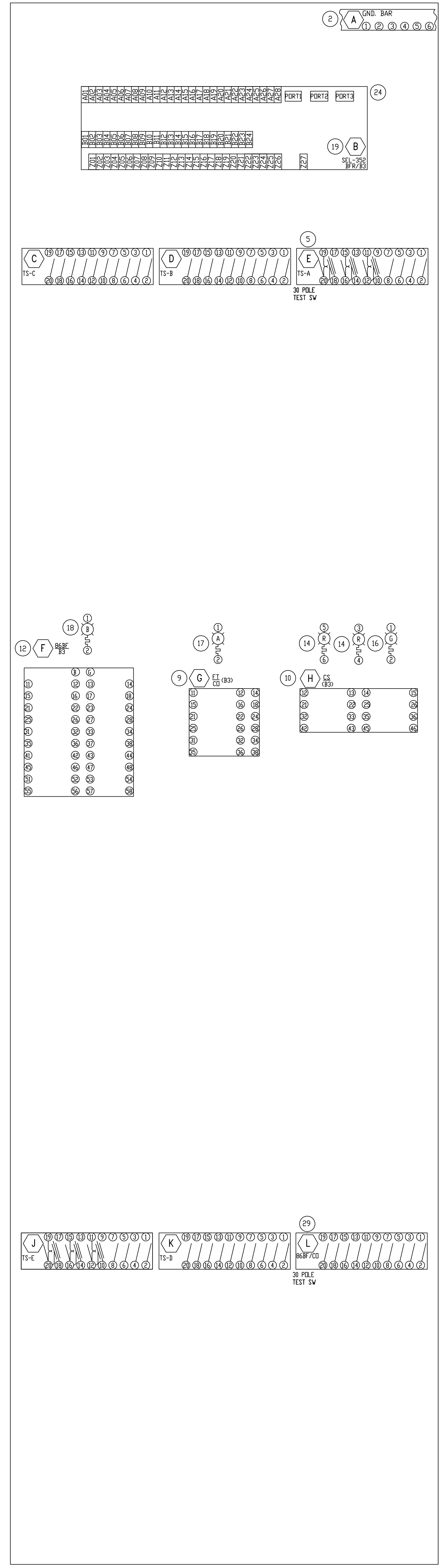
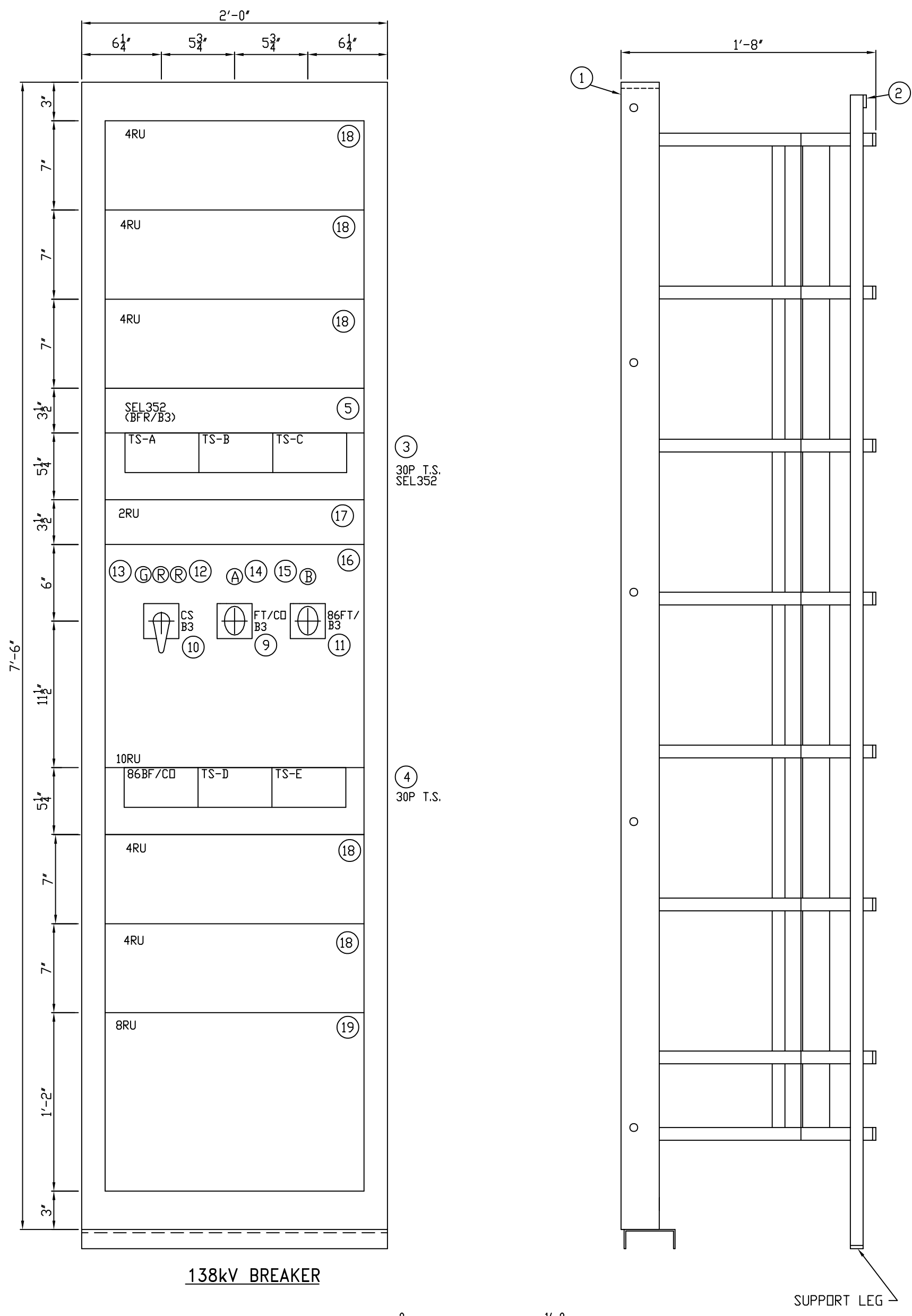


138 kV Control & Relay Frame Bill of Material

Item	Quan.	Description
1	1	Vertical Open Rack, 24" W x 90" H, with 20" deep side panels and provisions for 19" rack mount equipment as required. Panel to be fabricated from a minimum of 1/4 gauge steel. Terminal block supports shall be 1/2" x 3" angle.
2	1	Ground Bus (1" x 1/4" copper)
3	1	ABB Flexitest switch assembly, type FT-19RX, for 19 inch rack mounting with one 10.5" extended case FT-1 switch, 3 rack units, switches low, gray, Cat. No. FSXG19001001NX10.
4	1	ABB Flexitest switch assembly, type FT-19RX, for 19 inch rack mounting with two 10.5" extended case FT-1 switches, 3 rack units, switches low, gray, Cat. No. FSXG001001119NX10.
5	1	Schweitzer SEL-035210325HX4XX breaker failure relay, suitable for 125VDC operation, 150VAC maximum phase-neutral (wye), 5 amp phase, 2RU, 3 outputs & 6 inputs.
6	12	Marathon stud type terminal block, 12 point, Cat. No. 1512STRC
7	1	Bussmann class R fuseblock, two pole, 250 V, 30 ampere, Cat. No. R25030-2SR.
8	2	Ferraz Shawmut, Tri-ionic Smart Spot indicator fuse, class RK-5, 250V, 10 ampere, Cat. No. TR10R
9	1	ElectroSwitch Series 24 (FT/CO) switch as follows: Cat. No.: 242039 Engraving Code: 10C-2XGE Position Limiting Code: 2G Handle: Oval Configuration: 3 decks, 2 position, maintained Mounting: On 1/8" steel panel
10	2	ElectroSwitch Series 24 control switch as follows: Cat. No.: 74204VY Engraving Code: 18S-2XGP Handle: Flat grip Configuration: 4 decks, spring return to normal, with target Mounting: On 1/8" steel panel
11	1	ElectroSwitch Series 24 (866F/B3) switch as follows: Cat. No.: 7986D No. of contacts: 10 N.O., 10 N.C. Reset: Hand Contacts in Coil Ckt: 2 Coil: 120V DC (30-140 V DC, 27 ohm) Mounting: On 1/8" steel panel
12	2	General Electric ET-16 LED indicator for 125 VDC consisting of a receptacle/resistor assembly Cat. No. 11686708G43, red color lens for mounting on 1/8" steel panel, Cat. No. 286A5443PR4 Data Display Products T-3-1/4 lamp, red LED, 60 volt, rated for use with dropping resistor, DDP, Part No. 1835S3-R-CR. For use with General Electric ET-16 LED receptacle.
13	1	General Electric ET-16 LED indicator for 125 VDC consisting of a receptacle/resistor assembly Cat. No. 11686708G43, green color lens for mounting on 1/8" steel panel, Cat. No. 286A5443PC4 Data Display Products T-3-1/4 lamp, green LED, 60 volt, rated for use with dropping resistor, DDP, Part No. 1835S3-G-CG. For use with General Electric ET-16 LED receptacle.
14	1	General Electric ET-16 LED indicator for 125 VDC consisting of a receptacle/resistor assembly Cat. No. 11686708G43, amber color lens for mounting on 1/8" steel panel, Cat. No. 286A5443PA4 Data Display Products T-3-1/4 lamp, amber LED, 60 volt, rated for use with dropping resistor, DDP, Part No. 1835S3-A-CA. For use with General Electric ET-16 LED receptacle.
15	1	General Electric ET-16 LED indicator for 125 VDC consisting of a receptacle/resistor assembly Cat. No. 11686708G43, blue color lens for mounting on 1/8" steel panel, Cat. No. 286A5443PB4 Data Display Products T-3-1/4 lamp, blue LED, 60 volt, rated for use with dropping resistor, DDP, Part No. 1835S3-B-CB. For use with General Electric ET-16 LED receptacle.
16	1	Mounting plate, 10RU
17	1	Filler plate, 2RU
18	5	Filler plate, 4RU
19	1	Filler plate, 8RU
20	1	Test switch, two pole, front connected, Superior Cat. No. 21385-F, Meter Devices Cat. No. 617, States Cat. No. 202-A.



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FOR REVIEW

NOT FOR CONSTRUCTION

ENG: JM / AA / ZL	CYCLONE		
APP: JDM	CITY: AMES	STATE: IDWA	ZIP: 50014
DATE: 02/19/2021	DRAWING CREATED BY IDWA STATE SENIOR DESIGN 2020.		
ISSUE: For Review	DES MOINES/XMFR 1 138 kV BREAKER 3 PANEL LAYOUT		
ISU-SD-04	IA-000-08-03		