REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
C-3	1	CORRECTED WEIGHTS	11/25/97	MBS

TRANSFORMER

MVA 22.5 CLASS OA RISE 55 °C
MVA 30.0 CLASS FA RISE 55 °C
MVA 37.5 CLASS FA RISE 55 °C
MVA 42.0 CLASS FA RISE 65 °C

COND HV CU LV CU PHASE 3
MAX OPERATING PRESSURE 0.5 LBS. POS. 5.0 LBS. POS.
TANK DESIGNED FOR 14.7 PSI VACUUM FILLING
ALTITUDE 3300 FEET ABOVE SEA LEVEL

SERIAL NO.	DESIGN NO.
	5474368T00

HZ 60

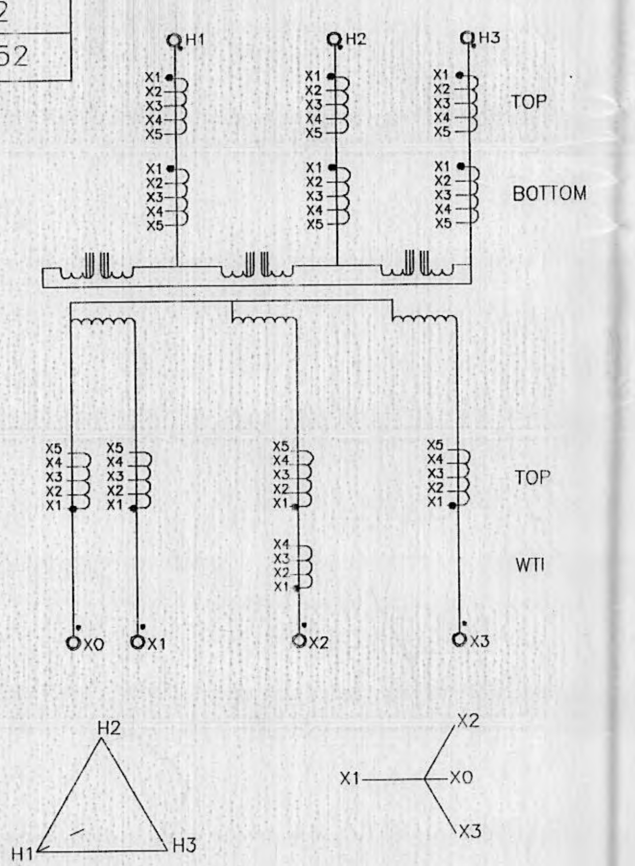
HV 68800 DELTA BIL 350 KV
LV 13090 GRDY/7560 BIL 110 KV
IMPEDANCE ____ % @ 22.5 MVA YEAR OF MFR ____
LIQUID LEVEL 17.0 INCHES BELOW MANHOLE FLANGE AT 25°C
LIQUID LEVEL CHANGE 0.67 INCHES PER 10°C LIQUID TEMP.
INSTR BOOK 9300

APPROXIMATE WEIGHTS	POUNDS
CORE AND COILS	50000
TANK AND FITTINGS	26950
2780 GALLONS OF OIL*	20850
TOTAL WEIGHT WITHOUT OIL*	76950
TOTAL WEIGHT WITH OIL*	97800
UNTANKING (HEAVIEST PIECE)	50000

*INHIBITED OIL MEETS ASTM D3487 TYPE II NON-DETECTABLE LEVEL (LESS THAN 2 PPM) OF PCB PER FEDERAL REGISTER (44FR31514) MAY 31, 1979

HV	TAP CHANGER POSITION	VOLTAGE	AMPS @ 22.5 MVA	AMPS @ 30.0 MVA	AMPS @ 37.5 MVA	AMPS @ 42.0 MVA
DE-ENERGIZE TRANSFORMER BEFORE CHANGING TAPS	1	72400	179	239	299	335
	2	70600	184	245	307	343
	3	68800	189	252	315	352
	4	67000	194	259	323	362
	5	65200	199	266	332	372
LV	ANY	13090	992	1323	1654	1852

9.100529
8.8624338



BUSHING CURRENT TRANSFORMER MULTI-RATIO ACC. CLASS C400 H1-H2-H3 - TOP AND BOTTOM DESIGN 7617982T00

CURRENT RATIO	TAP	CURRENT RATIO	TAP
50:5	X2-X3	300:5	X2-X4
100:5	X1-X2	400:5	X1-X4
150:5	X1-X3	450:5	X3-X5
200:5	X4-X5	500:5	X2-X5
250:5	X3-X4	600:5	X1-X5

BUSHING CURRENT TRANSFORMER MULTI-RATIO ACC. CLASS C800 X1-X2-X3 - TOP DESIGN 617983T00

CURRENT RATIO	TAP	CURRENT RATIO	TAP
300:5	X3-X4	1200:5	X1-X3
400:5	X1-X2	1500:5	X1-X4
500:5	X4-X5	1600:5	X2-X5
800:5	X2-X3	2000:5	X1-X5
1100:5	X2-X4		

BUSHING CURRENT TRANSFORMER MULTI-RATIO ACC. CLASS C400 X0 - TOP DESIGN 7617984T00

CURRENT RATIO	TAP	CURRENT RATIO	TAP
50:5	X2-X3	300:5	X2-X4
100:5	X1-X2	400:5	X1-X4
150:5	X1-X3	450:5	X3-X5
200:5	X4-X5	500:5	X2-X5
250:5	X3-X4	600:5	X1-X5

BUSHING CURRENT TRANSFORMER MULTI-RATIO ACC. CLASS C50 FOR WINDING TEMP. INDICATOR LOCATED ON X2 BUSHING RATIO 2400:5 CONN (X2-X4) 2200:5 DESIGN 7613756T00

WAUKESHA ELECTRIC SYSTEMS
A UNIT OF GENERAL SIGNAL
P.O. BOX 268 GOLDSBORO, N.C. 27533

MATERIAL: 12.25 X 10.00 STAINLESS STEEL USS. STD. GA. NO. 22 (.0299)
MTG. HOLES: 11.75 X 9.5 C TO C 4-5/32 DIA HOLES
LETTERING AND NUMERALS SUNKEN BLACK ON A POLISHED STAINLESS STEEL BACKGROUND
PAINT: SPRAYED BLACK ENAMEL
PADS: ALL RAISED PADS ARE 7/32 WIDE AND LENGTH SHOWN

NOTE:
THE DESIGN IMPEDANCE IS:
7.0 @ 22.5 MVA
THE SERIAL NUMBER, YEAR OF MANUFACTURE, AND MEASURED IMPEDANCE OF EACH UNIT OF THIS DESIGN WILL BE STAMPED ON ITS NAMEPLATE PRIOR TO SHIPMENT.

SN 971382 6.98%Z
SN 971383 6.97%Z

HARRIMAN UTILITY
NEW HARRIMAN SUBSTATION
P.O. NO. 12701 (A)
SERIAL/MFG NO. GM971382
"FINAL-AS-BUILT"

Harriman District substation

DRAWN	RDN
DATE	10/22/97
APPROVED	MBS

WAUKESHA ELECTRIC SYSTEMS
A UNIT OF GENERAL SIGNAL
P.O. BOX 268 GOLDSBORO NC 27533

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TRANSFORMER NAMEPLATE DRAWING

Margrave st.

SIZE C | FSCM NO | DWG NO A547436890
SCALE 1.0 | SHEET