 875-8007



DATE	REVISION HISTORY	PROJECT IDENTIFIER	REV NO.	DRAWING NO.	SHEET NO.
10/23/2024		Malmstrom AFB Lodging IT Infrastructure Upgrade	00	T-100	2 of 14
SHEET TITLE Site Map					

1. UTILIZE EXISTING PATHWAYS.
2. RE-SEAL ALL PENETRATIONS AND OPENINGS.
3. INSTALL J-HOOK SUPPORTS WHERE NEEDED.
4. DROP CEILING IN CORRIDOR.

OUTLET LEGEND:

8' 4' 0 8'

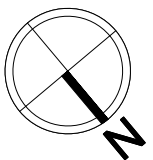


SCALE: $\frac{3}{32}'' = 1'-0''$

DATE 10/23/2024	DRAWING NO. T-200	REV NO. 00	PROJECT IDENTIFIER Mainstream AFR Logging IT Infrastructure Upgrade	REV	REVISION HISTORY	DATE
			SHEET NO. 3 of 14	SHEET TITLE Building 1620 - 1 st Floor Plan		
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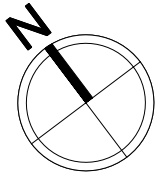
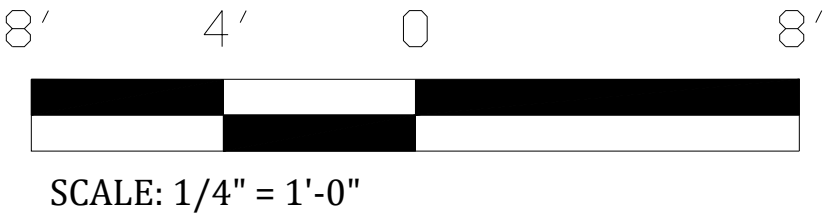
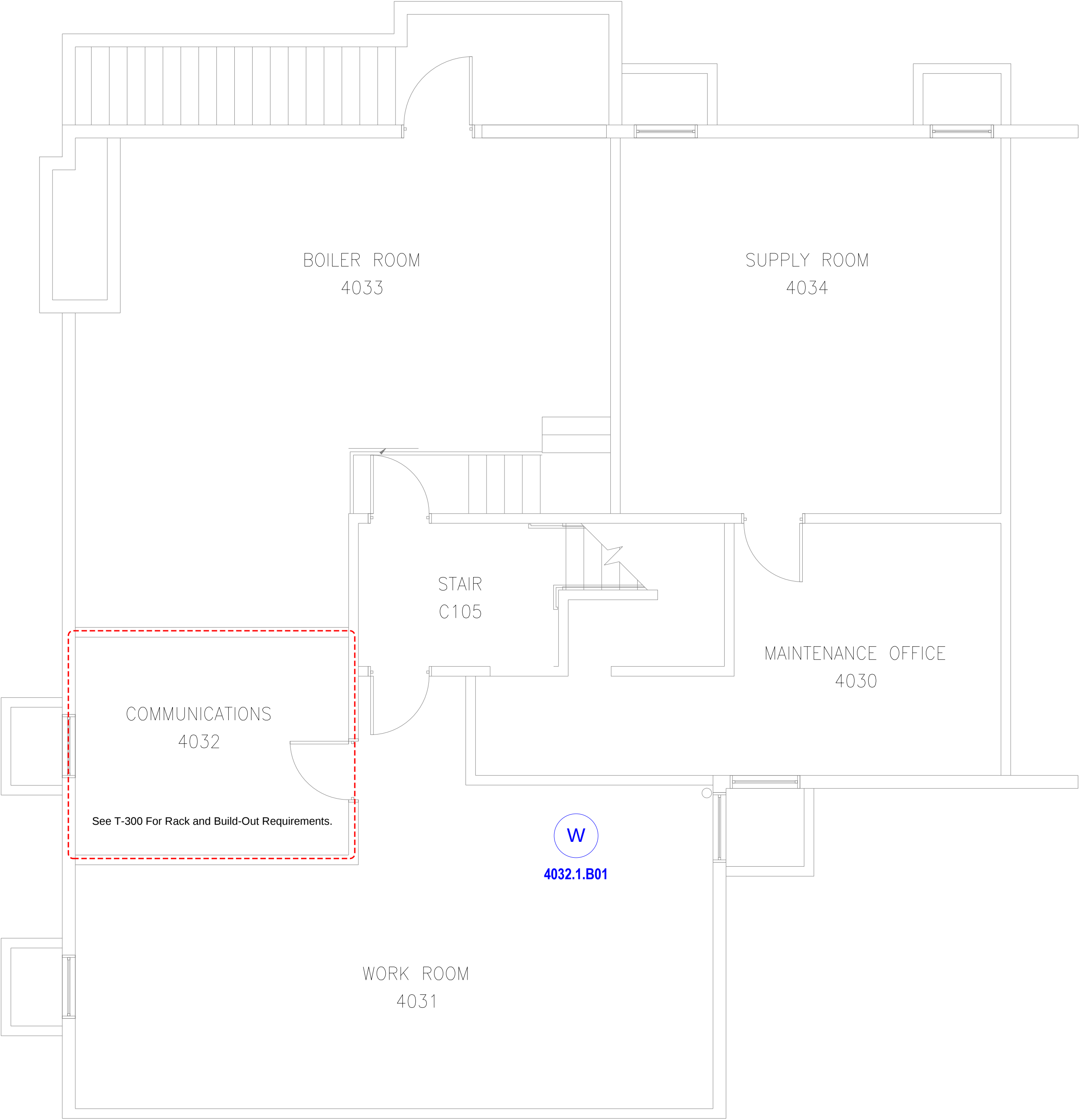
1. UTILIZE EXISTING PATHWAYS.
2. RE-SEAL ALL PENETRATIONS AND OPENINGS.
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Malmstrom AFB
Lodging OSP & Wifi Upgrade
Building 1680 - Basement Floor Plan



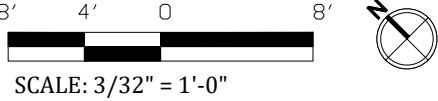
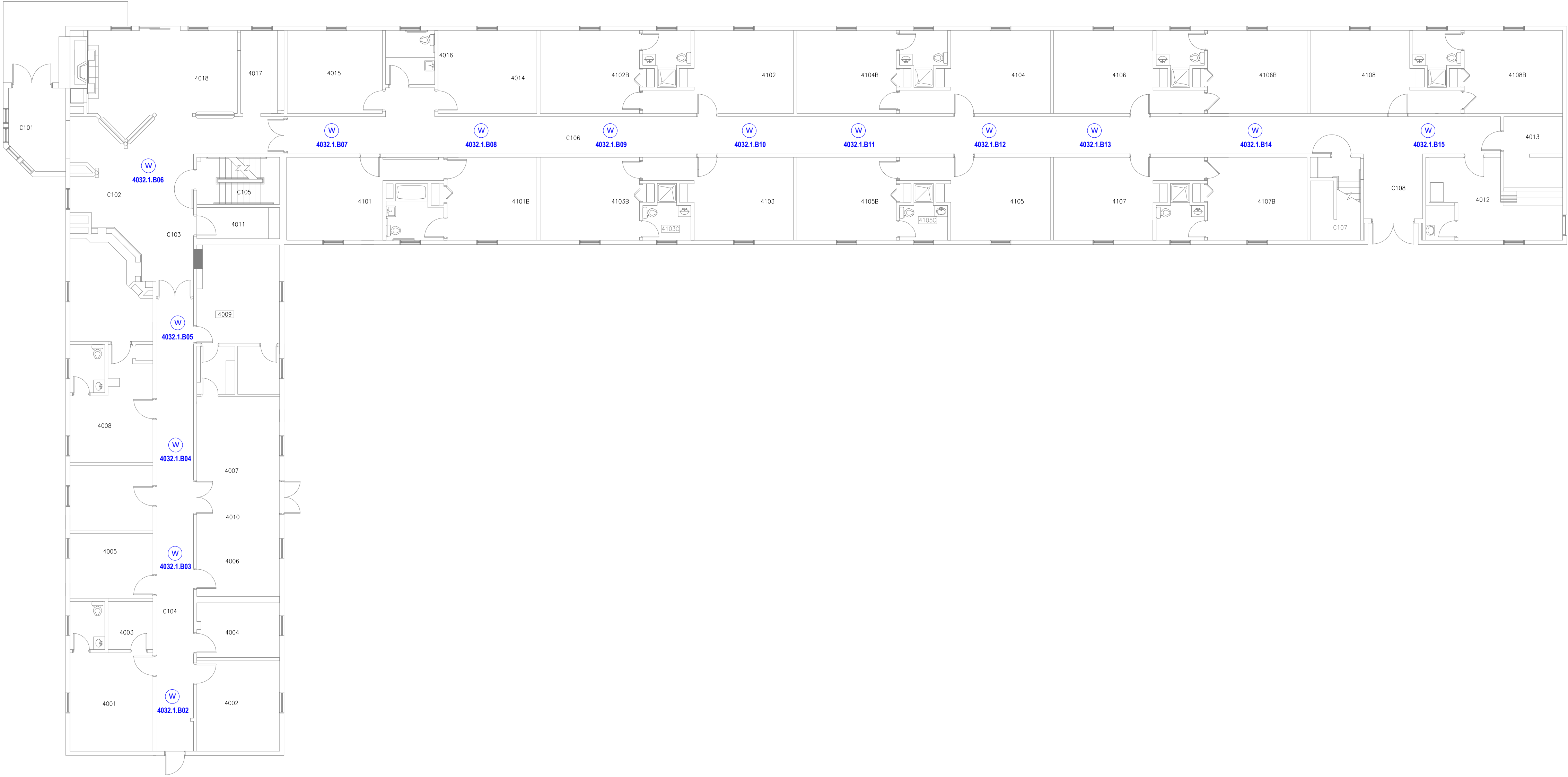
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 MVA/ASTEC/RESEARCH TECHNICAL SERVICES					
 SNS Solutions P.O. Box 1242 Ocean Springs, MS 39566 USA Phone (228) 875-7336 Fax (228) 875-8007					
 BicSI BICSI ID # 142787 RCDD					
DATE	DRAWING No.	REV No.	PROJECT IDENTIFIER	REVISION HISTORY	DATE
10/23/2024	T-202	00	Malmstrom AFB Lodging IT Infrastructure Upgrade		
			SHEET TITLE		
			Building 1680 - Basement Floor Plane		
			SHEET No.		
			5 of 14		
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- SHEET NOTE:
1. UTILIZE EXISTING PATHWAYS.
 2. RE-SEAL ALL PENETRATIONS AND OPENINGS.
 3. INSTALL J-HOOK SUPPORTS WHERE NEEDED.
 4. DROP CEILING IN CORRIDOR.

OUTLET LEGEND:

(W) (1) CATEGORY 6 UTP CABLE (BLUE).

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Building 1680 - 1st Floor Plan



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P.O. Box 1242
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10/23/2024			Malmstrom AFB Lodging IT Infrastructure Upgrade	00	T-203	10/23/2024
			SHEET TITLE Building 1680 - 1 st Floor Plan	SHEET No. 6 of 14		

1. UTILIZE EXISTING PATHWAYS.
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3. INSTALL J-HOOK SUPPORTS WHERE NEEDED.
4. DROP CEILING IN CORRIDOR.

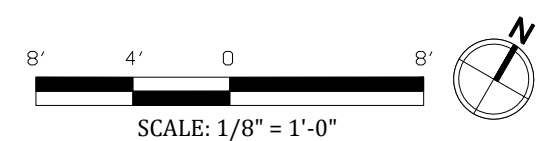
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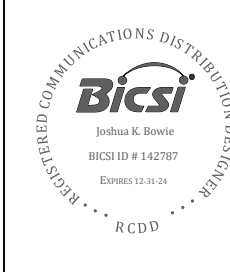
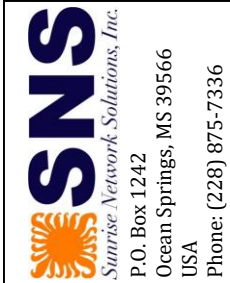
1. UTILIZE EXISTING PATHWAYS.
2. RE-SEAL ALL PENETRATIONS AND OPENINGS.
3. INSTALL J-HOOK SUPPORTS WHERE NEEDED.
4. SHEETROCK CEILINGS. UTILIZE ATTIC SPACE FOR CABLE PATHWAY.
5. INSTALL PLASTIC ACCESS PANEL (ACUDOR PA-3000 12X12 OR EQUAL AT EACH WIRELESS DROP LOCATION FOR ACCESS TO CABLING CONNECTION WITHOUT THE REQUIREMENT TO ENTER ATTIC.

OUTLET LEGEND:

Floor plan of the 3rd floor showing rooms 3001 through 3010. The plan includes room layouts, door swings, and labels for windows (W) and doors (TR-1.A01 through TR-1.A10). A red dashed box highlights a room labeled 'TR' with a note: 'See T-300 For Rack and Build-Out Requirements.'



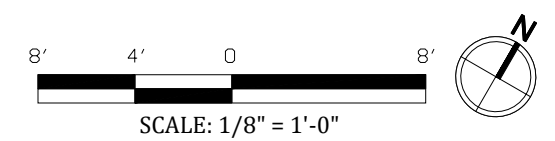
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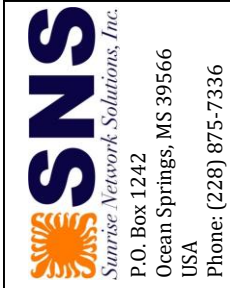
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10/23/2024	T-205	00	Malmstrom AFB Lodging IT Infrastructure Upgrade		
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1. UTILIZE EXISTING PATHWAYS.
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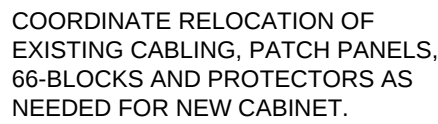
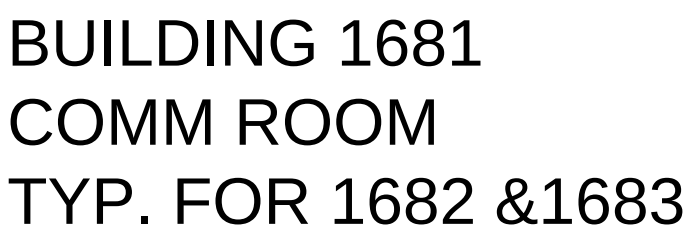
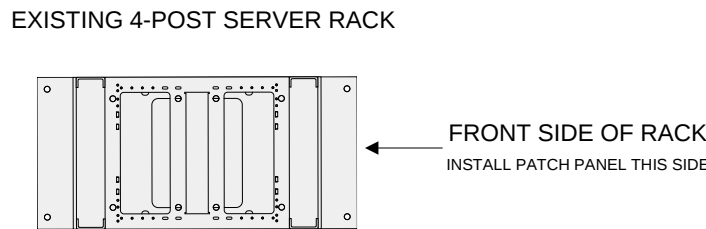


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10/23/2024	T-207	00	Malmstrom AFB Lodging IT Infrastructure Upgrade			
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			Building 16683 - Floor Plan			

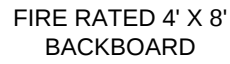
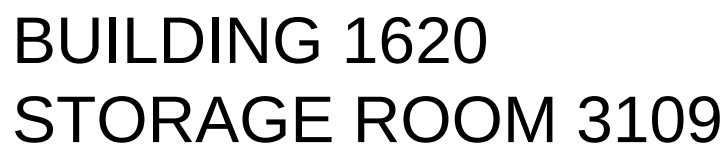
Malmstrom AFB
Lodging OSP & Wifi Upgrade
Comm Room Overhead View



EX. FIRE RATED 4' X 8'
BACKBOARD

CABINET LOCATION
SHOWN FOR VISUAL
PURPOSES ONLY.
LOCATION WILL
CHANGE BETWEEN
BUILDINGS.

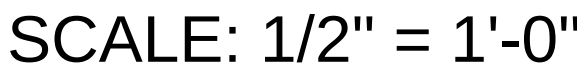
INSTALL 12" X 4" X 1/4" TMGB.
INSTALL #6 GROUND TO
ELECTRICAL SERVICE GROUND.
TEST EXISTING ELECTRICAL
RECEPTACLE.



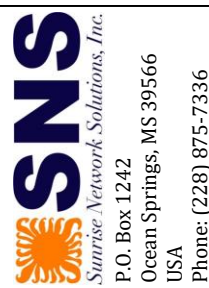
← FRONT

LEAVE 24" OF SPACE BETWEEN TOP
OF CABINET AND CEILING

INSTALL 12" X 4" X 1/4" TMGB
INSTALL DEDICATED 20AMP DUPLEX
ELECTRICAL RECEPTACLE.



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REV	REVISION HISTORY	DATE

PROJECT IDENTIFIER	SHEET TITLE
Malmstrom AFB Lodging IT Infrastructure Upgrade	Comm Room Overhead View

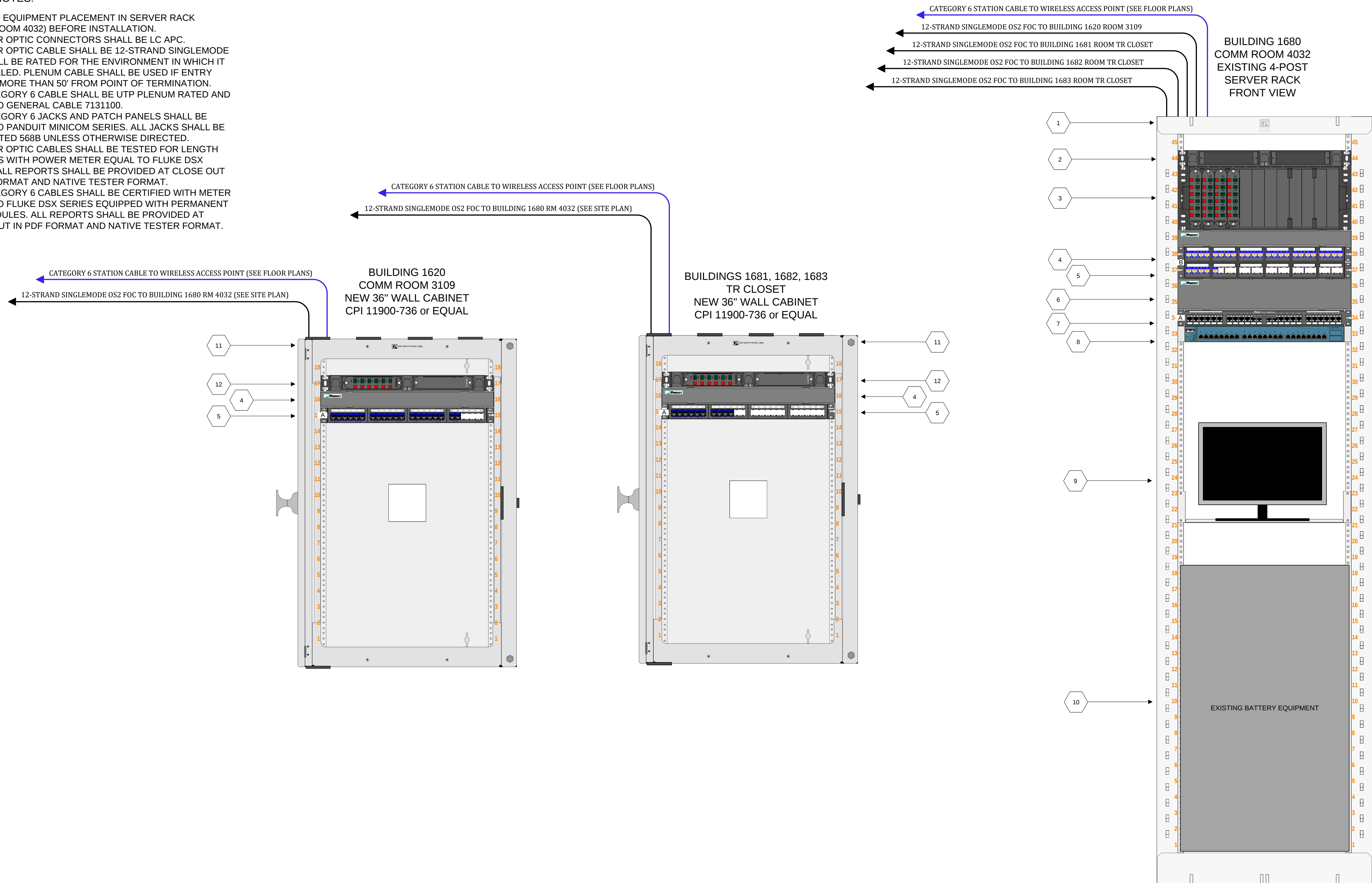
REV No.	00
SHEET No.	11 of 14

Drawing No.
T-300

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1. EXISTING EQUIPMENT RACK
2. EXISTING CISCO EQUIPMENT
3. NEW 4U FIBER ENCLOSURE
4. NEW 1U HORIZONTAL WIRE MANAGER
5. NEW 1U MODULAR CATEGORY 6 24-PORT PATCH PANEL
6. EXISTING 2U HORIZONTAL WIRE MANAGER
7. EXISTING 1U 24-PORT PATCH PANEL
8. EXISTING SWITCH
9. EXISTING MONITOR
10. EXISTING BATTERY EQUIPMENT
11. NEW 18U WALL MOUNTED EQUIPMENT CABINET
12. NEW 1U FIBER ENCLOSURE

1. CONFIRM EQUIPMENT PLACEMENT IN SERVER RACK (COMM ROOM 4032) BEFORE INSTALLATION.
2. ALL FIBER OPTIC CONNECTORS SHALL BE LC APC.
3. ALL FIBER OPTIC CABLE SHALL BE 12-STRAND SINGLEMODE AND SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED. PLENUM CABLE SHALL BE USED IF ENTRY POINT IS MORE THAN 50' FROM POINT OF TERMINATION.
4. ALL CATEGORY 6 CABLE SHALL BE UTP PLENUM RATED AND EQUAL TO GENERAL CABLE 7131100.
5. ALL CATEGORY 6 JACKS AND PATCH PANELS SHALL BE EQUAL TO PANDUIT MINICOM SERIES. ALL JACKS SHALL BE TERMINATED 568B UNLESS OTHERWISE DIRECTED.
6. ALL FIBER OPTIC CABLES SHALL BE TESTED FOR LENGTH AND LOSS WITH POWER METER EQUAL TO FLUKE DSX SERIES. ALL REPORTS SHALL BE PROVIDED AT CLOSE OUT IN PDF FORMAT AND NATIVE TESTER FORMAT.
7. ALL CATEGORY 6 CABLES SHALL BE CERTIFIED WITH METER EQUAL TO FLUKE DSX SERIES EQUIPPED WITH PERMANENT LINK MODULES. ALL REPORTS SHALL BE PROVIDED AT CLOSE OUT IN PDF FORMAT AND NATIVE TESTER FORMAT.

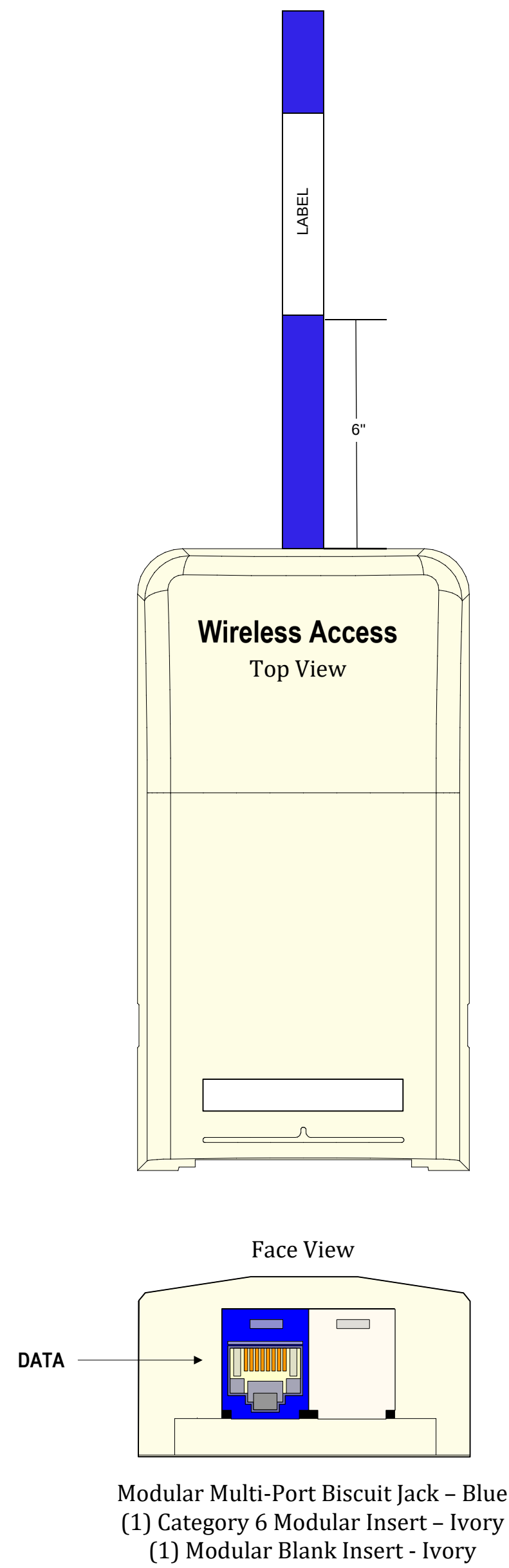


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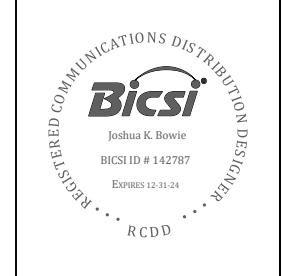
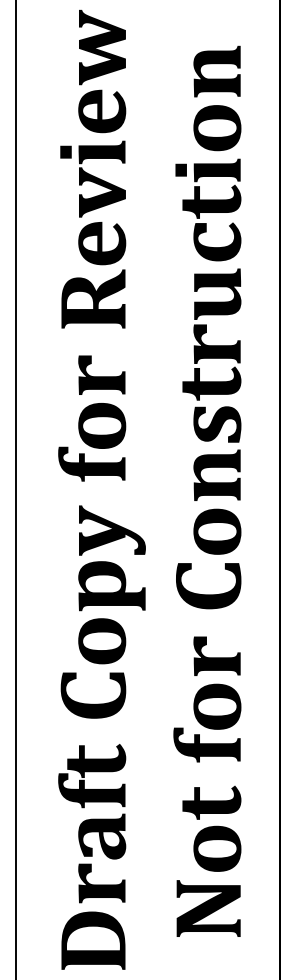


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10/23/2024	T-301	00	Mainstream AEG Lodging IT Infrastructure Upgrade			
		SHEET NO.	SHEET TITLE			
		12 of 14	Rack Elevation			

Malmstrom AFB Lodging OSP & Wifi Upgrade Outlet Diagram



One Line Diagram – Malmstrom AFB Lodging – Proposed Fiber Infrastructure to Lodging Campus



DATE	DRAWING NO.	REV. NO.	PROJECT IDENTIFIER	REV	REVISION HISTORY	DATE
10/23/2024	T-400	00	Mainstream AFB Lodging IT Infrastructure Upgrade			
			SHEET TITLE			
			Fiber Optic One-Line Diagram			