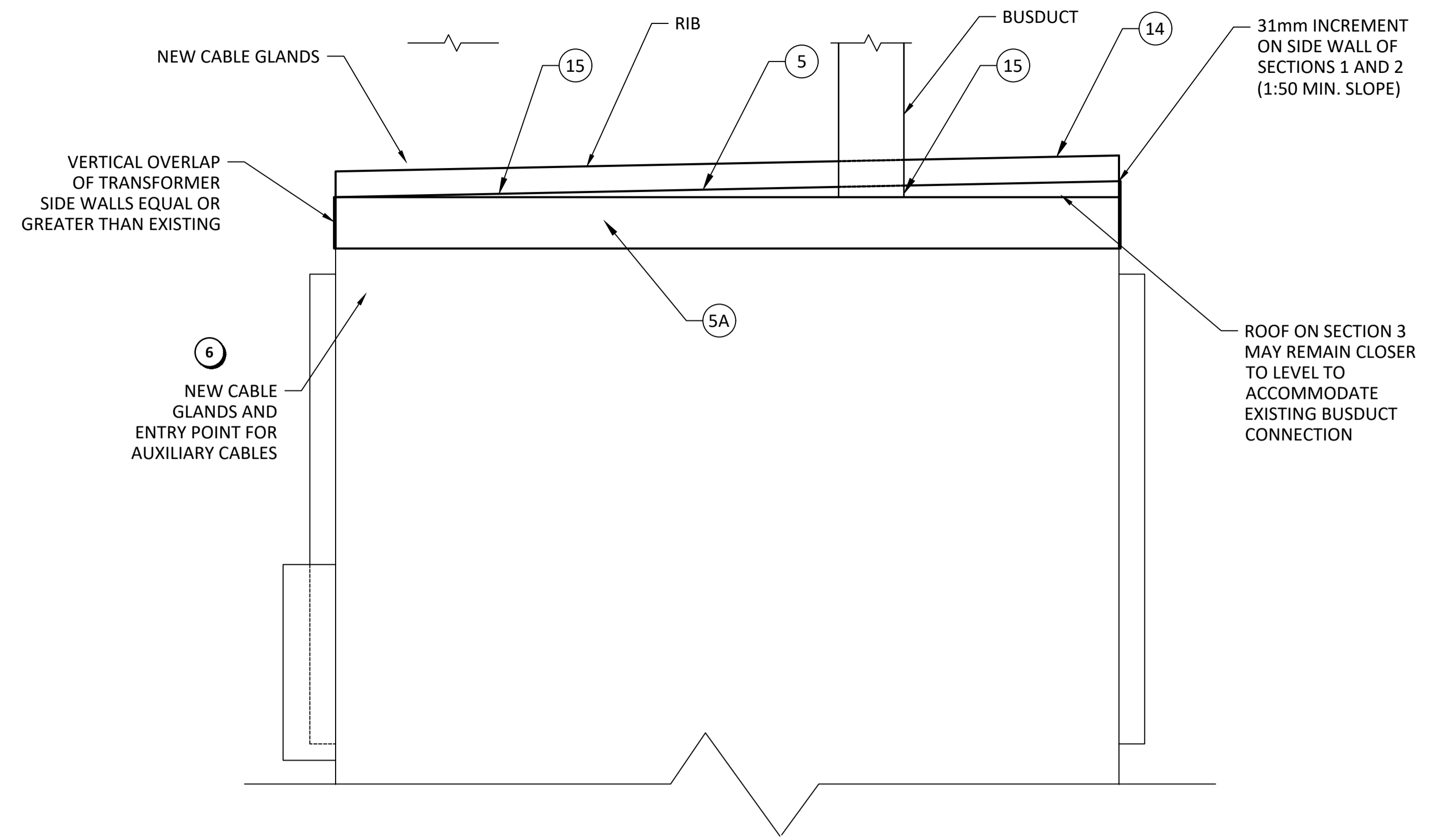
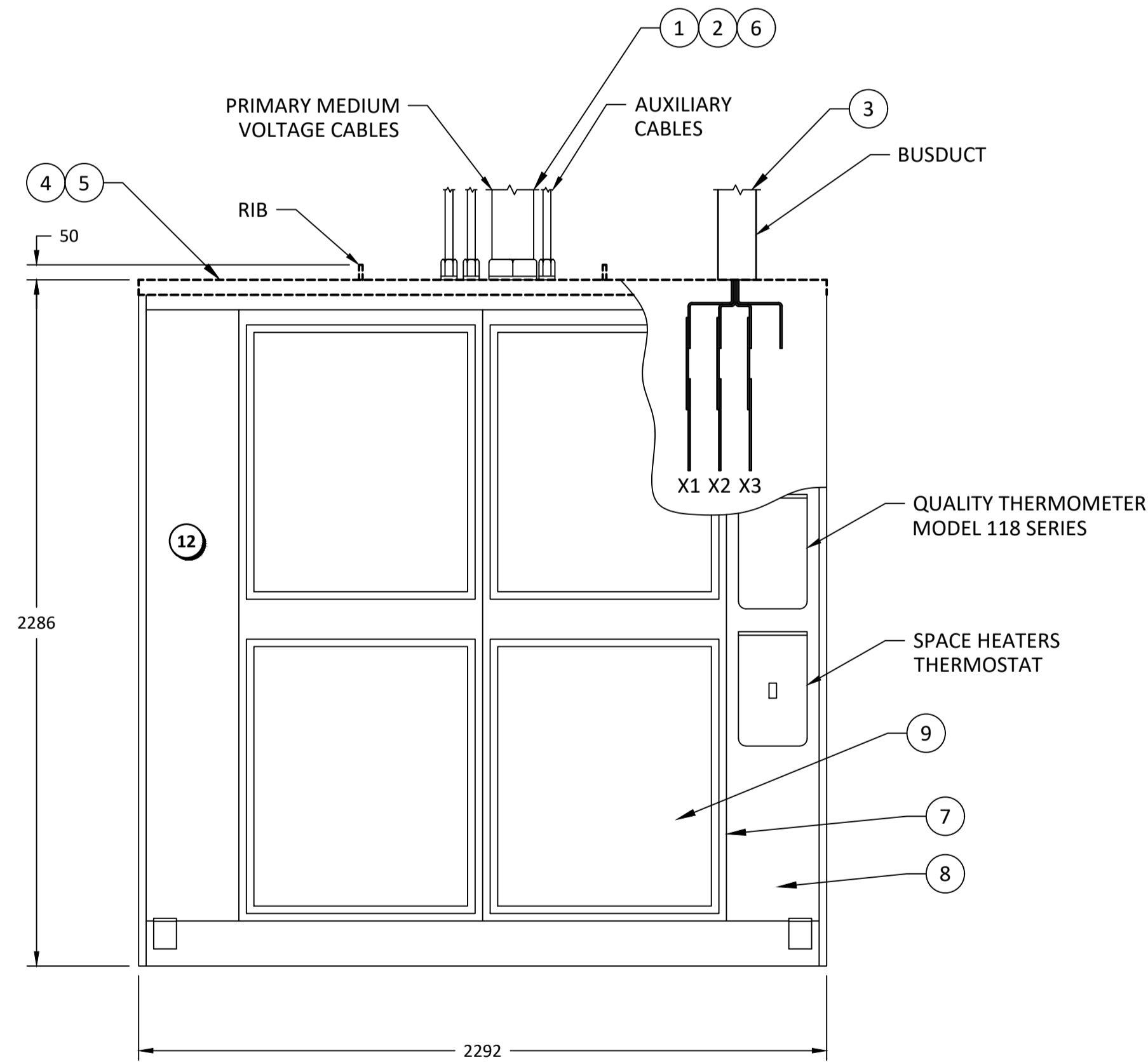


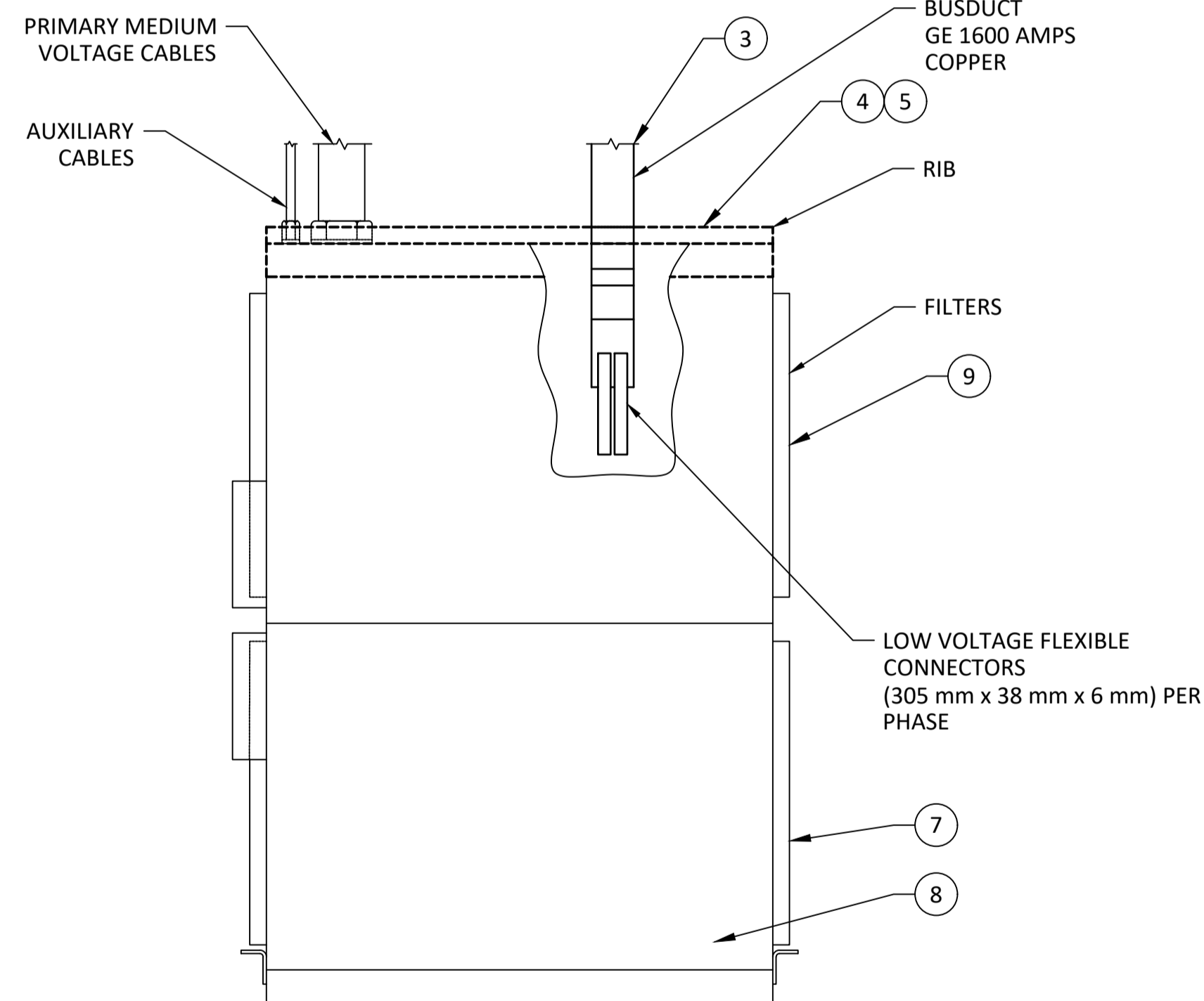
TOP VIEW - EXISTING
SCALE 1:16



RIGHT SIDE VIEW - NEW
SCALE 1:8



FRONT VIEW - EXISTING
SCALE 1:16



RIGHT SIDE VIEW - EXISTING
SCALE 1:16

CONSTRUCTION NOTES:	
1	TEST THE TRANSFORMER AND CABLES PRIOR TO REMOVING.
2	DISCONNECT AND CAREFULLY REMOVE THE 4160V PRIMARY POWER CABLES.
3	DISCONNECT THE BUSDUCT AND REMOVE THE TRANSITION SECTION AND OTHER SECTIONS AS REQUIRED TO REMOVE THE TRANSFORMER ROOF.
4	REMOVE THE TRANSFORMER ROOF AND COVER THE TRANSFORMER AS REQUIRED TO PREVENT MOISTURE INGRESS WHILE THE ROOF IS REMOVED.
5	REPLACE THE EXISTING STEEL WITH A STAINLESS STEEL ROOF THAT HAS A MINIMUM SLOPE OF 1:50 ON SECTION 1 AND SECTION 2. THE SECTION 3 ROOF SLOPE MAY BE MINIMIZED TO ALLOW FOR THE BUSDUCT CONNECTION. A POSSIBLE DESIGN CONCEPT IS SHOWN IN DETAIL 1. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE MODIFIED ROOF AND MODIFICATION OF ALL THE CONNECTIONS, INCLUDING THE BUSDUCT CONNECTION. PROVIDE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
5A	PROVIDE AND ATTACH INSULATION TO THE INTERIOR OF THE ENCLOSURE ROOF. IN ADDITION TO ATTACHING THE INSULATION REUTILIZE OR PROVIDE NEW FIBREBOARD TO PREVENT INSULATION FROM FALLING DOWN. PROVIDE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
6	RE-INSTALL ALL CABLES AND BUSDUCT, REPLACE ALL THE CABLE GLANDS, AND PROVIDE THE ASSOCIATED STRUCTURE TO SUPPORT THE CABLES, TAKING CARE NOT TO DAMAGE. RE-ENTRY OF ALL AUXILIARY CABLES TO BE FROM THE RIGHT SIDE OF THE TRANSFORMER. REPAIR THE 4160V CABLES AS DESCRIBED IN THE SPECIFICATIONS.
7	REMOVE ALL DOORS AND PANELS THAT ARE READILY REMOVABLE, TAKE OFFSITE TO AN APPROPRIATE SHOP. CLEAN TO BASE METAL UTILIZING SAND BLASTING AND PAINT IN ACCORDANCE WITH THE SPECIFICATIONS.
8	REMOVE ALL CORROSION AND LOOSE PAINT TO BASE METAL ON THE ENCLOSURE EXTERIOR WALLS, AND ALL OTHER PANELS NOT REMOVED. DO NOT UTILIZE SANDBLASTING OR OTHER TECHNIQUES WHICH COULD IMPACT THE TRANSFORMER ON THE PANELS. PRIME AND PAINT THE ENTIRE ENCLOSURE EXTERIOR IN ACCORDANCE WITH THE SPECIFICATIONS.
9	REMOVE AND CLEAN ALL FILTERS.
10	CLEAN THE TRANSFORMER INTERIOR.
11	TEST THE TRANSFORMER AND CABLES UPON COMPLETION OF THE REPAIR WORK.
12	INSTALL A NEW SIGN WITH A RED FACE CONTAINING THE WORDS: "DANGER: 4160 V".
13	COORDINATE, PAY FOR, AND RECEIVE AN INSPECTION AND APPROVAL OF THE TRANSFORMER MODIFICATIONS. THE INSPECTION AGENCY SHALL PROVIDE A CSA OR CSA EQUIVALENT CERTIFICATION FOR EACH TRANSFORMER.
14	PROVIDE A SEAL TO ENSURE ALL RIB CONNECTIONS ARE WATER-TIGHT.
15	IN ADDITION TO ANY MANUFACTURER REQUIREMENTS, PROVIDE A COMPATIBLE LONG-LIFE SEALANT AROUND ALL CABLE GLANDS AND BUS-DUCT CONNECTIONS TO ENSURE A LONG-LIFE WATER-TIGHT SEAL.

- NOTES:**
- ALL DIMENSIONS SHOWN ARE APPROXIMATE ONLY AND REQUIRE FIELD CONFIRMATION.
 - ALL BRACING AND FIELD INSTALLED CHANNELS ARE NOT SHOWN. SITE INVESTIGATION IS REQUIRED.

1-0101U-E0013
1-0101U-E0016
1-0101U-E0020

SINGLE LINE DIAGRAM, 4160V ELECTRICAL DISTRIBUTION
SINGLE LINE DIAGRAM, 600V AND 208/120V DISTRIBUTION
INSTALLATION DETAILS, CABLE TRAY, AND BUSDUCT SUPPORTS

DRAWING NUMBER REFERENCE DRAWINGS

**ENGINEERS
GEOSCIENTISTS
MANITOBA**
Certificate of Authorization
CENGYS Ltd.
No. 6983

NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR CONSTRUCTION (152-2023)	2023-02-28	CJR	CJR

 www.cengys.com		DESIGNED BY: C. REIMER	CHECKED BY: C. REIMER
		DRAWN BY: S. FUNK / E. COELHO	APPROVED BY: C. REIMER
SCALE: AS SHOWN		ISSUED FOR CONSTRUCTION BY: K. SCHIMKE	
DATE: 2021-08-15		DATE: 2023-02-28	
CONSULTANT NO.: 100048-001			

ENGINEER'S SEAL

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
UV TRANSFORMER ENCLOSURE REPAIR
EQUIPMENT LAYOUT
LST-4 AND LST-5 TRANSFORMERS

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101U-E0019	001	00	A1