E N G I N E E R I N G
R O A D W A Y
O F F I C E
C O N T R O L  C E N T E R  W I R I N G
S T A N D A R D  R O A D W A Y  C O N S T R U C T I O N  D R A W I N G
S C D  N U M B E R
H L -6 0 .3 1
E N G I N E E R
S T D S .
R E V I S I O N  D A T E
T R A N S P O R T A T I O N  A D M I N I S T R A T O R
S T A T E  O F  O H I O  D E P A R T M E N T  O F
0 1-17 -2 0 2 0
D a v i d  L . H o l s t e i n
D u e m m e l

120 Volt Coil
3 Pole Contactor
(2 Pole Branch Circuit Breakers)

240 Volt Coil
3 Pole Contactor

120 Volt Photo-Electric Relay
Line
Neutral
Load

240 Volt Photo-Electric Relay
Line
Neutral
Load

Fused 3 Pole Disconnect (Note 6)

Fused 3 Pole Disconnect (Note 6)

Grounding Electrode

Neutral Bus Bar

Neutral Bus Bar

Feeder Bus Bars (2)

Feeder Bus Bars (2)

120 and 120/240 VOLT CONNECTIONS

480 and 480/480 VOLT CONNECTIONS (SINGLE-PHASE)

NOTES:

1. Power line fuses shall be Class RK.
2. Control fuse shall be Class CC.
3. See standard ampere ratings in NEC 240.6 (2011). Disconnect fuse and circuit breakers shall be coordinated per NEC 240.6(D) (2011).
5. Enclosure construction shall conform to NEC Art. 409.
6. Lighting branch circuits shown are schematic, typically all branch circuits emanating from a control center have the same configuration, voltages on all conductors for new construction shall not exceed 277V to ground.
7. Do not include neutral conductor in lighting branch circuits if all loads are connected line-to-line. See Hl-60.11, Hl-60.12 and Hl-60.21.
8. Alternating luminaire loads L₁+N, L₂ for the length of the branch circuit.
9. For lighting branch circuits fed from 3-phase service, apply colored phase tape on the load side of the circuit breakers as follows:
   - A one stripe
   - B two stripes
   - C three stripes
   Use a different colored tape for each branch circuit. Do not use red or blue for branch circuits.
   Phase marking tape is in addition to CMS 625.17 and 725.02 marking requirements for circuit identification.
   For all ungrounded conductors inside the control center on the line side of the branch circuit breakers, apply phase tape as follows:
   - A block (or no tape)
   - B Red
   - C Blue
   Use a different colored tape for each branch circuit, for all ungrounded conductors inside the control center on the line side of the branch circuit breakers, apply colored tape, but do not use the same color as any branch circuit.
10. Fast identification means inside each enclosure per NEC 210.5.
11. Bus bars and ground bars are required.
12. Remove enamel coating from under ground bar.
13. Surge Protective Device (SPD) required, see HL-40.20. Connect power leads to line side of fused disconnect, neutral lead to neutral bus bar.