# AV F&I Electric Standards

04/07/2025 - 2025 F&I STANDARD DETAILS

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REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 04/07/2025 | MDB | NEW SHEET, 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

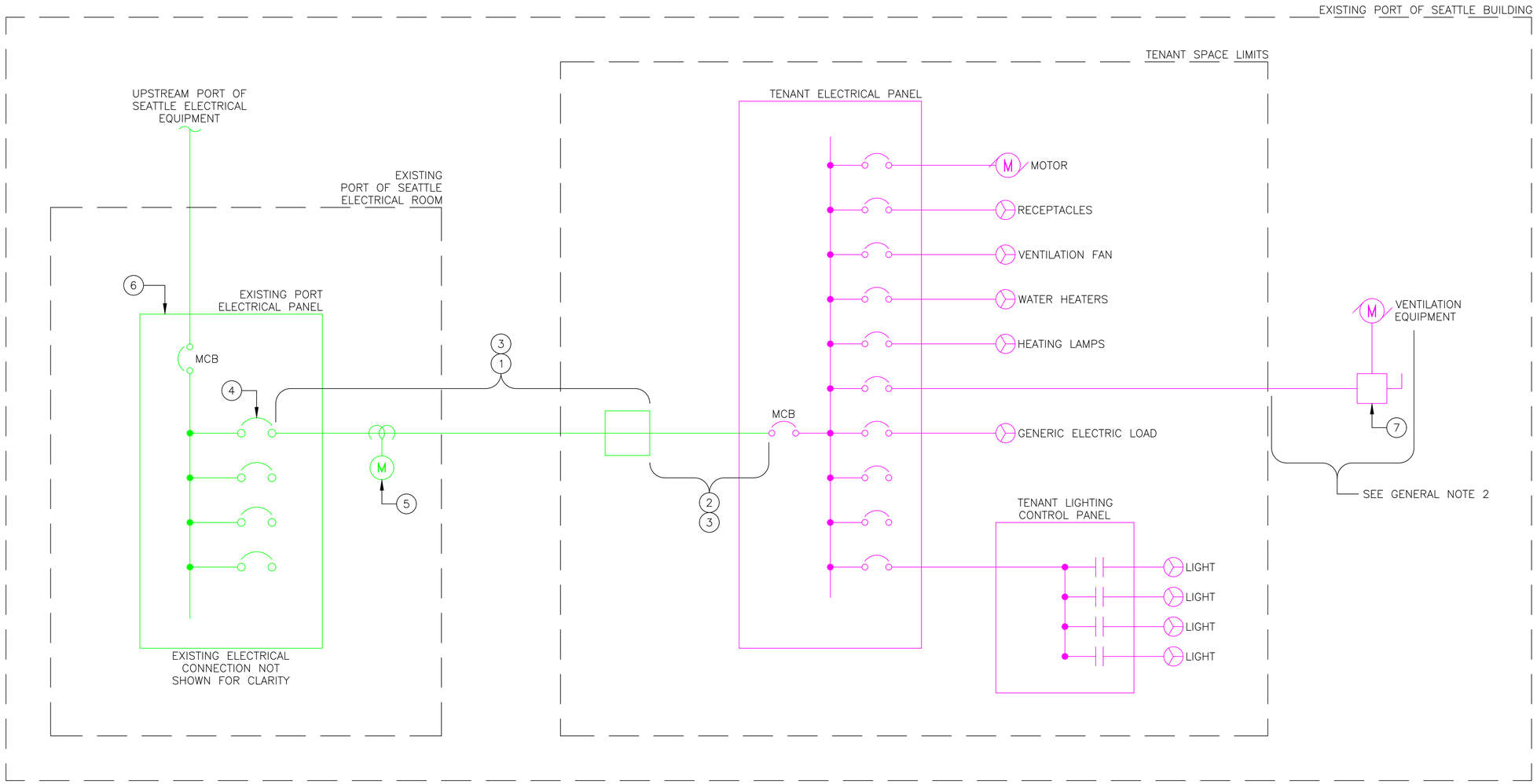
PROJECT: F&I STANDARD DETAILS

SHEET TITLE: F&I ELECTRICAL STANDARDS COVER SHEET AND SHEET INDEX

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO. 26 00 00 - 00




## ABBREVIATION

| | |
|---|---|
| BRPELS | BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS |
| CFCI | CONTRACTOR FURNISHED, CONTRACTOR INSTALLED |
| MCB | MAIN CIRCUIT BREAKER |
| PFCI | PORT FURNISHED, CONTRACTOR INSTALLED |
| PFPI | PORT FURNISHED, PORT INSTALLED |

## KEYNOTES

1. PFPI, RACEWAY AND J–BOX.
2. CFCI, RACEWAY.
3. CFCI, CONDUCTORS, SEE GENERAL NOTE 3.
4. CFCI, CIRCUIT BREAK.
5. CFCI, METER & METER CONNECTIVITY.
6. 30 DAY LOAD STUDY REQUIRED FOR LOAD AVAILABILITY AND BREAKER SIZING. REQUESTED BY PROJECT PERFORMED BY PORT MAINTENANCE.
7. CFCI, LOCAL EQUIPMENT DISCONNECTING MEANS PER CODE.

## GENERAL NOTES:

1. TENANT SPACE MUST ADHERE TO NATIONAL ELECTRIC CODE, AND STATE ELECTRIC CODE.
2. ALL SPACES OUTSIDE THE TENANT SPACES AND UPSTREAM OF TENANT ELECTRICAL PANEL SHALL ADHERE TO NATIONAL ELECTRIC CODE, STATE ELECTRIC CODE, AND PORT OF SEATTLE ELECTRICAL STANDARDS.
3. CONDUCTORS SHALL BE SIZED ACCORDINGLY PER CODE AND FACTOR IN LINE LOSE.
4. ALL DESIGN DOCUMENT (DRAWINGS, SPECIFICATION, CALCULATION, ETC) SHALL BE STAMPED, SIGNED, AND DATED BY A PROFESSIONAL ENGINEER OF THE STATE OF WASHINGTON PER WASHINGTON STATE BRPELS REQUIREMENTS.
5. TENANT EQUIPMENT SHALL BE MAINTAINED, OPERATED AND SERVICED BY TENANT OR TENANT'S ELECTRICAL CONTRACTOR.

REVISIONS

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| 1 | 04/07/2025 | MDB | NEW DETAIL, 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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| PROJECT ENGINEER: | — |
| DESIGN ENGINEER: | — |
| DRAFTER: | — |
| SCALE: | N.T.S. |
| DATE: | — |
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Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

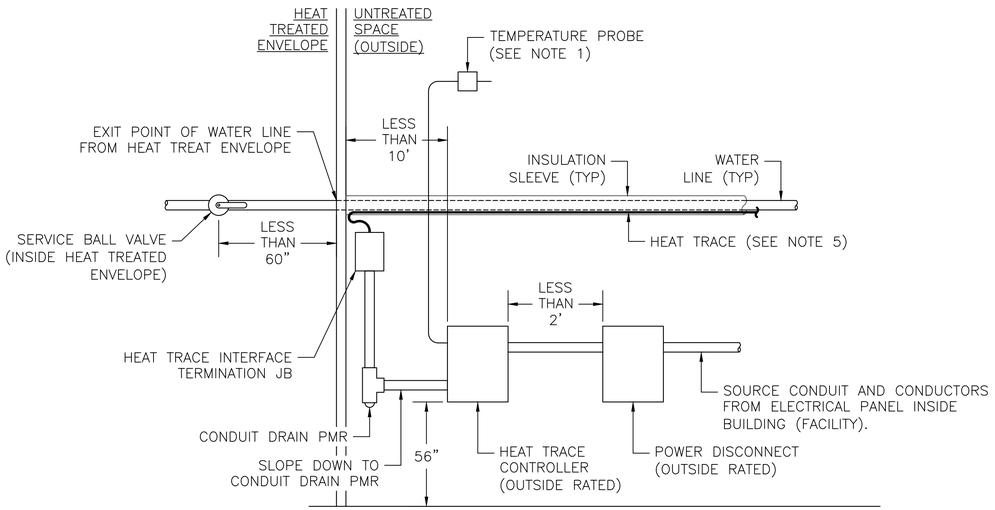
SHEET TITLE: **GENERIC - AIRPORT DINING AND RETAIL ELECTRICAL REQUIREMENTS**

WORK PROJECT NO.

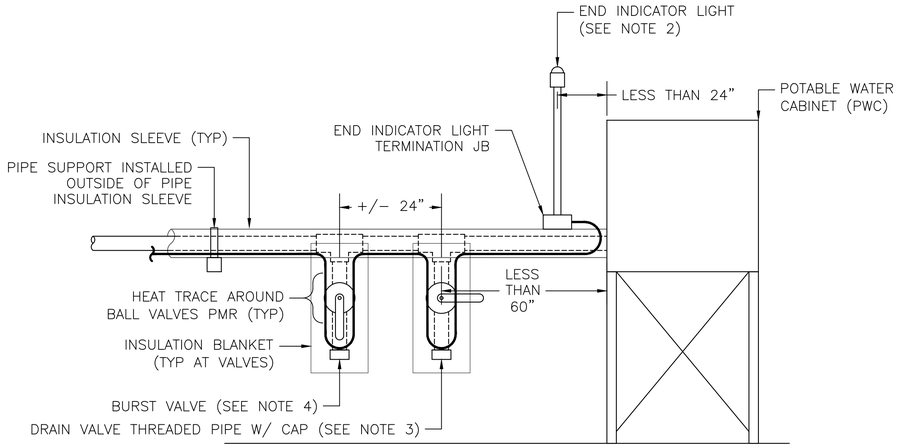
CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 00 00 - 01**




AT BUILDING




AT PASSENGER LOADING BRIDGE

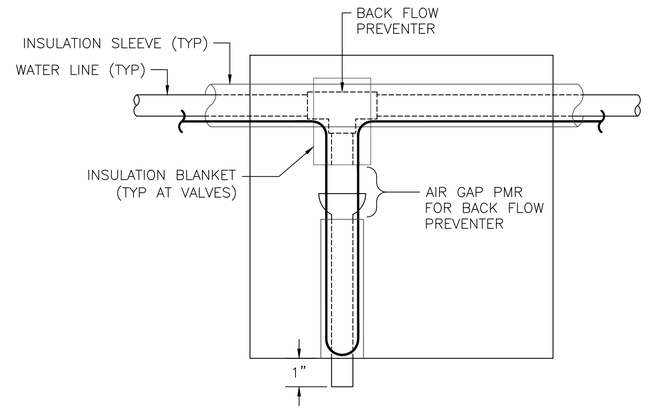
**DETAIL** 1
HEAT TRACE EQUIPMENT LAYOUT
SCALE: NTS

## ABBREVIATIONS:

| | |
|---|---|
| APPROX. | APPROXIMATE |
| JB | JUNCTION BOX |
| LED | LIGHT EMITTING DIODE |
| PMR | PER MANUFACTURES RECOMMENDATION |
| PWC | POTABLE WATER CABINET |
| TYP | TYPICAL |
| W/ | WITH |

## HEAT TRACE INSTALLATION NOTES:

1. TEMPERATURE PROBE SHALL BE INSTALLED IN UNTREATED SPACE (OUTSIDE AIR, NOT UNDER BUILDING OR OTHER LARGER STRUCTURES). PLACEMENT OF THE TEMPERATURE PROBE SHALL BE POSITIONED SUCH THAT IT IS NOT HEATED OR COOLED BY ANY SOURCE OTHER THAN AMBIENT UNTREATED SPACE AIR.
2. SECURE END INDICATOR LIGHT (LED) TO POTABLE WATER CABINET SUCH THAT IT IS VISIBLE FROM DRIVE LANE. MOUNTING OF END INDICATOR LIGHT SHALL NOT PENETRATE INTO THE PWC.
3. DRAIN VALVE NORMALLY CLOSED. DRAIN VALVE USED FOR DRAINING WATER LINE SERVICE.
4. BALL VALVE FOR BURST VALVE NORMALLY OPENED AND CLOSED FOR SERVICING OR REPLACING BURST VALVE. BURST VALVE RATED PER PORT DESIGN STANDARDS.
5. INSTALL HEAT TRACE IN BETWEEN WATER LINE AND INSULATION SLEEVE PMR.




**DETAIL** 2
RP BOX IN UNTREATED SPACE
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 04/07/2025 | MDB | NEW DETAIL, 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **GENERIC - POTABLE WATER CABINET HEAT TRACE**

WORK PROJECT NO. -
CONSULTANT'S NO. -
PORT OF SEATTLE NO. **26 00 00 - 02**

## ARCHITECT/ENGINEER CODE INFORMATION CHECKLIST

### A. GENERAL PROJECT INFORMATION

1. Name of Project: NAME OF PROJECT
2. Official street address: City of SeaTac, WA
3. Parcel No.: 282 304-9016
4. Project description: PROJECT DESCRIPTION

| | (Name) | (Address) | (Telephone) |
|---|---|---|---|
| 5. Owner: | Port of Seattle | PO Box 68727<br>Seattle, WA 98168 | PM PHONE # |
| 6. Architect: | | | |
| 7. Civil: | ENGINEER'S NAME | ENGINEER'S ADDRESS | ENGINEER'S PHONE # |
| 8. Structure: | ENGINEER'S NAME | ENGINEER'S ADDRESS | ENGINEER'S PHONE # |
| 9. Mechanical: | ENGINEER'S NAME | ENGINEER'S ADDRESS | ENGINEER'S PHONE # |
| 10. Electrical: | ENGINEER'S NAME | ENGINEER'S ADDRESS | ENGINEER'S PHONE # |
| 11. Contact Person: (Port Project Manager) | PM NAME | PM ADDRESS | ENGINEER'S PHONE # |

12. New ☒ Addition ☐ Tenant Improvement ☐
13. Existing lot/building use: N/A
14. Proposed use(s): DESCRIBE
15. Environmental documents on project: N/A
16. Port of Seattle Aviation Building Department:
    Address: 17900 International Blvd., #300B
    Seattle, WA 98188
    Phone #: (206) 835-5806

### B. ZONING DESIGNATION/ENVIRONMENTAL REVIEW

1. Zoning designation: Airport Zoning
2. Use zone of adjacent lots: North ____ South X East X West ____
3. Lot area (square feet) N/A
4. Percent of lot covered by building(s): N/A
5. Total impervious surface: Existing No change Proposed No change
6. Net increase/decrease of impervious surface: 0
7. Change in type of impervious surface: No
8. Fire: Jurisdiction: Port of Seattle Fire Department
   Sprinkler: Existing N/A New N/A
   Fire Alarm: Existing N/A New N/A
9. Parking standards: Existing 0 required 0 Proposed 0 See sheet N/A
10. Landscaping (RAC, Section No.) N/A
11. Surface water standards: King County Surface Water Design Manual
12. Surface Water discharge by basin: Des Moines Creek
13. Technical Information Report required (Y/N): No
14. Geotech report required: (Y/N): No
15. Approximate area of earth work (SF or Acres) 0

### C. BUILDING INFORMATION

1. New ☐ Addition ☐ Tenant Improvement ☐ N/A
2. Existing lot/building use: VARIES
3. Proposed use(s): BUILDING INFORMATION
4. Occupancy group: Existing: N/A Proposed: N/A
5. Construction type required: Existing: N/A Proposed: N/A
6. Allowable height: N/A
7. Allowable area: N/A
8. Set backs: N/A
9. Building height (both in feet and number of stories): ____ Feet ____ Stories
10. Main floor area and occupant load: Floor area: N/A Occupant load N/A
11. Mezzanine floor area and occupant load: Floor area: N/A Occupant load N/A
12. Architect design standards: (RAC, Section No.) N/A
13. Total floor area (including basements and occupied roofs): N/A
14. ADA requirement: N/A
15. Energy code: Third party review & inspection required? (Y/N) N/A
    Method: Component/Prescriptive: ____
16. Seattle-King County Health Department approval required? (Y/N) No



REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER:
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE: N.T.S.
DATE:
CHECKED/APPROVED BY:

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: F&I STANDARD DETAILS

SHEET TITLE: CODE CHECKLIST

WORK PROJECT NO.

CONSULTANT'S NO.

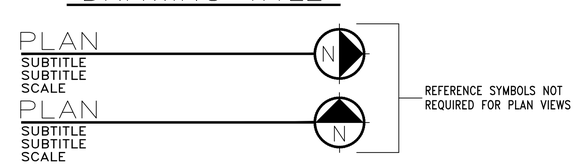
PORT OF SEATTLE NO.

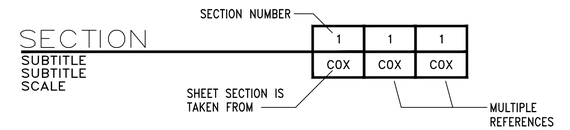
26 05 00 - G01

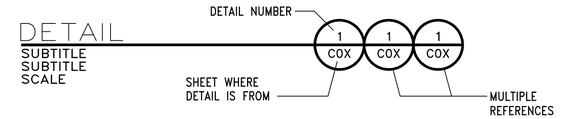
# ABBREVIATIONS

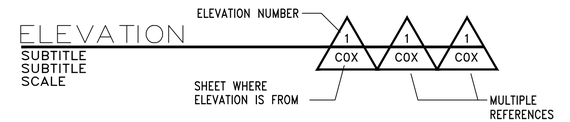
| | |
|---|---|
| A | AMMETER, AMPERE, AMPS |
| ABND | ABANDON |
| ABV | ABOVE |
| AC | ASPHALTIC CONCRETE/ALTERNATING CURRENT |
| ACP | ASPHALT CONCRETE PAVEMENT |
| ADS | ADS CORRUGATED POLYETHYLENE PIPE |
| AF | AMP FRAME |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| AHU | AIR HANDLING UNIT |
| AIC | AMPS INTERRUPTING CAPACITY |
| AL | ALUMINUM |
| ALT | ALTERNATE |
| AM | AMMETER |
| AMP | AMPERE |
| ANSI | AMERICAN NATIONAL STANDARDS INSTITUTE |
| AOA | AIRFIELD OPERATIONS AREA |
| APPROX | APPROXIMATE |
| ARCH | ARCHITECTURAL |
| ASPH | ASPHALT |
| ASR | AIRPORT SURVEILLANCE RADAR |
| ASTM | AMERICAN SOCIETY FOR TESTING MATERIAL |
| AT | AMP TRIP |
| ATS | AUTOMATIC TRANSFER SWITCH |
| AUX | AUXILIARY |
| AUTO | AUTOMATIC |
| AVG | AVERAGE |
| AWG | AMERICAN WIRE GAUGE |
| BATT | BATTERY |
| BC | BOLT CIRCLE/BARE COPPER |
| BET | BETWEEN |
| BITUM | BITUMINOUS |
| BLDG | BUILDING |
| BM | BENCH MARK |
| BKR | BREAKER |
| BOT | BOTTOM |
| C | CONDUCTOR |
| CAB | CABINET |
| CAT | CATALOG |
| CB | CATCH BASIN OR CIRCUIT BREAKER |
| CCR | CONSTANT CURRENT REGULATOR |
| CEM | CEMENT |
| CF | CUBIC FOOT |
| CI | CAST IRON |
| CIP | CAST-IN-PLACE |
| CJ | CONSTRUCTION JOINT |
| CKT | CIRCUIT |
| CLR | CLEAR |
| CL | CLASS OR CENTERLINE |
| CLG | CEILING |
| CMP | CORRUGATED METAL PIPE, CENTRAL MECHANICAL PLANT |
| CO | CONDUIT ONLY |
| COL | COLUMN |
| COMM | COMMUNICATION(S) |
| CONC | CONCRETE |
| COND | CONDUIT |
| CONN | CONNECT/CONNECTION |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS |
| CONTR | CONTRACTOR |
| COORD | COORDINATE |
| CP | CONCRETE PIPE |
| CPD | CAPPED |
| CPT | CONTROL POWER TRANSFORMER |
| CR | CONTROL RELAY |
| CRS | PVC COATED RIGID STEEL |
| CS | CONTROL SWITCH/CONTROL STATION |
| CSA | CANADIAN STANDARDS ASSOCIATION |
| CT | CURRENT TRANSFORMER |
| CTE | CENTRAL TERMINAL EXPANSION |
| CTR | CENTER |
| CTRL | CONTROL |
| CTS | CURRENT TEST SWITCH |
| CU | COPPER |
| CY | CUBIC YARD |
| DB | DUCT BANK |
| DBC | DIRECT BURIAL CABLE |
| DC | DIRECT CURRENT |
| DDC | DIRECT DIGITAL CONTROL |
| DED | DEDICATED |
| DET | DETAIL |
| DIA | DIAMETER |
| DIFF | DIFFERENTIAL |
| DIM | DIMENSION |
| DIP | DUCTILE IRON PIPE |
| DISC | DISCONNECT |
| DISTR | DISTRIBUTION |
| DN | DOWN |
| DO | DITTO |
| DP | DISTRIBUTION PANELBOARD |
| DS | DISCONNECT SWITCH |
| DWG | DRAWING |
| E | EAST |
| EA | EACH |
| EC | ELECTRICAL CONDUIT |
| ED | ELECTRICAL DUCT |
| EF | EXHAUST FAN |
| EGC | EQUIPMENT GROUND CONDUCTOR |
| EI | ELECTRICAL INTERLOCK |
| ELEC | ELECTRIC/ELECTRICAL |
| EL, ELEV | ELEVATION |
| ELT | EQUIPMENT LIGHT |
| EMBT | EMBEDMENT |
| EMT | ELECTRICAL METALLIC TUBING |
| EMERG | EMERGENCY |
| ENCL | ENCLOSURE |
| ENGR | ENGINEER |
| EOP | EDGE OF PAVEMENT |
| EPR | ETHYLENE PROPYLENE RUBBER |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| EQUIV | EQUIVALENT |
| ETL | ELECTRICAL TESTING LABORATORY |
| EW | EACH WAY |
| EWC | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| EXIST | EXISTING |
| EXH | EXHAUST |
| EXJ | EXPANSION JOINT |
| EXP | EXPOSED |
| EXT | EXTERIOR |
| E-W | EAST-WEST |
| F | FARENHEIT, FEEDER |
| FAA | FEDERAL AVIATION ADMINISTRATION |
| FACP | FIRE ALARM CONTROL PANEL |
| FC | FOOT CANDLE |
| FD | FIELD DRILL, FLOOR DRAIN |
| FDN | FOUNDATION |
| FDR | FEEDER |
| FH | FIRE HYDRANT |
| FHP | FRACTIONAL HORSEPOWER |
| FIN | FINISHED |
| FIN FL | FINISHED FLOOR |
| FIXT | FIXTURE |
| FL | FLOOD LIGHT |
| FLEX | FLEXIBLE CONDUIT |
| FLR | FLOOR |
| FLUOR | FLUORESCENT |
| FM | FACTORY MUTUAL |
| FO | FIBER OPTIC |
| FS | FAR SIDE |
| FT | FOOT (FEET) |
| FTG | FOOTING |
| FU | FUSE |
| FUT | FUTURE |
| FV | FULL VOLTAGE |
| FVR | FULL VOLTAGE REVERSING |
| FVNR | FULL VOLTAGE NON-REVERSING |
| G | GREEN INDICATING LIGHT OR GROUND (ELECTRICAL) |
| GALV | GALVANIZED |
| GB | GROUND BEAM |
| GCB | GAS CIRCUIT BREAKER |
| GEC | GROUNDING ELECTRODE CONDUCTOR |
| GEN | GENERATOR |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GFI | GROUND FAULT INTERRUPTER |
| GND | GROUND |
| GR | GRADE, GROUND ROD |
| GRS | GALVANIZED RIGID STEEL |
| GV | GATE VALVE |
| H | HEIGHT (HIGH) |
| HBS | HIGH BUS SUPPORT |
| HCO | ANNUNCIATOR HORN CIRCUIT |
| HDSS | HIGH BUS DISCONNECT SWITCH SUPPORT |
| HEX | HEXAGONAL |
| HF | H-FRAME |
| HH | HANDHOLE |
| HID | HIGH INTENSITY DISCHARGE |
| HK | HOOK |
| HMI | HUMAN-MACHINE INTERFACE |
| HOA | HAND-OFF-AUTO |
| HORIZ | HORIZONTAL |
| HP | HORSEPOWER |
| HPS | HIGH PRESSURE SODIUM |
| HTR | HEATER |
| HV | HIGH VOLTAGE |
| HZ | HERTZ |
| I | CURRENT, INTERLOCK |
| I/O | INPUT/OUTPUT PANEL |
| IC | INTERRUPTING CAPACITY |
| ID | INSIDE DIAMETER/DIMENSION |
| IE | INVERT ELEVATION |
| IJB | INSTRUMENT JUNCTION BOX |
| ILS | INSTRUMENT LANDING SYSTEM |
| IN | INCH |
| INCL | INCLUDING |
| INST | INSTANTANEOUS |
| INSTR | INSTRUMENT |
| INV | INVERT |
| IPS | IRON PIPE SIZE |
| IWS | INDUSTRIAL WASTE SEWER |
| J, JB | JUNCTION BOX |
| JCT | JUNCTION |
| JT | JOINT |
| K | KIRK INTERLOCK, KIP |
| KCMIL | THOUSAND CIRCULAR-MIL |
| KO | KEY OPERATED |
| KSI | 1000 POUNDS PER SQUARE INCH |
| KV | KILOVOLT |
| KVA | KILOVOLT AMPERE(S) |
| KVAR | KILOVOLT AMPERES REACTIVE |
| KVARH | KILOVARHOUR |
| KW | KILOWATT |
| KWH | KILOWATT HOUR |
| KWHD | KILOWATT HOUR DEMAND |
| L | LENGTH, ANGLE, LIGHT, LOCAL |
| LB | POUND, LOADBREAK |
| LBS | POUNDS, LOW BUS SUPPORT |
| LC | LIGHTING CONTACTOR |
| LCP | LOCAL CONTROL PANEL |
| LDSS | LOW BUSS DISCONNECT SUPPORT SWITCH |
| LED | LIGHT EMITTING DIODE |
| LF | LINEAR FEET/FOOT |
| LIN | LINEAR |
| LO | LOW |
| LONGIT | LONGITUDE |
| LP | LIQUID PETROLEUM |
| LS | LIMIT SWITCH |
| LT | LIGHT |
| LTC | LOAD TAP CHANGER |
| LTG | LIGHTING |
| LTS | LIGHTS |
| LV | LOW VOLTAGE |
| L-L | LINE-TO-LINE |
| M | MOTOR |
| MAX | MAXIMUM |
| MC | MISCELLANEOUS CHANNEL |
| MCC | MOTOR CONTROL CENTER |
| MCM | MILLION CIRCULAR MILS |
| MCP | MOTOR CIRCUIT PROTECTOR |
| MCOV | MAXIMUM CIRCUIT OPERATING VOLTAGE |
| MECH | MECHANICAL |
| MEMB | MEMBRANE |
| MFM | MULTIFUNCTION METER |
| MFR | MANUFACTURER |
| MG | MOTOR GENERATOR |
| MH | MANHOLE |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MLO | MAIN LUGS ONLY |
| MON | MONUMENT |
| MR | MULTI-RATIO |
| MTD | MOUNTED |
| MTG | MOUNTING |
| MTR | MOTOR |
| MTS | MAIN TERMINAL SECURITY |
| MVA | MEGAVOLT-AMPERE |
| N | NORTH/NEUTRAL |
| NC | NORMALLY CLOSED |
| NE | NORTHEAST |
| NEC | NATIONAL ELECTRICAL CODE |
| NEMA | NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION |
| NEUT | NEUTRAL |
| NIC | NOT IN CONTRACT |
| NO | NORMALLY OPEN |
| NO. | NUMBER |
| NPP | NON-PERFORATED PIPE |
| NTS | NOT TO SCALE |
| N-S | NORTH-SOUTH |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER/DIMENSION |
| OHW | OVERHEAD WIRE |
| OL | OVERLOAD |
| OP | OPERATED |
| OPP | OPPOSITE |
| OPER | OPERATOR |
| PA | PUBLIC ADDRESS |
| P | PANEL, POLE, PHASE, POWER |
| PAV | PAVEMENT |
| PB | PUSH BUTTON |
| PBX | PRIVATE BRANCH EXCHANGE |
| PC | POINT OF CURVATURE, PIECE |
| PCC | PORTLAND CEMENT CONCRETE |
| PCF | POUND PER CUBIC FOOT |
| PCS | PORT CONSTRUCTION SERVICES |
| PE | PHOTOELECTRIC SENSOR |
| PERF | PERFORATED |
| PF | POWER FACTOR |
| PH OR ø | PHASE |
| PKG | PACKAGE |
| PL | PLATE |
| PLCS | PLACES |
| PMI | PADMOUNT FAULT INTERRUPTOR |
| PNL | PANEL |
| PNLBD | PANELBOARD |
| POS | PORT OF SEATTLE |
| PR | PAIR |
| PREFAB | PREFABRICATED |
| PRI | PRIMARY |
| PROJ | PROJECT |
| PS | POWER SUPPLY |
| PSE | PUGET SOUND ENERGY |
| PSF | POUND PER SQUARE FOOT |
| PSI | POUND PER SQUARE INCH |
| PT | POINT OF TANGENCY, POINT |
| PTVC | POINT OF TANGENCY, VERTICAL CURVE |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |
| QTY | QUANTITY |
| R | RADIUS, REMOTE, OR RED INDICATING LIGHT |
| RCP | REINFORCED CONCRETE PIPE |
| RECD | RECEIVED |
| REC | RECEPTACLE |
| RED | REDUCER |
| REF | REFERENCE |
| REINF | REINFORCEMENT |
| REQD | REQUIRED |
| REV | REVISION/REVISED |
| RGS | RIGID GALVANIZED STEEL |
| RM | ROOM |
| ROW | RIGHT-OF-WAY |
| RP | RADIUS POINT |
| RPM | REVOLUTIONS PER MINUTE |
| RTU | REMOTE TERMINAL UNIT |
| RVAT | REDUCED VOLTAGE AUTOTRANSFORMER |
| RVNR | REDUCED VOLTAGE NON-REVERSING |
| R/W | RUNWAY, RIGHT-OF-WAY |
| S | SOUTH, SEWER MANHOLE |
| SA | SURGE ARRESTOR |
| SC | SECTIONALIZING CABINET |
| SCADA | SURPERVISORY CONTROL AND DATA ACQUISITION |
| SCH | SCHEDULE |
| SD | SOFT DRAWN (COPPER), STORM DRAIN |
| SEC | SECOND, SECONDARY |
| SECT | SECTION |
| SF | SQUARE FOOT/FEET |
| SHLD | SHIELD OR SHIELDED |
| SHT | SHEET |
| SI | SQUARE INCH/INCHES |
| SIM | SIMILAR |
| SK | SKETCH |
| SOGM | SWITCH OPERATOR GROUND MAT |
| SP | SPACED, SPACING |
| SPDT | SINGLE POLE DOUBLE THROW |
| SPEC | SPECIFICATION(S) |
| SPP | STEEL POWER POLE |
| SQ | SQUARE |
| SS | SANITARY SEWER |
| SSS | SWITCH SUPPORT STRUCTURE |
| SSTL | STAINLESS STEEL |
| ST | STREET |
| STA | STATION |
| STD | STANDARD |
| STEP | SOUTH TERMINAL EXPANSION PROJECT |
| STL | STEEL |
| STIA | SEA-TAC INTERNATIONAL AIRPORT |
| STM | STEAM |
| STR | STRUCTURAL |
| SUB | SUBSTITUTION |
| SUBSTA | SUBSTATION |
| SUPT | SUPPORT |
| SV | SOLENOID VALVE, SWITCH VAULT |
| SVC | SERVICE |
| STR | STRUCTURAL |
| SURF | SURFACE |
| SW | SWITCH |
| SWBD | SWITCHBOARD |
| SWGR | SWITCHGEAR |
| SYM | SYMMETRICAL |
| SYNC | SYNCHRONOUS |
| SYNCS | SYNCHROSCOPE |
| SY | SQUARE YARD/YARDS |
| SYS | SYSTEM |
| T | TELEPHONE PEDESTAL, THERMOSTAT |
| TAN | TANGENT |
| TB | TERMINAL BOARD, TERMINAL BLOCK |
| TBD | TO BE DETERMINED |
| TC | TOP OF CURVE |
| TD | TIME DELAY |
| TE | TOP ELEVATION |
| TEL | TELEPHONE |
| TEMP | TEMPORARY |
| TERM | TERMINAL, TERMINATION |
| TESCP | TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN |
| THHN | HEAT-RESISTANT THERMOPLASTIC |
| THWN | MOISTURE-AND-HEAT RESISTANT THERMOPLASTIC |
| THRU | THROUGH |
| TMH | TELEPHONE MANHOLE |
| TOC | TOP OF CONCRETE |
| TOF | TOP OF FOOTING |
| TOP | TOP OF PAVEMENT |
| TOS | TOP OF SUPPORT OR STEEL |
| TOW | TOP OF WALL |
| TP | TURNING POINT |
| TRAN | TRANSVERSE |
| TS | TUBE STEEL |
| TSP | TWISTED-SHIELDED-PAIR |
| TTB | TELEPHONE TERMINAL BOARD |
| TYP | TYPICAL |
| T/D | TRANSDUCER |
| T/L, TL | TAXILANE |
| T/W | TAXIWAY |
| T&B | TOP AND BOTTOM |
| UBC | UNIFORM BUILDING CODE |
| UF | UNDER FLOOR |
| UG | UNDERGROUND |
| UH | UNIT HEATER |
| UL | UNDERWRITERS LABORATORY |
| UMC | UNIFORM MECHANICAL CODE |
| UN | UNLESS NOTED |
| UNC | UNIFIED NATIONAL COARSE THREAD |
| UNO | UNLESS NOTED OTHERWISE |
| UPC | UNIFORM PLUMBING CODE |
| UPS | UNINTERRUPTED POWER SUPPLY |
| V | VOLT |
| VAR | VOLT AMPERE REACTIVE |
| VARM | VAR METER |
| VERT | VERTICAL |
| VFI | VACUUM FAULT INTERRUPTER |
| VFD | VARIABLE FREQUENCY DRIVE |
| VM | VOLTMETER |
| VOL | VOLUME |
| VS | VERSUS |
| VSD | VARIABLE SPEED DRIVE |
| VT | VOLTAGE TRANSFORMER |
| VTS | VOLTAGE TEST SWITCH |
| W | WIDE FLANGE, WATT, WIDTH, WEST WHITE INDICATING LIGHT, WATER |
| WH | WATTHOUR |
| WM | WATTMETER |
| W/O | WITHOUT |
| WP | WEATHERPROOF |
| WPP | WOOD POWER POLE |
| WT | WEIGHT |
| WWF | WELDED WIRE FABRIC |
| W/ | WITH |
| X | REACTANCE |
| XFMR | TRANSFORMER |
| XHHW | MOISTURE/AND HEAT RESISTANT CROSS LINKED SYNTHETIC POLYMER |
| XMTR | TRANSMITTER |
| XP | EXPLOSION PROOF |
| & | AND |
| @ | AT |
| # | NUMBER |
| % | PERCENT |
| %Z | PERCENT IMPEDANCE |
| Ø | PHASE |

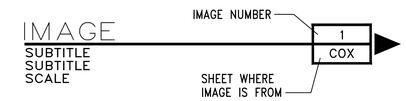
# DRAWING TITLE



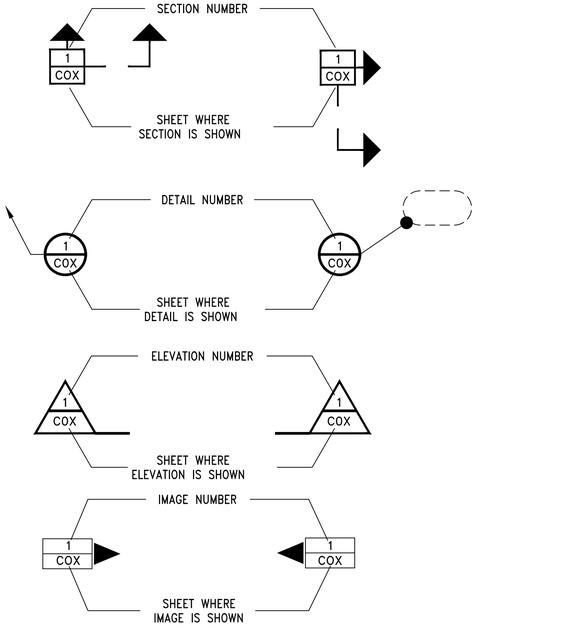




# REFERENCE SYMBOL




REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle

PROJECT: SEA-TAC INTERNATIONAL AIRPORT
**F&I STANDARD DETAILS**

SHEET TITLE: **STANDARD ABBREVIATIONS AND REFERENCE SYMBOLS**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.
**26 05 00 - G02**

# ELECTRICAL PLAN

| | |
|---|---|
| | EXPOSED CONDUIT OR CABLE |
| | CONDUIT (UNDERGROUND OR CONCEALED IN FLOOR, WALL, OR CEILING) |
| G | EXPOSED GROUND WIRE |
| G | BURIED GROUND WIRE |
| LV | LOW VOLTAGE WIRING |
| | EXISTING TO BE REMOVED |
| | CONDUIT OR CABLE DOWN |
| | CONDUIT OR CABLE UP |
| | CONDUIT OR CABLE CAPPED |
| | CABLE TRAY |
| | CABLE TRAY |
| | FLEXIBLE CONDUIT |
| | REMOVE OR DEMOLISH EQUIPMENT, CONDUIT, OR CABLE UNDER HATCH |
| | HAZARDOUS LOCATION PER NEC CHAPTER 5<br>DIVISION 1 |
| | DIVISION 2 |
| | UNCLASSIFIED |
| | HOME RUN – NUMBER OF CONDUCTORS AS INDICATED, SMALL HASH MARKS INDICATE PHASE CONDUCTORS, LARGER HASH MARKS INIDCATES NEUTRAL, BACKSLASH INDICATES GROUND WIRE, BACKSLASH WITH DOT INDICATES ISOLATED GROUND, ALL UNMARKED CONDUIT RUNS ARE 3/4" CONDUIT WITH 2#12, 1#12G UNLESS NOTED OTHERWISE |
| | CONDUIT SEAL |
| J | JUNCTION BOX |
| PB | PULLBOX |
| HH | HANDHOLE |
| , , MH | MANHOLE |
| | 480Y/277V, 3ø. 4W PANELBOARD |
| | 208Y/120V, 3ø, 4W PANELBOARD |
| | EQUIPMENT CABINET – TYPE AS NOTED |
| A | TELEPHONE OUTLET – SUBSCRIPT INDICATES:<br>A – COMPLIES WITH A.D.A.<br>D – DESK MOUNTED<br>P – PAY PHONE<br>W – WALL MOUNTED |
| | COMPUTER/DATA OUTLET |
| | COMBINATION VOICE/DATA OUTLET |
| D | INTERCOM STATION – SUBSCRIPT INDICATES:<br>D – DESK MOUNTED STATION OUTLET<br>M – MASTER STATION<br>W – WALL MOUNTED STATION OUTLET |
| M | MICROPHONE INPUT JACK |
| A | AUXILIARY INPUT JACK |
| A | AUDIO OUTPUT JACK |
| V | VOLUME CONTROL |
| 14<br>WP | RECEPTACLE OUTLET:<br>SUBSCRIPT NUMBER INDICATES CIRCUIT GROUPING<br>SUBSCRIPT LETTER INDICATES:<br>GFI – GROUND FAULT CIRCUIT INTERRUPTER<br>WP – WEATHERPROOF<br>XP – EXPLOSION PROOF |
| | GROUNDING TYPE SINGLE RECEPTACLE |
| | GROUNDING TYPE DUPLEX RECEPTACLE |
| | GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE |
| | CEILING MOUNTED DUPLEX RECEPTACLE |
| | SPLIT WIRED GROUNDING TYPE DUPLEX RECEPTACLE |

# ELECTRICAL PLAN

| | |
|---|---|
| | SPECIAL PURPOSE RECEPTACLE – TYPE AS NOTED |
| | FLUSH FLOOR BOX WITH HINGED DEVICE COVER |
| | FLUSH FLOOR BOX WITH DEVICES AS SHOWN |
| P | PEDESTAL MOUNTED DEVICES ON FLOOR BOX OR FLOOR DUCT |
| | POKE–THRU TYPE FITTING WITH DEVICES AS SHOWN |
| | FLUSH FLOOR COUPLING |
| P | FLUSH FLOOR COUPLING WITH PEDESTAL TEL OUTLET |
| | GROUND CONNECTION |
| | GROUND ROD |
| | GROUND WELL |
| | EQUIPMENT CONNECTION |
| M | MOTOR CONNECTION |
| G | GENERATOR |
| | STARTER<br>3–POLE, NEMA SIZE 1 MINIMUM UNLESS NOTED OTHERWISE |
| NEMA 3 | COMBINATION STARTER<br>HP RATED, 3–POLE, NEMA STARTER SIZE 1 MINIMUM UNLESS NOTED OTHERWISE – MCP OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED |
| | DISCONNECT SWITCH<br>3–POLE UNLESS NOTED OTHERWISE – OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED |
| 2 | CONTACTOR<br>SUBSCRIPT INDICATES NUMBER OF POLES |
| ST CB 20/3 | CIRCUIT BREAKER<br>NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES CURRENT LIMITING UNLESS OTHERWISE NOTED<br>GFI – GROUND FAULT CIRCUIT INTERRUPTER<br>ST – INDICATES SHUNT TRIP<br>MO – MOTOR OPERATED |
| TD | TRANSDUCER |
| T | POWER TRANSFORMER |
| SV | SOLENOID VALVE |
| | BATTERY |
| M | MOTOR OPERATED VALVE |
| X 65° | THERMOSTAT |
| P | PUSHBUTTON SWITCH – MOMENTARY CONTACT:<br>P – INDICATES PILOT LIGHT |
| ZS | POSITION SWITCH<br>DIRECTLY ACTUATED, SPRING RETURN |
| LLS NC | LIQUID LEVEL ACTUATED SWITCH:<br>NC OPENS ON RISING LIQUID<br>NO CLOSES ON FALLING LIQUID |
| PS | PRESSURE OR VACUUM ACTUATED SWITCH |
| TS | TEMPERATURE ACTUATED SWITCH |
| FS | FLOW ACTUATED SWITCH |
| | CLOCK |
| | CLOCK AND SPEAKER COMBINATION |
| | CEILING MOUNTED DOUBLE FACED CLOCK |
| S b | SPEAKER<br>LOWER CASE LETTER INDICATES SWITCHING GROUP |
| S | SPEAKER – CEILING RECESSED MOUNTED |
| S | SPEAKER – CEILING SURFACE MOUNTED |
| S | SPEAKER – WALL RECESSED MOUNTED |
| S | SPEAKER – WALL SURFACE MOUNTED |
| A b | ALARM LIGHT/STROBE, INDICATING LIGHT<br>TYPE AS NOTED LOWER CASE LETTER INDICATES SWITCHING GROUP<br>A–AMBER; B–BLUE; G–GREEN; R–RED; W–WHITE |

# ELECTRICAL PLAN

| | |
|---|---|
| S | ALARM BUZZER<br>A–ALARM; F–FIRE; S–SECURITY |
| S | ALARM CHIME<br>A–ALARM; F–FIRE; S–SECURITY |
| A | ALARM BELL<br>A–ALARM; F–FIRE; S–SECURITY |
| | EMERGENCY SHUTDOWN SWITCH |
| P | MANUAL PULL STATION |
| A | ANNUNCIATOR |
| FCP | CONTROL PANEL<br>ESR ELEVATOR STATUS/RECALL<br>FAC FIRE ALARM COMMUNICATOR<br>FCP FIRE ALARM CONTROL PANEL<br>FSA FIRE SYSTEM ANNUNCIATOR<br>HCP HALON CONTROL PANEL<br>HVA CONTROL PANEL FOR HVAC OR EXAUST STAIRWELL PRESSURIZATION |
| FS | FLOW SWITCH CONNECTION |
| TS | TAMPER SWITCH CONNECTION |
| H | FIRE OR EMERGENCY TELEPHONE STATION<br>A – ACCESSIBLE<br>J – JACK<br>H – HANDSET |
| R/F | HEAT DETECTOR<br>R/F – COMB. RATE OF RISE AND FIXED TEMP.<br>R/C – RATE COMPENSATION<br>F – FIXED TEMPERATURE<br>R – RATE OF RISE ONLY |
| DH | MAGNETIC DOOR HOLDER |
| P | SMOKE DETECTOR<br>P – PHOTOELECTRIC PRODUCTS OF COMBUSTION<br>I – IONIZATION TYPE<br>BT – BEAM TRANSMITTER<br>BR – BEAM RECEIVER |
| | GAS DETECTOR<br>FLAME DETECTOR |
| | ILLUMINATED EXIT SIGN – SINGLE FACE WITH EGRESS DIRECTION AS SHOWN |
| | ILLUMINATED EXIT SIGN – DOUBLE FACE WITH EGRESS DIRECTION FOR EACH FACE |
| | BATTERY POWERED EMERGENCY LIGHT NUMBER OF LAMPS AS SHOWN |
| | COMBINATION BATTERY POWERED EMERGENCY LIGHT AND ILLUMINATED EXIT SIGN |
| 6a,b | LIGHTING FIXTURE<br>ADJACENT NUMBER INDICATES CIRCUIT GROUPING LOWER CASE LETTER INDICATES SWITCHING GROUP |
| | SURFACE–MOUNTED 2x4 FLUORESCENT FIXTURE WITH JUNCTION BOX |
| | SURFACE–MOUNTED 1x4 FLUORESCENT FIXTURE WITH JUNCTION BOX |
| | SURFACE–MOUNTED 2x2 FLUORESCENT FIXTURE WITH JUNCTION BOX |
| | SURFACE–MOUNTED 2x4 FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | SURFACE–MOUNTED 1x4 FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | SURFACE–MOUNTED 2x2 FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | RECESSED–MOUNTED 2x4 FLUORESCENT FIXTURE WITH JUNCTION BOX |
| | RECESSED–MOUNTED 1x4 FLUORESCENT FIXTURE WITH JUNCTION BOX |
| | RECESSED–MOUNTED 2x2 FLUORESCENT FIXTURE WITH JUNCTION BOX |
| | RECESSED–MOUNTED 2x4 FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | RECESSED–MOUNTED 1x4 FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | RECESSED–MOUNTED 2x2 FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | PENDANT–MOUNTED FIXTURE – TYPE AS NOTED |
| | PENDANT–MOUNTED FIXTURE ON EMERGENCY CIRCUIT |
| | WALL–MOUNTED FLUORESCENT FIXTURE – TYPE AS NOTED |

# ELECTRICAL PLAN

| | |
|---|---|
| | STRIP FLUORESCENT FIXTURE – TYPE AS NOTED |
| | STRIP FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | STAGGERED STRIP FLUOR FIXTURE – TYPE AS NOTED |
| | CEILING–MOUNTED FIXTURE – TYPE AS NOTED |
| | CEILING–MOUNTED FIXTURE ON EMERGENCY CIRCUIT |
| | WALL–MOUNTED FIXTURE – TYPE AS NOTED |
| | WALL–MOUNTED FIXTURE ON EMERGENCY CIRCUIT |
| | WALL WASH FIXTURE – TYPE AS NOTED |
| | WALL WASH FIXTURE ON EMERGENCY CIRCUIT |
| | DIRECTIONAL LIGHTING FIXTURE – TYPE AS NOTED |
| | DIRECTIONAL LIGHTING FIXTURE ON EMERGENCY CIRCUIT |
| | TRACK LIGHT – TYPE AS NOTED – NUMBER OF HEADS AS SHOWN |
| | ILLUMINATION CONTROL STATION |
| PC | PHOTOCELL CONTROL |
| T 65° | THERMOSTAT |
| PE | PHOTOELECTRIC SENSOR |
| N | NIGHT LIGHT |
| $ | SINGLE–POLE WALL SWITCH |
| 2$WP a | WALL SWITCH<br>LOWER CASE LETTER INDICATES SWITCHING GROUP<br># INDICATES: 2 2–POLE; 3 3–WAY; 4 4–WAY<br>SUBSCRIPT INDICATES: M – MANUAL MOTOR STARTER; WP – WEATHERPROOF; LV – LOW–VOLTAGE |
| | POLE–MOUNTED LIGHTING FIXTURE – TYPE AS NOTED<br>NUMBER OF FIXTURES AS SHOWN |
| | EXTERIOR LANDSCAPE FIXTURE – TYPE AS NOTED |
| | EXTERIOR LANDSCAPE FIXTURE – ON EMERGENCY CIRCUIT |
| | EXTERIOR STEP LIGHTING FIXTURE – TYPE AS NOTED |
| L | SUBSTATION LIGHT |
| | GROUND PIGTAIL |
| | WELDED GROUND CONNECTION |
| | SEPARABLE SPLICE |
| | NONSEPARABLE SPLICE |
| 207 | FEEDER NUMBER |
| 4"C.O. | SPARE CONDUIT |
| FI | FAULT INDICATOR |

NOTE: NEW EQUIPMENT SHALL BE DRAWN IN BOLD LINES.
EXISTING EQUIPMENT SHALL BE DRAWN IN LIGHT LINES.

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDW | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEATTLE INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle
PROJECT: MARITIME DIVISION F&I STANDARD DETAILS
SHEET TITLE: ELECTRICAL PLAN AND SYMBOLS LEGEND

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 05 00 - G03

# CONTROL DIAGRAM

| | |
|---|---|
| Aa | ALARM LIGHT/STROBE, INDICATING LIGHT – TYPE AS NOTED LOWER CASE LETTER INDICATES SWITCHING GROUP<br>A–AMBER; B–BLUE; G–GREEN; R–RED; W–WHITE |
| AM | INDICATING INSTRUMENT:<br>AM – AMMETER<br>FM – FREQUENCY METER<br>I – INTERLOCK<br>kVA – KILOVOLT AMP METER<br>kWH – KILOWATT HOUR METER<br>VARHM – VAR HOUR METER<br>VM – VOLTMETER |
| AS | INSTRUMENT SWITCH:<br>AS – AMMETER SWITCH<br>VS – VOLTMETER SWITCH<br>SS – SYNCHRONIZING SWITCH<br>SV – SUPERVISORY (LOCAL/REMOTE) SWITCH<br>ATS – AUTOMATIC TRANSFER SWITCH<br>52CS – CIRCUIT BREAKER CONTROL SWITCH |
| | SOLENOID |
| | BATTERY |
| C | CONTACTOR<br>3 POLE UNLESS NOTED OTHERWISE |
| | NORMALLY OPEN |
| | NORMALLY CLOSED |
| | TIME DELAY SWITCH:<br>NORMALLY OPEN CONTACT CLOSES AFTER TIME DELAY WHEN COIL IS ENERGIZED, OPENS INSTANTANEOUSLY WHEN DE–ENERGIZED |
| | NORMALLY CLOSED CONTACT OPENS AFTER TIME DELAY WHEN COIL IS ENERGIZED, CLOSES INSTANTANEOUSLY WHEN DE–ENERGIZED |
| | NORMALLY OPEN CONTACT CLOSES INSTANTANEOUSLY WHEN COIL IS ENERGIZED, OPENS AFTER TIME DELAY WHEN DE–ENERGIZED |
| | NORMALLY CLOSED CONTACT OPENS INSTANTANEOUSLY WHEN COIL IS ENERGIZED, CLOSES AFTER TIME DELAY WHEN DE–ENERGIZED |
| P | PUSHBUTTON SWITCH – MOMENTARY CONTACT:<br>P – INDICATES PILOT LIGHT |
| | CIRCUIT CLOSING |
| | CIRCUIT OPENING |
| | LIMIT SWITCH DIRECTLY ACTUATED, SPRING RETURN:<br>NORMALLY OPEN |
| | NORMALLY OPEN – HELD CLOSED |
| | NORMALLY CLOSED |
| | NORMALLY CLOSED – HELD OPEN |
| CR1 | RELAY COIL:<br>CR – CONTROL RELAY<br>M – MOTOR CONTACTOR<br>TD – TIME DELAY RELAY<br>UV – UNDER VOLTAGE RELAY<br>NUMBER INDICATES UNIT NUMBER |
| CR1 | CONTACT, NORMALLY OPEN, CONTROLLED BY RELAY INDICATED |
| CR1 | CONTACT, NORMALLY CLOSED |
| | LIQUID LEVEL ACTUATED SWITCH:<br>OPENS ON RISING LIQUID |
| | CLOSES ON RISING LIQUID |
| | PRESSURE OR VACUUM ACTUATED SWITCH:<br>OPENS ON RISING PRESSURE |
| | CLOSES ON RISING PRESSURE |
| | TEMPERATURE ACTUATED SWITCH:<br>OPENS ON RISING TEMPERATURE |
| | CLOSES ON RISING TEMPERATURE |
| | FLOW ACTUATED SWITCH:<br>OPENS ON INCREASE IN FLOW |
| | CLOSES ON INCREASE IN FLOW |
| | TEST SWITCH |
| | TEST SWITCH, SHORTING TYPE |

# ONE–LINE DIAGRAM

| | |
|---|---|
| | CONDUIT/CABLE/WIRING |
| | REMOVE OR DEMOLISH EQUIPMENT, CONDUIT, OR CABLE UNDER HATCH. |
| | GROUND CONNECTION |
| | GROUND WELL |
| | SURGE ARRESTORS |
| | MEDIUM VOLTAGE CABLE TERMINATION |
| | PRIMARY FUSED CUTOUT SWITCH |
| M | ELECTRICALLY OPERATED SWITCH |
| | GROUP OPERATED SWITCH – VERTICAL BREAK WITH MANUAL OPERATOR MECHANISM |
| | SEPARABLE CONNECTOR |
| 100A | FUSE WITH RATING |
| | RESISTOR |
| | MOV SURGE PROTECTION |
| | MOTOR THERMAL OVERLOADS (3) UNLESS NOTED OTHERWISE |
| | EQUIPMENT CONNECTION |
| M | MOTOR CONNECTION |
| G | GENERATOR |
| | POWER TRANSFORMER |
| | DELTA |
| | WYE, SOLIDLY GROUNDED NEUTRAL |
| 200/5<br>3 | CURRENT TRANSFORMER RATIO AND QUANTITY AS INDICATED |
| 1200/500VR<br>3 | POTENTIAL TRANSFORMER – QUANTITY AS INDICATED |
| MM | MICROPROCESSOR CONTROLLED MONITOR<br>SEE NOTES FOR FUNCTIONS |
| | CAPACITOR BANK |
| | TERMINAL BLOCK |
| | CABLE SPLICE, 3 SINGLE CONDUCTORS UNLESS OTHERWISE NOTED |
| | DISCONNECT SWITCH<br>3–POLE UNLESS NOTED OTHERWISE |
| | WITH OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED |
| 52 | DRAWOUT AC TYPE CIRCUIT BREAKER, MEDIUM VOLTAGE<br>UNLESS OTHERWISE INDICATED. |
| | DRAWOUT AC TYPE CIRCUIT BREAKER (600V OR BELOW) |
| ST 30/3 | CIRCUIT BREAKER<br>NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES<br>ST – INDICATES SHUNT TRIP |
| 25 | ANSI DEVICE<br>25 – SYNCHRONIZING DEVICE<br>27 – UNDERVOLTAGE RELAY<br>32 – DIRECTIONAL POWER RELAY<br>50 – INSTANTANEOUS OVERCURRENT RELAY<br>51 – AC TIME OVERCURRENT RELAY<br>59 – OVERVOLTAGE RELAY<br>62BF – BREAKER FAILURE RELAY<br>64 – GROUND PROTECTIVE RELAY<br>83 – AUTOMATIC TRANSFER RELAY<br>86 – LOCKOUT RELAY<br>86BFA – LOCKOUT ON BUS A FEEDER BREAKER FAILURE<br>86BFB – LOCKOUT ON BUS B FEEDER BREAKER FAILURE<br>87 – DIFFERENTIAL PROTECTIVE RELAY |
| ST G 400/3 | CIRCUIT BREAKER WITH GROUND FAULT PROTECTION<br>NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES<br>CL – INDICATES CURRENT LIMITING<br>ST – INDICATES SHUNT TRIP |

# ONE–LINE DIAGRAM

| | |
|---|---|
| M 100/3 | MOTOR OPERATED CIRCUIT BREAKER<br>NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES |
| G | CIRCUIT BREAKER WITH EXTERNAL GROUND FAULT RELAY AND CT'S |
| ST G | SWITCH WITH SHUNT TRIP AND EXTERNAL GROUND FAULT RELAY AND CT'S |
| CL | CURRENT LIMITING CIRCUIT BREAKER WITH FUSES |
| K | KIRK–KEY INTERLOCK |
| M | MOTOR OPERATED VALVE |
| | 3–POSITION SELECTOR SWITCH<br>HAND–OFF–AUTOMATIC |
| | 2–POSITION SELECTOR SWITCH |
| | ON–OFF SELECTOR SWITCH |
| 200A | EQUIPMENT BUSHING WELL WITH RATING IN AMPS |
| | LOAD INTERRUPTING SWITCH WITH INTEGRAL GROUND POSITION |
| T/D | TRANSDUCER |
| | 6–WAY PMI W/ 4 FAULT INTERRUPTORS(*) AND 2 KIRK–KEYED LOAD INTERRUPTORS. ALL SWITCHES AND INTERRUPTORS ARE 3–POLE, GANG–OPERATED, UNLESS OTHERWISE SHOWN ON THE DRAWINGS |
| | REPRESENTATION OF ROOM OR FACILITY ENCLOSING THE EQUIPMENT SHOWN |
| NC<br>NO | MEDIUM VOLTAGE DUPLEX SWITCH AIR INSULATED 3–POLE |
| NO NC | MEDIUM VOLTAGE, VAC PAC SWITCH, MEDIUM VOLTAGE, 3–POLE, 3–WAY, 2–WAYS SWITCHED |
| NO NC<br>NC NC | MEDIUM VOLTAGE VAC PAC, 3–POLE, 4–WAY SWITCH |
| | MEDIUM VOLTAGE OIL INSULATED, 3–POLE, TWO POSITION SWITCH |
| | MEDIUM VOLTAGE, AIR INSULATED, 3–POLE SWITCH |

# GENERAL NOTES:

1. ALL CONTACTS ARE SHOWN IN THE DE–ENERGIZED (SHELF POSITION).
2. ABBREVIATIONS OTHER THAN SHOWN PER ANSI/ASME Y1.1.
3. NEW EQUIPMENT SHALL BE DRAWN IN BOLD LINES. EXISTING EQUIPMENT SHALL BE DRAWN IN LIGHT LINES.
4. ALL DETAILS AND DIMENSIONS ASSOCIATED WITH THESE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE PERFORMING WORK THAT RELIES ON THIS INFORMATION. DESIGN TOLERANCES SHALL BE ALLOWED TO ENABLE WORK TO PROCEED WITHOUT DUE FRIVOLOUS DESIGN CHANGES FOR MINOR RELOCATIONS TO UN–ANTICIPATED FIELD CONDITIONS. THESE DESIGN TOLERANCES SHALL BE + OR – 5 % (OR AS ALLOWED BY THE SPECIFIC DESIGN ENGINEERING FIRM) IN ANY DIRECTION OR CONFIGURATION. THE CONTRACTOR SHALL INCLUDE ALL DESIGN TOLERANCE RELATIONS AND MINOR CHANGES ON THE AS BUILT DRAWINGS.
5. STANDARD POS AVIATION ABBREVIATIONS AND SYMBOLS ARE SHOWN ON THE PRECEEDING DRAWINGS AND COLUMNS. PROJECT SPECIFIC ABBREVIATIONS AND SYMBOLS ARE SHOWN BELOW.

# PROJECT SPECIFIC ABBREVIATIONS AND SYMBOLS



REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

F&I FACILITIES & INFRASTRUCTURE SEATTLE INTERNATIONAL TRIBAL

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle

PROJECT: SEA-TAC INTERNATIONAL AIRPORT
F&I STANDARD DETAILS

SHEET TITLE: ELECTRICAL DIAGRAM AND SYMBOLS LEGEND

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 05 00 - G04

EPR, 105C, TAPE SHIELD, 133% INSULATION, COPPER, THREE CONDUCTORS PER FEEDER

| CONDUCTOR SIZE | GROUND SIZE (1) | APPROX. O.D. INCHES (2) | APPROX. WEIGHT LBS/1000' (2) | AMPACITY IN DUCT (3) | MIN. BENDING RADII INCHES (4) | CONDUIT SIZE (5) | JAM RATIO (6) | PERCENT FILL (7) | MAX PULLING TENSION LBS (8) | MAX SIDEWALL PRESSURE LB-FT |
|---|---|---|---|---|---|---|---|---|---|---|
| BICC CABLE | | | | | | | | | | |
| 2 AWG | 6 AWG | 1.01 | 685 | 115 | 12.1 | 6 | 5.94 | 8.6% | 1,060 | 500 |
| 2/0 AWG | 4 AWG | 1.13 | 979 | 165 | 13.6 | 6 | 5.31 | 10.8% | 2,130 | 500 |
| 4/0 AWG | 2 AWG | 1.23 | 1299 | 205 | 14.8 | 6 | 4.88 | 13.0% | 3,380 | 500 |
| 350 KCMIL | 4/0 AWG | 1.41 | 1875 | 265 | 16.9 | 6 | 4.26 | 16.9% | 5,600 | 500 |
| 500 KCMIL | 4/0 AWG | 1.53 | 2440 | 310 | 18.4 | 6 | 3.92 | 19.9% | 6,500 | 500 |
| 750 KCMIL (9) | 4/0 AWG | 1.72 | 3378 | 375 | 20.6 | 6 | 3.49 | 25.0% | 6,500 | 500 |
| KERITE CABLE | | | | | | | | | | |
| 2 AWG | 6 AWG | 1.06 | 725 | 115 | 12.7 | 6 | 5.66 | 9.5% | 1,062 | 675 |
| 2/0 AWG | 4 AWG | 1.19 | 1021 | 165 | 14.3 | 6 | 5.04 | 11.9% | 2,130 | 675 |
| 4/0 AWG | 2 AWG | 1.29 | 1344 | 205 | 15.5 | 6 | 4.65 | 14.2% | 3,386 | 675 |
| 350 KCMIL | 4/0 AWG | 1.47 | 1916 | 265 | 17.6 | 6 | 4.08 | 18.4% | 5,600 | 675 |
| 500 KCMIL | 4/0 AWG | 1.60 | 2478 | 310 | 19.2 | 6 | 3.75 | 21.5% | 8,000 | 675 |
| 750 KCMIL (9) | 4/0 AWG | 1.87 | 3533 | 375 | 22.4 | 6 | 3.21 | 29.5% | 12,000 | 675 |
| OKONITE CABLE | | | | | | | | | | |
| 2 AWG | 6 AWG | 1.00 | 670 | 115 | 12.0 | 6 | 6.00 | 8.4% | 1,062 | 500 |
| 2/0 AWG | 4 AWG | 1.11 | 955 | 165 | 13.3 | 6 | 5.41 | 10.4% | 2,130 | 500 |
| 4/0 AWG | 2 AWG | 1.21 | 1265 | 205 | 14.5 | 6 | 4.96 | 12.5% | 3,386 | 500 |
| 350 KCMIL | 4/0 AWG | 1.37 | 1810 | 265 | 16.4 | 6 | 4.38 | 16.0% | 5,600 | 500 |
| 500 KCMIL | 4/0 AWG | 1.49 | 2355 | 310 | 17.9 | 6 | 4.03 | 18.8% | 8,000 | 500 |
| 750 KCMIL (9) | 4/0 AWG | 1.73 | 3360 | 375 | 20.8 | 6 | 3.47 | 25.3% | 10,000 | 500 |
| 2 AWG | 6 AWG | | | | | 4 | 4.00 | 19.0% | | |
| 2/0 AWG | 4 AWG | | | | | 4 | 3.60 | 23.4% | | |
| 4/0 AWG | 2 AWG | | NOT RECOMMENDED, | | | 4 | 3.31 | 28.2% | | |
| 350 KCMIL | 4/0 AWG | | CONSIDER TRIPLEX --> | | | 4 | 2.92 | 36.0% | | |

NOTES:
(1) BARE COPPER FOR STEEL OR PVC CONDUIT. INSULATED WIRE FOR ALUMINUM CONDUIT.
(2) BASED ON BICC UNIBLEND POWER CABLE P/N 17031-130200, -135200, -135400, -136200, -136500, -137000; KERITE POWER CABLE TYPE MV-105 CAT. NO. 102C15-C4400, 121C15-, 141C15-, 135C15-, 150C15-, 175C15-; OKONITE TYPE MV-105 133% INSULATION CABLE CAT # 115-23-3111, -3117, -3121, -3127, -3131, -3135.
(3) 2002 NEC TABLE 310.77 AND FIGURE 310.60 DETAIL 3, 30" MAX. TO TOP OF DUCT, 7-1/2" CENTERS, 6 CIRCUITS.
(4) 12 X CABLE OD PER 2002 NEC 300.34 FOR SHIELDED CONDUCTORS
(5) 6 INCH DUCT STANDARD FOR MAIN DUCTBANKS. 4 INCH DUCT STANDARD FOR LOAD SPECIFIC FEEDERS <200A.
(6) CONDUIT ID/CABLE OD. 2.8 TO 3.2 = CRITICAL AREA TO BE AVOIDED
(7) BARE GROUND CONDUCTOR ASSUMED.
(8) T = 0.008 X 2 CONDUCTORS (CRADLED POSITION ASSUMED) X CIRCULAR MILLS. ALL MANUFACTURER'S USE SOME VARIATION OF THIS FORMULA. BICC'S VALUES ARE FROM A TABLE. OKONITE LIMITS MAXIMUM TENSION TO 10,000 LBS. SIDEWALL PRESSURE IS USUALLY THE LIMITING FACTOR.
(9) 750KCMIL TO BE USED ON AN EXCEPTION BASIS ONLY

REVISIONS

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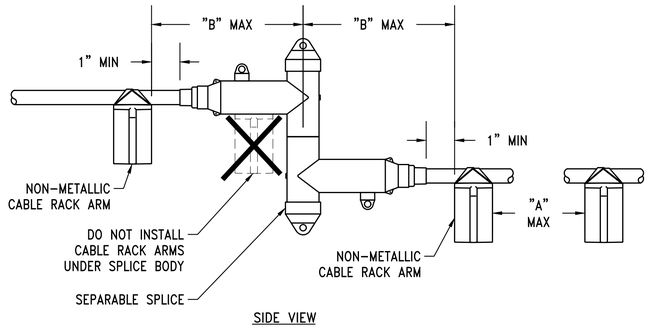
FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: STANDARD STIA 12.47KV FEEDER AND DUCT SIZES

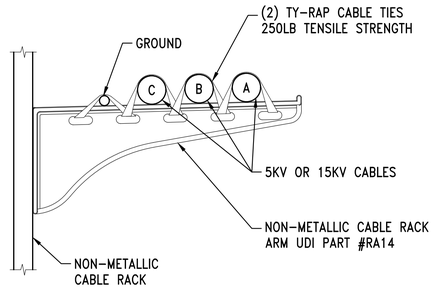
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 05 13 - 01



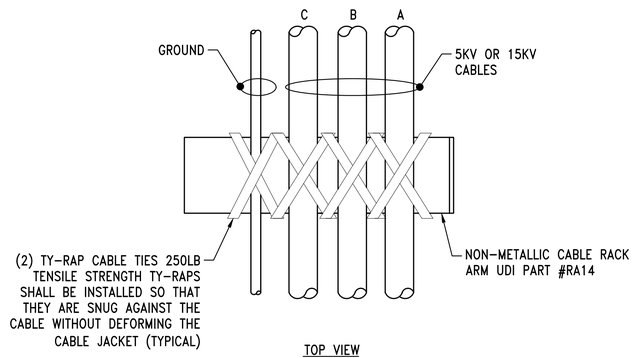

SIDE VIEW

## DETAIL 1

PROPER METHOD TO RACK
HAMMERHEAD SEPARABLE SPLICES
HALF SIZE SCALE: 3/4"=1'-0"




SECTION VIEW




TOP VIEW

## DETAIL 2

CABLE RACK DETAIL
HALF SIZE SCALE: 1 1/2"=1'-0"

## GENERAL NOTES:

1. SEE GROUNDING, LABELING, AND RACK DETAILS FOR RELATED REQUIREMENTS.
2. SEE SPECIFICATION 260513 FOR SPLICE ASSEMBLY REQUIREMENTS.

| RACK SPACING | | |
|---|---|---|
| CABLE SIZE | "A" IN FEET | "B" IN FEET |
| 2/0 | 4.5 | 3.0 |
| 4/0 | 4.0 | 3.0 |
| 350 | 3.0 | 3.0 |
| 500 | 2.5 | 2.5 |
| 750 | 2.0 | 2.0 |

TABLE VALUES APPLY TO 5KV AND
15KV TYPE MV-105 CABLE ONLY

REVISIONS

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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: F&I STANDARD DETAILS

SHEET TITLE: PROPER SPLICE ORIENTATION AND CABLE RACK SPACING

WORK PROJECT NO.

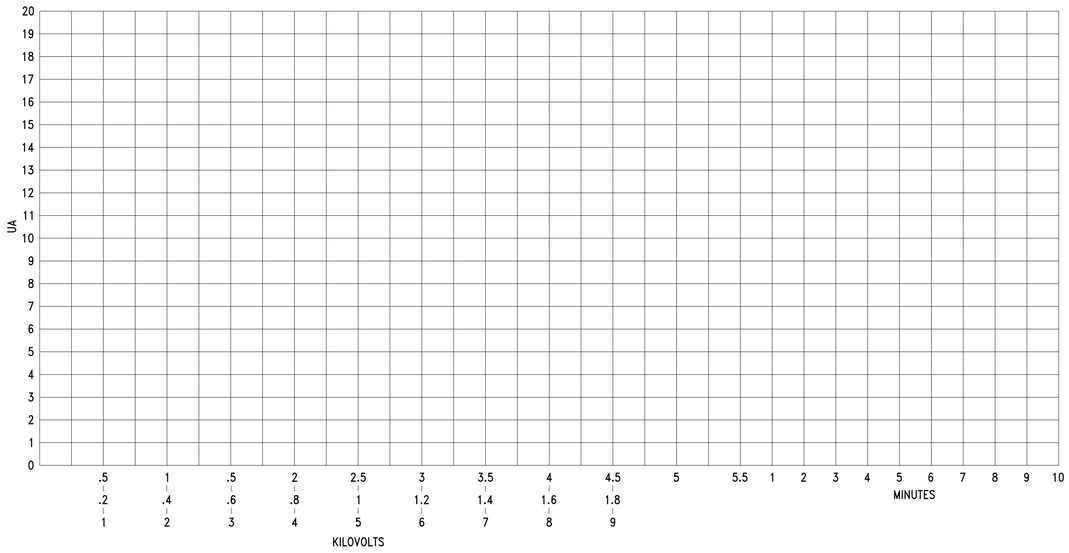
CONSULTANT'S NO.

PORT OF SEATTLE NO.
26 05 13 - 02

# MEDIUM VOLTAGE CABLE INSULATION TEST DATA SHEET

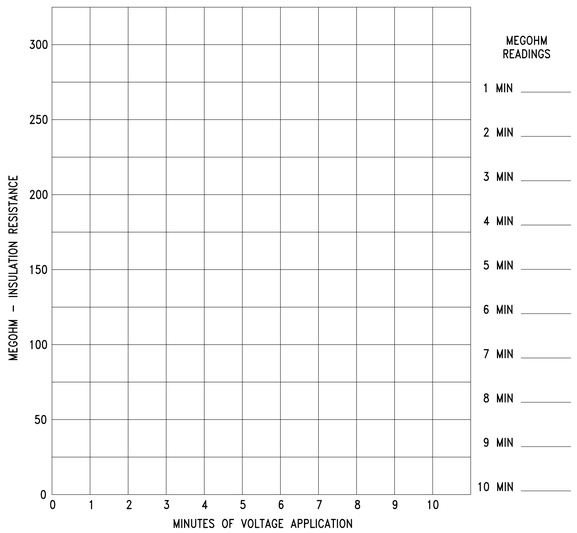
PROJECT: _____ DATE: _____ CIRCUIT NO. _____

## D.C. DIELECTRIC ABSORPTION TEST

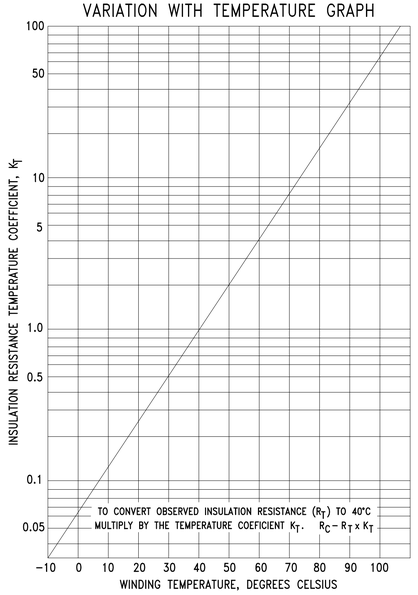



## POLARIZATION INDEX TEST

POLARIZATION INDEX GRAPH




APPROXIMATE INSULATION RESISTANCE VARIATION WITH TEMPERATURE GRAPH






REVISIONS

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F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
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Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

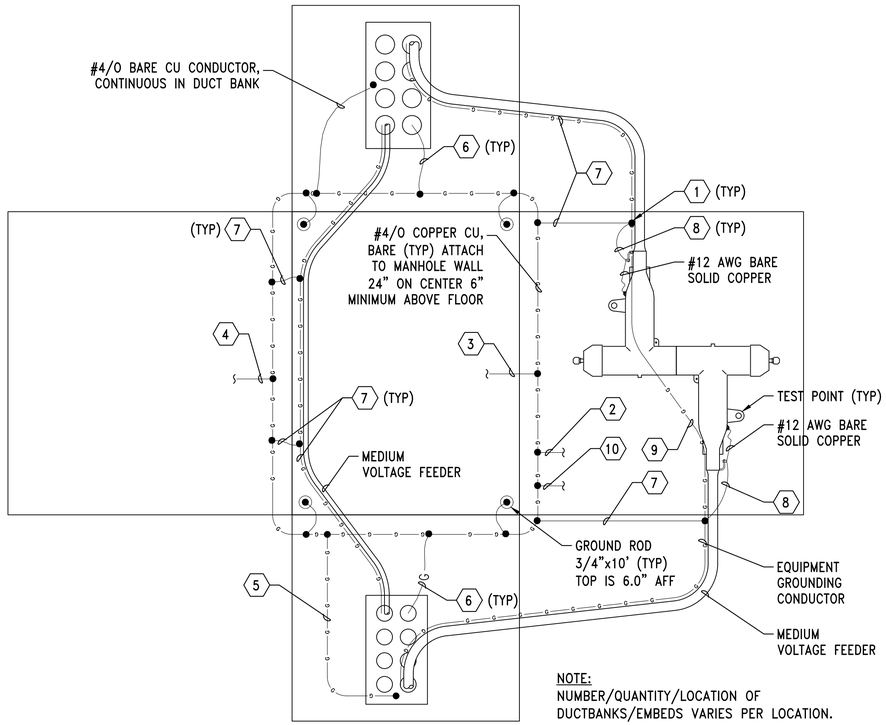
PROJECT: F&I STANDARD DETAILS

SHEET TITLE: MEDIUM VOLTAGE CABLE INSULATION TEST DATA SHEET

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO. 26 05 13 - 03




## DETAIL

VAULT GROUNDING PLAN
SCALE: NTS

1
—

## GENERAL NOTES:

1. ALL GROUND CONNECTIONS SHALL BE MADE USING COPPER ALLOY BURNDY HY-GROUND COMPRESSION CONNECTIONS OR APPROVED EQUAL ONLY. EXOTHERMIC AND SPLIT BOLT CONNECTIONS ARE NOT ALLOWED.
2. FASTEN ALL EXPOSED COPPER GROUND CONDUCTORS TO WALL USING NYLON STRAPS.
3. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.

## KEYED NOTES:

1. WHERE GROUND CONDUCTOR ENDS ARE EXPOSED, WRAP WITH TAPE TO COVER SHARP POINTS ON CABLE.
2. #2 STRANDED UP TO CAST IRON MANHOLE COVER RING.
3. #2 DOWN TO GRATING ON SUMP (USED BOLTED CONNECTION) IF METALLIC.
4. EXTEND #4/0 GROUNDS UP TO EQUIPMENT ABOVE AND BOND TO GROUND BUS.
5. PROVIDE #4/0 GROUND FROM DUCT BANK GROUND TO GROUND RING.
6. IF NO DUCT BANK GROUND IS PRESENT, INSTALL DUCT BANK GROUND IN EMPTY CONDUIT. BOND THE DUCT BANK GROUNDS TO THE MANHOLE GROUNDING ELECTRODE SYSTEM.
7. ROUTE EQUIPMENT GROUNDING CONDUCTOR WITH FEEDER CONDUCTORS. INSTALL TWO TAPS OF EQUAL SIZE TO THE EQUIPMENT GROUND CONDUCTOR FROM EQUIPMENT GROUND CONDUCTOR TO GROUNDING ELECTRODE SYSTEM, EACH NEAR THE ENTRY AND EXIT POINTS.
8. CONNECT #8 DRAIN WIRE TO EQUIPMENT GROUND CONDUCTOR AND BOND EQUIPMENT GROUND CONDUCTOR TO GROUNDING ELECTRODE SYSTEM FOR EACH CONNECTOR.
9. ROUTE EQUIPMENT GROUND CONDUCTOR BEHIND PHASE CONDUCTORS. TY-RAP TO RACK ARM BEHIND SPLICE.
10. #2 GROUND TO LADDER IF METALLIC.

REVISIONS

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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

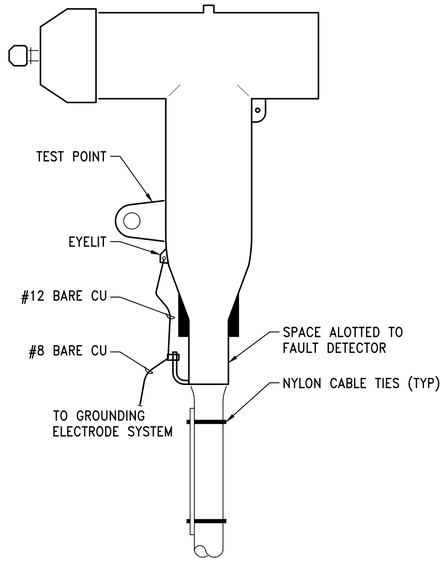
PROJECT: F&I STANDARD DETAILS

SHEET TITLE: GROUND DETAILS VAULT GROUNDING

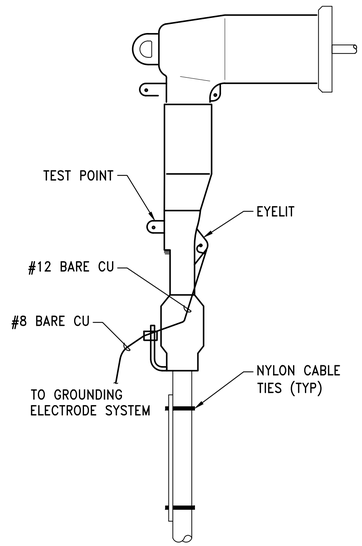
WORK PROJECT NO.

CONSULTANT'S NO.

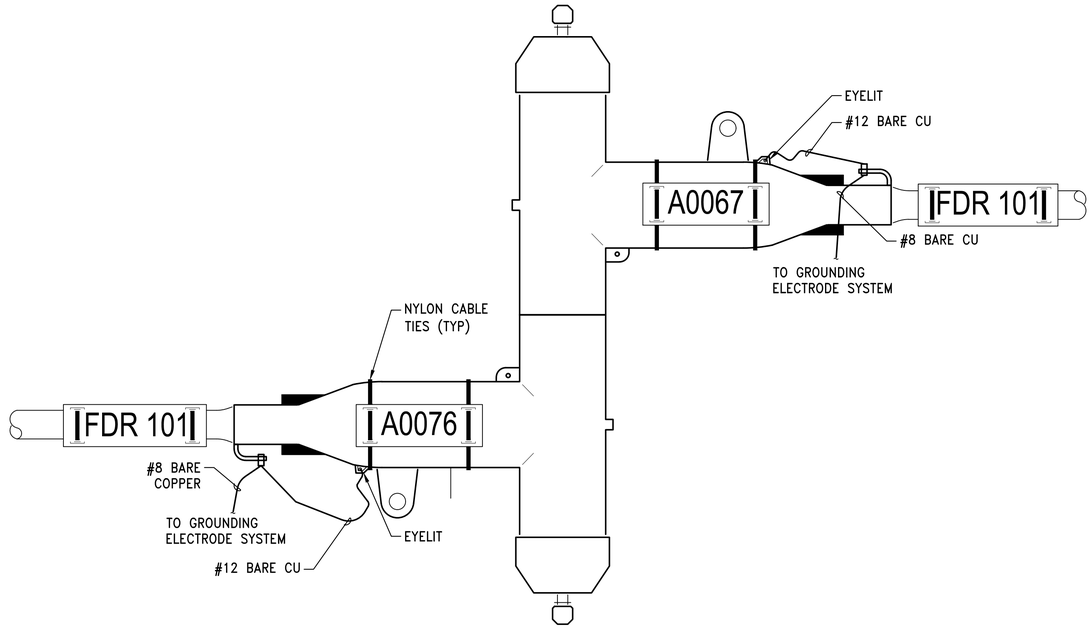
PORT OF SEATTLE NO.
26 05 26 - 01




**DETAIL** 1
600A ELBOW TERMINATION
LABELING DIAGRAM
SCALE: NTS




**DETAIL** 2
200A ELBOW TERMINATION
LABELING DIAGRAM
SCALE: NTS




**DETAIL** 3
600A ELBOW SPLICE
LABELING DIAGRAM
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

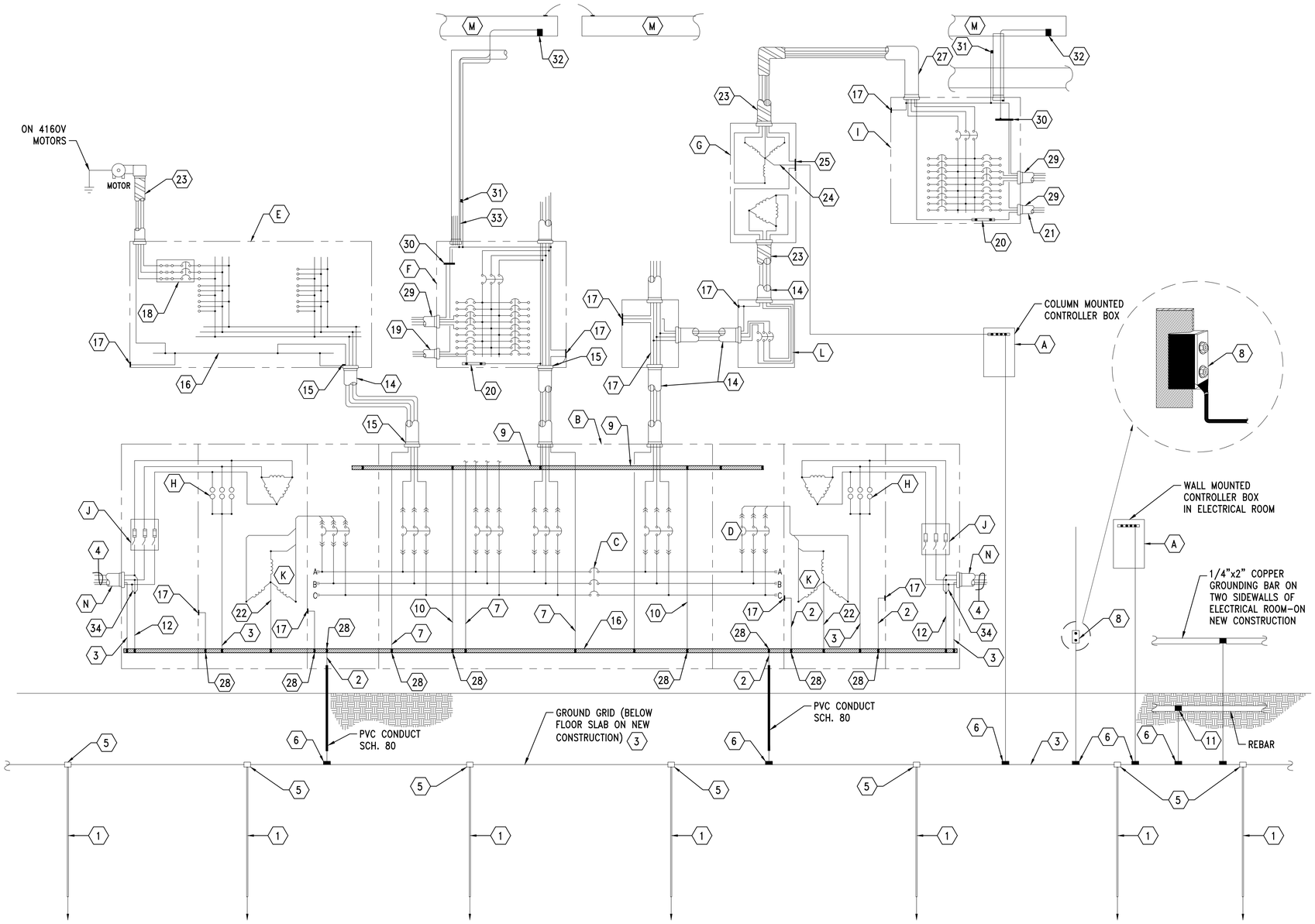
PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **PROPER SPLICE ORIENTATION AND CABLE RACK SPACING**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.
**26 05 26 - 02**




## GENERAL NOTES:

1. GROUNDING CONDUCTORS RUN ON BUILDING STEEL OR CONCRETE STRUCTURE SHALL BE SUPPORTED AT INTERVALS OF NOT MORE THAN 2'-6" HORIZONTALLY AND 4"-0" VERTICALLY.
2. COPPER ALLOY GROUNDING FITTINGS.

## KEYED NOTES:

1. 3/4" COPPER CLAD GROUND ROD, 10 FOOT LONG INSTALLED IN UNDISTURB THE EARTH; 2-1/2 FEET BELOW FINISHED GRADE ON NEW CONSTRUCTION. MAXIMUM DISTANCE BETWEEN RODS SHALL BE 100'-0".
2. GROUNDING ELECTRODE CONDUCTOR; SIZED PER NEC 250-28 AND NEC TABLE 250-66.
3. BARE STRANDED 4/0 COPPER GROUND CONDUCTOR.
4. 12.47 KV, 3 PHASE, 3W, PRIMARY SERVICE FEEDER, WITH 1-4/0 COPPER BARE GND..
5. GROUND ROD TO GRID CONNECTION. USE BURNDY HYGROUND TYPE YGHC-C OR YGHP-C CONNECTOR OR APPROVED EQUAL.
6. CABLE TO CABLE GROUND GRID CONNECTION. USE BURNDY HYGRID CONNECTOR THE YGL-C OR APPROVED EQUAL.
7. BARE STRANDED COPPER GROUND CONDUCTOR CONNECTING EQUIPMENT AND SWITCHBOARD GROUND BAR SEE NEC TABLE 250-122.
8. CABLE TO BUILDING STEEL CONNECTION; BURNDY GROUND LINE CONNECTOR TYPE YGIB & HYLUG TERMINALS TYPE YGHA OR APPROVED EQUAL.
9. NEUTRAL BUS, 100% PHASE BUS AMPACITY, IN MAIN SWITCHGEAR INSULATED FROM HOUSING.
10. INTERCONNECTION BUS 1/4"x2" COPPER BAR; NEUTRAL BUS TO GROUND BUS CONNECTION.
11. CABLE TO CONCRETE REBAR CONNECTION; BURNDY HYTAP CONNECTOR TYPE YGHC-C OR APPROVED EQUAL.
12. AWG #6 COPPER, SOLID INSULATED GROUND CONDUCTOR.
13. 480/277 V, 4W (100% NEUTRAL), INSULATED SECONDARY BUS.
14. FEEDER CONDUIT WITH, 3 PHASE, 3W, & GROUNDING CONDUCTOR.
15. INSULATED BUSHING, GROUNDING TYPE, USED IN ALL CONDUIT TERMINATING AT EQUIPMENT AND NOT IN CONTACT WITH METAL ENCLOSURE. TIE ALL BUSHINGS WITH BARE GROUND CONDUCTOR AND ATTACH TO COPPER GROUND BUS.
16. UNINSULATED 1/4"x2" COPPER GROUND BUS; BOND TO EACH SECTION OF EQUIPMENT AND INTERCONNECT TO FORM A CONTINUOUS GROUND BUS. SEE NEC 250-24 & 28.
17. GROUNDING LUGS SUITABLY BONDED TO CABINET OR CABLE TRAY.
18. COMBINATION CIRCUIT BREAKER AND STARTER IN MOTOR CONTROL CENTER (MOTOR CIRCUIT PROTECTOR).
19. BRANCH CIRCUIT, 277 V, 1 PHASE, 2W, & GROUND WIRE.
20. BARE NEUTRAL BAR INSULATED FROM CABINET.
21. BRANCH CIRCUIT, 120 V, 1 PHASE, 2W, & GROUND WIRE.
22. MAIN BOUNDING JUMPER; SIZED PER NEC 250-28.
23. FLEXIBLE FEEDER CONDUIT – 3 PHASE, 3W, & GROUNDING CONDUCTOR.
24. LOW VOLTAGE NEUTRAL GROUNDED TO ENCLOSURE, BOLTED CONNECTION. GROUND PAD.
25. FLEXIBLE FEEDER CONDUIT, 3 PHASE, 4W, & GROUNDING CONDUCTOR.
26. FEEDER CONDUIT, 3 PHASE, 4W & GROUND CONDUCTOR.
27. CABLE TERMINAL TO GROUND BUS COPPER BAR CONNECTION. USE BURNDY HYLUG TERMINAL TYPE YGHA.
28. BRANCH CIRCUIT CONDUIT WITH 3 PHASE FEEDER & GROUND WIRE.
29. UNINSULATED 1/4"x1" COPPER GROUND BUS IN PANELS THAT CONTAIN 1 POLE, 2 POLE, OR 3 POLE BRANCH CIRCUITS.
30. GROUNDING CONNECTOR FOR METALLIC CONDUITS OR STEEL PIPES. BURNDY TYPE GC-A GROUND CLAMPS OR APPROVED EQUAL.
31. CABLE TRAY GROUND CLAMP, BURNDY TYPE GC-CT OR APPROVED EQUAL.
32. GROUND CONDUCTOR, CONNECTION ALONG RACEWAY, RUN ON INTERVALS.
33. CABLE DRAIN WIRE (BARE COPPER WIRE SHIELD) OR COPPER TAPE SHIELD. SHIELDS ARE BONDED VIA COLLAR CLAMP (BURNDY TYPE GC-A GROUND CLAMP OR APPROVED EQUAL)
34. FLEXIBLE GROUND CONNECTION, BURNDY TYPE B FLEXIBLE COPPER BRAID OR APPROVED EQUAL

## EQUIPMENT TAGS:

- A — COLUMN OR WALL MOUNTED CONTROLLER BOX.
- B — SUBSTATION SCHEMATIC LAYOUT.
- C — SWITCHGEAR TIE BREAKER (NO – NORMALLY OPEN).
- D — SWITCHGEAR MAIN CIRCUIT BREAKER.
- E — MOTOR CONTROL CENTER, 480 V, 3 PHASE, 3W (TYPICAL).
- F — DISTRIBUTION SWITCHBOARD, 480/277 V, 3 PHASE, 4W, 60HZ.
- G — DRY TYPE TRANSFORMER – 300 KVA, 480 V – 208/120 V, 3 PHASE, 4W, 60HZ.
- H — SURGE ARRESTER
- I — PANELBOARD – 208/120 V, 3 PHASE, 4W
- J — SWITCHGEAR PRIMARY MAIN DISCONNECT SWITCH, LOADBREAK RATED, FUSE TYPE.
- K — MV TRANSFORMER, 12.47 KV DELTA – 480/277 V, WYE GROUNDED, 60HZ.
- L — ENCLOSED CIRCUIT BREAKER PROTECTOR – DISTRIBUTION TRANSFORMER PRIMARY.
- M — CABLE TRAY
- N — PRIMARY FEEDER CONDUIT, GRC (SEE KEYED NOTE 38)

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

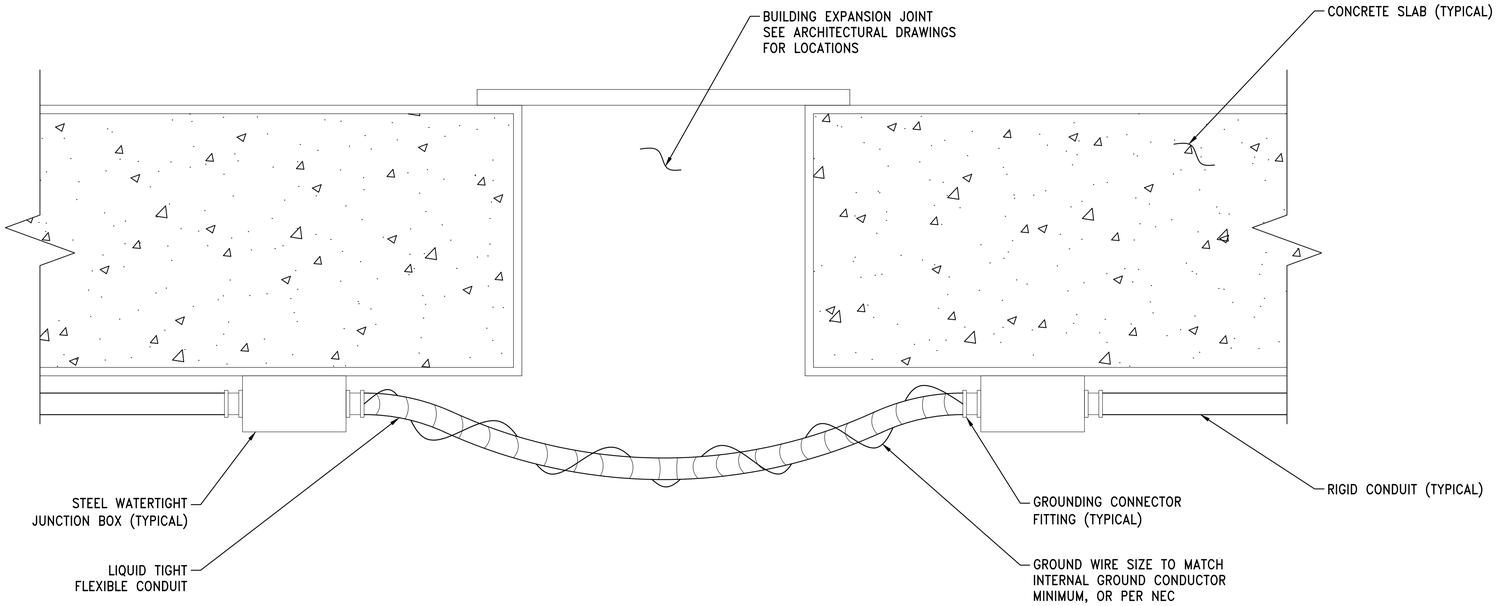
PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle — SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: ELECTRICAL GROUNDING SYSTEM DIAGRAM (TYPICAL)

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 05 26 - 03

NOTE:

PROVIDE SUFFICIENT SLACK IN ALL CONDUCTORS AND FLEXIBLE CONDUIT CROSSING EXPANSION JOINTS TO ALLOW FOR STRUCTURE EXPANTION/CONTRACTION. COORDINATE REQUIREMENTS WITH POS RESIDENT ENGINEER.




## DETAIL 1

EXPANSION JOINT CONDUIT
GROUNDING DETAIL
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
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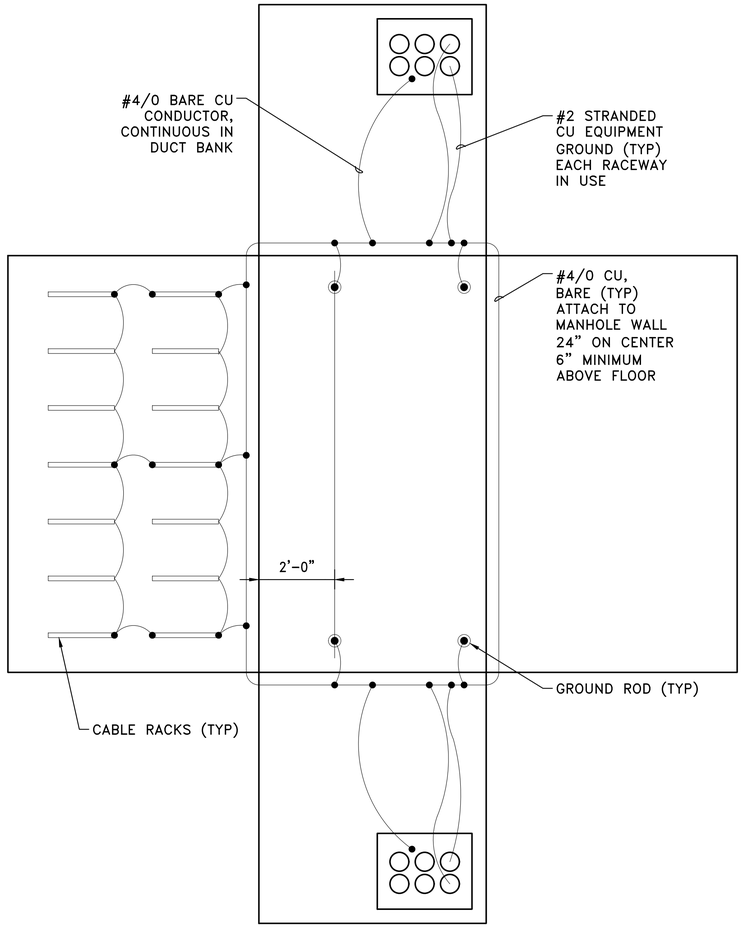
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: GROUNDING DETAIL EXPANSION JOINT CONDUIT

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 05 26 - 04






REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

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PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: F&I STANDARD DETAILS

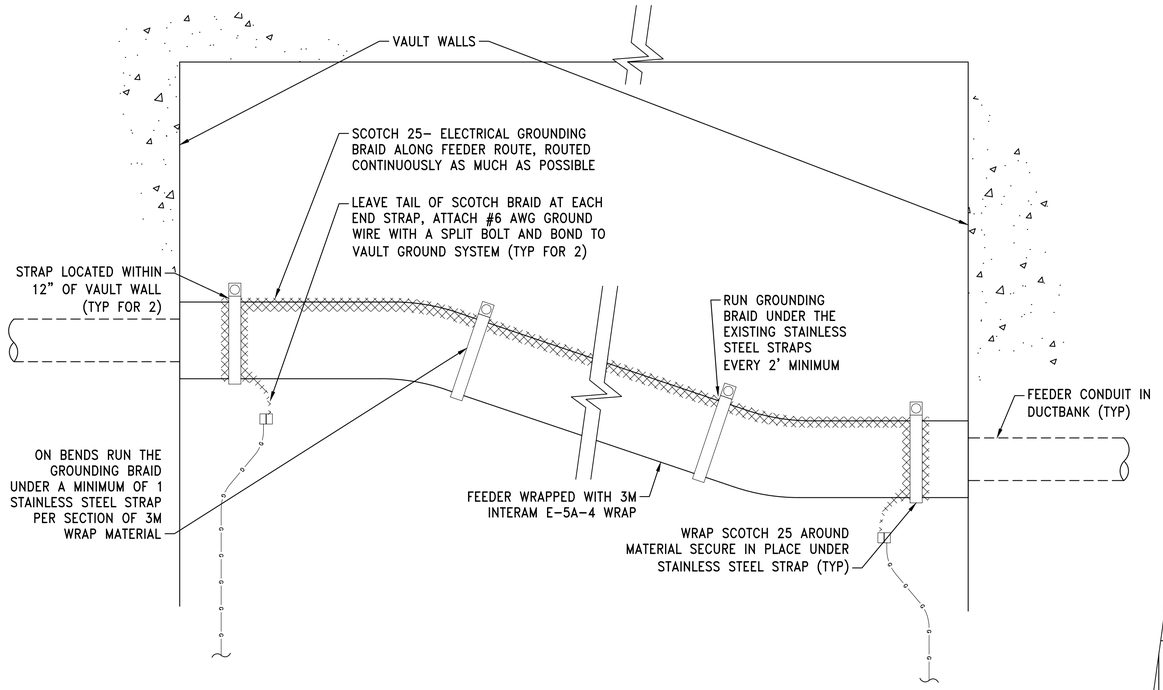
SHEET TITLE: GROUNDING DETAIL MANHOLE

WORK PROJECT NO.

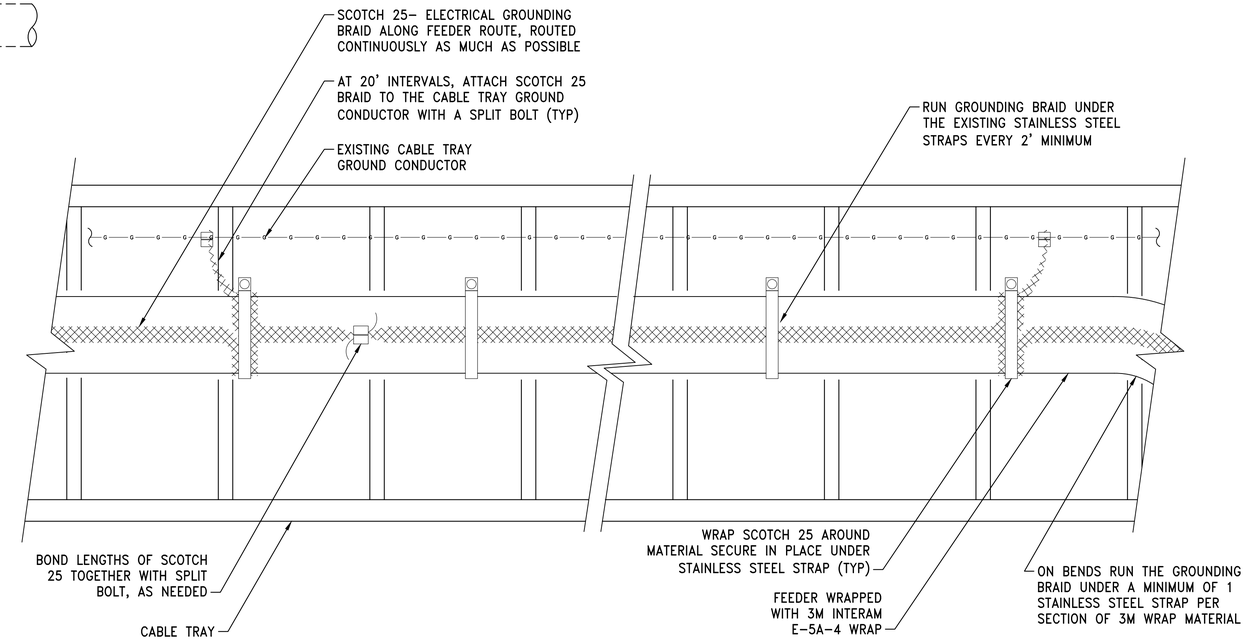
CONSULTANT'S NO.

PORT OF SEATTLE NO.

26 05 26 - 05




## 3M INTERAM E-5A-4 GROUNDING
## TYPICAL FOR CV02, CV07, CV08, T-9, CV09, CV10 AND CV11




## 3M INTERAM E-5A-4 GROUNDING FOR CV01 (CABLE TRAY)

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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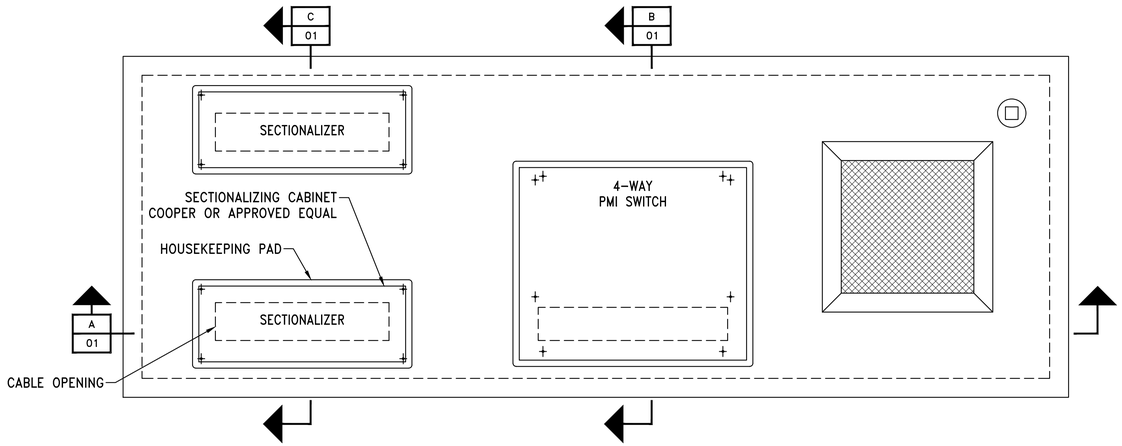
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

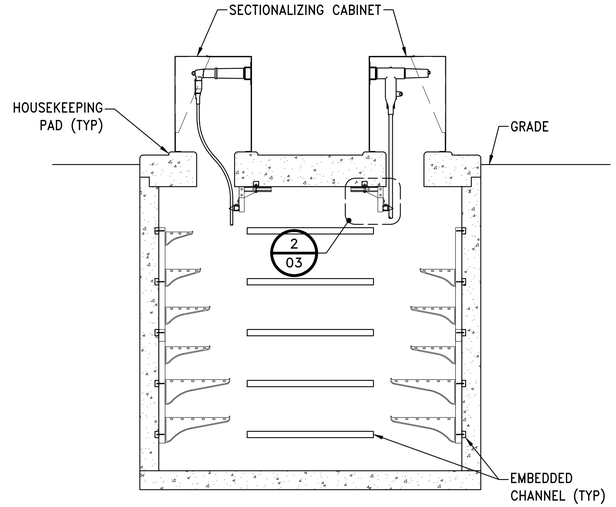
SHEET TITLE: **GROUNDING DETAILS CABLE VAULT CABLE SUPPORT AND MANHOLE DETAILS**

WORK PROJECT NO. —
CONSULTANT'S NO. —
PORT OF SEATTLE NO. **26 05 26 - 06**



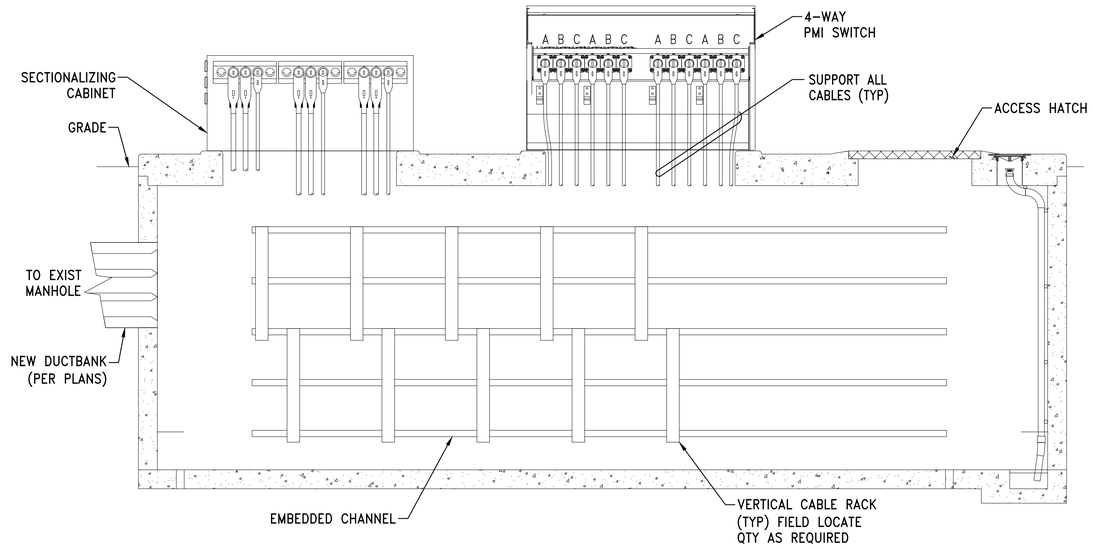

## DETAIL 1/01

TYPICAL SWITCH VAULT
EQUIPMENT LAYOUT
SCALE: NTS



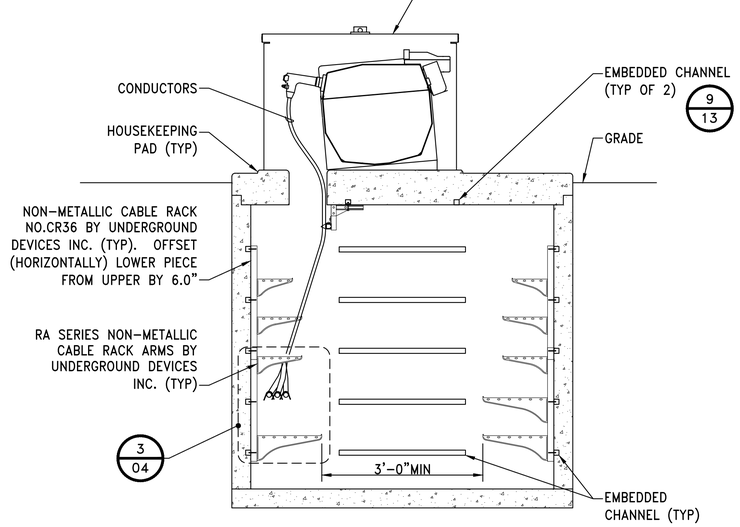

## SECTION C/01

SWITCH VAULT CUT AT
SECTIONALIZING CABINETS
SCALE: NTS




## SECTION A/01

SWITCH VAULT SECTION
SCALE: NTS




## SECTION B/01

SWITCH VAULT CUT AT PMI SWITCH
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

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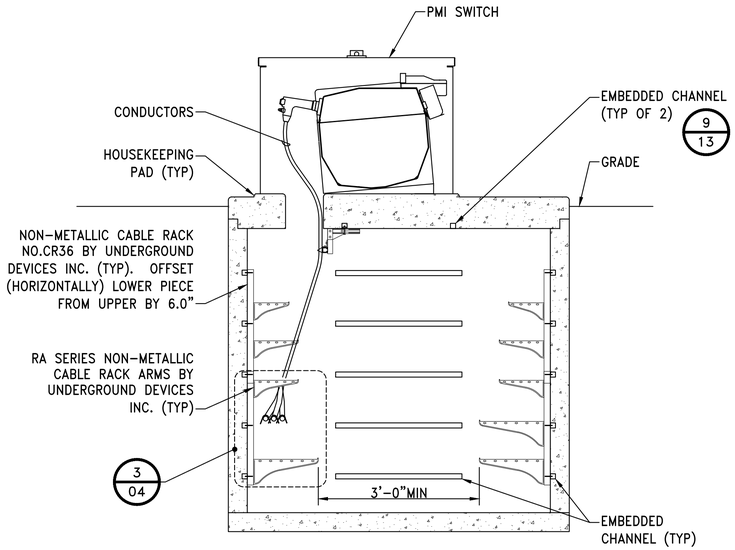
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**

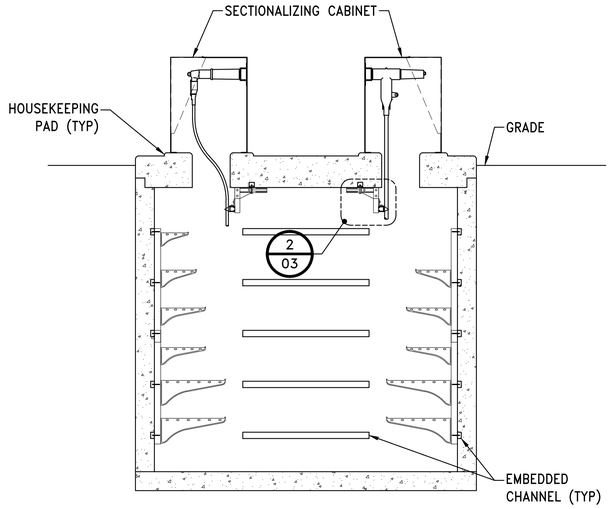
SHEET TITLE: **SWITCH VAULT DETAILS TYPICAL SWITCH VAULT LAYOUT**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. **26 05 43 - 01**




## SECTION B 01

SWITCH VAULT CUT AT PMI SWITCH
SCALE: NTS




## SECTION C 01

SWITCH VAULT CUT AT SECTIONALIZING CABINETS
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **SWITCH VAULT DETAILS PMI AND SC SECTIONS**

WORK PROJECT NO.

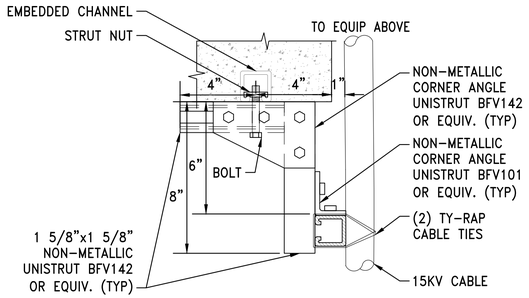
CONSULTANT'S NO.

PORT OF SEATTLE NO.

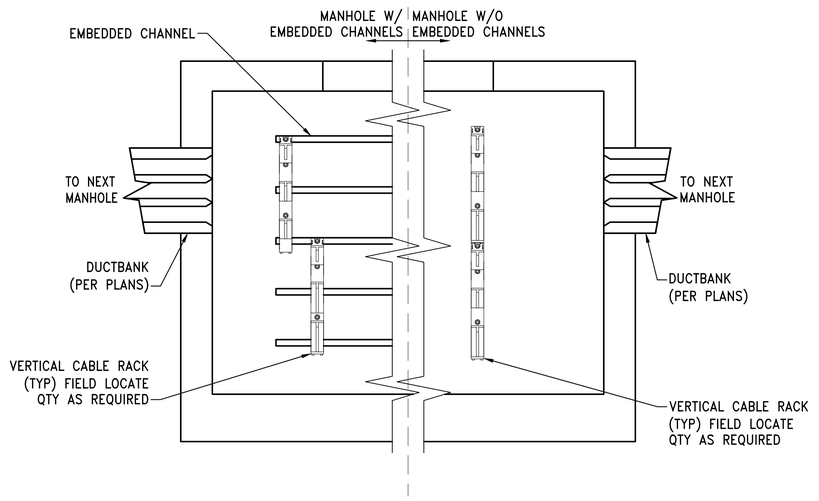
**26 05 43 - 02**

## GENERAL NOTES:

1. ALL METAL COMPONENTS SHALL BE 316 STAINLESS STEEL.




**DETAIL** 2/02
CABLE SUPPORT DETAIL
SCALE: NTS




**SECTION** D/03
TYPICAL MANHOLE SECTION WITH AND WITHOUT EMBEDDED CHANNELS
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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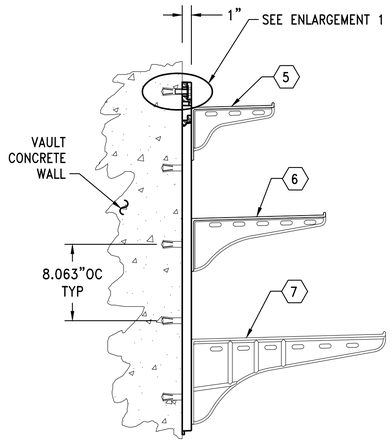
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

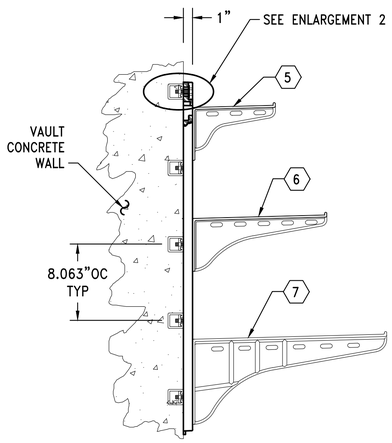
F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

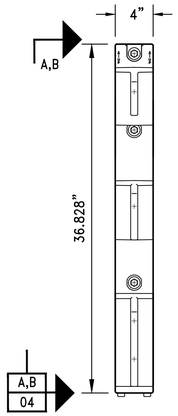
PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **SWITCH VAULT DETAILS CABLE SUPPORT AND MANHOLE DETAILS**

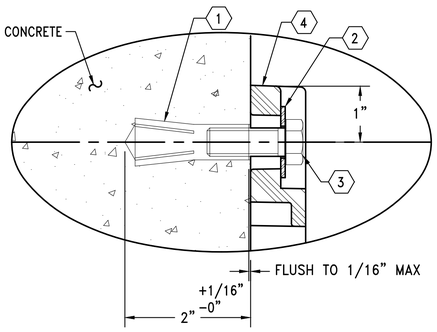
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. **26 05 43 - 03**



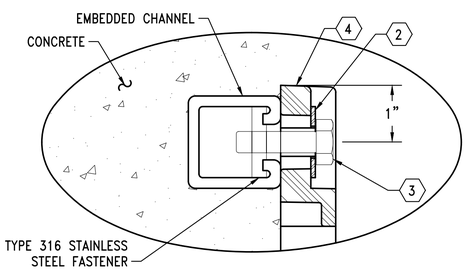




ELEVATION




ENLARGEMENT 1




ENLARGEMENT 2

## BILL OF MATERIAL

| ITEM NUMBER | CATALOG NUMBER | DESCRIPTION | QUANTITY REQUIRED |
|---|---|---|---|
| 1 | FSRM-12 | 1/2"-13 DROP-IN ANCHOR<br>MATERIAL: 303 STAINLESS STEEL | 5 |
| 2 | FFW316-18-40 | FLAT WASHER<br>ID=.562, OD=1.250, THK=.078<br>MATERIAL: 316 STAINLESS STEEL | 5 |
| 3 | FHC316-16-044 | 1/2"-13 x 1-3/8" LG.<br>HEX HEAD CAP SCREW<br>MATERIAL: 316 STAINLESS STEEL | 5 |
| 4 | CR36 | CR36 STANCHION<br>MATERIAL: 50% GLASS REINFORCED NYLON | 1 |
| 5 | RA08 | RA08 ARM (8" LONG)<br>MATERIAL: 50% GLASS REINFORCED NYLON | 1 |
| 6 | RA14 | RA14 ARM (14" LONG)<br>MATERIAL: 50% GLASS REINFORCED NYLON | 1 |
| 7 | RA20 | RA20 ARM (20" LONG)<br>MATERIAL: 50% GLASS REINFORCED NYLON | 1 |
| NOT SHOWN | FRT-112 | SETTING TOOL (USED TO INSTALL CATALOG NO. FSRM-12 DROP-IN ANCHOR) | AS REQ'D |

**DETAIL** 1/—
CABLE RACKS AND RACK ARMS
SCALE: N/A



REVISIONS

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PROJECT MANAGER: —
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SCALE: N.T.S.
DATE: —
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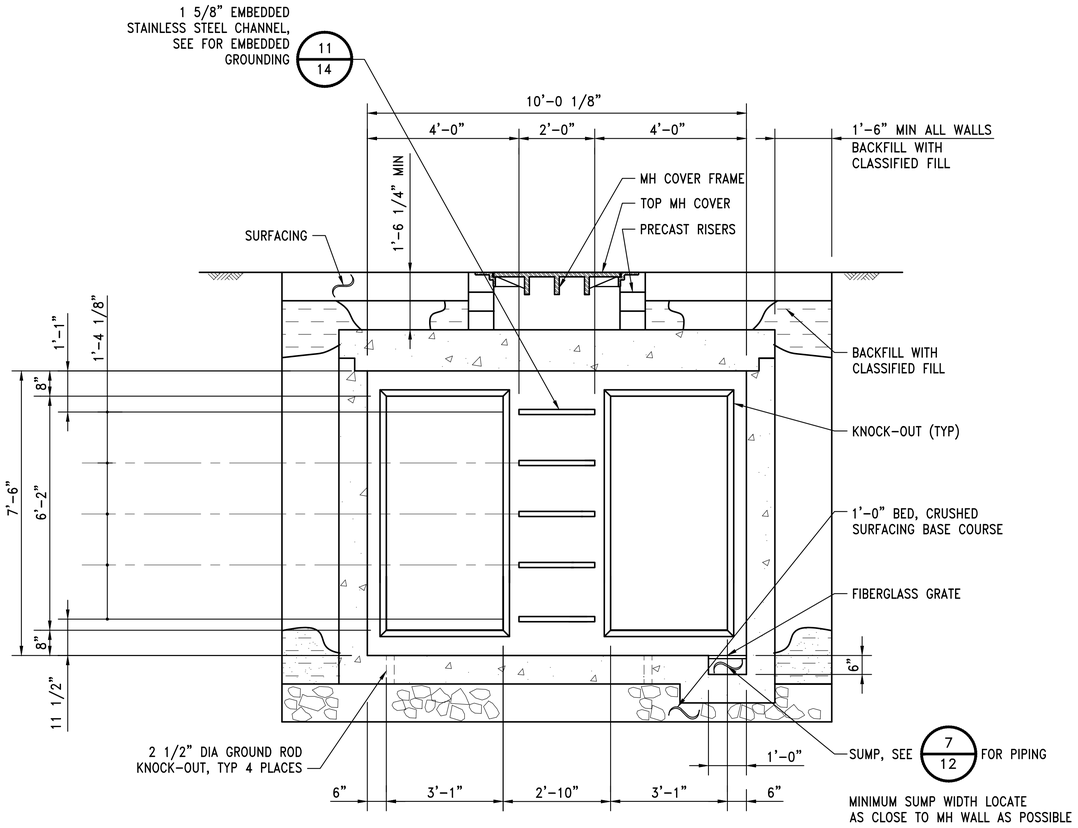
Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **SWITCH VAULT DETAILS MISCELLANEOUS SWITCH VAULT DETAILS**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 05 43 - 04**

## GENERAL NOTES:

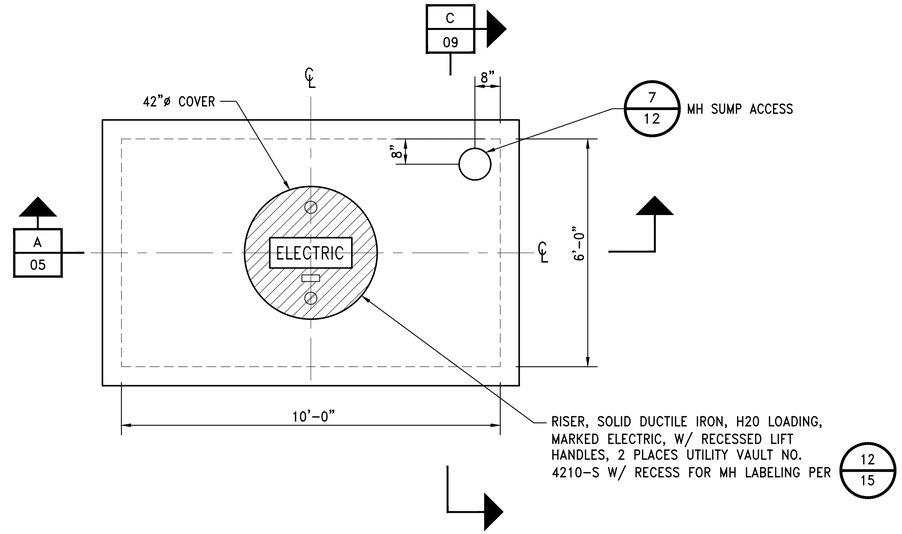
1. MINIMUM MANHOLE SIZE. NOT RECOMMENDED UNLESS PHYSICAL CONSTRAINTS DICTATE USE.
2. TERMS–A–DUCTS RECOMMENDED FOR CONDUITS IDENTIFIED AT INSTALLATION OF MH.




## SECTION

CABLE PULLING MANHOLE
SCALE: 1/4" = 1'–0"

| A | A |
|---|---|
| 05 | 09 |




## PLAN

CABLE PULLING MANHOLE
SCALE: 1/4"=1'–0"

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

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PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
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Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: F&I STANDARD DETAILS

SHEET TITLE: CABLE PULLING MANHOLE PLAN AND SECTION

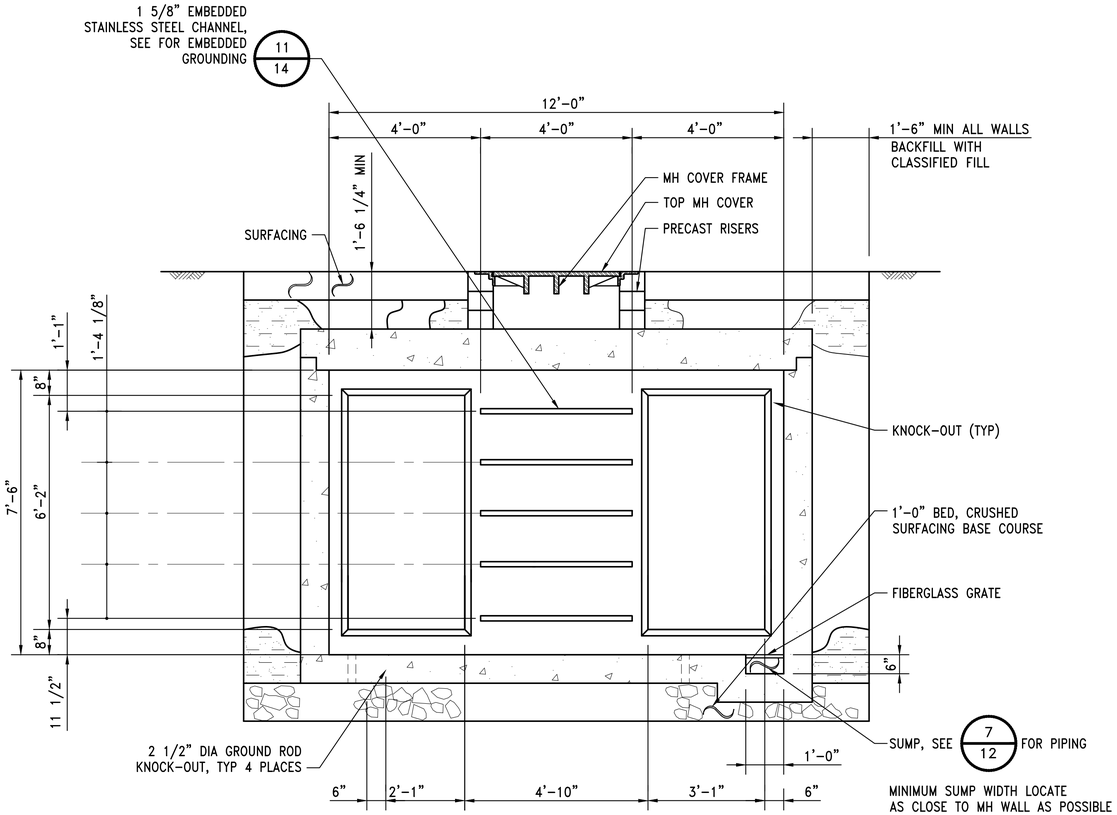
WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO. 26 05 43 - 05

## GENERAL NOTES:

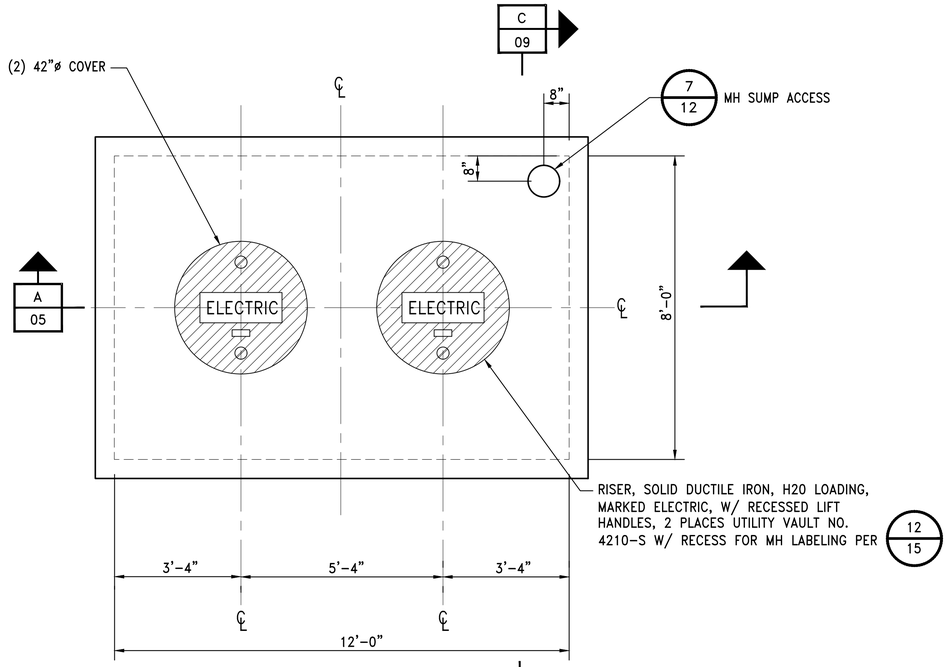
1. PREFERRED MH FOR PULLING AND SPLICING APPLICATIONS.
2. MINIMUM MANHOLE SIZE. NOT RECOMMENDED UNLESS PHYSICAL CONSTRAINTS DICTATE USE.
3. TERM-A-DUCTS RECOMMENDED FOR CONDUITS IDENTIFIED AT INSTALLATION OF MH.




## SECTION

SPLICING MANHOLE
SCALE: 1/4" = 1'-0"

A/06




## PLAN

SPLICING MANHOLE
SCALE: 1/4"=1'-0"

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

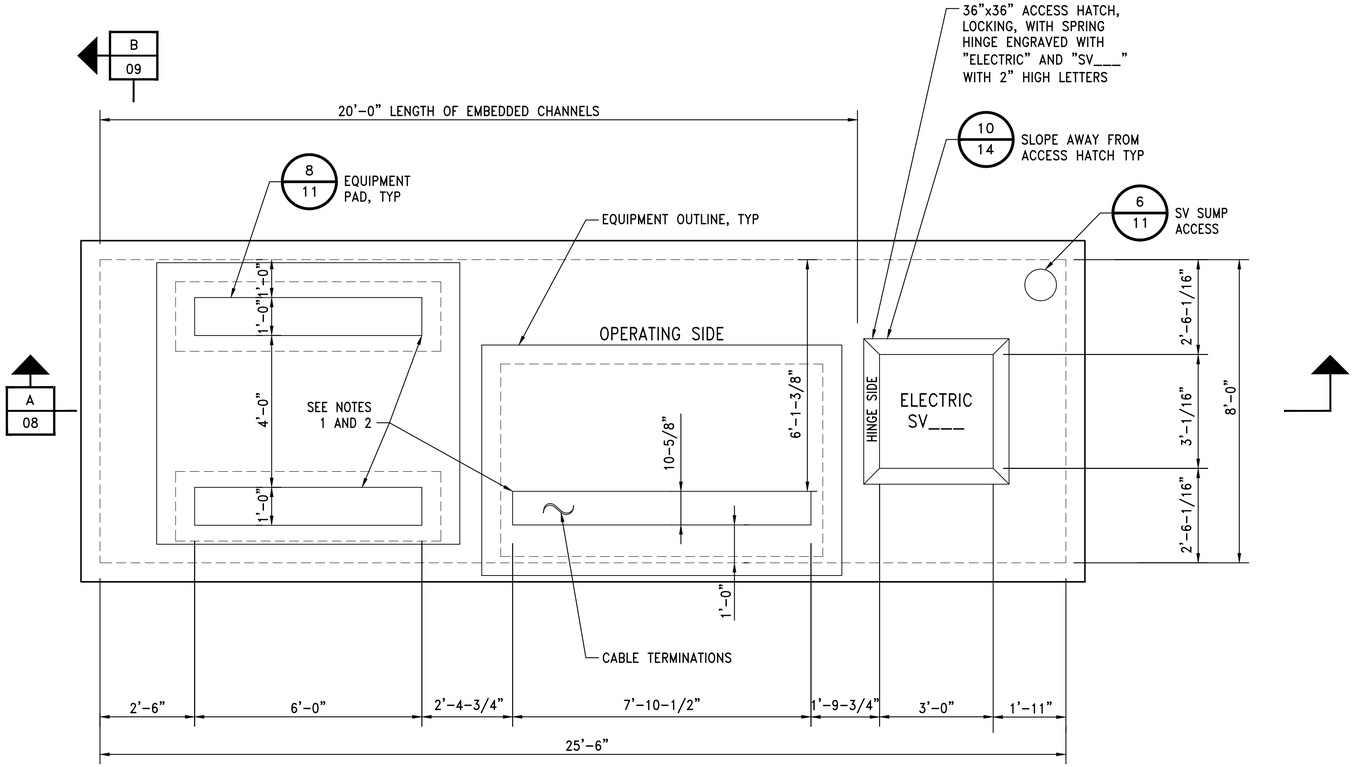
PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **SPLICING MANHOLE PLAN AND SECTION**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 05 43 - 06**

## GENERAL NOTES:

1. VERIFY ALL OPENINGS W/EQUIPMENT SUPPLIED.
2. RADIUS ALL EDGES OF OPENINGS, R=1".
3. OPENINGS AS SHOWN FOR 6-WAY SWITCH AND 3-POINT JUNCTION.




## PLAN

TYPICAL VAULT LID PLAN
SCALE: 1/4"=1'-0"

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **SWITCH VAULT PLAN**

WORK PROJECT NO.

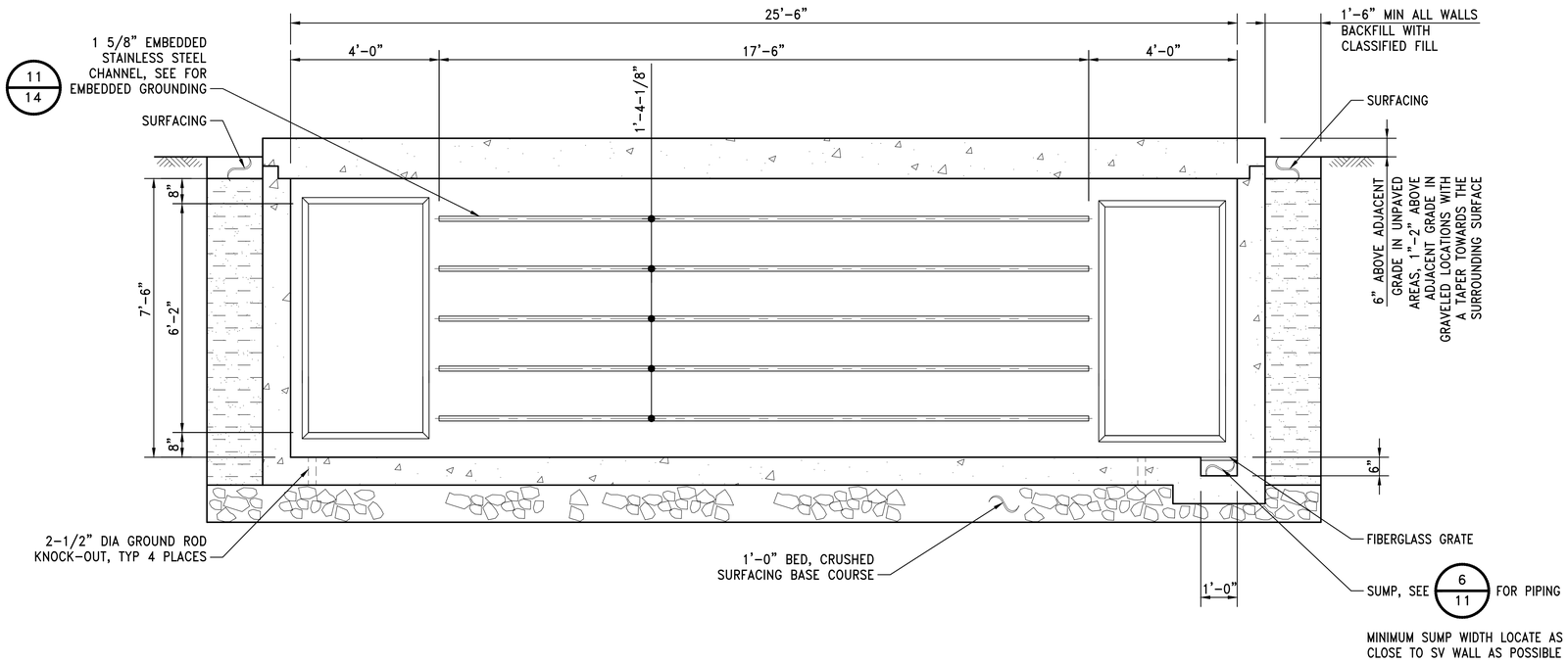
CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 05 43 - 07**

## GENERAL NOTES:

1. ADJUST KNOCK OUT SIZE AND LOCATIONS FOR DUCTBANK IN FINAL DESIGN.
2. TERM-A-DUCTS RECOMMENDED FOR CONDUITS IDENTIFIED AT INSTALLATION OF MH.




## SECTION

PRECAST SWITCH VAULT
SCALE: 1/4" = 1'-0"

| A |
|---|
| 07 |



REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT DRAFT

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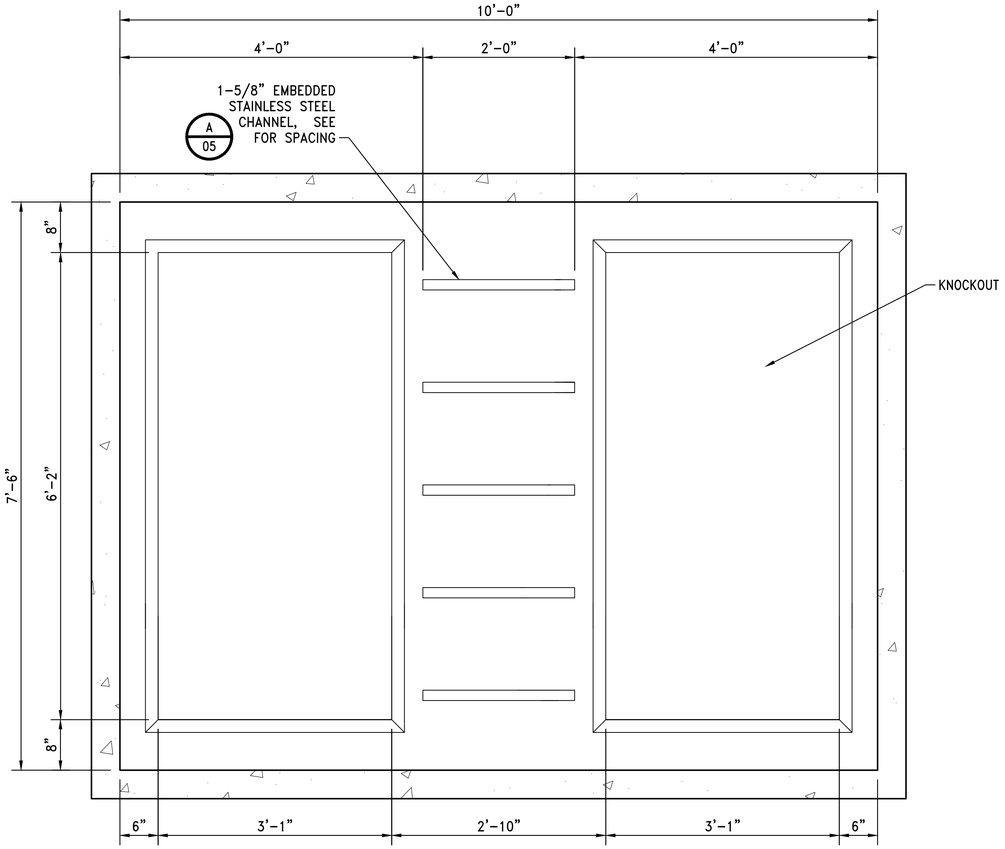
Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **SWITCH VAULT DETAILS TYPICAL SWITCH VAULT LAYOUT**

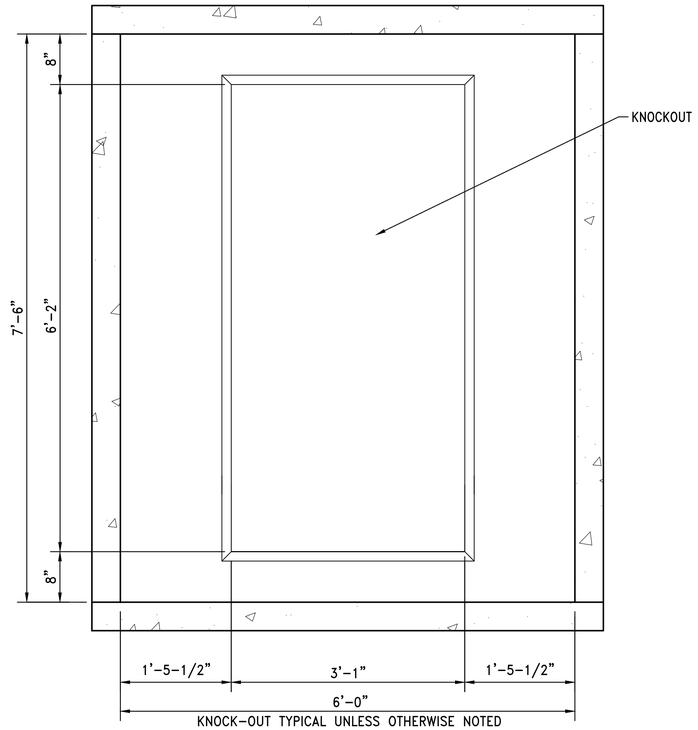
WORK PROJECT NO. —
CONSULTANT'S NO.
PORT OF SEATTLE NO. **26 05 43 - 01**




## SECTION

PRECAST MANHOLE AND VAULT
SCALE: NONE

| B | B |
|---|---|
| 06 | 07 |




KNOCK-OUT TYPICAL UNLESS OTHERWISE NOTED

## SECTION

PRECAST MANHOLE
SCALE: NONE

| C |
|---|
| 05 |

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

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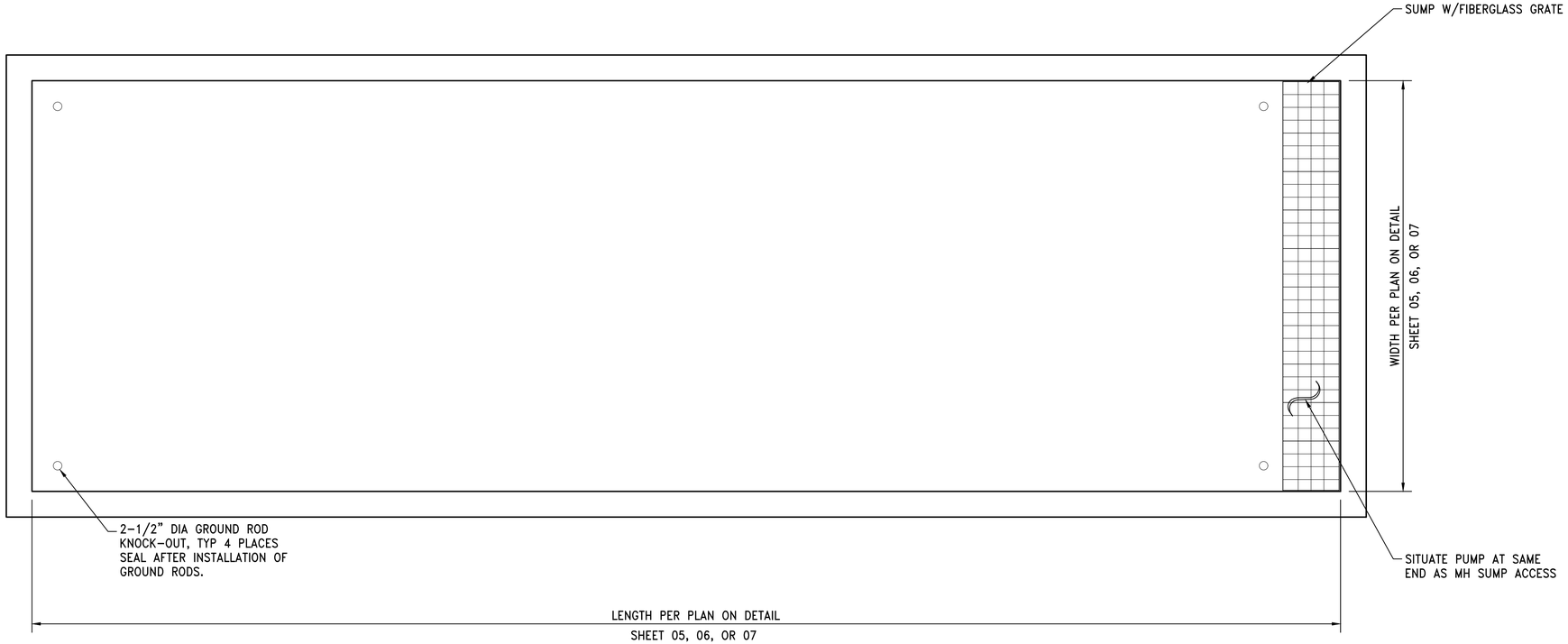
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **STANDARD MANHOLE AND VAULT SECTIONS**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 05 43 - 09**




## PLAN

SPLICING MANHOLE
SCALE: 3/8"=1'-0"

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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PROJECT ENGINEER: —
DESIGN ENGINEER: —
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SCALE: N.T.S.
DATE: —
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Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

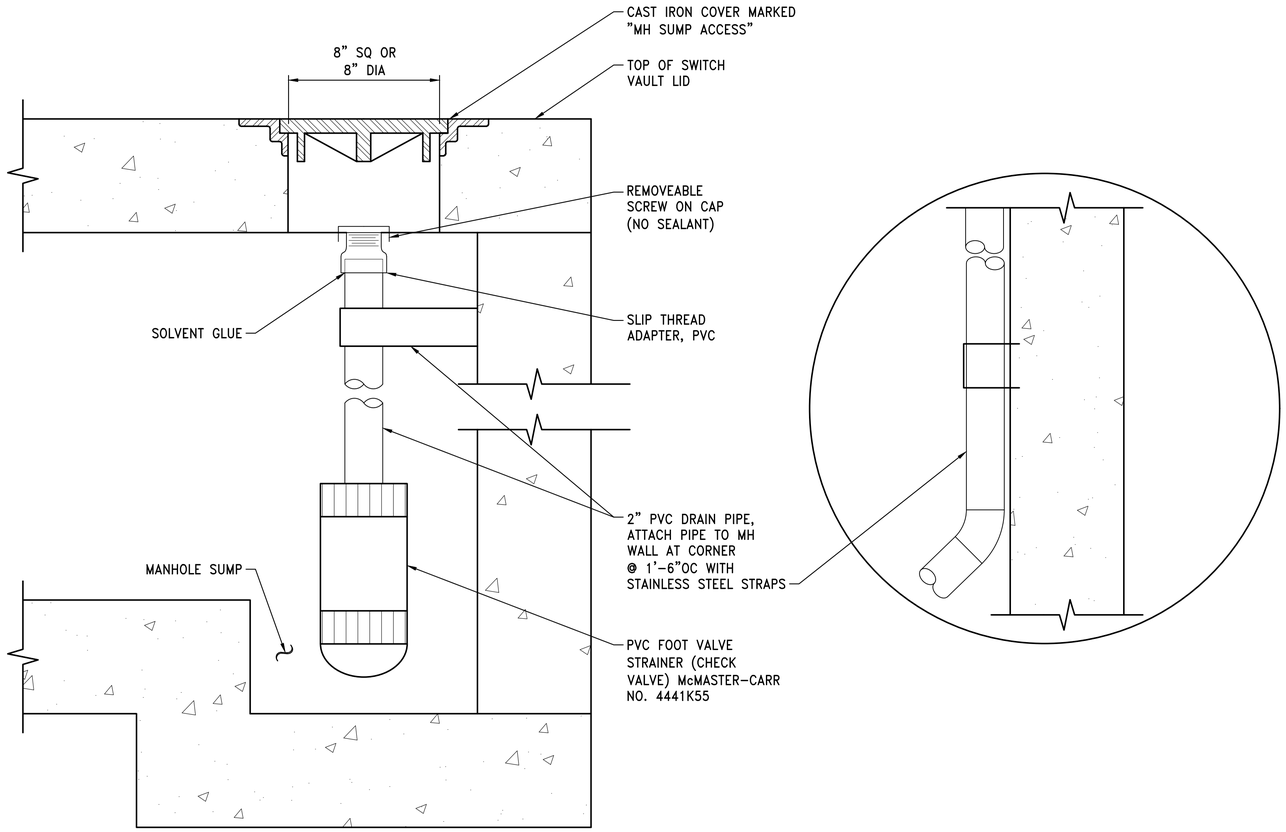
SHEET TITLE: **MANHOLE TYPICAL FLOOR PLAN**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 05 43 - 10**




## DETAIL

SWITCH VAULT SUMP PIPING AND ACCESS
SCALE: NONE

6/07 6/08

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
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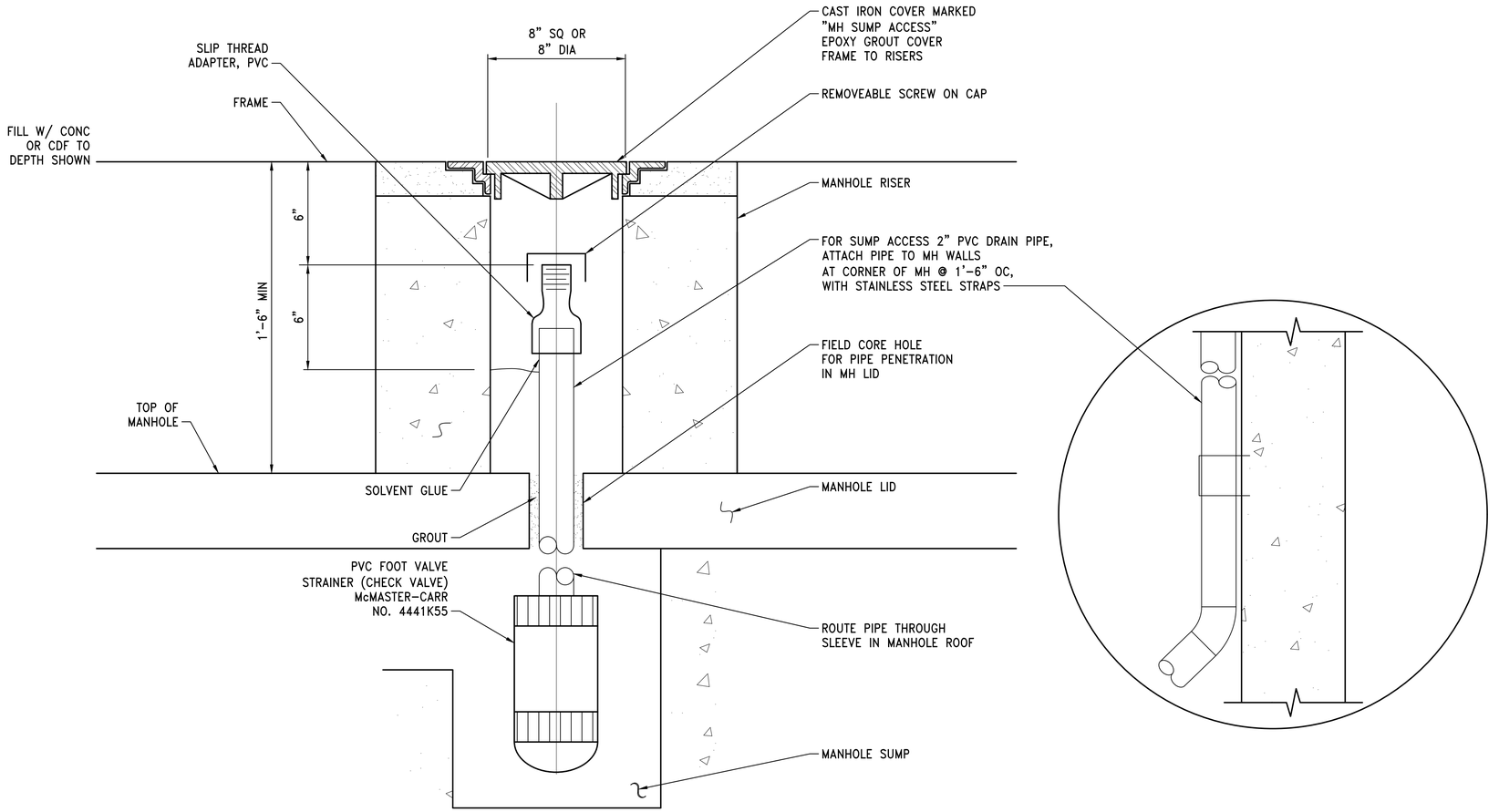
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: STANDARD SWITCH VAULT SUMP AND PIPE DETAIL

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 05 43 - 11




## DETAIL

MANHOLE SUMP PIPING
AND ACCESS
SCALE: NONE

7 05 | 7 06

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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FACILITIES & INFRASTRUCTURE
F&I
SEATAC INTERNATIONAL AIRPORT

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PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
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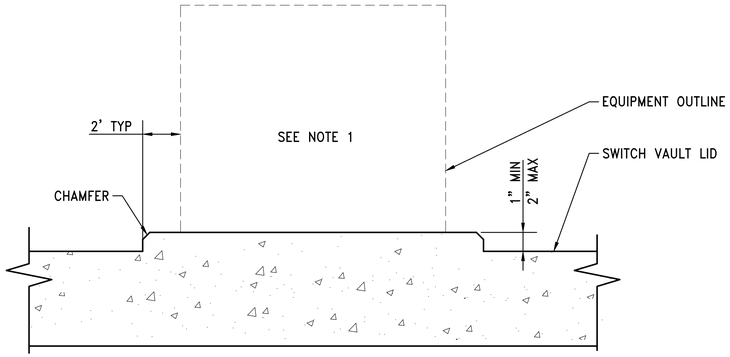
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **STANDARD MANHOLE SUMP AND PIPE DETAILS**

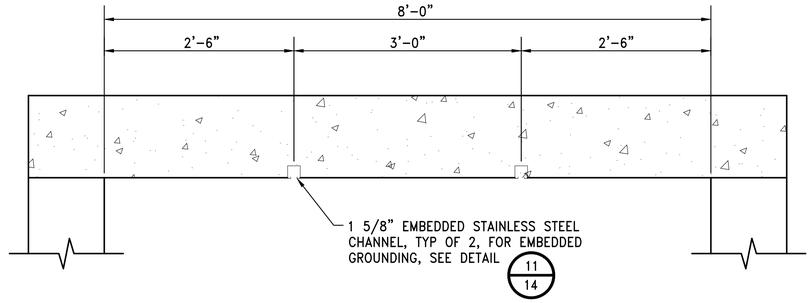
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 05 43 - 12**

## GENERAL NOTES:

1. VERIFY EQUIPMENT PAD DIMENSIONS WITH EQUIPMENT SUPPLIER.




**DETAIL** 8/07
SWITCH VAULT EQUIPMENT PAD
SCALE: NONE




**DETAIL** 9/02
MANHOLE AND SWITCH VAULT LID EMBEDMENTS
SCALE: NONE

| REVISIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
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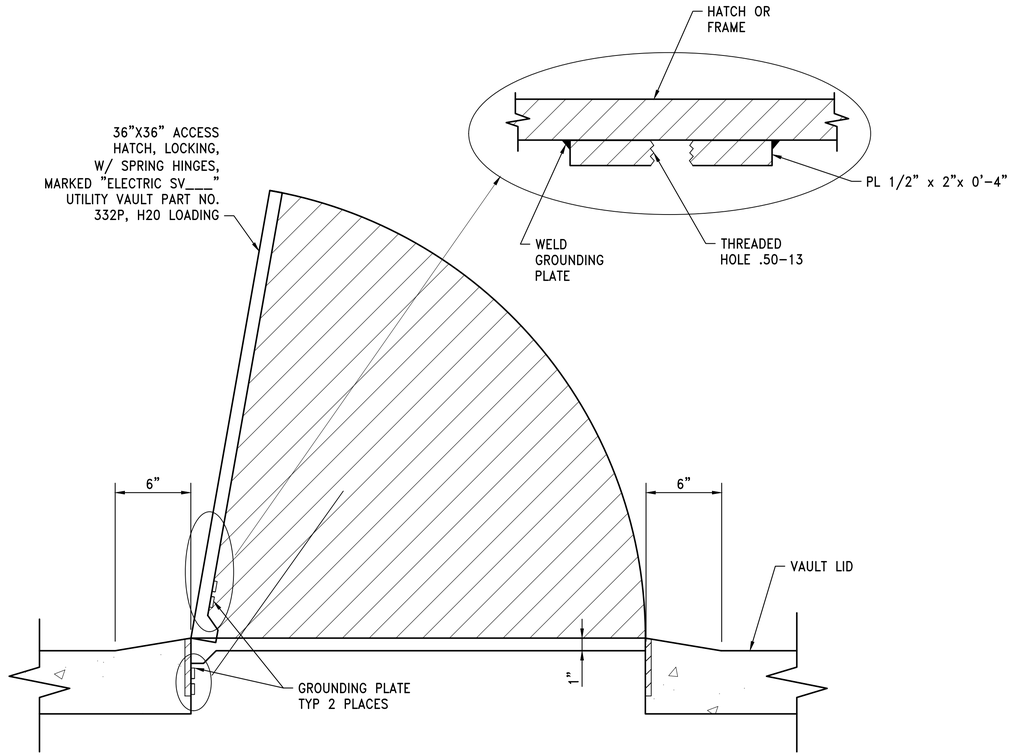
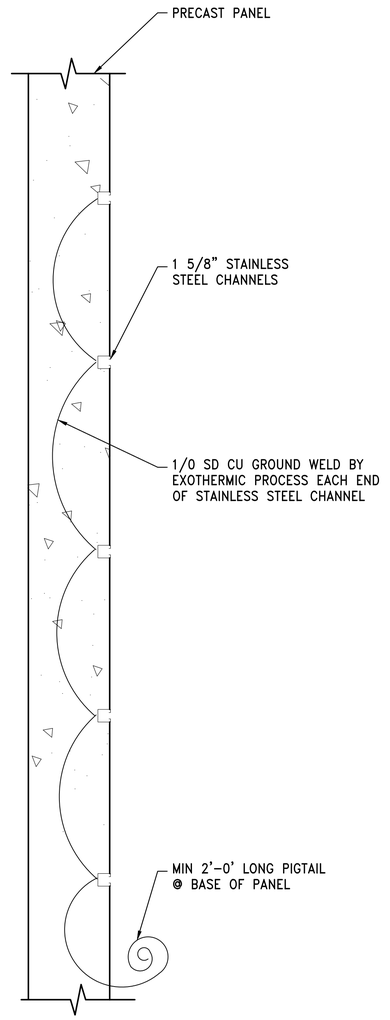
Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **STANDARD VAULT LID DETAILS**

WORK PROJECT NO. —
CONSULTANT'S NO.
PORT OF SEATTLE NO. **26 05 43 - 13**




**DETAIL** 10/07
ACCESS HATCH
SCALE: NONE




**DETAIL** 11/05 11/06 11/08 11/13
TYPICAL EMBEDDED GROUNDING
SCALE: NONE

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
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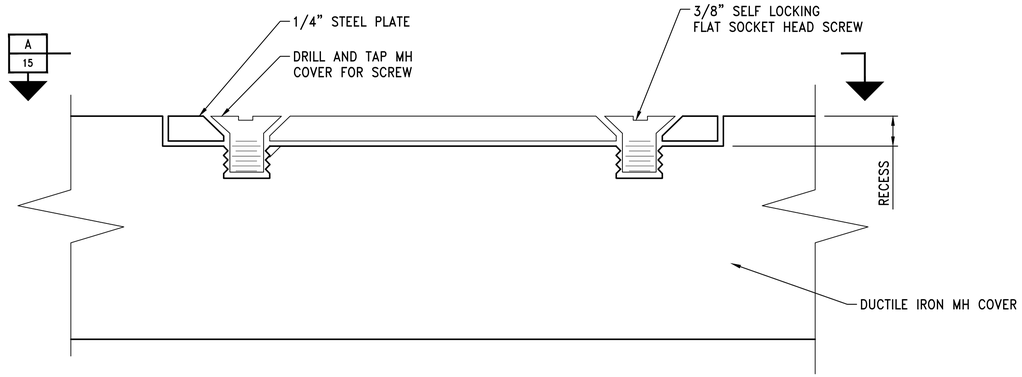
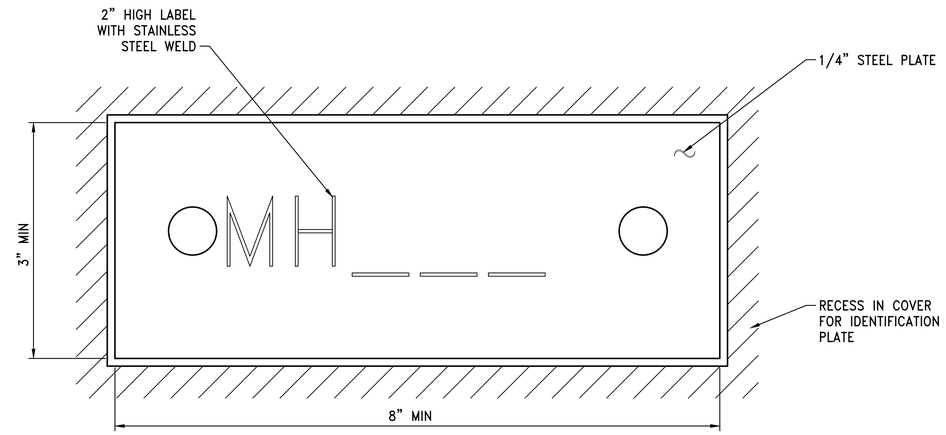
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **VAULT HATCH AND EMBEDDED GROUNDING DETAILS**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. **26 05 43 - 14**




**DETAIL** 12/05 12/06
MH COVER IDENTIFICATION PLATE
SCALE: NONE




**SECTION** A/15
MH COVER IDENTIFICATION PLATE
SCALE: NONE

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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PROJECT MANAGER: —
PROJECT ENGINEER: —
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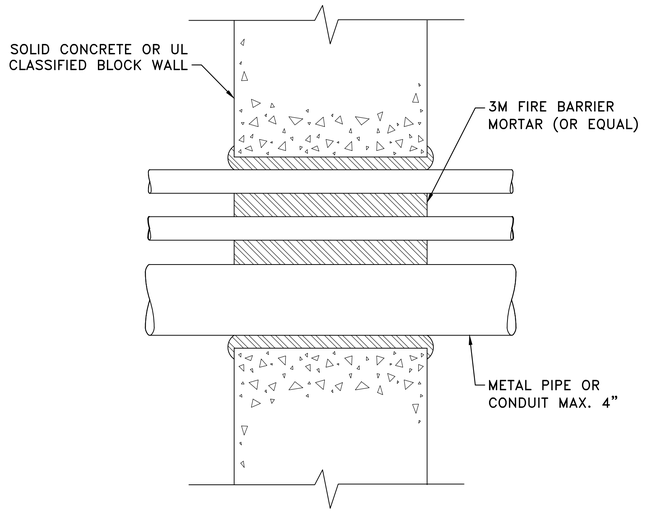
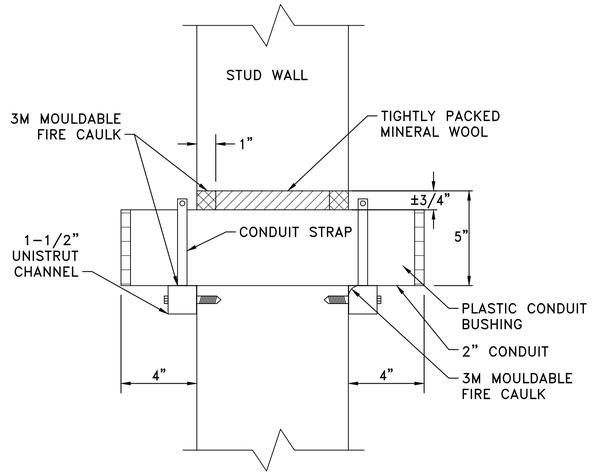
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: STANDARD MANHOLE COVER DETAIL

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 05 43 - 15



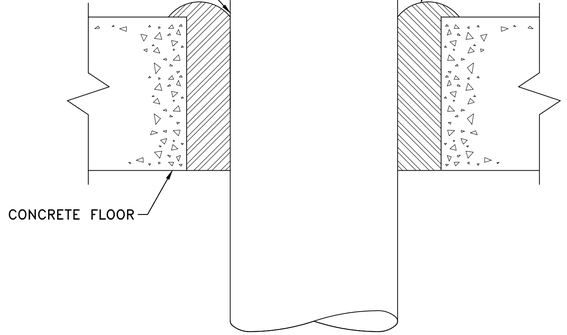

**DETAIL** 1
TYPICAL WALL PENETRATION
3M FIRESTOPPING
SCALE: NTS




**DETAIL** 3
TYPICAL CONDUIT PENETRATION
THROUGH STUD WALL
SCALE: NTS

## GENERAL NOTES:

1. FLOOR PENETRATION MAY NOT EXCEED 6" IN DIAMETER OR 144 SQUARE INCHES.
2. MORTAR MUST BE INSTALLED IN 100% OF PENETRATION IN CONCRETE FLOORS AND WALLS.
3. PRIOR TO INSTALLATION, CONTRACTOR SHALL PROVIDE SUBMITTAL OF PROPOSED FIRESTOPPING FOR APPROVAL BY ENGINEER.
4. FIRE STOPPING MORTAR MUST COMPLY WITH INTERNATIONAL BUILDING CODE 712.3.1.
5. 3M PRODUCT "MORTAR". NO EQUAL.




**DETAIL** 2
TYPICAL FLOOR PENETRATION
3M FIRESTOPPING
SCALE: NTS

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

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Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: FIRESTOPPING DETAILS

WORK PROJECT NO.
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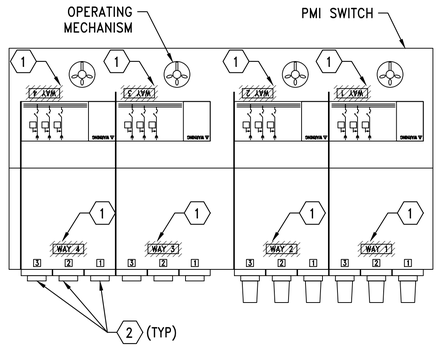
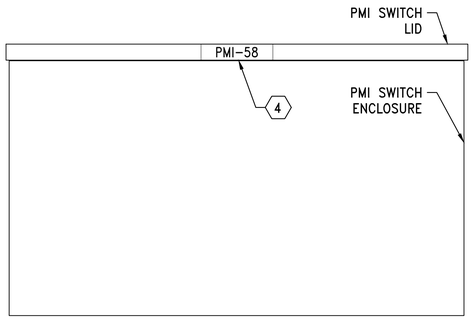
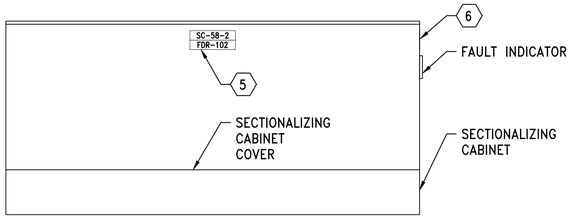
PORT OF SEATTLE NO.
26 05 44 - 01



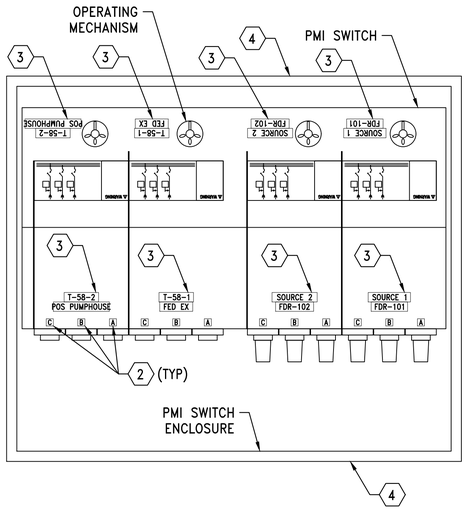

**DETAIL 1**
PMI SWITCH DEMOLITION
LABELING DIAGRAM
SCALE: NTS



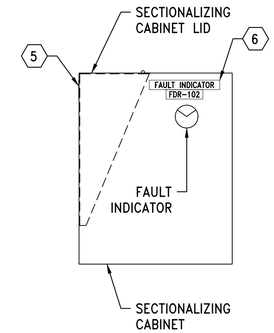

**DETAIL 3**
PMI ENCLOSURE
LABELING DIAGRAM – FRONT VIEW
SCALE: NTS




**DETAIL 4**
SECTIONALIZING CABINET
LABELING DIAGRAM – FRONT VIEW
SCALE: NTS




**DETAIL 2**
PMI SWITCH AND ENCLOSURE
LABELING DIAGRAM – TOP VIEW
SCALE: NTS




**DETAIL 5**
SECTIONALIZING CABINET
LABELING DIAGRAM – SIDE VIEW
SCALE: NTS

## GENERAL NOTES:

1. ALL LABELS SHALL BE MELAMINE PLASTIC LAMINATEFLAT STOCK, 1/16" MIN THICKNESS FOR SIZES UP TO AND INCLUDING 15 SQUARE INCHES. USE 1/8" MIN FOR SIZES LARGER THAN 15 SQUARE INCHES. BLACK BACKGROUND WITH WHITE LETTERS FOR NORMAL POWER SYSTEMS AND RED WITH WHITE LETTERS FOR EMERGENCY POWER SYSTEMS. TEXT SHALL BE 60PT ARIAL FONT.
2. ALL LABELS TO BE APPROVED BY THE ELECTRICAL SHOP.

## KEYED NOTES:

1. REMOVE EXISTING LABELS SHOWING "WAY 1", "WAY 2", ETC AS SHOWN IN DETAIL 1.
2. COVER ALL EXISTING PHASE "1", "2", AND "3" LABELS WITH PHASE "A", "B", AND "C" LABELS RESPECTIVELY AS SHOWN IN DETAILS 1 AND 2.
3. INSTALL LABELS GIVING EITHER SOURCE NUMBER (SOURCE 1) AND FEEDER NUMBER (FDR-101) OR TAP NUMBER (T-58-1) AND BRIEF LOAD DESCRIPTION (FED EX) AS SHOWN IN DETAIL 2.
4. INSTALL LABEL DISPLAYING PMI NUMBER (PMI-58) ON THE CENTER OF THE FRONT OF THE LID BOTH ON THE OPERATION AND TERMINATION SIDE AS SHOWN IN DETAILS 2 AND 3.
5. INSTALL LABEL DISPLAYING SECTIONALIZING CABINET NUMBER AND FEEDER NUMBER (SC-58-1 FDR-102) ON THE CENTER OF THE TOP FRONT OF THE LID AS SHOWN IN DETAILS 4 AND 5.
6. INSTALL LABEL ABOVE THE FAULT INDICATOR SHOWING FEEDER NUMBER (FAULT INDICATOR FDR-102) AS SHOWN IN DETAILS 4 AND 5.

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT DRAFT

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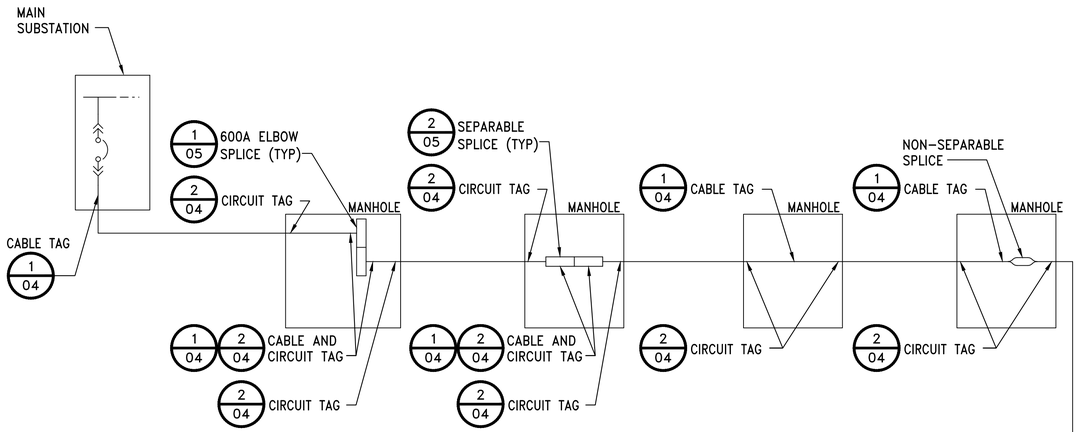
Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
F&I STANDARD DETAILS

SHEET TITLE: LABELING DETAILS PMI AND SECTIONALIZING CABINET

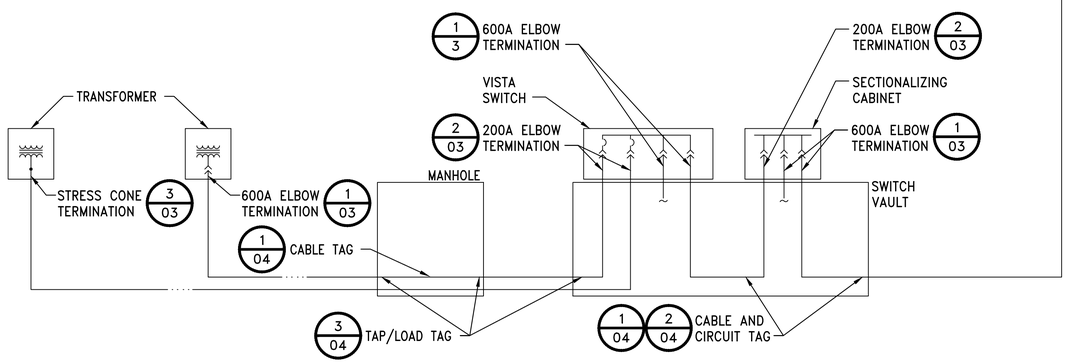
WORK PROJECT NO. —
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 05 53 - 01

## GENERAL NOTES:

1. FOR TAG SPECIFICATIONS, REFERENCE POS STANDARD DETAIL SHEET 260553-04 : TAG SPECIFICATIONS.




**DETAIL** 1/–
CONDUCTOR/ELBOW SPLICE
LABELING DIAGRAM
SCALE: NTS




**DETAIL** 2/–
PMI & SECTIONALIZING CABINET
LABELING DIAGRAM
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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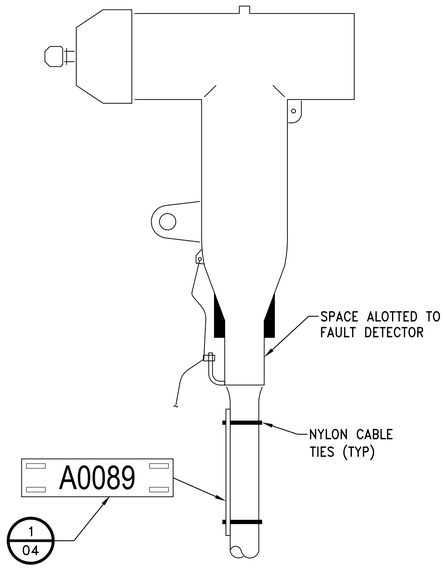
Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
F&I STANDARD DETAILS

SHEET TITLE: LABELING DETAILS 12KV CONDUCTOR ELBOW TAG PLACEMENT

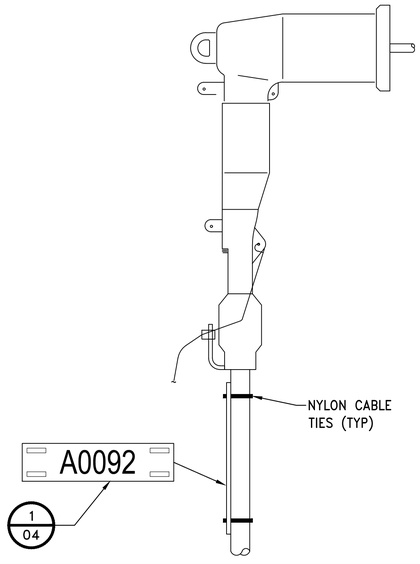
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 05 53 - 02

## GENERAL NOTES:

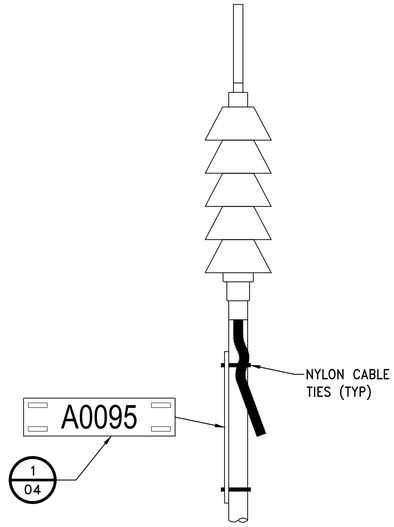
1. FOR TAG EXAMPLES AND SPECIFICATIONS, REFERENCE POS STANDARD DETAIL SHEET 260553-04 : TAG SPECIFICATIONS.




**DETAIL** 1/02
600A ELBOW TERMINATION
LABELING DETAIL
SCALE: NTS




**DETAIL** 2/02
200A ELBOW TERMINATION
LABELING DETAIL
SCALE: NTS




**DETAIL** 3/02
600A STRESS CONE TERMINATION
LABELING DETAIL
SCALE: NTS

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
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| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDW | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

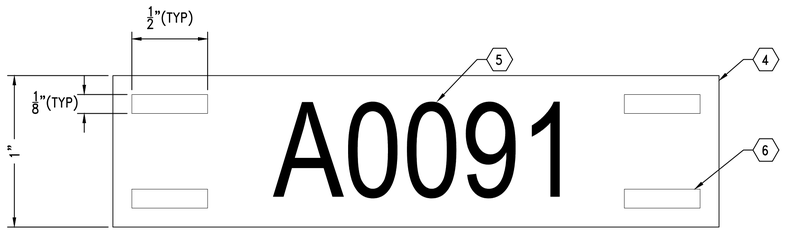
SHEET TITLE: **MEDIUM VOLTAGE CABLE INSULATION TEST DATA SHEET**

WORK PROJECT NO.

CONSULTANT'S NO.

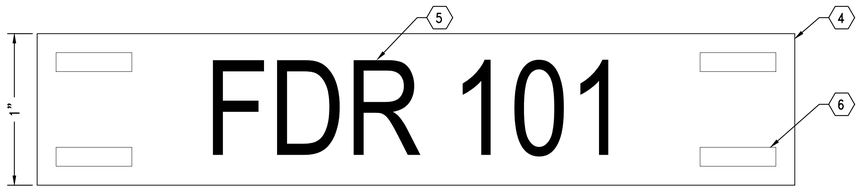
PORT OF SEATTLE NO.

**26 05 13 - 03**



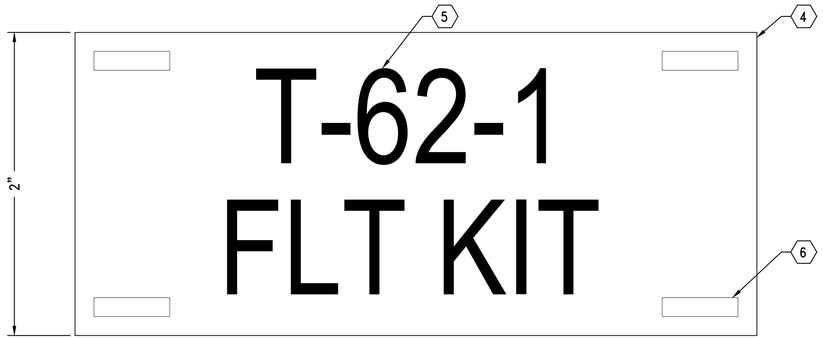

**DETAIL**
CABLE TAG EXAMPLE (1)
SCALE: 1"=1"

1 / 02 | 1 / 03 | 1 / 05




**DETAIL**
CIRCUIT TAG EXAMPLE (2)
SCALE: 1"=1"

2 / 02 | 2 / 05




**DETAIL**
TAP/LOAD TAG EXAMPLE (3)
SCALE: 1"=1"

3 / 02

## KEYED NOTES:

1. CABLE TAG SHALL DISPLAY A UNIQUE CABLE NUMBER FOR EACH PHASE OF EACH SECTION OF CABLE. FOLLOWING IS A BRIEF DESCRIPTION:
   XYYYY
   X REPRESENTS THE PHASE OF THE CABLE
   YYYY IS THE UNIQUE CABLE NUMBER
   CONTACT BRENDON INMAN, ELCON ASSOCIATES, (206) 243-5022 TO REQUEST CABLE NUMBERS.

2. CIRCUIT TAG SHALL DISPLAY THE FEEDER NUMBER. FOR EXAMPLE, FEEDER 207 WOULD BE LABELED "FDR 207".

3. TAP/LOAD TAG SHALL BE INSTALLED ON ALL TAPS FROM SWITCHES. THEY SHALL DISPLAY BOTH THE SWITCH NUMBER AND AN ABBREVIATED LOAD DESCRIPTION. THE ABBREVIATION IS TO BE DETERMINED BY THE ENGINEER AND APPROVED BY THE POS. FOLLOWING IS A BRIEF DESCRIPTION OF A TAP LABEL:
   T-XXX-Y
   T = INDICATES THAT THE CABLE IS A TAP FROM A SWITCH
   XXX = THE SWITCH NUMBER WHICH FEEDS THE TAP
   Y = THE TAP NUMBER AT THE SWITCH WHICH THE CABLE IS CONNECTED TO
   AN EXAMPLE OF A TYPE III TAG FOR THE FEED TO THE FLIGHT KITCHEN TRANSFORMER FROM PMI SWITCH NUMBER 62, TAP NUMBER 1 COULD BE:
   FLTKIT T-62-1

4. ALL LABELS SHALL BE MELAMINE PLASTIC LAMINATE FLAT STOCK, 1/16" MIN THICKNESS FOR SIZES UP TO AND INCLUDING 15 SQUARE INCHES. USE 1/8" MIN FOR SIZES LARGER THAN 15 SQUARE INCHES. WHITE BACKGROUND WITH BLACK LETTERS FOR NORMAL POWER SYSTEMS AND RED BACKGROUND WITH WHITE LETTERS FOR EMERGENCY POWER SYSTEMS.

5. TEXT SHALL BE 60PT ARIAL. CABLE AND CIRCUIT TAGS SHALL BE 1" TALL AND TAP/LOAD TAGS SHALL BE 2" TALL WITH THE LENGTH ACCORDING TO THE NUMBER OF CHARACTERS IN THE TAG.

6. TAGS SHALL CONTAIN HOLES IN ALL FOUR CORNERS FOR TY-RAPPING TAGS TO MEDIUM VOLTAGE CABLES.

REVISIONS

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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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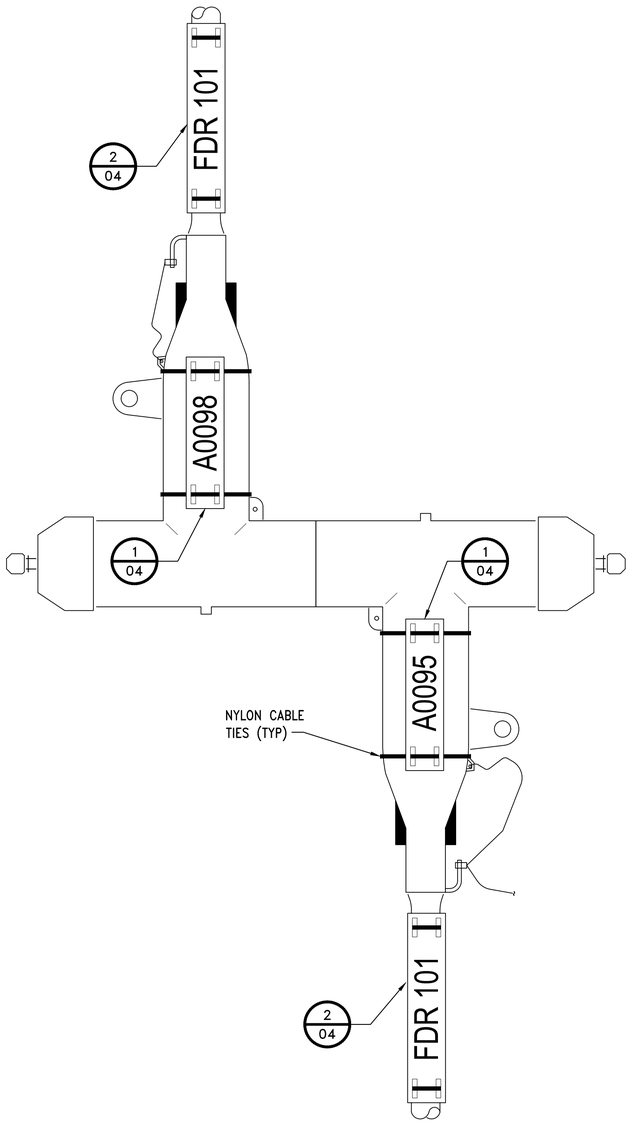
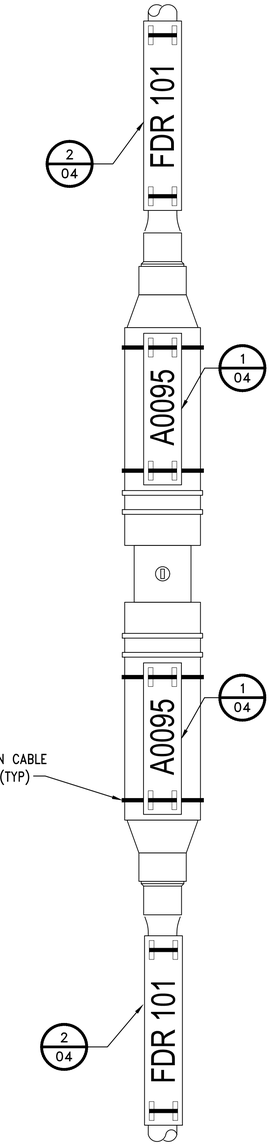
Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: LABELING DETAILS TAG SPECIFICATIONS

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 05 53 - 04




**DETAIL** 1/02
600A ELBOW SPLICE
LABELING DETAIL
SCALE: NTS




**DETAIL** 2/02
SEPARABLE SPLICE
LABELING DETAIL
SCALE: NTS

## GENERAL NOTES:

1. FOR TAG EXAMPLES AND SPECIFICATIONS, REFERENCE POS STANDARD DETAIL 260553-04 : TAG SPECIFICATIONS.

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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **LABELING DETAILS 12KV SPLACE TAG PLACEMENT**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 05 53 - 05**

## EQUIPMENT IDENTIFICATION

SV06-TXY-1 — OIL FILLED TRANSFORMERS

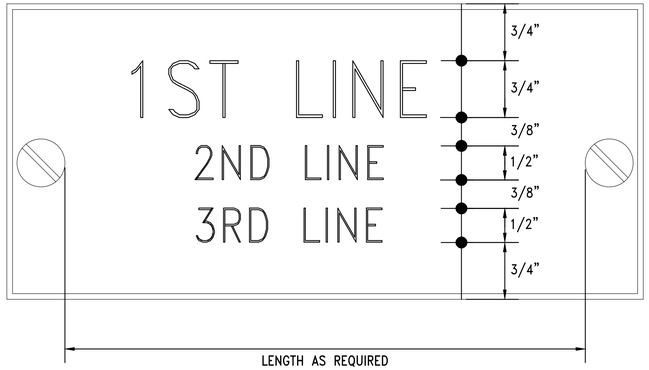
- DESIGNATION: THE TAP NUMBER ON THE PMI SOURCE FEEDING THIS EQUIPMENT
- SECONDARY VOLTAGE: X=480/277V
- PRIMARY VOLTAGE: V=4160V; W=12.5KV
- DEVICE: T=TRANSFORMERS
- SOURCE POWER: SERVICE VAULT NUMBER WHERE PMI SOURCE IS LOCATED

LETTERING: ARRANGE ALL LETTERING TO THE CENTER OF PLATE. USE ONE, TWO OR THREE LINES OF LETTERING AS SHOWN ON NAMEPLATE SCHEDULE.

1ST LINE
NAME OF OUTDOOR MEDIUM VOLTAGE TRANSFORMER

2ND LINE
IDENTIFY DOWNSTREAM EQUIPMENT. ENTER "FEEDS" ON THE 2ND LINE, FOLLOWED BY NAME OF THE DOWNSTREAM EQUIPMENT.

3RD LINE
IDENTIFY UPSTREAM SOURCE. ENTER "FED FROM" ON THE 3RD LINE, FOLLOWED BY NAME OF THE UPSTREAM SOURCE EQUIPMENT.




MATERIAL: LAMINATED PHENOLIC PLASTIC, 1/16" THICK, DULL BLACK SURFACE.

ENGRAVING: ENGRAVE THROUGH BLACK SURFACE TO EXPOSE CORE.
LETTERING STYLE TO BE AS SHOWN ABOVE.

FOR METAL EQUIPMENT, ATTACH TAG WITH RIVETS OR SCREWS. DO NOT DAMAGE EQUIPMENT WHEN DRILLING HOLES FOR ATTACHMENT.

**DETAIL** 1/–
OUTDOOR MEDIUM VOLTAGE TRANSFORMER LABELS
SCALE: NTS

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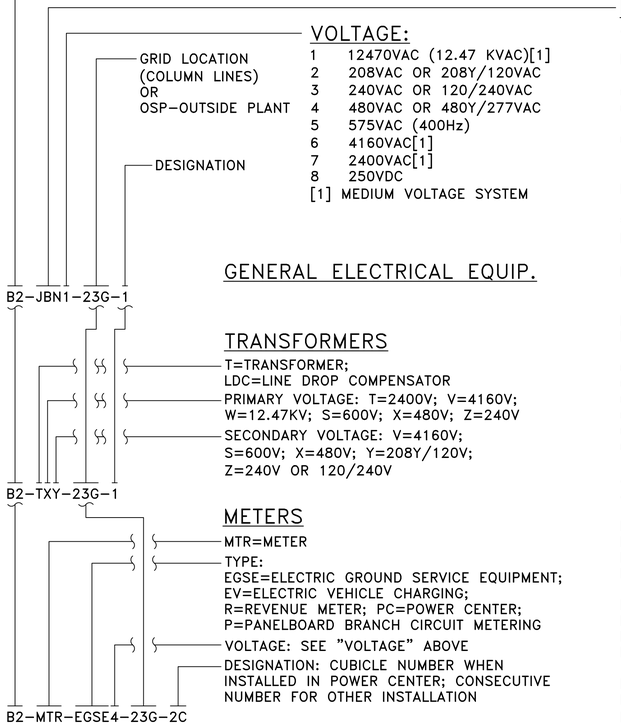
Port of Seattle — SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: LABELING DETAILS TRANSFORMER LABELS

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 05 53 - 06




## VOLTAGE:

GRID LOCATION (COLUMN LINES) OR OSP-OUTSIDE PLANT

DESIGNATION

| | |
|---|---|
| 1 | 12470VAC (12.47 KVAC)[1] |
| 2 | 208VAC OR 208Y/120VAC |
| 3 | 240VAC OR 120/240VAC |
| 4 | 480VAC OR 480Y/277VAC |
| 5 | 575VAC (400Hz) |
| 6 | 4160VAC[1] |
| 7 | 2400VAC[1] |
| 8 | 250VDC |

[1] MEDIUM VOLTAGE SYSTEM

## GENERAL ELECTRICAL EQUIP.

## TRANSFORMERS

T=TRANSFORMER;
LDC=LINE DROP COMPENSATOR

PRIMARY VOLTAGE: T=2400V; V=4160V; W=12.47KV; S=600V; X=480V; Z=240V

SECONDARY VOLTAGE: V=4160V; S=600V; X=480V; Y=208Y/120V; Z=240V OR 120/240V

## METERS

MTR=METER

TYPE:
EGSE=ELECTRIC GROUND SERVICE EQUIPMENT;
EV=ELECTRIC VEHICLE CHARGING;
R=REVENUE METER; PC=POWER CENTER;
P=PANELBOARD BRANCH CIRCUIT METERING

VOLTAGE: SEE "VOLTAGE" ABOVE

DESIGNATION: CUBICLE NUMBER WHEN INSTALLED IN POWER CENTER; CONSECUTIVE NUMBER FOR OTHER INSTALLATION

## ELECTRICAL EQUIPMENT:

| | |
|---|---|
| ATS | AUTOMATIC TRANSFER SWITCH |
| BC | PANELBOARD, BAGGAGE CONVEYOR |
| CAB | CABINET/ENCLOSURE |
| CAP | POWER FACTOR CORRECTION CAPACITOR BANK |
| CB | ENCLOSED CIRCUIT BREAKER AND NUMBER |
| DE | DISTRIBUTION CENTER, EMERGENCY (NEC 700) |
| **DP | DISTRIBUTION CENTER, NORMAL POWER |
| DR | DISTRIBUTION CENTER, LEGALLY REQUIRED (NEC 701) |
| DS | DISTRIBUTION CENTER, OPTIONAL STANDBY (NEC702) |
| ESGE | ELECTRIC GROUND SERVICE EQUIPMENT |
| EV | ELECTRIC VEHICLE CHARGING EQUIPMENT |
| GEN | ENGINE GENERATOR |
| GTW2 | METER GATEWAY, 200E |
| GTW4 | METER GATEWAY, 400E |
| GTW6 | METER GATEWAY, 600E |
| GTW8 | METER GATEWAY, 800E |
| GTW9 | METER GATEWAY, 900E |
| JBE | JUNCTION BOX, EMERGENCY POWER |
| JBN | JUNCTION BOX, NORMAL POWER |
| LCP | LIGHTING CONTROL PANEL |
| LTCC | LIGHTING CONTROLS, CONTACTOR |
| LTCM | LIGHTING CONTROLS, MOTION SENSOR |
| LTCO | LIGHTING CONTROLS, OCCUPANCY SENSOR |
| LTCD | LIGHTING CONTROLS, DAYLIGHT SENSOR |
| LTCP | LIGHTING CONTROLS, PHOTOCELL |
| LTCS | LIGHTING CONTROLS, SWITCH |
| LTCT | LIGHTING CONTROLS, TIMER |
| MC | METER CABINET |
| MCC | MOTOR CONTROL CENTER |
| ME | MAIN SWITCHGEAR, EMERGENCY (NEC 700) |
| **MP | MAIN SWITCHGEAR, NORMAL POWER |
| MR | MAIN SWITCHGEAR, LEGALLY REQUIRED (NEC 701) |
| MS | MAIN SWITCHGERA, OPTIONAL STANDBY (NEC 702) |
| MTS | MANUAL TRANSFER SWITCH |
| **PE | PANELBOARD, EMERGENCY (NEC 700) |
| PGCS | PORTABLE GENERATOR CONNECTION SWITCHBOARD |
| **PL | PANELBOARD, LIGHTING |
| **PP | PANELBOARD, NORMAL POWER |
| **PR | PANELBOARD, LEGALLY REQUIRED (NEC 701) |
| **PS | PANELBOARD, OPTIONAL STANDBY (NEC 702) |
| R400 | ROTARY 400HZ CONVERTER |
| SC | SECTIONALIZER CABINET |
| STR | MOTOR STARTER |
| SW | ENCLOSED SWITCH |
| TVS | TRANSIENT VOLTAGE SUPPRESSION |
| UPS | UNINTERRUPTIBLE POWER SUPPLY |
| UPSL | UNINTERRUPTIBLE POWER SUPPLY FOR LIGHTING INVERTER |
| VFD | VARIABLE FREQUENCY DRIVE |
| WSWGR | WALK-IN SWITCHGEAR ENCLOSURE. |

## BUILDING AND LEVEL IDENTIFIERS

| | |
|---|---|
| CONCOURSE A: | A1=TRANSIT; A2=RAMP; A3=CONCOURSE LEVEL; A4=MEZZANINE; A5=ROOF/PENTHOUSE |
| CONCOURSE B: | B1=TRANSIT; B2=RAMP; B3=CONCOURSE LEVEL; B4=MEZZANINE; B5=ROOF/PENTHOUSE |
| CONCOURSE C: | C1=TRANSIT; C2=RAMP; C3=CONCOURSE LEVEL; C4=MEZZANINE; C5=ROOF/PENTHOUSE |
| C1 BUILDING: | C1.2 = RAMP; C1.3 = CONCOURSE LEVEL; C1.4 = MEZZANINE; C1.5 = ROOF |
| CONCOURSE D: | D1=TRANSIT; D2=RAMP; D3=CONCOURSE LEVEL; D4=MEZZANINE; D5=ROOF/PENTHOUSE |
| INTERNATIONAL ARRIVALS FACILITY (IAF): | IAF2= RAMP; IAF3 = CONCOURSE LEVEL; IAF4 = CBP OFFICE LEVEL; PW1 = PEDESTRIAN WALKWAY 10000 |
| SOUTH TERMINAL: | A1=TRANSIT/BASEMENT; A2=BAGGAGE CLAIM; ABL=BRIDGE LEVEL; A3=TICKETING; A4=MEZZANINE; PH=PENTHOUSE; AO1=OFFICE LEVEL 1; AO2=OFFICE LEVEL 2; AO3=OFFICE LEVEL 3; AO4=OFFICE LEVEL 4; AO5=OFFICE LEVEL 5:<br>NOTE: ADD CW IF LOCATED ON CATWALK. EXAMPLE: A2CW-BC4-A26AA-1. |
| MAIN TERMINAL: | MLD=LOADING DOCK; MT=TRANSIT; MBW=BAGWELL; MBC=BAGGAGE CLAIM; MBL=BRIDGE LEVEL; M1=1ST FLOOR; M2=2ND FLOOR; MMZ=MEZZANINE; M3=3RD FLOOR; M4=4TH FLOOR; M5=5TH FLOOR; MTW=TOWER; MPH=PENTHOUSE; MB=BASEMENT IN CTE.<br>NOTE: ADD CW IF LOCATED ON CATWALK. EXAMPLE: MBWCW-BC4-R14G-1. |
| N CONCOURSE: | N1=TRANSIT; N2=RAMP; N3=CONCOURSE; N4=MEZZANINE; N5=ROOF/PENTHOUSE |
| S CONCOURSE: | SB=BASEMENT; S1=TRANSIT; S2=MEZZANINE; S3=RAMP; S4=INTERNATIONAL CORRIDOR; S5=CONCOURSE; S6=ROOF/PENTHOUSE |
| PARKING GARAGE: | PLL=LOWER LEVEL; P1=1ST FLOOR; P2=2ND FLOOR; P3=3RD FLOOR; P4=4TH FLOOR; P5=5TH FLOOR; P6=6TH FLOOR; P7=7TH FLOOR; P8=8TH FLOOR; PPH=PENTHOUSE; PST=SOUTH TOLL PLAZA; PNT=NORTH TOLL PLAZA |
| AIRPORT CAMPUS BUILDING: | USE AIRPORT FACILITIES BUILDING NUMBERS TYPICALLY THREE (3) DIGITS AND THEN A LETTER (161A). THEN A PERIOD "." THEN A NUMBER INDICATING FLOOR LEVEL.<br><br>EXAMPLE: 161A.1-PP2-10G-1, IS A 208Y/120V PANELBOARD THAT IS INSIDE BUILDING 161A ON THE FIRST LEVEL NEAR GRID INTERSECTION 10G.<br><br>IF THERE IS AN ELECTRICAL EQUIPMENT ASSOCIATED WITH THE BUILDING (I.E. METER ENCLOSURE) BUT IS INSTALL OUTSIDE OF THE BUILDING. IT WOULD HAVE THE NAMING CONVENTION OF 156A.1-MC4-OSP-1, IS A 480Y/277V METER CABINET THAT IS OUTSIDE BUILDING 156A ON GRADE.<br><br>NOTE: SOME ELECTRICAL EQUIPMENT MAY UTILIZE OLDER NAMING SCHEMA. |
| OUTDOOR: | NOTE: OUTDOOR REFERS TO AREAS OUTSIDE OF A BUILDING. AIR CARGO BUILDINGS AND HARDSTANDS, FIRE STATION, ETC, ARE CONSIDERED OUTSIDE PROPERTIES.<br><br>OSP=OUTSIDE BUILDING; CAR2=AIR CARGO 2; CAR3=AIR CARGO 3; CAR4=AIR CARGO 4; CAR5=AIR CARGO 5; CAR6=AIR CARGO 6; CAR7=AIR CARGO 7<br><br>OLDER NAMING SCHEMA F&I IS TRANSITIONING TO BUILDING NUMBER SEE "AIRPORT CAMPUS BUILDING" ABOVE:<br>TRANS=TRANSIPLEX; FD=FIRE DEPARTMENT; LOG=LOGISTICS; PH=PUMPHOUSE; IWTP=INDUSTRIAL WASTE TREATMENT PLANT; BIF=BIFFY DUMP; SS=SNOW SHED; TTL=TAXI TRANSIT LOT; MIDRVR=MIDFIELD RVR; WEY=WEYERHAEUSER HANGAR |



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| 4 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |
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Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **LABELING DETAILS EQUIPMENT NAMING CONVENTION 1**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 05 53 - 07**

SEE "LABELING DETAILS EQUIPMENT NAMING CONVENTION 1" ON STANDARD DETAIL SHEET 26 05 53 – 07 FOR FURTHER INFORMATION

## MEDIUM–VOLTAGE INTERRUPTER SWITCHGEAR

- TYPE: PSF=PRIMARY SWITCH FUSED; PSNF=PRIMARY SWITCH NON–FUSED; PST=PRIMARY SWITCH TIE; PSB=PRIMARY SWITCH W/ BREAKER
- VOLTAGE: 1=12.47KV; 6=4160V; 7=2400V
- GRID LOCATION (COLUMN LINES)
- DESIGNATION

B2–PSF1–23G–1

## MEDIUM–VOLTAGE METAL–CLAD DRAWOUT CIRCUIT BREAKER SWITCHGEAR

- DCB=DRAWOUT CIRCUIT BREAKER
- VOLTAGE: 1=12.47KV; 6=4160V; 7=2400V
- TYPE: S=SWITCHGEAR; T=BUS TIE BREAKER; M=MAIN BREAKER; F=FEEDER BREAKER
- GRID LOCATION (COLUMN LINES)
- DESIGNATION

B2–DCB1T–23G–1

## MEDIUM–VOLTAGE MOTOR CONTROLLERS

- MMC=MEDIUM–VOLTAGE MOTOR CONTROLLER
- GRID LOCATION (COLUMN LINES)
- DESIGNATION

B2–MMC–23G–1

## MEDIUM–VOLTAGE PAD–MOUNTED VACUUM INTERRUPTER SWITCHGEAR (PMI)

- PMI=PAD–MOUNTED VACUUM INTERRUPTER SWITCHGEAR (OUTDOOR); VFI=VACUUM FAULT INTERRUPTER SWITCHGEAR (INDOOR)
- TYPE: 3=3–WAYS; 4=4 WAYS; 5=5 WAYS; 6=6 WAYS
- MANHOLE NUMBER (OUTDOOR); GRID LOCATION (COLUMN LINES) (INDOOR)
- DESIGNATION

B2–PMI4–23G–1

SEE "LABELING DETAILS EQUIPMENT NAMING CONVENTION 1" ON STANDARD DETAIL SHEET 26 05 53 – 07 FOR FURTHER INFORMATION

## FIRE ALARM SYSTEM

- TYPE: FA=FIRE ALARM PANEL [SEE NOTE 1]; FD=FIRE ALARM DATA GATHERING PANEL [SEE NOTE 1]; FI=FIRE ALARM I/O PANEL [SEE NOTES 1, 2]; FL=FIRE ALARM LOCAL OPERATOR CONSOLE [SEE NOTE 1]; FN=FIRE ALARM NETWORK PANEL [SEE NOTES 1, 2]; FR=FIRE ALARM RELAY PANEL [SEE NOTES 1, 2]; FS=FIRE ALARM SUB–PANEL [SEE NOTES 1, 2]; FT=FIRE ALARM TFX EXTENDER PANEL [SEE NOTE 1]; FU=FIRE ALARM ANNUNCIATOR PANEL [SEE NOTE 1]; FX=FIRE ALARM SIMPLEX EXTENDER PANEL
- PANEL SERIES: B=SYSTEM 3; L=SIMPLEX 4007 SERIES; S=SIMPLEX 4100 SERIES; T=TFX SERIES
- GRID LOCATION (COLUMN LINES)
- DESIGNATION
- FIRE DEPARTMENT NODE (OLD ID NUMBER)

B2–FXX–23G–1.###

## NOTES:

1. THESE ARE LEGACY TERMINOLOGY AND SHALL NOT BE USED FOR NEWER INSTALLATIONS (I.E. SIMPLEX 4100, 4007 SERIES)
2. NOT CURRENTLY USED.



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| 3 | 01/20/2023 | MDB | 2023 F&I STANDARD DETAILS | | | | | | |
| 4 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |
| | | | | | | | | | |
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FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

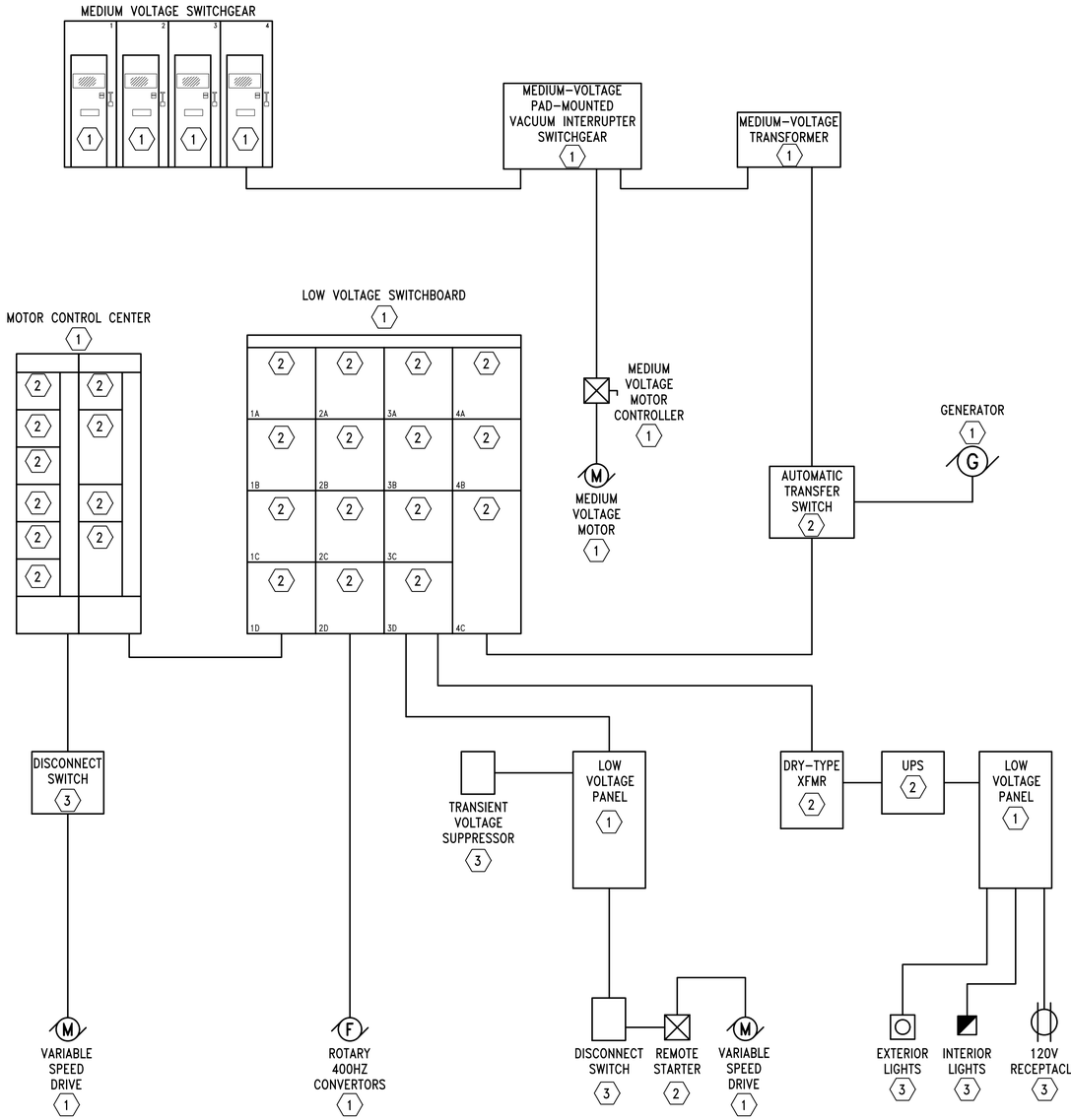
SHEET TITLE: **LABELING DETAILS EQUIPMENT NAMING CONVENTION 2**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 05 53 - 08**




## KEYED NOTES:

1. INSTALL LABEL WITH 5/8" HIGH TEXT. REFERENCE DETAIL SHEET 260553-11.
2. INSTALL LABEL WITH 1/4" HIGH TEXT. REFERENCE DETAIL SHEET 260553-12.
3. INSTALL SMALL LABEL. REFERENCE DETAIL SHEET 260553-13.

## DETAIL 1/—

EQUIPMENT LABELING DIAGRAM
SCALE: NTS



REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

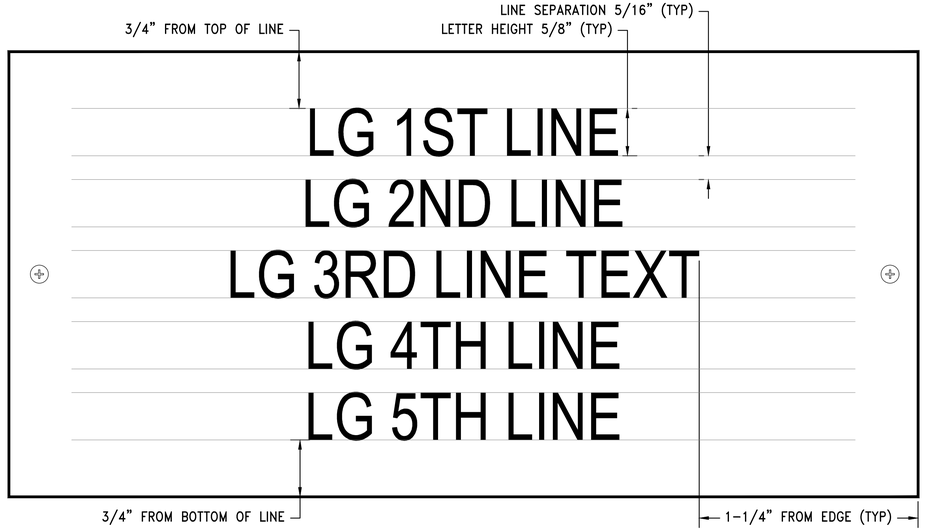
SHEET TITLE: **LABELING DETAILS EQUIPMENT LABELING DIAGRAM**

WORK PROJECT NO.

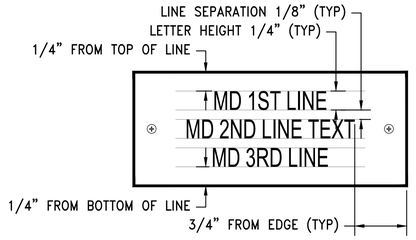
CONSULTANT'S NO.

PORT OF SEATTLE NO.

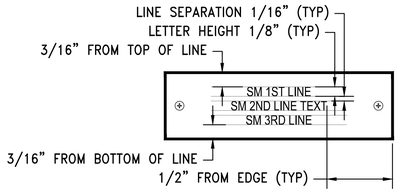
**26 05 53 - 09**



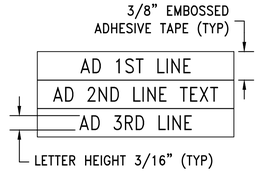

**DETAIL** 1
NAMEPLATE DETAIL FOR
5/8" TEXT HEIGHT
SCALE: N.T.S.




**DETAIL** 2
NAMEPLATE DETAIL FOR
1/4" TEXT HEIGHT
SCALE: N.T.S.




**DETAIL** 3
NAMEPLATE DETAIL FOR
1/8" TEXT HEIGHT
SCALE: N.T.S.




**DETAIL** 4
EMBOSSED ADHESIVE TAPE WITH
3/16" TEXT HEIGHT
SCALE: N.T.S.

## LG/MD/SM/AD 1ST LINE

NAME OF LOCAL DEVICE FROM NAMING CONVENTION ON DETAIL SHEETS 260553-07, 08, 09.

## LG/MD/SM/AD 2ND LINE

IF THE LOCAL DEVICE PROVIDES PROTECTION OR SWITCHING FOR A SINGLE EXTERNAL DEVICE, ENTER "FEEDS" ON THE 2ND LINE. IF THE LOCAL DEVICE PROVIDES PROTECTION OR SWITCHING FOR MULTIPLE EXTERNAL DEVICES OR IF THE LOCAL DEVICE DOES NOT PROVIDE PROTECTION OR SWITCHING FOR (AN) EXTERNAL DEVICE(S), ENTER "FED FROM" ON THE 2ND LINE.

## LG/MD/SM/AD 3RD LINE

IF THE LOCAL DEVICE PROVIDES PROTECTION OR SWITCHING FOR AN EXTERNAL DEVICE, ENTER THE NAME OF THE EXTERNAL DEVICE ON LINE 3. IF THE LOCAL DEVICE PROVIDES PROTECTION OR SWITCHING FOR MULTIPLE EXTERNAL DEVICES OR IF THE LOCAL DEVICE DOES NOT PROVIDE PROTECTION OR SWITCHING FOR (AN) EXTERNAL DEVICE(S), ENTER THE NAME OF THE SOURCE FEEDING THE LOCAL DEVICE ON LINE 3.

## LG/MD/SM/AD 4TH LINE

MOST TAGS WILL NOT REQUIRE MORE THAN 3 LINES. THEREFORE, THIS LINE SHALL ONLY BE USED IF THERE IS NOT ADEQUATE SPACE TO LENGTHEN THE SIZE OF THE TAG. TAGS WITH ONLY FOUR LINES SHALL BE ADJUSTED IN SIZE ACCORDINGLY.

REVISIONS

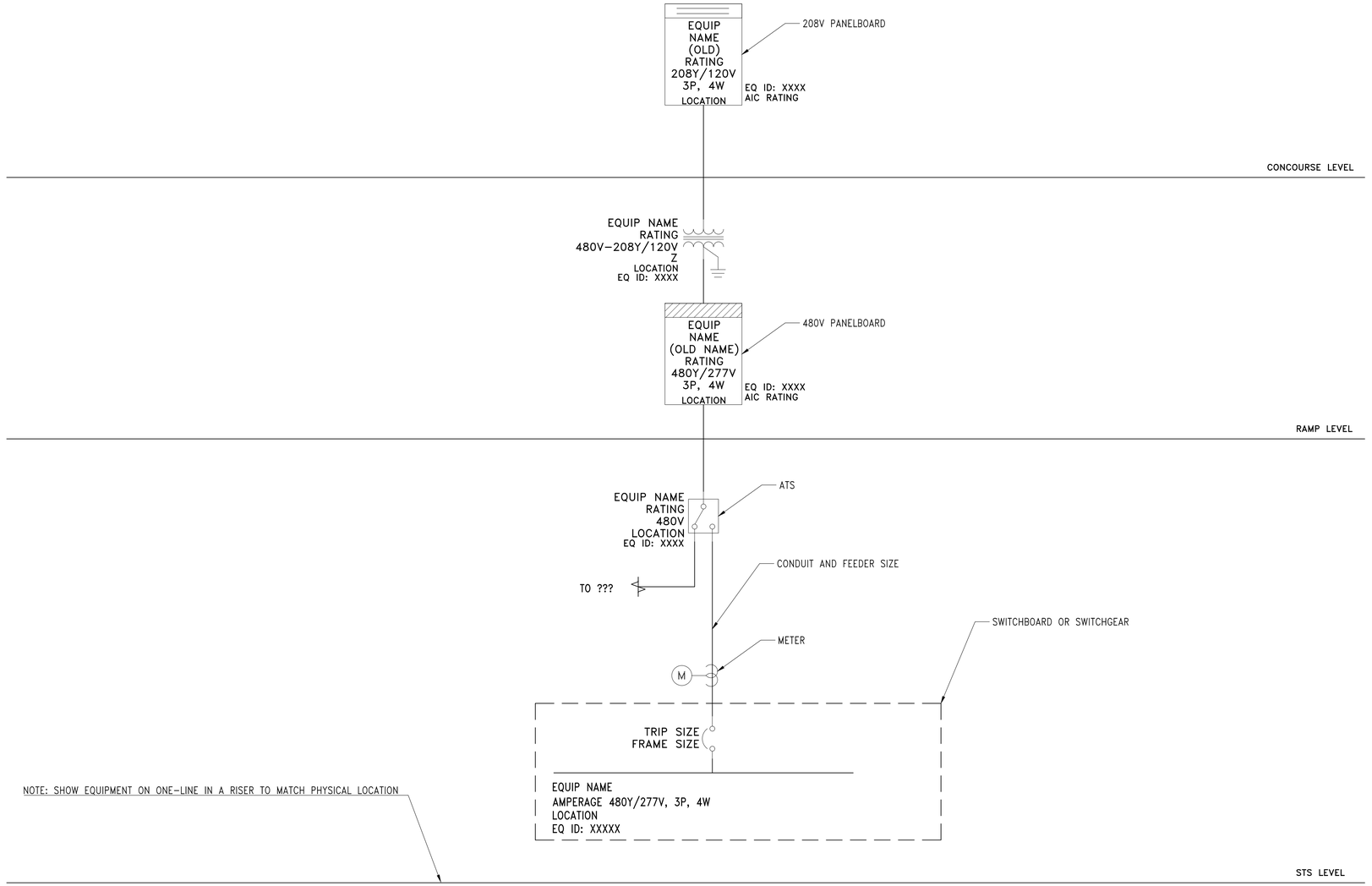
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | CONSOLIDATED DETAILS, 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: LABELING DETAILS TEXT HEIGHT NAMEPLATE

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 05 53 - 10




\\SEATTLE.INTERNAL.LOCAL\PORT\AVIATION\AVIATION\AV-ISG\F&I_ELECTRICAL\10_STANDARDS\02_CAD STANDARDS\01_DIV26_WORKING\DWG\260553-11 - SAMPLE RISER DIAGRAM.DWG SAVED: 4/7/2025 9:16 AM MZB926 PLOTTED:4/7/2025 9:30 AM

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 2 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle

SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

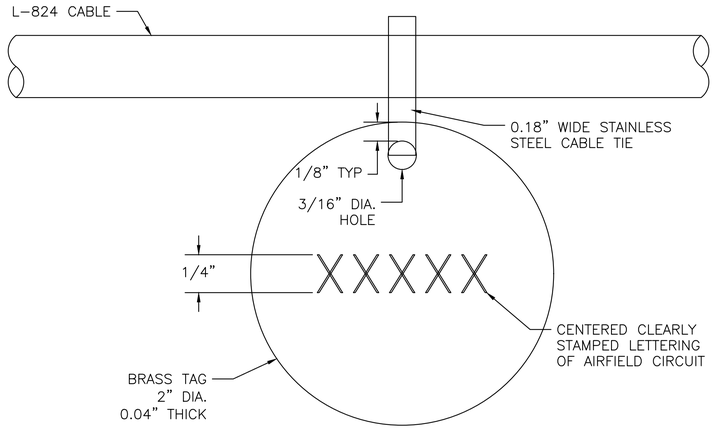
SHEET TITLE: **SAMPLE RISER DIAGRAM**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 05 53 - 11**




## DETAIL 1

AIRFIELD CIRCUIT IDENTIFICATION TAG
1/8" TEXT HEIGHT
SCALE: 1"=1"

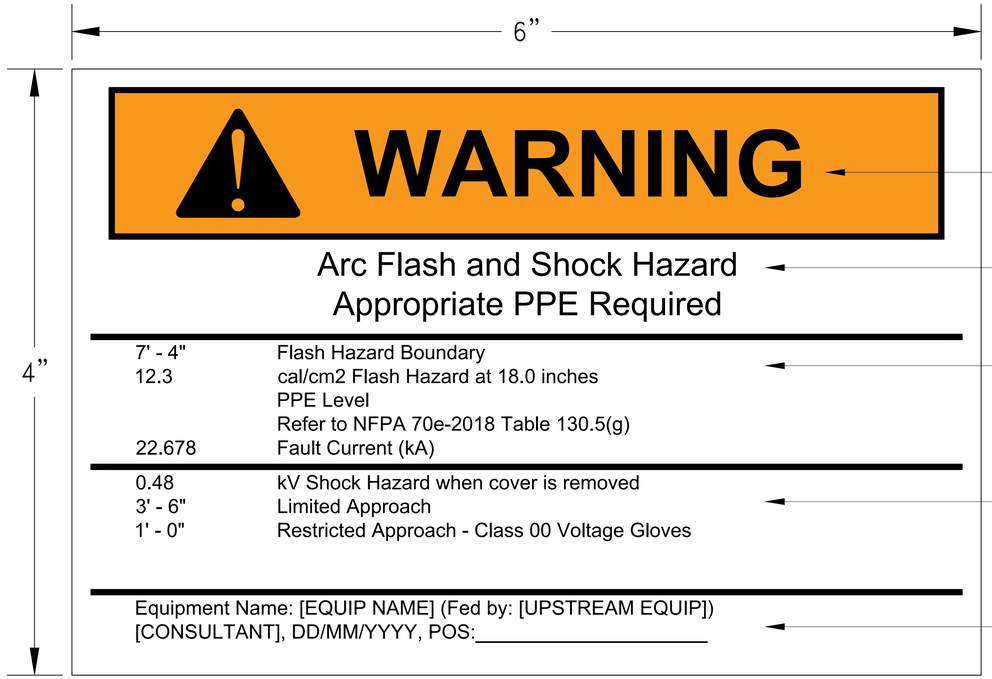
REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 01/01/2024 | MDB | NEW DETAIL, 2024 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: LABELING DETAILS AIRFIELD LIGHTING IDENTIFICATION

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 05 53 - 12




EASYPOWER LABEL TEMPLATE AVAILABLE UPON REQUEST FROM F&I.



REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDW | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **ARC FLASH LABEL TEMPLATE**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.

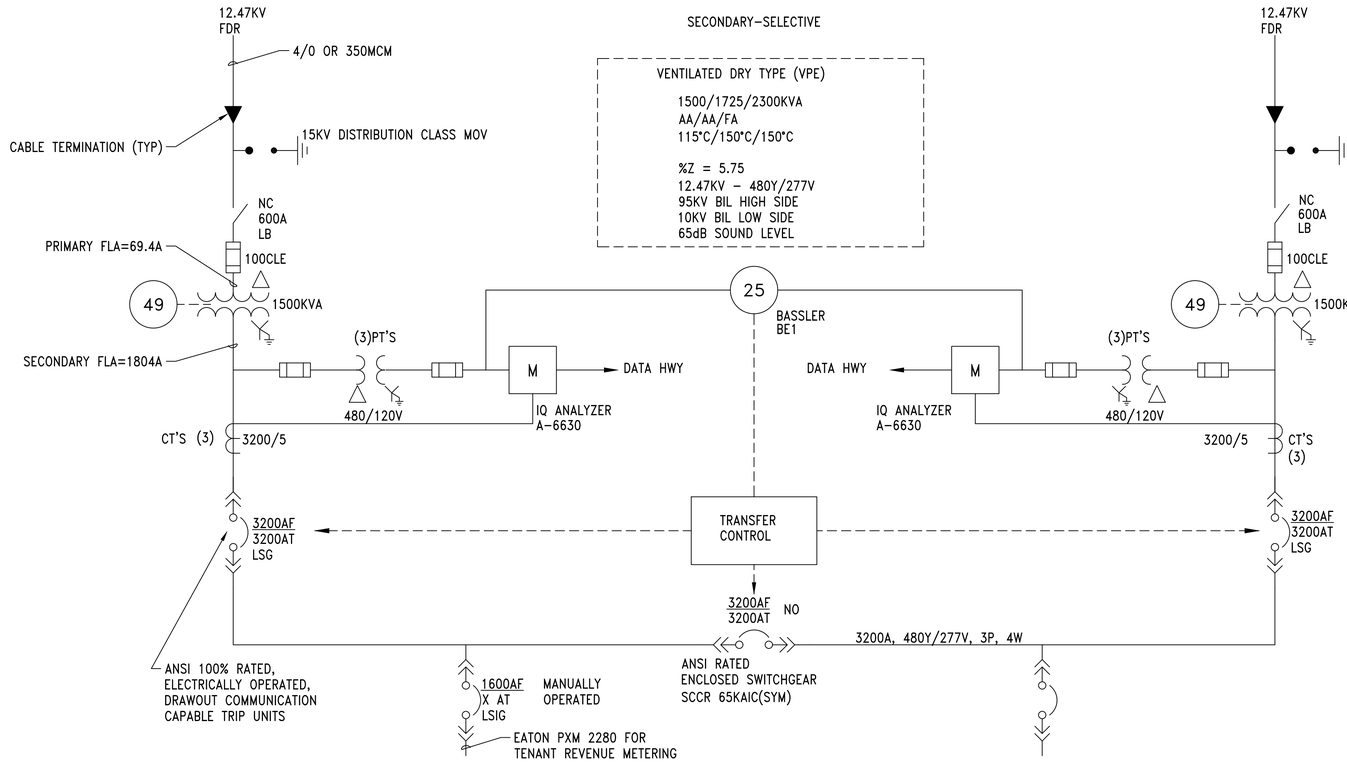
**26 05 73 - 01**

## GENERAL NOTES:

1. PROVIDE REVENUE ACCURACY CT'S AND PT'S

## OPTIONS:

1. 2000/2300/3067KVA W/4000A BUS & MAIN & TIE BREAKERS






REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
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| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

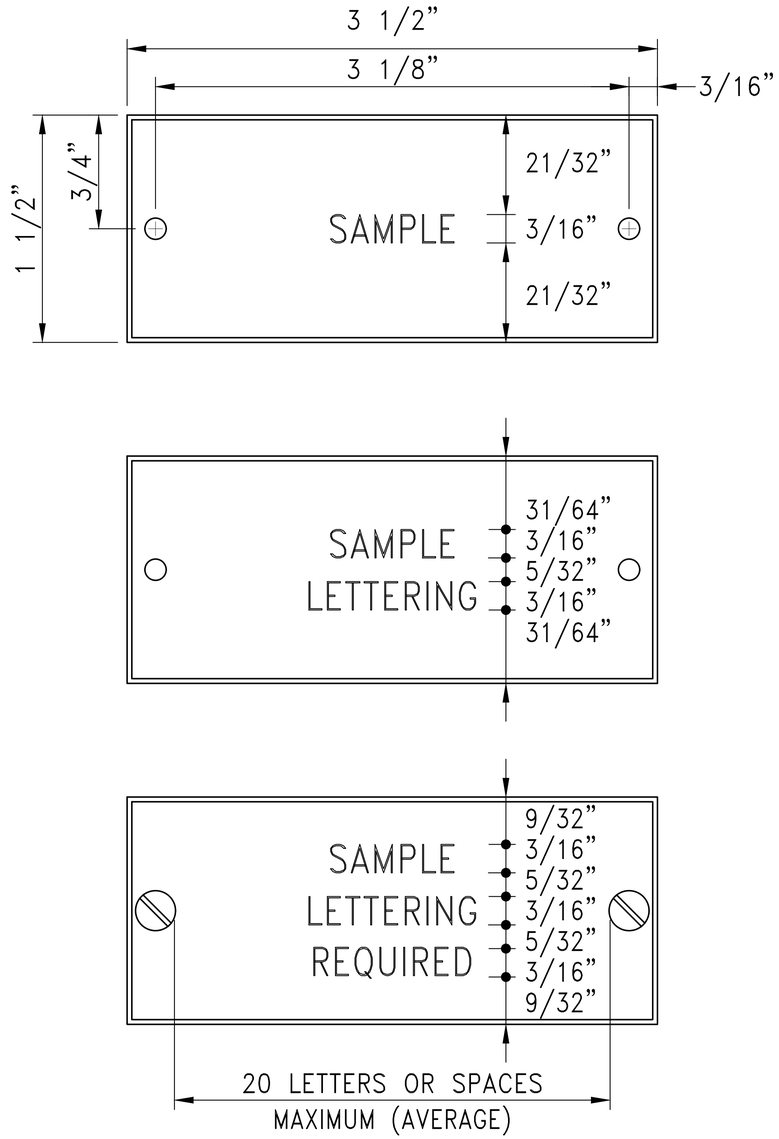
SHEET TITLE: **DOUBLE ENDED UNIT SUBSTATION ONE-LINE**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 11 16 - 01**




## EQUIPMENT IDENTIFICATION

01-TXY-MH58-1 OIL FILLED TRANSFORMERS

- DESIGNATION
- MANHOLE NUMBER
- SECONDARY VOLTAGE: X=480/277V
- PRIMARY VOLTAGE: V-4160V; W-12.5KV
- DEVICE: T=TRANSFORMERS
- SITE LOCATION: 1=SOUTH OF FIRE STATION
  2=SOUTH OF FUEL FARM
  3=EAST OF FEDERAL EXPRESS BUILDING
- LOCATION: 0=OUTSIDE

MATERIAL: LAMINATED PHENOLIC PLASTIC, 1/16" THICK, DULL BLACK SURFACE.

ENGRAVING: ENGRAVE THROUGH BLACK SURFACE TO EXPOSE CORE.
LETTERING STYLE TO BE AS SHOWN ABOVE.

LETTERING: ARRANGE ALL LETTERING TO THE CENTER OF PLATE.
USE ONE, TWO OR THREE LINES OF LETTERING AS
SHOWN ON NAMEPLATE SCHEDULE.

FOR METAL EQUIPMENT, ATTACH TAG WITH RIVETS OR SCREWS. DO NOT DAMAGE EQUIPMENT WHEN DRILLING HOLES FOR ATTACHMENT.

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDW | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: EQUIPMENT COMPONENT ID TAG REQUIREMENTS

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 12 00 - 01

# TRANSFORMER NAMEPLATE SCHEDULE

RATINGS:

kVA: 1500 PHASE: 3 FREQ: 60 HZ

TEMP RISE: 65°C RISE OA kV BIL: 95

PRIMARY VOLTS: 12.47kV ■ DELTA ☐ GND WYE ☐ WYE

SECONDARY VOLTS: 480Y/277 IMPEDANCE: 5.75%

WINDINGS: ALUMINUM FLUID: MINERAL OIL

PROJECT DATA:

ENGINEER: _____

POS PSA NO: _____

POS W.O. NO: _____

REF DWG: _____

CONTRACTOR: _____

CONTRACT NO: _____

DATE COMPLETED: _____

EQUIP MFR: _____

LOCATION: _____

REF G.O. NO: _____

SEC WIRE COLOR CODES:

Aø – BROWN

Bø – ORANGE

Cø – YELLOW

NEUT – WHITE

GND – GREEN

ISOLATION FUSE LINK: _____

CURRENT LIMITING FUSE: _____

LOAD SENSING FUSE: _____

FIELD/DESIGN EVALUATION:

BY: _____

DATE: _____

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

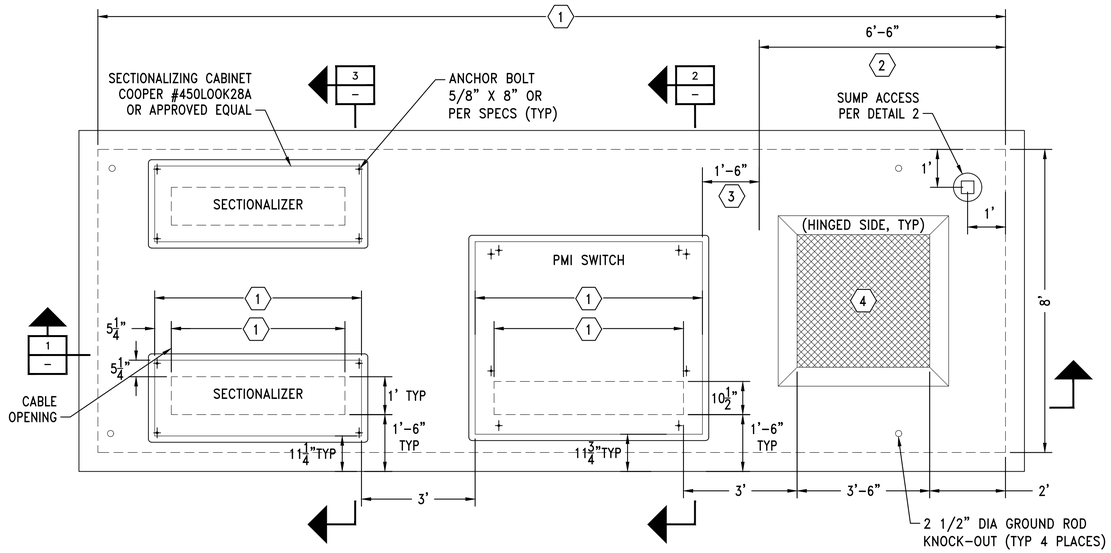
SHEET TITLE: **TRANSFORMER NAMPLATE SCHEDULE**

WORK PROJECT NO.

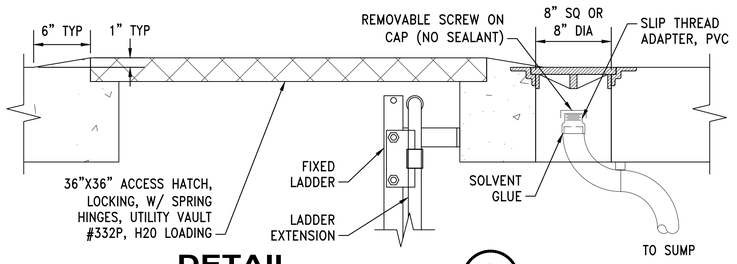
CONSULTANT'S NO.

PORT OF SEATTLE NO.

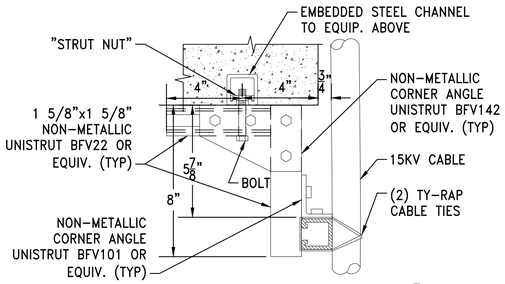
**26 12 00 - 02**




**DETAIL** 1 –
TYPICAL SWITCH VAULT EQUIPMENT LAYOUT
SCALE: NTS




**DETAIL** 2 –
DETAIL SHOWING VAULT LID AND SUMP ACCESS
SCALE: NTS




**DETAIL** 3 –
CABLE SUPPORT DETAIL
SCALE: NTS

## GENERAL NOTES:

1. IN GRASSY OR BARKED AREAS, VAULT LID TOP SHOULD BE 6" ABOVE GRADE. IN GRAVEL AREAS, VAULT LID TOP SHOULD BE 1" TO 2" ABOVE GRADE, WITH A TAPER DOWN TOWARDS THE SURROUNDING SURFACE.
2. VAULT LID SHALL BE NO MORE THAN 1'–6" AFG IN FRONT OF EQUIP.
3. THERE SHALL BE A MINIMUM OF 6' CLEARANCE IN FRONT OF SWITCHES AND SECTIONALIZERS.
4. ALL DUCTBANKS SHALL ENTER AT THE EDGES OF A WALL AND ON THE SHORT WALL WHEN POSSIBLE.

## KEYED NOTES:

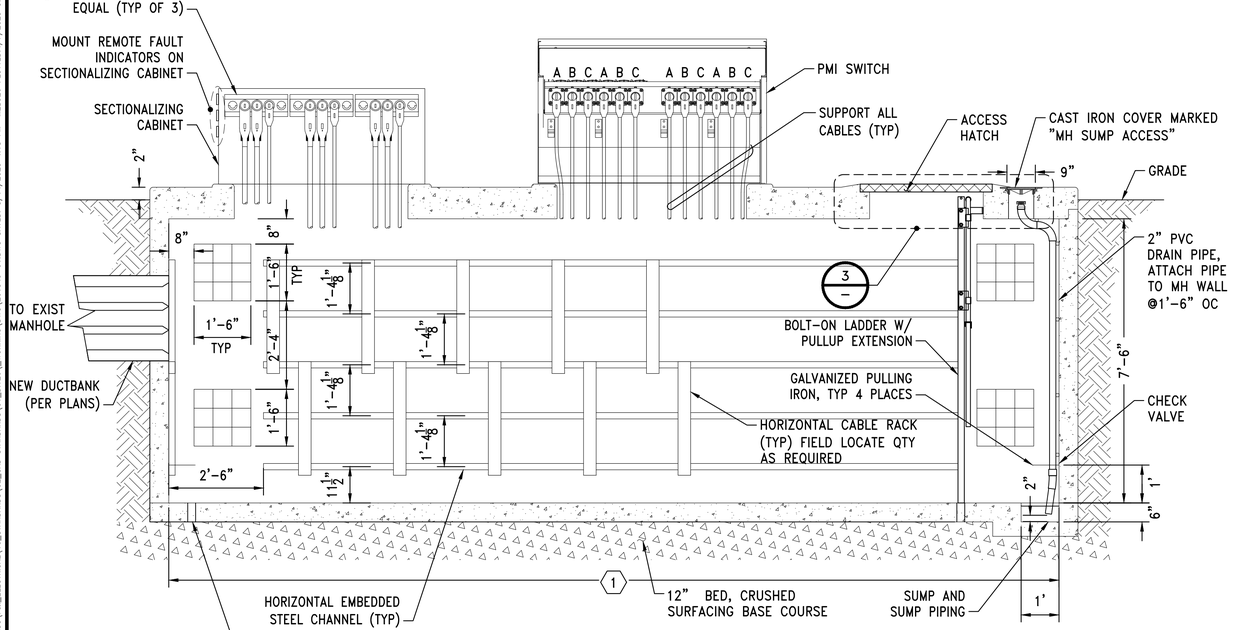
(1) REFER TO THE FOLLOWING TABLE FOR EQUIPMENT USED

| | Mfgr | Part # | EQUIP. LENGTH | OPENING LENGTH |
|---|---|---|---|---|
| SECTIONALIZERS | | | | |
| 2 POINT | Cooper | 450L00K28A | 5'–6" | 4'–6" |
| 3 POINT | Cooper | 450L00K28A | 5'–6" | 4'–6" |
| 4 POINT | Cooper | 450L00K30A | 6'–6" | 5'–6" |
| PMI SWITCHES | | | | |
| 3–WAY | S & C | 330 | 6'–0" | 4'–0" |
| 4–WAY | S & C | 422 | 6'–0" | 5'–0" |
| 5–WAY | S & C | 523 | 8'–6" | 6'–7" |
| 6–WAY | S & C | 624 | 8'–6" | 7'–10" |

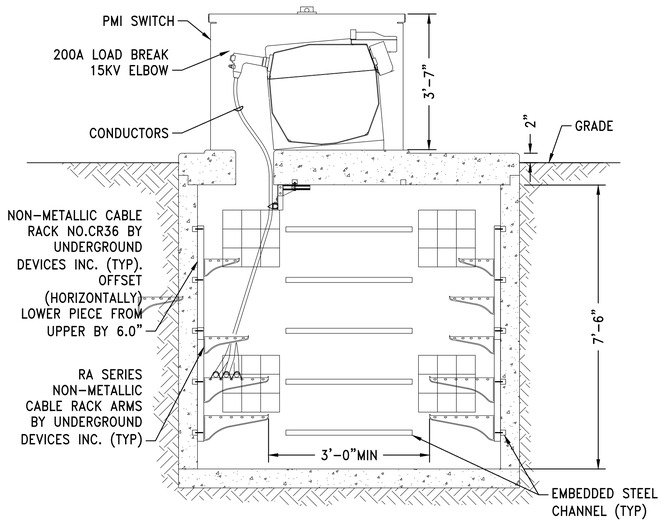
(2) BASE VAULT LENGTH = 6'–6"

(3) ADD 1'–6" ON EITHER SIDE OF EQUIPMENT TO BASE VAULT LENGTH

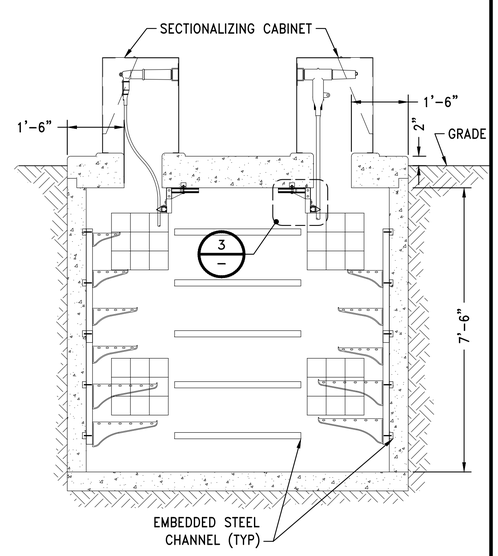
(4) ENGRAVE SWITCH VAULT NUMBER IN HATCH USING 5" MIN CHARACTERS




**SECTION** 1 –
SWITCH VAULT SECTION
SCALE: NTS




**SECTION** 2 –
15KV PMI SWITCH SHOWING 200A LB ELBOW TERMINATION
SCALE: NTS




**SECTION** 3 –
SECTIONALIZING CABINET SHOWING 200A LB & 600A DB TERMINATIONS
SCALE: NTS

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDW | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

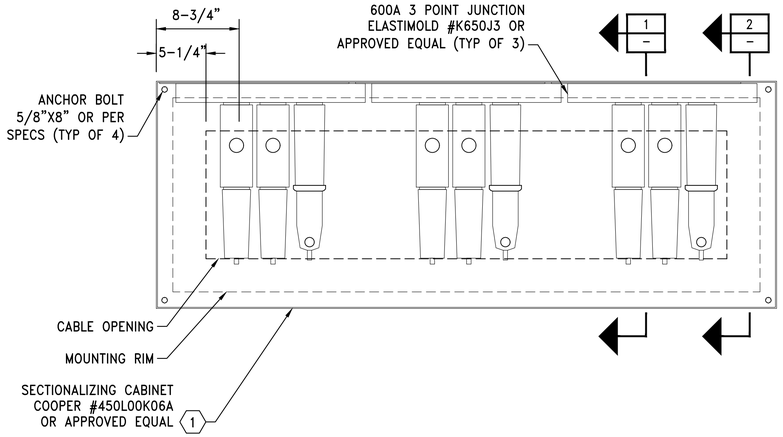
PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **SWITCH VAULT DETAILS**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. **26 13 49 - 01**

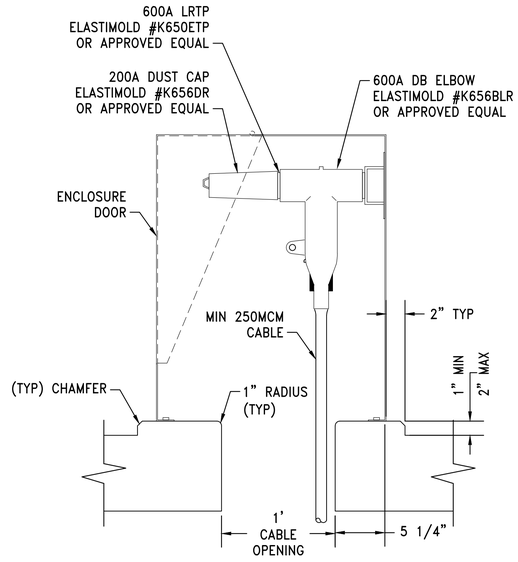
## KEYED NOTES:

1. TYPICAL NAMING FOR SECTIONALIZING CABINETS:
   SC-[MANHOLE/VAULT #]-[CABINET #]
   EXAMPLE:
   FOR TWO CABINETS ON A VAULT NAMED SV-20:
   SC-20-1, SC-20-2
   FOR THREE CABINETS ON A MANHOLE NAMED MH145:
   SC-145-1, SC-145-2, SC-145-3



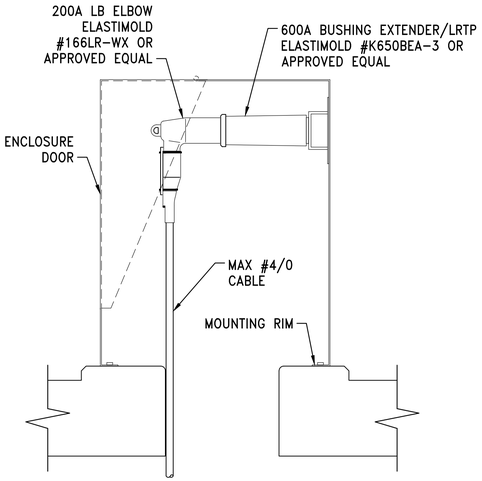

## DETAIL 1 –

TERMINATION DETAIL FOR
COOPER SECTIONALIZING CABINET
SCALE: 1 1/2"=1'-0"




## SECTION 1 –

600A ELBOW TERMINATION AT
SECTIONALIZING CABINET
SCALE: 1 1/2"=1'-0"




## SECTION 2 –

200A ELBOW TERMINATION AT
SECTIONALIZING CABINET
SCALE: 1 1/2"=1'-0"

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: –
PROJECT ENGINEER: –
DESIGN ENGINEER: –
DRAFTER: –
SCALE: N.T.S.
DATE: –
CHECKED/APPROVED BY: –

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

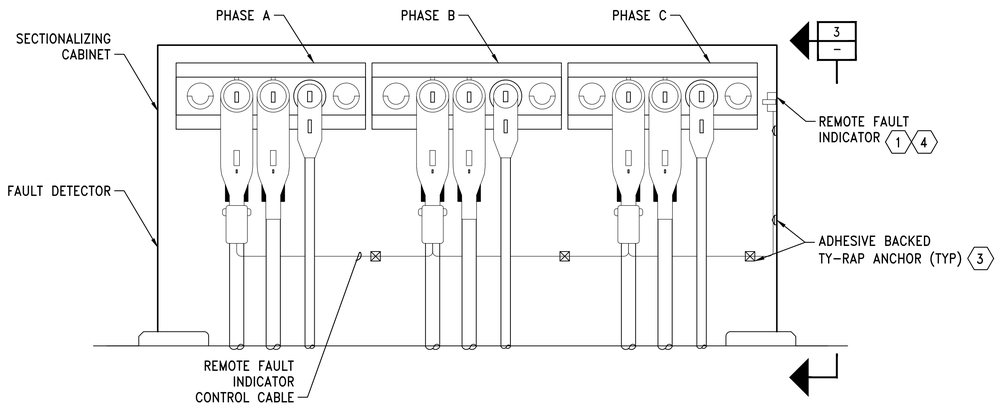
PROJECT: F&I STANDARD DETAILS

SHEET TITLE: SECTIONALIZING CABINET DETAILS TYPICAL 3-WAY SECTIONALIZER

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO. 26 18 00 - 01

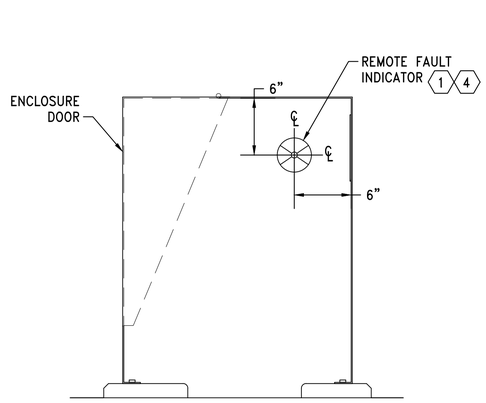



## DETAIL 2 –

TERMINATION DETAIL FOR
COOPER SECTIONALIZING CABINET
SCALE: 3/4"=1'-0"

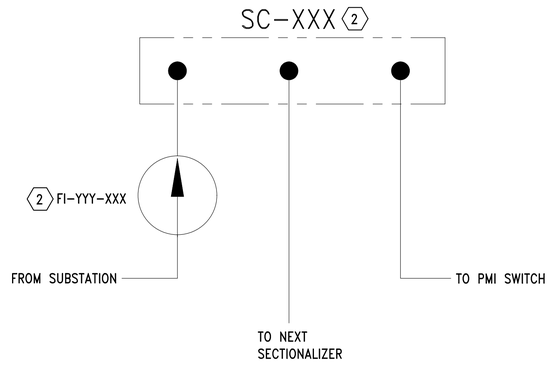
## KEYED NOTES:

1. REMOTE FAULT INDICATOR TO BE PLACED ON SIDE OF SECTIONALIZING CABINET OPPOSITE THE PMI SWITCH UNLESS DIRECTED OTHERWISE. SCHWEITZER PART NUMBER 3CRL-0800-IRACC OR APPROVED EQUAL. ADD 'W' TO PART NUMBER FOR TAMPER PROOF WINDOW KIT.
2. XXX = SWITCH VAULT OR MANHOLE NUMBER
   YYY = FEEDER NUMBER
3. FASTEN CONTROL CABLES TO THE BACK OF THE ENCLOSURE WITH ADHESIVE TY-RAP ANCHORS AND TY-RAPS.
4. MOUNT FAULT INDICATOR PER MANUFACTURERS RECOMMENDATIONS. REFINISH EXPOSED STEEL EDGES OF HOLES TO MATCH THE EXISTING FINISH.




## SECTION 3 –

600A ELBOW TERMINATION AT
SECTIONALIZING CABINET
SCALE: 3/4"=1'-0"




## DETAIL 3 –

ONE-LINE DIAGRAM OF SECTIONALIZER
SCALE: N/A

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: SECTIONALIZING CABINET DETAILS

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 18 00 - 02

## GENERAL NOTES:

1. PROVIDE REVENUE ACCURACY CTS AND PTS AS REQUIRED.
2. CUBICLE SECTIONS 1,3 AND 5 CAN ACCOMMODATE LARGER BREAKERS WHICH REQUIRE TWO CUBICLES. A LARGE BREAKER IN 1A WOULD FILL SECTIONS 1A AND 1E.
3. CUBICLE SECTIONS ON EACH END AND IN CENTER SHALL BE DOUBLE SECTIONS AS SHOWN TO ACCOMMODATE MAIN CIRCUIT BREAKERS AND TIE BREAKER SIZED AT 4000A AND LARGER.
4. WHERE QUANTITY OF COLUMNS OF CUBICLES VARIES FROM EXAMPLE SHOWN, ADJUST NUMBERING AS NECESSARY. ALWAYS ALLOW DOUBLE SECTIONS ON EACH END AND MINIMUM OF ONE DOUBLE SECTION IN THE CENTER.

# SWITCHGEAR CUBICLE DESIGNATION FOR LOW VOLTAGE DOUBLE-ENDED SWITCHGEAR RATED 4000A AND LARGER

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CUBICLE (1A) | CUBICLE (1E) | CUBICLE (2A) | CUBICLE (3A) | CUBICLE (3E) | CUBICLE (4A) | CUBICLE (5A) | CUBICLE (5E) |
| CUBICLE (1B) | CUBICLE (1F) | CUBICLE (2B) | CUBICLE (3B) | CUBICLE (3F) | CUBICLE (4B) | CUBICLE (5B) | CUBICLE (5F) |
| CUBICLE (1C) | CUBICLE (1G) | CUBICLE (2C) | CUBICLE (3C) | CUBICLE (3G) | CUBICLE (4C) | CUBICLE (5C) | CUBICLE (5G) |
| CUBICLE (1D) | CUBICLE (1H) | CUBICLE (2D) | CUBICLE (3D) | CUBICLE (3H) | CUBICLE (4D) | CUBICLE (5D) | CUBICLE (5H) |



REVISIONS

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| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **LV SWITCHGEAR CUBE LAYOUT 4000A AND LARGER**

WORK PROJECT NO. —
CONSULTANT'S NO.
PORT OF SEATTLE NO. **26 23 00 - 01**

## GENERAL NOTES:

1. PROVIDE REVENUE ACCURACY CTS AND PTS AS REQUIRED.
2. CUBICLE SECTIONS CAN ACCOMMODATE UP TO 3200A BREAKER. IF BREAKERS ARE TOO LARGE TO FIT IN ONE CUBICLE, USE CUBICLE NUMBERING SYSTEM SHOWN ON DRAWING 16430.2

# SWITCHGEAR CUBICLE DESIGNATION FOR LOW VOLTAGE DOUBLE-ENDED SWITCHGEAR RATED 3200A AND SMALLER

| | | | |
|---|---|---|---|
| CUBICLE (1A) | CUBICLE (2A) | CUBICLE (3A) | CUBICLE (4A) |
| CUBICLE (1B) | CUBICLE (2B) | CUBICLE (3B) | CUBICLE (4B) |
| CUBICLE (1C) | CUBICLE (2C) | CUBICLE (3C) | CUBICLE (4C) |
| CUBICLE (1D) | CUBICLE (2D) | CUBICLE (3D) | CUBICLE (4D) |

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

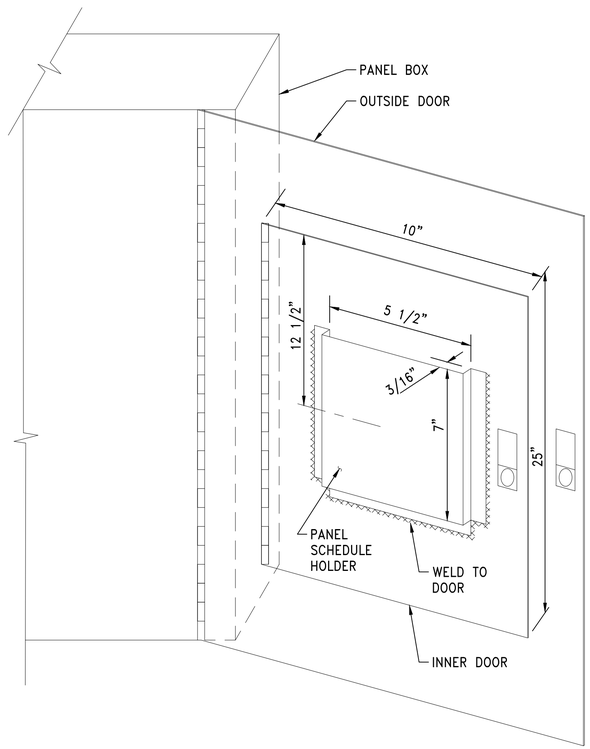
SHEET TITLE: **LV SWITCHGEAR CUBE LAYOUT 3200A AND SMALLER**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 23 00 - 02**




## DETAIL 1/–

PANEL SCHEDULE HOLDER
SCALE: NONE

| REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
| 1 | 03/01/2019 | KDW | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDW | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

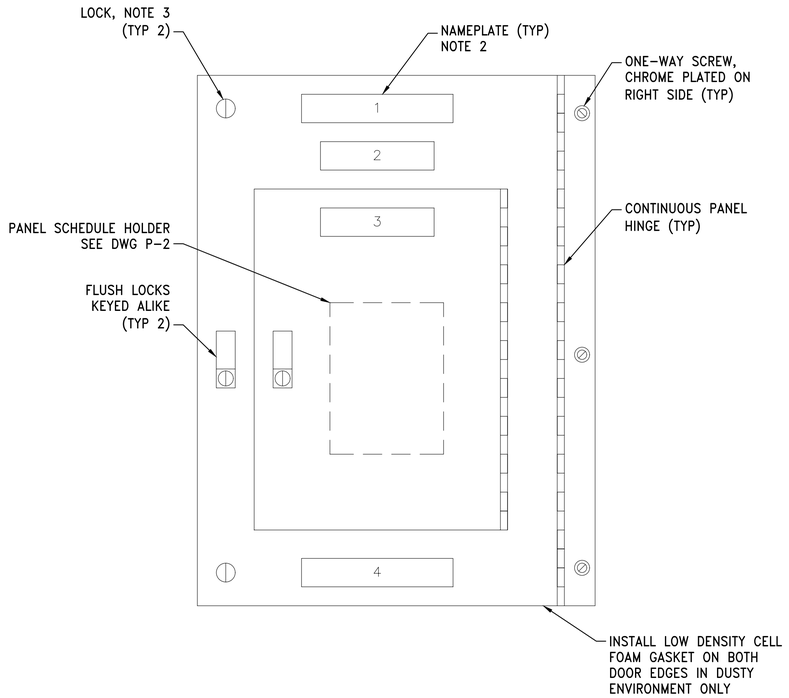
SHEET TITLE: **PANEL TRIM PANEL SCHEDULE HOLDER**

WORK PROJECT NO.

CONSULTANT'S NO.

PORT OF SEATTLE NO.

**26 24 16 - 01**




## DETAIL 1/–

PANEL TRIM
DOOR-IN-DOOR TYPE
SCALE: NONE

## NOTES:

1. CABINET CONSTRUCTION: ANSI GRAY FINISH, 14 –12 GAUGE WITH "U.L" LABEL
2. ALL NAME PLATES SHALL BE PHENOLIC WITH ADHESIVE BACK.
   (SEE NAMEPLATE SCHEDULE FOR DETAILS
3. REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS.

### NAME PLATE SCHEDULE

| ITEM NO | NAMEPLATE INSCRIPTION<br>LINE 1 / LINE 2 / LINE 3 / LINE 4 / LINE 5 | CHARACTER HEIGHT / BACKGROUND | REMARKS |
|---|---|---|---|
| 1 | PANEL B2 – E2 – 38G (OLD EX-15) / 225A 208Y/120V 3ø 4WSN /<br>FED FROM PANEL B2 – E2 – 30G/1, 3, 5 | 5/8" H WHITE CHAR.<br>ON BLACK BACKGROUND | RED BACKGROUND FOR<br>EMERGENCY POWER |
| 2 | VOLTAGE – 208Y/120V 3ø 4WSN / Aø – BLACK / Bø – RED /<br>Cø – BLUE / N – WHITE | 1/4" H WHITE CHAR.<br>ON BLACK BACKGROUND | |
| 3 | FOR PANEL ACCESS CALL / ACC: (206) 787-5406 OR /<br>SHOP: (206) 787-5311 | 1/4" H WHITE CHAR.<br>ON BLACK BACKGROUND | |
| 4 | WARNING – ANY UNAUTHORIZED USE OF / PANEL MAY RESULT IN SUSPENSION /<br>OF PORT OF SEATTLE BADGE | 1/2" H RED CHAR.<br>ON WHITE BACKGROUND | 5/8" H RED CHAR.<br>FOR "WARNING" ONLY |

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
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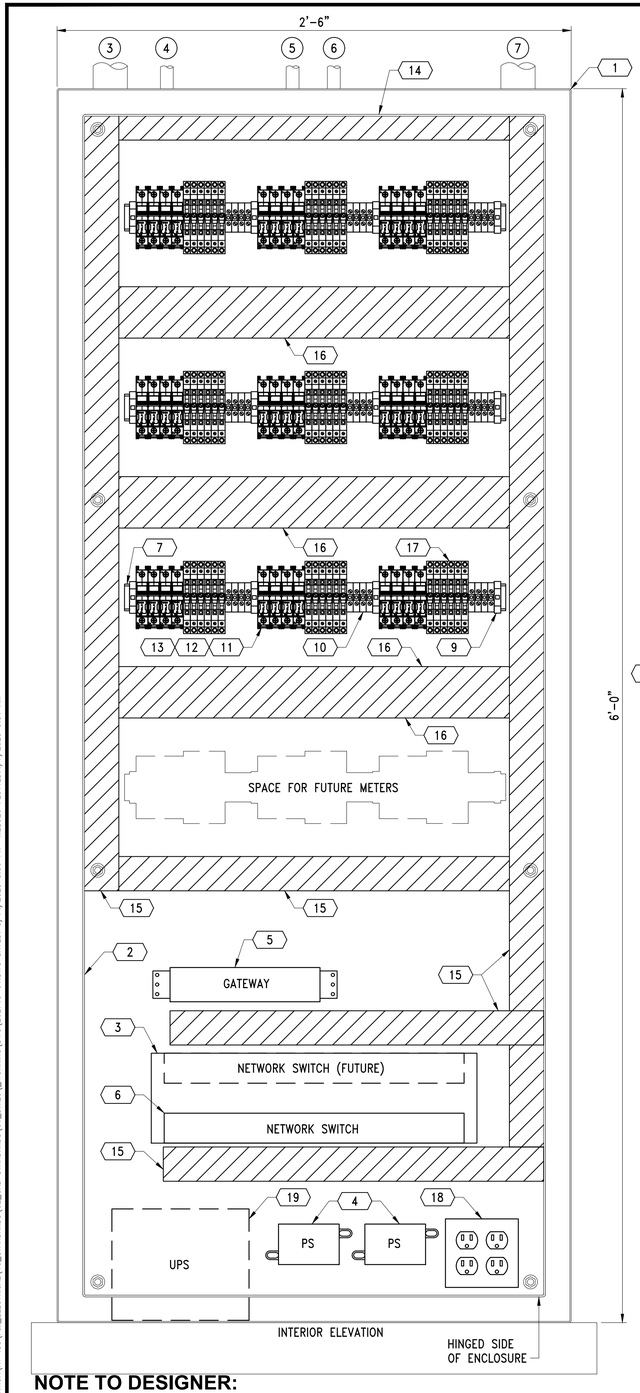
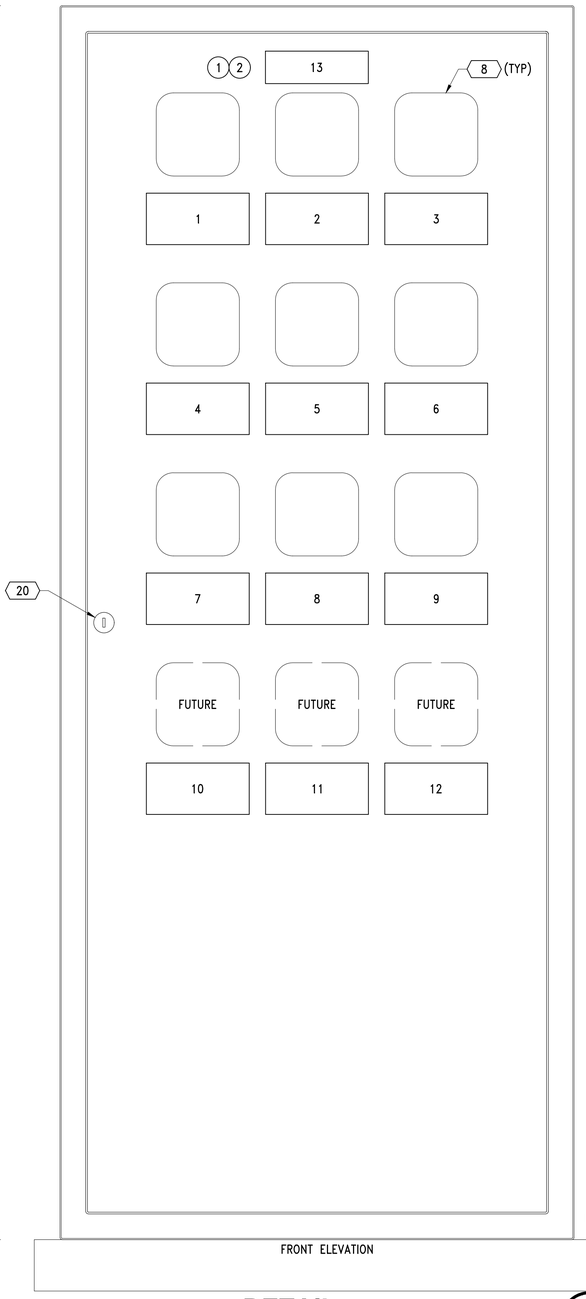
| 2 | 03/01/2020 | KDW | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

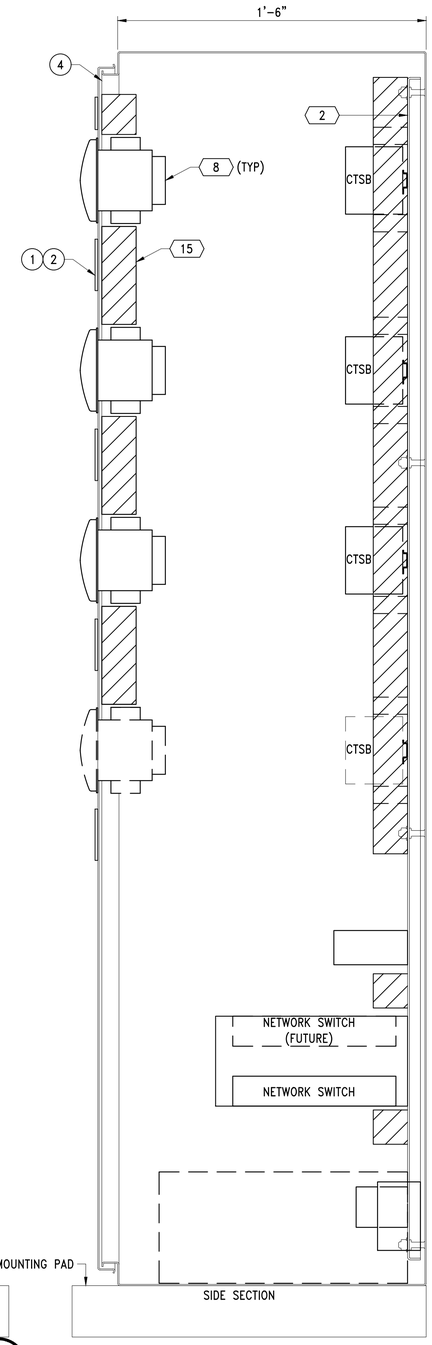
PROJECT MANAGER: –
PROJECT ENGINEER: –
DESIGN ENGINEER: –
DRAFTER: –
SCALE: N.T.S.
DATE: –
CHECKED/APPROVED BY: –

Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: PANEL TRIM DOOR-IN-DOOR TYPE

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
26 24 16 - 02




## NOTE TO DESIGNER:
## COORDINATE WITH F&I FOR CAPACITY REQUIREMENTS OF METERING CABINET.

## DETAIL 1/–
METERING ENCLOSURE
SCALE: 1/4" = 1'-0"

## GENERAL NOTES:

1. METERING ENCLOSURE DESCRIPTION: UL LISTED NEMA 12 ENCLOSURE WITH POWER METERS, NETWORK SWITCH AND GATEWAY, PRE-WIRED WITH POWER SUPPLY, TERMINAL BLOCKS AND CT SHORTING BLOCKS. METER DISPLAY MOUNTS ON PANEL DOOR. ETHERNET CONNECTIONS TERMINATE ON SWITCH AND GATEWAY. METERS, NETWORK, GATEWAY ENCLOSURES AND ALL ASSOCIATED EQUIPMENT SHALL BE PROVIDED BY DIVISION 26.
2. METERING ENCLOSURE FABRICATOR SHALL COORDINATE INSTALLATION OF EQUIPMENT WITH MANUFACTURER OF POWER METERS PRIOR TO CONSTRUCTION.
3. METERING ENCLOSURE FABRICATOR SHALL PROVIDE INSTALLATION OF ALL DEVICES INDICATED REQUIRING ONLY THE CUSTOMER'S EXTERNAL CONNECTIONS TO PRODUCE A FULLY OPERATIONAL METERING ENCLOSURE. PROVIDE ALL INTERNAL WIRING INCLUDING CONNECTIONS FROM CT SHORTING BLOCKS TO METERS MOUNTED ON FRONT OF ENCLOSURE. PROVIDE CAT 6 CABLE WITH RJ45 CONNECTORS FROM EACH METER TO NETWORK SWITCH INSIDE ENCLOSURE.
4. FABRICATOR FURNISHED ITEMS ARE LISTED BUT ARE NOT NECESSARILY LIMITED TO THE BILL OF MATERIALS.
5. POWER WIRING SHALL BE MINIMUM 12 AWG, CU, 600V, 41/30 STRANDED MTW WIRE. 24V WIRING SHALL BE 16 AWG, MTW WIRE, CU, 600V, STRANDED.
6. ALL WIRING SHALL BE NEATLY TIE WRAPPED IN TRUNKS AND SECURED TO PANEL.
7. OPTIMUM LOCATIONS OF TERMINAL STRIPS ARE LEFT TO THE DISCRETION OF THE FABRICATOR. LABEL AND NUMBER TERMINALS PER SCHEMATIC.
8. MAINTAIN MIN CONDUCTOR BENDING RADIUS PER NEC. CUSTOMER CONDUIT ENTRIES ARE ANTICIPATED AT THE TOP OF THE ENCLOSURE.
9. REFER TO SPECIFICATION SECTION 260553 FOR NAMEPLATE LABELING REQUIREMENTS INCLUDING COLOR, MATERIAL AND THICKNESS.
10. NAMEPLATES SHALL HAVE SLIGHTLY CHAMFERED EDGES AND SHALL BE FASTENED TO PANEL USING S.S. SCREWS.
11. COMPLETED ENCLOSURE SHALL MEET UL508A REQUIREMENTS AND SHALL BE LABELED ACCORDINGLY.
12. PLACE WARNING PLACARD ON FRONT OF METER ENCLOSURE, PER SECTION 260553.
13. ROUTE 480V CONDUCTORS AND CAT 6A CABLES IN SEPARATE WIRING DUCTS.
14. WIRING DUCT SIZES ARE TYPICAL. FABRICATOR TO ENSURE DUCT SIZE IS ADEQUATE FOR FUTURE METER ADDITIONS.

## KEYED NOTES:

| | |
|---|---|
| 1 | REFER TO METER NAMEPLATE SCHEDULE ON SHEET EXXX FOR NAMEPLATE ID NAME AND NUMBER. |
| 2 | REFER TO DRAWING EXXX FOR TYPICAL NAMEPLATE DETAILS |
| 3 | 2" CONDUIT WITH PULL STRING FOR CT WIRING FROM PANELBOARD/SWITCHBOARD. |
| 4 | 3/4" CONDUIT FOR VOLTAGE CONDUCTORS. PROVIDE CONNECTION FROM 480V POWER CIRCUIT TO SUPPLY POWER FOR METERS. |
| 5 | 3/4" CONDUIT WITH 2#12, #12G. PROVIDE 120V POWER FOR METERS. |
| 6 | 3/4" CONDUIT WITH PULL STRING UP TO JUNCTION BOX ON CEILING |
| 7 | 2" CONDUIT (TYP) WITH PULL STRING FOR COMM CABLING. SIZE CONDUIT AS NEEDED. |

## BILL OF MATERIALS (METERING ENCLOSURE)

| ITEM | DESCRIPTION | QTY | MANUFACTURER | PART NO. |
|---|---|---|---|---|
| 1 | UL LISTED NEMA 12 SINGLE DOOR ENCLOSURE 72"H x 30"W x 18"D | 1 | HOFFMAN, MIDWEST OR APPROVED EQUAL (AE) | A72H3118FS |
| 2 | BACKPANEL (INTERIOR) | 1 | HOFFMAN, MIDWEST OR AE | AP30 |
| 3 | 19" RACK PANEL WITH 3 RACK UNITS 19"W x 5.25"H | 1 | HOFFMAN, CHATSWORTH OR AE | P1J9RP3UA |
| 4 | POWER SUPPLY (PS), 24VDC, 48 VA, SIZE 5.3"W x 3.75"D x 3.21"H | 2 | EATON | ELC-P502 |
| 5 | GATEWAY | 1 | EATON | POWER EXPERT 600A |
| 6 | NETWORK SWITCH, SIZE 1.73"H x 17.7"W x 9.52"D | 1 | CISCO | WS-C2960+24TC-L |
| 7 | TYPE 3 DIN RAIL | VARIES | COOPER OR AE | |
| 8 | POWER METER | VARIES | EATON | PXM 3000 MA15 |
| 9 | END BRACKET | VARIES | MARATHON SPECIAL PRODUCTS OR AE | |
| 10 | TERMINAL BLOCK | VARIES | MARATHON SPECIAL PRODUCTS OR AE | 603GP03 |
| 11 | FUSED DISCONNECT SWITCH | VARIES | MARATHON SPECIAL PRODUCTS OR AE | FDS-30-C-1, FDS-30-C-3 |
| 12 | FAST ACTING FUSES, 0.1A | VARIES | LITTELFUSE, BUSSMAN OR AE | OKLK.100 |
| 13 | TIME DELAY FUSES, 3A | VARIES | LITTELFUSE, BUSSMAN OR AE | FLQ003 |
| 14 | WIRING DUCT, LIGHT GRAY W/COVER, 1.25"W x 3"H | VARIES | PANDUIT, THOMAS & BETTS OR AE | |
| 15 | WIRING DUCT, LIGHT GRAY W/COVER, 1.75"W x 3"H | VARIES | PANDUIT, THOMAS & BETTS OR AE | |
| 16 | WIRING DUCT, LIGHT GRAY W/COVER, 2.75"W x 3"H | VARIES | PANDUIT, THOMAS & BETTS OR AE | |
| 17 | CT SHORTING BLOCKS (CTSB) | VARIES | MARATHON SPECIAL PRODUCTS OR AE | 1506SC |
| 18 | DOUBLE GANG BACKBOX W/ NEMA 5-20R RECEPTACLES AND COVER | 1 | HUBBELL, LEVITON OR APPROVED AE | 5-20R |
| 19 | UPS, SIZE 6.34"H x 5.43"W x 14.29"D | 1 | APC OR AE | SMT750 |
| 20 | LOCK FOR METER ENCLOSURE | 1 | COORDINATE WITH PORT ELECTRIC SHOP | |

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 2 | 03/01/2023 | KDM | 2023 F&I STANDARD DETAILS | | | | | | |
| 4 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

PROJECT MANAGER: —
PROJECT ENGINEER: —
DESIGN ENGINEER: —
DRAFTER: —
SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: F&I STANDARD DETAILS
SHEET TITLE: METER ENCLOSURE ELEVATIONS AND DETAILS TYPICAL OF CABINET WITH CAPACITY FOR 12 METERS

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. 26 27 13 - 01

## METER NAMEPLATE SCHEDULE

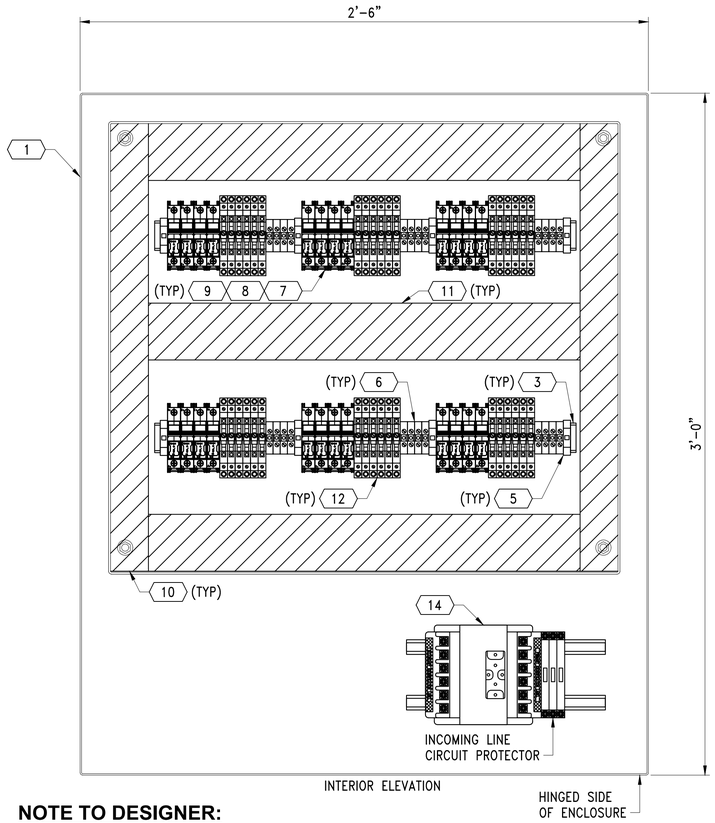
| ITEM | EQUIPMENT | 1ST LINE | 2ND LINE | 3RD LINE | 4TH LINE (COMM RM. NO.) | LETTERING HEIGHT |
|---|---|---|---|---|---|---|
| 1 | METER | < METER NUMBER > | < LOAD METERED > | < LOAD DESCRIPTION > | < ER.1234.5 > | 3/8" |
| 2 | METER | < METER NUMBER > | < LOAD METERED > | < LOAD DESCRIPTION > | < ER.1234.5 > | 3/8" |
| 3 | METER | < METER NUMBER > | < LOAD METERED > | < LOAD DESCRIPTION > | < ER.1234.5 > | 3/8" |
| 4 | METER | < METER NUMBER > | < LOAD METERED > | < LOAD DESCRIPTION > | < ER.1234.5 > | 3/8" |
| 5 | METER | < METER NUMBER > | < LOAD METERED > | < LOAD DESCRIPTION > | < ER.1234.5 > | 3/8" |
| 6 | METER | < METER NUMBER > | < LOAD METERED > | < LOAD DESCRIPTION > | < ER.1234.5 > | 3/8" |
| 7 | METER ENCLOSURE | METER CABINET | < CABINET NUMBER > | FED FROM | < PANEL NUMBER > | 3/8" |

## BILL OF MATERIALS (METERING ENCLOSURE)

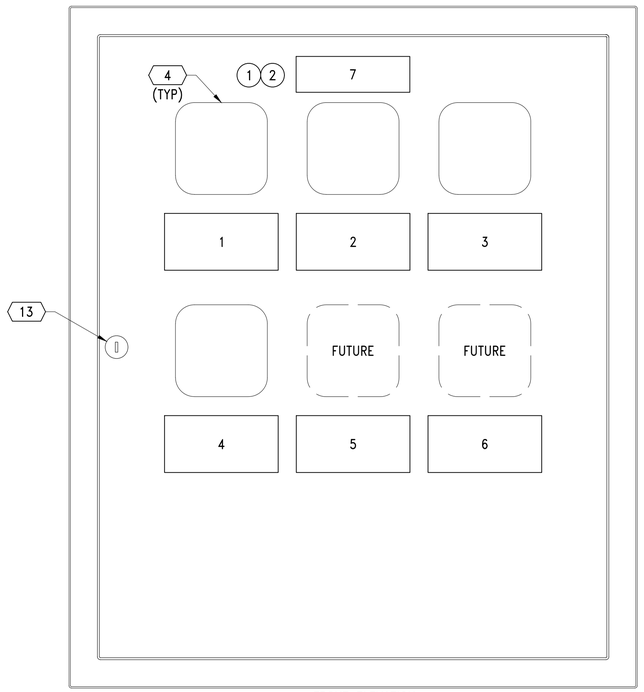
| ITEM | DESCRIPTION | QTY | MANUFACTURER | PART NO. |
|---|---|---|---|---|
| 1 | UL LISTED NEMA 12 SINGLE DOOR ENCLOSURE 30"H x 30"W x 18"D | 1 | HOFFMAN, MIDWEST OR APPROVED EQUAL (AE) | A30H3118FS |
| 2 | BACKPANEL (INTERIOR) | 1 | HOFFMAN, MIDWEST OR AE | AP30 |
| 3 | TYPE 3 DIN RAIL | VARIES | COOPER OR AE | |
| 4 | POWER METER | VARIES | EATON | PXM 3000 MA15 |
| 5 | END BRACKET | VARIES | MARATHON SPECIAL PRODUCTS OR AE | |
| 6 | TERMINAL BLOCK | VARIES | MARATHON SPECIAL PRODUCTS OR AE | 603GP03 |
| 7 | FUSED DISCONNECT SWITCH | VARIES | MARATHON SPECIAL PRODUCTS OR AE | FDS-30-C-1, FDS-30-C-3 |
| 8 | FAST ACTING FUSES, 0.1A | VARIES | LITTELFUSE, BUSSMAN OR AE | OKLK.100 |
| 9 | TIME DELAY FUSES, 3A | VARIES | LITTELFUSE, BUSSMAN OR AE | FLQ003 |
| 10 | WIRING DUCT, LIGHT GRAY W/COVER, 1.75"W x 3"H | VARIES | PANDUIT, THOMAS & BETTS OR AE | |
| 11 | WIRING DUCT, LIGHT GRAY W/COVER, 2.75"W x 3"H | VARIES | PANDUIT, THOMAS & BETTS OR AE | |
| 12 | CT SHORTING BLOCKS (CTSB) | VARIES | MARATHON SPECIAL PRODUCTS OR AE | 1506SC |
| 13 | LOCK FOR METER ENCLOSURE | 1 | COORDINATE WITH PORT ELECTRIC SHOP | |
| 14 | CONTROL POWER TRANSFORMER | 1 | EATON, SCHNEIDER, OR AE | |

## GENERAL NOTES:

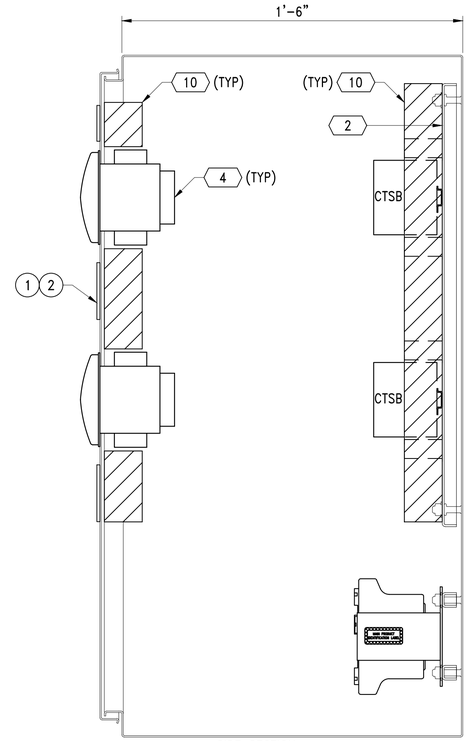
1. METERING ENCLOSURE DESCRIPTION: UL LISTED NEMA 12 ENCLOSURE WITH POWER METERS, NETWORK SWITCH AND GATEWAY, PRE-WIRED WITH POWER SUPPLY, TERMINAL BLOCKS AND CT SHORTING BLOCKS. METER DISPLAY MOUNTS ON PANEL DOOR.
2. METERING ENCLOSURE FABRICATOR SHALL COORDINATE INSTALLATION OF EQUIPMENT WITH MANUFACTURER OF POWER METERS PRIOR TO CONSTRUCTION.
3. METERING ENCLOSURE FABRICATOR SHALL PROVIDE INSTALLATION OF ALL DEVICES INDICATED REQUIRING ONLY THE CUSTOMER'S EXTERNAL CONNECTIONS TO PRODUCE A FULLY OPERATIONAL METERING ENCLOSURE. PROVIDE ALL INTERNAL WIRING INCLUDING CONNECTIONS FROM CT SHORTING BLOCKS TO METERS MOUNTED ON FRONT OF ENCLOSURE.
4. FABRICATOR FURNISHED ITEMS ARE LISTED BUT ARE NOT NECESSARILY LIMITED TO THE BILL OF MATERIALS.
5. POWER WIRING SHALL BE MINIMUM 12 AWG, CU, 600V, 41/30 STRANDED MTW WIRE. 24V WIRING SHALL BE 16 AWG, MTW WIRE, CU, 600V, STRANDED.
6. ALL WIRING SHALL BE NEATLY TIE WRAPPED IN TRUNKS AND SECURED TO PANEL.
7. OPTIMUM LOCATIONS OF TERMINAL STRIPS ARE LEFT TO THE DISCRETION OF THE FABRICATOR. LABEL AND NUMBER TERMINALS PER SCHEMATIC.
8. MAINTAIN MIN CONDUCTOR BENDING RADIUS PER NEC. CUSTOMER CONDUIT ENTRIES ARE ANTICIPATED AT THE TOP OF THE ENCLOSURE.
9. REFER TO SPECIFICATION SECTION 260553 FOR NAMEPLATE LABELING REQUIREMENTS INCLUDING COLOR, MATERIAL AND THICKNESS.
10. NAMEPLATES SHALL HAVE SLIGHTLY CHAMFERED EDGES AND SHALL BE FASTENED TO PANEL USING S.S. SCREWS.
11. COMPLETED ENCLOSURE SHALL MEET UL508A REQUIREMENTS AND SHALL BE LABELED ACCORDINGLY.
12. PLACE WARNING PLACARD ON FRONT OF METER ENCLOSURE, PER SECTION 260553.
13. ROUTE 480V CONDUCTORS AND CAT 6A CABLES IN SEPARATE WIRING DUCTS.
14. SEE THIS SHEET FOR BILL OF MATERIALS.
15. CONTACT ELECTRICAL SHOP TO COORDINATE INSTALLATION AND CONNECTION OF METERING CABINET. ELECTRICAL SHOP MAY BE REACHED AT PHONE NUMBER 206-787-5311. ELECTRICAL SHOP FOREMAN: SLAVI KOSYUK (C) 206-437-6187, STEVE LEWIS (C) 206-595-9639, KRISTEL MANNEY (O) 206-305-6861.




INTERIOR ELEVATION




FRONT ELEVATION




SIDE SECTION

## KEYED NOTES

1. REFER TO METER NAMEPLATE SCHEDULE ON SHEET EXXX FOR NAMEPLATE ID NAME AND NUMBER.
2. REFER TO DRAWING EXXX FOR TYPICAL NAMEPLATE DETAILS.

**NOTE TO DESIGNER:**
**COORDINATE WITH F&I FOR CAPACITY REQUIREMENTS OF METERING CABINET.**

## DETAIL 1

METERING ENCLOSURE
SCALE: 1/4" = 1'-0"

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 03/01/2023 | KDM | 2023 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

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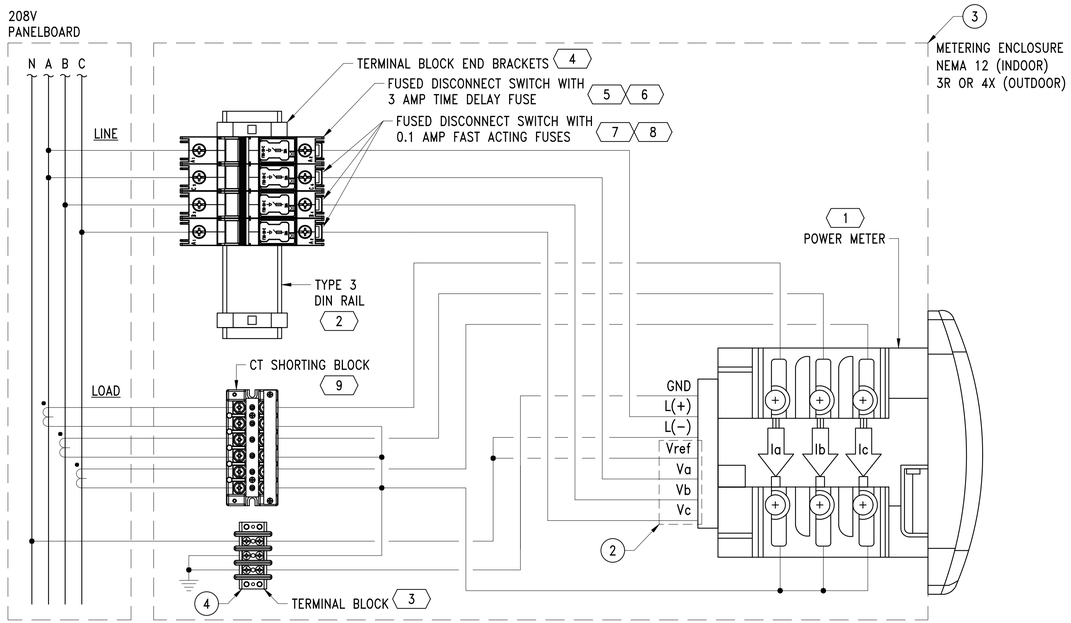
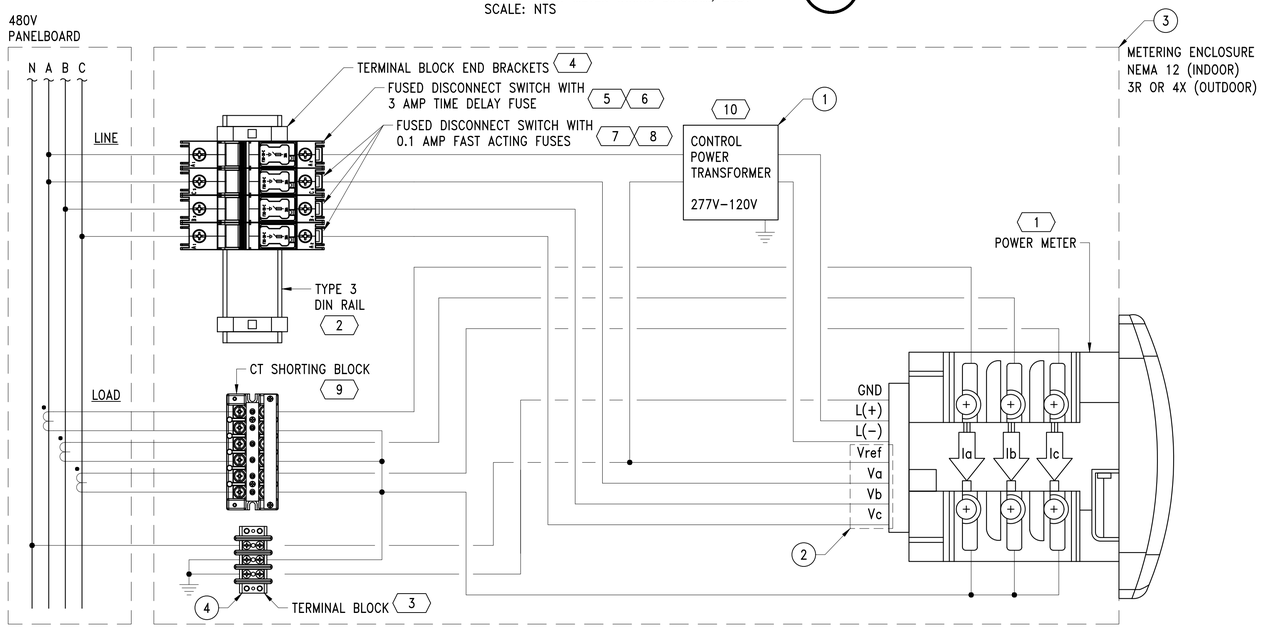
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**

SHEET TITLE: **METER ENCLOSURE ELEVATIONS AND DETAILS TYPICAL OF CABINET WITH CAPACITY FOR 4 - 6 METERS**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 27 13 - 02**




**DETAIL** 1
POWER XPERT METER WIRING DIAGRAM, 208V
SCALE: NTS




**DETAIL** 2
POWER XPERT METER WIRING DIAGRAM, 480V
SCALE: NTS

## GENERAL NOTES:

1. METERING ENCLOSURE DESCRIPTION:
   UL LISTED NEMA 12 (INDOOR) 3R OR 4X (OUTDOOR) ENCLOSURE WITH POWER METERS, NETWORK SWITCH AND GATEWAY, POWER SUPPLY, TERMINAL BLOCKS AND CT SHORTING BLOCKS. METER DISPLAY MOUNTS ON PANEL DOOR. ETHERNET CONNECTIONS TERMINATE ON SWITCH AND GATEWAY. METERS, NETWORK, GATEWAY ENCLOSURES AND ALL ASSOCIATED EQUIPMENT SHALL BE PROVIDED BY DIVISION 16.
2. METERING ENCLOSURE FABRICATOR SHALL COORDINATE INSTALLATION OF EQUIPMENT WITH MANUFACTURER OF POWER METERS PRIOR TO CONSTRUCTION.
3. PROVIDE INSTALLATION OF ALL DEVICES INDICATED REQUIRING ONLY THE CUSTOMER'S EXTERNAL CONNECTIONS TO PRODUCE A FULLY OPERATIONAL METERING ENCLOSURE. PROVIDE ALL INTERNAL WIRING INCLUDING CONNECTIONS FROM CT SHORTING BLOCKS TO METERS MOUNTED ON FRONT OF ENCLOSURE. PROVIDE CAT 6 CABLE WITH RJ45 CONNECTORS FROM EACH METER TO NETWORK SWITCH.
4. POWER WIRING SHALL BE MINIMUM 12 AWG, CU, 600V, 41/30 STRANDED MTW WIRE. 24V WIRING SHALL BE 16 AWG, MTW WIRE, CU, 600V, STRANDED.
5. ALL WIRING SHALL BE NEATLY TIE WRAPPED IN TRUNKS AND SECURED TO PANEL.
6. OPTIMUM LOCATIONS OF TERMINAL STRIPS ARE LEFT TO THE DISCRETION OF THE FABRICATOR. LABEL AND NUMBER TERMINALS PER SCHEMATIC.
7. MAINTAIN MIN CONDUCTOR BENDING RADIUS PER NEC. CUSTOMER CONDUIT ENTRIES ARE ANTICIPATED AT THE TOP OF THE ENCLOSURE.
8. REFER TO SPECIFICATION SECTION 260553 FOR NAMEPLATE LABELING REQUIREMENTS INCLUDING COLOR, MATERIAL AND THICKNESS.
9. NAMEPLATES SHALL HAVE SLIGHTLY CHAMFERED EDGES AND SHALL BE FASTENED TO PANEL USING S.S. SCREWS.
10. COMPLETED ENCLOSURE SHALL MEET UL508A REQUIREMENTS AND SHALL BE LABELED ACCORDINGLY.
11. ROUTE 480V OR 208V CONDUCTORS AND CAT 6A CABLES IN SEPARATE WIRING DUCTS.
12. CONTACT ELECTRIC SHOP FOREMAN TO ARRANGE FOR QA INSPECTION OF METER INSTALLATION.

## KEYED NOTES

1. SIZE CONTROL POWER TRANSFORMER PER MANUFACTURER'S RECOMMENDATION.
2. REFERENCE VOLTAGE CONNECTION FROM UNSWITCHED NEUTRAL AND VOLTAGE PHASE INPUTS SHALL BE TAKEN FROM PANEL SERVING METERED CIRCUIT. FOR THIS PROJECT, APPLICABLE PANEL NAME(S) IS(ARE) _____ .
3. OUTDOOR INSTALLATION SHALL INCLUDE TRANSDUCER ONLY WITH METER MOUNTED IN CABINET (NO DOOR PENETRATION).
4. ENSURE ELECTRICAL ISOLATION BETWEEN NEUTRAL CONDUCTOR AND GROUND. DO NOT GROUND NEUTRAL.

## BILL OF MATERIALS (METERING ENCLOSURE)

| ITEM | DESCRIPTION | QTY | MANUFACTURER | PART NO. |
|---|---|---|---|---|
| 1 | POWER METER | VARIES | EATON | PXM 3000 MA15 |
| 2 | TYPE 3 DIN RAIL | VARIES | COOPER OR APPROVED EQUAL | |
| 3 | TERMINAL BLOCK | VARIES | MARATHON SPECIAL PRODUCTS OR APPROVED EQUAL | 603GP03 |
| 4 | END BRACKET | VARIES | MARATHON SPECIAL PRODUCTS OR APPROVED EQUAL | |
| 5 | FUSED DISCONNECT SWITCH | VARIES | MARATHON SPECIAL PRODUCTS OR APPROVED EQUAL | FDS-30-C-1 |
| 6 | TIME DELAY FUSES, 3A | VARIES | LITTELFUSE, BUSSMAN OR APPROVED EQUAL | FLQ003 |
| 7 | FUSED DISCONNECT SWITCH | VARIES | MARATHON SPECIAL PRODUCTS OR APPROVED EQUAL | FDS-30-C-3 |
| 8 | FAST ACTING FUSES, 0.1A | VARIES | LITTELFUSE, BUSSMAN OR APPROVED EQUAL | OKLK.100 |
| 9 | CT SHORTING BLOCKS (CTSB) | VARIES | MARATHON SPECIAL PRODUCTS OR APPROVED EQUAL | 1506SC |
| 10 | CONTROL POWER TRANSFORMER | 1 | EATON, SCHNEIDER, OR APPROVED EQUAL | |

REVISIONS

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| 1 | 03/01/2015 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
| 2 | 03/01/2020 | KDM | 2020 F&I STANDARD DETAILS | | | | | | |
| 3 | 03/01/2023 | KDM | 2023 F&I STANDARD DETAILS | | | | | | |
| 3 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

FACILITIES & INFRASTRUCTURE F&I SEA-TAC INTERNATIONAL AIRPORT

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PROJECT ENGINEER: —
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SCALE: N.T.S.
DATE: —
CHECKED/APPROVED BY: —

Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **POWER METERING WIRING DIAGRAM**

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
**26 27 13 - 03**

## GENERAL NOTES:

1. DATA CABLE SHALL BE SYSTIMAX CATEGORY-6 CABLES.
2. DATA CABLE INSTALLATION SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS GIVEN IN CONSTRUCTION SPECIFICATION DIVISION 27.

## KEYED NOTES

(1) CONTRACTOR SHALL TERMINATE, CONNECT, AND ROUTE COMMUNICATIONS CABLING IN MINIMUM 1" CONDUIT. CONDUIT CABLE FILL SHALL COMPLY WITH 40% MAX FILL AS GIVEN IN TIA-569-C.

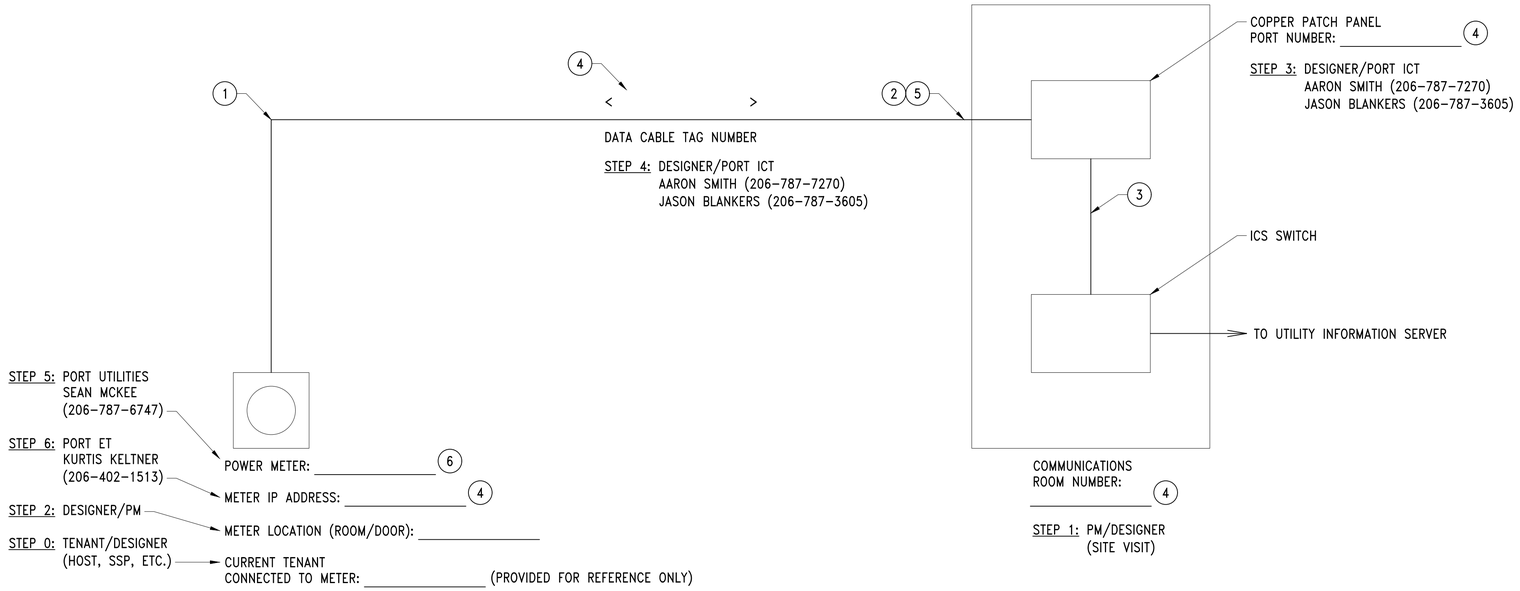
(2) CONTRACTOR SHALL ROUTE DATA CABLING AND CONDUIT TO COMM ROOM AND TERMINATE CABLES ON PATCH PANEL.

(3) PORT ET TO CROSS CONNECT. CONTACT MICAH EGGER (ET SHOP) AT 206-218-3787.

(4) PORT PM TO SUBMIT REQUEST AT START MEETING FOR METER IP ADDRESS, DATA CABLE TAG NUMBER, PATCH PANEL PORT NUMBER AND COMM ROOM NUMBER.

(5) DEPENDING ON METER CABINET CONFIGURATION, COPPER DATA CABLE MAY TERMINATE ON SWITCH IN METER CABINET WITH FIBER LEAVING METER CABINET AND RUNNING TO COMM ROOM.

(6) PORT UTILITIES SHALL ASSIGN METER NUMBER AT INITIAL PEST MEETING.






REVISIONS

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|---|---|---|---|---|---|---|---|---|---|
| 1 | 03/01/2019 | KDM | 2019 F&I STANDARD DETAILS | | | | | | |
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| 3 | 03/01/2023 | KDM | 2023 F&I STANDARD DETAILS | | | | | | |
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F&I FACILITIES & INFRASTRUCTURE SEA-TAC INTERNATIONAL AIRPORT

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DATE: —
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Port of Seattle SEA-TAC INTERNATIONAL AIRPORT

PROJECT: **F&I STANDARD DETAILS**

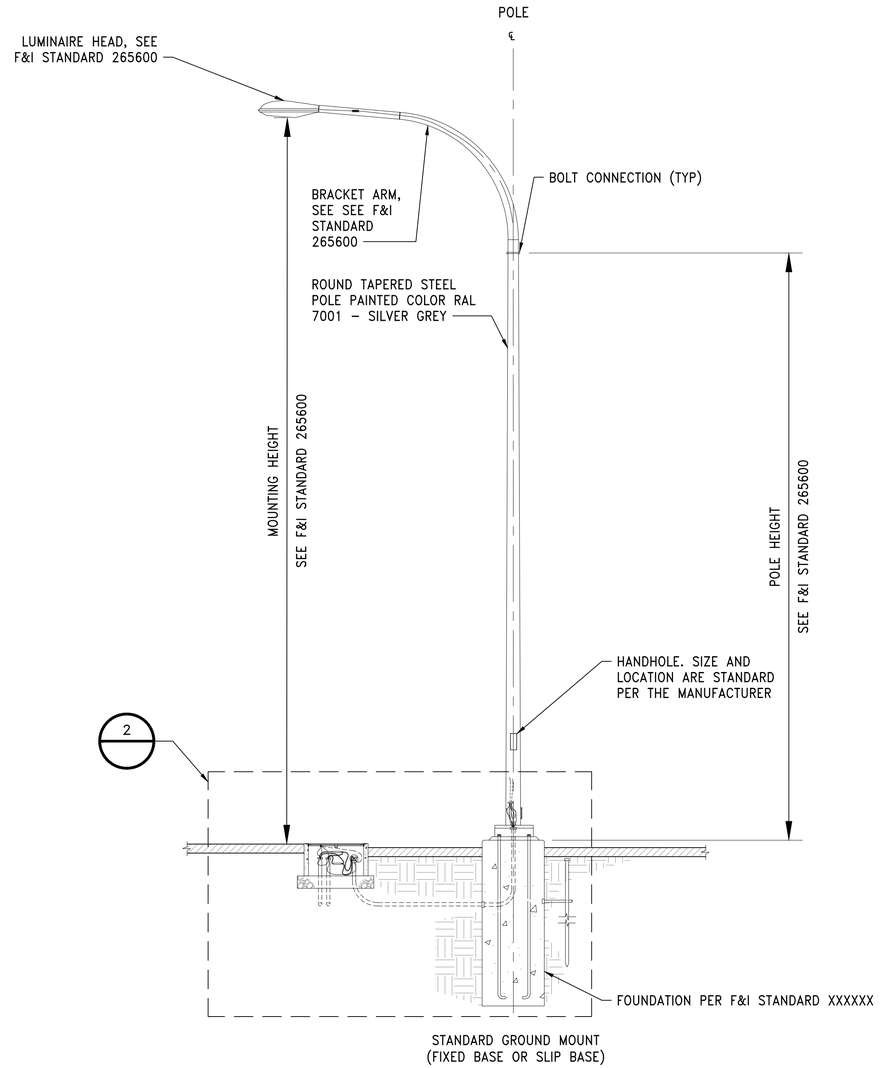
SHEET TITLE: **METER COMMUNICATIONS ONE-LINE DIAGRAM**

WORK PROJECT NO.

CONSULTANT'S NO.

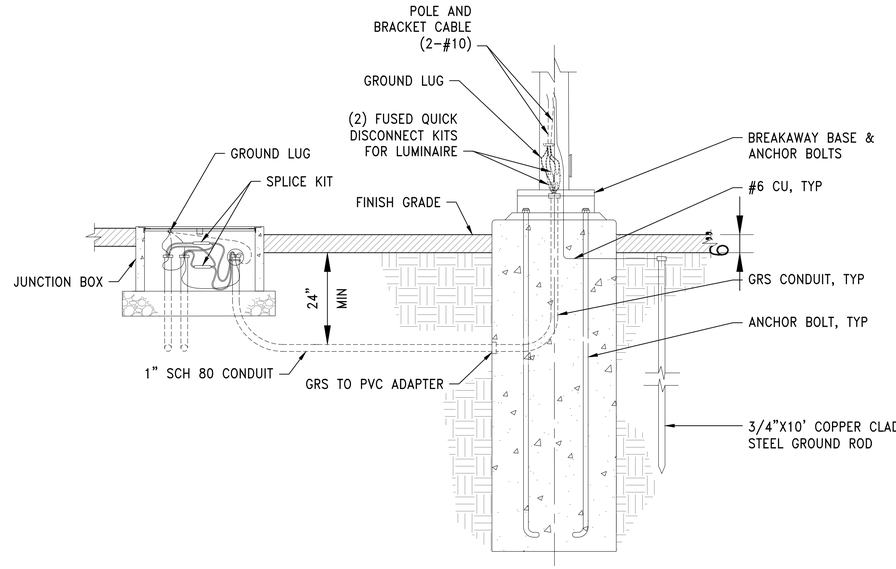
PORT OF SEATTLE NO.

**26 27 13 - 04**




STANDARD GROUND MOUNT
(FIXED BASE OR SLIP BASE)

**DETAIL** 1
LIGHT POLE AND LUMINAIRE
SCALE: NTS




**DETAIL** 2
TYPICAL LOCATION OF JUNCTION BOX AND FOUNDATION
SCALE: NTS



REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 1 | 04/21/2023 | KDM | 2023 F&I STANDARD DETAILS | | | | | | |
| 2 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

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DATE: —
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Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **ILLUMINATION POLE AND FOUNDATION**

WORK PROJECT NO.
CONSULTANT'S NO.
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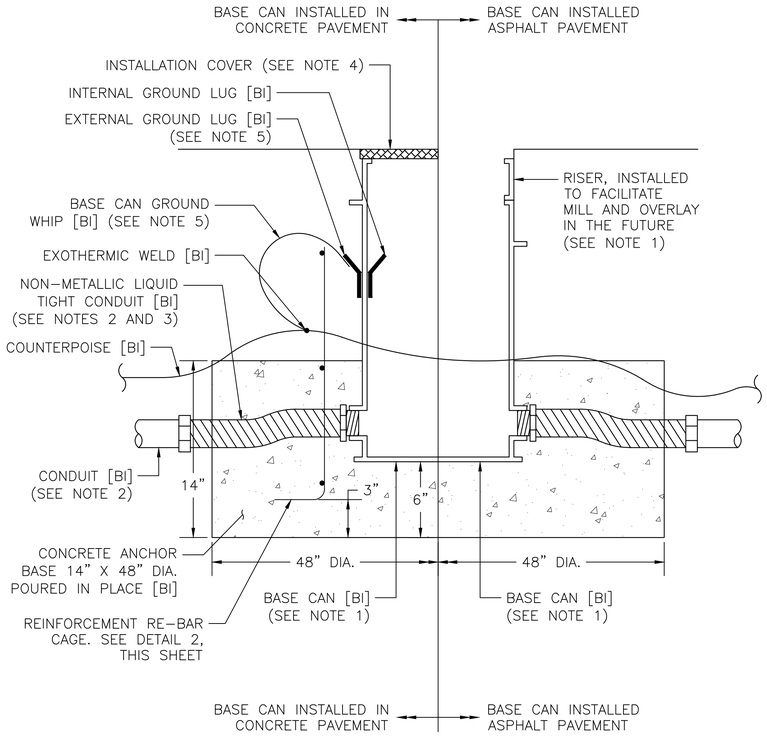
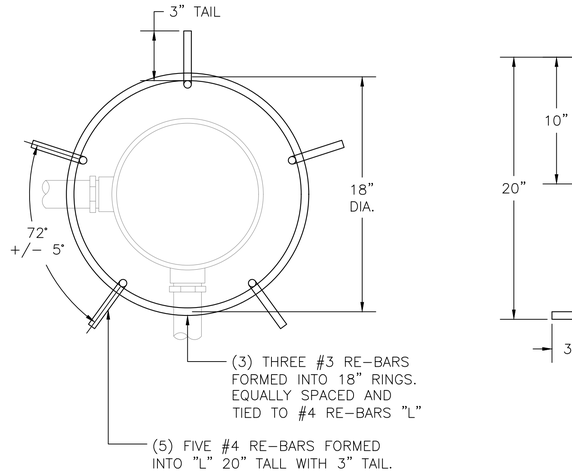
**26 56 00 - 01**




[BI] – BOTH INSTALLATION

**SECTION** 1
TYPICAL BASE CAN INSTALLATION –
SCALE: NTS




**DETAIL** 2
BASE CAN REINFORCING CAGE –
SCALE: NTS

## BASE CAN INSTALLATION NOTES:

1. BASE CAN SHALL BE ORDER WITH THREADED HUBS BASED ON PLANS AND FIELD CONDITIONS. FIELD INSTALLED CORE WITH GROMMETS ARE NOT ACCEPTABLE.
   A. TYPICAL BASE CAN DIAMETER IS 12" (SIZE B) UNLESS OTHERWISE IDENTIFIED.
   B. BASE CAN INSTALLED IN CONCRETE SHALL BE 24" DEEP TYPICALLY UNLESS OTHERWISE STATED.
   C. BASE CAN INSTALLED IN ASPHALT PAVEMENT SHALL BE 18" DEEP WITH A 6" RISER TYPICALLY UNLESS OTHERWISE STATED.
   D. BASE CAN INSTALLED IN AIRCRAFT MOVEMENT PAVEMENT SHALL BE L-868, AND 60" OFF NEAREST AIRCRAFT MOVEMENT PAVEMENT EDGE.
   E. BASE CAN INSTALLED IN SHOULDER OR GRASS AREA SHALL BE L-867, UNLESS OTHERWISE CALLED OUT.
2. CONDUIT TYPE PER PLANS, TYPICALLY PVC. CONDUIT SIZED PER PLANS, TYPICALLY SIZE 2".
3. TYPICALLY 30" LONG LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT (LFNC) MATCHING CONDUIT SIZE. WHERE CONDUIT CONNECTION BETWEEN BASE CANS IS LESS THAN TEN FEET (10') LFNC MAYBE USED BETWEEN BASE CANS.
4. INSTALL 3/4" PLYWOOD COVER DURING INSTALLATION OF BASE CAN.
5. BASE CAN GROUND WHIP SHALL BE #6 AWG BARE COPPER. INSTALL CRIMPED RING TERMINAL TO BASE CAN GROUND WHIP AND MECHANICALLY CONNECT TO EXTERNAL GROUND LUG. EXOTHERMICALLY WELD OTHER END OF BASE CAN GROUND WHIP TO COUNTERPOISE.

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
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| 1 | 01/01/2024 | KDM | NEW DETAIL, 2024 F&I STANDARD DETAILS | | | | | | |
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PROJECT: **F&I STANDARD DETAILS**
SHEET TITLE: **AIRFIELD LIGHTING DETAIL 1**

WORK PROJECT NO.
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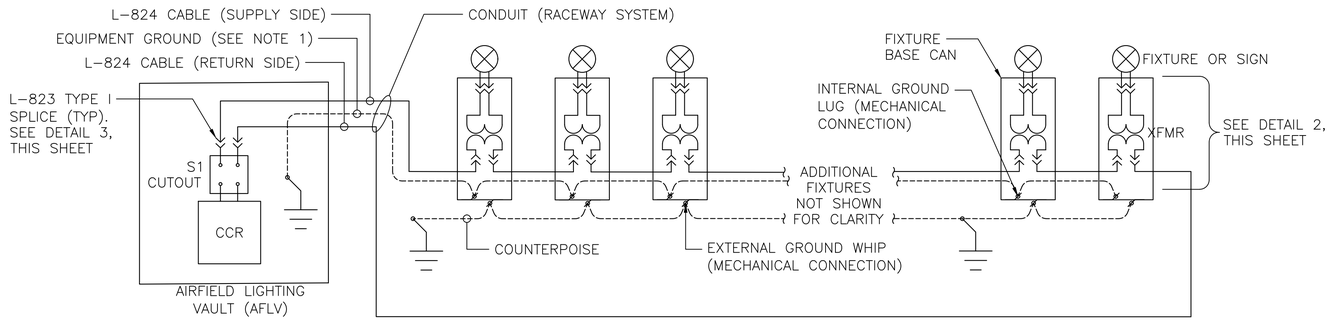
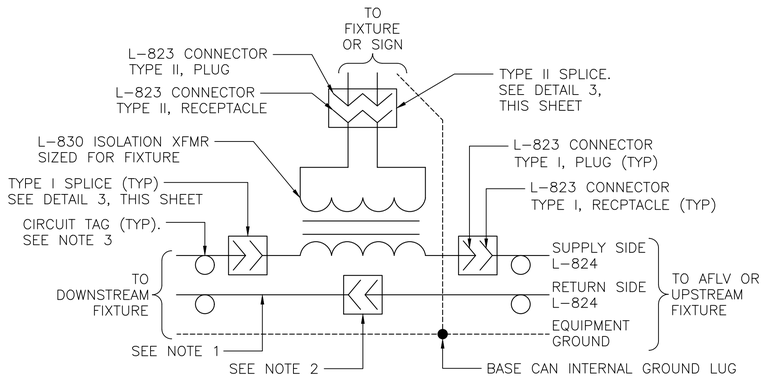


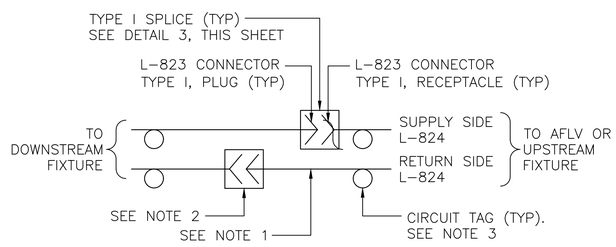

## TYPICAL CONSTANT CURRENT ONE-LINE NOTES:

1. A SINGLE EQUIPMENT GROUND SHALL BE IN THE CONDUIT (RACEWAY) OF THE AIRFIELD LIGHTING CIRCUIT.

**DETAIL 1**
TYPICAL CONSTANT CURRENT CIRCUIT ONE-LINE
SCALE: NTS




TYPICAL FIXTURE OR SIGN ONE-LINE

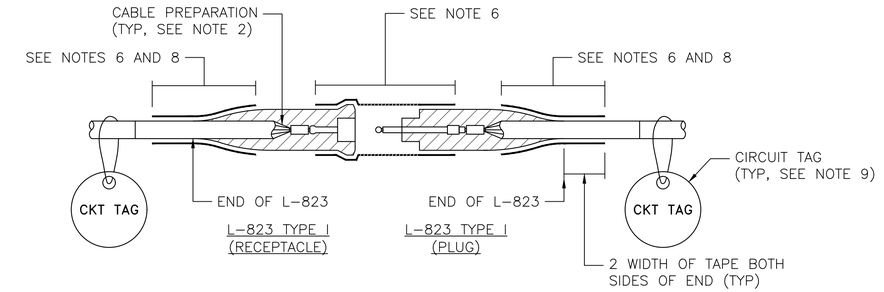



TYPICAL SPLICE ONE-LINE

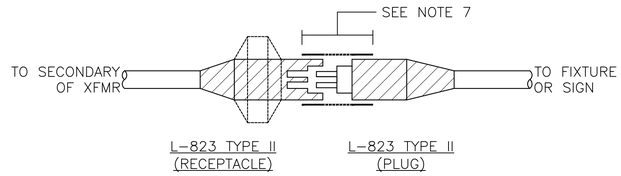
## ONE-LINE L-823 AND L-824 NOTES:

1. RETURN CONDUCTOR NOT ALWAYS PRESENT.
2. L-823 CONNECTOR ON RETURN CONDUCTOR NOT ALWAYS PRESENT.
3. CIRCUIT TAGS SHALL BE INSTALLED ON BOTH SIDES OF A FIELD INSTALLED L-823 SPLICE. IF A RETURN CONDUCTOR IS WITHOUT A L-823 SPLICE INSTALLED A SINGLE CIRCUIT TAG IS ACCEPTABLE ON THAT CONDUCTOR.

**DETAIL 2**
TYPICAL L-823 AND L-824 CONNECTION ONE-LINE
SCALE: NTS




TYPE I – PRIMARY (5KV) CONNECTION




TYPE II – SECONDARY (600V) CONNECTION

## AIRFIELD LIGHTING CABLE CONNECTION (L-823) NOTES:

1. PROVIDE PLUG & RECEPTACLE L-823 CONNECTORS AS REQUIRED ON EACH CONDUCTOR AT ACCESS POINT (BASE CAN, HAND HOLE, MANHOLE, ETC) AS INDICATED IN DRAWING OR BY FIELD ENGINEER TO ALLOW ISOLATION OF HOMERUN CIRCUIT.
2. ALL CABLE ENDS SHALL BE PREPARED WITH THE USE OF A TAPERING TOOL SPECIFICALLY DESIGNED FOR USE WITH L-824 CABLES.
3. PLUG AND RECEPTACLE END FITTINGS SHALL BE CRIMPED ONTO THE CONDUCTOR BY USE OF AN AIRPORT PERSONNEL ACCEPTED HYDRAULIC TYPE CRIMPING TOOL.
4. AT THE POINT OF CONNECTION WITH THE EXISTING FIELD CIRCUITS, INSTALL NEW L-823 PLUGS ON BOTH THE NEW AND EXISTING CABLES. VERIFY INSULATION TYPES OF BOTH NEW & EXISTING CABLES & COORDINATE WITH TERMINATION KITS TO ASSURE PROPER AND WATERPROOF FIT.
5. THERE SHALL BE NO SPLICES BETWEEN LIGHTS. SPLICES ALLOWED IN BASES OR ACCESS POINTS ONLY.
6. WRAP AREA WITH TWO LAYERS. EACH WRAP SHALL BE OVERLAPPED BY 1/2 WIDTH OF THE TAPE.
   FIRST LAYER IS 1" WIDE, 30-MIL THICK, MEDIUM VOLTAGE, ETHYLENE PROPYLENE RUBBER SPLICING TAPE (3M SCOTCH 130V OR EQUAL)
   SECOND LAYER IS 1" WIDE, 8.5-MIL THICK, 600V, VINYL (PVC) TAPE (3M SCOTCH SUPER 88 OR EQUAL).
7. WRAP AREA WITH TWO LAYERS. EACH WRAP SHALL BE OVERLAPPED BY 1/2 WIDTH OF THE TAPE. OMIT TAPE FOR ELEVATED FIXTURES
   FIRST LAYER IS 1" WIDE, 8.5-MIL THICK, 600V, VINYL (PVC) TAPE (3M SCOTCH SUPER 88 OR EQUAL).
   SECOND LAYER IS 1" WIDE, 8.5-MIL THICK, 600V, VINYL (PVC) TAPE (3M SCOTCH SUPER 88 OR EQUAL).
8. FOR FACTORY MOLDED TYPE I OR TYPE II CONNECTORS, TAPING OF THE ENDS SHALL NOT BE REQUIRED.
9. INSTALL CABLE TAGS ON FIELD CABLES ONLY, AND NOT FACTORY CABLES OF TRANSFORMER.

**DETAIL 3**
TYPICAL AIRFIELD LIGHTING CABLE CONNECTION (L-823)
SCALE: NTS

REVISIONS

| NO. | DATE | BY | DESCRIPTION | APP'D | NO. | DATE | BY | DESCRIPTION | APP'D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 01/01/2024 | KDM | NEW DETAIL, 2024 F&I STANDARD DETAILS | | | | | | |
| 2 | 04/07/2025 | MDB | 2025 F&I STANDARD DETAILS | | | | | | |

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SHEET TITLE: AIRFIELD LIGHTING DETAIL 2

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