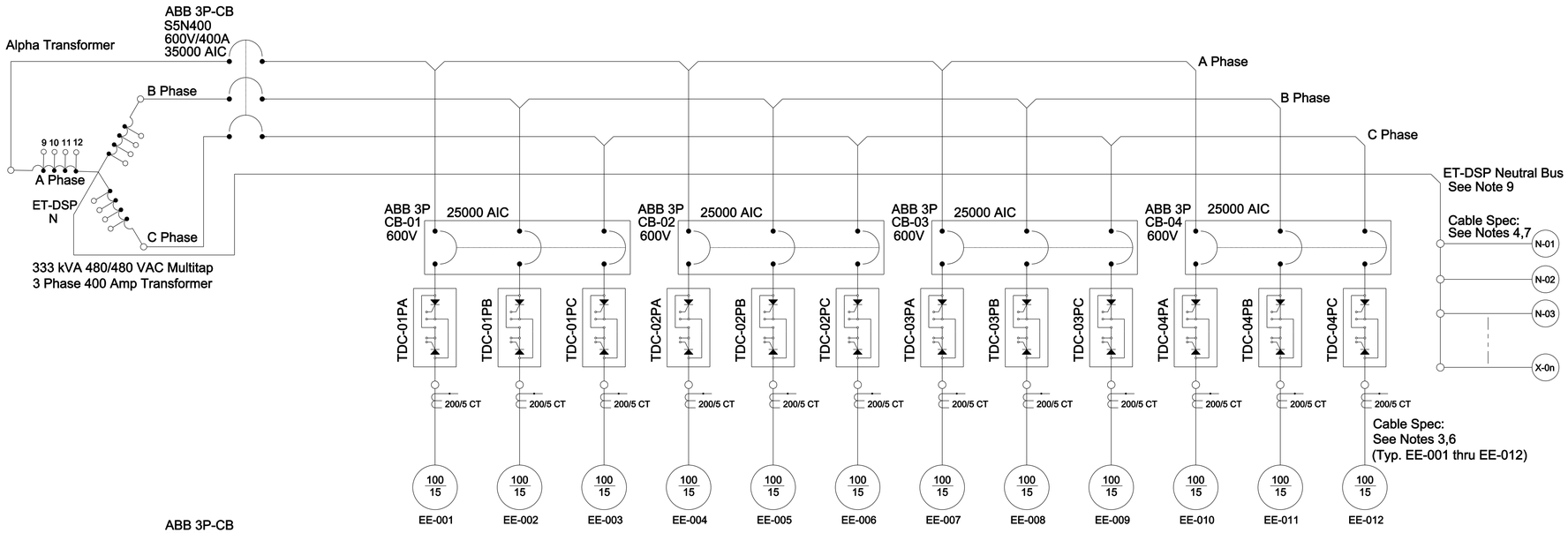
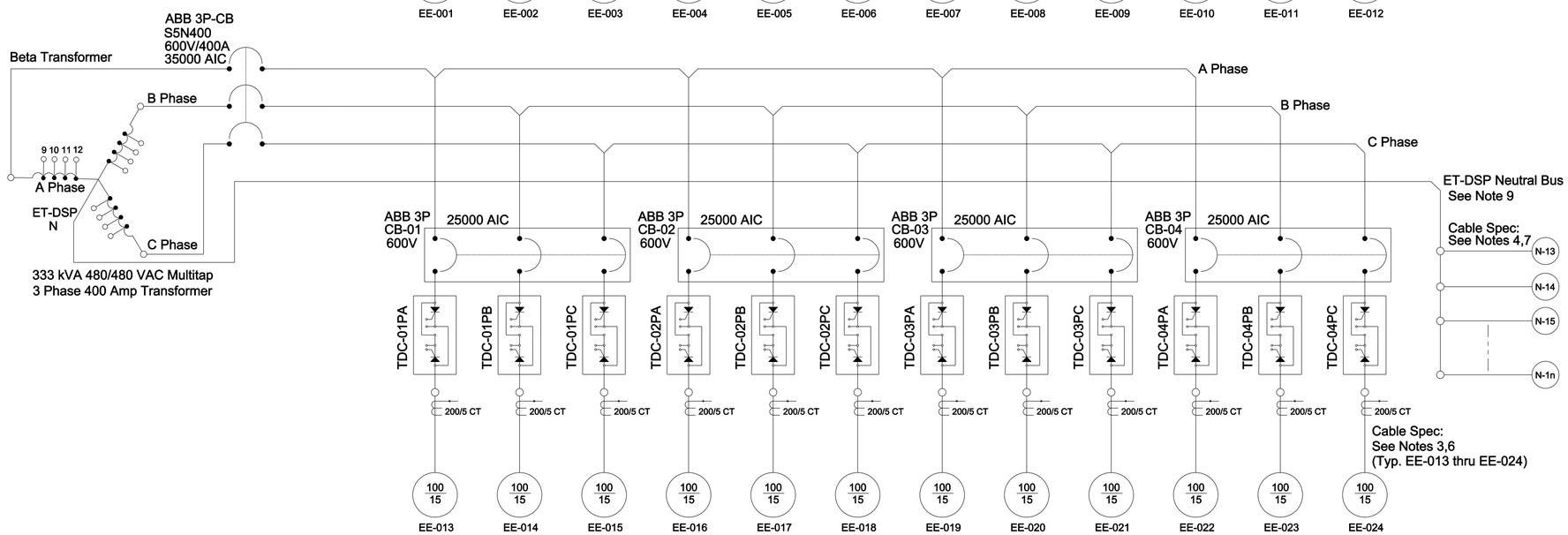
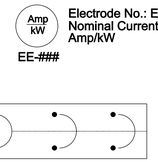


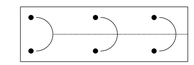


Symbols

Time Distributed Control SCR TDC-## Phase #
Output Power Panel on PDS Unit
Peak Ratings 1,200 VAC 355 Amp
Continuous Rating 165 Amp
Normally Open - Internet Controlled
Electrode Power Control Device



Electrode No.: EE-XXX
Nominal Current/Power
Amp/kW



Circuit Breaker CB-XX
3P, 600 VAC

Instrument Class
Current Transformer CT
200 A/0-5V Output
Internet Monitored Real Time

General Notes

1. Construction and material shall comply with Kentucky building code, CSA/UL, National Electrical Code and applicable local and state codes.

2. Cable from distribution breaker to PDS-XX, two to Alpha transformer & two to Beta transformer: Parallel 3C -250kcm w/Ground STR AL NUAL Alcan Type ACWU90 XLPE INS AIA BLK PVC JKT 600V 90C HL CSA C22.2 NO.51. Above Ground.

3. Cable from PDS-XX to E-XXX: 1C No. 2 AWG, Rockbestos Type DAA1048B EXANE XLPE STR TNC 110C FT4, 600V CSA CSA/UL MARINE GRYJKT. Above ground.

4. ET-DSP neutral cable: RWU-90 Copper AWG No. 2 INS 90 C PVC. Above ground.

5. Maximum connected operating load (12 electrodes) with a 1.25 margin factor for Alpha and Beta transformers is: 12 x 15kW x 1.25 = 225 kW at a maximum phase angle of 3 degrees = 225 kVA.

6. All cable from PDS-XX to E-XXX is above ground rated.

7. All ET-DSP N-Cable is above ground rated.

8. All electrical equipment shall be connected to utility ground in accordance with local code.

9. ET-DSP neutral grounding scheme determined during system commissioning and shall include all metal-constructed extraction wells.

10. Electrode breakers are model ABB 600V, either
    (a) S3N150 150A thermal, or
    (b) Tmax T4N250 250A electronic trip unit.

U.S. DEPARTMENT OF ENERGY
PADUCAH, PORTSMOUTH PROJECT OPERATIONS,
PADUCAH GASEOUS DIFFUSION PLANT

PADUCAH Remediation Services
A Portage Shaw Joint Venture Company

managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC30-06EW05001
Paducah, Kentucky

McMillan-McGee Corp
CALGARY, ALBERTA CANADA
(403) 279-7948
FAX (403) 272-7201

COLLIER ASSOCIATES, INC.
CALVERT CITY, KY.

DOE CONTRACT NO. DE-AC30-06EW05001

PROJECT NAME:
Paducah PGDP C-400 Remediation Project

TITLE:
C-400 Complex East Area
Electrical Schematic of Electrode and
Neutral PDS Connections

CAD FILE NAME	BUILDING	PLANT	CLASS
Mc2 Paducah C-400 ET-DSP PDS-Wellfield Schematic.DWG	C-400	PGDP	U

SCALE:	DRAWING NUMBER	REV
Not To Scale	E7DC40000A009	1

LPE

REV.	DATE (D/M/Y)	DESCRIPTION	DRAWN BY	DRAFT CHK	DRG/ ENGR	LEAD ENGR	QA	CONF CTRL/ NUCL SFTY	FAC MGR	PRJ ENGR
1	11/19/09	Breaker Specs	ER	DF	DF	BM				
0	02/23/09	Engineering Modifications	ER	DF	DF	BM				
C	01/12/08	Certified for Construction	RJ	RJ	ER	BM				
B	11/24/07	QA/QC Revision	ER	RJ	ER	BM				
A	01/12/07	Initial 90% Design Schematic	WR	ER	ER	BM				

DATE
PROFESSIONAL SEAL
DRAWING REVISIONS