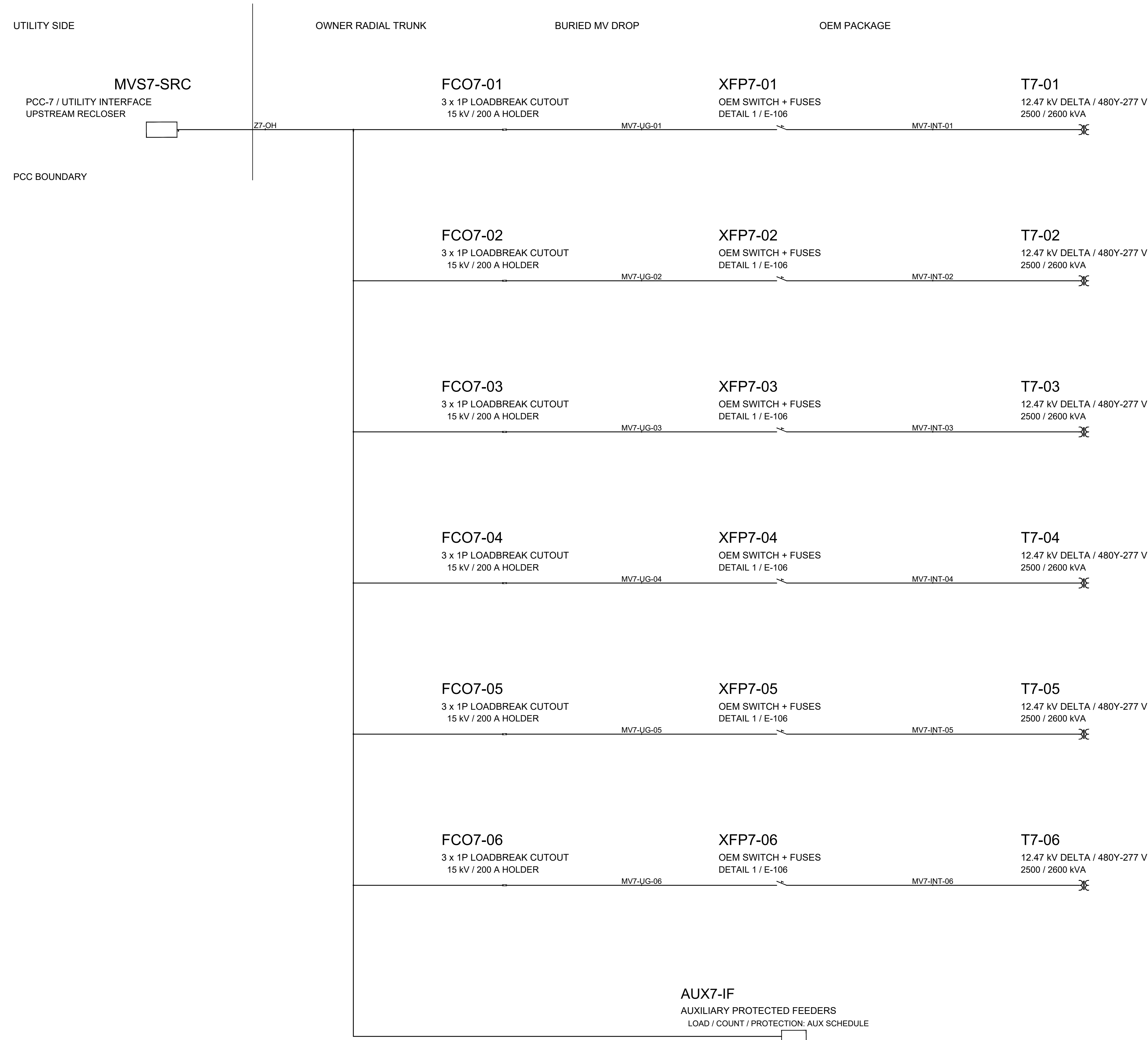


K&K DATA / MEDIUM VOLTAGE DISTRIBUTION / ZONE 7

E-104 | 12.47 kV, 3 PHASE, 60 Hz | UTILITY INPUT PER SERVICE AGREEMENT

SINGLE-LINE, NOT TO SCALE



SYSTEM AND INTERFACE BASIS

PCC protection, metering and lockable service isolation: BY UTILITY.

Existing utility apparatus may satisfy these functions; no additional recloser is specified.

PCC position and route length follow utility-approved access and site survey; no MV zone tie.

Mechanical / auxiliary transformer feeders are additional; thirteen paths are critical power only.

CONDUCTOR AND PROTECTION SCHEDULE

Trunk design-current basis: 341.2 A at 12.47 kV, 0.95 PF; input limit per service agreement.

OH trunk: 336.4 kcmil ACSR Linnet; site thermal, sag and fault checks.

Drop: 3 x 1/C 15 kV shielded Al; 1/0 AWG initial size, burial / fault check.

Transformer primary: 115.7 A at 2500 kVA; 120.4 A at 2600 kVA.

Cutout holder rating is NOT the fuse-link rating. Link selection follows full TCC coordination.

Typical riser, termination, bonding and OEM integral arrangement: detail 1 / E-106.

DESIGN SOURCES AND INTERFACES

OEM GA + data sheet, 08 SEP 2026: 2500/2600 kVA discrepancy; capacity study uses 2500.

Two feeders from the same substation: Zone 7 input per service agreement; Zone 8 8 MW. Upstream recloser: BY UTILITY.

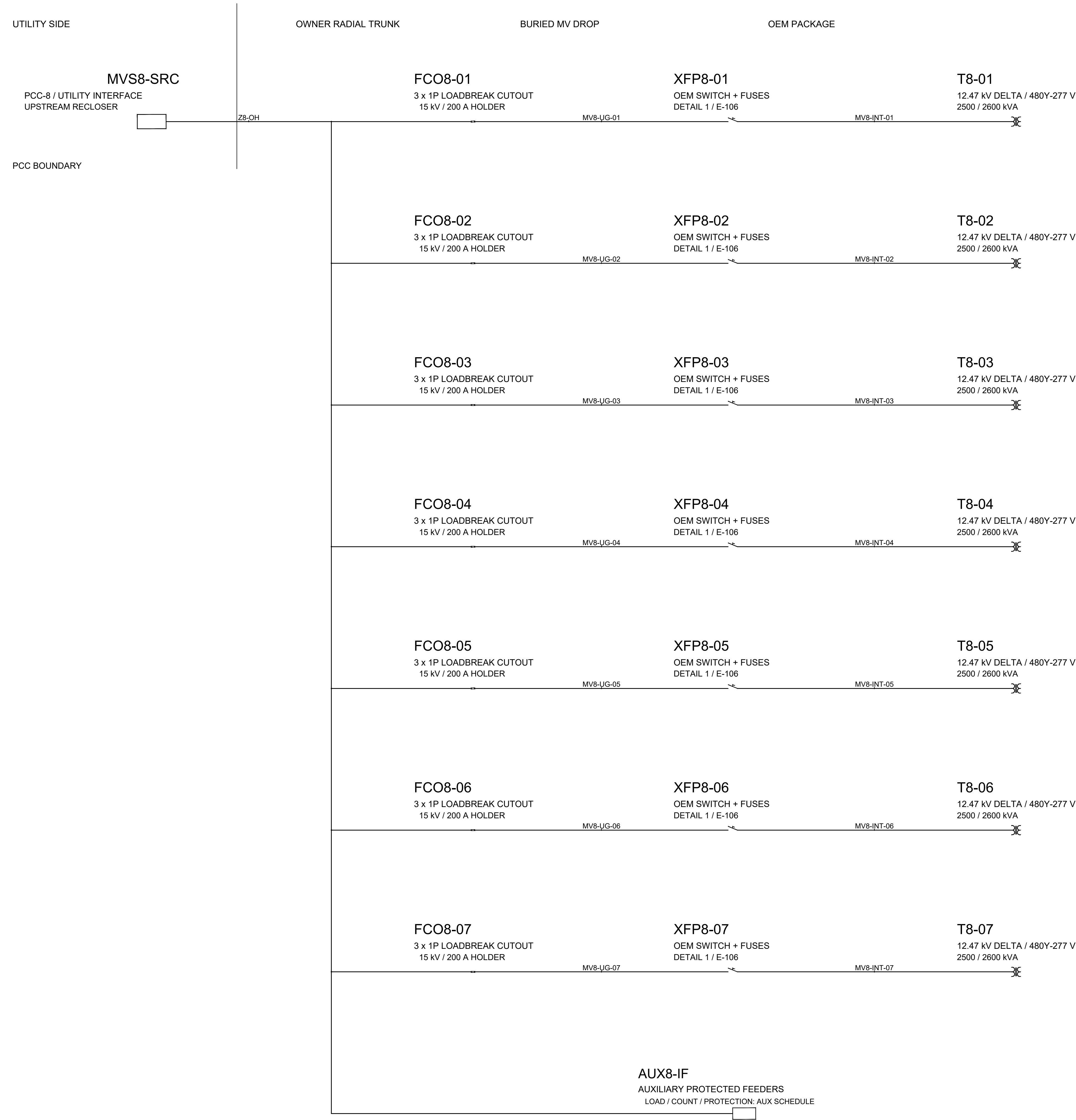
Utility PCC / grounding / isolation. Site route / soil / fault level. Protection curves.

13 critical paths do not include auxiliary transformers. Auxiliary feeder schedule remains open.

K&K DATA / MEDIUM VOLTAGE DISTRIBUTION / ZONE 8

E-105 | 12.47 kV, 3 PHASE, 60 Hz | 8 MW UTILITY INPUT LIMIT

SINGLE-LINE, NOT TO SCALE



SYSTEM AND INTERFACE BASIS

PCC protection, metering and lockable service isolation: BY UTILITY.

Existing utility apparatus may satisfy these functions; no additional recloser is specified.

PCC position and route length follow utility-approved access and site survey; no MV zone tie.

Mechanical / auxiliary transformer feeders are additional; thirteen paths are critical power only.

CONDUCTOR AND PROTECTION SCHEDULE

Trunk duty: 8 MW / (sqrt(3) x 12.47 kV x 0.95 PF) = 389.9 A.

OH trunk: 336.4 kcmil ACSR Linnet; site thermal, sag and fault checks.

Drop: 3 x 1/C 15 kV shielded Al; 1/0 AWG initial size, burial / fault check.

Transformer primary: 115.7 A at 2500 kVA; 120.4 A at 2600 kVA.

Cutout holder rating is NOT the fuse-link rating. Link selection follows full TCC coordination.

Typical riser, termination, bonding and OEM integral arrangement: detail 1 / E-106.

DESIGN SOURCES AND INTERFACES

OEM GA + data sheet, 08 SEP 2026: 2500/2600 kVA discrepancy; capacity study uses 2500.

Two feeders from the same substation: Zone 7 input per service agreement; Zone 8 8 MW. Upstream recloser: BY UTILITY.

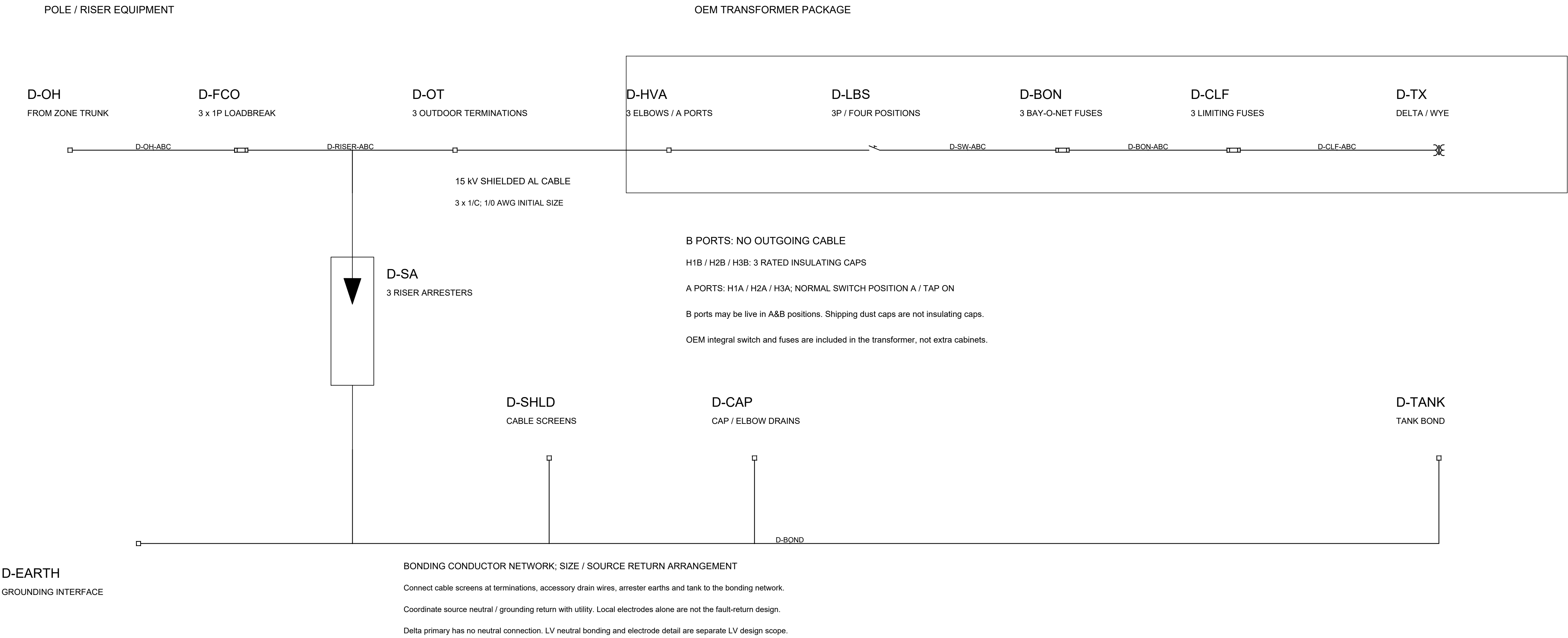
Utility PCC / grounding / isolation. Site route / soil / fault level. Protection curves.

13 critical paths do not include auxiliary transformers. Auxiliary feeder schedule remains open.

K&K DATA / TYPICAL MEDIUM-VOLTAGE TRANSFORMER BRANCH

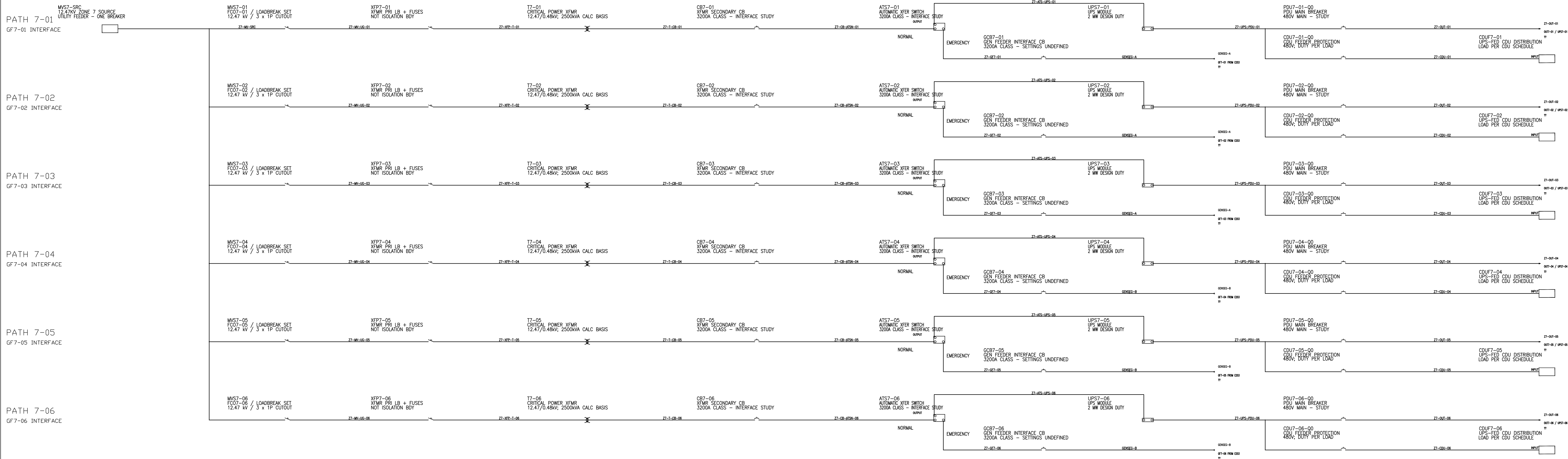
E-106 / FUNCTIONAL SINGLE-LINE, NOT TO SCALE

DETAIL 1: THREE-PHASE BRANCH SHOWN AS ONE LINE; APPLIES TO E-104 / E-105



K&K DATA-E-107 SITE13 ZONE 7 - 6 UPS PATHS / 42 RACKS - MV SOURCE TO RACK BRANCH INTERFACE

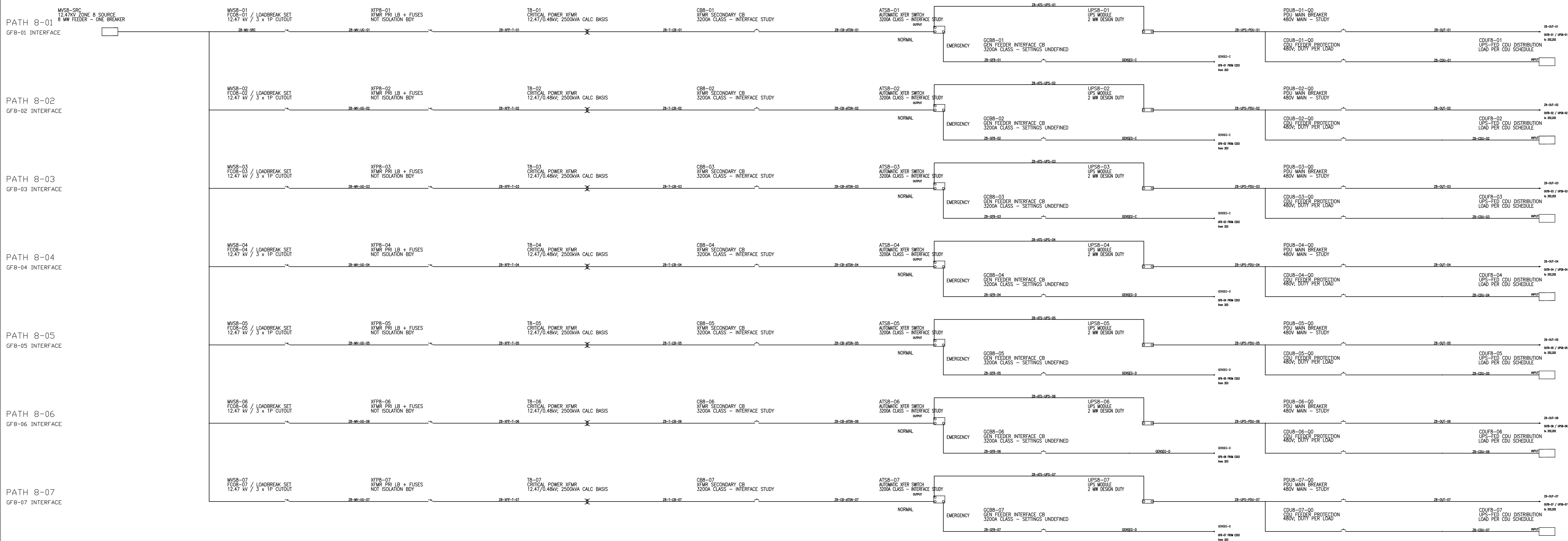
ZONE 7: 12.47 kV / 480 V, 60 Hz. RACK DUAL-INPUT DISTRIBUTION AND GENERATING PLANT ARE OUTSIDE THIS SHEET.



- SIX RADIAL PATHS ON THE ZONE 7 FEEDER. EACH TRANSFORMER SECONDARY FEEDS ONE LV BREAKER, ONE ATS AND ONE UPS ONLY. KEEP INDEPENDENT UPS OUTPUTS UN-PARALLELED.
- MVS7-SRC IS ONE 12.47 kV ZONE 7 SOURCE POINT. THE ZONE 7 AND 8 MW FEEDERS COME FROM THE SAME SUBSTATION; UTILITY INPUT PER SERVICE AGREEMENT.
- GF7-01.06 ARE SEPARATE GENERATOR FEEDER INTERFACES. GCB7-01.06 PROVIDE THE RESPECTIVE EMERGENCY FEEDER PROTECTION. THE GENERATING PLANT IS NOT REPRESENTED AS A COMMON RISER HERE.
- TRANSFORMERS: DEM 12.47/0.48kV; 2500kVA CALCULATION BASIS. FINAL NAMEPLATE AND INTERFACE DATA TO MATCH THE SUPPLY PACKAGE.
- ATS IS A TRANSFER SWITCH, OPEN TRANSITION, NOT AN OVERCURRENT DEVICE. TRIP SETTINGS, AIC, SCCR AND WITHSTAND / CLOSE-ON COORDINATION ARE AN OPEN DEM RETURN.
- Z7-IT-01.06 CONTINUE TO THE RACK A/B INPUT GROUPS ON E201. GENERATOR SOURCES ARE ON E203; GCB7 FEEDER PROTECTION IS PHYSICALLY LOCATED AT THE GENERATOR PLANT.
- EACH PATH IS RATED 2 MW DESIGN DUTY. THE 2 x 1200 kVA/kW FRAME IS A CANDIDATE; FINAL EQUIPMENT SELECTION REQUIRES COORDINATION.
- IT BASIS: 136kW/RACK, 50/50 NORMAL SHARING; 952kW NORMAL / 1428kW SINGLE-PATH OUTAGE. ALL CDU LOADS REQUIRE UPS SUPPLY AND ADD TO THESE IT VALUES.

K&K DATA-E-108 SITE13 ZONE 8 (8 MW FEEDER) - 7 UPS PATHS / 48 RACKS - MV SOURCE TO RACK BRANCH INTERFACE

ZONE 8: 12.47 kV / 480 V, 60 Hz. RACK DUAL-INPUT DISTRIBUTION AND GENERATING PLANT ARE OUTSIDE THIS SHEET.

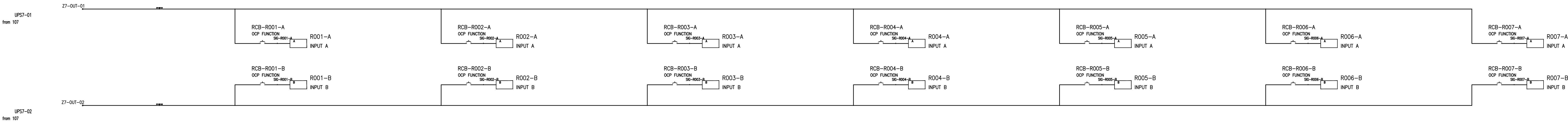


- SEVEN RADIAL PATHS ON THE 8 MW FEEDER. EACH TRANSFORMER SECONDARY FEEDS ONE LV BREAKER, ONE ATS AND ONE UPS ONLY. NO UPS OUTPUT IS PARALLELED WITH ANOTHER UPS OUTPUT.
- MVS8-SRC IS ONE 12.47 kV ZONE 8 SOURCE POINT. THE ZONE 7 AND 8 MW FEEDERS COME FROM THE SAME SUBSTATION; UTILITY INPUT PER SERVICE AGREEMENT.
- GFB-01.07 ARE SEPARATE GENERATOR FEEDER INTERFACES. GCB8-01.07 PROVIDE THE RESPECTIVE EMERGENCY FEEDER PROTECTION. THE GENERATING PLANT IS NOT REPRESENTED AS A COMMON RISER HERE.
- TRANSFORMERS: DEM 12.47/0.48kV; 2500kVA CALCULATION BASIS. FINAL NAMEPLATE AND INTERFACE DATA TO MATCH THE SUPPLY PACKAGE.
- ATS IS A TRANSFER SWITCH, OPEN TRANSITION, NOT AN OVERCURRENT DEVICE. TRIP SETTINGS, AIC, SCCR AND WITHSTAND / CLOSE-ON COORDINATION ARE AN OPEN DEM RETURN.
- ZB-IT-01.07 CONTINUE TO THE RACK A/B INPUT GROUPS ON E202. GENERATOR SOURCES ARE ON E203. GCB8 FEEDER PROTECTION IS PHYSICALLY LOCATED AT THE GENERATOR PLANT.
- EACH PATH IS RATED 2 MW DESIGN DUTY. THE 2 x 1200 kVA/kW FRAME IS A CANDIDATE; FINAL EQUIPMENT SELECTION REQUIRES COORDINATION.
- IT AT 136kW/RACK; UPS8-01/07 = 884kW NORMAL / 1360kW WORST; UPS8-02.06 = 952/1428kW. ALL CDU ELECTRICAL LOADS REQUIRE UPS SUPPLY AND ADD TO THESE VALUES.

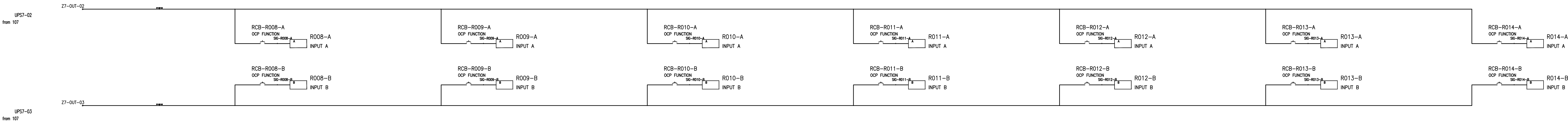
E201 ZONE 7 - 42 RACKS / INDEPENDENT A-B INPUT GROUPS

6 UPS PATHS / CYCLIC PAIRING WITHIN ZONE 7 ONLY / TWO POWER INTERFACES PER PHYSICAL RACK

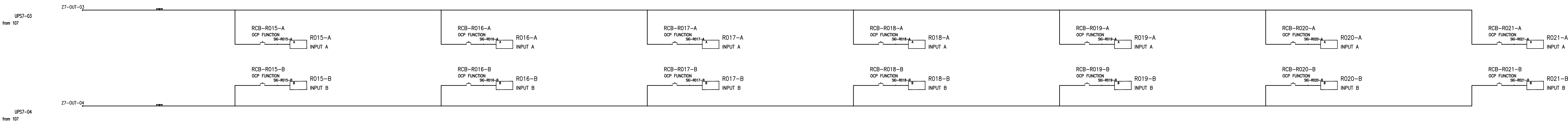
R001 - R007 | A: UPS7-01 B: UPS7-02 | 7 RACKS



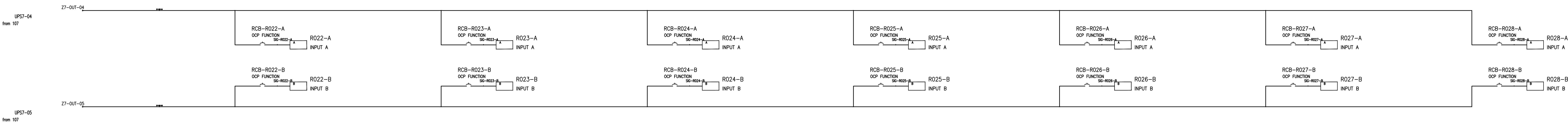
R008 - R014 | A: UPS7-02 B: UPS7-03 | 7 RACKS



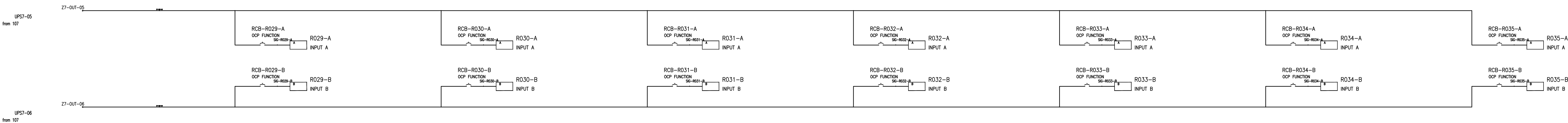
R015 - R021 | A: UPS7-03 B: UPS7-04 | 7 RACKS



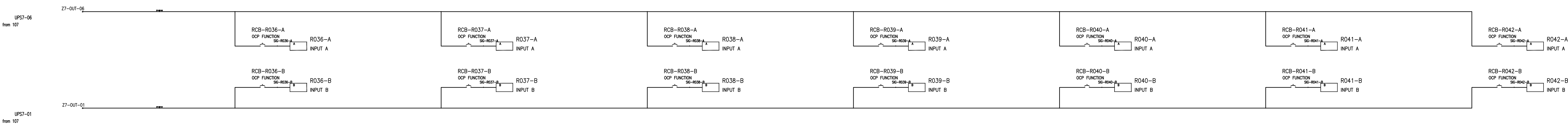
R022 - R028 | A: UPS7-04 B: UPS7-05 | 7 RACKS



R029 - R035 | A: UPS7-05 B: UPS7-06 | 7 RACKS



R036 - R042 | A: UPS7-06 B: UPS7-01 | 7 RACKS



DESIGN BASIS: Each rack has two independent input groups; each group supports the specified surviving-side duty. No UPS AC outputs are tied together.

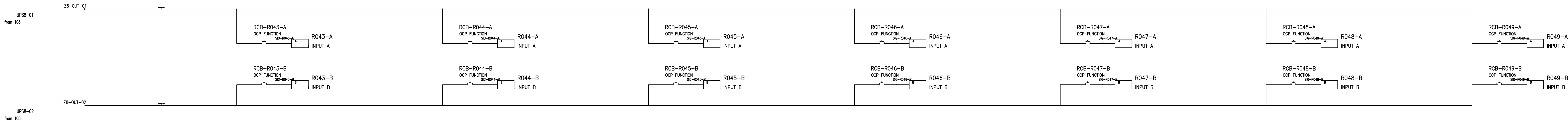
RATING BASIS: 136 kW/rack comparison; 155 kW/rack screening. Concurrent rack loading shall include actual CDU package loads within zone and path capacities.

RCB tags denote branch protection functions; final branch / whip quantity, current and poles follow server OEM input architecture. Cross-sheet references identify associated circuits.

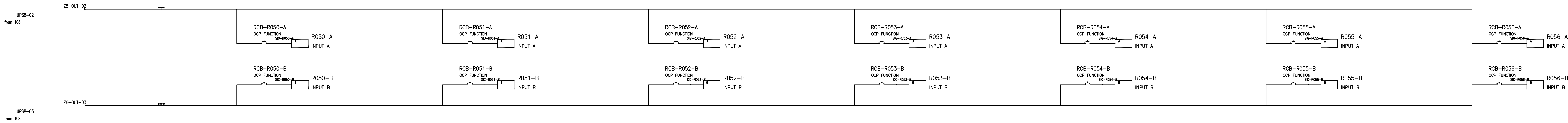
E202 ZONE 8 - 48 RACKS / INDEPENDENT A-B INPUT GROUPS

7 UPS PATHS / CYCLIC PAIRING WITHIN ZONE 8 ONLY / TWO POWER INTERFACES PER PHYSICAL RACK

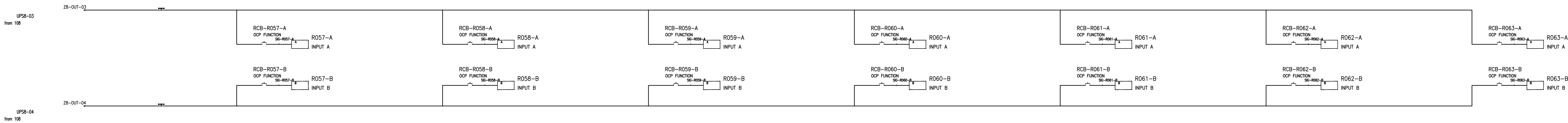
R043 - R049 | A: UPS8-01 B: UPS8-02 | 7 RACKS



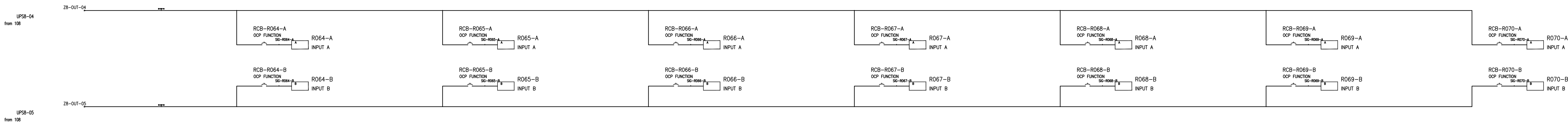
R050 - R056 | A: UPS8-02 B: UPS8-03 | 7 RACKS



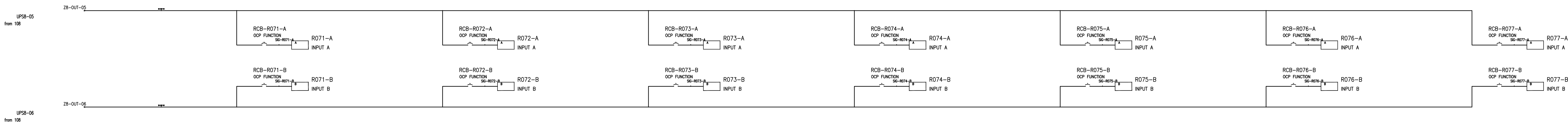
R057 - R063 | A: UPS8-03 B: UPS8-04 | 7 RACKS



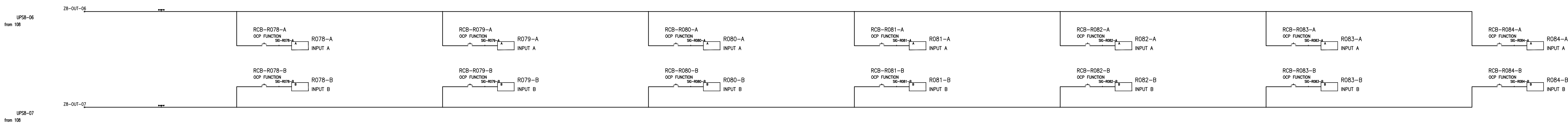
R064 - R070 | A: UPS8-04 B: UPS8-05 | 7 RACKS



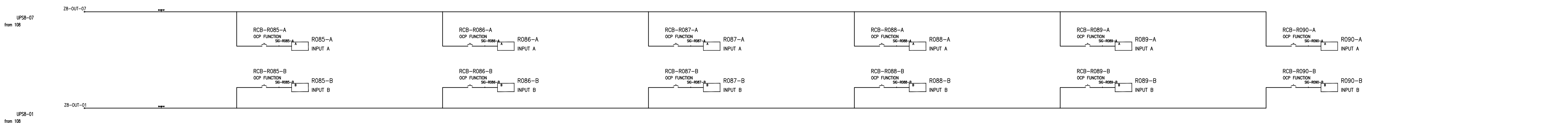
R071 - R077 | A: UPS8-05 B: UPS8-06 | 7 RACKS



R078 - R084 | A: UPS8-06 B: UPS8-07 | 7 RACKS



R085 - R090 | A: UPS8-07 B: UPS8-01 | 6 RACKS



DESIGN BASIS: Each rack has two independent input groups; each group supports the specified surviving-side duty. No UPS AC outputs are tied together.

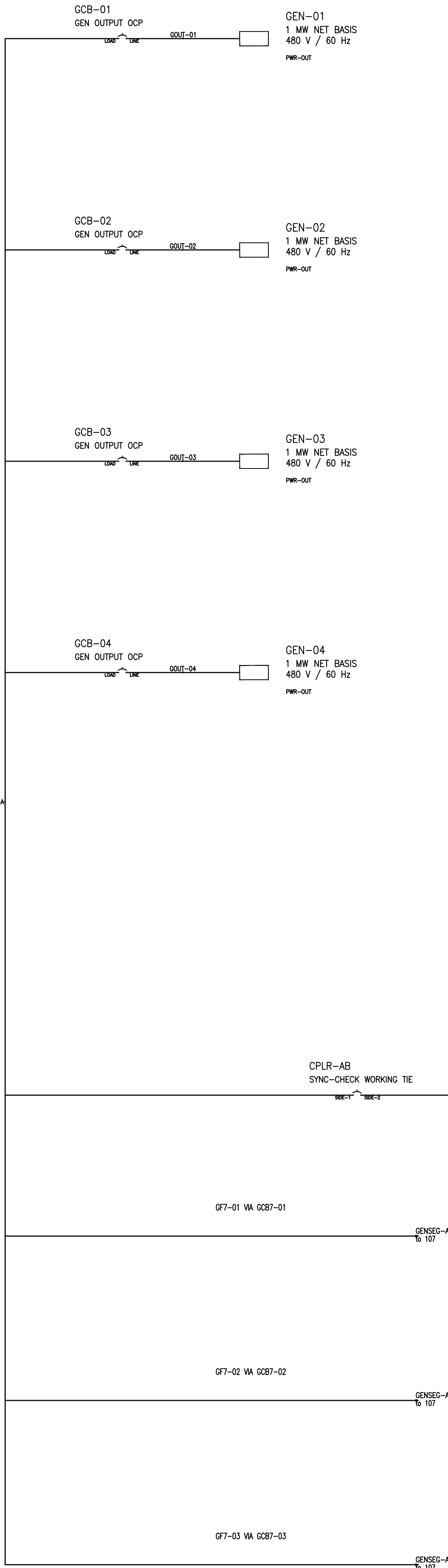
RATING BASIS: 136 kW/rack comparison; 155 kW/rack screening. Concurrent rack loading shall include actual CDU package loads within zone and path capacities.

RCB tags denote branch protection functions; final branch / whip quantity, current and poles follow server OEM input architecture. Cross-sheet references identify associated circuits.

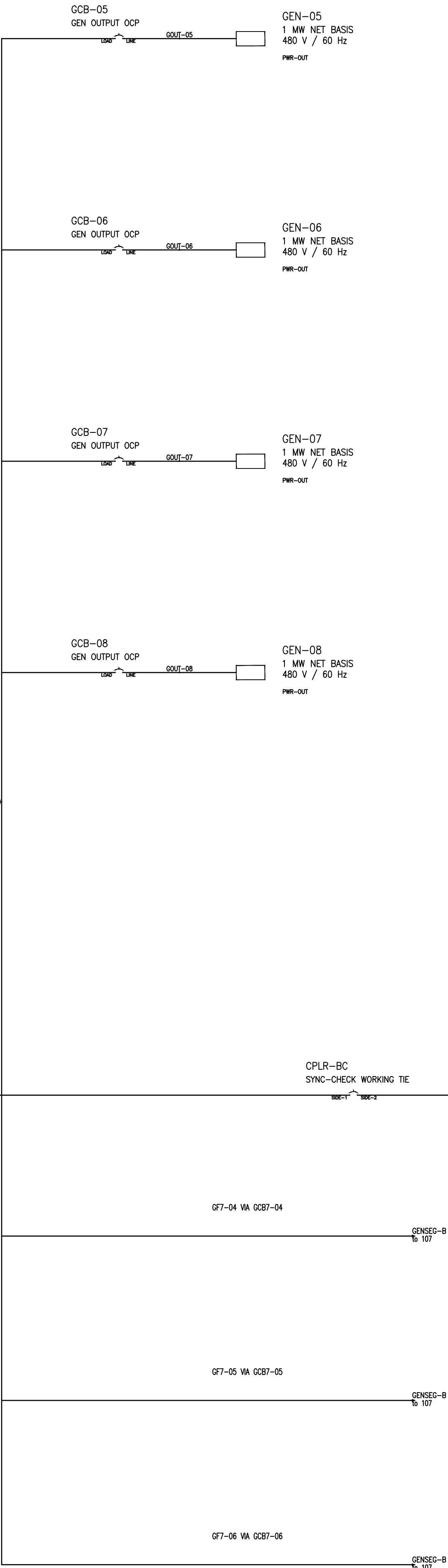
E203 GENERATOR PLANT - FOUR SECTIONS / THREE WORKING COUPLERS

DESIGN BASIS (STUDY): 16 x 1 MW SITE-NET OUTPUT, 480 V / 60 Hz, 13 UPS FEEDERS CONTINUE TO E107 / E108.

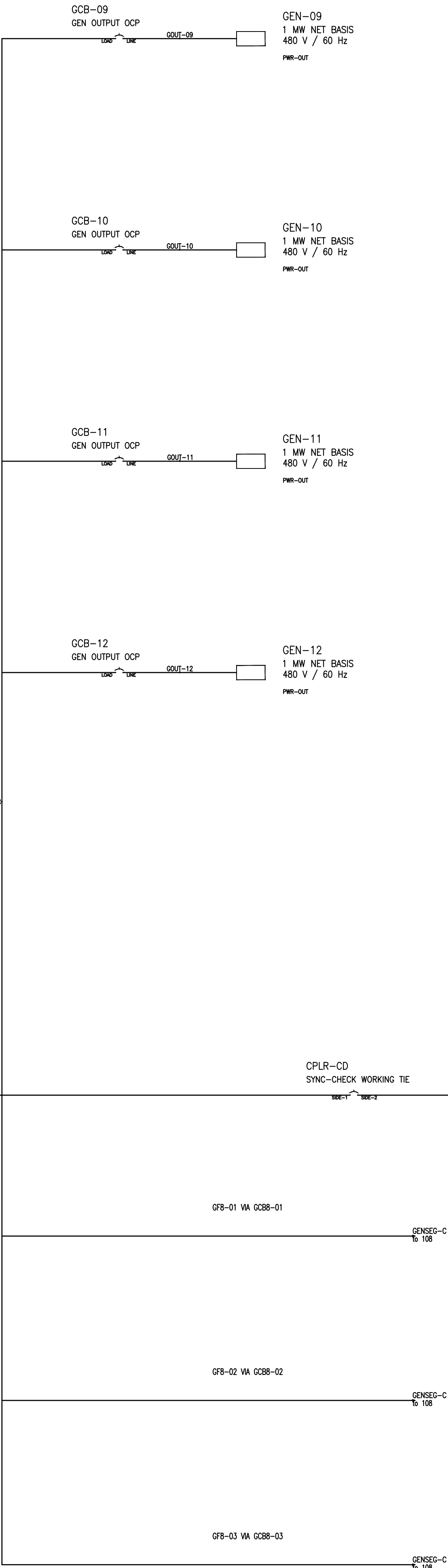
GENSEG-A / GEN-01 TO 04



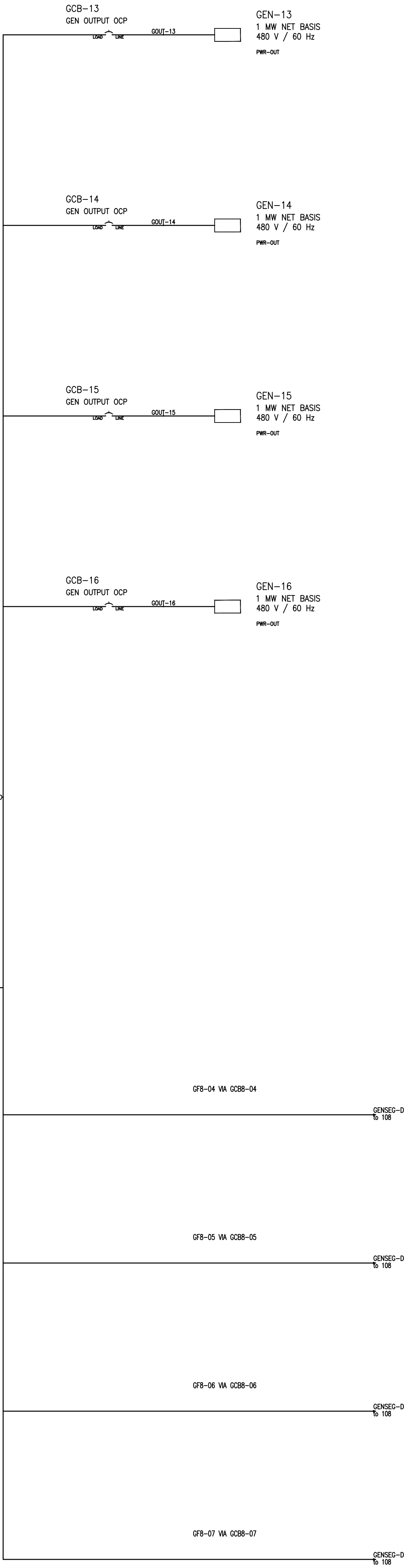
GENSEG-B / GEN-05 TO 08



GENSEG-C / GEN-09 TO 12



GENSEG-D / GEN-13 TO 16



1. First available generator closes to a verified dead bus; subsequent machines and live-bus couplers require synchronism-check permissives. Establish required working ties before loading beyond a local section.
2. The 13 outgoing feeder protection functions GCB7-01..06 / GCB8-01..07 are shown on E107 / E108 and physically belong to the generator switchgear; they are not additional breakers on this sheet.
3. On utility loss, UPS batteries maintain affected IT and all assigned CDU loads. Inhibit charging before generator pickup; restore input paths sequentially within available generation. Healthy-zone ATS may remain on utility.
4. No utility paralleling and no UPS AC output interconnection. Section protection and coupler interlocks isolate a faulted section; available generation is determined by the connected healthy sections.
5. SECTION / TIE STUDY DUTY: SEE E204. Pickup permissives: E205. Final neutral / grounding arrangement, interrupting ratings, protection coordination, site derating and transient load acceptance follow the selected equipment data and engineering calculations.

E204 OPERATING DUTY / 13 UPS PATHS - 4 GENERATOR SECTIONS

KW STUDY VALUES / 26 SEP 2026 / SYSTEM TOPOLOGY: E107-E108, E201-E203

PATH IT DUTY - NORMAL / WORST SINGLE UPS OUTPUT LOSS					
UPS PATH	GEN SEG	IT N136	IT F136	IT N155	IT F155
UPS7-01	A	952	1428	1085	1627.5
UPS7-02	A	952	1428	1085	1627.5
UPS7-03	A	952	1428	1085	1627.5
UPS7-04	B	952	1428	1085	1627.5
UPS7-05	B	952	1428	1085	1627.5
UPS7-06	B	952	1428	1085	1627.5
UPS8-01	C	884	1360	1007.5	1550
UPS8-02	C	952	1428	1085	1627.5
UPS8-03	C	952	1428	1085	1627.5
UPS8-04	D	952	1428	1085	1627.5
UPS8-05	D	952	1428	1085	1627.5
UPS8-06	D	952	1428	1085	1627.5
UPS8-07	D	884	1360	1007.5	1550

SEGMENT IT DUTY - NORMAL / UPS8-03 OUTPUT UNAVAILABLE				
SEGMENT	IT N136	IT F136	IT N155	IT F155
A	2856	2856	3255	3255
B	2856	2856	3255	3255
C	2788	2312	3177.5	2635
D	3740	4216	4262.5	4805

COUPLER REAL POWER - ALL TIES CLOSED / 16 UNITS AVAILABLE				
TIE / +DIR	N136	F136	N155	F155
AB / A>B	210.31	210.31	239.69	239.69
BC / B>C	420.62	420.62	479.38	479.38
CD / C>D	701.03	1191.75	798.97	1358.25

kW / ITseg/0.97 BASIS / EXCLUDES U_s

- 136/155 = rack IT basis kW. N = normal 50/50 input sharing. Path F = worst surviving-path duty over each single UPS output loss; these maxima do not occur simultaneously.
- Segment/tie F = UPS8-03 output unavailable only. Independent UPS AC outputs remain isolated; transfer occurs at rack inputs.
- Pseg = ITseg/0.97 + U_s; assumed eta = 0.97. U_s includes CDU/eta, AC charging, external auxiliaries and losses not already included in eta; U_s is not zero; determine these loads explicitly.
- Tie numbers exclude U_s and assume equal real-power sharing per available generator. Size couplers for complete operating duties including U_s.
- For 16 available units: F_AB=F0-0.75UA+0.25UB+0.25UC+0.25UD; F_BC=F0-0.5UA-0.5UB+0.5UC+0.5UD; F_CD=F0-0.25UA-0.25UB-0.25UC+0.75UD.
- Verify connected-island capacity, required ties and controlled charging before pickup. Include open-tie, one-machine-unavailable and maintenance operating cases.

K&K DATA | MEDIUM-VOLTAGE SITE ROUTING AND SHARED CRANE ACCESS

E-301 / PE-P1 / 26 SEP 2026 / 8-POLE COORDINATION / PLAN DIMENSIONS mm

LEGEND: SOLID = OH TRUNK; DASHED = UG DROP; CIRCLE = BRANCH POLE; INTERFACE LEADERS = SCHEMATIC ONLY.

FC07-01..06: E-104; FCO8-01..07: E-105; BRANCH ASSEMBLY: E-106 UNCHANGED

UTILITY CONNECTION INTERFACES

PCC-7 / PCC-8: FINAL LOCATIONS BY UTILITY

CENTRAL ENTRY OPTION; TWO SEPARATE FEEDERS / NO MV TIE

LEADERS INDICATE INTERFACE ONLY; NO UTILITY APPROACH LENGTH MEASURED

6.5 m SHARED ROAD / LIFTING POSITIONS SELECTED BY LIFT PLAN

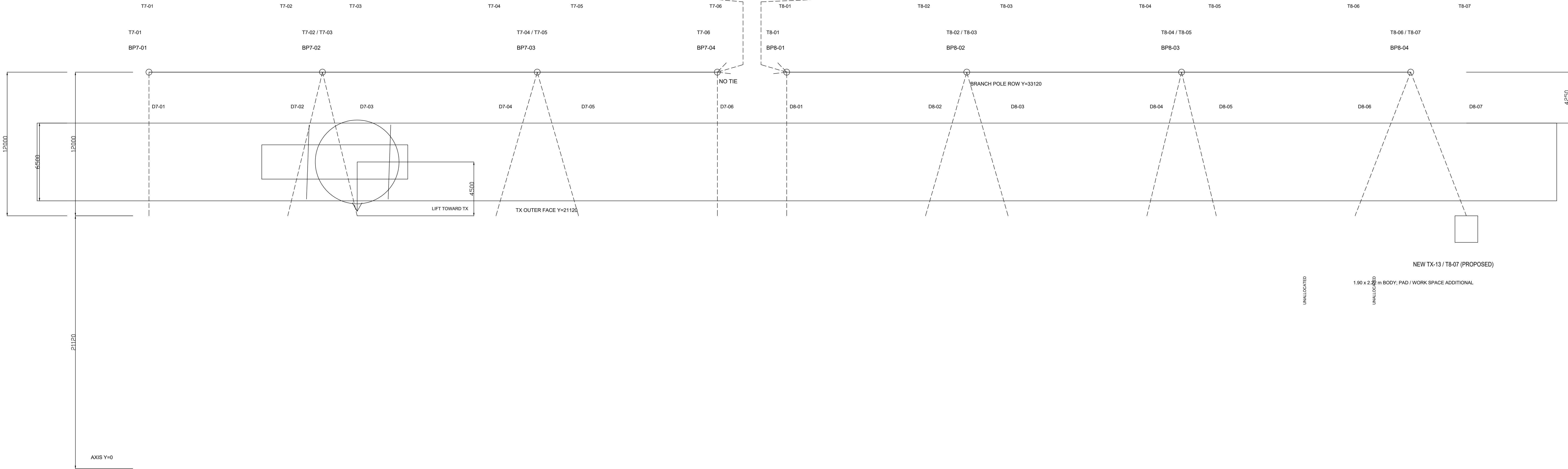
TRAVEL, GENERATOR EXTRACTION AND LIFTING USE THE SAME ROAD AT DIFFERENT TIMES

60 in COVER / CONTROLLED TRENCH BACKFILL: E-303. LIFT SUPPORT INTERFACE: E-302.

DIRECT UG DROPS / 60 in MINIMUM CONDUIT COVER / TRENCH DETAIL E-303

TO ZONE 7

TO ZONE 8



LOCAL X/Y: A/01 = 0,0; +Y TOWARD EQUIPMENT YARD. NOT TRUE NORTH OR SURVEY CONTROL.

SOURCE GEOMETRY AND SITE TARGET

Architectural arrangement reference: 12 original TX footprints plus proposed T8-07.

Current electrical allocation: T7-01..06 and T8-01..07; proposed T8-07 is separate from auxiliary transformers.

GEN-01..16: current generator allocation per E203. Old GEN-17/18 footprints: UNALLOCATED, not procurement quantities.

FACT: axis length 106600 mm; end-wall length 106900 mm; proposed TX13 outer end X112400 mm.

Owner target: 100 x 45 m = 4500 m² = 1.112 acres. Verify equipment and access envelopes against this site target.

Road X-8000..119000: 127 m design length; end turns and loop connections TO BE COORDINATED.

Cooling-tower position and full site boundary TO BE COORDINATED with the illustrated source geometry.

OEM GA: 1900 x 2220 x 2150 mm body, 6800 kg. Lifting condition and centre of gravity BY OEM.

Transformer bodies exclude foundations, oil control, terminal access and rigging/work clearances.

ROUTE QUANTITIES AND CROSSING DUTY

8 branch poles: 5 dual + 3 single; 13 independently protected branches / 39 single-pole cutouts.

12,000 m transverse row spacing retained; direct UG plan routes total 161,065 m to TX outer faces.

Three-phase horizontal basis 483.195 m; final bends, duct spread, risers, entries and slack additional.

Alternative-routing comparison: 5 fewer branch poles; route delta +5,065 m / +15.195 phase-m (lengths only).

OH between branch poles: Zone7 47,500 m + Zone8 52,150 m = 99,650 m; utility approach excluded.

PCC-7 / PCC-8 positions, ownership, metering and approach by utility; terminal / support poles additional.

Shared-road buried crossings use E-303 trench construction and vehicle-load verification.

Trench / travel-load basis: E-303. Lift-specific support loads: E-302.

Axle / wheel and outrigger loads are separate. H20/H20 does not establish crane capacity.

Adopted cover: 60 in to conduit top. Bedding / backfill / checks: E-303.

CRANE / GENERATOR / ELECTRICAL INTERFACES

Shared ring road: 6.5 m wide at Y22370..28870; no separate lifting strip.

Crane shown for envelope only; no fixed stopping or outrigger position.

STUDY: 4,500 m TX-face-to-axis; 4,250 m road-edge-to-pole centre.

Crane reference: vehicle axis offsets -7972 / +4231 mm; envelope is STUDY.

Shared pole may remove two normal inputs; verify UPS bridge and GEN takeover for both paths.

Crane travel and generator extraction use the shared road in timed windows.

Maintenance lifting closes the occupied road section; no simultaneous GEN exit.

Maintain emergency / fire access by an approved operation and traffic plan.

Check all crane parts, suspended load and rigging in three dimensions.

Include actual conductor sag / swing, cutouts, jumpers and pole accessories.

Verify conductor height and actual 3,048 m spatial clearance throughout the lift envelope.

OSHA <=50 kV Table A basis; apply required assessment / operating controls.

Branch fuse removal does not de-energize the OH trunk or isolate LV backfeed.

Isolate MV and LV sources; verify dead and grounded before TX removal.

Four-position OEM switch is not whole-apparatus isolation; rate and cap B ports.

Keep terminal access and cable pulling / bend spaces clear of supports.

Retain drainage, turning, fire access and other buried utilities in civil design.

MV electrical branch details: E104-E106.

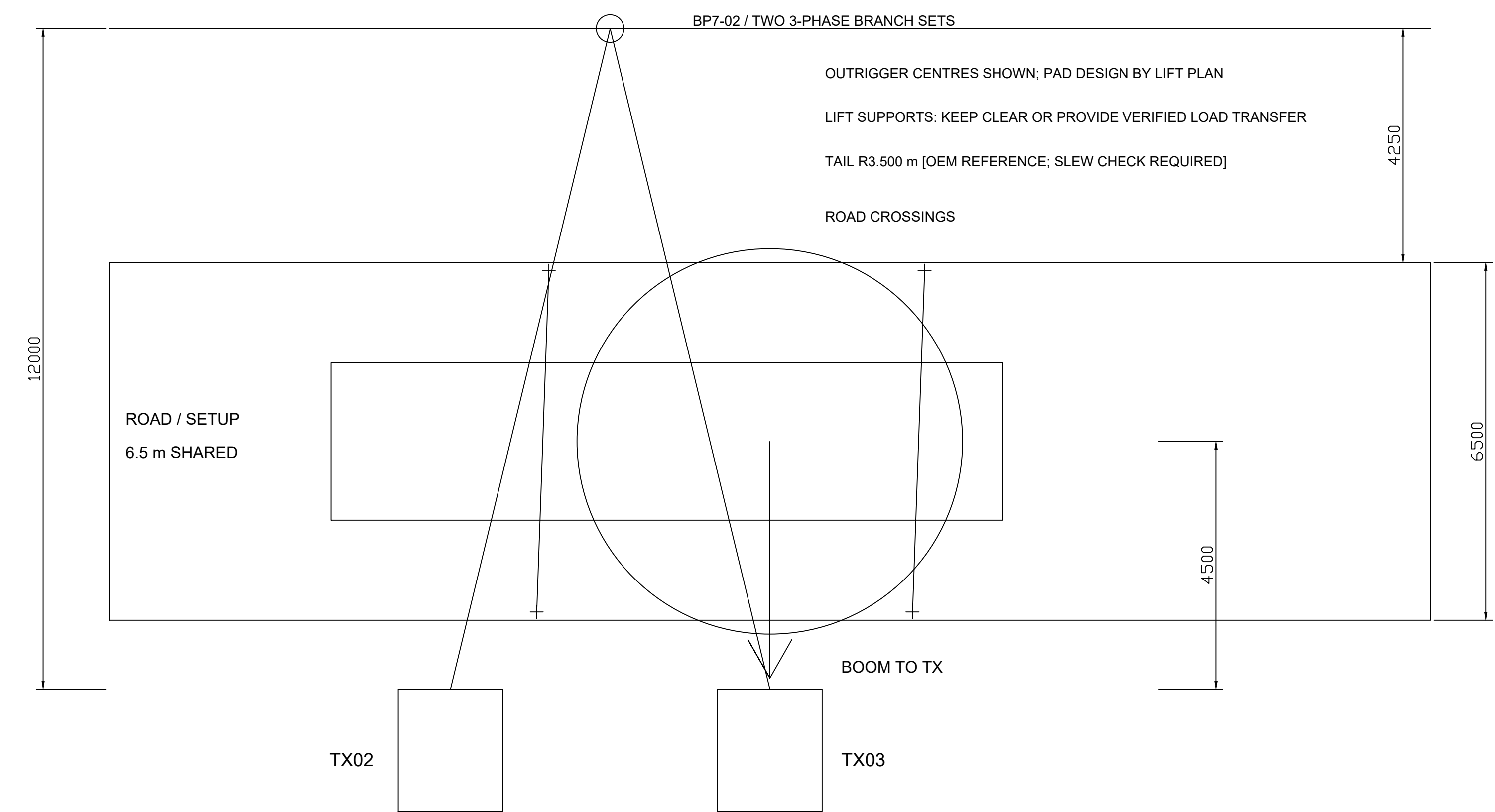
Refs: OEM GA 08 SEP; Crane reference sheet; OSHA 1926.1402/ 1408/ 1411;

UFGS 33 71 02 sec 3.7.9 (reference); owner 12 m decision, 25 SEP 2026.

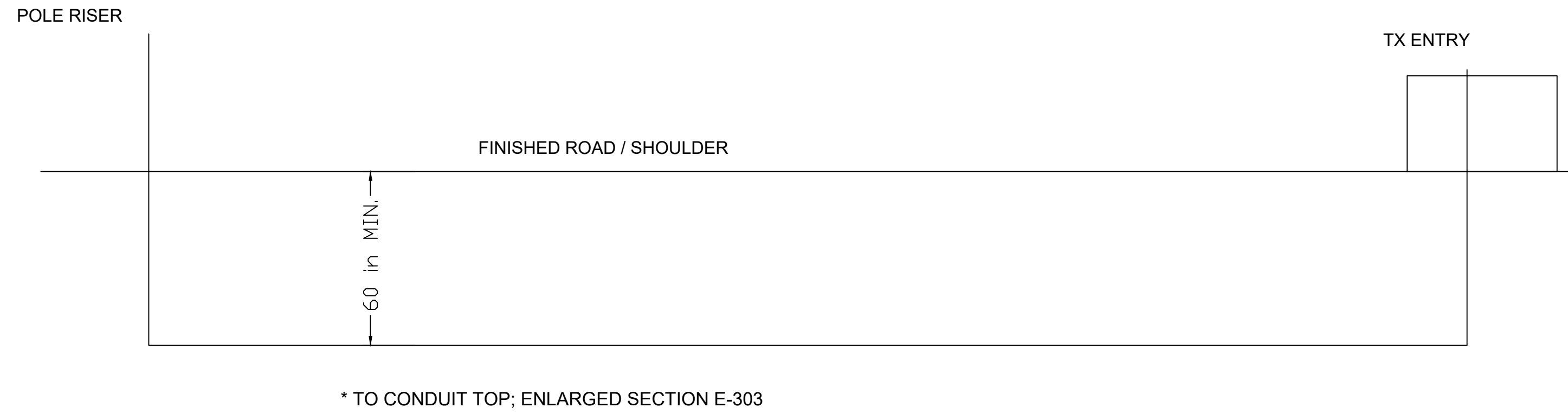
K&K DATA | CRANE ACCESS AND MV CROSSING

E-302 / 26 SEP 2026 / CRANE ACCESS AND BURIED CROSSING INTERFACES - NTS

1 SHARED ROAD / CRANE SETUP



2 BURIED CROSSING / CONSTRUCTION INTERFACE



Controlled trench construction extends through road and shoulders.
Transitions at pole risers and TX entries follow cable bend / pulling limits.
E-303 defines cover, bedding, pipe-zone work and inspection records.
Vehicle wheel loading and lifting support reactions are separate cases.
Lift planning shall first locate supports clear of the buried-route influence.
Where overlap remains, verify support load transfer with actual reactions.
Determine support-pad size and concrete protection section from support loads and ground conditions.
Shared-road travel and lifting are scheduled separately; retain emergency access.

References: Crane GMK3050-3 product guide; OSHA 1926.1402 / 1408 / 1411; OEM GA; E-301; E-303.

3 GEOMETRY / LIFT AND ELECTRICAL INTERFACES

LAYOUT BASIS: E-301 COORDINATES

TX outer face to branch-pole row: 12000 mm transverse.

Road edges Y22370 / Y28870; shared width 6500 mm.

Crane slew-axis example Y25620; TX-face distance 4500 mm.

Road-edge to pole-row distance 4250 mm; not an electrical clearance.

Crane reference: 6200 mm outrigger spread; 6825 mm longitudinal.

Vehicle axis offsets -7972 / +4231 mm; width 2860 mm.

Tail radius 3500 mm per reference product guide; actual configuration governs.

Crane stopping and support positions shall be established by the lift plan.

LC-T / TRAVEL: TRENCH BASIS ON E-303

Actual mobilized axle loads, wheel spacing, contact and turning are inputs.

Travel release follows ground, backfill and vehicle-load verification.

LC-O / LIFT SUPPORTS: LIFT-SPECIFIC DESIGN

Use OEM reactions for actual load, radius, slew and counterweight.

Verify support bearing, settlement, mat action and buried-service protection.

LC-C / CONSTRUCTION: ACTUAL STAGE CONDITIONS

Temporary traffic uses actual cover and achieved backfill condition.

OVERHEAD CLEARANCE / OPERATION

Verify all crane parts, load and rigging against sag, swing and accessories.

OSHA 1926.1408 Table A: <=50 kV basis 10 ft (3.048 m).

The 20 ft assessment trigger is not a pole-to-TX siting dimension.

Apply below-line restrictions and the applicable operating controls.

Verify the full crane/load/rigging envelope and energized-line clearance for the selected 12 m row spacing.

Branch isolation does not de-energize the adjacent overhead trunk.

ELECTRICAL / MAINTENANCE

12.47 kV radial branches and protection: E-104 to E-106 unchanged.

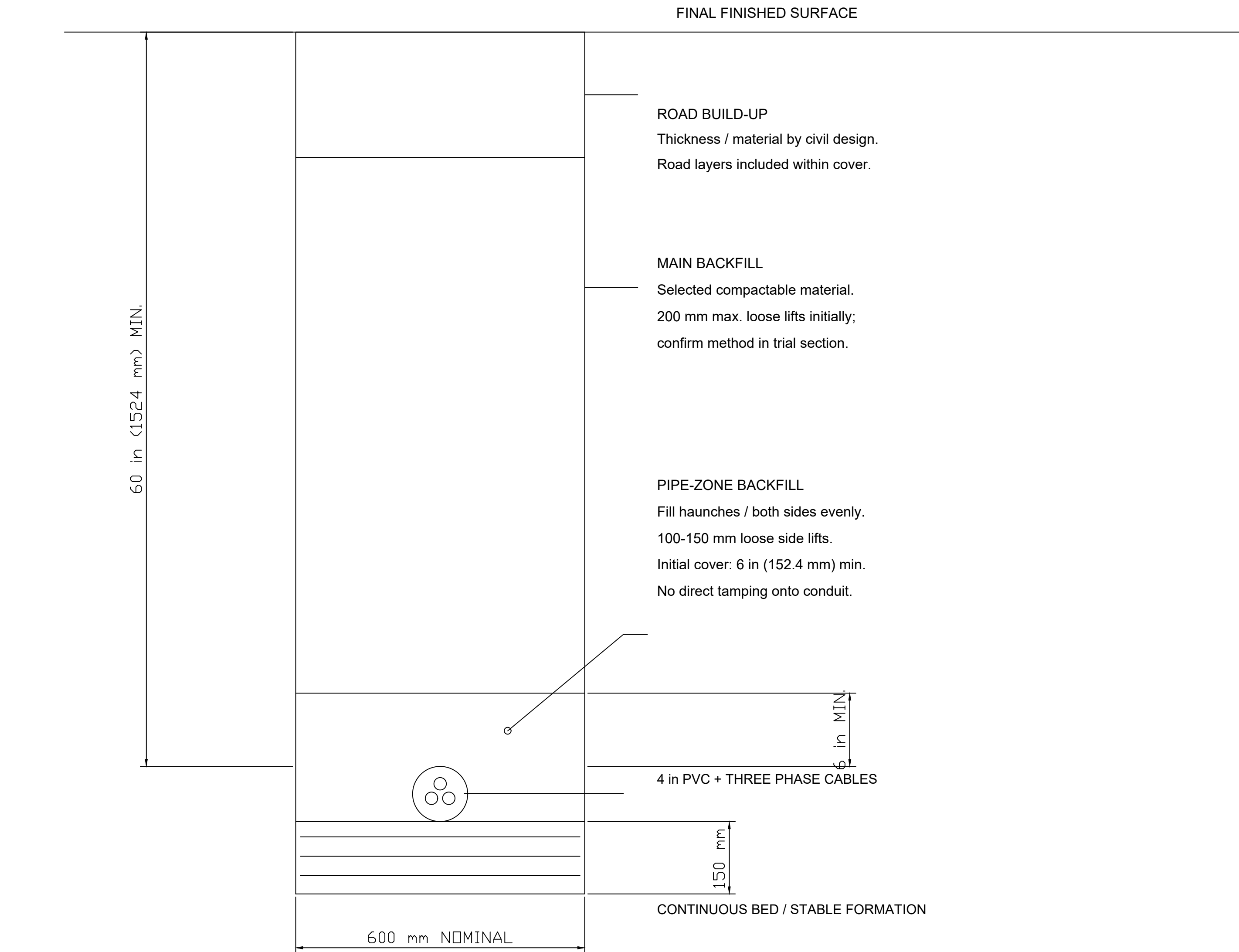
A 200 A cutout holder rating does not select the fuse-link current.

Isolate MV and all LV backfeed; verify dead and ground for TX removal.

Maintain terminal access, drainage, cable bends and emergency access.

As-built records identify buried routes and adopted travel / lift conditions.

1 TYPICAL SINGLE-BRANCH TRENCH



Cover measured vertically to TOP OF CONDUIT, not trench bottom.

Illustrated 114.3 mm OD + 150 mm bed gives ~1788 mm excavation.

600 mm is a nominal single-duct work width, not a shoring clearance.

Shared-pole double drops: coordinate separation, pulling and mutual heating.

No concrete encasement or steel sleeve is assumed in this base section.

Reinstate road / shoulders without abrupt settlement steps; civil acceptance.

2 VEHICLE-LOAD SCREEN

60 in cover; three axles at 0 / 2.79 / 4.44 m; track 2.285 m.

Axle load / wheel split	Live at pipe top	Soil + live
12 t / 50:50	20.00 kPa	50.48 kPa
16 t / 50:50	26.66 kPa	57.14 kPa
16 t / 55:45	28.94 kPa	59.42 kPa

Boussinesq six-point screen; factor 1.3; soil weight 20 kN/m3.

Compare these calculated load effects with selected conduit and ground performance limits.

3 MATERIALS AND INSTALLATION

Conduit : 4 in solid-wall electrical PVC, UL 651 listed, 90 C rated;

Sch40 is the base candidate. Reference OD 114.3 / min. wall 6.02 mm.

Product ring stiffness, long-term properties and allowable deformation are submitted for load verification before conduit procurement release.

Branch : 3 x 1/C 15 kV shielded Al 1/0 AWG; final cable selection includes 60 in burial, soil thermal resistivity, duct grouping and faults.

Primary-current screen: 2600 kVA / (sqrt(3) x 12.47 kV) = 120.38 A.

Provide clean, stable, drained formation; remove unsuitable material.

Use compatible selected bedding / surround without sharp inclusions.

Joint, cure, support and backfill to the selected conduit instructions.

Riser, bends, seals and pulls follow cable and termination requirements.

Warning tape / markers: coordinated utility requirement and as-built level.

4 INSPECTION AND CONTRACTOR DELIVERABLES

Before covering: inspect formation, continuous bed, joints and haunch fill.

Set out final grade; record conduit-top levels and 60 in minimum cover.

Submit material grading, moisture control, lift thickness and trial method.

Geotechnical acceptance sets density test method / target / frequency for pipe zone and road fill separately; no assumed soil modulus from density.

Keep layer-quality records; mandrel / clean ducts and install pull ropes.

Record duct IDs, surveyed routes, depth, bends, seals and cable tests.

Include excavation protection, dewatering and disposal in contractor scope.

Excavation ~1788 mm exceeds 5 ft: worker entry needs an OSHA 1926.652 protective system, except applicable stable-rock conditions.

Traffic release uses actual axle data and achieved cover / backfill condition.

5 DESIGN COMPLETION / REVIEW BASIS

Design team closes ground / groundwater, backfill mechanics and thermal properties using site investigation and supplier / transport data.

Verify pipe deformation, stress, creep and groundwater buckling; verify cable ampacity and fault duty. Local protection is added only where required.

Outrigger reactions and pad design are separate from this wheel-load screen (E-302); support-mat load spreading is not credited to this trench section.

Cover basis: 60 in cover; utility interface review by the Utility.

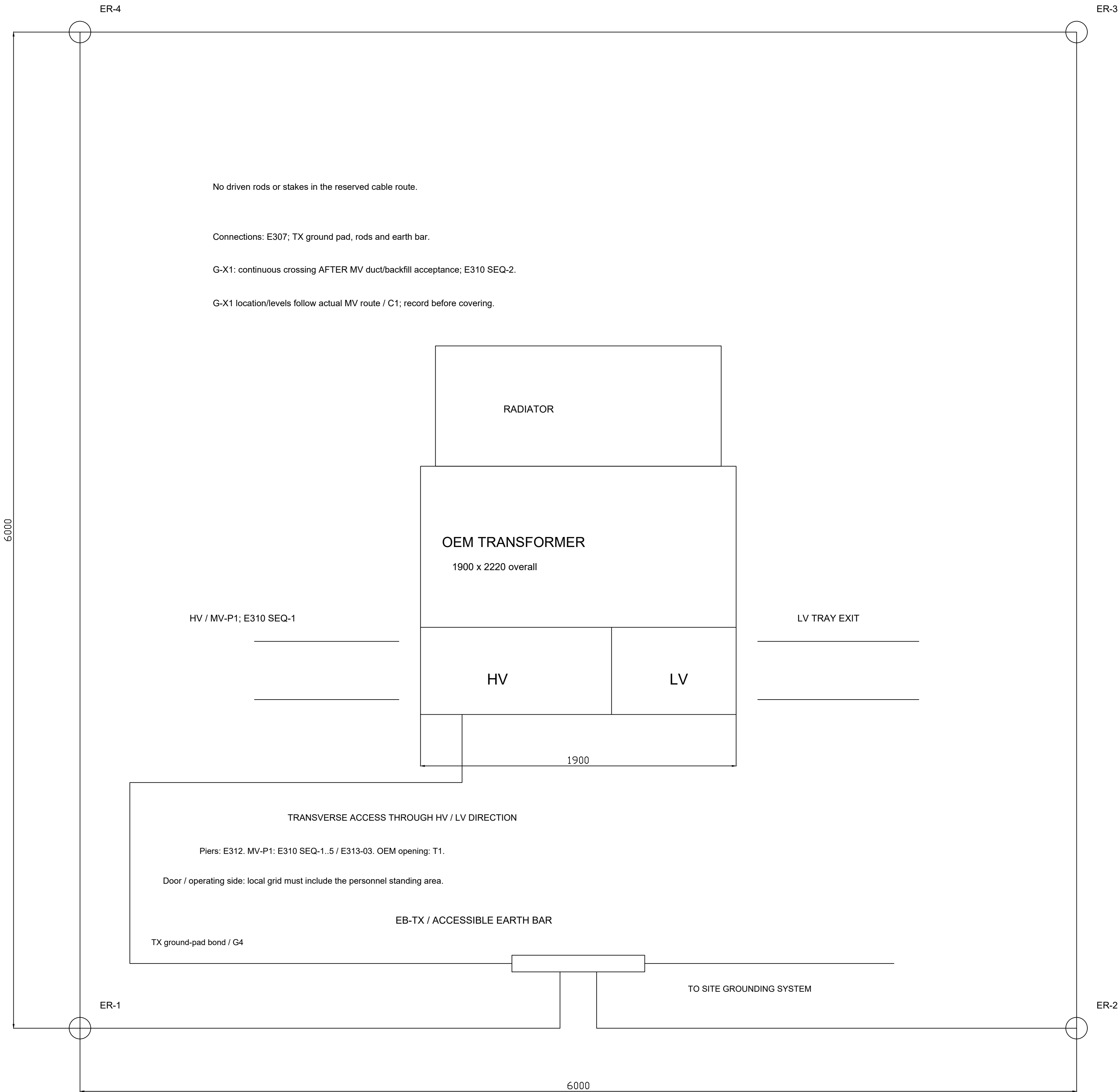
Utility-owned extension scope and interface acceptance remain separate.

Sources: CANTEX PVC catalog pp.4-5,159; Crane GMK3050-3 guide pp.7-8;

Utility service policy; OSHA 1926.652; SRP Technical Provisions (load method).

Calculation basis: K&K DATA trench load screening; assumptions as tabulated.

1 LOCAL PLAN / PROPOSED 6000 x 6000 ELECTRODE ENVELOPE



2 CONFIGURATION AND INSTALLATION

ER-1..4: four listed copper-bonded steel rods.

Candidate rod: 3/4 in diameter x 10 ft long.

Ring: 2/0 AWG bare copper; candidate depth800 mm.

Plan perimeter: nominal24 m; add both risers and leads.

One continuous conductor; both ends terminate at EB-TX.

Each rod uses a listed direct-burial bolted clamp.

Select clamp for actual rod / conductor / strand class.

EB-TX: accessible copper bar >=1/4 x2 in.

Separate terminal positions; no operating disconnect.

Grid connected to the site system; not isolated earth.

No welding required by this connection arrangement.

Protect existing ring; no cut-and-rejoin with ordinary bolts.

Listed buried fittings for actual use; GEC splices: 250.64(C).

3 SEPARATE CONDUCTOR FUNCTIONS

GEC: general-table screen3/0 Cu for8x1000Al/phase.

Electrode-specific sizing exceptions remain applicable.

SBJ / SSBJ: calculate separately under250.102(C).

Do not use3/0 Cu as a universal bonding-jumper limit.

MV EGC:250.190(C),250.122; >=6AWG Cu, then size

for protection and fault duty. Ring is not the fault return.

Keep neutral bonding at one coordinated point per TX.

Do not add a second N-PE bond in the indoor cabinet.

4 DESIGN AND TEST BASIS

6x6 m and four rods are a design candidate, not a code

prescription or a verified touch/step-voltage result.

Confirm soil resistivity, fault split and clearing time.

Rebar and four structural piles are supplementary;

do not credit them to make the base earth grid pass.

Check all electrode ties, continuity and test method.

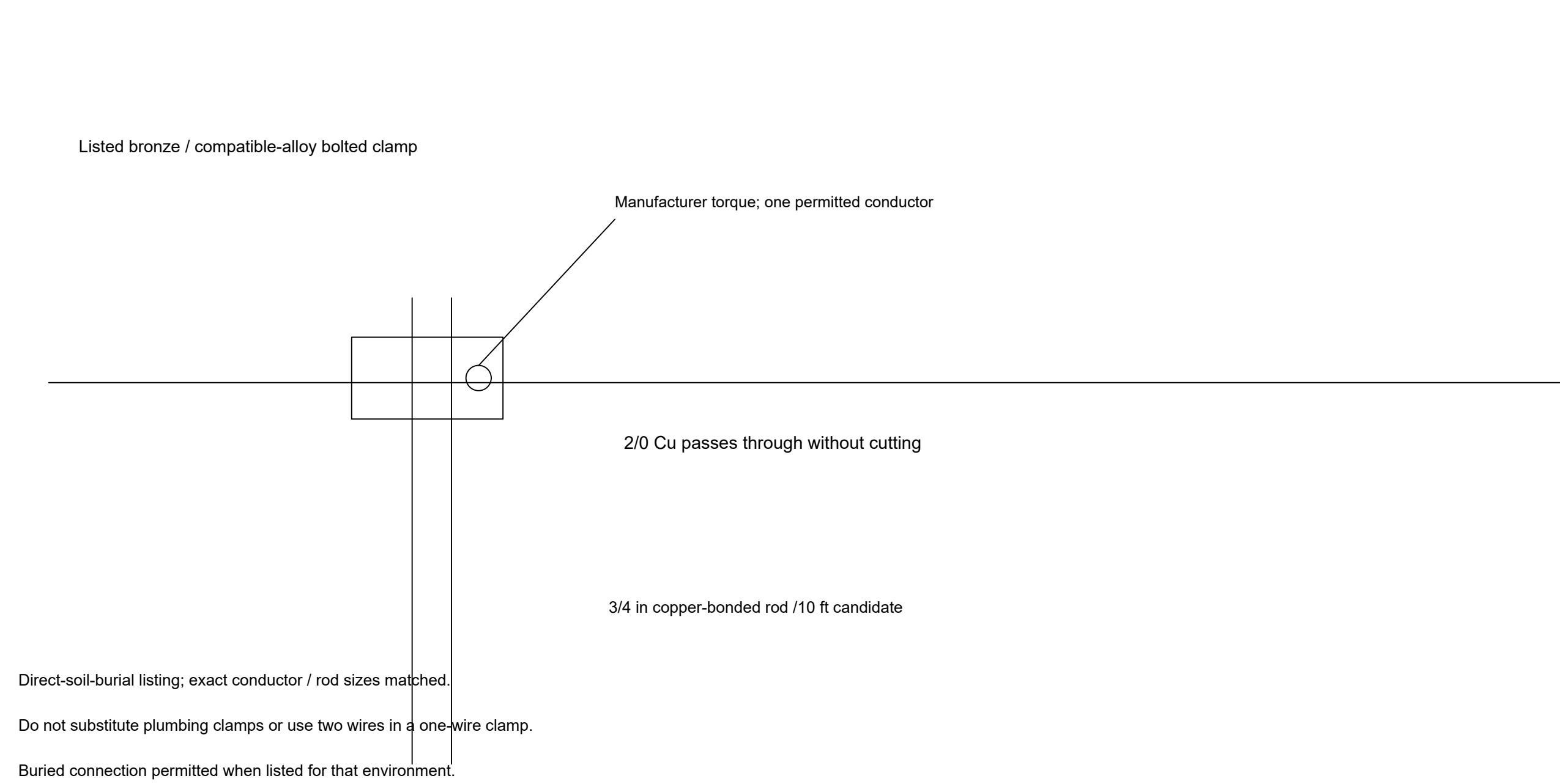
Grounding acceptance: verify touch/step and fault-clearing performance; 25 ohms alone does not establish MV-pad acceptance.

Final site position avoids poles, crane supports and ducts.

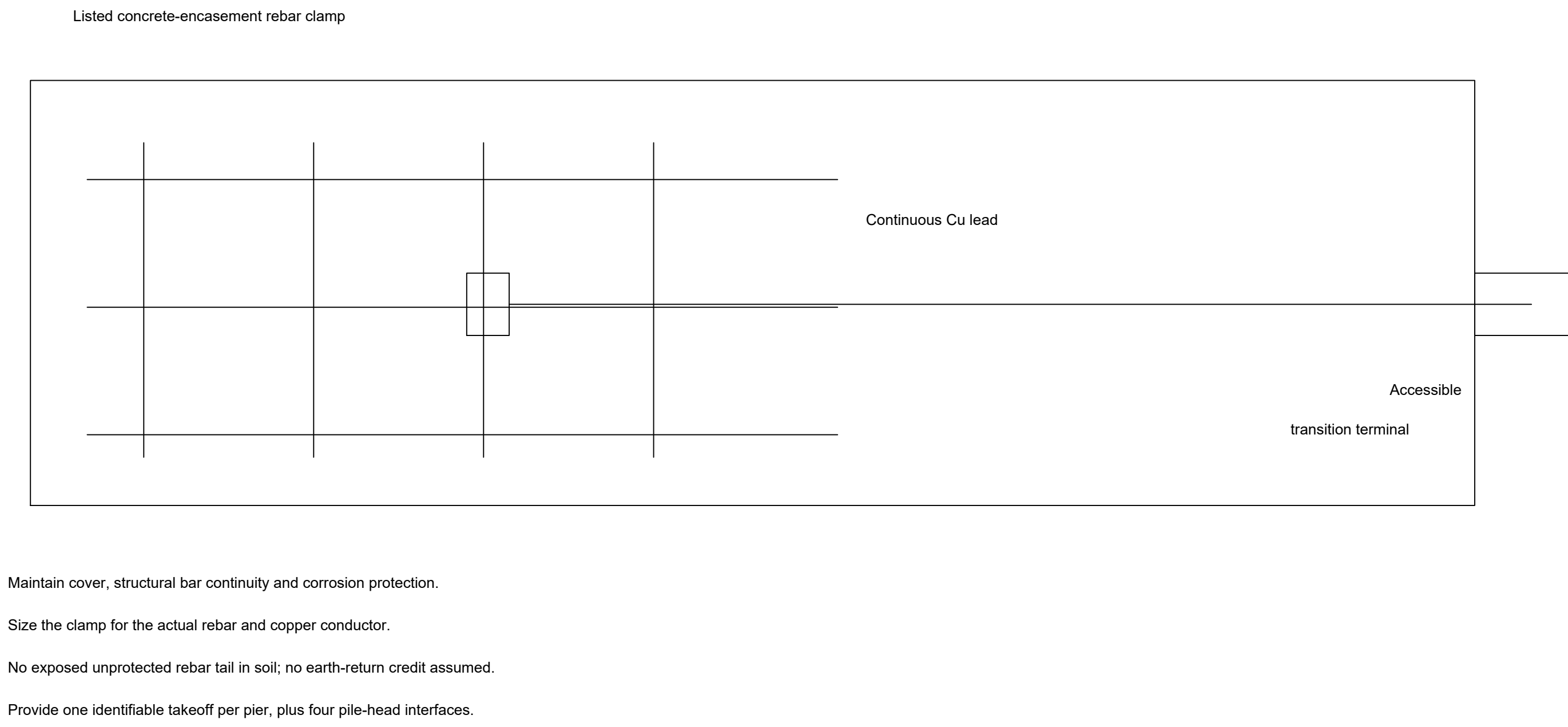
References: NEC2017 Art250; OEM GA;

Transformer grounding specification.

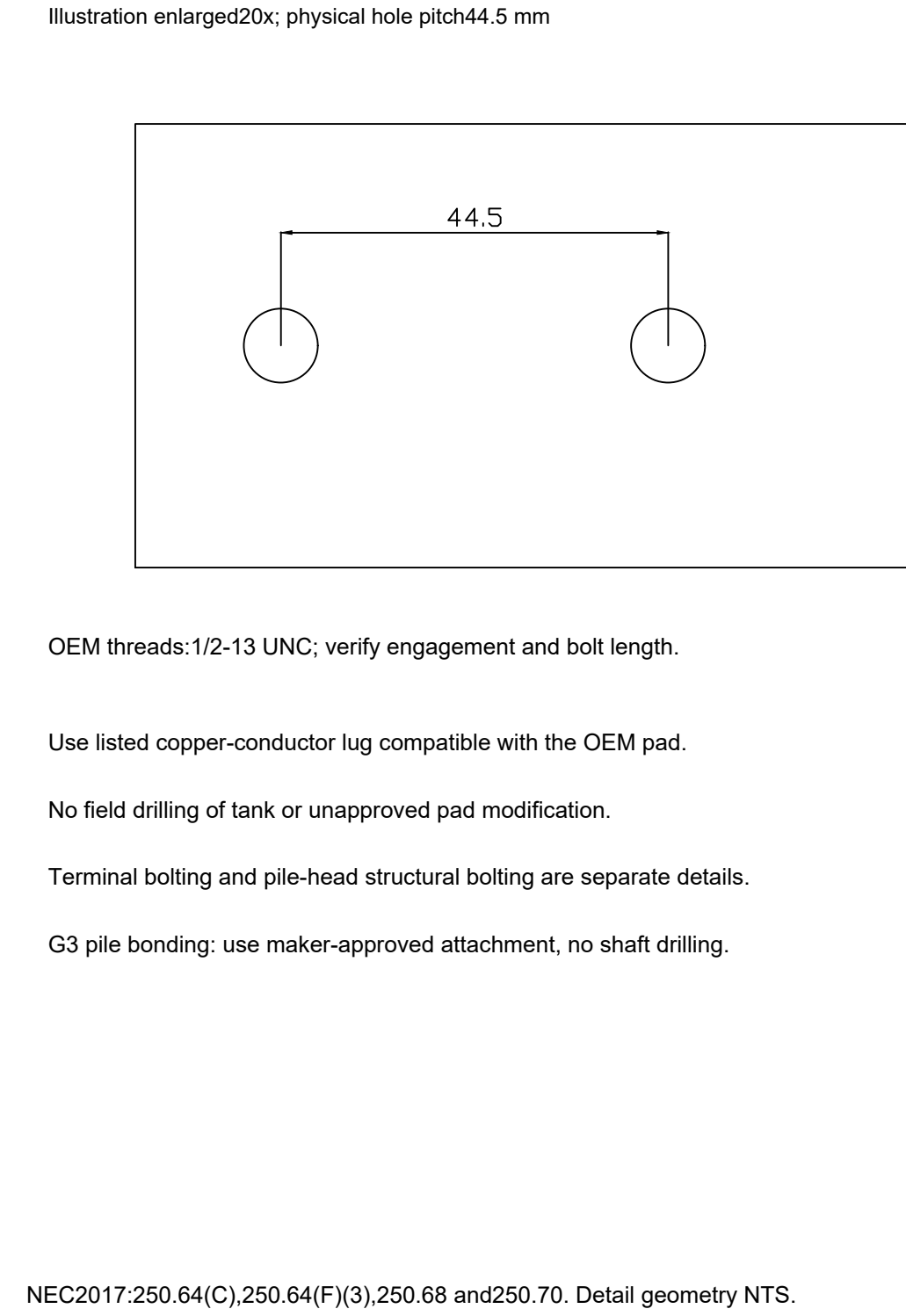
G1 / ROD TO CONTINUOUS COPPER



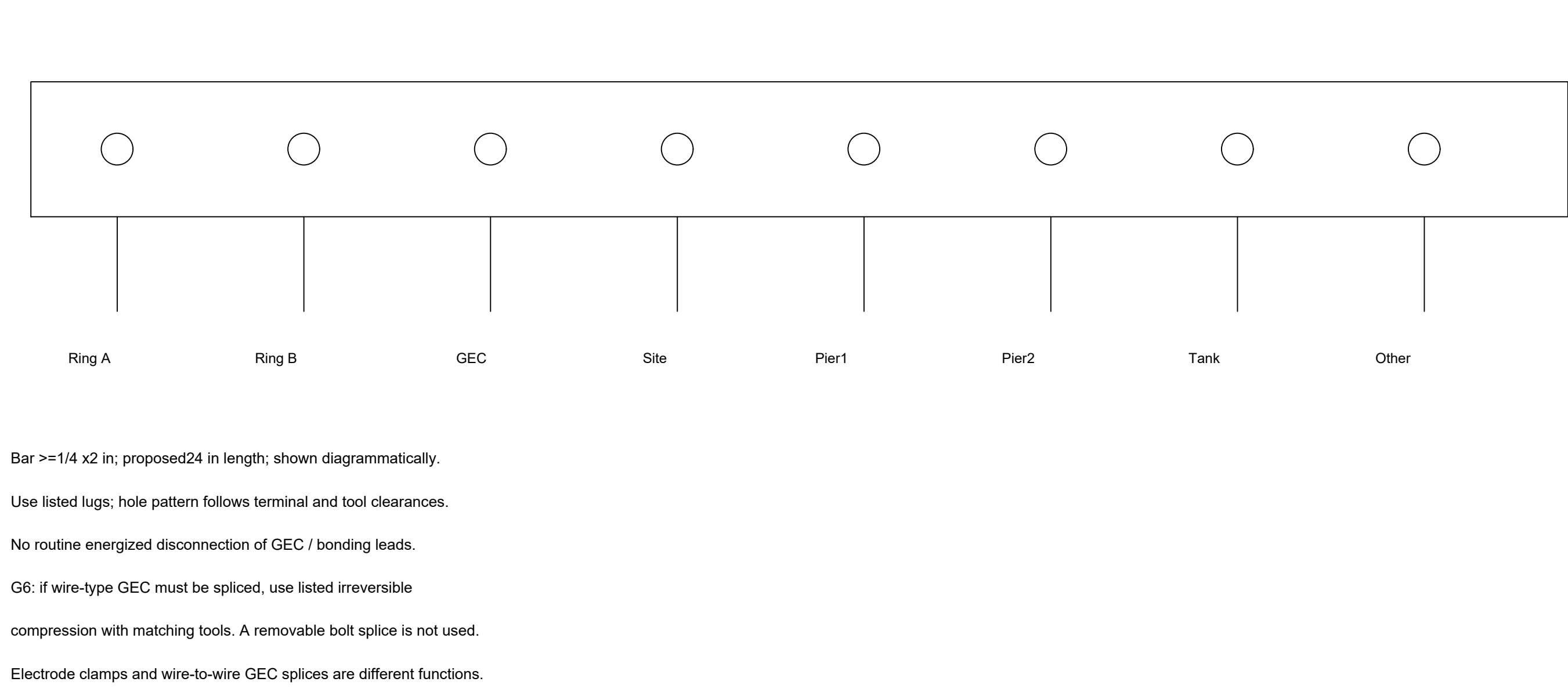
G2 / REBAR TO COPPER / NO FIELD WELD



G4 / OEM TANK GROUND PAD

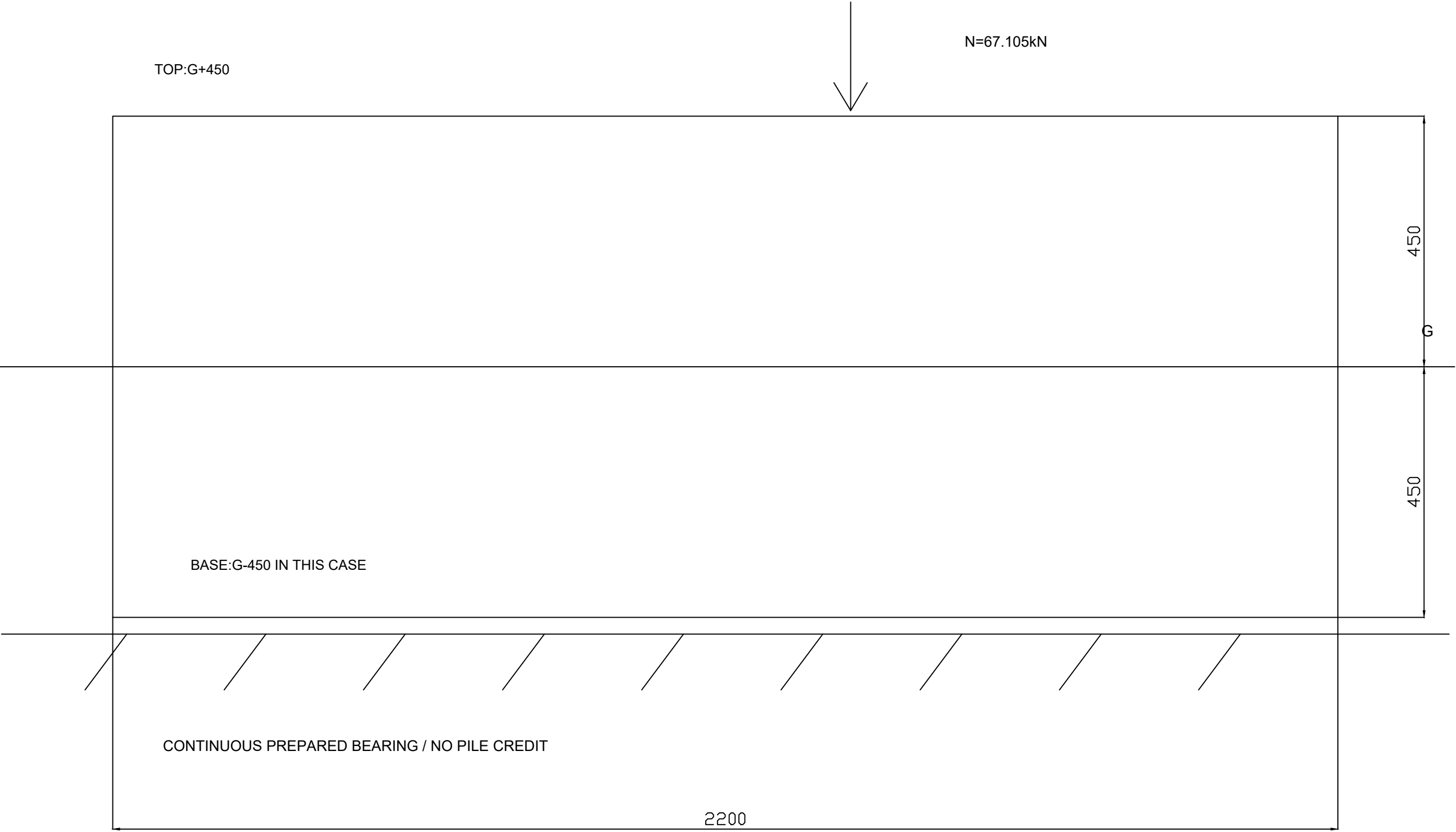


G5 / ACCESSIBLE COPPER BAR



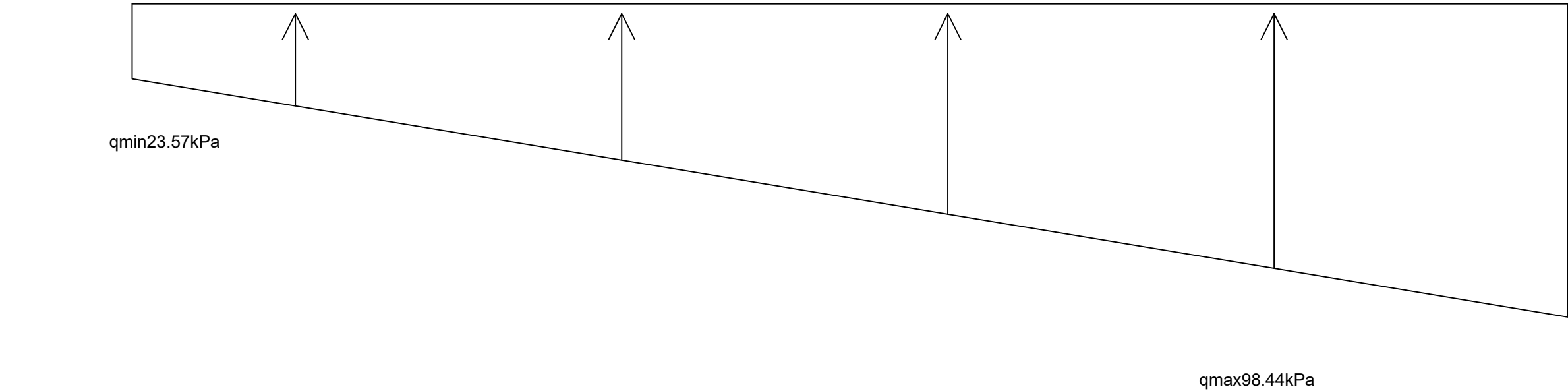
1 / PRIMARY LOAD PATH / LONGITUDINAL STUDY SECTION

Illustrated case:L2200 x B500 x H900; actual OEM supports to be located.



H450+D; D follows bearing stratum, frost and applicable embedment.

2 / BEARING PRESSURE / TOTAL RESULTANT e=225



Pressure diagram NTS; no ground tension in this example.

$N=0.65 \times 66.685 + 24 \times 2.2 \times 0.5 \times 0.9 = 67.105\text{kN}$.

$q=N/(LB)=61.00\text{kPa}$; $q_{\text{max}}/\text{min}=q(1 \pm 6e/L)$.

Soil allowable pressure must match the gross-pressure basis.

Gravity load comparison; soil bearing, settlement and lateral stability require site-specific calculation.

3 / WIDTH COMPARISON / L2200 / H900

WIDTH	qMAX	TWO-PIER CONCRETE
400mm	114.34kPa	1.584m3
500mm	98.44kPa	1.980m3
600mm	87.84kPa	2.376m3
700mm	80.27kPa	2.772m3

4 / FOUNDATION PERFORMANCE

Normal support:two reinforced concrete piers on prepared soil.

Four helical piles remain supplementary; no added pile count.

Normal vertical calculation takes zero pile-capacity credit.

Check soil pressure,settlement,differential movement and erosion.

Check actual rail bearing,concrete flexure/shear and anchor loads.

Detail structural pile-head connections separately from grounding clamps and rebar ties.

5 / ECCENTRICITY AND HORIZONTAL ACTION

Full contact: $6|ex|/L + 6|ey|/B \leq 1$.

B500 /ex225 leaves transverse $|ey| \leq 32.2\text{mm}$.

Use compression-only soil contact if this condition is exceeded.

Calculate each pier with its actual N,H and overturning moments.

Calculate each independent pier using its own bearing width.

No passive-soil resistance credited where later excavation removes it.

6 / GEOMETRY AND MATERIAL CONTROL

SupporttopG+450 is separate from total concrete height.

H600 provides150mm embedment at the stated support level; select embedment for bearing stratum, frost and stability.

If both widths fit inside gross1495:gap $\leq 1495-2B$.

B500 gives495mm; B600 gives295mm before other offsets.

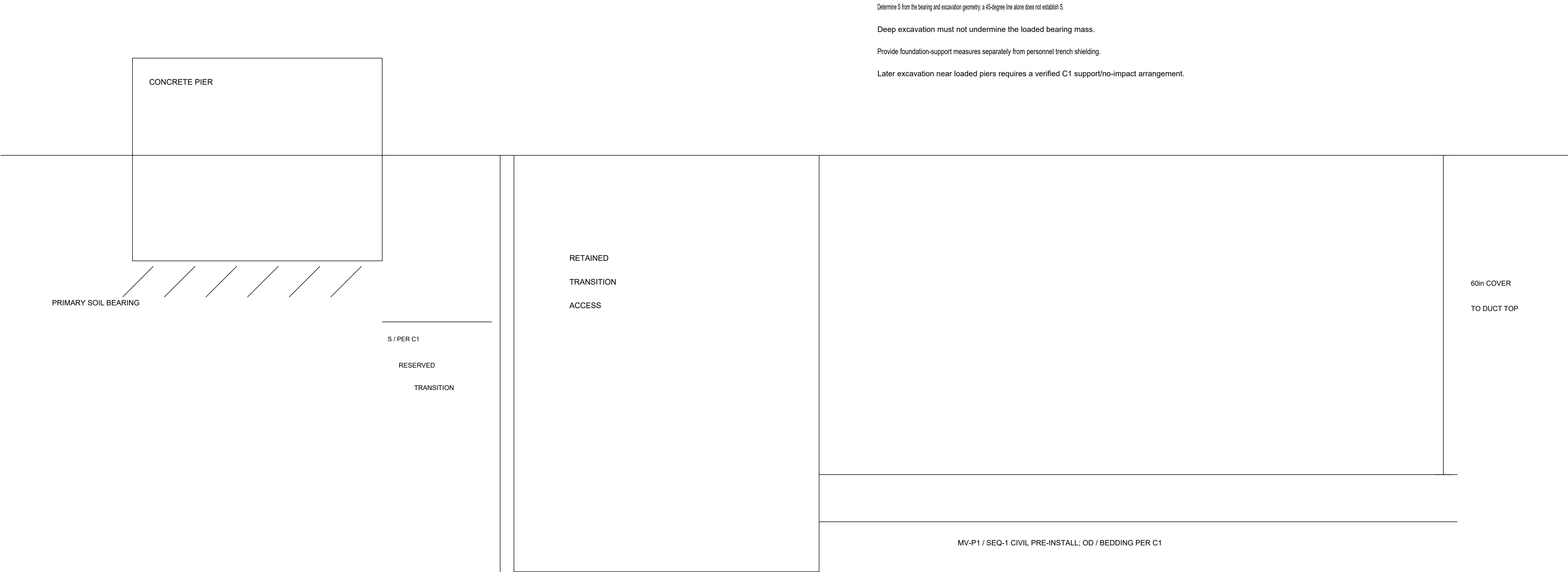
OEM rail/aperture data determine actual pier positions and overhang.

Preserve transverse HV/LV access when coordinating pier widths.

Design reinforcement and anchors for the actual rail reactions.

1 / SEPARATE SHALLOW ACCESS FROM DEEP MV APPROACH / SECTION NTS

MV-P1: CIVIL installs near-foundation ducts and accepts backfill BEFORE foundation loading; SEQ-1..2.



Determine S from the bearing and excavation geometry; a 45-degree line alone does not establish S.

Deep excavation must not undermine the loaded bearing mass.

Provide foundation-support measures separately from personnel trench shielding.

Later excavation near loaded piers requires a verified C1 support/no-impact arrangement.

2 / LOCAL LOW-VOLTAGE ACCESS / DISTINCT DEPTH

LV local recess study:G-250mm; no60in LV-depth requirement adopted.

Two trays end outside the OEM bottom opening; grouped cables turn in.

Primary supporttop remainsG+450; common indoor/outdoor datum required.

The transverse channel runs left-right across HV/LV compartments.

No pressure is transferred to the terminal enclosure or a nonstructural lid.

GROUNDING E306/E307: G-X1 AFTER MV backfill (SEQ-2); record levels and continuity before energising.

Source: OSHA1926.651(i); OEM GA08Sep2026; shallow-foundation design. Provide site-specific excavation support.

3 / INSTALLATION SEQUENCE / SEQ-1 TO SEQ-5

SEQ-1 Protect existing services/ring; CIVIL installs MV-P1 ducts/elbows.

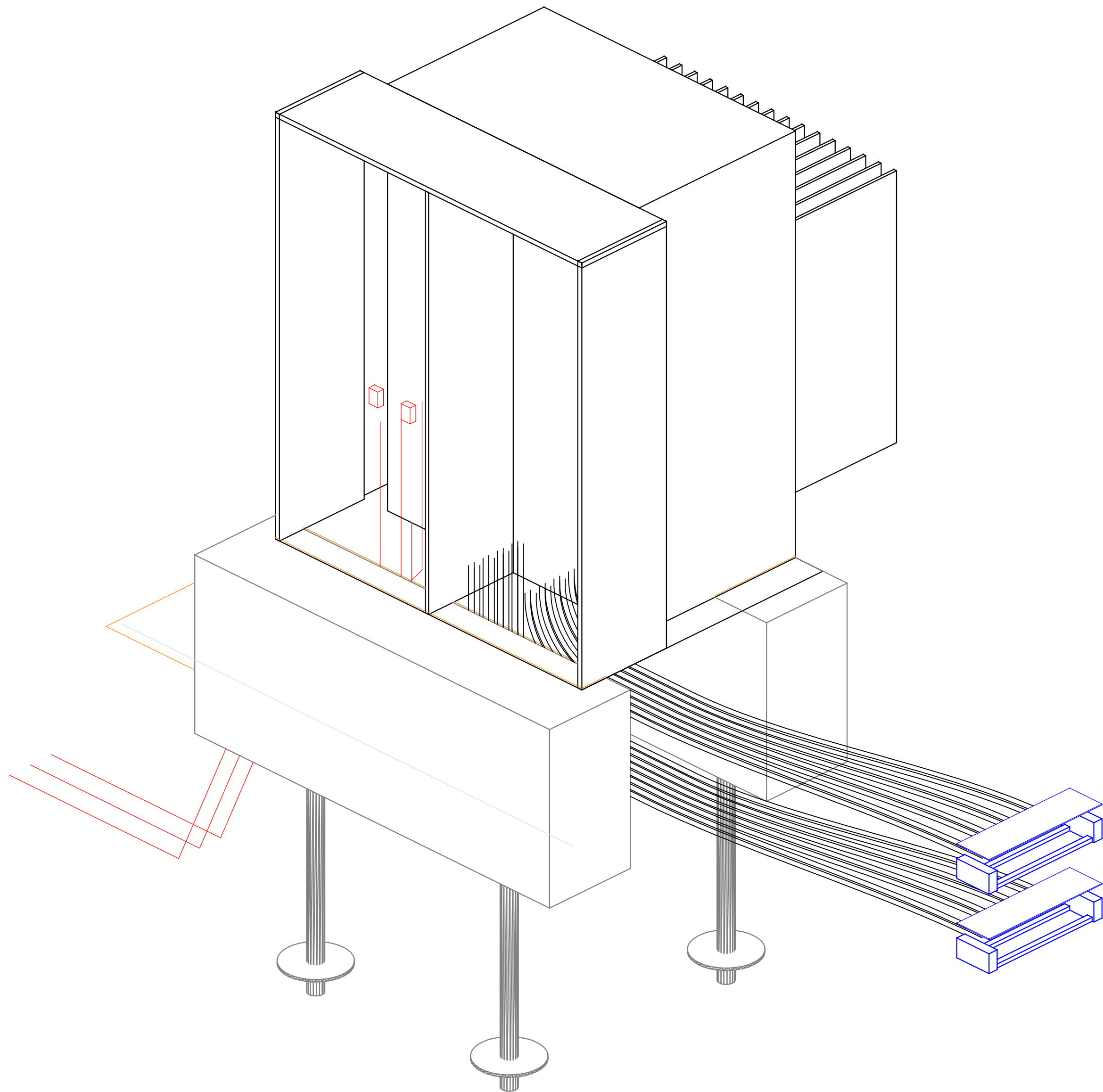
SEQ-2 Inspect support/backfill; record ducts; THEN install G-X1 ring crossing.

SEQ-3 Verify bearing; four auxiliary piles, takeoffs, two piers; cure/accept.

SEQ-4 Check OEM bearing and anchors; place transformer and bond.

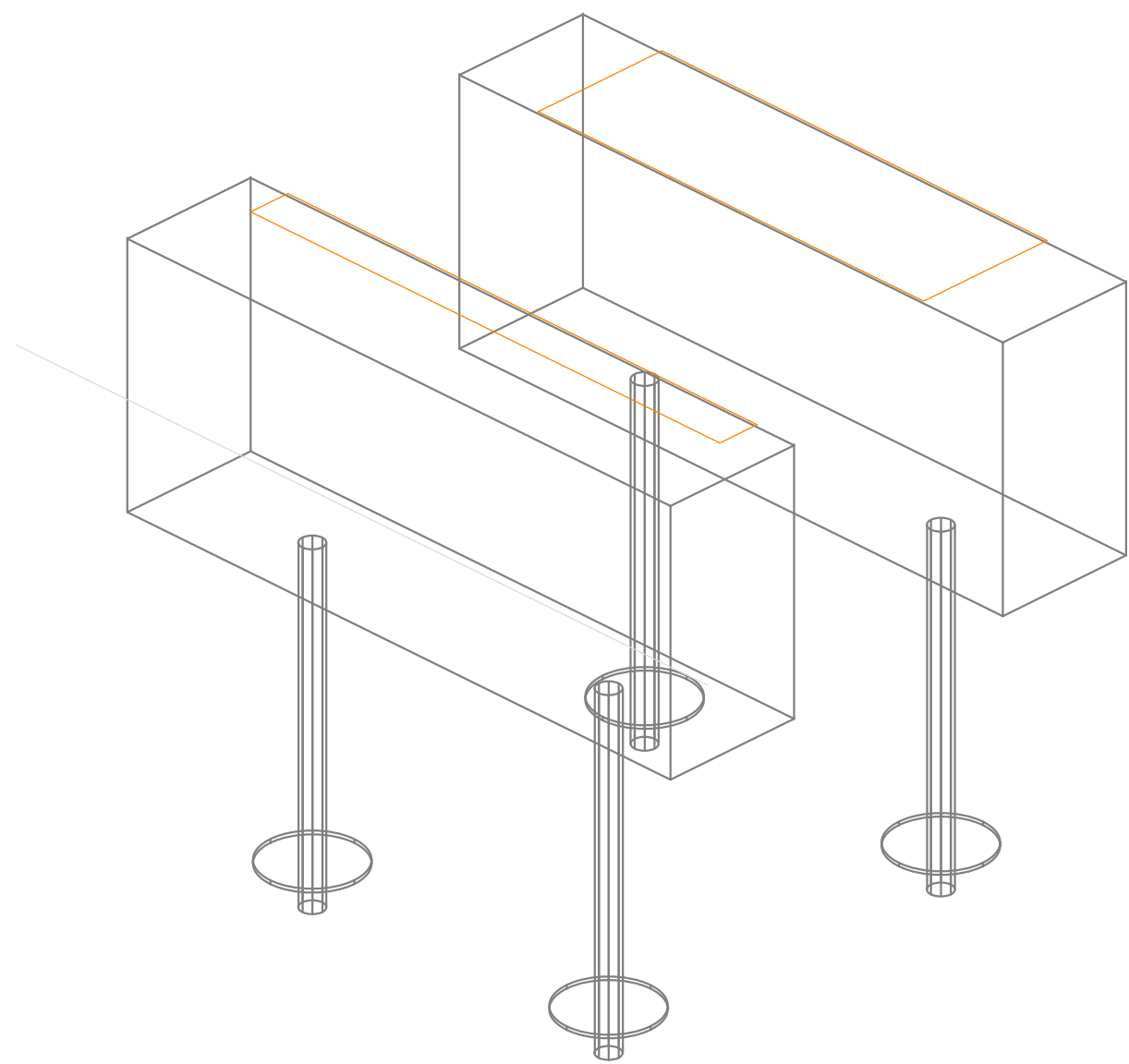
SEQ-5 MV crew ONE mobilisation: prove ducts, pull, terminate; final tests.

01 LOCAL INSTALLATION /32 CONDUCTORS TO T2



FRONT: TERMINAL DOORS / HV LEFT - LV RIGHT

02 TWO PIERS / FOUR SUPPLEMENTARY PILES



PRIMARY SUPPORT: prepared soil beneath both concrete piers. No pile capacity credited in normal bearing calculation.

SUPPLEMENTARY PILES: two per pier; shaft, helix and embedment shown schematically, not fabrication dimensions.

OEM BEARING INTERFACE: Place piers to the OEM bottom support drawing; support the designated structural bearing members and keep the terminal enclosure unloaded.

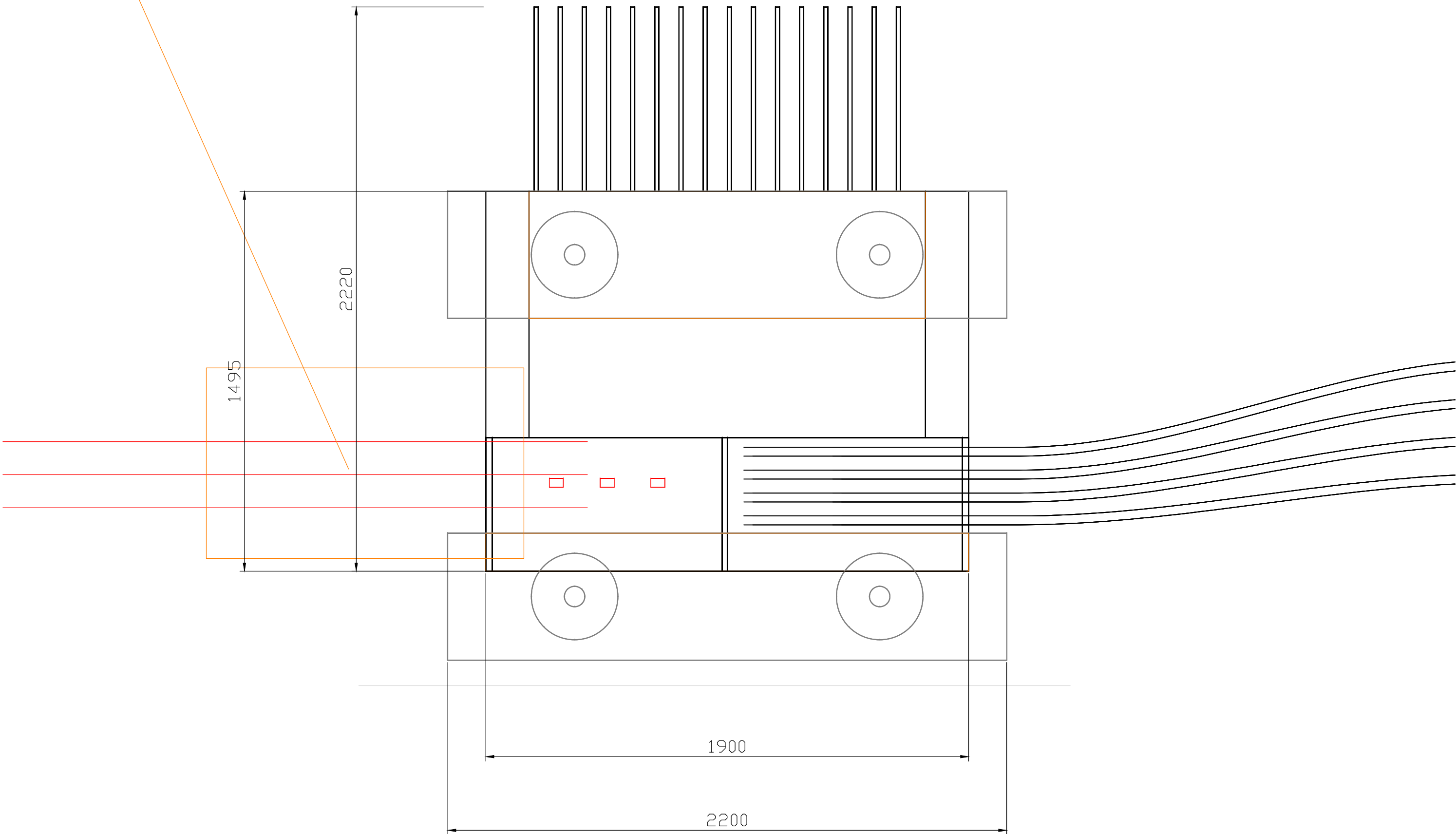
Local study: pier top G+450; two 2200 x 500 x 900 piers; external two-tier ladder tray.

OEM GA, 08 Sep 2026: 1900W x 2220D x 2150H; mass 6800kg.

Views omit doors/covers for visibility. 32 identified centreline routes stop atG650; actual termination remainsT2.

01 PLAN / FRONT AT BOTTOM

MV TRANSITION / EXCAVATION INTERFACE

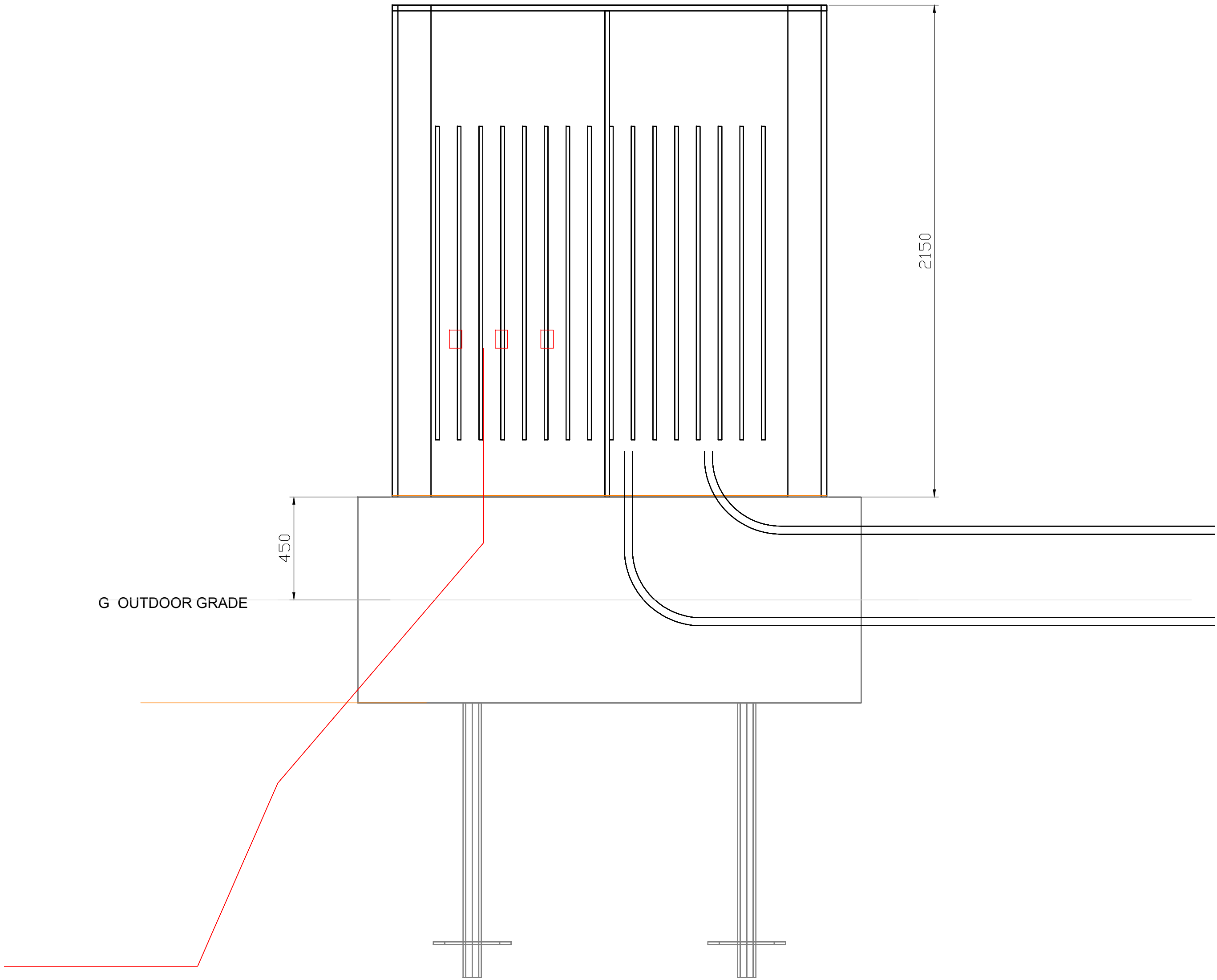


HV APPROACH

STRAIGHT TRAY / TO BUILDING

Equipment width 1900; base-outline depth 1495; rear radiator envelope extends total depth to 2220. Front compartment exterior depth 525 is not a net cable aperture.

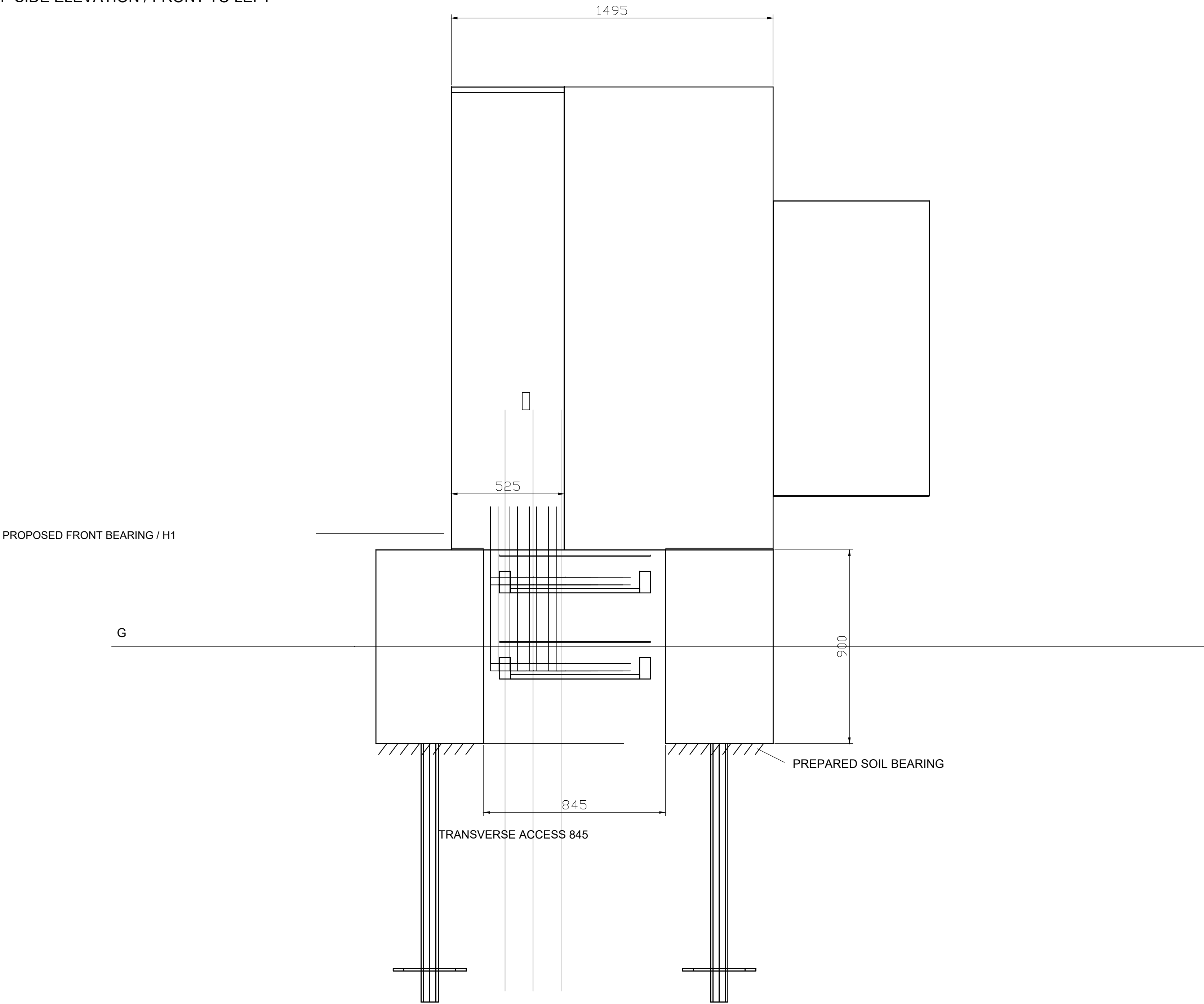
02 FRONT ELEVATION / DOORS OMITTED



Piers 2200 long, 500 wide; clear transverse separation 845. Coordinate OEM support rails, anchor coordinates and clear HV/LV apertures before final setting-out.

Straight tiers:600 net /700 outer;400 pitch. Bearing G270 /G-130; covers G420..425 /G20..25. X4000 building-side stub denotes continuation. TF01 X2100..4000: support assembly; product detail BY OEM. See E314/E315.

01 SIDE ELEVATION / FRONT TO LEFT



C1: E312 PLAN; MV-P1 BEFORE LOADING, E310 SEQ-1..2

02 ELEVATION AND INTERFACE SCHEDULE

Equipment height2150 above base.
BaseG450; topG2600.
Tray bottomsG250/G-150; bearingG270/G-130.
Cover underside420/20; top425/25.
Pitch400; intertier225.
Building board soffitM1000; topM1030.
Z_M=Z_G+Delta; surveyDelta and actual beamsD1.
See E315 for route longitudinal section.

C1: PRE-INSTALL BEFORE LOADING
MV-P1 near-foundation ducts and accepted backfill are CIVIL SEQ-1..2 (E310). Later deep excavation beside loaded piers requires a verified support/no-impact arrangement.

T1/T2/S1 CABLE ENTRY
32 independent physical routes share E315 XYZ; endpointG650. TF01 support and OEM aperture/terminalXY remain interfaces. No ordinary side rail traverses the fan-in. Terminal geometry and tool access follow the T2 interface.

03 CONSTRUCTION SEQUENCE

A CIVIL (SEQ-1..3)
MV-P1 ducts/backfill FIRST; THEN G-X1 crossing. Verify bearing; four auxiliary piles (no normal bearing credit), takeoffs and two piers; cure/accept. Preserve transverse access. See E310.

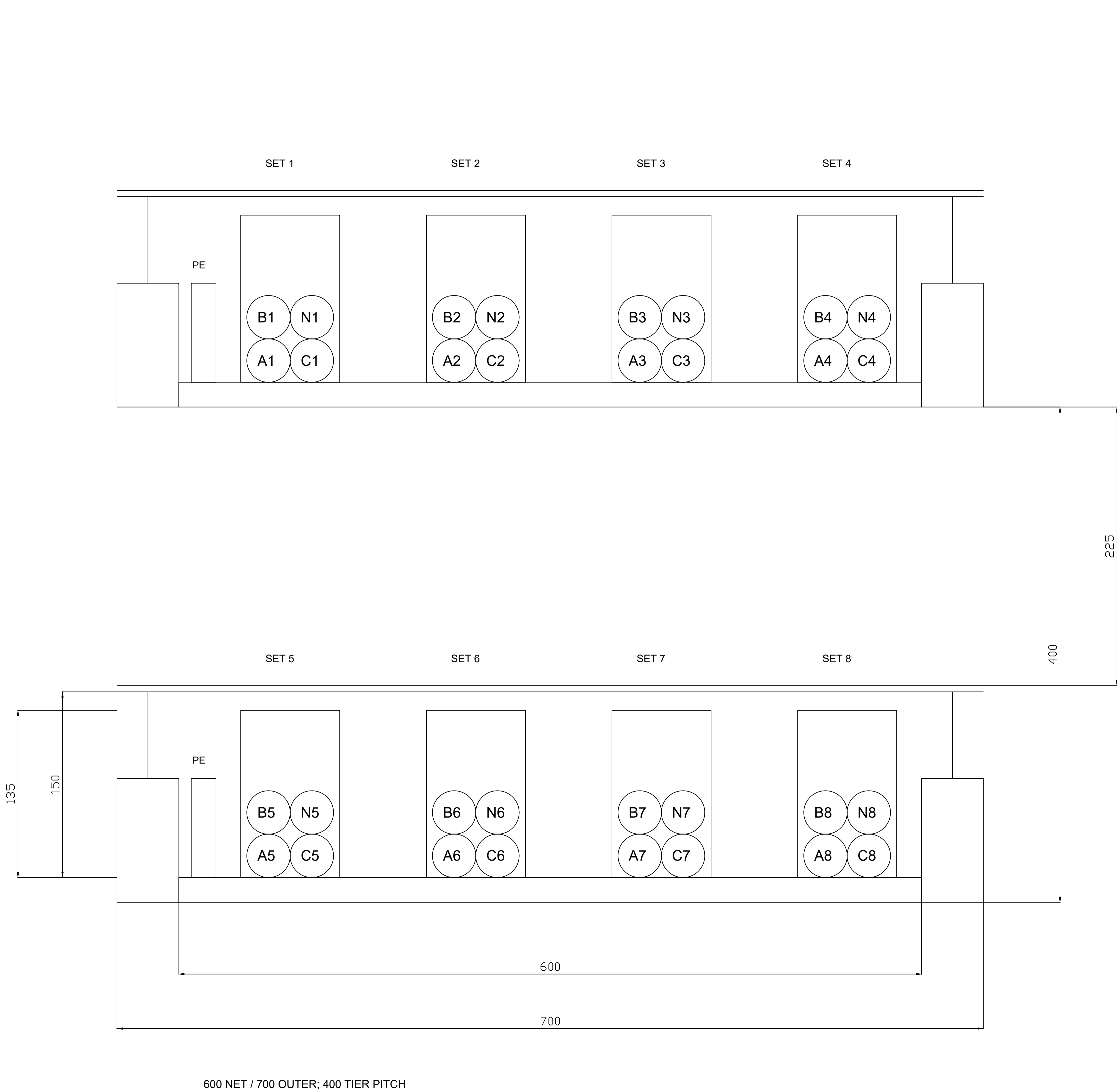
B EQUIPMENT (SEQ-4)
Accept concrete strength. Verify OEM bearing contact and anchors before placement; complete equipment bonding. Maintain both electrical work zones.

C MV / LV (SEQ-5)
MV crew ONE mobilisation: prove pre-installed ducts, pull and terminate. Remote excavation only with C1 support/no-impact basis. Complete trays, bonding, final tests and drainage.

K&K DATA / TRANSFORMER BOTTOM ENTRY

E-314 / PE-P1 / 1000 kcmil AL / TWO-TIER CABLE CROSS-SECTION

A-A / 32 SINGLE CONDUCTORS / TWO STRAIGHT TRAY TIERS / MODEL ENLARGEMENT 5x



UPPER SETS1-4 / LOWER SETS5-8

24 phases +8 provisional full-size neutrals.

Each conductor1000 kcmil Al; PE separate.

D35 geometry envelope; actual OD31.19 candidate.

CMP 80W x115H x58L candidate body.

135H installation reserve ≈115+10+10.

150 clear to removable cover;15 spare.

15 clearance is NOT tool-working space.

Remove cover for clamp/bolt tool access.

Cable seats/mounting pattern: supplier interface S1.

Upper: bottom250 / bearing270 / cover420..425.

Lower: bottom-150 / bearing-130 / cover20..25.

225 between lower cover and upper tray bottom.

25 from upper cover top to support plane450.

Cover stops outside equipment enclosure footprint.

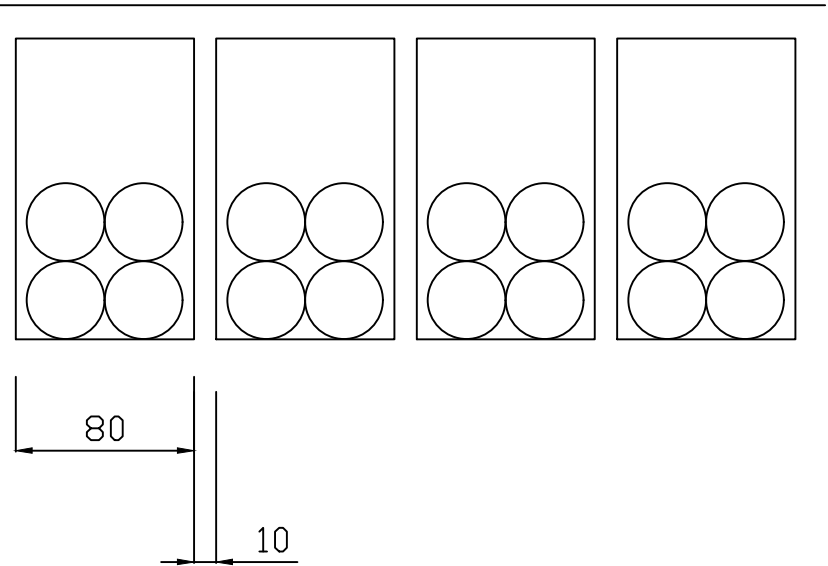
Clamp envelope shown; hole pattern to match the selected OEM clamp.

Parallel ABCN sets stay together; no cross-layer mix.

Electrical / thermal basis: cable ampacity and installation calculations.

Verify installed ampacity for the illustrated cable grouping, cover arrangement and terminations.

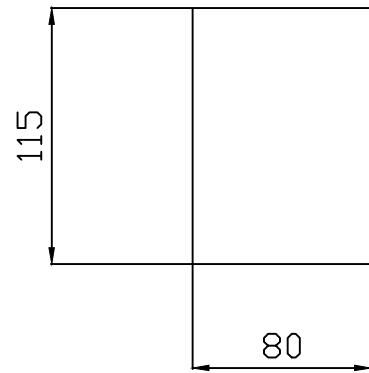
B-B / X2100 FAN-IN END / 3x / NO ORDINARY SIDE RAIL



90 CENTRES /80 ENVELOPE /10 SIDE GAP

CMP BODY80x115; DEPTH58

ISOLATED SIZE ENVELOPE;



SEATS / BOLTS: CONFIRM OEM INTERFACES.

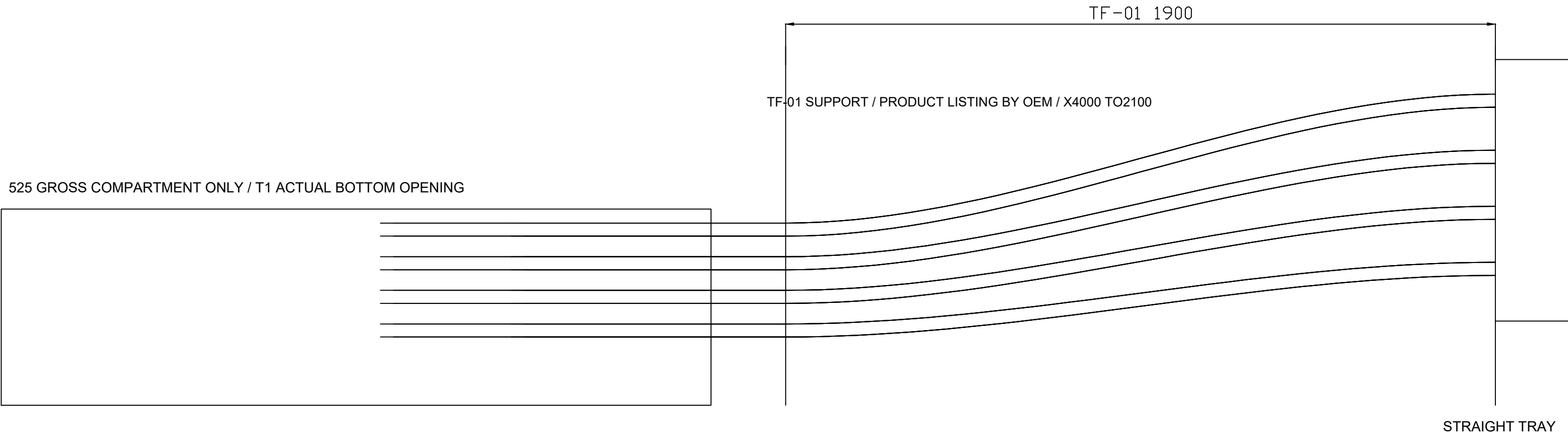
Dimensions: mm.

K&K DATA / TRANSFORMER BOTTOM ENTRY

E-315 / PE-P1 / STRAIGHT TRAY / BOTTOM-ENTRY AND CABLE-RISE ENVELOPES

G-C01 / ALL32 IDENTIFIED CONDUCTORS / COMMON XYZ / PE-P1

PLAN / X0=BODY LEFT; Y0=TERMINAL COMPARTMENT FRONT / DIMENSIONS IN mm



ENTRY AND LEVEL DATUMS

32 conductors: upper sets 1-4; lower sets 5-8.

Overlapping projections: see E314 cross-sections.

TF-01: X2100-X4000; 1900 long fan-in region.

S1: support assembly and product listing to be selected.

T1: Gross compartment depth 525; obtain the net bottom cable opening from OEM.

OEM bottom opening and base supports require coordination.

T2: drawn routes end at G+650, below actual terminals.

GA terminal heights above base: 1200 / 1403.

With base G+450 : calculated levels G+1650 / G+1853.

Remaining rise: 1000 / 1203; determine cable cutting lengths from the complete routed length and termination allowance.

Terminal XY, access and final bends: OEM interface T2.

Upper bend radii R335 / R300; lower R335 / R300.

Tray bearing G+270 / G-130; pitch 400.

Covers stop outside transformer enclosure footprint.

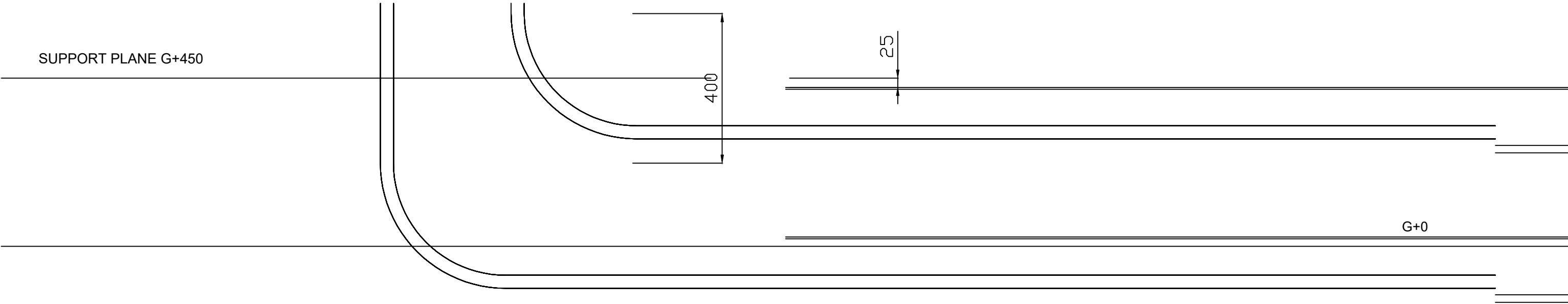
Building board: underside M1000 / top M1030.

Survey relation: $Z_M = Z_G + \Delta$; verify actual beams.

SIDE / X-Z / SAME ROUTES / GROUND G=0

CABLE BENDS ONLY; TRAY DIRECTION REMAINS STRAIGHT

ENDS G+650; OEM TERMINAL ROUTING STARTS AT INTERFACE T2



E205 GENERATOR OPERATING SEQUENCE

K0 CURRENT TOPOLOGY / 16 SETS - 4 SECTIONS - 3 TIES / FUNCTIONAL REQUIREMENTS / 26 SEP 2026

GENERATOR OPERATING SEQUENCE / FUNCTIONAL REQUIREMENTS			
STATE	MODE / EVENT	REQUIRED ACTION	INTERLOCK / SERVICE BOUNDARY
ST-01	UTILITY / STANDBY	ATS on N; GBs open; ties preclosed only on proved dead bus	No LOTO; proven positions; one close command at a time
ST-02/03	BLACK START	Start sets; charge inhibit; one first GB per connected island	Independent voltage proof + arbitration; subsequent GBs synchronise
ST-04/05	STAGED PICKUP	One ATS emergency close permit; latch after closed feedback	Net capacity + U + reserve + step/kVA checks; permit loss is NOT a trip
ST-06/07	SET FAIL / TRIP	Recompute online capacity; protect connected plant	No assumed IT curtailment; no essential CDU shedding; battery is time-limited
ST-08	UPS OUTPUT LOSS	Rack inputs pick up on surviving paths; update segment demand	Independent UPS outputs NEVER interconnected; include assigned CDU duty
ST-09	SEGMENT FAULT	Isolate faulted bus; input-lost UPSs use batteries temporarily	No power through isolated section; post-autonomy topology/capacity separately checked
ST-10/11	TIE / MAINTENANCE	Proven-open ties form separate islands	Planned work requires both utility feeds healthy; blackout maintenance requires a separate capacity and isolation assessment.
ST-12	UTILITY RETURN	Open-transition retransfer, then stagger recharge	Service limits: Zone 7 per agreement; Zone 8 8 MW. TX headroom / OEM charge controls.
ST-13/14	COMMS / DC LOSS	Local protection remains; block unqualified new closes	OEM fail-state testing must establish stay-running and black-start behaviour.
ST-15..18	PERMIT / TIE FAILURE	Debounce permits; distinguish open / closed / UNKNOWN	UNKNOWN is NOT isolation. Failure to open: no maintenance. Failure to close + proved open: islands
ST-19	COMMON-BUS DUTY GATE	16-set common-bus mode requires accepted fault-duty/protection screen	17.1% X"d exists; confirm base, decrement, X/R, connections and clearing time

CONTROL REQUIREMENTS: OEM integration and FAT to demonstrate the specified sequence.

CONTROL STATES ST-01 through ST-19; generator network: E203; operating load basis: E204.

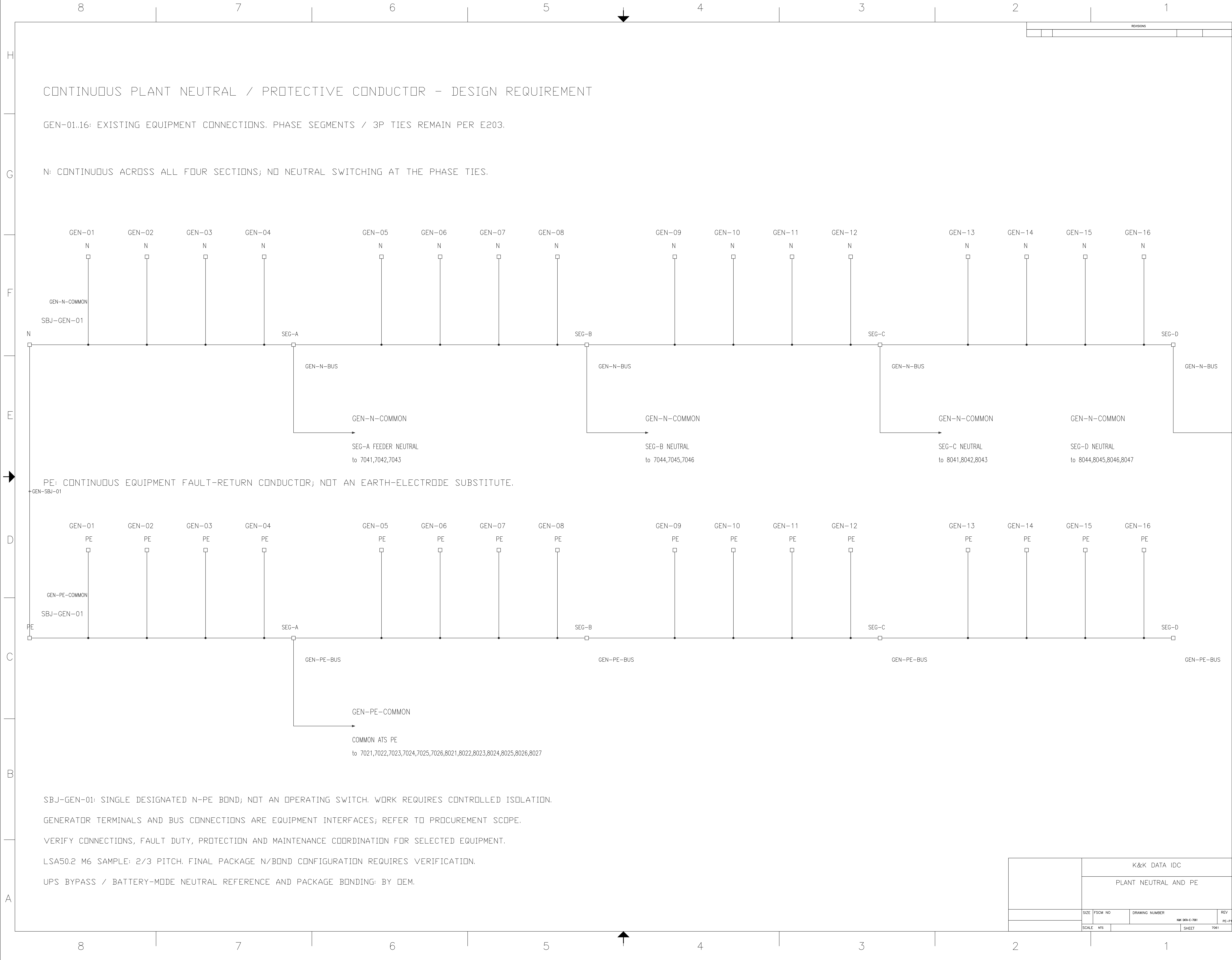
ST-14: Provide verified control power for dead-bus BTB operation; busbar-fed AC is unavailable when both busbars are dead.

U = assigned CDU, charging, auxiliary and uncounted losses; determine these quantities explicitly. Reserve is additional where required.

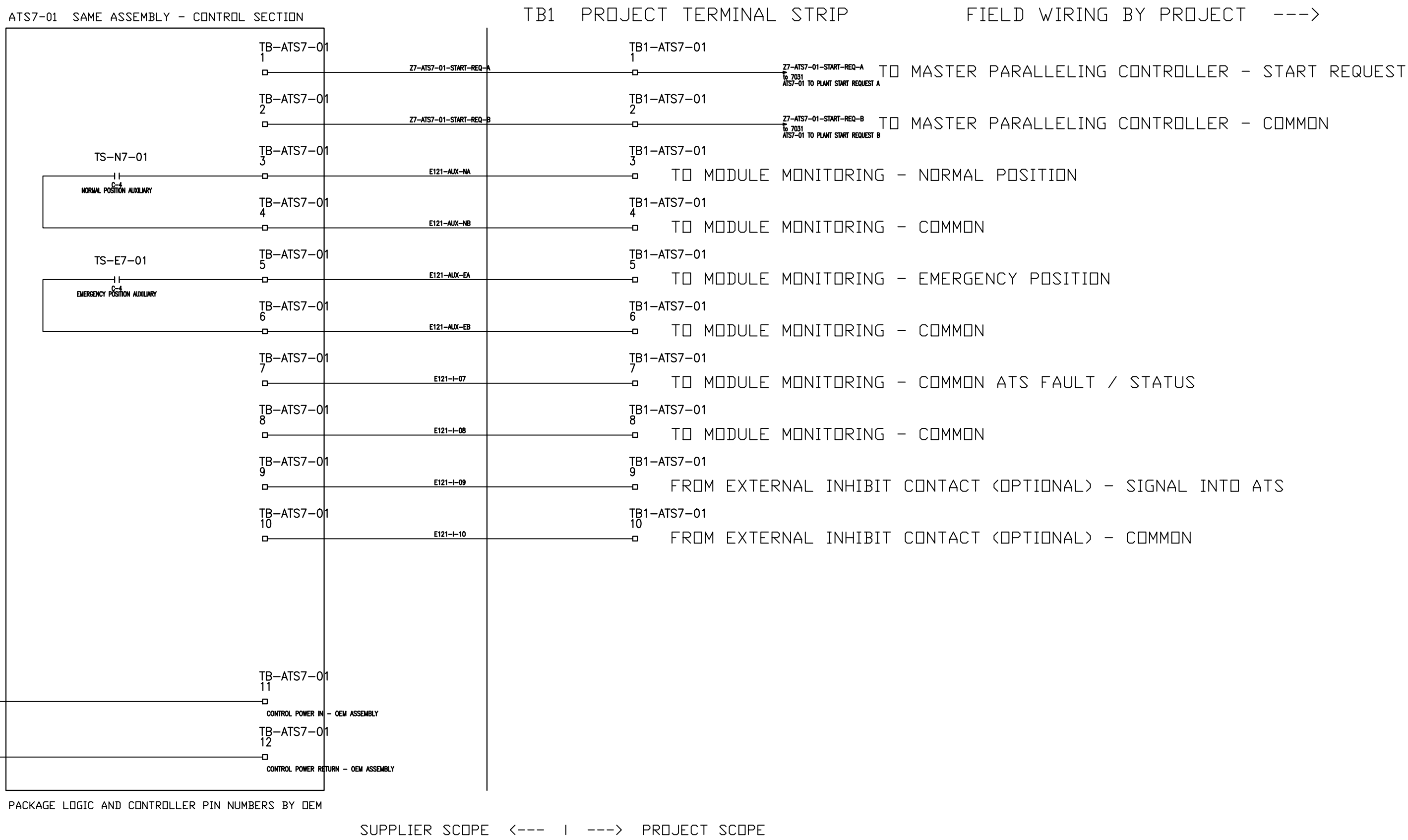
SOURCE: DEIF G5 4189341278E pp17-23,62-64,69-72,84; OEM equipment data; operating calculations.

CONTROL SYSTEM SCOPE: Integrate these functions with the illustrated four-section, three-tie arrangement. Feeder arrangement as shown; K1/K2 alternatives excluded.

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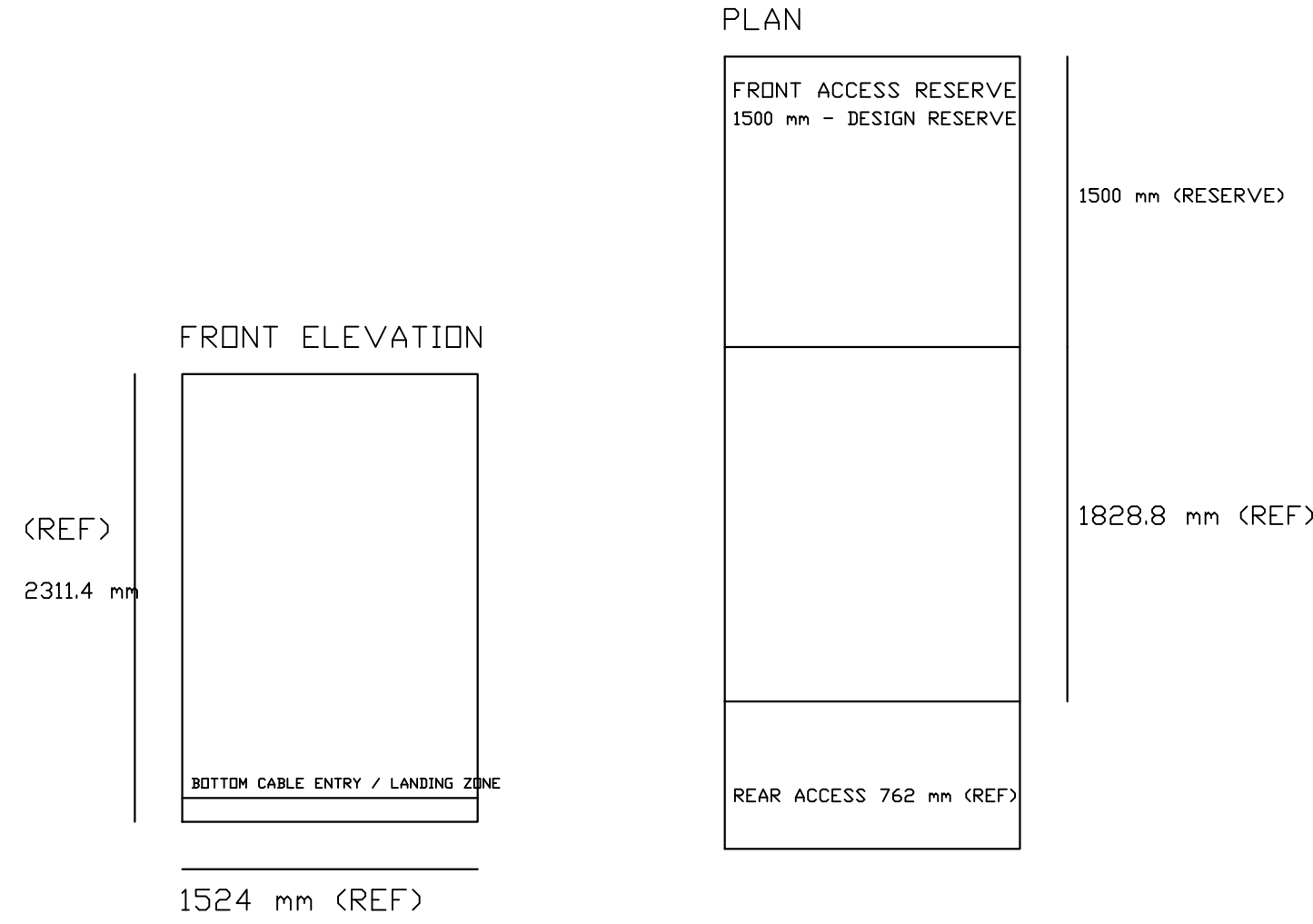






TBI	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ---> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY OEM; TBI AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N7-01 AUXILIARY	ATS ---> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E7-01 AUXILIARY	ATS ---> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM OEM CONTROLLER	ATS ---> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY OEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO OEM CONTROLLER INPUT	FIELD ---> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY OEM	PROJECT ---> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1-8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <---> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

1. A1S7-01 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
2. THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
3. SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING- DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
4. THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
5. TERMINAL IDS ARE PROJECT FUNCTIONAL IDS. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
6. GROUNDING IS THE STARTER PARALLELING CONTROLLER. NOT DIRECT STARTER TO SET POINT. THE STARTER MUST BE PARALLELED TO THE SET POINT.
7. POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
8. NORMAL SOURCE PROTECTION AND ISOLATION CB7-01. SEE E107 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCB7-01. SEE E107 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
9. ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
10. EQUIPMENT SELECTION TO BE COORDINATED. ASCO / EATON DATA DESIGN REFERENCE.



PROJECT: K&K DATA IDC - ZONE 7 - PATH 01
DRAWING: K&K DATA-E-7021 ATS-01 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

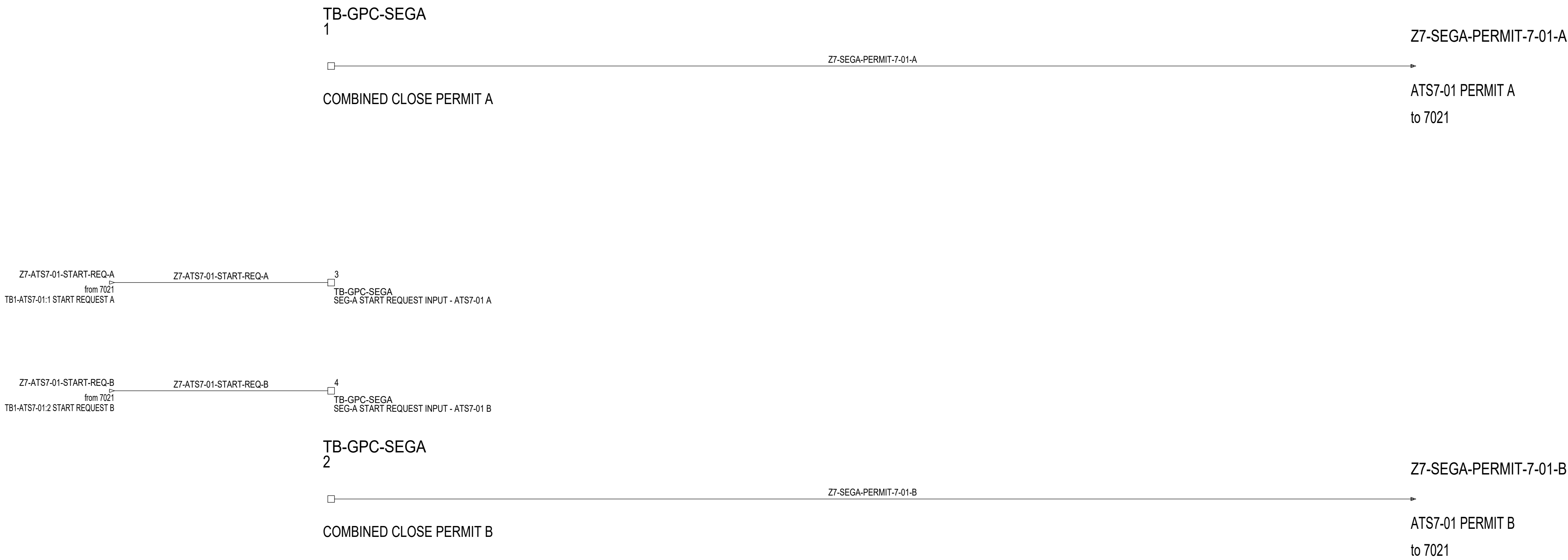
K&K DATA-E-7031 AT57-01 / SEG-A PLANT CONTROL INTERFACE

PATH 7-01: START TB-GPC-SEGA:3/4; CLOSE PERMISSION TB-GPC-SEGA:1/2 PER E205 PE-P1 2026-09-26

GENERATOR PLANT SEG-A TB-GPC-SEGA

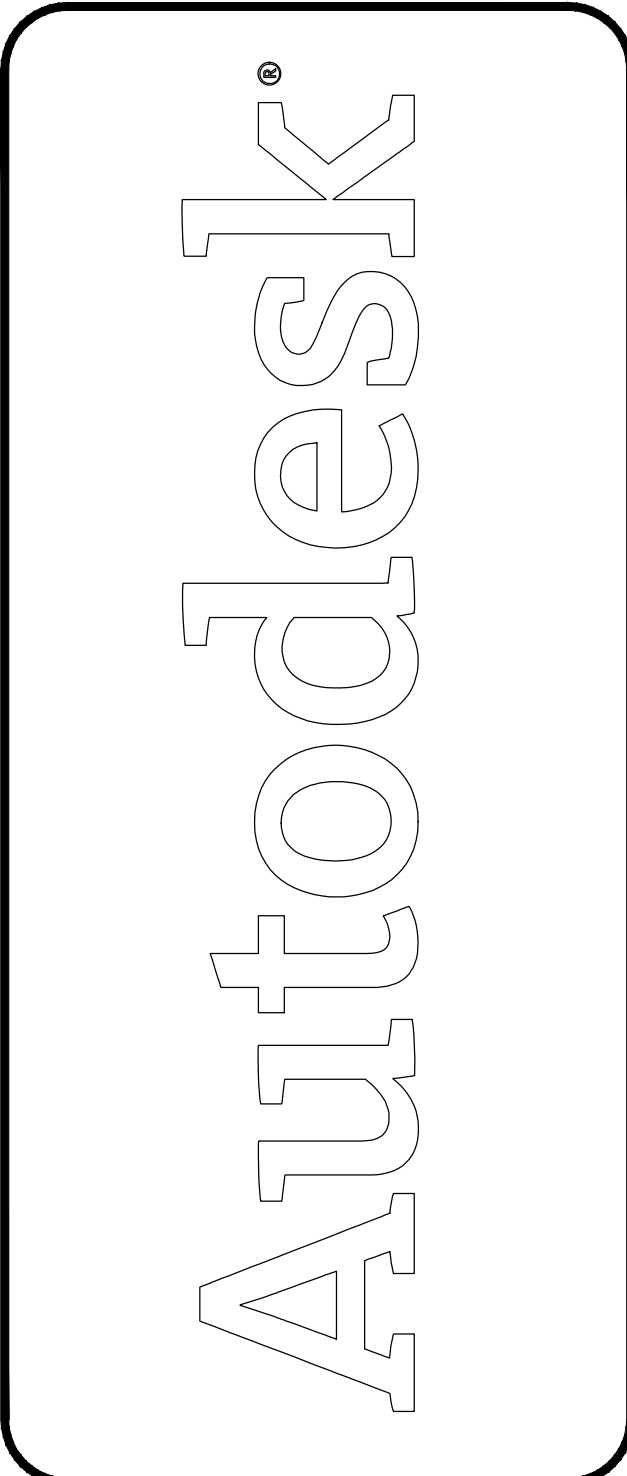
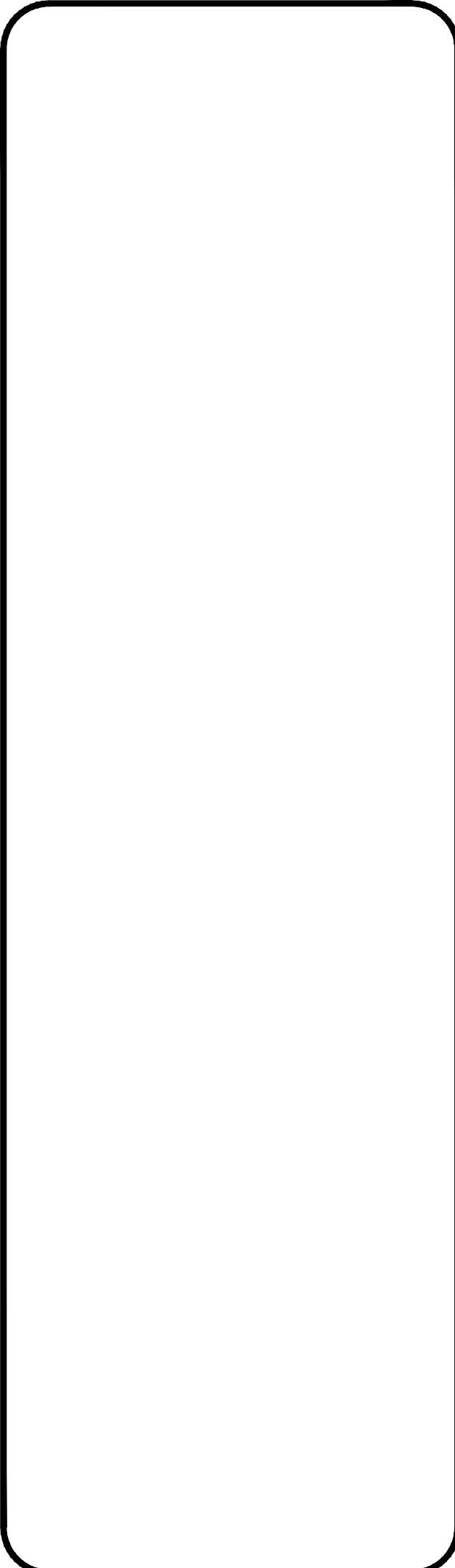
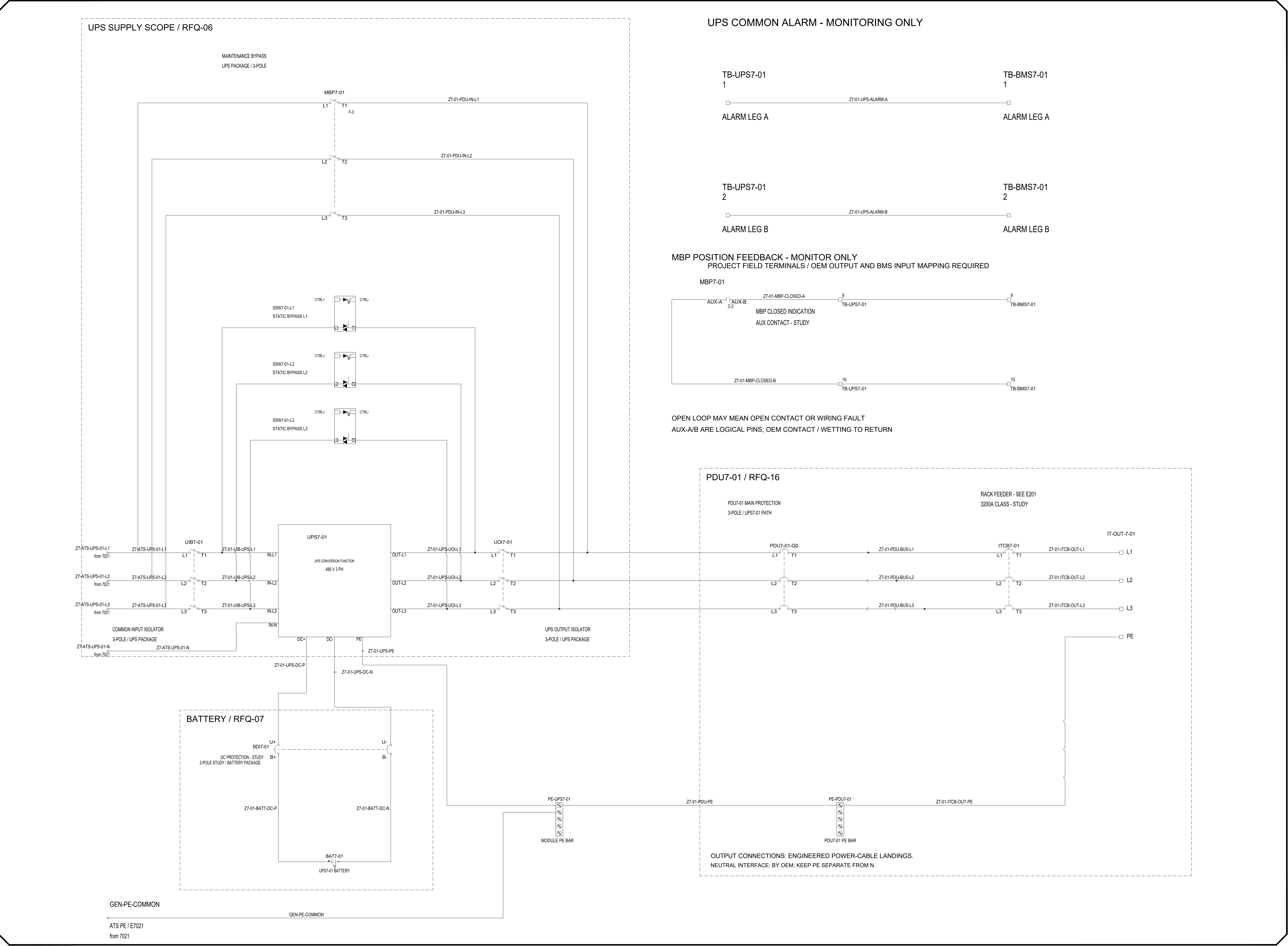
CLOSE PERMISSION TO E7021

ATS TERMINALS: SEE E7021



1. ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
2. THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
3. LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
4. SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
5. PROJECT TERMINALS: TB1-ATS7-01:11/12 AND TB-ATS7-01:13/14. OEM CONTROLLER PIN MAPPING: BY OEM. TB1-ATS7-01:1/2 START REQUEST IS SHOWN ON E7021.
6. COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
7. START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
8. PATH 7-01 / SEGMENT A. OTHER PATHS: SEE THEIR DEDICATED INTERFACE SHEETS.

1
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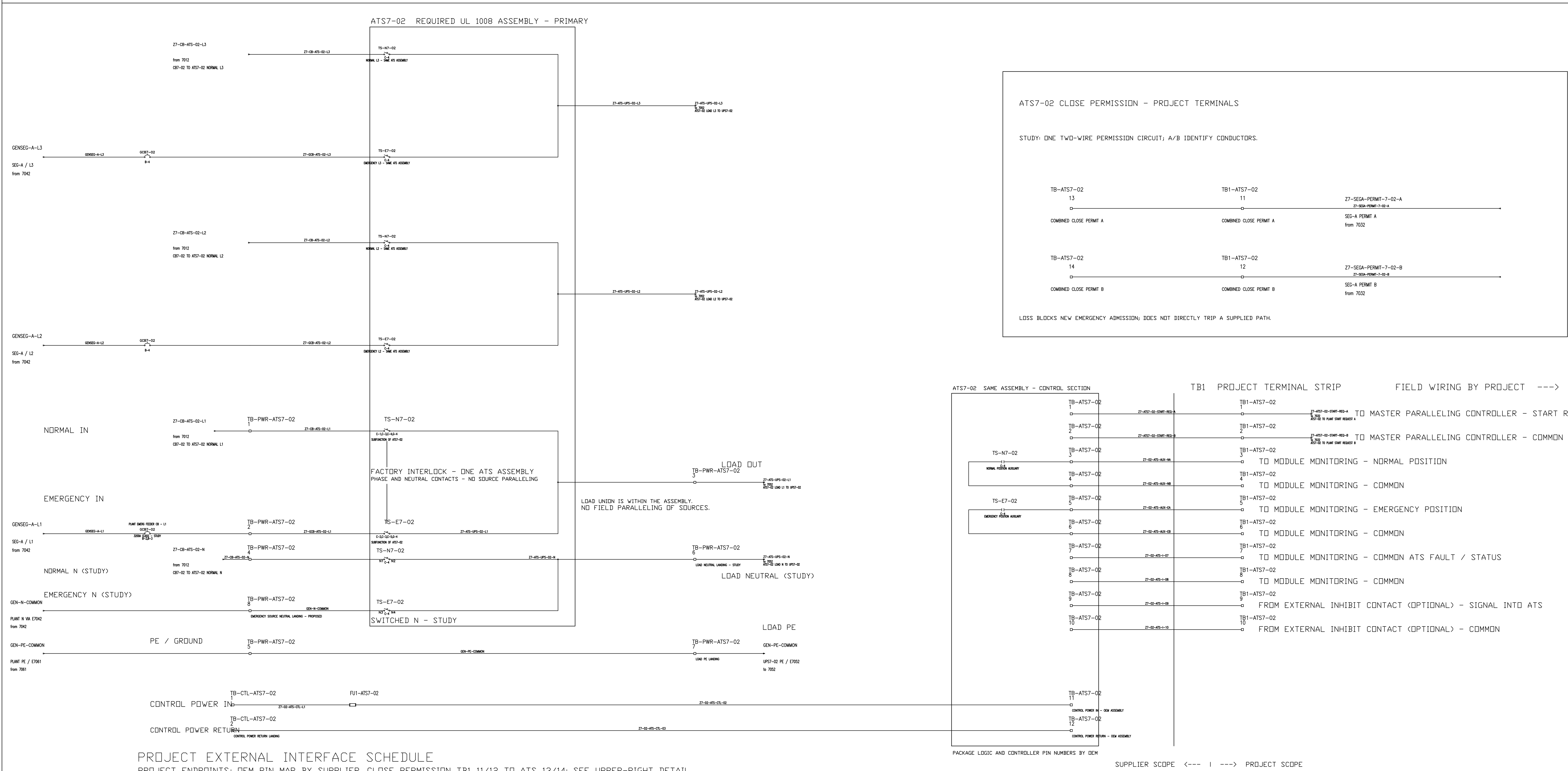
NO.	DATE	REVISION	BY
DWG TITLE			
UPS7-01 / BYPASS AND PDU INTERFACES ENGINEERING STUDY UPS7-01 DETAIL COORDINATION			
ENGINEER	CHECKED BY		
JOB NO.	DATE	DRAWN BY	
SCALE	No Scale	DATE	2026-09-02 / PEP1
DWG NO.	K&K DATA-E-7051		
SHEET NO.	OF		

Autodesk®

NO.	DATE	REVISION	BY		
DWG NO	TITLE				
PATH 7-02 MV BRANCH TO CB7-02 PCO - KFP - T7-02 - CB7-02 <i>ENGINEERING STUDY</i>					
ENGINEER		CHECKED BY			
JOB NO	K&K DATA	DRAWN BY			
SCALE	No Scale	DATE	2026-09-27		
DWG NO					
<i>K&K DATA-E-7012</i>					
SHEET NO					
<i>O'F</i>					

K&K DATA-E-7022 ATS7-02 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS

ZONE 7 / PATH 02 REV PE-P1 2026-09-27



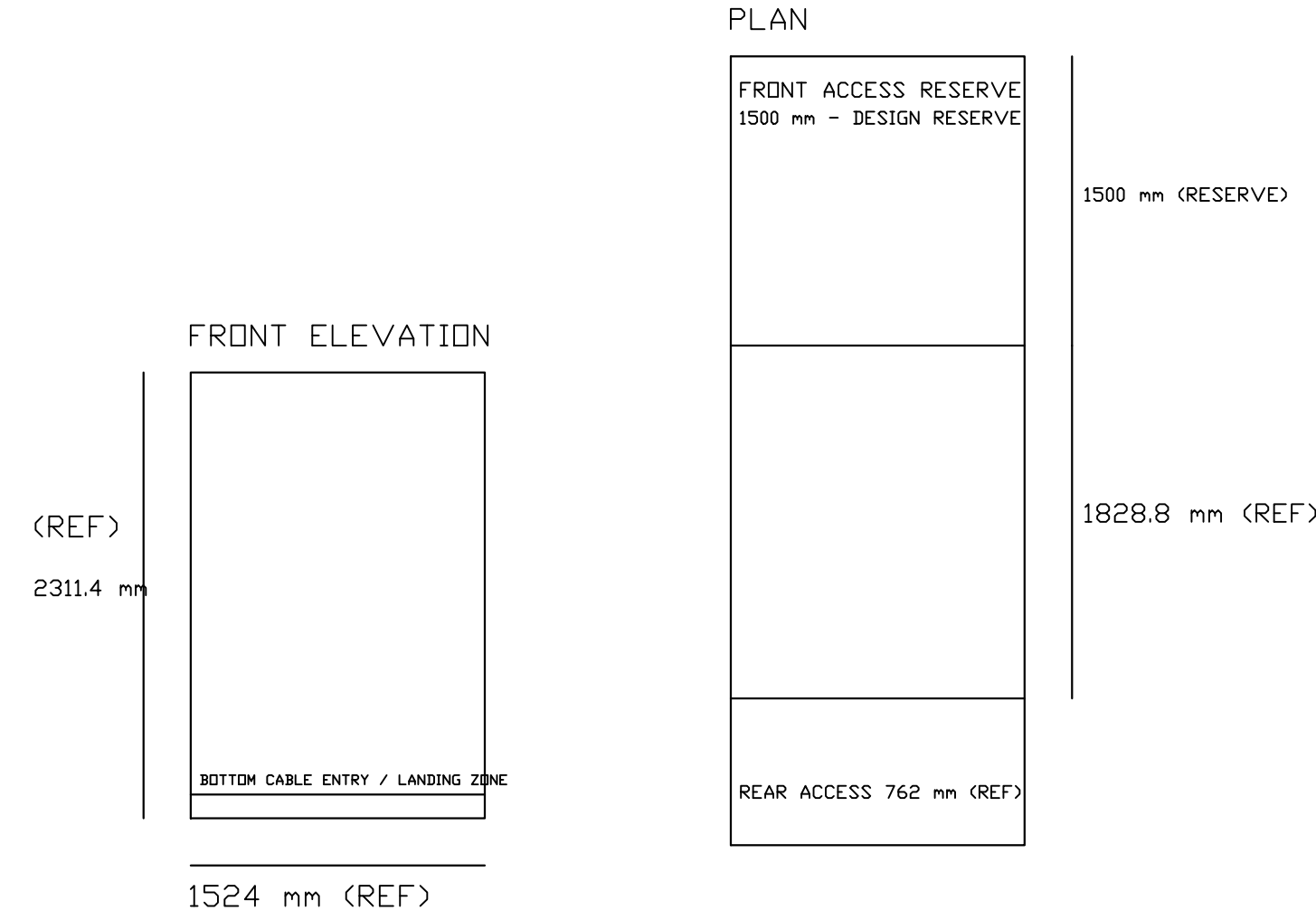
PROJECT EXTERNAL INTERFACE SCHEDULE
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TB1 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TB1	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ---> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TB1 AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N7-02 AUXILIARY	ATS ---> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E7-02 AUXILIARY	ATS ---> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ---> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ---> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ---> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <---> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

- ATS7-02 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
- THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
- SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
- THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
- TERMINAL IDs ARE PROJECT FUNCTIONAL IDs. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
- GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
- POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
- NORMAL SOURCE PROTECTION AND ISOLATION: CB7-02. SEE E107 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCB7-02. SEE E107 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
- ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
- EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; OFFERED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

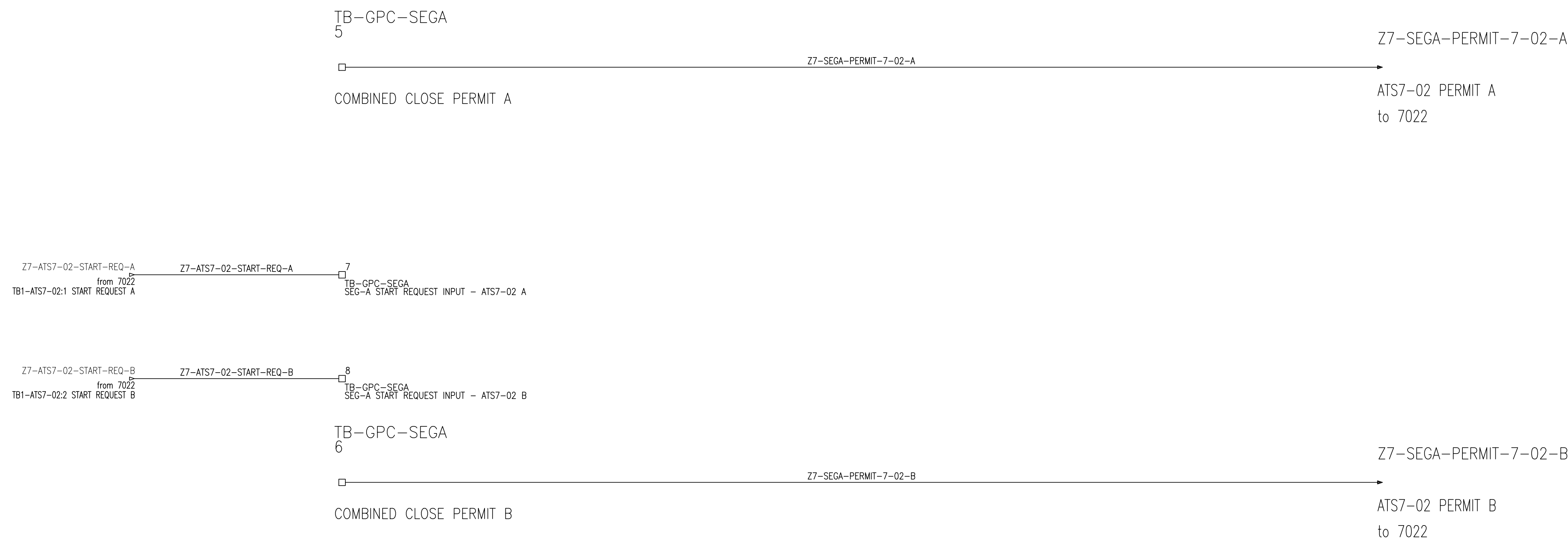
PROJECT: K&K DATA IDC - ZONE 7 - PATH 02
DRAWING: K&K DATA-E-7022 ATS7-02 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

K&K DATA-E-7032 ATS7-02 / SEG-A PLANT CONTROL INTERFACE
PATH 7-02: START TB-GPC-SEGA:7/8; CLOSE PERMISSION TB-GPC-SEGA:5/6 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-A TB-GPC-SEGA

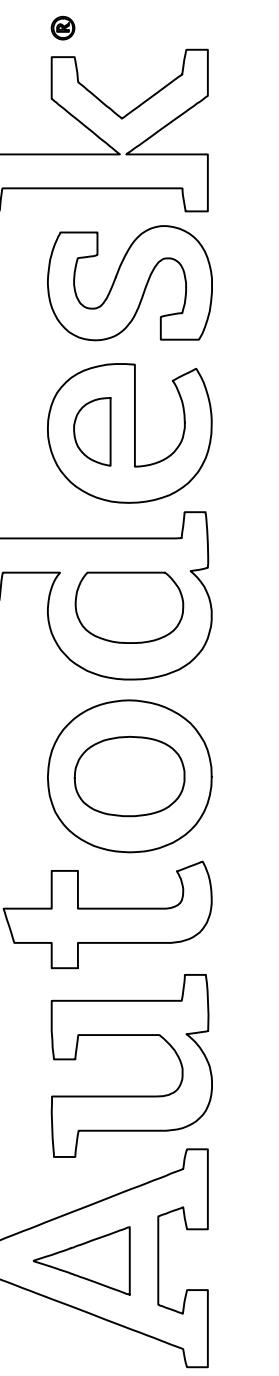
CLOSE PERMISSION TO E7022

ATS TERMINALS: SEE E7022



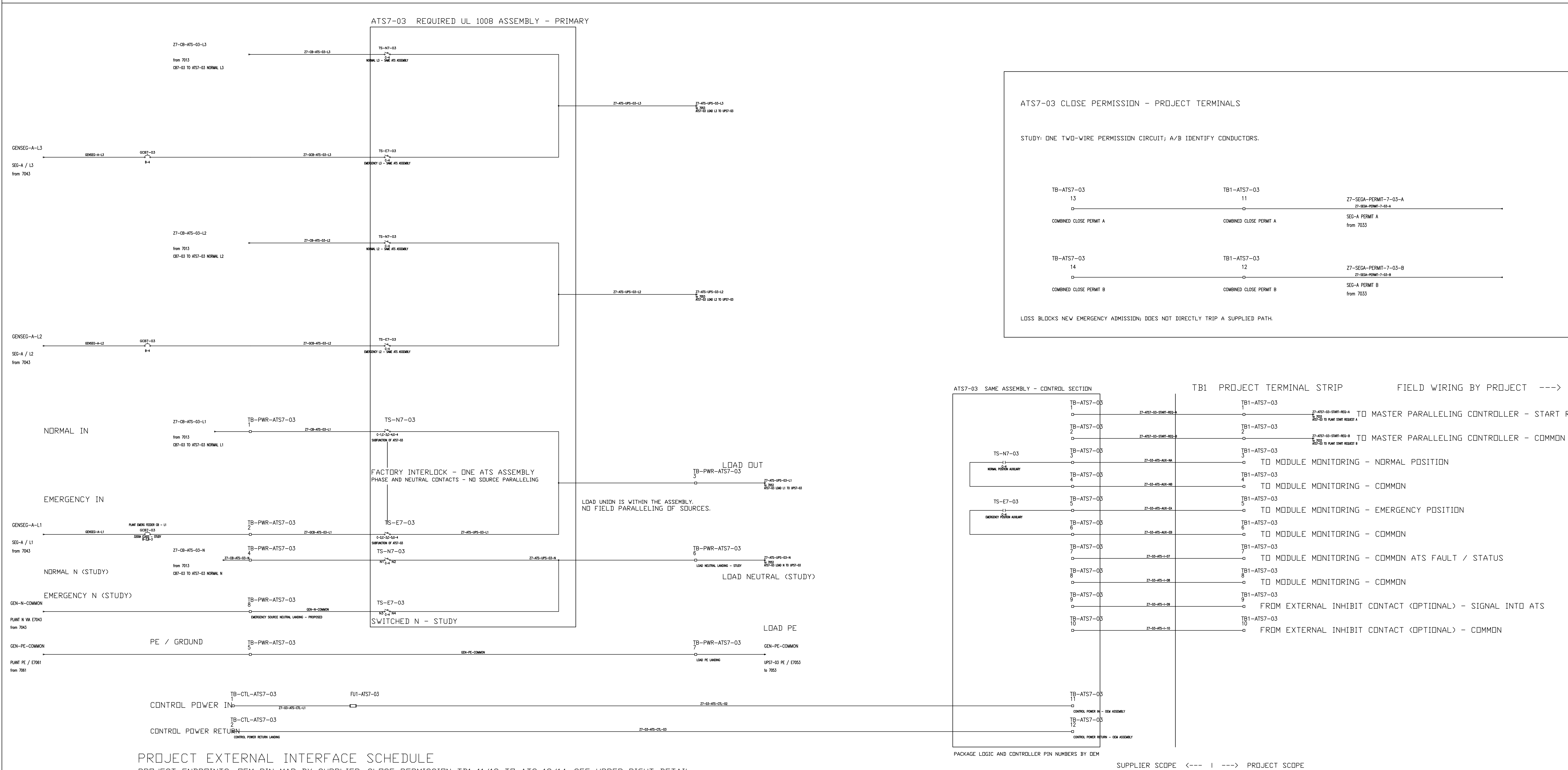
1. ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
2. THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP.
PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
3. LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
4. SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
5. TB1-ATS7-02:11/12 AND TB-ATS7-02:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS7-02:1/2 START REQUEST IS SHOWN ON E7022.
6. COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
7. START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
8. PATH 7-02 ON SEGMENT A ONLY. PATH 7-01 CONTROL INTERFACE: E7031.



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K&K DATA-E-7023 ATS7-03 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS

ZONE 7 / PATH 03 REV PE-P1 2026-09-27



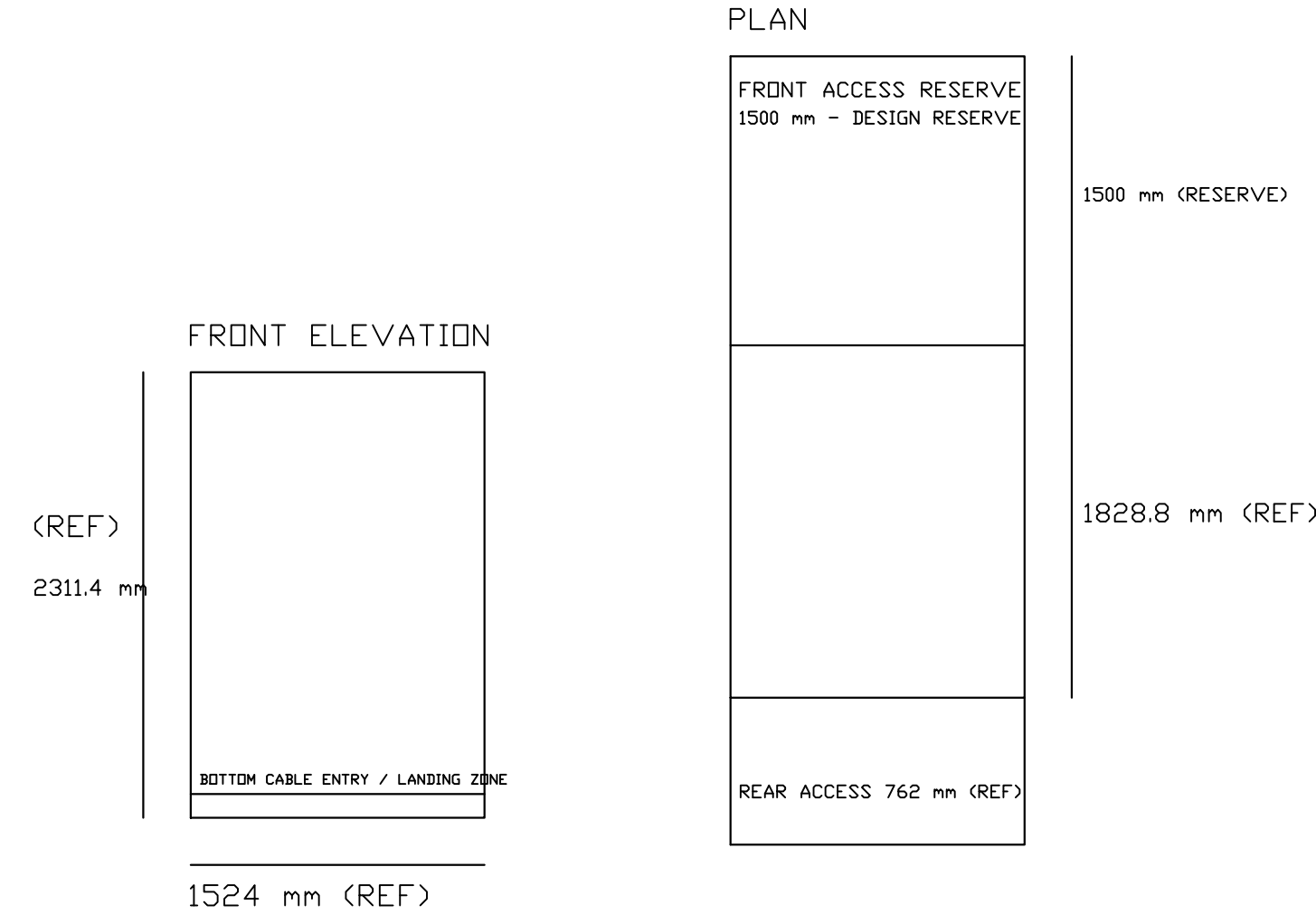
PROJECT EXTERNAL INTERFACE SCHEDULE
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TB1 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TB1	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ----> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TB1 AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N7-03 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E7-03 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ----> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ----> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ----> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <----> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

- ATS7-03 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
- THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
- SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
- THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
- TERMINAL IDs ARE PROJECT FUNCTIONAL IDs. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
- GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
- POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
- NORMAL SOURCE PROTECTION AND ISOLATION: CB7-03. SEE E107 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCB7-03. SEE E107 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
- ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
- EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



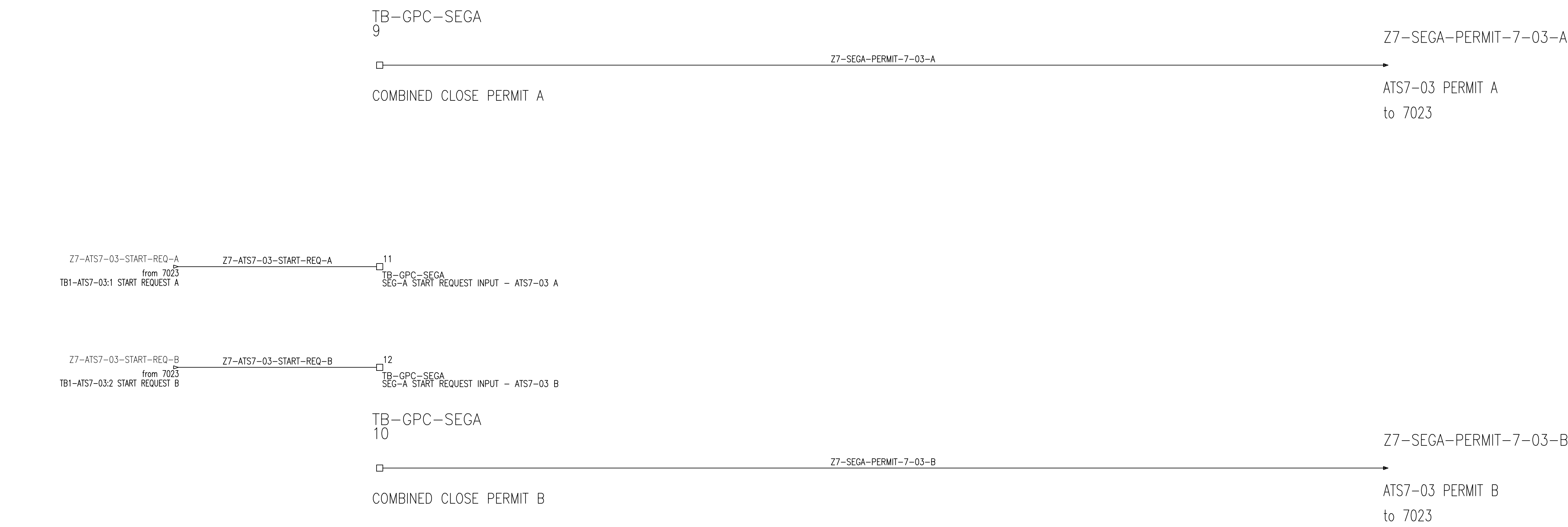
REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; OFFERED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

PROJECT: K&K DATA IDC - ZONE 7 - PATH 03
DRAWING: K&K DATA-E-7023 ATS7-03 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

K&K DATA-E-7033 ATS7-03 / SEG-A PLANT CONTROL INTERFACE

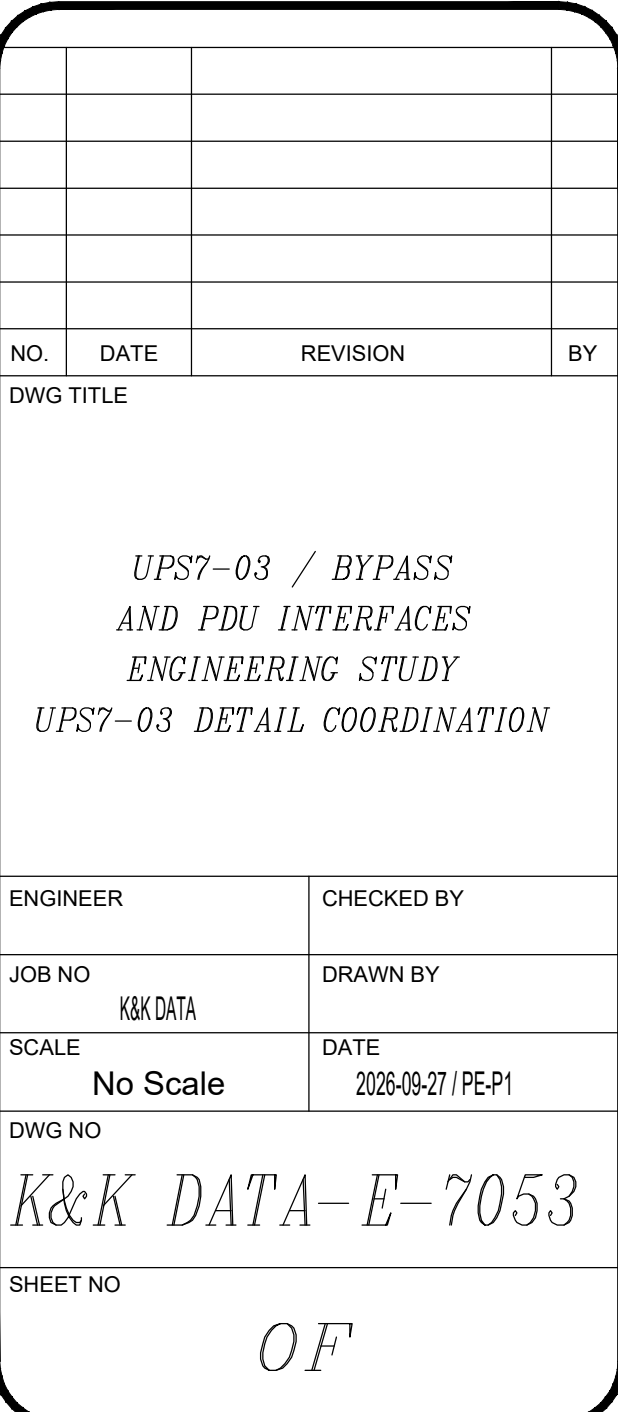
PATH 7-03: START TB-GPC-SEGA:11/12; CLOSE PERMISSION TB-GPC-SEGA:9/10 PER E205 PE-P1 2026-09-27

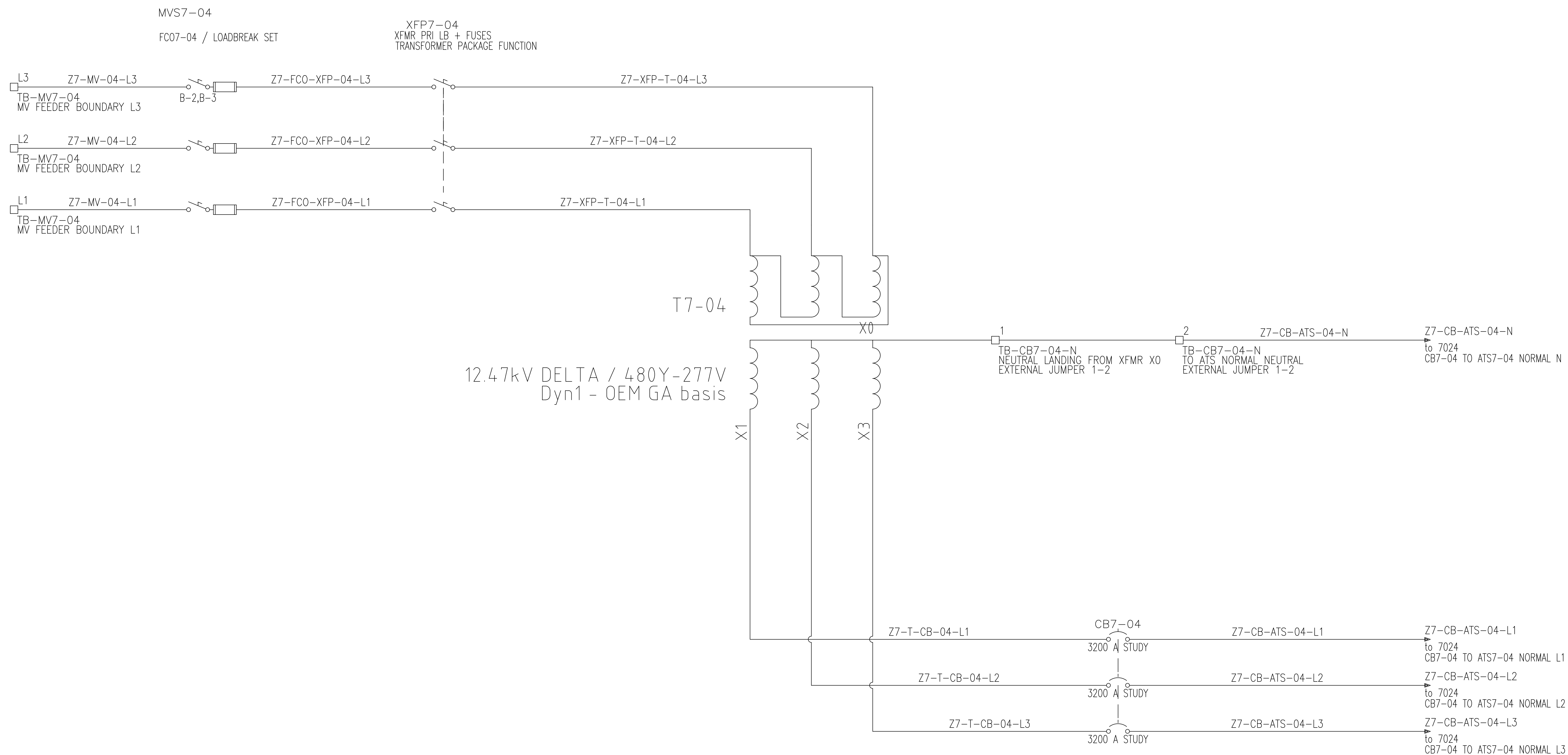
GENERATOR PLANT SEG-A TB-GPC-SEGA CLOSE PERMISSION TO E7023 ATS TERMINALS: SEE E7023



- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS7-03:11/12 AND TB-ATS7-03:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS7-03:1/2 START REQUEST IS SHOWN ON E7023.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 7-03 ON SEGMENT A ONLY. PATH 7-01 CONTROL INTERFACE: E7031.





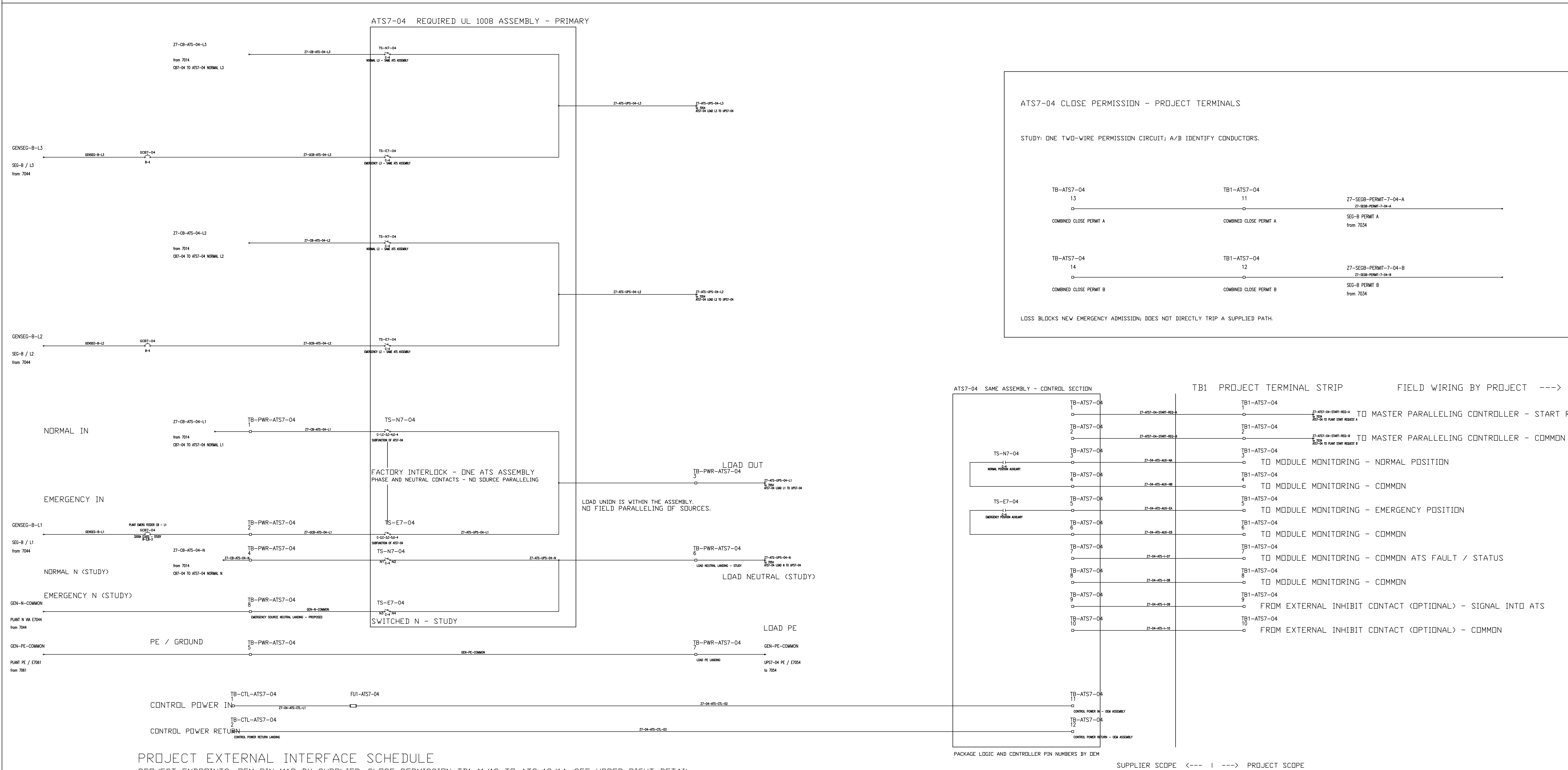


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NO.	DATE			REVISION				BY	
DWG TITLE									
PATH 7-04 MV BRANCH TO CB7-04 FCO - XFF - T7-04 - CB7-04 ENGINEERING STUDY									
JOB ENGINEER						CHECKED BY			
DRAWN NO						DRAWN BY			
SCALE K&K DATA						DATE			
No Scale						2026-09-27			
DWG NO									
K&K DATA-E-7014									
SHEET NO									
OF									

K&K DATA-E-7024 ATS7-04 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS

ZONE 7 / PATH 04 REV PE-P1 2026-09-27



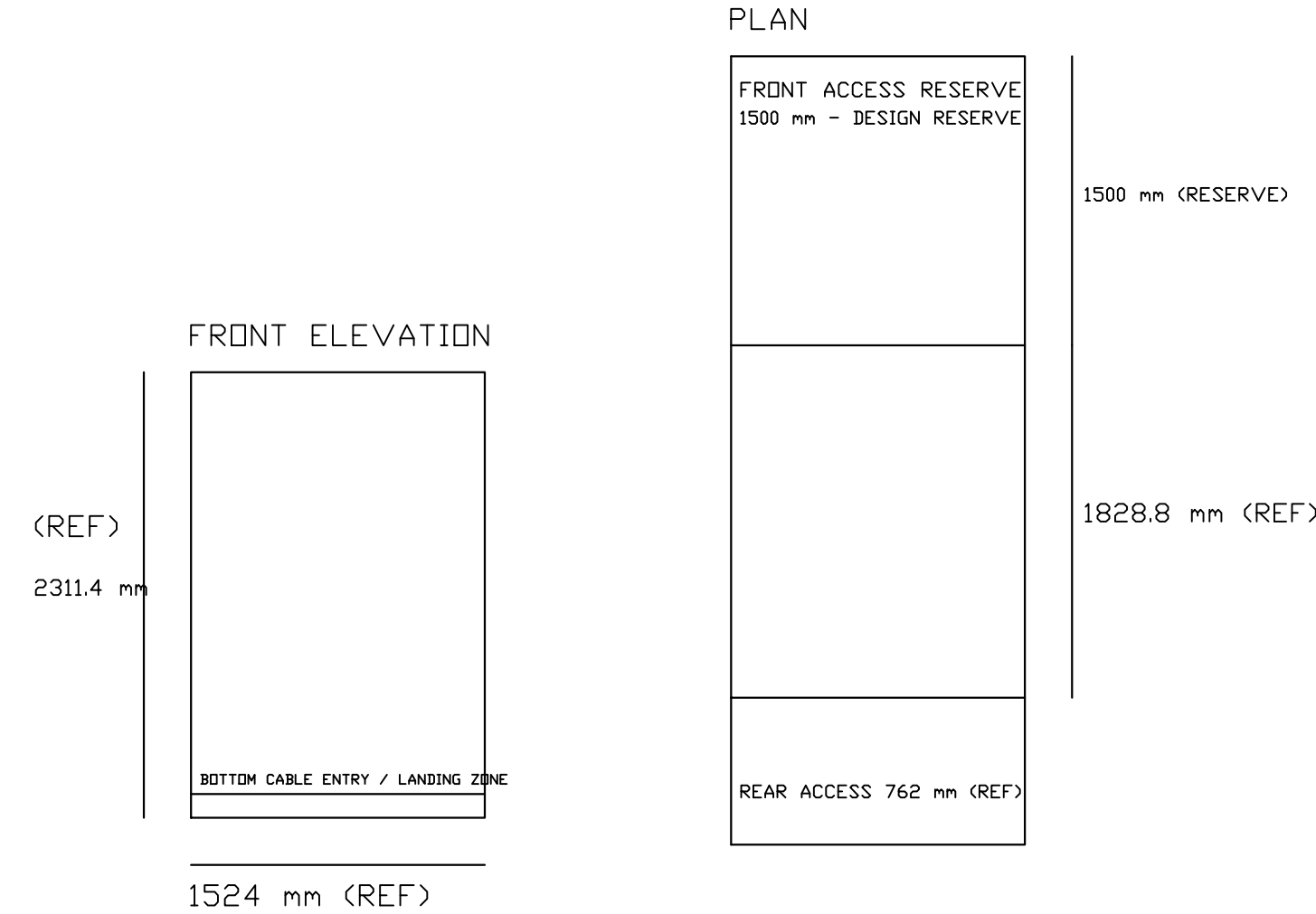
PROJECT EXTERNAL INTERFACE SCHEDULE
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TB1 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TB1	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ----> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TB1 AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N7-04 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E7-04 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ----> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ----> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ----> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <----> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

- ATS7-04 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
- THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
- SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
- THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
- TERMINAL IDS ARE PROJECT FUNCTIONAL IDS. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
- GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
- POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
- NORMAL SOURCE PROTECTION AND ISOLATION: CB7-04. SEE E107 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCB7-04. SEE E107 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
- ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
- EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; OFFERED OEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

PROJECT: K&K DATA IDC - ZONE 7 - PATH 04
DRAWING: K&K DATA-E-7024 ATS7-04 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

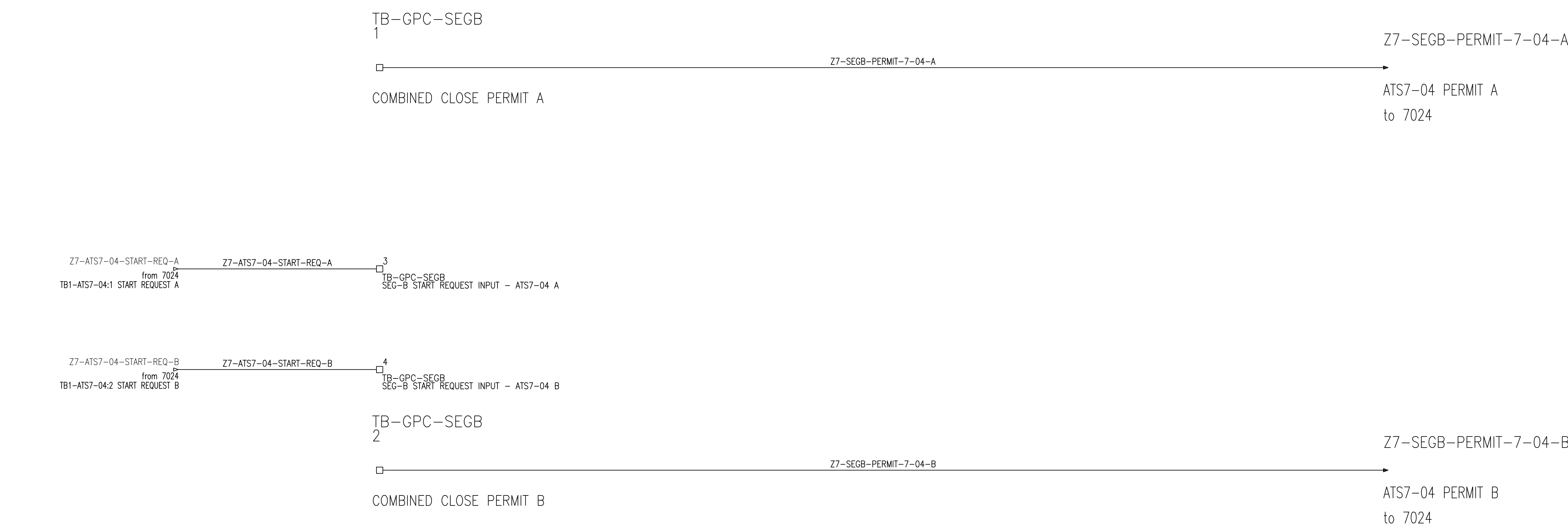
K&K DATA-E-7034 ATS7-04 / SEG-B PLANT CONTROL INTERFACE

PATH 7-04: START TB-GPC-SEGB:3/4; CLOSE PERMISSION TB-GPC-SEGB:1/2 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-B TB-GPC-SEGB

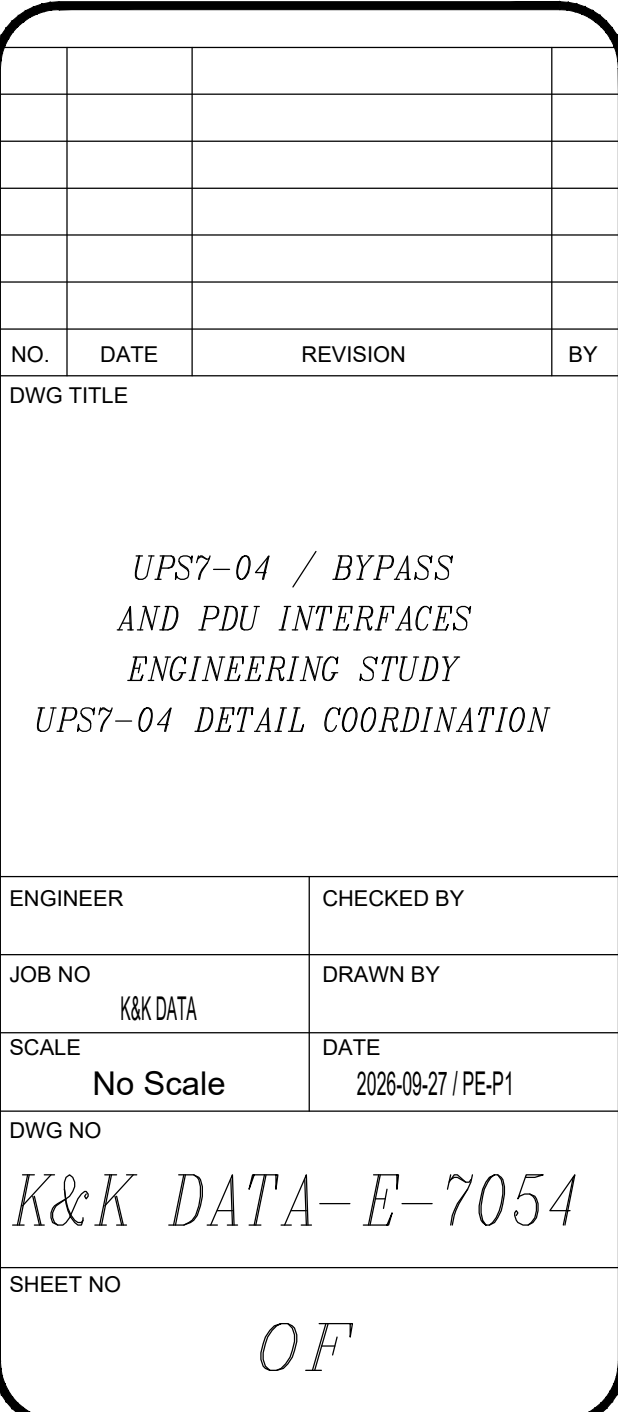
CLOSE PERMISSION TO E7024

ATS TERMINALS: SEE E7024



- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS7-04:11/12 AND TB-ATS7-04:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS7-04:1/2 START REQUEST IS SHOWN ON E7024.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 7-04 ON SEG-B ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.





MVS7-05
FC07-05 / LOADBREAK SET

XFP7-05
XFMR PRI LB + FUSES
TRANSFORMER PACKAGE FUNCTION

L3 Z7-MV-05-L3 TB-MV7-05 MV FEEDER BOUNDARY L3 B-2,B-3 Z7-FCO-XFP-05-L3 Z7-XFP-T-05-L3

L2 Z7-MV-05-L2 TB-MV7-05 MV FEEDER BOUNDARY L2 Z7-FCO-XFP-05-L2 Z7-XFP-T-05-L2

L1 Z7-MV-05-L1 TB-MV7-05 MV FEEDER BOUNDARY L1 Z7-FCO-XFP-05-L1 Z7-XFP-T-05-L1

T7-05
12.47kV DELTA / 480Y-277V
Dyn1 - OEM GA basis

X0
X1
X2
X3

1 TB-CB7-05-N NEUTRAL LANDING FROM XFMR X0 EXTERNAL JUMPER 1-2

2 Z7-CB-ATS-05-N TB-CB7-05-N TO ATS NORMAL NEUTRAL EXTERNAL JUMPER 1-2

Z7-CB-ATS-05-N to 7025 CB7-05 TO ATS7-05 NORMAL N

Z7-T-CB-05-L1 Z7-T-CB-05-L2 Z7-T-CB-05-L3

CB7-05
3200 A STUDY
3200 A STUDY
3200 A STUDY

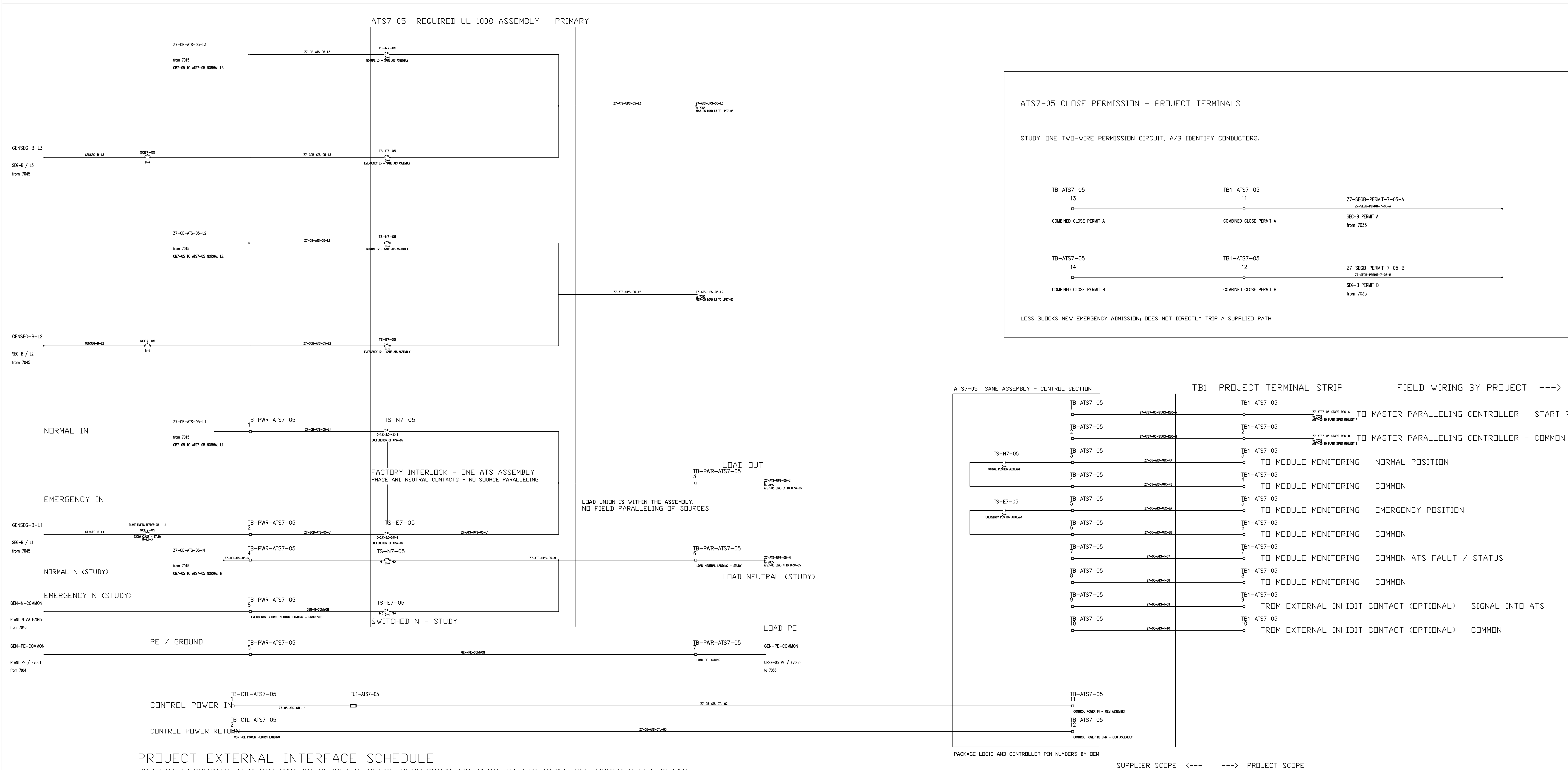
Z7-CB-ATS-05-L1 Z7-CB-ATS-05-L2 Z7-CB-ATS-05-L3

Z7-CB-ATS-05-L1 to 7025 CB7-05 TO ATS7-05 NORMAL L1
Z7-CB-ATS-05-L2 to 7025 CB7-05 TO ATS7-05 NORMAL L2
Z7-CB-ATS-05-L3 to 7025 CB7-05 TO ATS7-05 NORMAL L3

NO.	DATE	REVISION	BY		
DWG TITLE					
<i>PATH 7-05 MV BRANCH TO CB7-05</i> <i>FCO - KFP - 77-05 - CBT-05</i> <i>ENGINEERING STUDY</i>					
ENGINEER		CHECKED BY			
JOB NO		DRAWN BY			
SCALE		DATE			
No Scale		2026-09-27			
DWG NO					
<i>K&K DATA-E-7015</i>					
SHEET NO					
<i>OF</i>					

K&K DATA-E-7025 ATS7-05 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS

ZONE 7 / PATH 05 REV PE-P1 2026-09-27



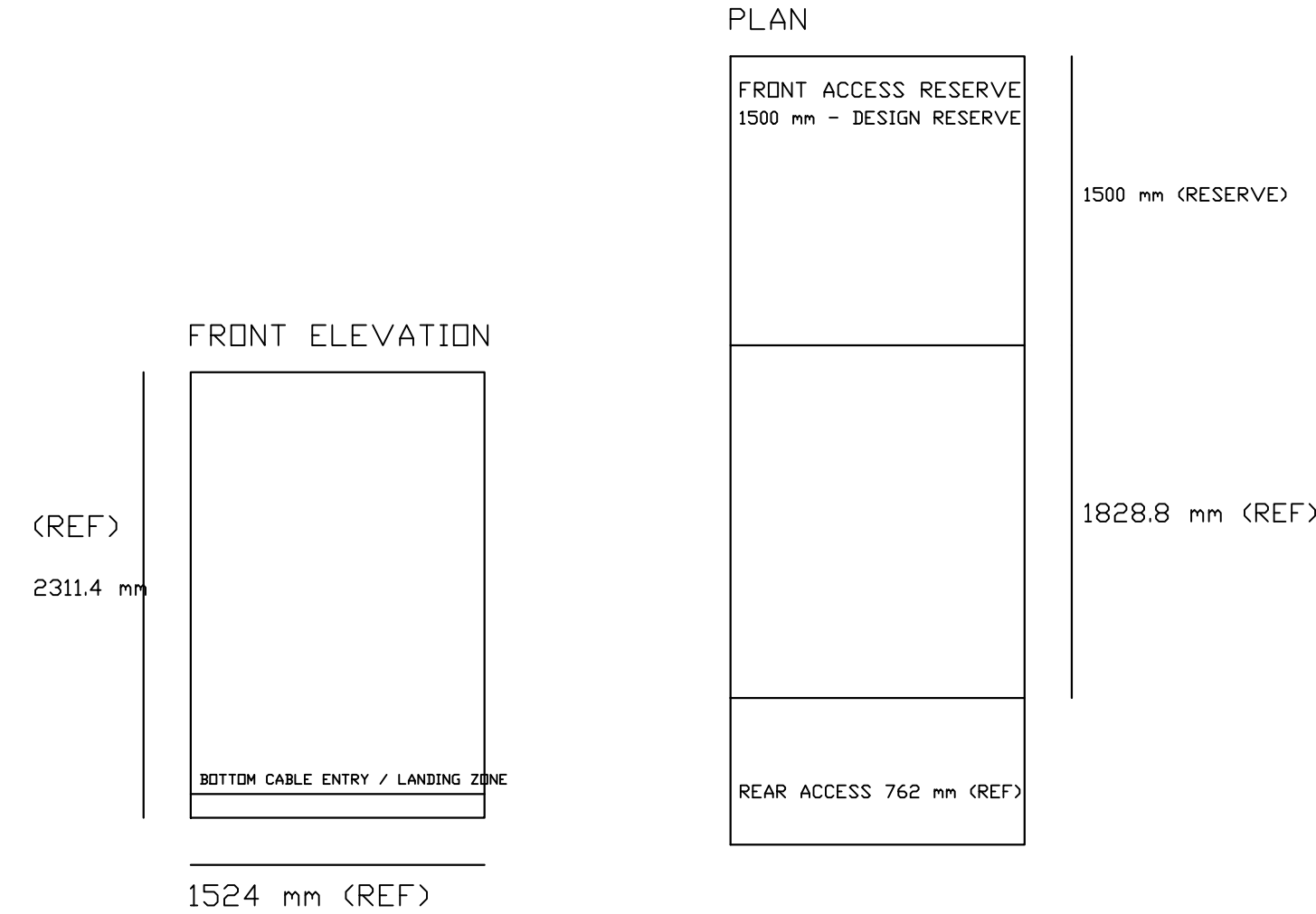
PROJECT EXTERNAL INTERFACE SCHEDULE
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TB1 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TB1	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ----> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TB1 AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N7-05 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E7-05 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ----> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ----> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ----> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <----> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

- ATS7-05 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
- THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
- SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
- THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
- TERMINAL IDs ARE PROJECT FUNCTIONAL IDs. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
- GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
- POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
- NORMAL SOURCE PROTECTION AND ISOLATION: CB7-05. SEE E107 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCB7-05. SEE E107 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
- ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
- EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; OFFERED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

PROJECT: K&K DATA IDC - ZONE 7 - PATH 05
DRAWING: K&K DATA-E-7025 ATS7-05 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

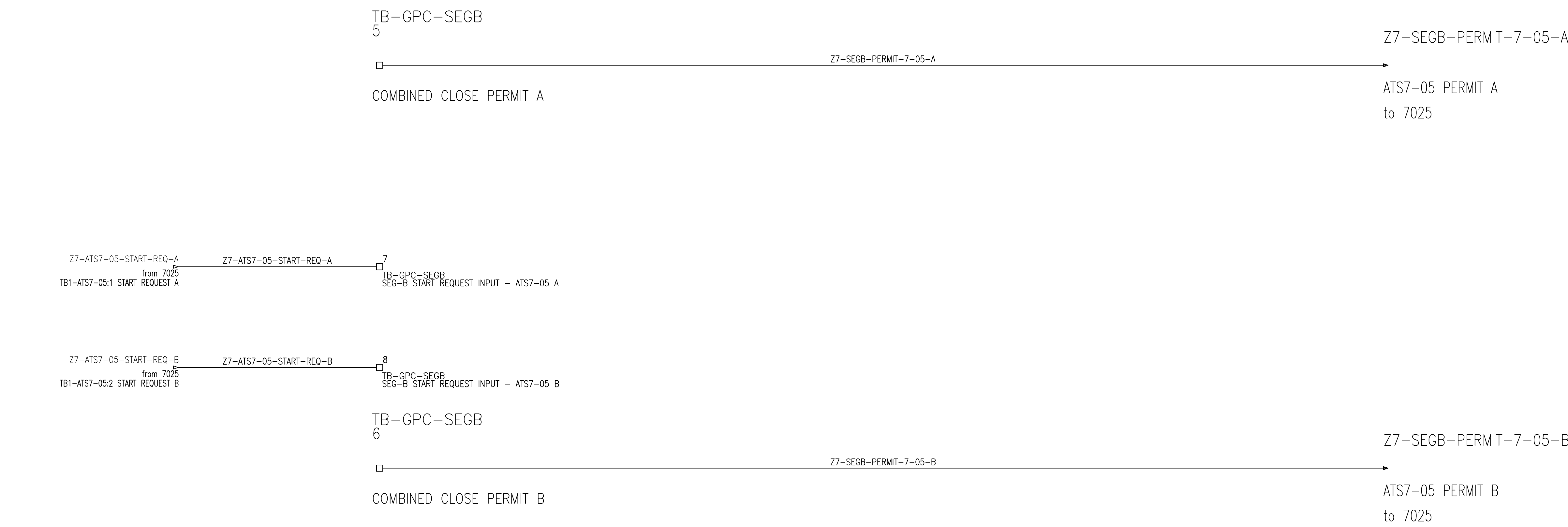
K&K DATA-E-7035 ATS7-05 / SEG-B PLANT CONTROL INTERFACE

PATH 7-05: START TB-GPC-SEGB:7/8; CLOSE PERMISSION TB-GPC-SEGB:5/6 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-B TB-GPC-SEGB

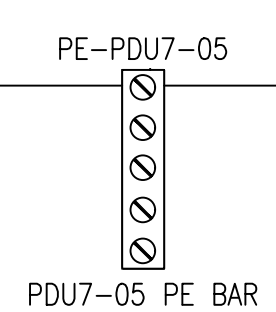
CLOSE PERMISSION TO E7025

ATS TERMINALS: SEE E7025



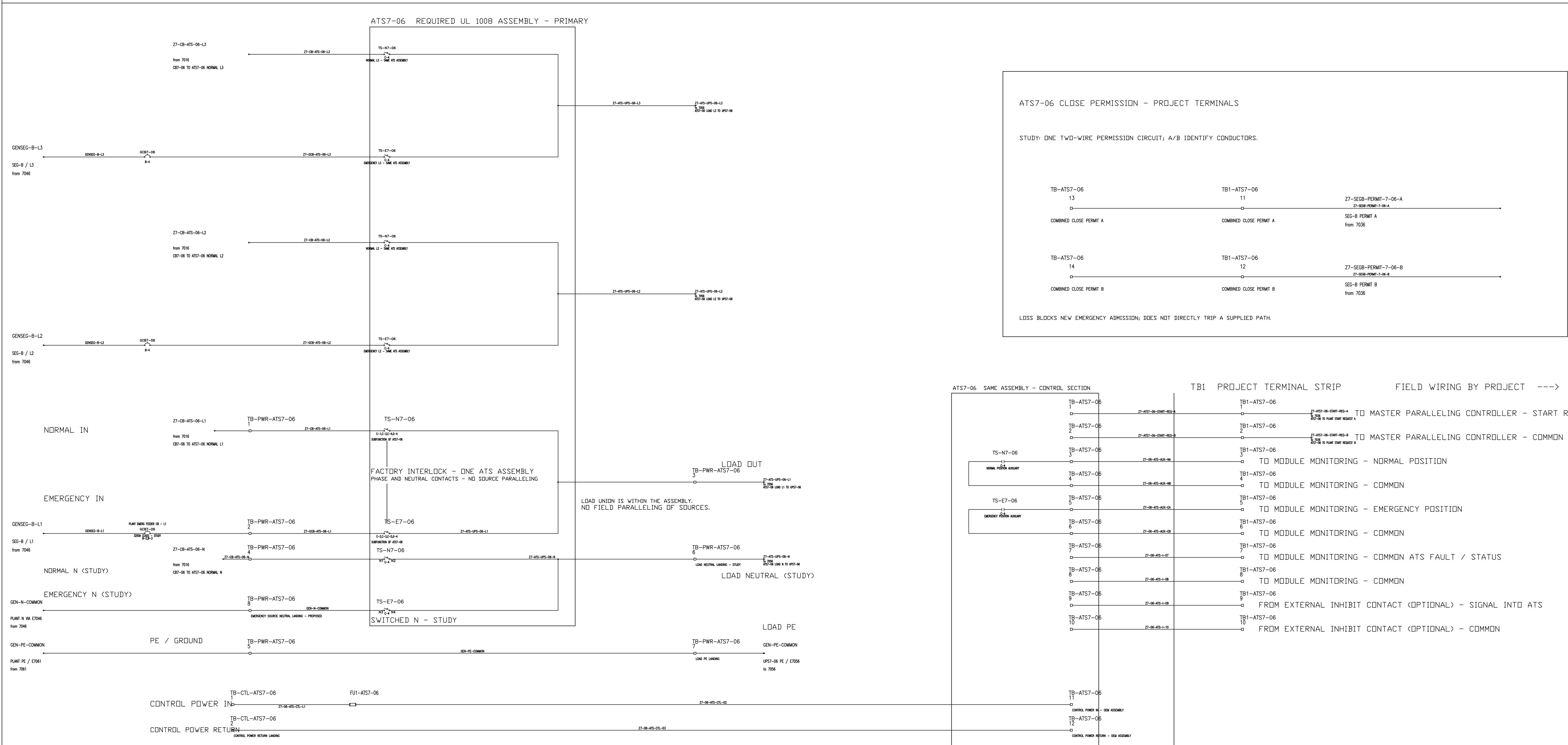
- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP.
PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT, THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS7-05:11/12 AND TB-ATS7-05:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS7-05:1/2 START REQUEST IS SHOWN ON E7025.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 7-05 ON SEG-B ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.



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NO.	DATE	REVISION			BY
DWG TITLE					
<i>PATH 7-06 MV BRANCH TO CB7-06</i> <i>FCO - XFP - 77-06 - CB7-06</i> <i>ENGINEERING STUDY</i>					
ENGINEER		CHECKED BY			
JOB NO		DRAWN BY			
SCALE		DATE			
No Scale		2026-09-27			
DWG NO					
<i>K&K DATA-E-7016</i>					
SHEET NO					
<i>OF</i>					



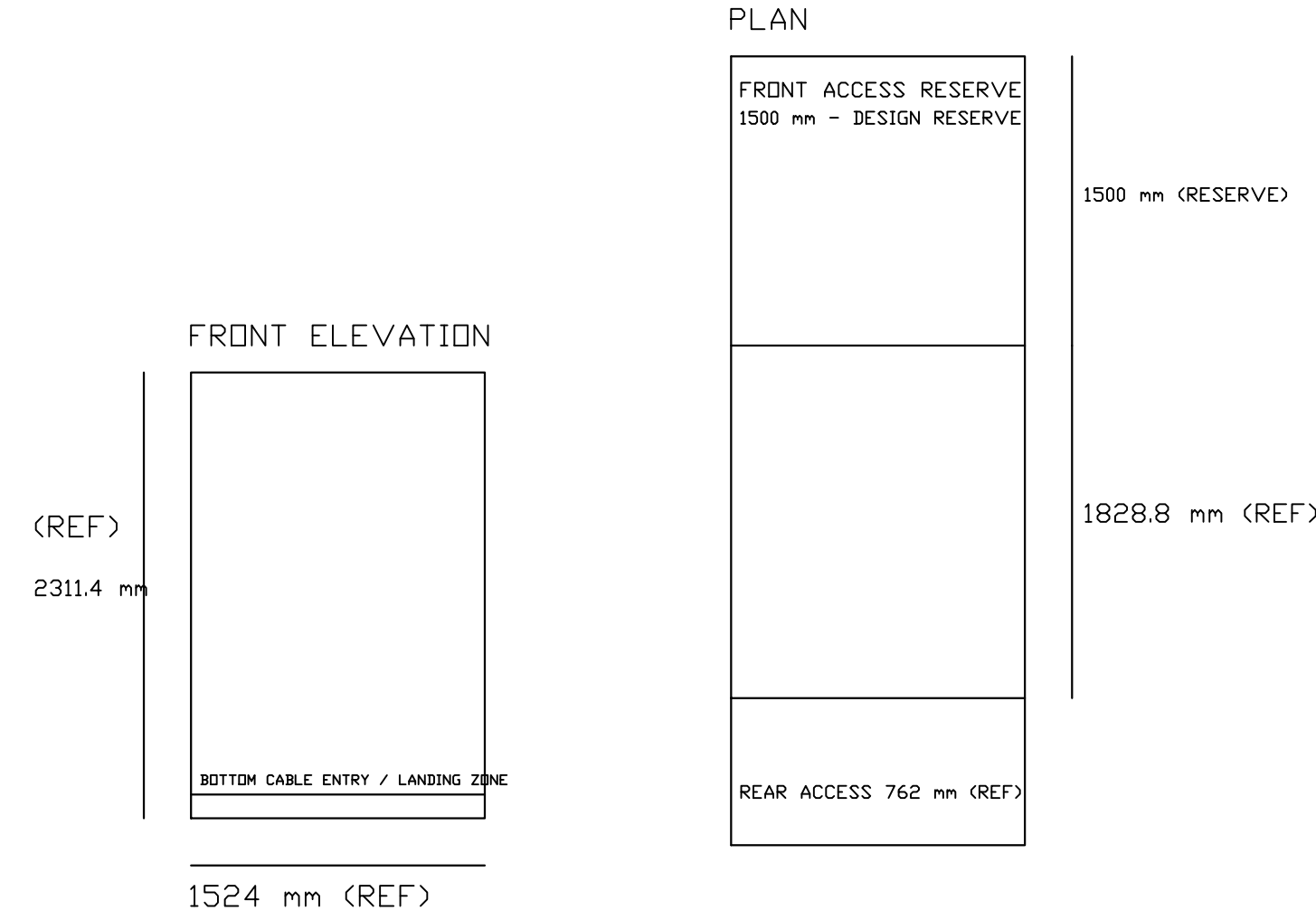
PROJECT EXTERNAL INTERFACE SCHEDULE
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TB1 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TB1	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ----> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TB1 AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N7-06 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E7-06 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ----> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ----> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ----> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <----> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

- ATS7-06 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
- THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
- SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
- THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
- TERMINAL IDs ARE PROJECT FUNCTIONAL IDs. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
- GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
- POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
- NORMAL SOURCE PROTECTION AND ISOLATION: CB7-06. SEE E107 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCB7-06. SEE E107 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
- ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
- EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; DEFERRED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

PROJECT: K&K DATA IDC - ZONE 7 - PATH 06
DRAWING: K&K DATA-E-7026 ATS7-06 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

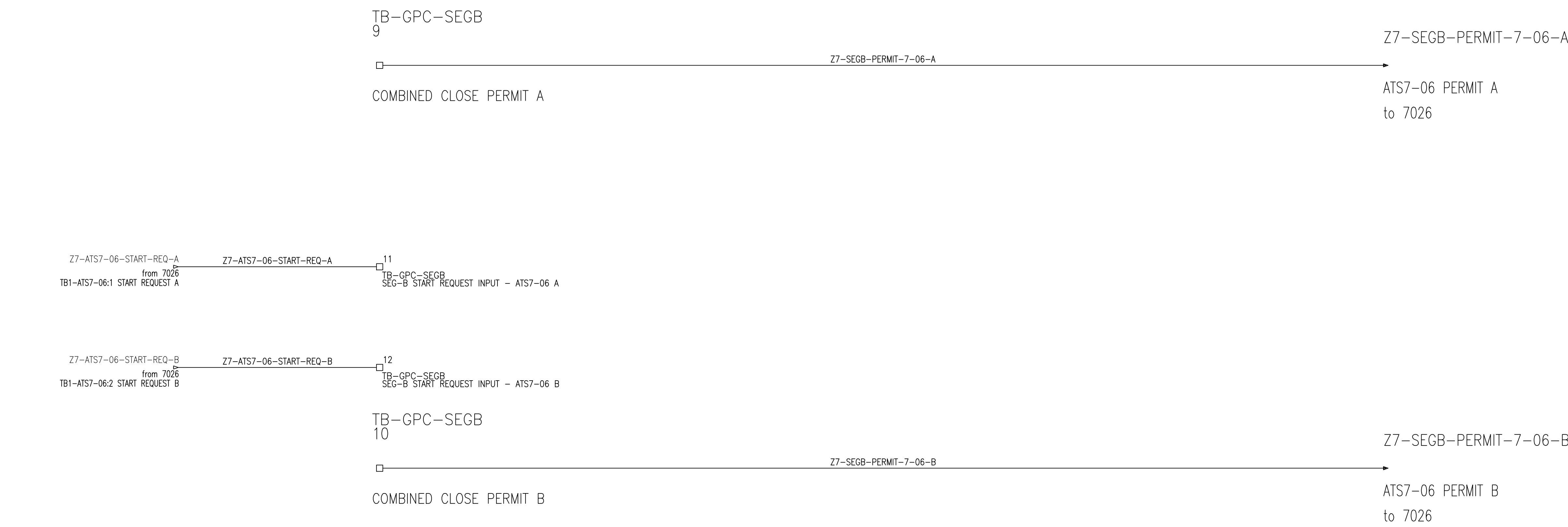
K&K DATA-E-7036 ATS7-06 / SEG-B PLANT CONTROL INTERFACE

PATH 7-06: START TB-GPC-SEGB:11/12; CLOSE PERMISSION TB-GPC-SEGB:9/10 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-B TB-GPC-SEGB

CLOSE PERMISSION TO E7026

ATS TERMINALS: SEE E7026



- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS7-06:11/12 AND TB-ATS7-06:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS7-06:1/2 START REQUEST IS SHOWN ON E7026.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 7-06 ON SEG-B ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.



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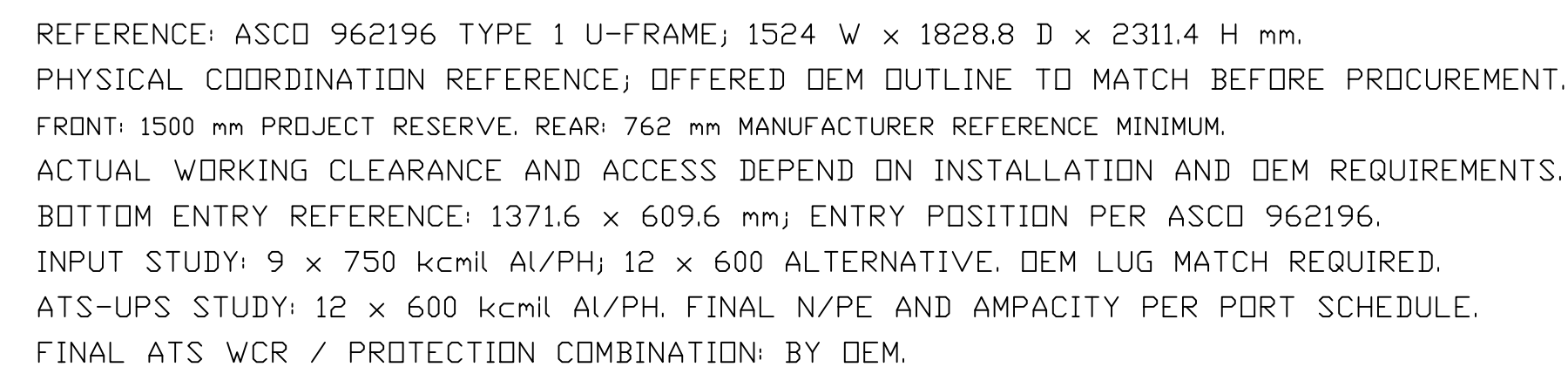
NO.	DATE	REVISION		BY	
DWG TITLE					
<i>PATH 8-01 MV BRANCH TO CDB-01</i> <i>PCO - XPP - 78-01 - CDB-01</i> <i>ENGINEERING STUDY</i>					
ENGINEER			CHECKED BY		
JOB NO			DRAWN BY		
SCALE			DATE		
No Scale			2026-09-27		
DWG NO					
<i>K&K DATA-E-8011</i>					
SHEET NO					
<i>OF</i>					



NOTES

1. ATS-01 SHALL BE ONE UL 1008 LISTED ASSEMBLY. KEYS AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE BEEN MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
2. THE LOAD UNION IS WITHIN THE ASSEMBLY. KEYS NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION- RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
3. SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING- DEEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
4. THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
5. TERMINAL IDS ARE PROJECT FUNCTIONAL IDS. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
6. GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
7. POSSIBLE FEEDBACK REPORTING POSITION ONLY. IT IS NOT PROVED THAT THE CORRESPONDING SOURCE IS OR IS NOT ACCEPTABLE.
8. NORMAL SOURCE PROTECTION AND ISOLATION CB98-01, SEE E108 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION GC98-01, SEE E108 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
9. ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
10. EQUIPMENT SELECTION TO BE COORDINATED. ASCO / EATON DATA- DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



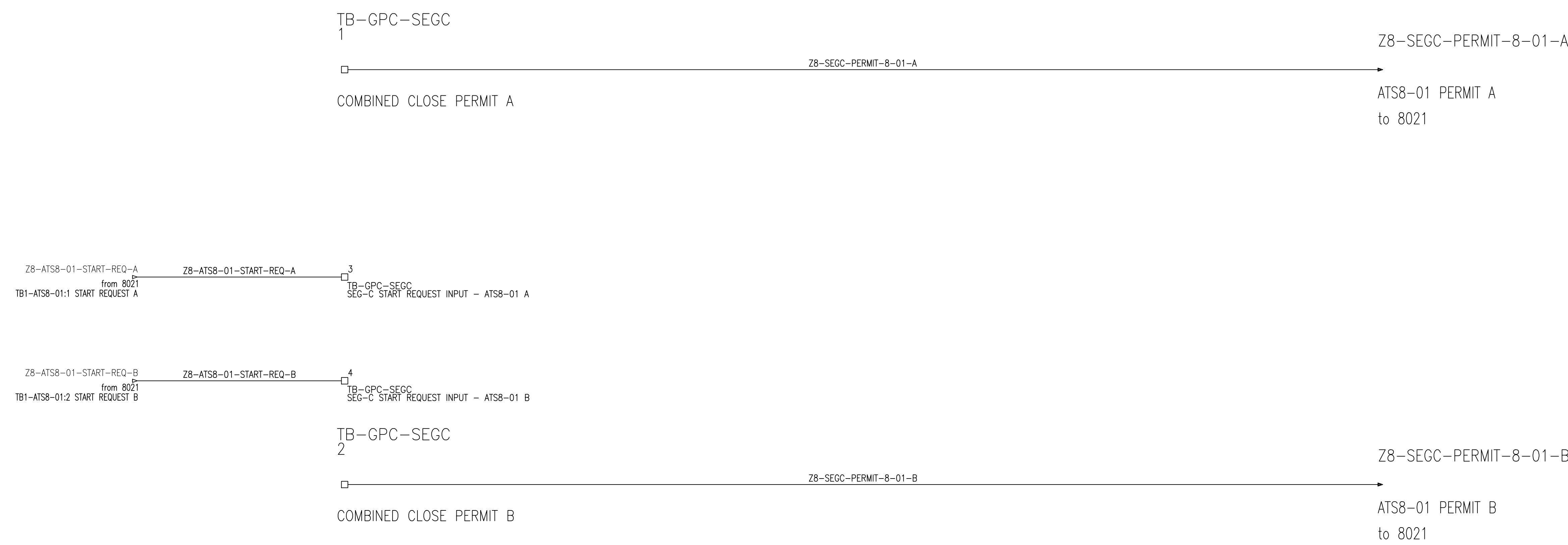
PROJECT: K&K DATA IDC - ZONE 8 - PATH 01
DRAWING: K&K DATA-E-8021 ATS8-01 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

K&K DATA-E-8031 ATS8-01 / SEG-C PLANT CONTROL INTERFACE
PATH 8-01: START TB-GPC-SEGC:3/4; CLOSE PERMISSION TB-GPC-SEGC:1/2 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-C TB-GPC-SEGC

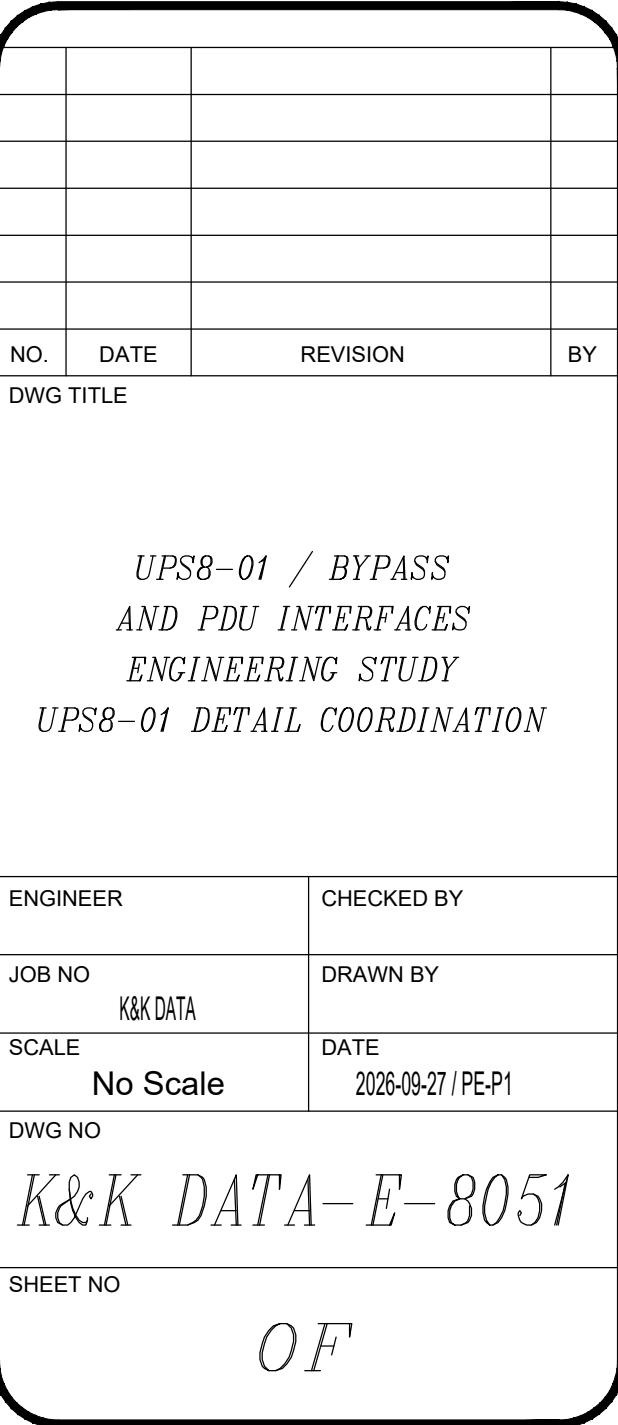
CLOSE PERMISSION TO E8021

ATS TERMINALS: SEE E8021



1. ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
2. THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING kVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
3. LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
4. SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
5. TB1-ATS8-01:11/12 AND TB-ATS8-01:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS8-01:1/2 START REQUEST IS SHOWN ON E8021.
6. COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
7. START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
8. PATH 8-01 ON SEG-C ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.





12.47kV DELTA / 480Y-277V
Dyn1 - OEM GA basis

MVS8-02
FC08-02 / LOADBREAK SET

XFP8-02
XFMR PRI LB + FUSES
TRANSFORMER PACKAGE FUNCTION

L3 Z8-MV-02-L3 Z8-FCO-XFP-02-L3 Z8-XFP-T-02-L3

L2 Z8-MV-02-L2 Z8-FCO-XFP-02-L2 Z8-XFP-T-02-L2

L1 Z8-MV-02-L1 Z8-FCO-XFP-02-L1 Z8-XFP-T-02-L1

TB-MV8-02
MV FEEDER BOUNDARY L3

TB-MV8-02
MV FEEDER BOUNDARY L2

TB-MV8-02
MV FEEDER BOUNDARY L1

T8-02

X0

1 TB-CB8-02-N
NEUTRAL LANDING FROM XFMR X0
EXTERNAL JUMPER 1-2

2 TB-CB8-02-N
TO ATS NORMAL NEUTRAL
EXTERNAL JUMPER 1-2

Z8-CB-ATS-02-N

Z8-CB-ATS-02-N
to 8022
CB8-02 TO ATS8-02 NORMAL N

Z8-T-CB-02-L1 Z8-CB-ATS-02-L1 Z8-CB-ATS-02-L1
to 8022
CB8-02 TO ATS8-02 NORMAL L1

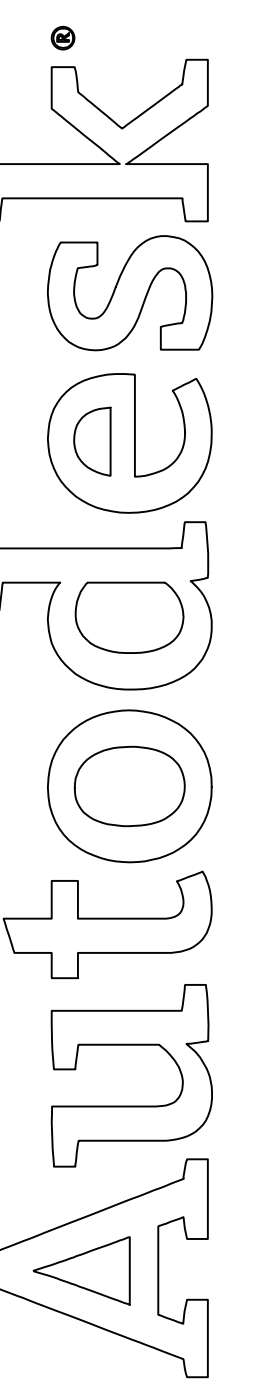
Z8-T-CB-02-L2 Z8-CB-ATS-02-L2 Z8-CB-ATS-02-L2
to 8022
CB8-02 TO ATS8-02 NORMAL L2

Z8-T-CB-02-L3 Z8-CB-ATS-02-L3 Z8-CB-ATS-02-L3
to 8022
CB8-02 TO ATS8-02 NORMAL L3

CB8-02
3200 A STUDY

3200 A STUDY

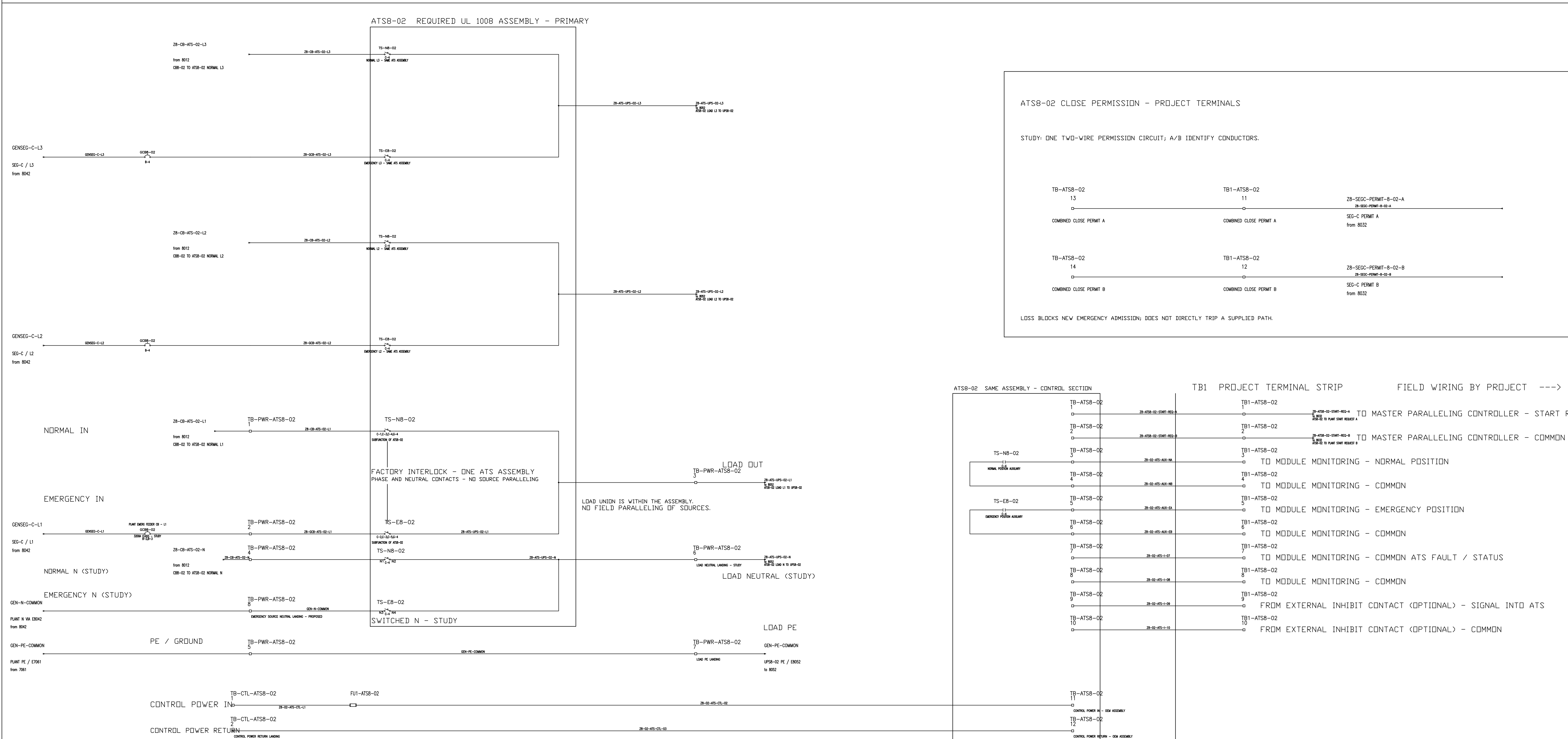
3200 A STUDY



NO.	DATE	REVISION		BY	
DWG TITLE					
FACH 8-02 MV BRANCH TO CB8-02					
P00 - XFF - T8-02 - CB8-02					
ENGINEERING STUDY					
ENGINEER			CHECKED BY		
JOB NO			DRAWN BY		
SCALE K&K DATA			DATE		
No Scale			2026-09-27		
DWG NO					
K&K DATA-E-8012					
SHEET NO					
OF					

K&K DATA-E-8022 ATS8-02 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS

ZONE 8 / PATH 02 REV PE-P1 2026-09-27



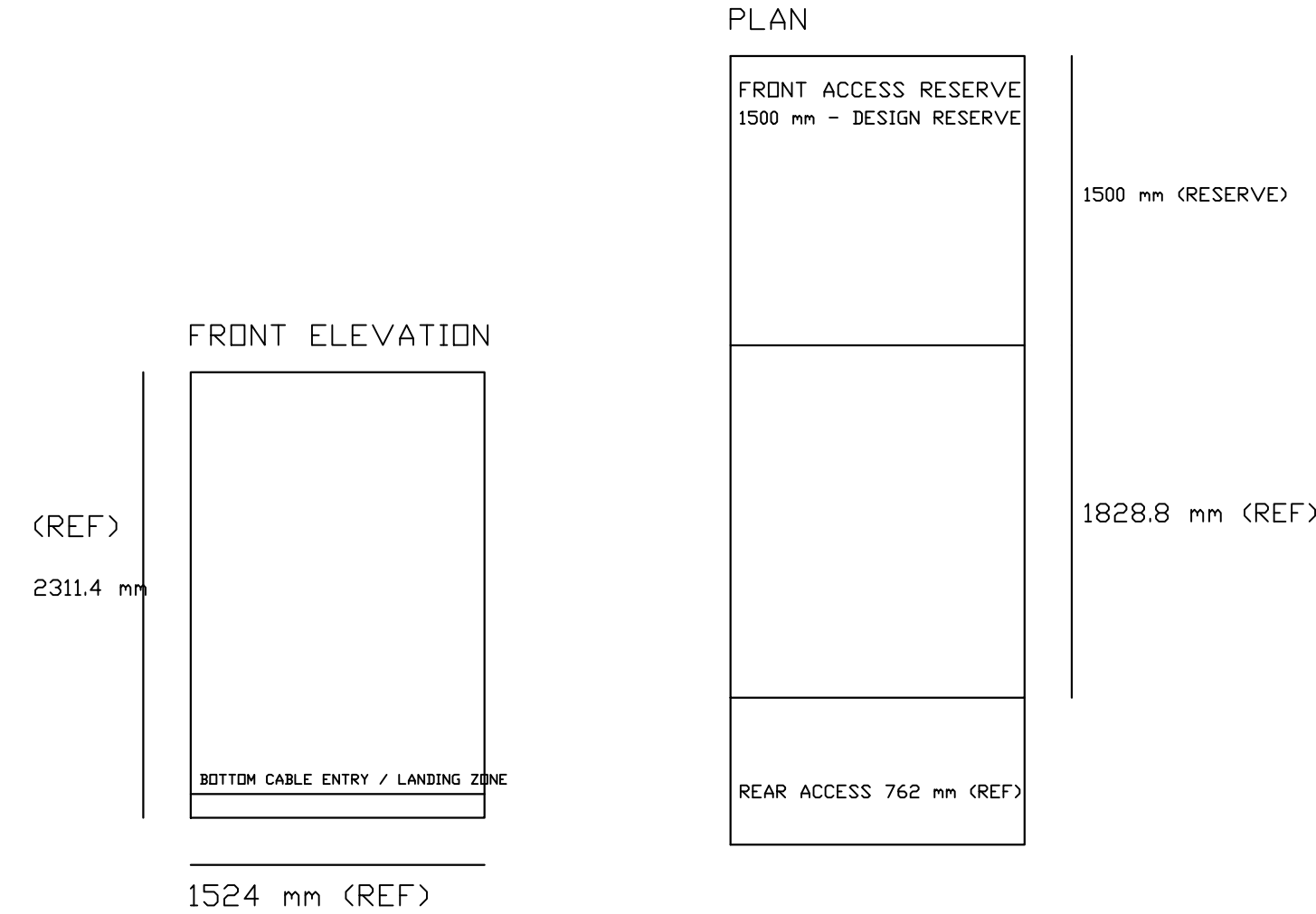
PROJECT EXTERNAL INTERFACE SCHEDULE
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TB1 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TB1	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ----> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TB1 AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N8-02 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E8-02 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ----> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ----> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ----> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <----> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

- ATS8-02 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
- THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
- SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
- THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
- TERMINAL IDs ARE PROJECT FUNCTIONAL IDs. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
- GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
- POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
- NORMAL SOURCE PROTECTION AND ISOLATION: CBB-02. SEE E108 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCBB-02. SEE E108 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
- ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
- EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; OFFERED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

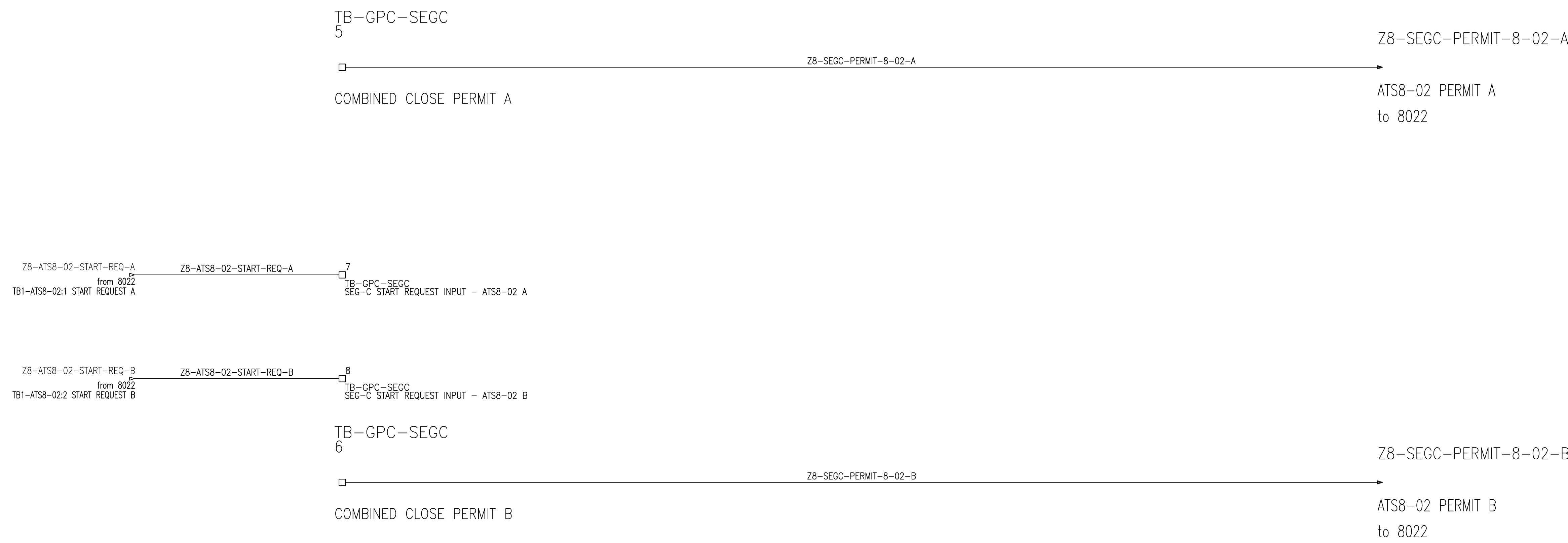
PROJECT: K&K DATA IDC - ZONE 8 - PATH 02
DRAWING: K&K DATA-E-8022 ATS8-02 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

K&K DATA-E-8032 ATS8-02 / SEG-C PLANT CONTROL INTERFACE
PATH 8-02: START TB-GPC-SEGC:7/8; CLOSE PERMISSION TB-GPC-SEGC:5/6 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-C TB-GPC-SEGC

CLOSE PERMISSION TO E8022

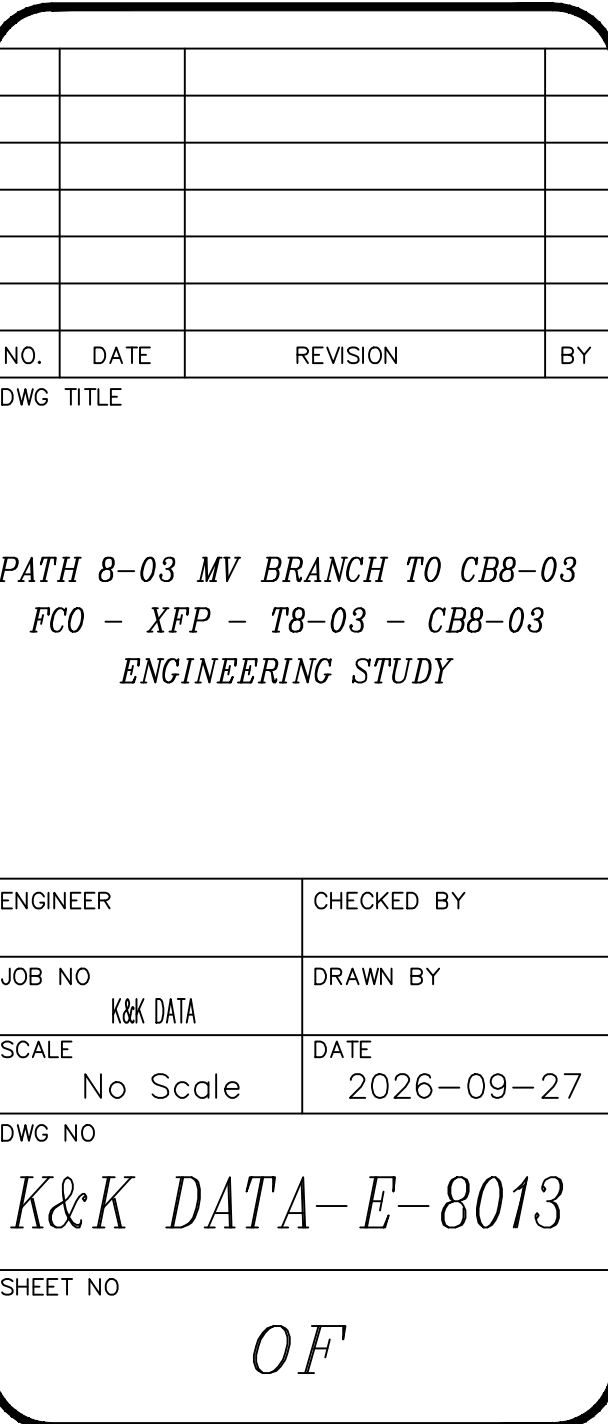
ATS TERMINALS: SEE E8022

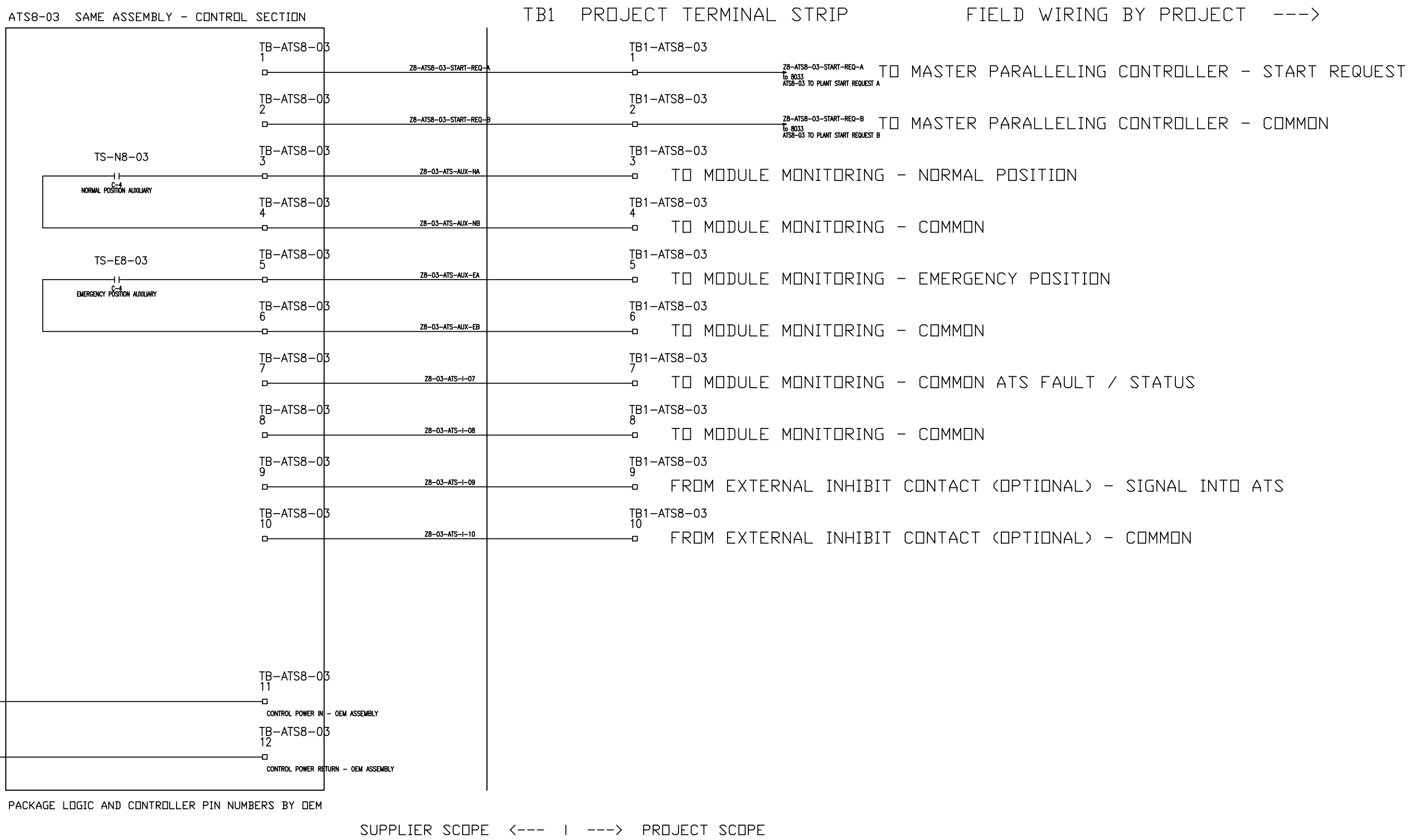


1. ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
2. THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP.
PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
3. LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
4. SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
5. TB1-ATS8-02:11/12 AND TB-ATS8-02:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS8-02:1/2 START REQUEST IS SHOWN ON E8022.
6. COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
7. START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
8. PATH 8-02 ON SEG-C ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.



inquiry@kkdatasvc.com





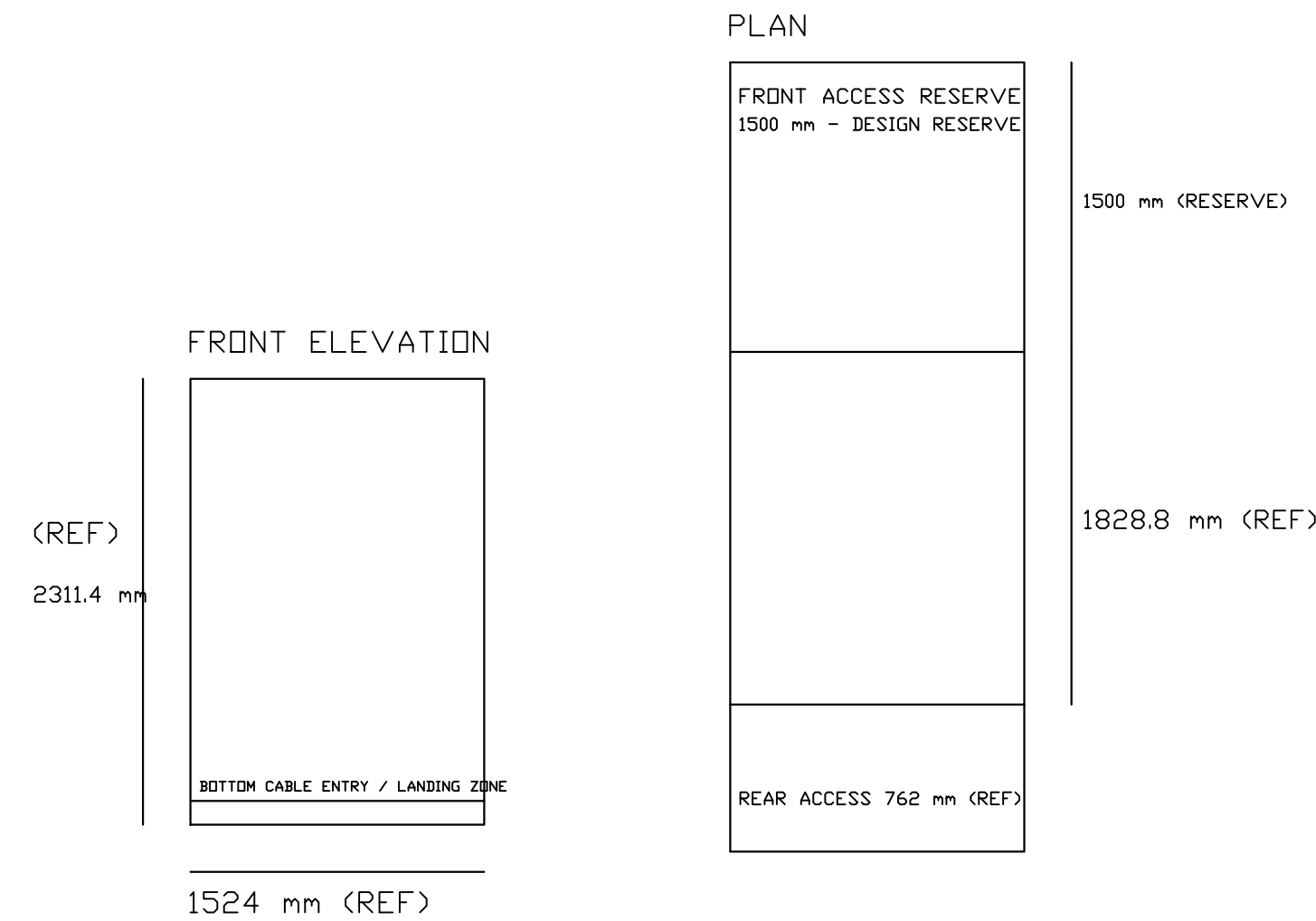
PROJECT ENDPOINTS; OEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TB1 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TB1	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ---> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY OEM; TB1 AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N8-03 AUXILIARY	ATS ---> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E8-03 AUXILIARY	ATS ---> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM OEM CONTROLLER	ATS ---> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY OEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO OEM CONTROLLER INPUT	FIELD ---> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY OEM	PROJECT ---> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <---> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

1. ATS-03 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
2. THE LOAD UNIDN IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION. RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
3. SOURCE SENSING, START / TRANSFER / RETRANSFER AND COLD/DOWN TIMING DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
4. THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
5. TERMINAL IDS ARE PROJECT FUNCTIONAL IDS. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
6. DEM CONTROLLER IS A DEM CONTROLLER. NOT A GENERATOR. NOT A GENERATOR. NOT A GENERATOR. NOT A GENERATOR. NOT A GENERATOR. NOT A GENERATOR. NOT A GENERATOR. NOT A GENERATOR.
7. POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
8. NORMAL SOURCE PROTECTION AND ISOLATION: CB8-03. SEE E108 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: CG8B-03. SEE E108 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
9. ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
10. EQUIPMENT SELECTION TO BE COORDINATED. ASCO / Eaton DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



REFERENCE: ASCO 9621 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE, OFFERED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1590 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm ENTRY POSITION PER ASCO 9621.96.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
FATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL FATS WCR / PROTECTION COMBINATION BY DEM.

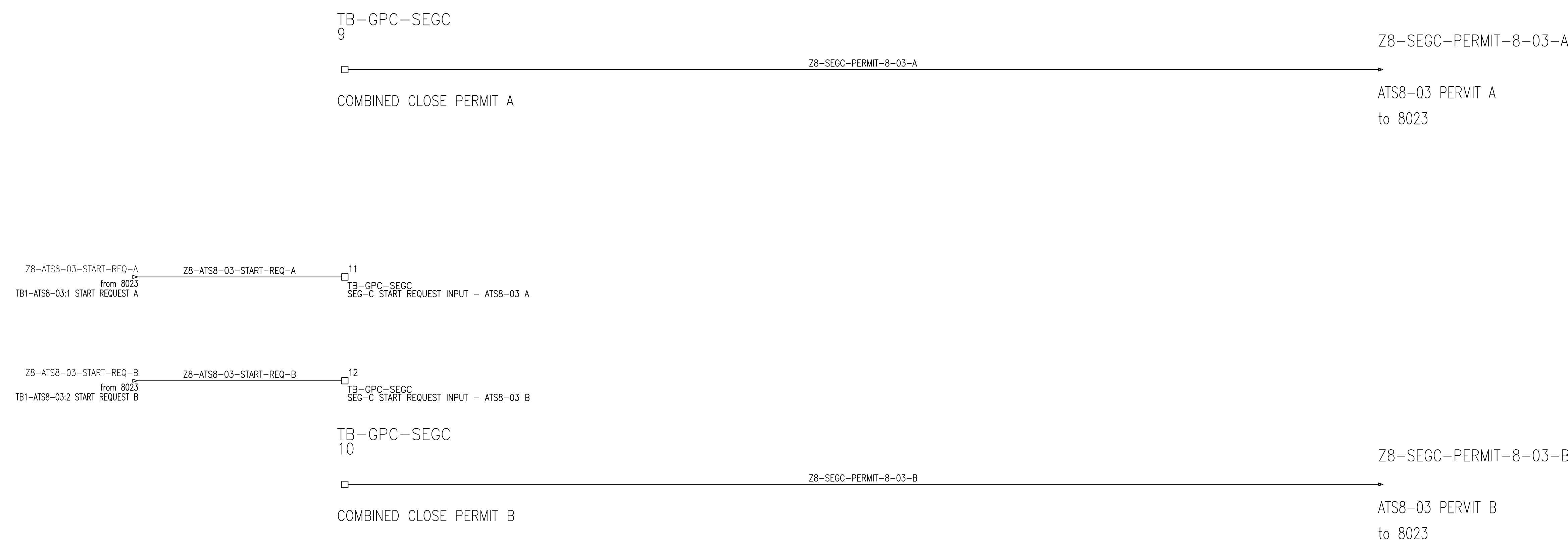
PROJECT: K&K DATA IDC - ZONE 8 - PATH 03
DRAWING: K&K DATA-E-8023 ATS8-03 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

K&K DATA-E-8033 ATS8-03 / SEG-C PLANT CONTROL INTERFACE
PATH 8-03: START TB-GPC-SEGC:11/12; CLOSE PERMISSION TB-GPC-SEGC:9/10 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-C TB-GPC-SEGC

CLOSE PERMISSION TO E8023

ATS TERMINALS: SEE E8023



1. ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
2. THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
3. LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
4. SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
5. TB1-ATS8-03:11/12 AND TB-ATS8-03:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS8-03:1/2 START REQUEST IS SHOWN ON E8023.
6. COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
7. START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
8. PATH 8-03 ON SEG-C ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.

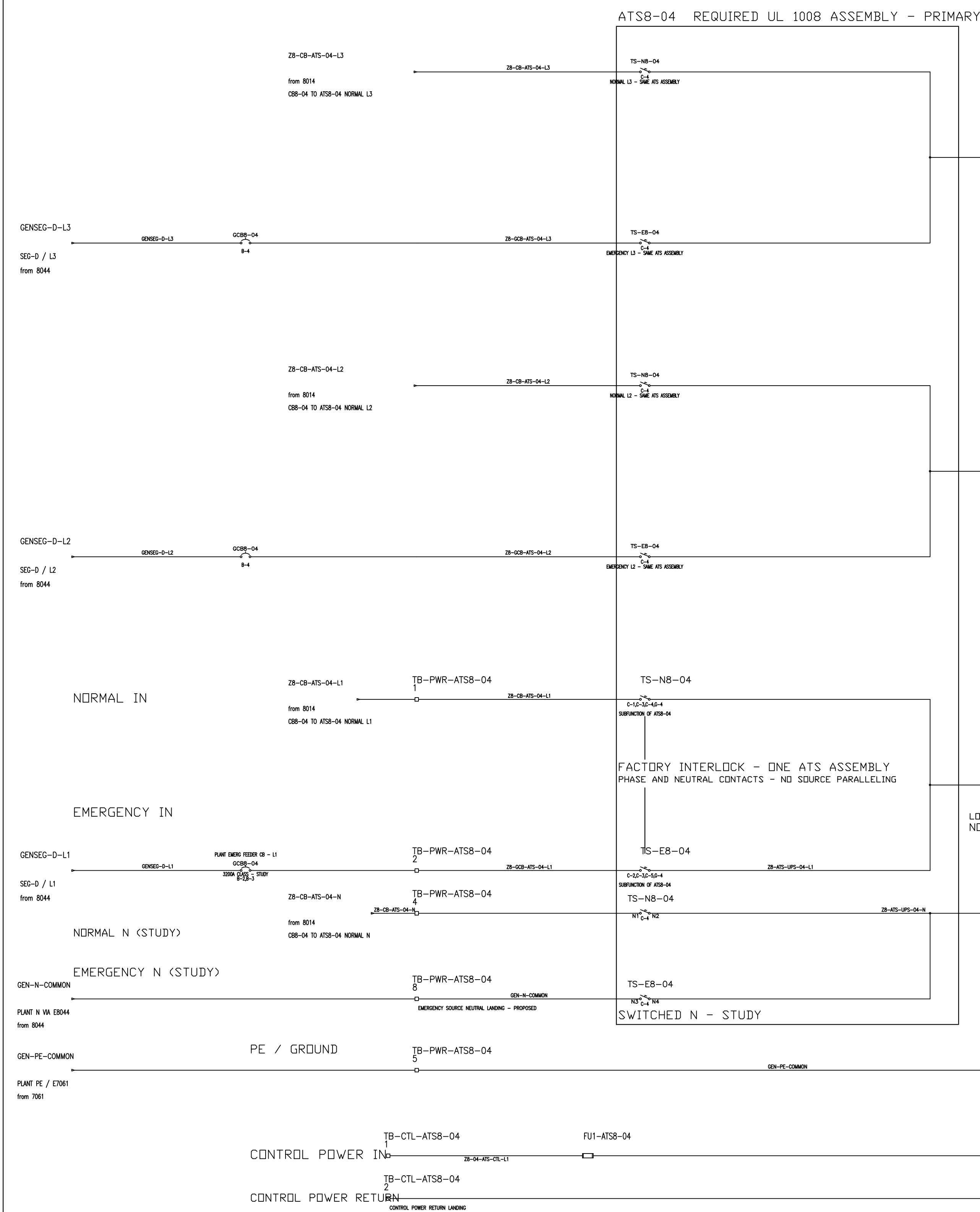


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NO.	DATE	REVISION			BY
DWG TITLE					
PATH 8-04 MV BRANCH TO CB8-04 FCO - XFP - T8-04 - CB8-04 ENGINEERING STUDY					
ENGINEER			CHECKED BY		
JOB NO <i>K&K DATA</i>			DRAWN BY		
SCALE			DATE		
No Scale			2026-09-27		
DWG NO					
<i>K&K DATA-E-8014</i>					
SHEET NO					
<i>OF</i>					

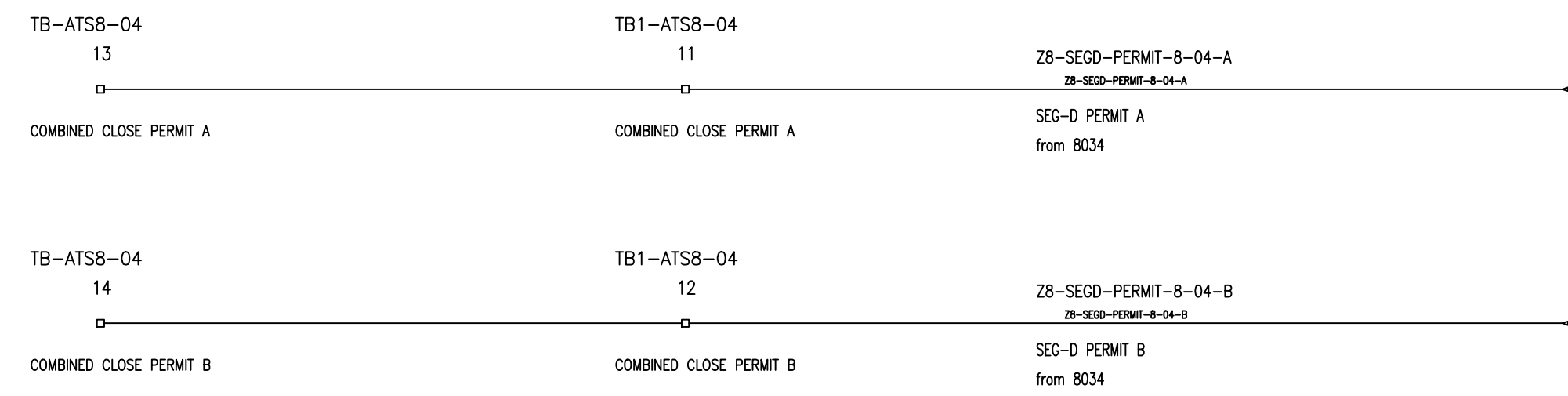
K&K DATA-E-8024 ATS8-04 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS

ZONE 8 / PATH 04 REV PE-P1 2026-09-27

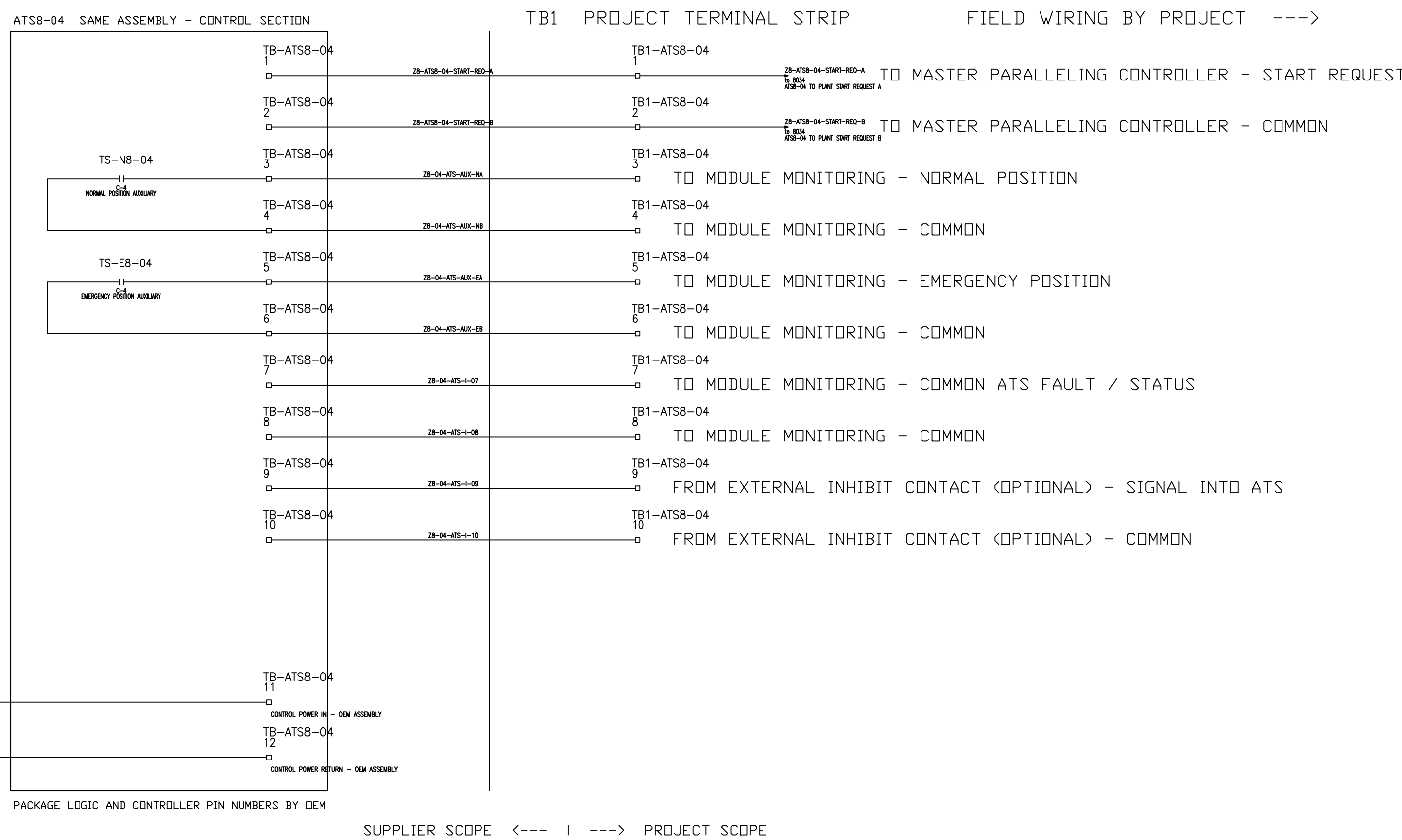


ATS8-04 CLOSE PERMISSION - PROJECT TERMINALS

STUDY: ONE TWO-WIRE PERMISSION CIRCUIT, A/B IDENTIFY CONDUCTORS.



LOSS BLOCKS NEW EMERGENCY ADMISSION; DOES NOT DIRECTLY TRIP A SUPPLIED PATH.



PROJECT EXTERNAL INTERFACE SCHEDULE

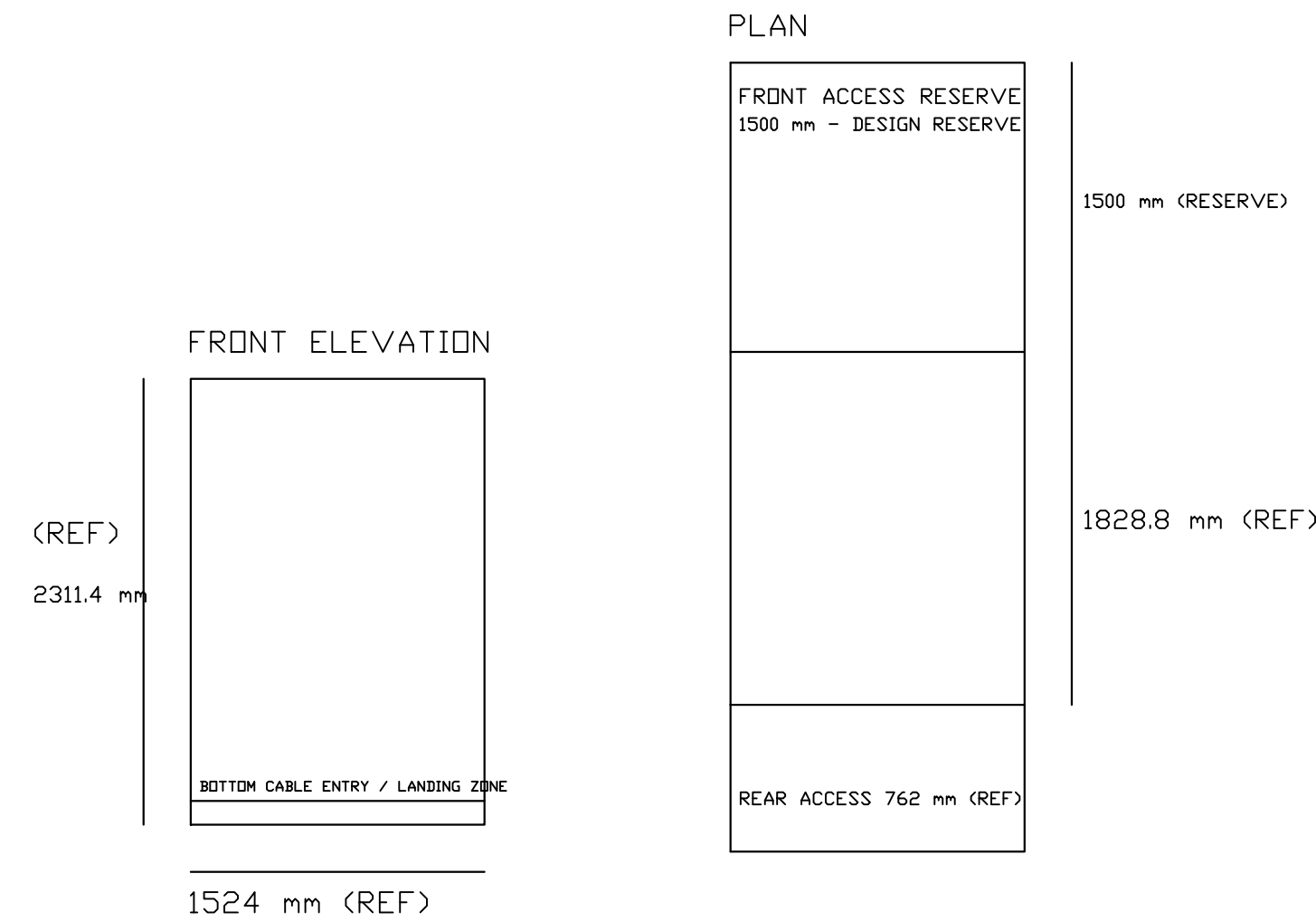
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TBI 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TBI	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ----> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TBI AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-NB-04 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-EB-04 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ----> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ----> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ----> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <----> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

NOTES

- ATS8-04 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
- THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
- SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
- THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
- TERMINAL IDs ARE PROJECT FUNCTIONAL IDs. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
- GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
- POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
- NORMAL SOURCE PROTECTION AND ISOLATION: CBB-04. SEE E108 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCB8-04. SEE E108 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
- ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
- EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; OFFERED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

PROJECT: K&K DATA IDC - ZONE 8 - PATH 04
DRAWING: K&K DATA-E-8024 ATS8-04 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

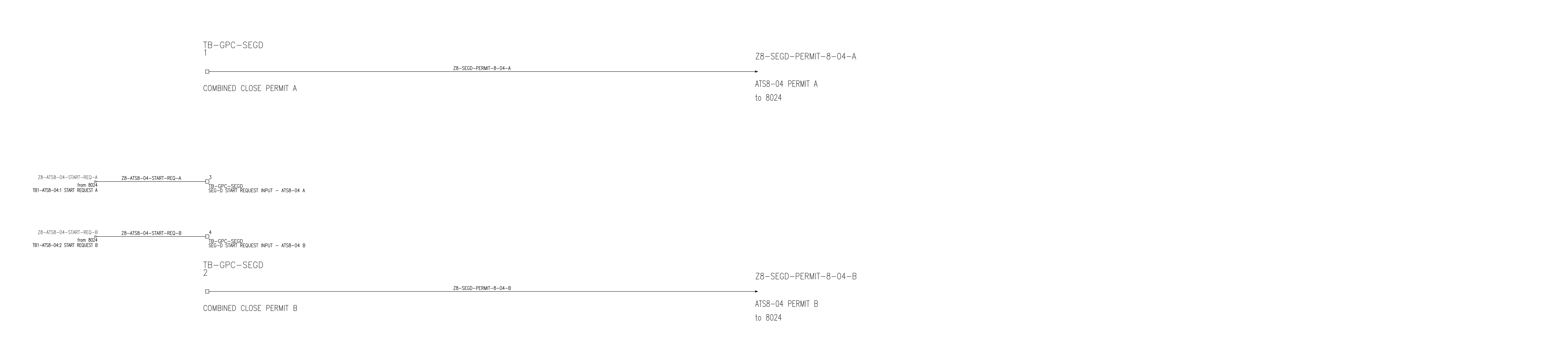
K&K DATA-E-8034 ATS8-04 / SEG-D PLANT CONTROL INTERFACE

PATH 8-04: START TB-GPC-SEGD:3/4; CLOSE PERMISSION TB-GPC-SEGD:1/2 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-D TB-GPC-SEGD

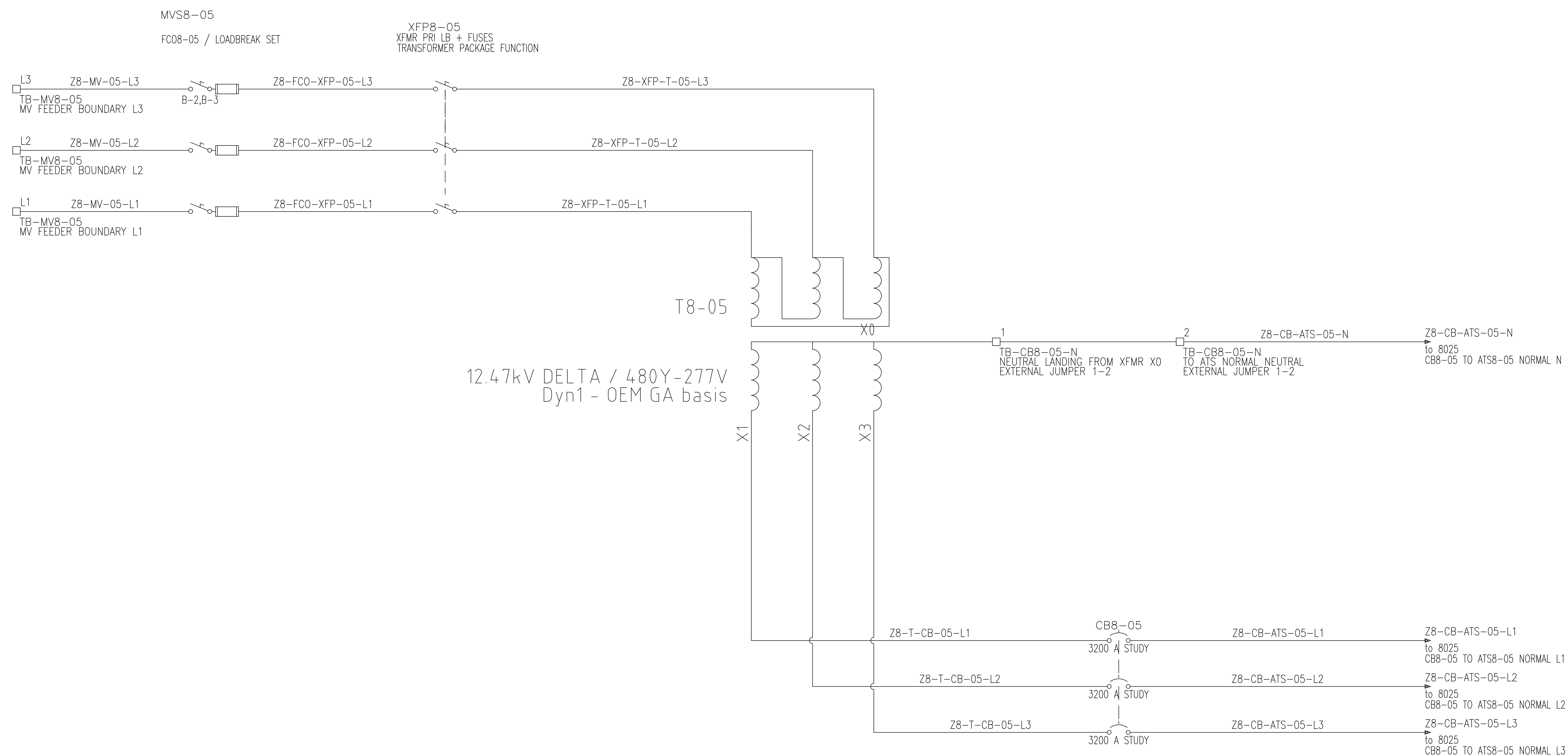
CLOSE PERMISSION TO E8024

ATS TERMINALS: SEE E8024



- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS8-04:11/12 AND TB-ATS8-04:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS8-04:1/2 START REQUEST IS SHOWN ON E8024.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 8-04 ON SEG-D ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.





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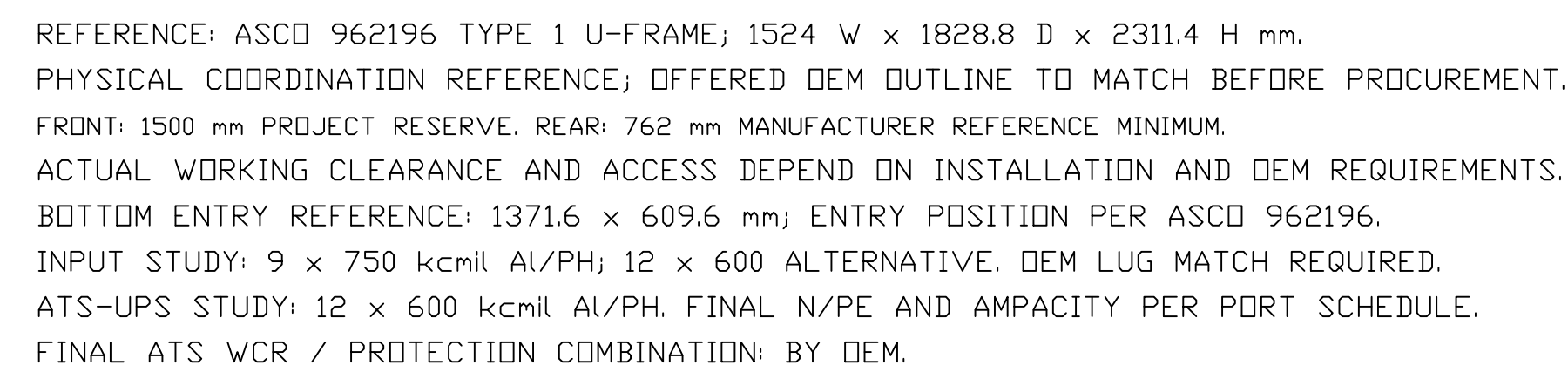
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NOTES

1. ATS-05 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE OEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
2. THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION. RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
3. SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: OEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
4. THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
5. TERMINAL IDS ARE PROJECT FUNCTIONAL IDS. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
6. GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
7. POSSIBLE FEEDBACK REPORT POSITION ONLY. IT IS NOT PROHIBITIVE IF THE CORRESPONDING SOURCE IS UNACCEPTABLE.
8. NORMAL SOURCE PROTECTION AND ISOLATION: CB8-05, SEE E109 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GC80-05, SEE E108 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
9. ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
10. EQUIPMENT SELECTION TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



PROJECT: K&K DATA IDC - ZONE 8 - PATH 05
DRAWING: K&K DATA-E-8025 ATS8-05 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

K&K DATA-E-8035 ATS8-05 / SEG-D PLANT CONTROL INTERFACE

PATH 8-05: START TB-GPC-SEGD:7/8; CLOSE PERMISSION TB-GPC-SEGD:5/6 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-D TB-GPC-SEGD

CLOSE PERMISSION TO E8025

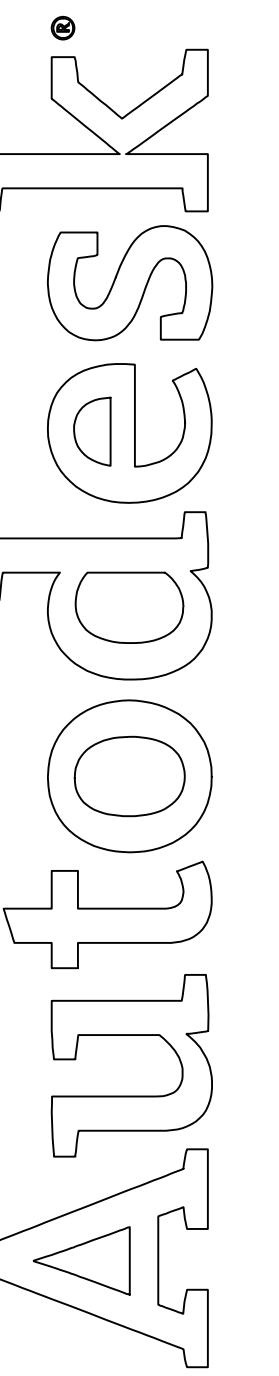
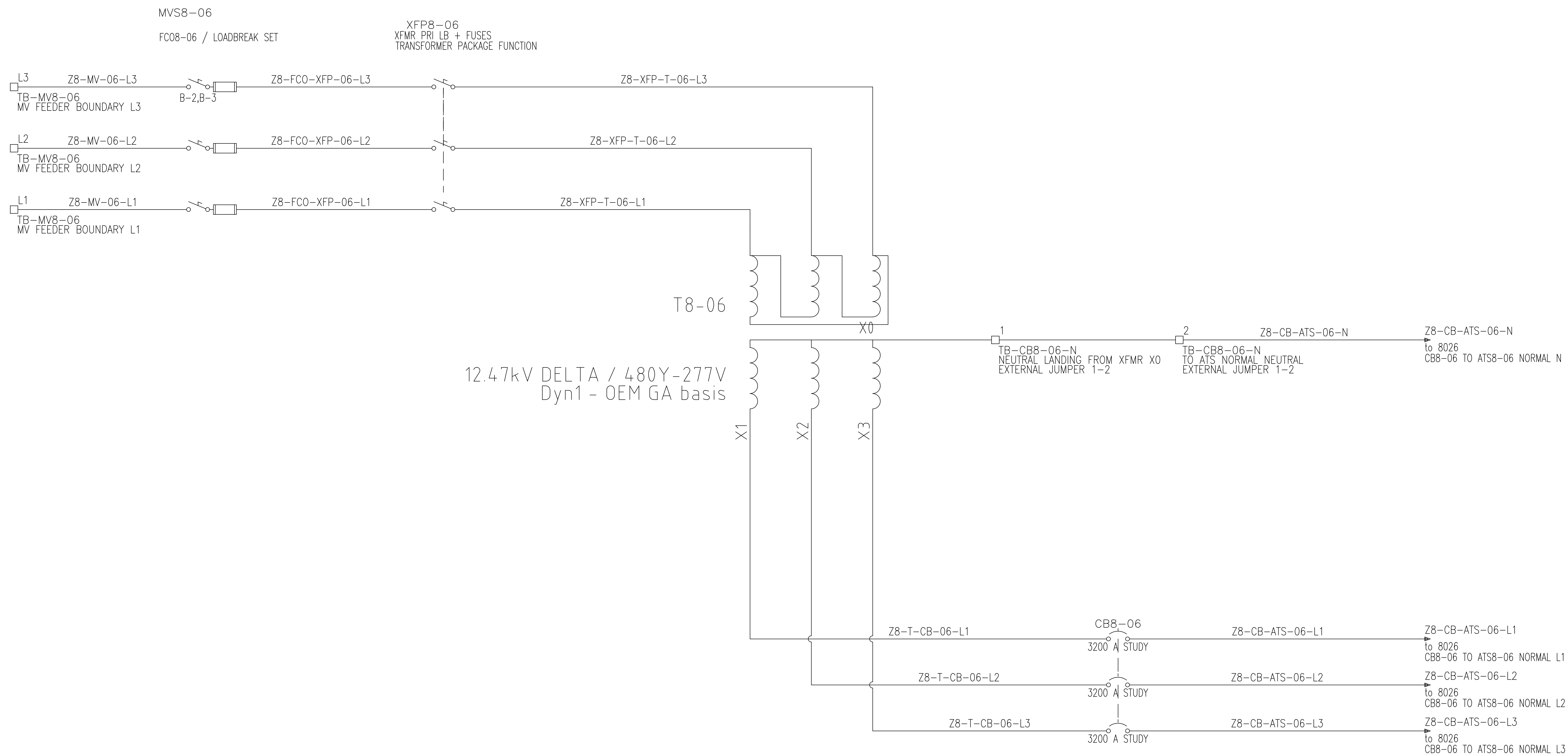
ATS TERMINALS: SEE E8025



- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS8-05:11/12 AND TB-ATS8-05:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS8-05:1/2 START REQUEST IS SHOWN ON E8025.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 8-05 ON SEG-D ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.



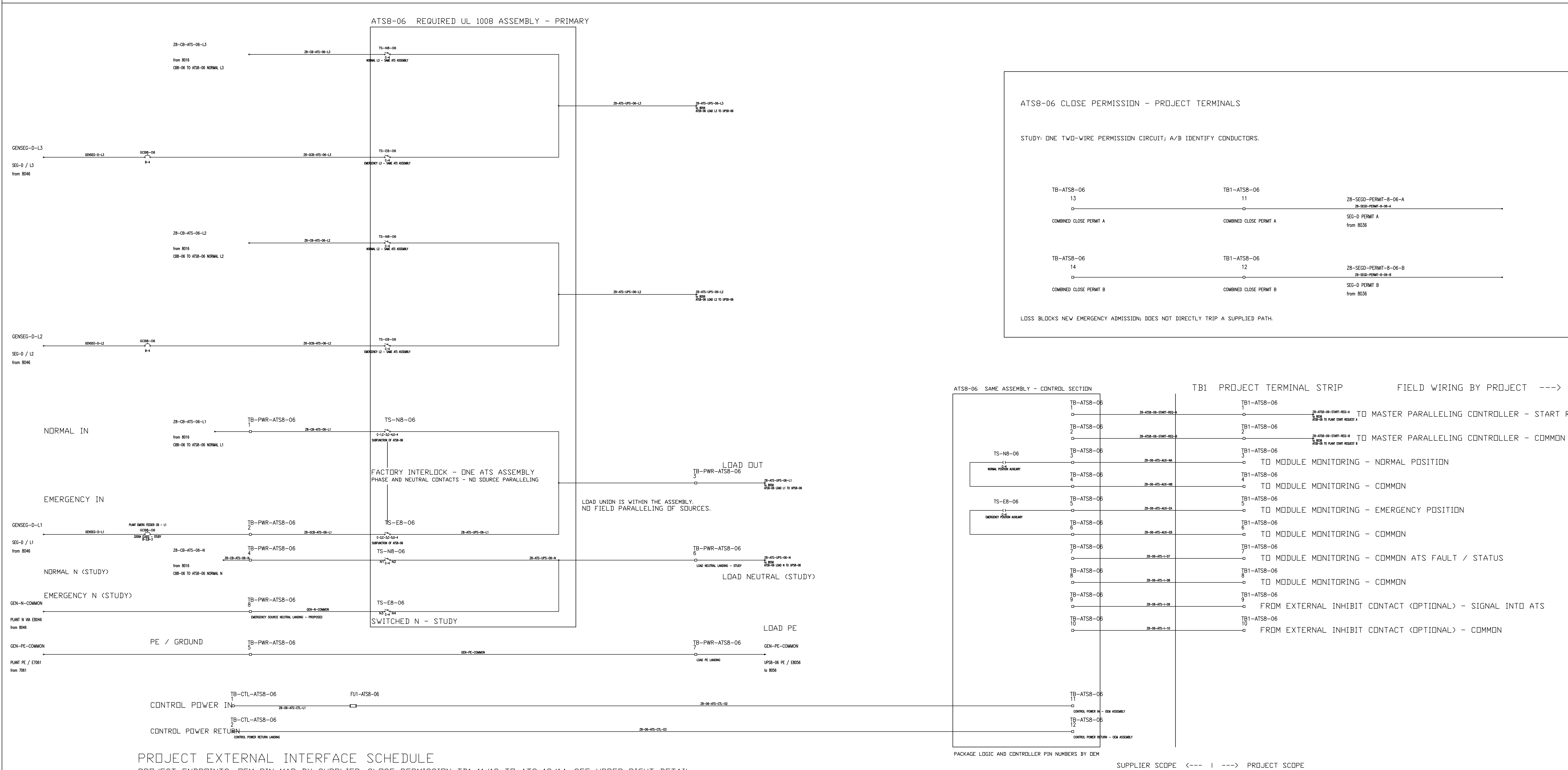




NO.	DATE	REVISION		BY	
DWG TITLE					
FATH 8-06 MV BRANCH TO CB8-06					
PCH - XFP - T8-06 - CB8-06					
ENGINEERING STUDY					
ENGINEER			CHECKED BY		
JOB NO			DRAWN BY		
SCALE No Scale			DATE 2026-09-27		
DWG NO					
K&K DATA-E-8016					
SHEET NO					
OF					

K&K DATA-E-8026 ATS8-06 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS

ZONE 8 / PATH 06 REV PE-P1 2026-09-27

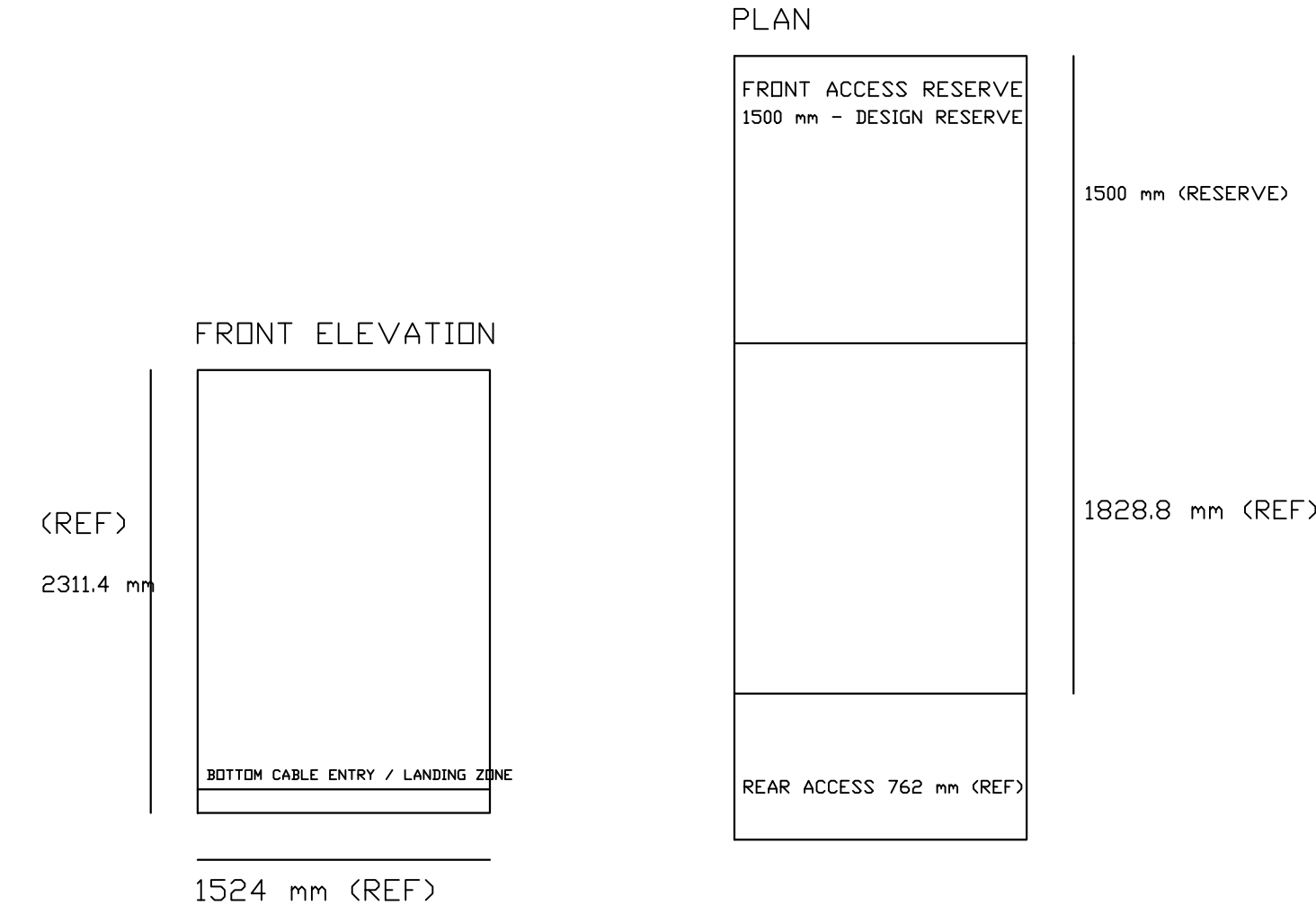


PROJECT EXTERNAL INTERFACE SCHEDULE
PROJECT ENDPOINTS; DEM PIN MAP BY SUPPLIER. CLOSE PERMISSION TBI 11/12 TO ATS 13/14; SEE UPPER-RIGHT DETAIL.

TBI	INTERFACE	SIGNAL	DIRECTION	BOUNDARY / SCOPE
1 / 2	GENSET START REQUEST	DRY CONTACT, NO VOLTAGE APPLIED BY ATS	ATS ----> MASTER PARALLELING CONTROLLER	CONTACT AND PINS BY DEM; TBI AND FIELD WIRING BY PROJECT
3 / 4	NORMAL POSITION	DRY CONTACT FROM TS-N8-06 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
5 / 6	EMERGENCY POSITION	DRY CONTACT FROM TS-E8-06 AUXILIARY	ATS ----> MODULE MONITORING	POSITION ONLY - NOT PROOF OF SOURCE AVAILABILITY
7 / 8	COMMON ATS FAULT / STATUS	DRY CONTACT FROM DEM CONTROLLER	ATS ----> MODULE MONITORING	CONTACT FORM AND PINS TO BE RETURNED BY DEM
9 / 10	REMOTE TRANSFER INHIBIT (OPTIONAL)	DRY CONTACT INTO DEM CONTROLLER INPUT	FIELD ----> ATS	REQUIRES DESIGN REVIEW: A BROKEN WIRE MUST NOT SILENTLY INHIBIT ALL EMERGENCY TRANSFER
TB-CTL 1 / 2	ATS CONTROL POWER	CONTROL VOLTAGE - VALUE TO BE CONFIRMED BY DEM	PROJECT ----> ATS	BEHAVIOUR ON LOSS OF CONTROL POWER TO BE SPECIFIED AND CHECKED WITH SUPPLIER
TB-PWR 1.8	NORMAL, EMERGENCY, LOAD, NEUTRAL (STUDY), PE	POWER LANDING	FIELD <----> ATS	AI-COMPATIBLE TERMINATION CAPACITY REQUIRED - SEE STUDY ENVELOPE

- NOTES
- ATS8-06 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
 - THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION: RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
 - SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING: DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
 - THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
 - TERMINAL IDs ARE PROJECT FUNCTIONAL IDs. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
 - GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
 - POSITION FEEDBACK REPORTS SWITCH POSITION ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
 - NORMAL SOURCE PROTECTION AND ISOLATION: CB8-06. SEE E108 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION: GCBB-06. SEE E108 / E203. SHOWN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
 - ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
 - EQUIPMENT SELECTION: TO BE COORDINATED. ASCO / EATON DATA: DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



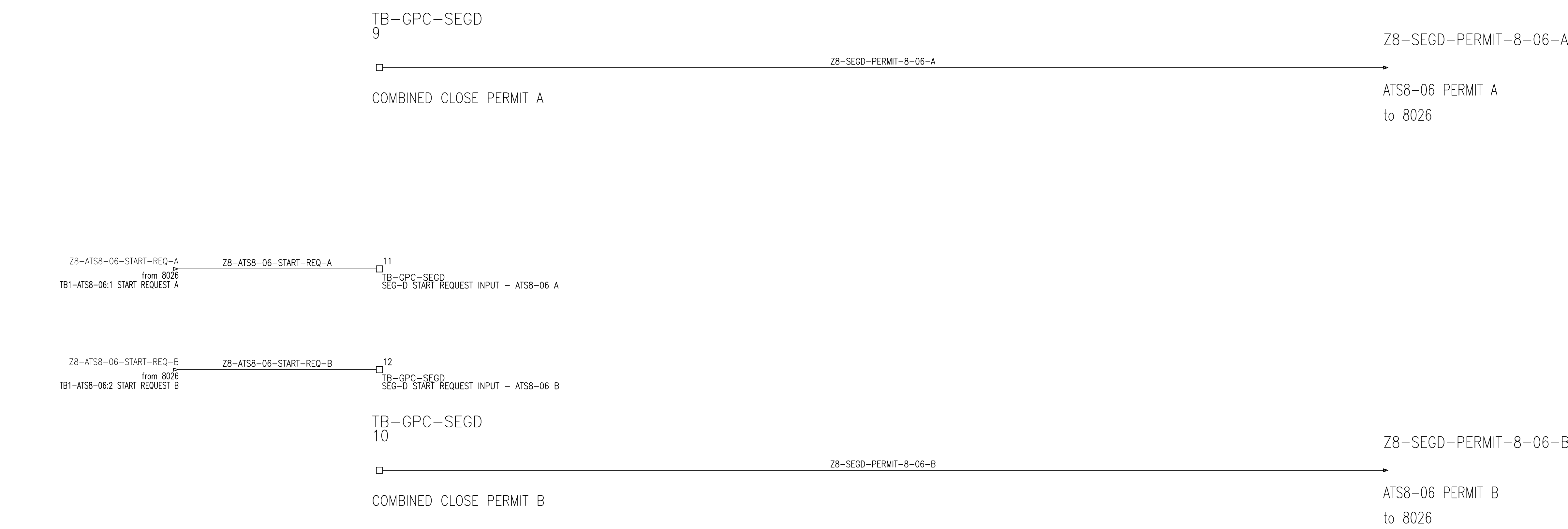
REFERENCE: ASCO 962196 TYPE 1 U-FRAME; 1524 W x 1828.8 D x 2311.4 H mm.
PHYSICAL COORDINATION REFERENCE; OFFERED DEM OUTLINE TO MATCH BEFORE PROCUREMENT.
FRONT: 1500 mm PROJECT RESERVE. REAR: 762 mm MANUFACTURER REFERENCE MINIMUM.
ACTUAL WORKING CLEARANCE AND ACCESS DEPEND ON INSTALLATION AND DEM REQUIREMENTS.
BOTTOM ENTRY REFERENCE: 1371.6 x 609.6 mm; ENTRY POSITION PER ASCO 962196.
INPUT STUDY: 9 x 750 kcmil AL/PH; 12 x 600 ALTERNATIVE. DEM LUG MATCH REQUIRED.
ATS-UPS STUDY: 12 x 600 kcmil AL/PH. FINAL N/PE AND AMPACITY PER PORT SCHEDULE.
FINAL ATS WCR / PROTECTION COMBINATION: BY DEM.

PROJECT: K&K DATA IDC - ZONE 8 - PATH 06
DRAWING: K&K DATA-E-8026 ATS8-06 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

K&K DATA-E-8036 ATS8-06 / SEG-D PLANT CONTROL INTERFACE

PATH 8-06: START TB-GPC-SEGD:11/12; CLOSE PERMISSION TB-GPC-SEGD:9/10 PER E205 PE-P1 2026-09-27

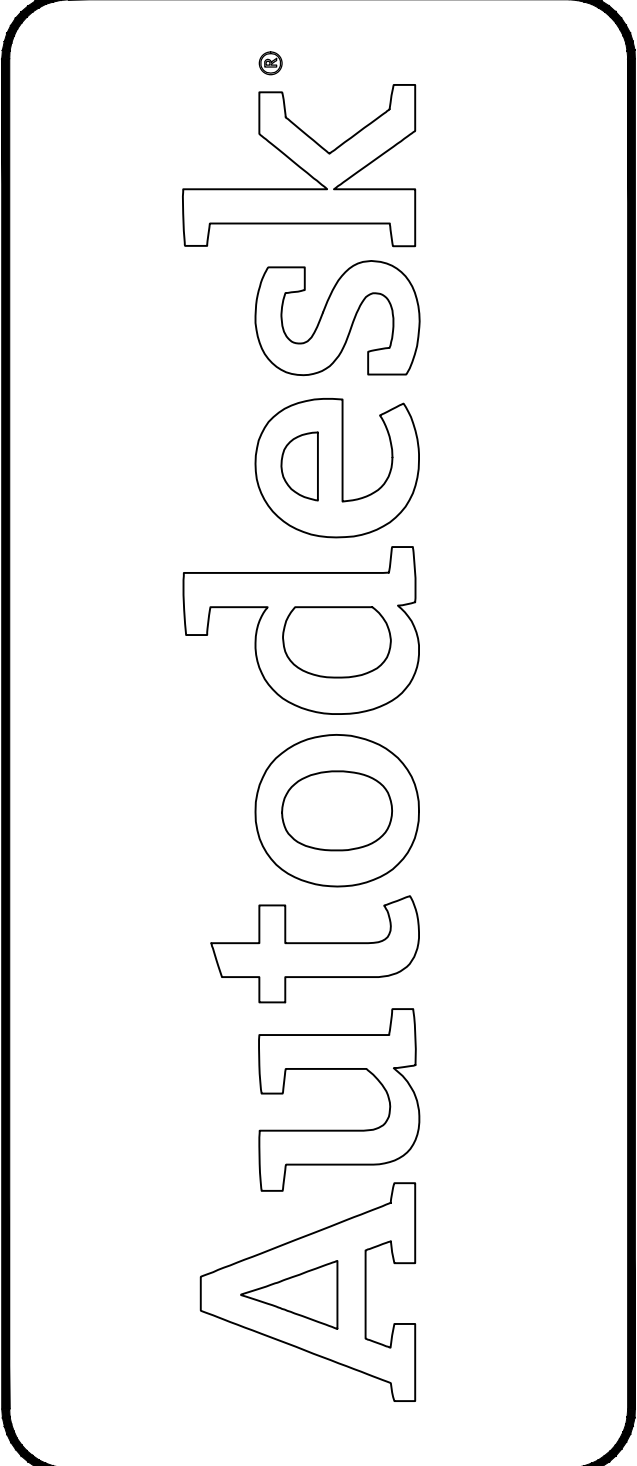
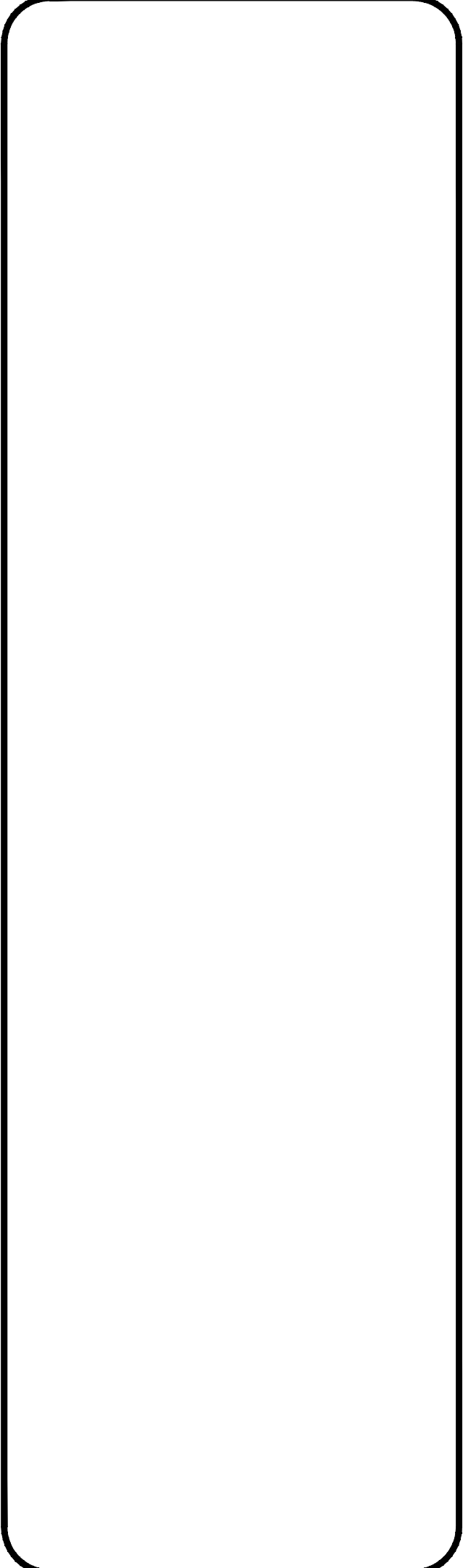
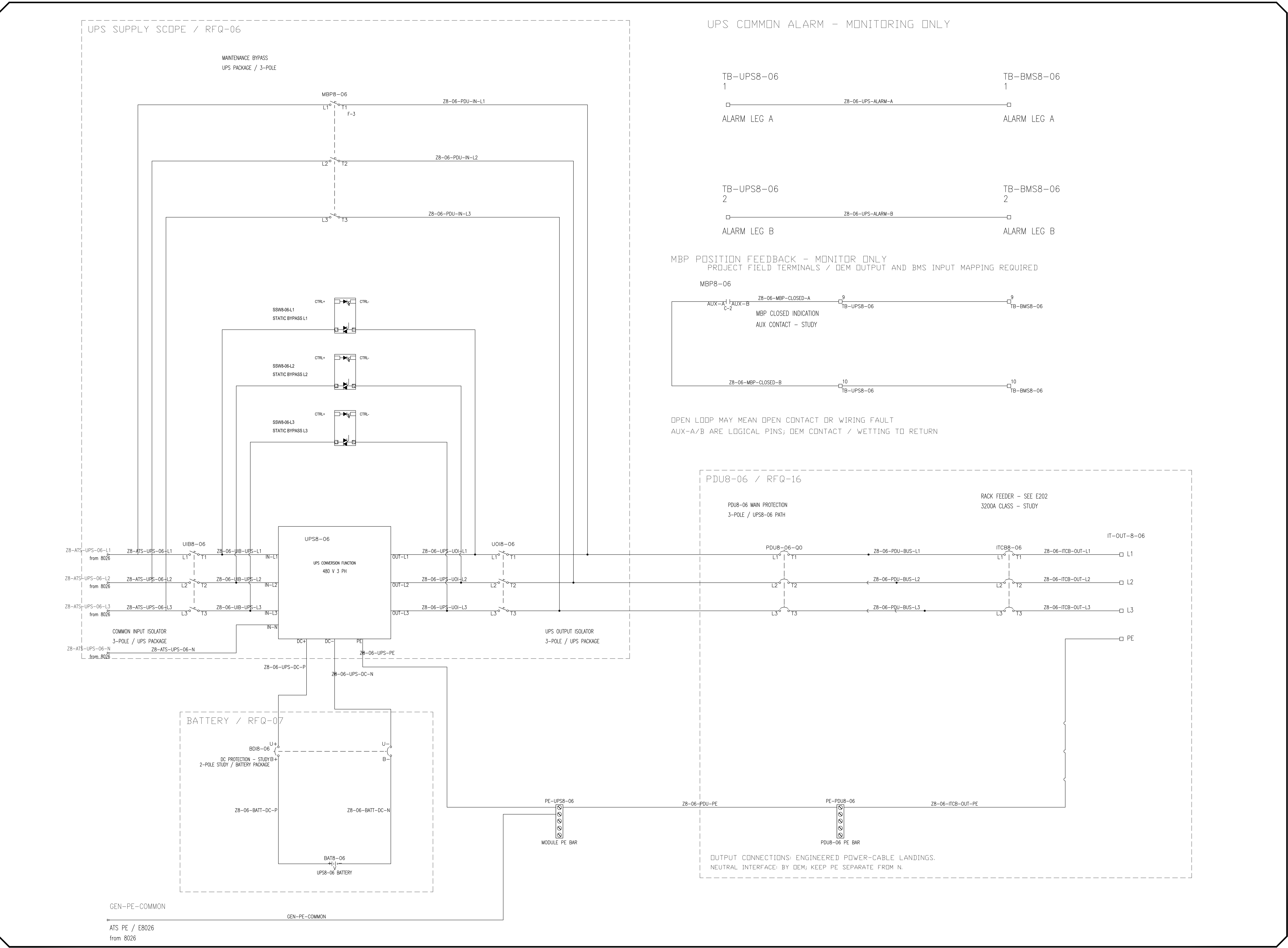
GENERATOR PLANT SEG-D TB-GPC-SEGD CLOSE PERMISSION TO E8026 ATS TERMINALS: SEE E8026



- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS8-06:11/12 AND TB-ATS8-06:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS8-06:1/2 START REQUEST IS SHOWN ON E8026.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 8-06 ON SEG-D ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.



1
2
3
4
5
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7
8



NO.	DATE	REVISION	BY
DWG TITLE			
UPS8-06 / BYPASS AND PDU INTERFACES ENGINEERING STUDY UPS8-06 DETAIL COORDINATION			
ENGINEER	CHECKED BY		
JOB NO	DATE	DRAWN BY	
SCALE	No Scale	DATE	2026-08-27 PEP1
DWG NO	K&K DATA-E-8056		
SHEET NO	OF		

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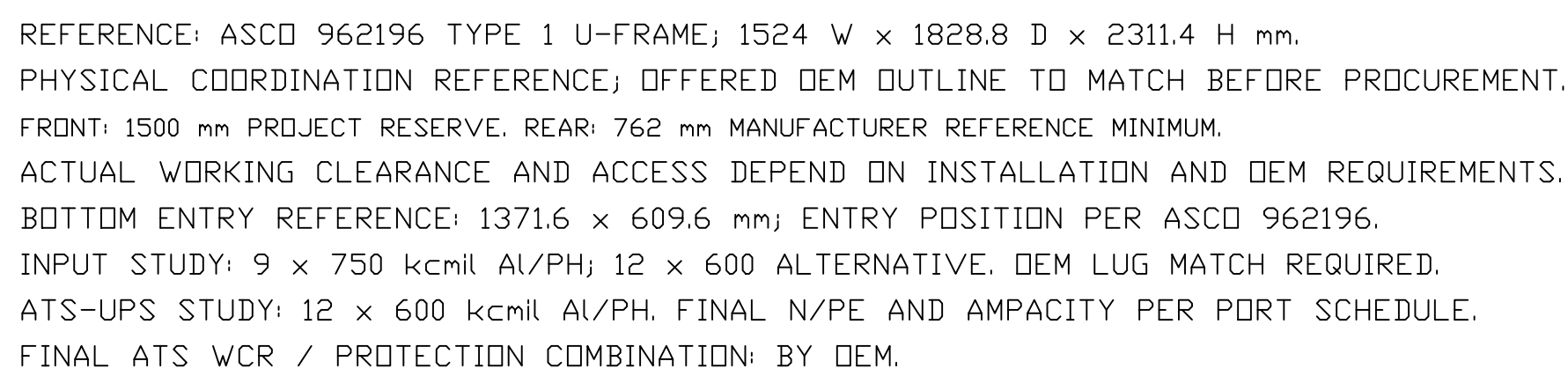
Autodesk®

NO.	DATE	REVISION	BY		
DWG TITLE					
PATH 8-07 MV BRANCH TO CB8-07 PCO - FXP - TB-07 - CDB-07 ENGINEERING STUDY					
ENGINEER		CHECKED BY			
JOB NO	K&K DATA	DRAWN BY			
SCALE	No Scale	DATE	2026-09-27		
DWG NO					
K&K DATA-E-8017					
SHEET NO					
OF					

NOTES

1. ATS#8-07 SHALL BE ONE UL 1008 LISTED ASSEMBLY. PHASE AND NEUTRAL SWITCHING FUNCTIONS SHALL HAVE DEM MECHANICAL AND ELECTRICAL INTERLOCKING. TWO INDEPENDENT BREAKERS ARE NOT A TRANSFER SWITCH.
2. THE LOAD UNION IS WITHIN THE ASSEMBLY. KEEP NORMAL AND EMERGENCY SOURCES UN-PARALLELED. TRANSFER IS OPEN TRANSITION; RELEASE THE OLD SOURCE BEFORE CLOSING THE NEW SOURCE.
3. SOURCE SENSING, START / TRANSFER / RETRANSFER AND COOLDOWN TIMING DEM IMPLEMENTATION OF THE SPECIFIED FUNCTIONAL REQUIREMENTS.
4. THE CONTROLLER SHALL MAINTAIN THE START CALL WHILE THE NORMAL SOURCE IS UNACCEPTABLE. VERIFY THIS FUNCTION WITH THE SUPPLIER.
5. TERMINAL IDS ARE PROJECT FUNCTIONAL IDS. THE SUPPLIER SHALL CONFIRM DEM CONTROLLER PIN MAPPING FOR FINAL WIRING COORDINATION.
6. GENSET START IS A REQUEST TO THE MASTER PARALLELING CONTROLLER, NOT A DIRECT START COMMAND TO ONE GENERATOR SET.
7. POSITION FEEDBACK SWITCH PENDING ONLY. IT IS NOT PROOF THAT THE CORRESPONDING SOURCE IS AVAILABLE OR ACCEPTABLE.
8. NORMAL SOURCE PROTECTION AND ISOLATION. CB#8-07. SEE E108 AND CURRENT INSTALLATION DRAWINGS. EMERGENCY FEEDER PROTECTION AND ISOLATION. CB#8-07, SEE E108 / E203. CHURN FEEDER FUNCTIONS ARE NOT ADDITIONAL PROCURED DEVICES.
9. ISOLATING ONE SOURCE DOES NOT MAKE THIS EQUIPMENT SAFE. ISOLATE AND LOCK NORMAL AND EMERGENCY SOURCES AND ALL CONTROL AND AUXILIARY SUPPLIES, THEN VERIFY ABSENCE OF VOLTAGE BY A QUALIFIED PERSON.
10. EQUIPMENT SELECTION TO BE COORDINATED. ASCO / Eaton DATA- DESIGN REFERENCE.

ATS CABINET / FRONT AND REAR ACCESS - STUDY (1 UNIT = 350 mm)



PROJECT: K&K DATA IDC - ZONE 8 - PATH 07
DRAWING: K&K DATA-E-8027 ATS8-07 PRIMARY, EXTERNAL INTERFACES AND PROJECT TERMINALS
REV: PE-P1 DATE: 2026-09-27 SHEET 1 OF 1 SCALE: NOT TO SCALE

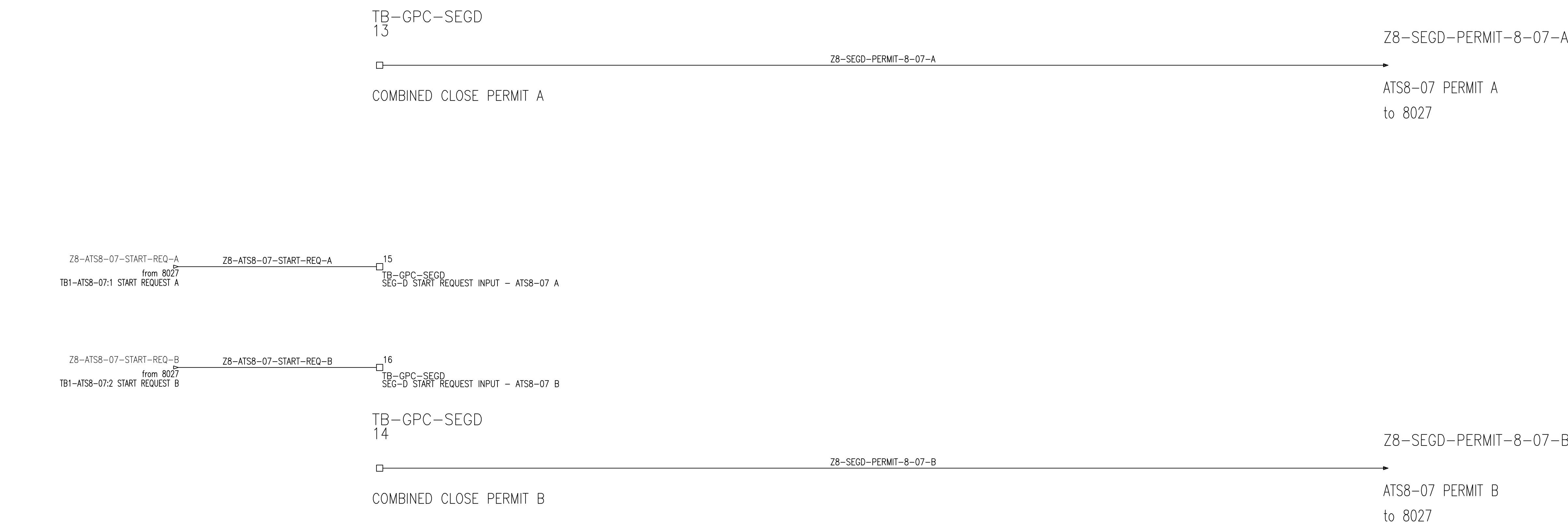
K&K DATA-E-8037 ATS8-07 / SEG-D PLANT CONTROL INTERFACE

PATH 8-07: START TB-GPC-SEGD:15/16; CLOSE PERMISSION TB-GPC-SEGD:13/14 PER E205 PE-P1 2026-09-27

GENERATOR PLANT SEG-D TB-GPC-SEGD

CLOSE PERMISSION TO E8027

ATS TERMINALS: SEE E8027



- ONE INTEGRATED PERMIT PER PATH: THE PLANT CAPACITY DECLARATION AND THE STAGED CLOSE PERMIT ARE CARRIED IN THIS ONE PAIR.
- THE PERMIT IS VALID ONLY WHILE THE GENERATOR BUS IS QUALIFIED AND SUFFICIENT AVAILABLE CAPACITY EXISTS AND THIS PATH HOLDS ITS ASSIGNED LOAD STEP. PERMIT THRESHOLDS, INCLUDING KVA, SHALL FOLLOW THE PLANT CAPACITY AND LOAD-STEP DESIGN.
- LOSS OF THE PERMIT BLOCKS A NEW CLOSE ONLY; IT DOES NOT TRIP AN ALREADY CONNECTED PATH. FAULT AND POSITION INTERLOCKS REMAIN PRIORITY.
- SPECIFY AN ISOLATED OEM RECEIVING INPUT. THE SUPPLIER SHALL CONFIRM THE INPUT SUPPLY ARRANGEMENT AND CONTACT RATINGS.
- TB1-ATS8-07:11/12 AND TB-ATS8-07:13/14 ARE PROJECT TERMINALS, NOT OEM CONTROLLER PINS.
TB1-ATS8-07:1/2 START REQUEST IS SHOWN ON E8027.
- COORDINATE INPUT LOAD STEPS AND RECHARGE SEPARATELY FROM MODULE RETURN DELAYS; AC INPUT LIMITING REQUIRES VERIFIED OEM FUNCTION.
- START REQUEST GOES TO THE PARALLEL-PLANT CONTROLLER. CONTACT RATINGS AND CONTROL SUPPLY REQUIRE OEM MATCH.
- PATH 8-07 ON SEG-D ONLY. OTHER PATHS HAVE SEPARATE CONTROL INTERFACES.



