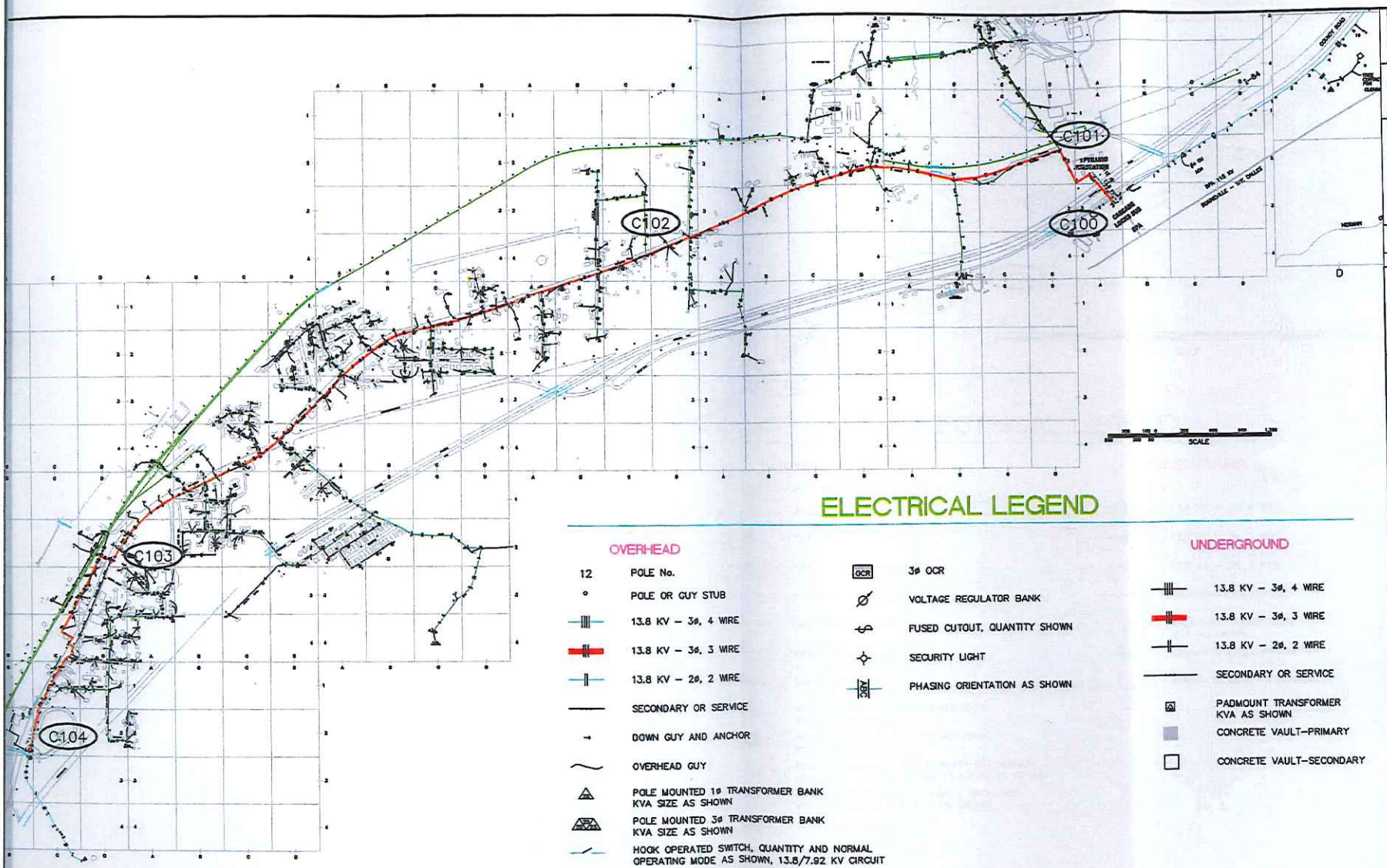


ELECTRICAL LEGEND

OVERHEAD

- 12 — POLE No.
- POLE OR GUY STUB
- 13.8 KV – 3ø, 4 WIRE
- 13.8 KV – 3ø, 3 WIRE
- 13.8 KV – 2ø, 2 WIRE
- SECONDARY OR SERVICE
- DOWN GUY AND ANCHOR
- OVERHEAD GUY
- POLE MOUNTED 1ø TRANSFORMER BANK KVA SIZE AS SHOWN
- POLE MOUNTED 3ø TRANSFORMER BANK KVA SIZE AS SHOWN
- HOOK OPERATED SWITCH, QUANTITY AND NORMAL OPERATING MODE AS SHOWN, 13.8/7.92 KV CIRCUIT
- GANG–OPERATED SWITCH, NORMAL OPERATING MODE AS SHOWN, 13.8/7.92 KV CIRCUIT
- OCR — 3ø OCR
- VOLTAGE REGULATOR BANK
- FUSED CUTOUT, QUANTITY SHOWN
- SECURITY LIGHT
- ABC — PHASING ORIENTATION AS SHOWN

UNDERGROUND

- 13.8 KV – 3ø, 4 WIRE
- 13.8 KV – 3ø, 3 WIRE
- 13.8 KV – 2ø, 2 WIRE
- SECONDARY OR SERVICE
- PADMOUNT TRANSFORMER KVA AS SHOWN
- CONCRETE VAULT–PRIMARY
- CONCRETE VAULT–SECONDARY

REV	DATE	REVISION DESCRIPTION	DESIGNER	REVIEWER
1	12-24-13	UPDATED TITLE BLOCK	LAS	

Brown & Kysar, Inc.
Engineering & Consulting
(503) 697.3066 | (503) 697.5139

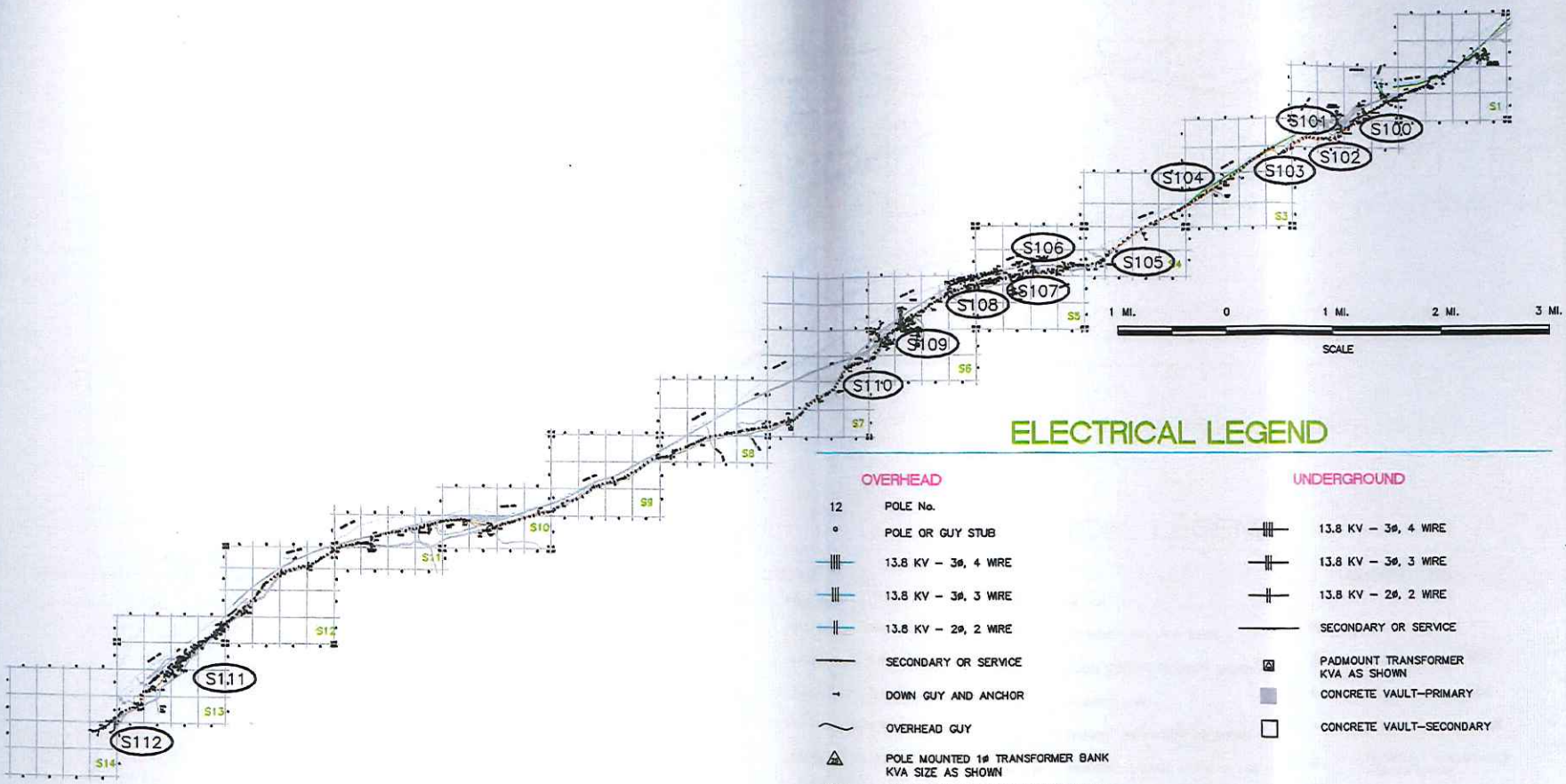
BKI PROJECT NO: CL12-006
CONTRACT NO:
THIS LINE IS 1" LONG AT THE CORRECT SCALE

SYSTEM MAPS
CITY 3-PHASE FEEDER

CITY OF CASCADE LOCKS
140 SW WaNaPa
CASCADE LOCKS, OR 97014

1 REVISION

A-1



ELECTRICAL LEGEND

OVERHEAD

- 12 — POLE No.
- POLE OR GUY STUB
- 13.8 KV – 3ø, 4 WIRE
- 13.8 KV – 3ø, 3 WIRE
- 13.8 KV – 2ø, 2 WIRE
- SECONDARY OR SERVICE
- DOWN GUY AND ANCHOR
- OVERHEAD GUY
- POLE MOUNTED 1ø TRANSFORMER BANK KVA SIZE AS SHOWN
- POLE MOUNTED 3ø TRANSFORMER BANK KVA SIZE AS SHOWN
- HOOK OPERATED SWITCH, QUANTITY AND NORMAL OPERATING MODE AS SHOWN, 13.8/7.92 KV CIRCUIT
- GANG-OPERATED SWITCH, NORMAL OPERATING MODE AS SHOWN, 13.8/7.92 KV CIRCUIT
- OCR — 3ø OCR
- VOLTAGE REGULATOR BANK
- FUSED CUTOUT, QUANTITY SHOWN
- SECURITY LIGHT
- ABC — PHASING ORIENTATION AS SHOWN

UNDERGROUND

- 13.8 KV – 3ø, 4 WIRE
- 13.8 KV – 3ø, 3 WIRE
- 13.8 KV – 2ø, 2 WIRE
- SECONDARY OR SERVICE
- PADMOUNT TRANSFORMER KVA AS SHOWN
- CONCRETE VAULT–PRIMARY
- CONCRETE VAULT–SECONDARY

REV	DATE	REVISION DESCRIPTION	DESIGNER	REVIEWER
1	12-24-13	UPDATED TITLE BLOCK	LJG	

B&K Brown & Kysar, Inc.
Engineering & Consulting
(360) 677-3565 | (360) 677-5339

BKI PROJECT NO: CL12-005
CONTRACT NO:
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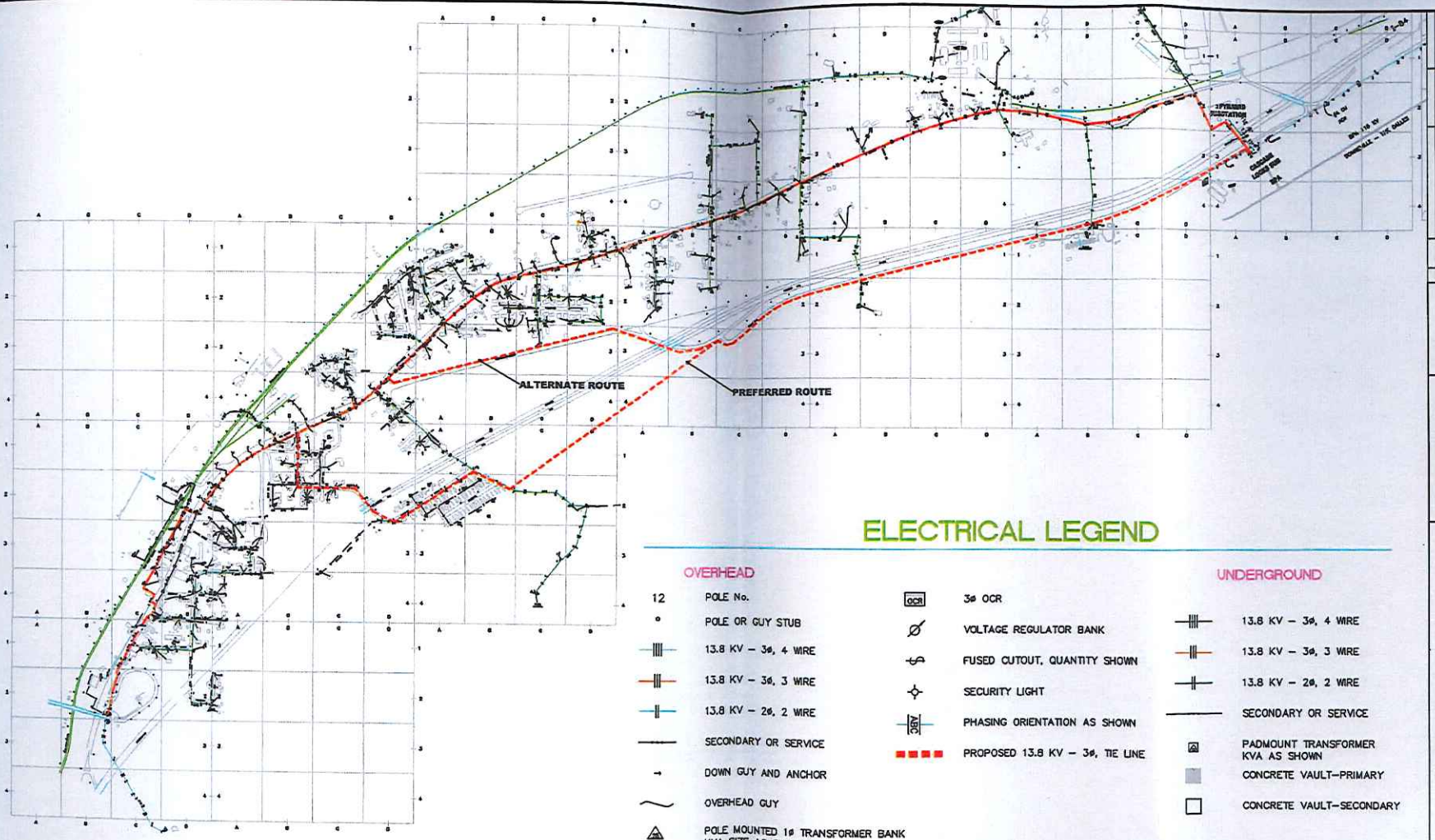
SYSTEM MAPS
SOUTHBANK FEEDER

CITY OF CASCADE LOCKS
140 SW WaNaPa
CASCADE LOCKS, OR 97014

0 REVISION

A-2



ELECTRICAL LEGEND

OVERHEAD

- 12 — POLE No.
- POLE OR GUY STUB
- 13.8 KV – 3ø, 4 WIRE
- 13.8 KV – 3ø, 3 WIRE
- 13.8 KV – 2ø, 2 WIRE
- SECONDARY OR SERVICE
- DOWN GUY AND ANCHOR
- OVERHEAD GUY
- POLE MOUNTED 1ø TRANSFORMER BANK KVA SIZE AS SHOWN
- POLE MOUNTED 3ø TRANSFORMER BANK KVA SIZE AS SHOWN
- HOOK-OPERATED SWITCH, QUANTITY AND NORMAL OPERATING MODE AS SHOWN, 13.8/7.92 KV CIRCUIT
- GANG-OPERATED SWITCH, NORMAL OPERATING MODE AS SHOWN, 13.8/7.92 KV CIRCUIT
- OCR — 3ø OCR
- VOLTAGE REGULATOR BANK
- FUSED CUTOUT, QUANTITY SHOWN
- SECURITY LIGHT
- ABC — PHASING ORIENTATION AS SHOWN
- PROPOSED 13.8 KV – 3ø, TIE LINE

UNDERGROUND

- 13.8 KV – 3ø, 4 WIRE
- 13.8 KV – 3ø, 3 WIRE
- 13.8 KV – 2ø, 2 WIRE
- SECONDARY OR SERVICE
- PADMOUNT TRANSFORMER KVA AS SHOWN
- CONCRETE VAULT–PRIMARY
- CONCRETE VAULT–SECONDARY

REV	DATE	REVISION DESCRIPTION	DESIGNER	REVIEWER

Brown & Kysar, Inc.
Engineering & Consulting

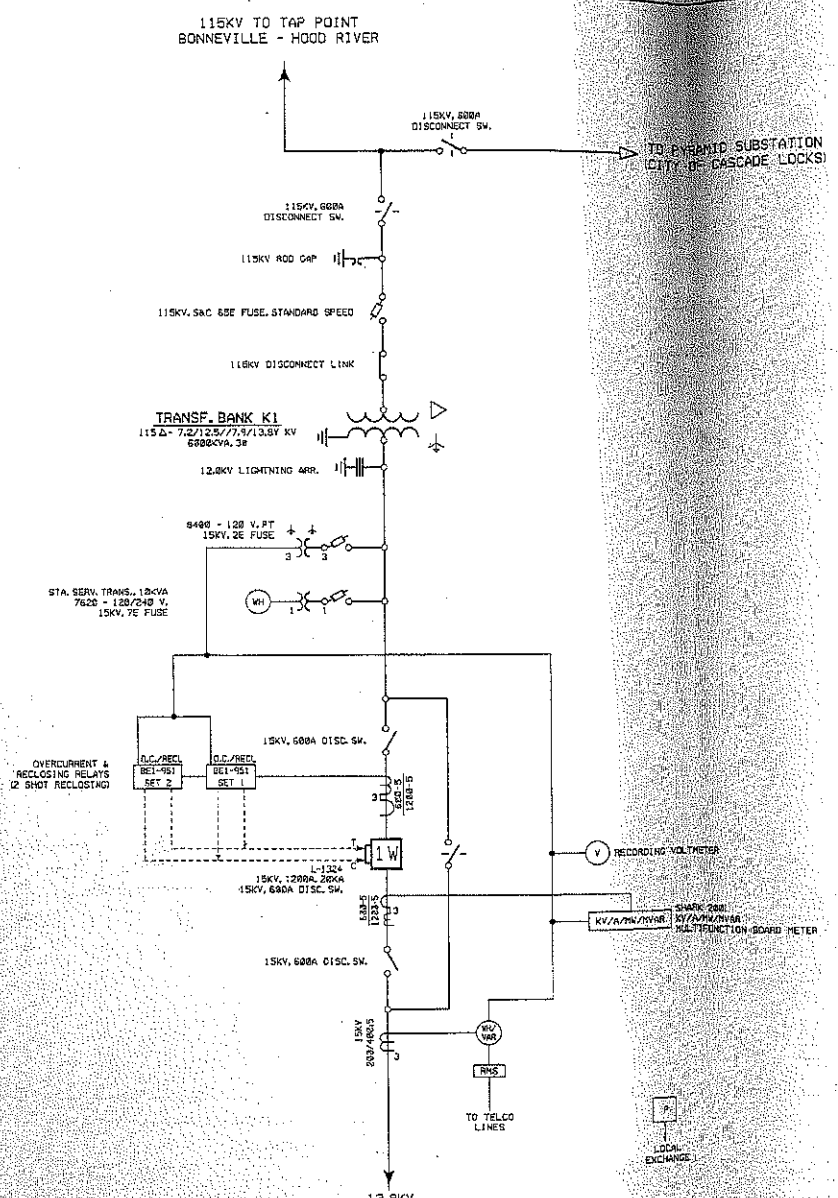
BKI PROJECT NO: CL12-006
CONTRACT NO:
THIS LINE IS 1" LONG AT THE CORRECT SCALE

SYSTEM MAPS
CITY 3-PHASE LOOP ROUTE

CITY OF CASCADE LOCKS
140 SW WaNaPa
CASCADE LOCKS, OR 97014

REVISION 0

B
1 / 1



NO.	FA	W.O.	COMPUTER REVISION ONLY	BY	DATE	APPROVED
6	R	224503	REVISED BY RR GROUP PER FIELD MODIFICATION	JAW	09/03/10	
5	FA	224503	REPL'D PCB 1W, O.C. & RECLR RELAYS. REVISION 4 DATED 8/12/03 CONVERTED TO CAD.	DA	05/20/09	TEJ

RR#7885

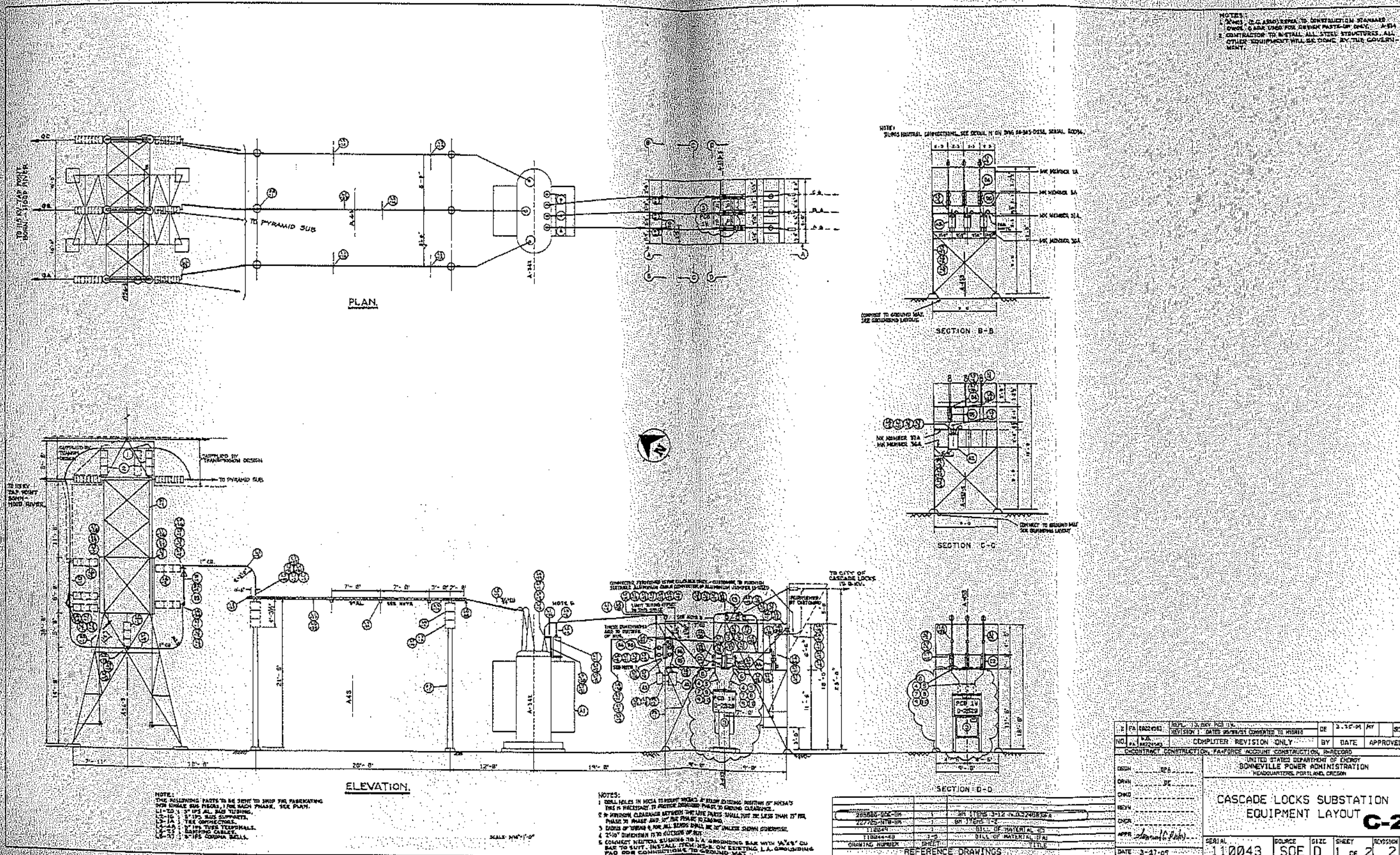
C=CONTRACT CONSTRUCTION, FA=FORCE ACCOUNT CONSTRUCTION, R=RECORD

DSGN RPA
DRWN DA/JAH
CHKD TEJ/DA
REVW
CHCR

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS, PORTLAND, OREGON

CASCADE LOCKS SUBSTATION
ONE LINE DIAGRAM

C-1


TO 115 KV TAP POINT BONN.-HOOD RIVER
TO PYRAMID SUB
PLAN.
SECTION B-B
SECTION C-C
SECTION D-D
SUPPLIED BY TRANSMISSION DESIGN
TO PYRAMID SUB
TO CITY OF CASCADE LOCKS 13.8-KV.
A-342
A-45
PCB 1V D-2529
ELEVATION.
21'- 6"
20'- 0"
12'-8"
19'- 8"
REFERENCE DRAWINGS
DRAWING NUMBER
SHEET
TITLE
285886-OGE-BM
227765-NTB-BM
110044
110044-40
BM ITEMS 3-12
BM ITEMS 1-2
BILL OF MATERIAL (C)
BILL OF MATERIAL (FA)
COMPUTER REVISION ONLY
NO.
BY
DATE
APPROVED
C=CONTRACT CONSTRUCTION, FA=FORCE ACCOUNT CONSTRUCTION, R=RECORD
UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS, PORTLAND, OREGON
DSGN
DRWN
CHKD
REVW
CNCR
APPR
DATE 3-27-09
CASCADE LOCKS SUBSTATION
EQUIPMENT LAYOUT
C-2
SERIAL 110043
SOURCE SOE
SIZE D
SHEET 1 OF 2
REVISION 2