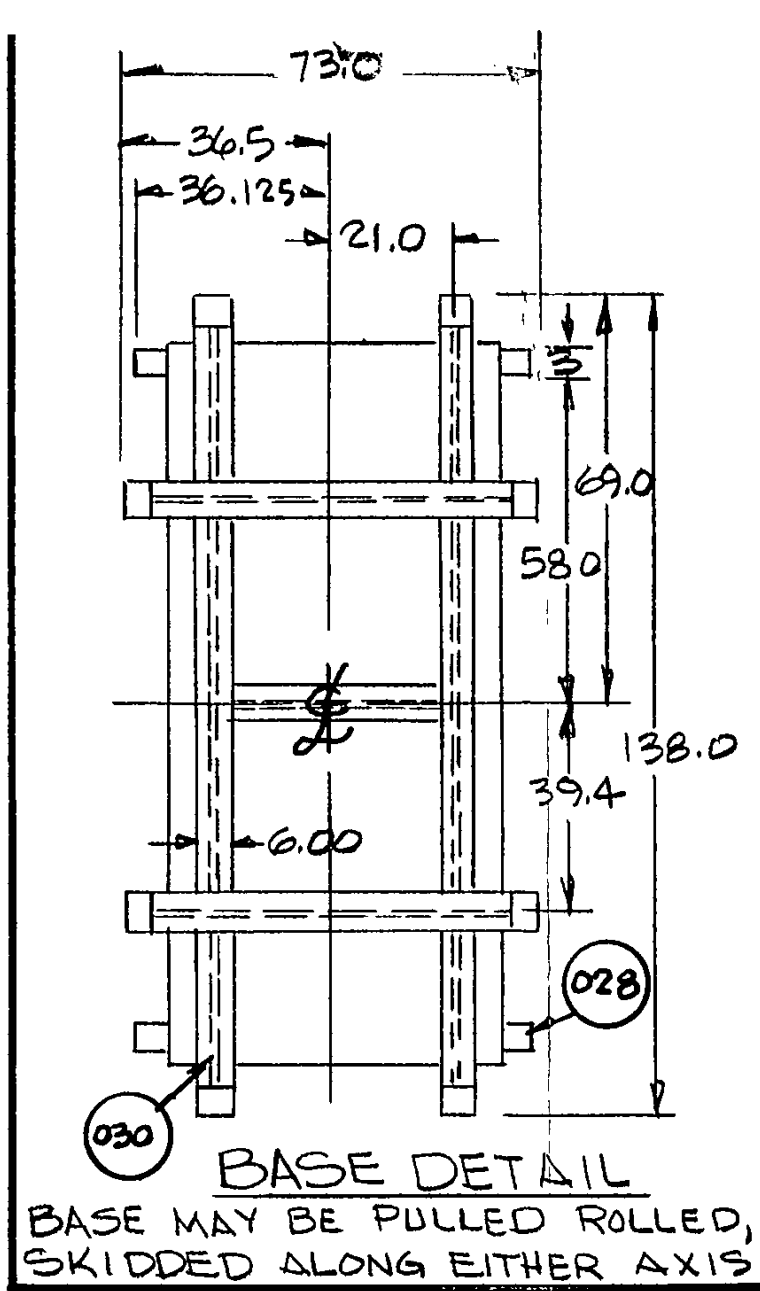
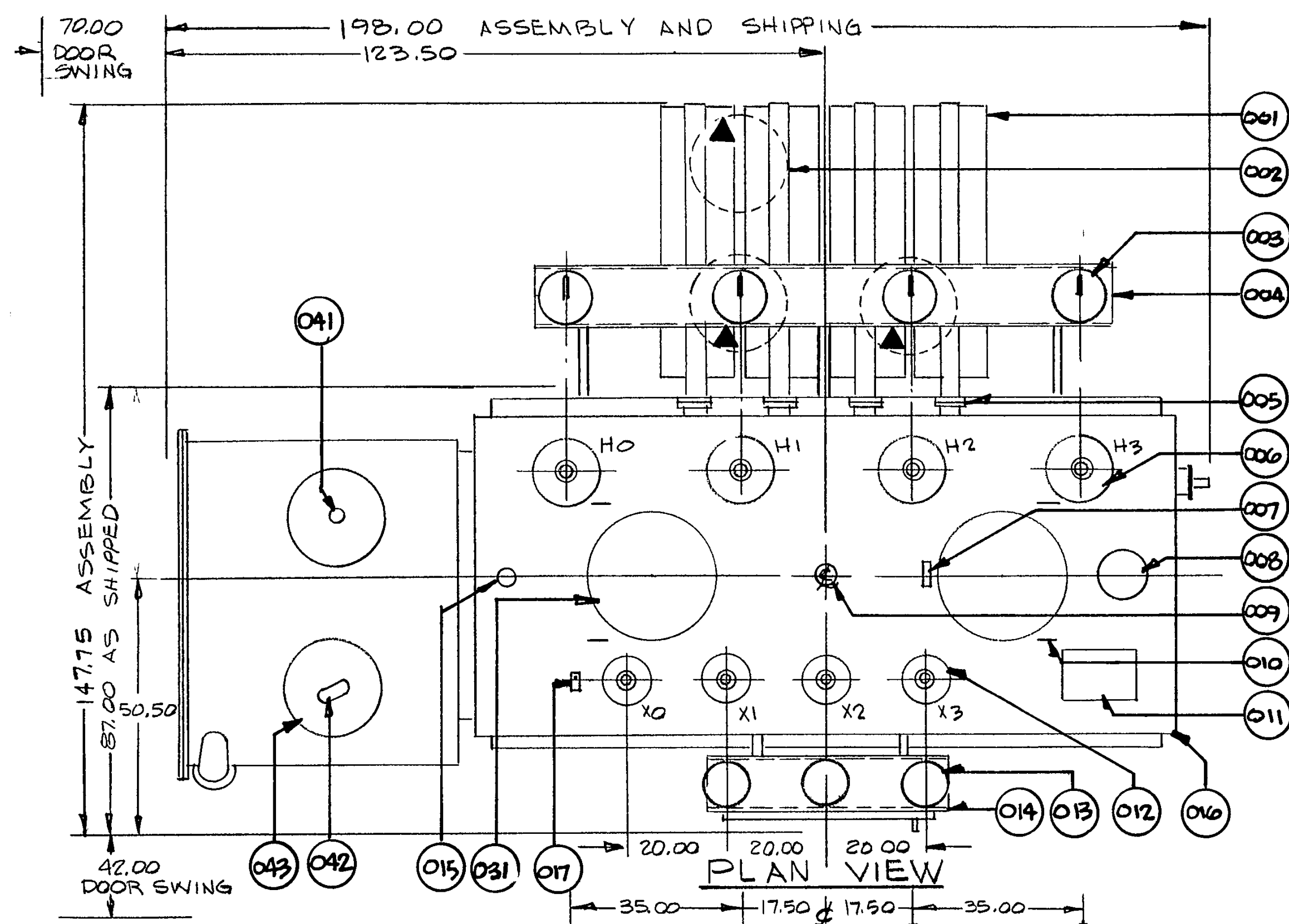
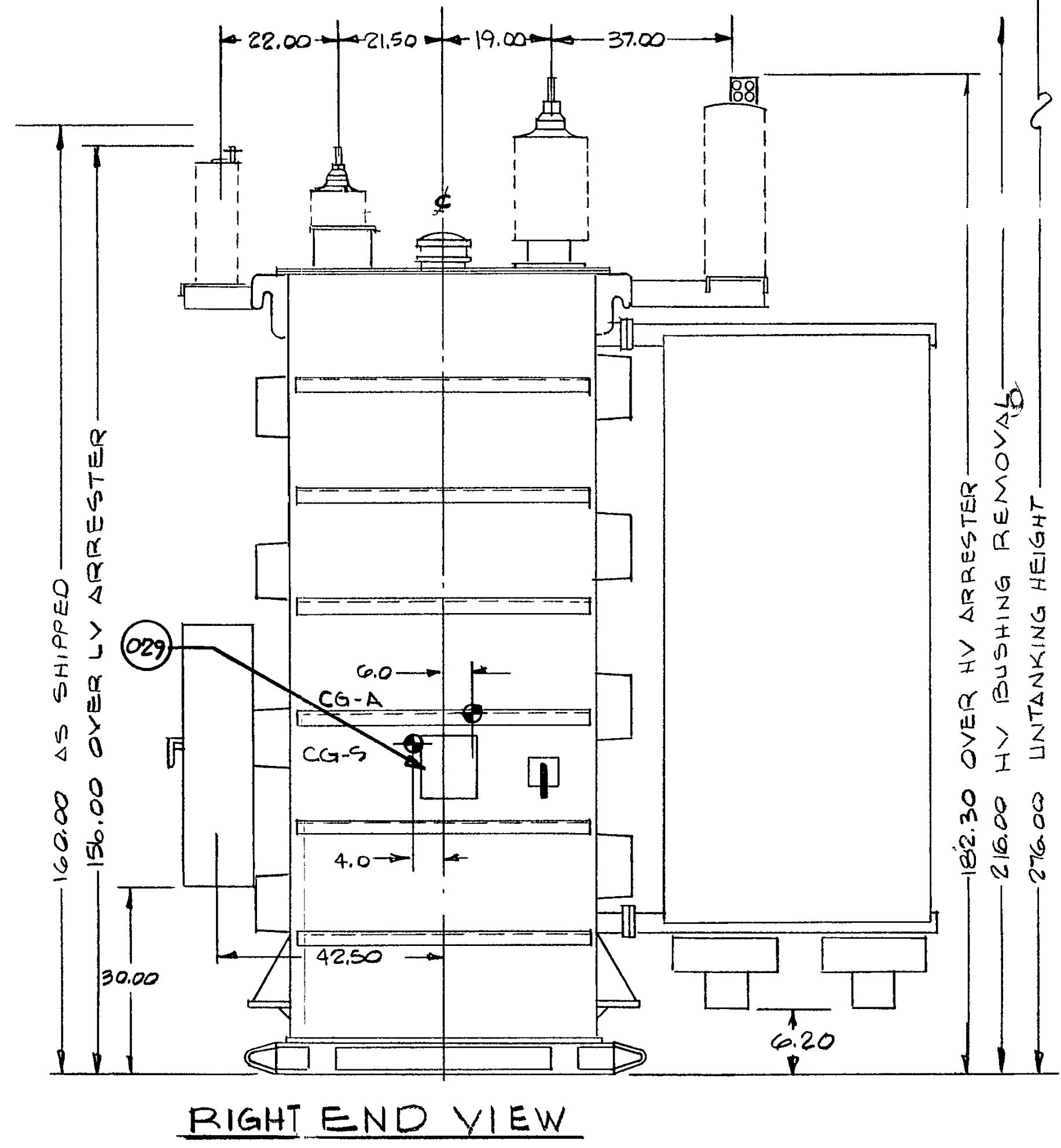
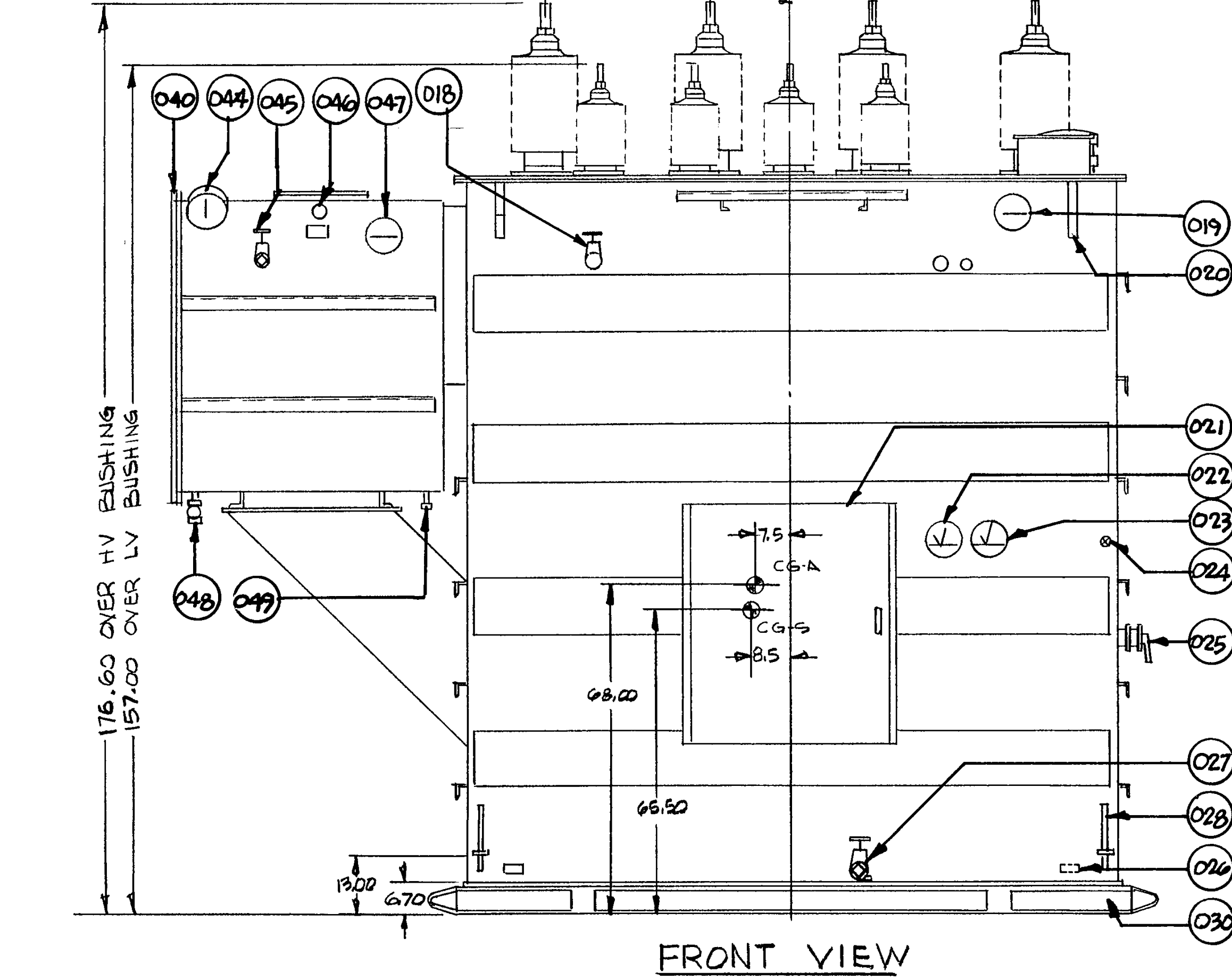


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- NOTES
- EQUIPPED WITH FLAPPER TYPE SHUT-OFF VALVES.
  - 24" DIAMETER, 1/4 HP, 1 φ, 230 VOLT, 1150 RPM
  - OHIO BRASS STATION CLASS, 54 DUTY CYCLE RATING KV RMS, CAT. NO. VN-219542.
  - LAPP PRC-A, 69 KV, 400 AMP, 350 KV BIL, DRAW LEAD CONNECTED, TOP STUD, 1.5-1/2 X 2.125 USABLE THREADS, SILVER PLATED CAT. NO. B-82015-70.
  - LAPP PRC, 15 KV, 1200 AMP, 110 KV BIL, BOTTOM CONNECTED, TOP STUD, 1.125-1/2 X 2.0 USABLE THREADS, SILVER PLATED, CAT. NO. B-82015-70.
  - OHIO BRASS STATION CLASS, 10 DUTY CYCLE RATING KV RMS, CAT. NO. VLA-217009.

- | ITEM | DESCRIPTION                              |
|------|--|
| *001 | COOLING RADIATORS - BOLTED TYPE          |
| *002 | COOLING FANS 1ST. STAGE                  |
| *003 | HV ARRESTERS                             |
| *004 | HV ARRESTER BRACKET                      |
| 005  | RADIATOR VALVE                           |
| *006 | HV BUSHINGS                              |
| 007  | CORE GROUND LOCATION PLATE               |
| 008  | PRESSURE RELIEF DEVICE                   |
| 009  | FAULT PRESSURE RELAY                     |
| 010  | EYES FOR LIFTING COVER                   |
| 011  | CT JUNCTION BOX                          |
| 012  | LV BUSHINGS                              |
| 013  | LV ARRESTERS                             |
| 014  | LV ARRESTER BRACKET                      |
| 015  | 2.00" FILLING PLUG                       |
| 016  | TRANSFORMER COVER - WELDED ON            |
| 017  | X0 GROUND PROVISION                      |
| 018  | 1.00" FILTER VALVE                       |
| 019  | LIQUID LEVEL GAUGE                       |
| 020  | LUG FOR LIFTING COMPLETE TRANSFORMER     |
| 021  | CONTROL CABINET                          |
| 022  | WINDING TEMPERATURE INDICATOR            |
| 023  | THERMOMETER                              |
| 024  | .25" TEST VALVE                          |
| 025  | NO LOAD TAP CHANGER                      |
| 026  | GROUND PROVISION - 2 HOLE PAD            |
| 027  | 2.00" DRAIN VALVE W/ SAMPLER             |
| 028  | JACKING PROVISION                        |
| 029  | DIAGRAMMATIC NAMEPLATE                   |
| 030  | TRANSFORMER BASE                         |
| 031  | MANHOLE - 18.00" DIAMETER W/BOLTED COVER |



- 040 - LOAD TAP CHANGER
- 041 - 2.00" FILLING PLUG
- 042 - BREATHING OUTLET
- 043 - MANHOLE - 18.00" DIAMETER W/BOLTED COVER
- 044 - POSITION INDICATOR
- 045 - 1.00" FILTER VALVE
- 046 - MECHANICAL OPERATION ACCESS
- 047 - LIQUID LEVEL GAUGE
- 048 - 1.00" DRAIN VALVE
- 049 - BREATHING INLET

- 12/16/17.92 MVA, 0A/FA, 55°/65° C RISE, 3 PHASE 60 HERTZ, OISC LOAD TAP CHANGER TRANSFORMER. HV-67000Y/38680(350 KV BIL) WITH TAPS AT 70350/68675/65325/63650. LV-13800 GRD Y/7967(110 KV BIL) WITH 16, .625% TAPS A #BN.
- APPROXIMATE WEIGHTS
- |                            |           |
|----------------------------|-----------|
| CORE AND COILS             | 44325 LBS |
| TANK AND FITTINGS          | 11584 LBS |
| * RADIATORS                | 5880 LBS  |
| OIL MAIN (3219 GALS)       | 24138 LBS |
| OIL LTC (733 GALS)         | 5500 LBS  |
| * OIL RADIATORS (303 GALS) | 2273 LBS  |
| TOTAL WEIGHT               | 93700 LBS |

- ITEMS MARKED \* REMOVED FOR SHIPMENT
- SHIPPING MAIN 85420
  - SHIPPING PARTS (INCLUDES 110 GALS MAKEUP) 8280
  - LTC AND MAIN UNIT SHIPPED FILLED WITH OIL AND BLANKET OF DRY AIR. MAKE-UP OIL SHIPPED IN DRUMS
  - ⊕ INDICATES CENTERLINE OF TANK
  - CG-A INDICATES CENTER OF GRAVITY ASSEMBLED
  - CG-S INDICATES CENTER OF GRAVITY SHIPPING

FOR REFERENCE ONLY



ENG.	NMA	01-26-2020	RECORD DRAWINGS
DR	NMA		
CK	NMA	09-18-2018	QA/QC REVISIONS
APP	MPM	08-15-2018	BIDS & CONSTRUCTION
		08-10-2018	OWNER REVIEW
		DATE	ISSUED FOR

**GRP**  
Engineering, Inc.  
PETOSKEY, MICHIGAN, 231-439-9683  
GRAND RAPIDS, MICHIGAN, 616-942-7183

TRAVERSE CITY LIGHT & POWER  
PARSONS ROAD SUBSTATION - 69KV SWITCH STATION  
TRAVERSE CITY, MICHIGAN  
OUTLINE DIAGRAM - TRANSFORMER NO.1

PROJECT NUMBER	DRAWING NUMBER
18-0929.01	851

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