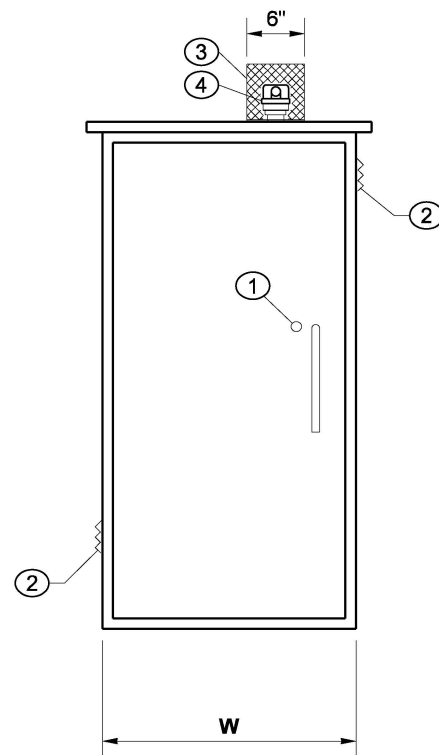
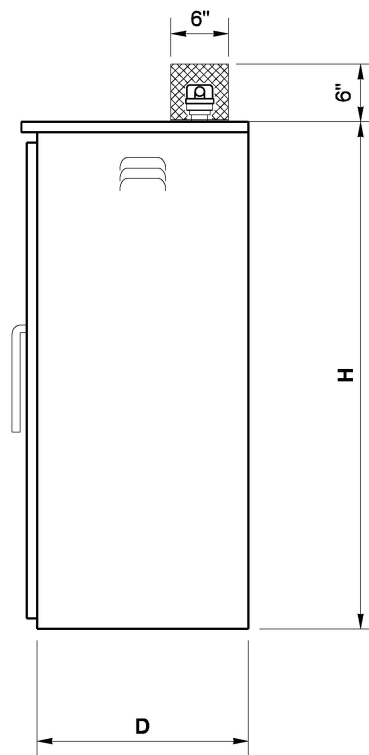


PLAN VIEW

TRANSFORMER SIZE (KVA)	CABINET DIMENSIONS		
	H	W	D
UP TO 12.5	48"	24"	20"
12.6 TO 37.5	60"	32"	30"



ELEVATION VIEW



SIDE VIEW

TRANSFORMER CABINET HOUSING

NOTES

1. See **Standard Specification Section 9-29.24** (Service Cabinets) and **9-29.25** (Amplifier, Transformer, and Terminal Cabinets).
2. Cabinet shall be rated NEMA 3R and shall include rain-tight vents as shown.
3. Dimensions shown are minimum and shall be adjusted to accommodate the various sizes of equipment installed. A 1% tolerance is allowed for all dimensions.
4. Doors shall be padlockable and gasketed. Both doors shall include a Best CX 6-pin Construction core lock. Each door shall use three two-piece hinges, or two or three heavy-duty lift-off type hinges. Hinges shall not be accessible with the doors closed.
5. Hinges with pins shall have stainless steel or brass pins - see door hinge details. When using two piece hinge type on galvanized enclosure, remove hinge pin prior to welding hinge to cabinet and prior to hot-dip galvanizing. After galvanizing, replace pin with brass pin and solder in place.
6. Transformer section dead front panel shall include a phenolic label attached with screws or rivets. The phenolic label shall read "SUPPLIED FROM SERVICE CABINET S?? ####". See Contract Plans for service cabinet S number.
7. Equipment identified by Key Numbers 14, 15, 16, 17, 18, 19, 20, 21, 22, and 25 shall have an appropriately engraved phenolic name plate attached with screws or rivets. The name plate for Key Number 22 (Test Switch only) shall read as follows: "PHOTOCELL BYPASS TEST ON" AND "PHOTOCELL TEST OFF - AUTOMATIC" (see test switch label detail).
8. All busswork shall be **ASTM B187** copper and shall have a minimum rating of 125 amps. All breakers shall bolt on to the busswork. Jumpering of breakers is not allowed. Busswork shall accommodate all future equipment as shown in the Breaker Schedule.
9. All nuts, bolts, and washers used for mounting the photocell enclosure shall be stainless steel.
10. The photocell unit shall be centered in the photocell enclosure to permit 360 degree rotation of the photocell without removal of the photocell unit or the photocell enclosure.
11. All internal wire runs shall be identified with "TO - FROM" coded tags labeled with the code letters and/or numbers shown on the Schedules. Approved PVC or polyolefin wire marking sleeves shall be used.
12. See Contract for Breaker and Contactor Schedule.
13. Buss bars shall be sized to accommodate up to #4 AWG wires.
14. Cabinet shall support a maximum of one lighting circuit (one lighting contactor).
15. Where no lighting circuit is required, do not include Key Items 3, 4, 21, and 25, and omit test switch from Key Item 22.
16. See **Standard Plan J-10.10** for foundation and anchor bolt details. Cabinet shall be oriented such that it opens away from traffic, unless otherwise specified in the Contract Plans.

KEY

- ① DOOR WITH BEST CX 6-PIN LOCK CORE
- ② SCREENED VENT LOUVER ~ MINIMUM 2 REQUIRED (1 EACH SIDE)
- ③ PHOTOCELL ENCLOSURE ~ SEE PHOTOCELL MOUNTING DETAIL ~ ENCLOSURE SHALL BE FABRICATED FROM EITHER:
A. 5/8" (IN) EXPANDED STEEL MESH WITH WELDED SEAMS AND MOUNTING FLANGES ~ HOT-DIP GALVANIZED AFTER FABRICATION
~ OR ~
B. TYPE 5052 - H32 ALUMINUM WITH 5/8" (IN) x 5/8" (IN) OPENINGS EQUIVALENT TO 5/8" (IN) EXPANDED STEEL MESH
- ④ PHOTOELECTRIC CONTROL ~ SEE **STANDARD SPECIFICATION, SECTION 9-29.11(2)**
- ⑤ ENCLOSED LOW VOLTAGE WIREWAY WITH REMOVABLE COVER.
- ⑥ NOT USED
- ⑦ TRANSFORMER SECTION HINGED DEAD FRONT WITH LOUVERED VENTS (2 MINIMUM). DEAD FRONT SHALL BE SECURED USING 1/4 TURN FASTENERS OR SLIDE LATCHES. DEAD FRONT SHALL INCLUDE A POWER SOURCE PHENOLIC LABEL (SEE NOTE 6)
- ⑧ LOAD CENTER SECTION HINGED DEAD FRONT. DEAD FRONT SHALL BE SECURED WITH 1/4 TURN FASTENERS OR SLIDE LATCHES ~ DEAD FRONT PANEL BOLTS SHALL NOT EXTEND INTO VERTICAL LIMITS OF THE BREAKER ARRAY(S)
- ⑨ ARC FLASH AND SHOCK HAZARD LABEL (FIELD INSTALLED) ~ SEE DETAIL (SHEET 2)
- ⑩ CABINET BUSSWORK RATING LABEL
- ⑪ METAL WIRING DIAGRAM HOLDER



Jun 20, 2024

**TRANSFORMER CABINET
(480V/240V - 240V/120V)**

STANDARD PLAN J-10.25-01

SHEET 1 OF 2 SHEETS

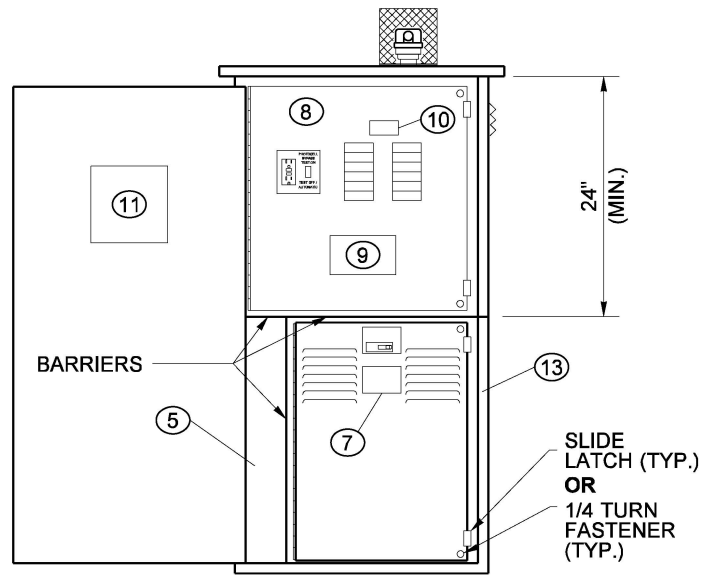
APPROVED FOR PUBLICATION

Mark A. Daines Jun 21, 2024

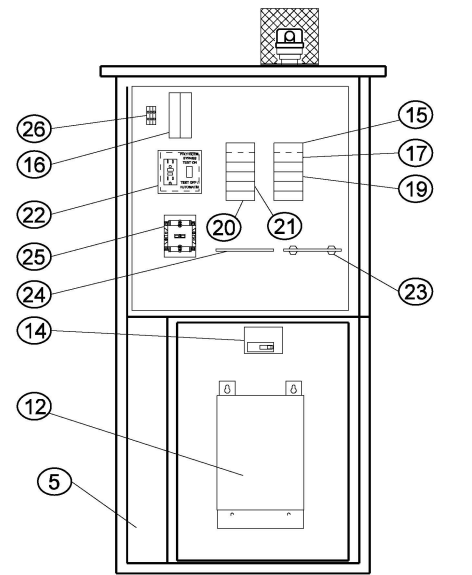
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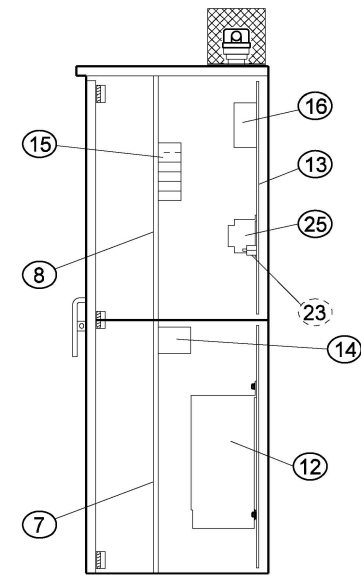
Washington State Department of Transportation



FRONT
(SHOWN WITH DOORS OPEN
AND DEAD FRONT CLOSED)
SERVICE CABINET INTERIOR



FRONT
(SHOWN WITH DEAD FRONTS REMOVED)
SERVICE CABINET INTERIOR DETAIL



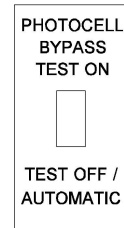
INTERIOR END VIEW
(SUPPORT FRAMES FOR EQUIPMENT
NOT SHOWN)

KEY (CONTINUED)

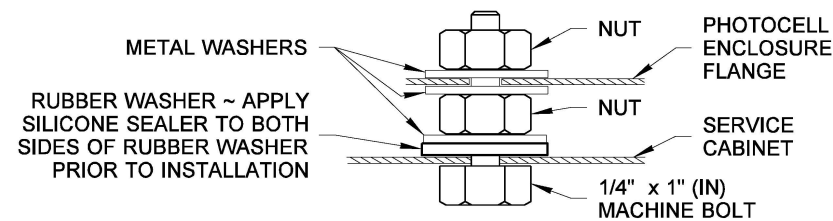
- ⑫ TRANSFORMER ON REMOVABLE ALUMINUM BACKPLATE. TRANSFORMERS OF SIZE 7.5 KVA AND ABOVE SHALL INCLUDE TWO FULL CAPACITY TAPS - ONE AT 5% AND ONE AT 10% BELOW NORMAL CAPACITY.
- ⑬ ALUMINUM BACKPLATE FOR EQUIPMENT
- ⑭ TRANSFORMER PRIMARY SIDE BREAKER ~ DPST
- ⑮ 12-CIRCUIT PANEL BOARD
- ⑯ 20 KA TYPE 1 OR TYPE 2 SURGE PROTECTION DEVICE ~ DIN RAIL MOUNT WITH PLUG-IN MODULE(S)
- ⑰ DPST BRANCH BREAKER ~ SEE BREAKER SCHEDULE
- ⑱ SPARE BRANCH BREAKER ~ 20 AMP SPST ~ OMIT IF BREAKER ARRAY IS FULL (SEE BREAKER SCHEDULE)
- ⑲ SPST BRANCH BREAKER ~ SEE BREAKER SCHEDULE
- ⑳ RECEPTACLE BREAKER ~ SPST 20 AMP
- ㉑ PHOTOCELL BREAKER ~ SPST 15 AMP
- GANG BOX WITH:
 - ㉒ A. RECEPTACLE (GROUNDED) ~ 125 VOLT 20 AMP GFCI
 - B. TEST SWITCH ~ 120/277 VOLT 15 AMP SPDT SNAP ACTION - POSITIVE CLOSE - "T" RATED.
 BOX MAY INCLUDE A COVER PLATE, OR MAY BE COVERED BY DEAD FRONT PANEL ~ GANG BOX SHALL BE WIRED TO THE CABINET BONDING JUMPER (KEY NUMBER 24)
- ⑳ ISOLATED NEUTRAL BUSS ~ 14 LUG COPPER (SEE NOTE 13)
- ㉒ CABINET MAIN BONDING JUMPER ASSEMBLY ~ BUSS SHALL BE 14 LUG TINNED COPPER (SEE NOTE 13) ~ SEE CABINET MAIN BONDING JUMPER ASSEMBLY DETAIL
- ㉓ CONTACTOR (BEHIND DEAD FRONT) ~ SEE BREAKER SCHEDULE
- ㉔ THREE POSITION DIN RAIL MOUNTED TERMINAL BLOCK ~ TERMINAL BLOCK SECTIONS SHALL BE BLACK, WHITE, AND RED AS SHOWN IN CABINET WIRING DIAGRAM.
- ㉕ CONNECTION TO GROUND ELECTRODE ~ SEE **STANDARD PLAN J-60.05**

ARC FLASH PROTECTION		SHOCK PROTECTION	
Arc Flash Boundary (in)	00 in	Shock Hazard When Cover Removed	000 VAC
Incident Energy at 18 inches (cal/cm ²)	0.00	Limited Approach	00 in
Assessment Date:	00-00-0000	Restricted Approach	00 in
By:		Glove Class	00
WSDOT Approval Inspector:		Date:	

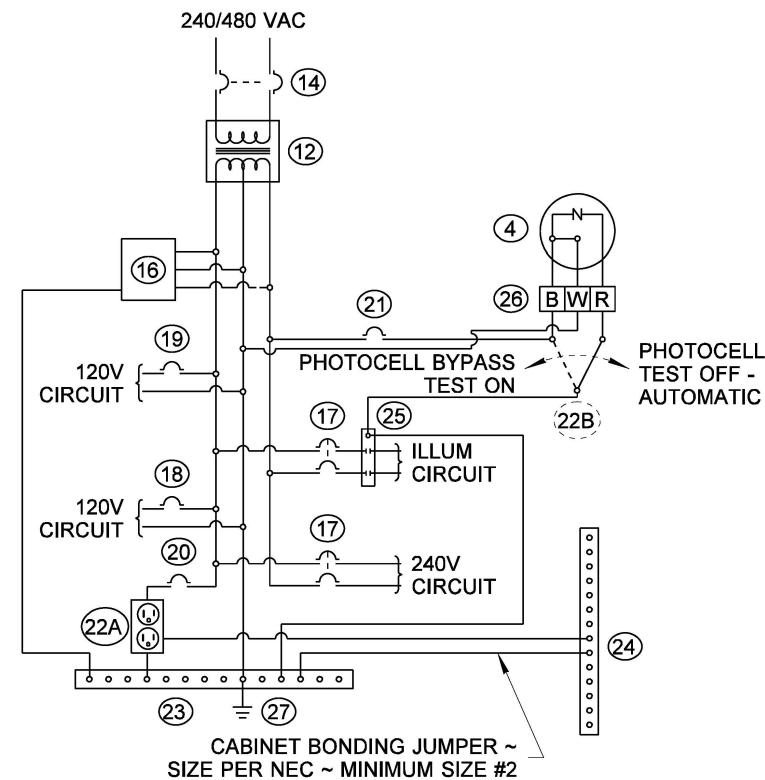
ARC FLASH AND SHOCK HAZARD LABEL DETAIL
⑨



TEST SWITCH LABEL DETAIL
⑳



PHOTOCELL ENCLOSURE MOUNTING DETAIL



WIRING DIAGRAM
(FOR REFERENCE ONLY - SEE CONTRACT FOR NUMBER AND TYPE OF 120V AND 240V CIRCUITS)



Jun 20, 2024

**TRANSFORMER CABINET
(480V/240V - 240V/120V)**

STANDARD PLAN J-10.25-01

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION

Mark A. Davies

Jun 21, 2024

STATE DESIGN ENGINEER



Washington State Department of Transportation