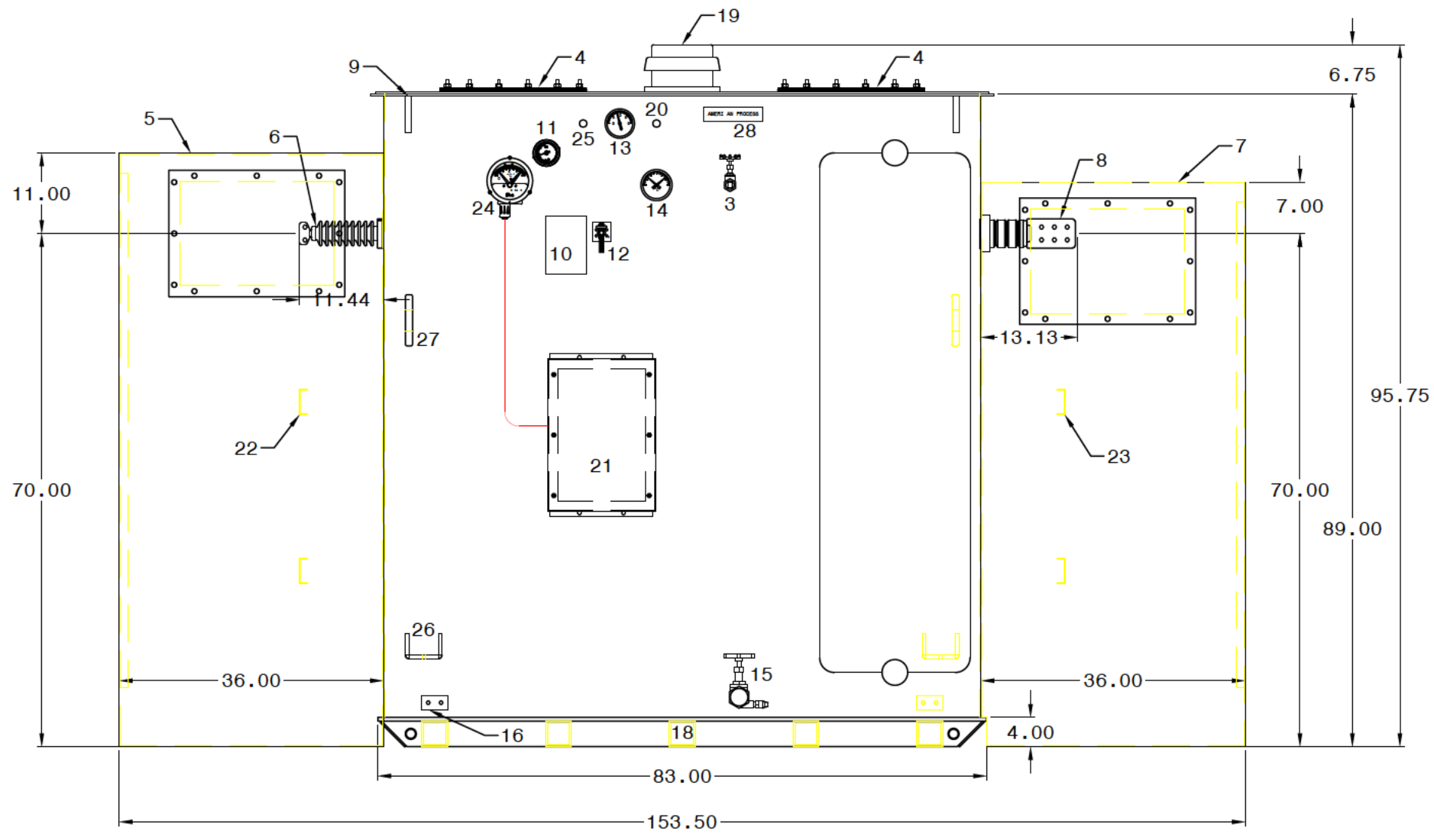


REV	DESCRIPTION	BY	DATE						
A	STATUS TO RECORD	JV	07/19/11	-	----				



- 1 COOLING PANELS (FLAT PANELS IN A COMMON HEADER)
- 2 TRANSFORMER TANK WITH WELDED COVER DOMED TO SHED WATER
- 3 1.00 INCH UPPER FILL VALVE AND FILTER PRESS CONNECTION
- 4 HANDHOLE (16.00 X 24.00 INCHES I.D. - 2 EA)
- 5 36.00 INCH DEEP REMOVABLE CABINET WITH SIDE ACCESS
- 6 HV BUSHING WITH 2 HOLE G SPADE CONNECTOR (SEE DETAIL)
- 7 36.00 INCH DEEP REMOVABLE CABINET WITH SIDE ACCESS
- 8 LV BUSHING WITH 6 HOLE SPADE CONNECTOR (SEE DETAIL)
- 9 LIFT LUGS FOR LIFTING TRANSFORMER COMPLETE WITH LIQUID
- 10 SQUARE D UL LISTED STAINLESS STEEL NAMEPLATE AND CONNECTION DIAGRAM
- 11 LIQUID LEVEL GAUGE
- 12 DE-ENERGIZED TAPCHANGER WITH PROVISIONS FOR PADLOCKING
- 13 PRESSURE VACUUM GAUGE WITH BLEEDER VALVE
- 14 DIAL TYPE THERMOMETER
- 15 2.00 INCH DRAIN VALVE AND SAMPLER WITH FILTER PRESS CONNECTION
- 16 NEMA GROUND PADS WITH TWO 1/2-13 TAPPED HOLES
- 17 GROUND PAD TAPPED 1/2-13 WITH REMOVABLE GROUND STRAP
- 18 SKID BASE SUITABLE FOR JACKING, SKIDDING, AND PULLING
- 19 COVER-MOUNTED PRESSURE RELIEF DEVICE
- 20 SCHRADER VALVE (GAS SAMPLE)
- 21 AUXILIARY WIRING CABINET
- 22 HV CABLE SUPPORT
- 23 LV CABLE SUPPORT
- 24 WINDING TEMPERATURE INDICATOR WITH 2 FORM-C CONTACTS
- 25 PRESSURE RELIEF VALVE
- 26 JACK BOSS PROVISIONS
- 27 TRANSPORTATION TIE DOWN PROVISIONS
- 28 ID TAG - "AMERICAN PROCESS"

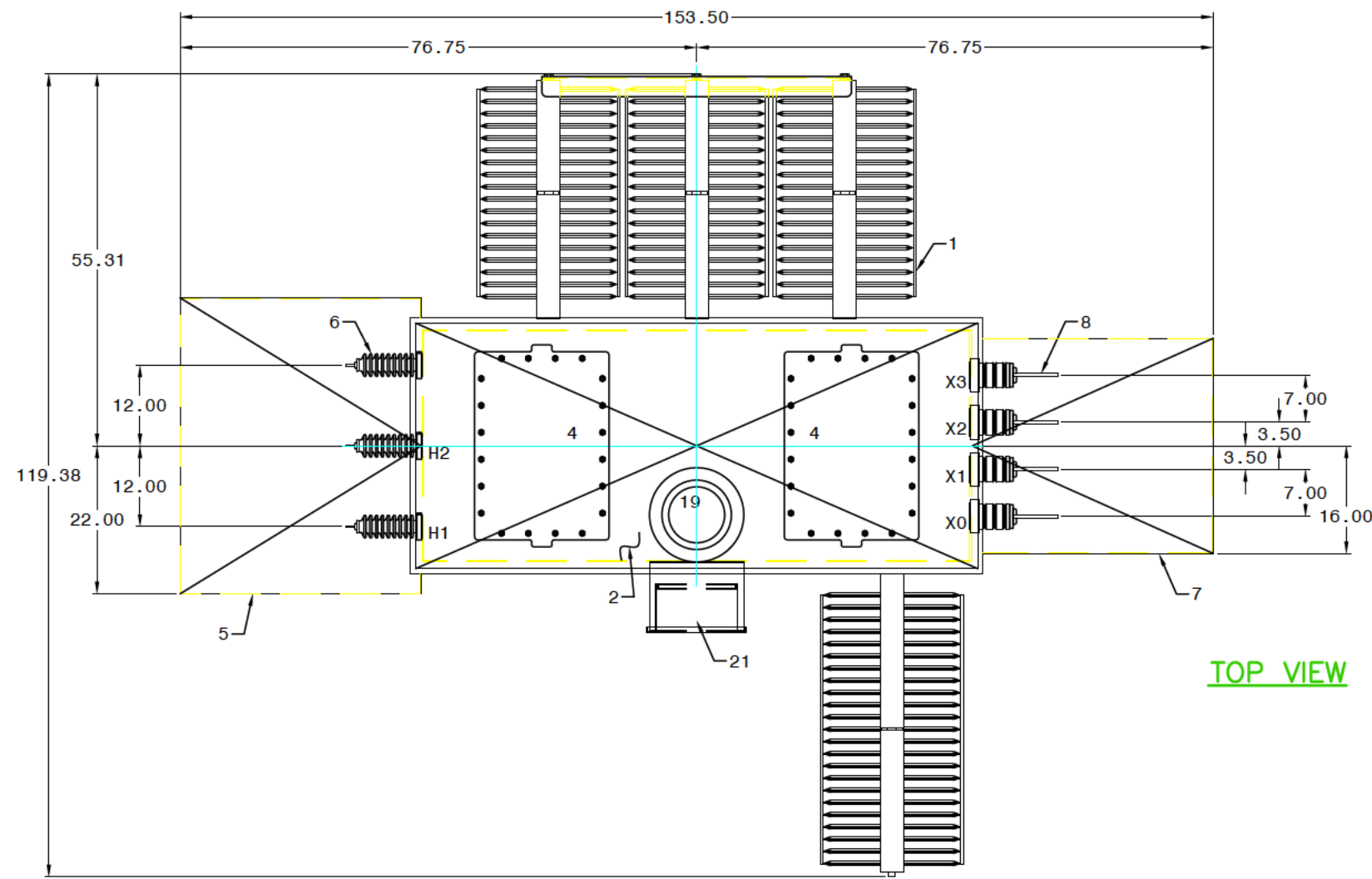
- LV CONDUCTOR ALUMINUM WOUND
- HV CONDUCTOR ALUMINUM WOUND
- STAINLESS STEEL HARDWARE

FRONT ELEVATION

Q23601

JOB NAME:	AMERICAN PROCESS INC., BIOREFINERY	EQUIPMENT DESIGNATION:	TRANSFORMER
JOB LOCATION:	TRAVERSE CITY	EQUIPMENT TYPE:	LIQUID FILLED UNIT SUBSTATION
DRAWN BY:	T. GOSHERT	DRAWING TYPE:	ELEVATION
ENGR:	D. WALKER		
DATE:	04/13/11		
DRAWING STATUS:	RECORD	DWG#	Q26790302-001-01-1

REV	DESCRIPTION	BY	DATE						
A	UPDATE BASE, STATUS TO RECORD	JV	07/19/11						



TOP VIEW

GENERAL NOTES

PRODUCT DESCRIPTION AND RATINGS

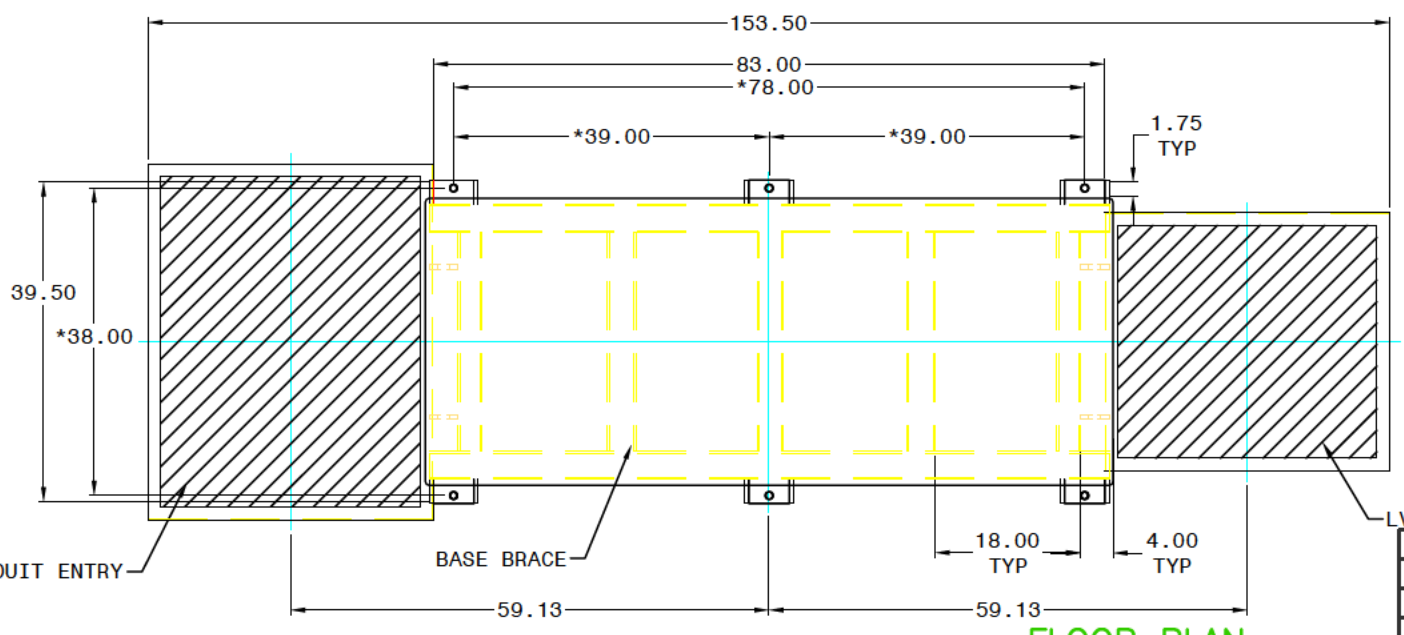
POWER SYSTEM DATA:
 KVA 5000 PRIMARY: 34500 DELTA SECONDARY: 4160Y/2400
 3 PHASE 60 HZ CLASS ONAN

ENCLOSURE DATA:
 GENERAL PURPOSE: OUTDOOR
 FINISH: ASA 49

ESTIMATED SHIPPING WEIGHTS:
 CORE AND COILS: 9300 LB. (4218 KG.)
 FLUID: 6279 LB. (2848 KG.)
 CASE: 7781 LB. (3529 KG.)
 TOTAL: 23230 LB. (10536 KG.)

PRODUCT INFORMATION

TRANSFORMER RATING:
 KVA: 5000
 PRIMARY VOLTAGE: 34500 VOLTS
 BASIC IMPULSE LEVEL (KV): 150
 PRIMARY VOLTAGE CONNECTION: DELTA
 SECONDARY VOLTAGE: 4160Y/2400 VOLTS
 BASIC IMPULSE LEVEL (KV): 60
 SECONDARY VOLTAGE CONNECTION: WYE
 PRIMARY CONDUCTOR: ALUMINUM
 SECONDARY CONDUCTOR: ALUMINUM
 TAPS: +2, -2 @ 2.5%
 IMPEDANCE: 6.50 (+/- 7.5% ANSI TOLERANCE)
 TEMPERATURE RISE: 65°C
 FLUID TYPE: TYPE II OIL
 GALLONS: 851



FLOOR PLAN

18 BASE DETAIL
 *BOLTDOWN DIMENSIONS

Q23601

HV CONDUIT ENTRY	BASE BRACE	LV CONDUIT ENTRY	JOB NAME:	EQUIPMENT DESIGNATION: TRANSFORMER
			JOB LOCATION:	EQUIPMENT TYPE: LIQUID FILLED UNIT SUBSTATION
			DRAWN BY: T. GOSHER	DRAWING TYPE: TOP VIEW/FLOOR PLAN
			ENGR: D. WALKER	
			DATE:	
			DRAWING STATUS: APPROVAL	DWG# Q26790302-001-01-2 PG 2 OF 4 REV A