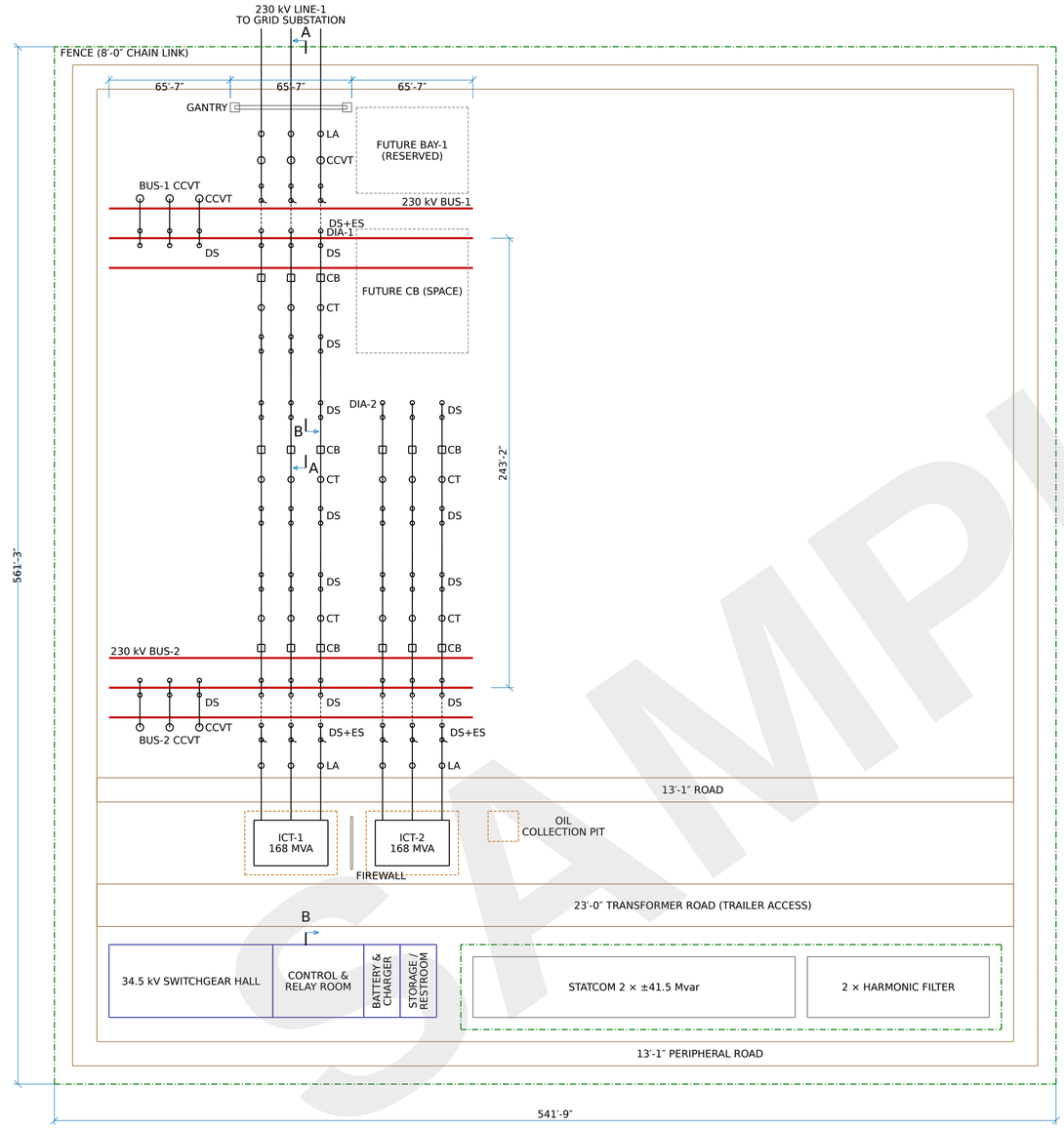
LAYOUT PLAN (SCALE 1″ = 40′-0″)



NOTES

1. Dimensions in feet and inches. Heights above finished grade.
2. 230 kV clearances (RUS 1724E-300 Table 4-7, 900 kV BIL): to grounded parts 5′-11″, metal to metal 7′-5″, conductor above grade 15′-0″, phase spacing with the switches 16′-0″ (Table 4-8). Insulator bases at least 8′-6″ above grade (NESC Rule 124A3) and 8′-0″ above a foundation.
3. Tubular Al main bus at 27′-11″ on post insulators. Equipment level 16′-5″, line gantry 52′-6″. Horizontal-break disconnect switches. Strung jumpers over the main buses at 42′-3″.
4. Transformer footprint 40′-0″ × 24′-8″ (indicative). Oil containment pit 4′-11″ beyond the tank. Firewall where the gap is less than 32′-10″.
5. Equipment footprints are indicative. Finalize with vendor GA drawings. Seismic qualification of the equipment: IEEE 693-2018, moderate level.
6. Ground grid: drawing SSL-E-EAR-001. Lightning protection: drawing SSL-E-DSL-001. Cable trenches are not covered by this drawing set.

YARD SUMMARY

Fenced area 541′-9″ × 561′-3″ = 6.98 acres.

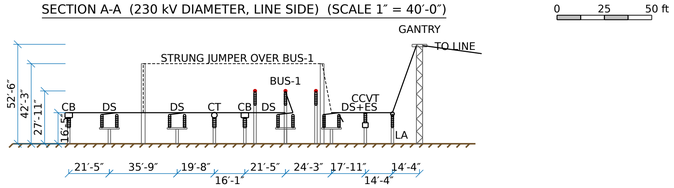
230 kV one-and-a-half breaker: 1 line, 2 transformers, 2 diameters, 2 bus CCVTs, 1 future. 3 columns of 65′-7″.

Building 177′-2″ × 39′-4″.

CLEARANCE CHECKS

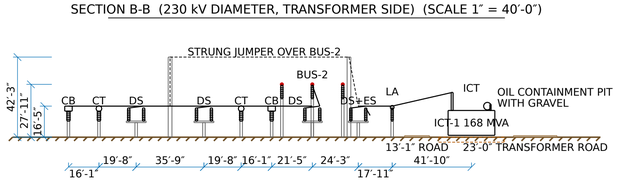
HV phase spacing ≥ ph-ph: 16′-1″ · limit 7′-5″ · Pass
HV outer phase to bay edge ≥ ph-G: 16′-9″ · limit 5′-11″ · Pass
HV equipment level ≥ ground clearance: 16′-5″ · limit 15′-0″ · Pass
HV bus above equipment ≥ ph-ph: 11′-6″ · limit 7′-5″ · Pass
HV phase spacing ≥ RUS bus and switch spacing: 16′-1″ · limit 16′-0″ · Pass
HV equipment level ≥ NESC vertical clearance: 16′-5″ · limit 13′-9″ · Pass
HV live parts to the fence ≥ NESC fence clearance R: 23′-0″ · limit 15′-5″ · Pass
HV line over the fence ≥ NESC fence clearance R: 47′-7″ · limit 15′-5″ · Pass
HV jumper above main bus ≥ ph-ph: 14′-5″ · limit 11′-1″ · Pass
34.5 kV phase spacing ≥ ph-ph: 4′-3″ · limit 1′-6″ · Pass
34.5 kV equipment level ≥ ground clearance: 11′-6″ · limit 10′-0″ · Pass
34.5 kV phase spacing ≥ RUS bus and switch spacing: 4′-3″ · limit 4′-0″ · Pass
34.5 kV equipment level ≥ NESC vertical clearance: 11′-6″ · limit 9′-6″ · Pass

SECTION A-A (230 kV DIAMETER, LINE SIDE) (SCALE 1″ = 40′-0″)



LIVE PARTS AT ≥ 16′-5″. MIN. GROUND CLEARANCE 15′-0″. JUMPER 14′-5″ ABOVE THE BUS.

SECTION B-B (230 kV DIAMETER, TRANSFORMER SIDE) (SCALE 1″ = 40′-0″)



LIVE PARTS AT ≥ 16′-5″. MIN. GROUND CLEARANCE 15′-0″. JUMPER 14′-5″ ABOVE THE BUS.

SAMPLE

SubstationLayout

REV	DATE	DESCRIPTION	BY
0	4 Nov 2026	Issued	Sample engineer

PROJECT	Sample 230/34.5 kV pooling substation
CLIENT	Sample client
LOCATION	Sample site
TITLE	230 kV SWITCHYARD PLAN AND SECTIONS 230/34.5 kV POOLING SUBSTATION, 250 MW

	NAME	DATE
DRAWN	Sample engineer	4 Nov 2026
CHECKED	Sample engineer	4 Nov 2026
APPROVED	Sample engineer	4 Nov 2026

DRG. NO.	SSL-E-LAY-001	REV.	0
SCALE	1″ = 40′-0″ / 1″ = 40′-0″	SIZE ANSI D	Sheet 1 of 1