



# **BEKOLAY & Associates. Ltd.**

*Consulting Engineers*

## **Schedule of Electrical Revisions on Drawings Issued Since Jan 23, 2016**

### **1. Drawing E-1**

- a. Revision 10: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Change underground service to re-use existing conductors for 600V service.
  - ii. Added symbols to legend (dry type transformer, existing to remain, existing to be removed, existing to be relocated/relocated existing).
- b. Revision 11: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. Added location of standby generator.
  - ii. Revised exterior lighting to connect wall mounted lighting from standby power.
  - iii. Added additional photocell to control lighting on standby power.
  - iv. Revised catch basin heat trace to trace 5 catch basins. Heat trace by electrical contractor. Electrical contractor to submit supplier/manufacturer shop drawings with details of insulated sumps.
  - v. Revised location of illuminated sign and added empty conduit for data.
- c. Revision 12: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Added security cameras – installation and connection by owner’s security contractor
  - ii. Added 2 additional wall mounted lighting fixtures on standby power.
  - iii. Added symbols to legend (smoke alarm and CO alarm).

### **2. Drawing E-2**

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Changed main service disconnect to fully rated main service protector.
  - ii. Changed transformer feeding distribution center #2 to 112.5kVA.
    1. Changed primary feeder to 3 No. 1/0 + G – 53mmC
    2. Changed secondary feeder to 3 No. 500mcm + G – 91mmC
  - iii. Changed distribution center #4 to be supplied from distribution center #2 and located in existing main floor electrical room.
  - iv. Changed feeder size to Panels A & B to 3 No. 1/0 + G – 41mmC
  - v. Changed Panel F to be connected on phases B & C and Panel G to be connected on phases C & A. Revised both panels to retain existing 200A main breaker.
  - vi. Added Panel R. Connect from distribution center #5.
  - vii. Revised standby feeder to transfer switch (feeding distribution center #3) to 3 No. 6 + G – 35mmc
  - viii. Changed MAU-2 to be connected from distribution center #3

- ix. Changed feeder to distribution center #6 to 3 No. 3/0 + G – 53mmC
- x. Changed MAU-1 and P-6 to be connected from distribution center #6
- b. Revision 10: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. Changed distribution center #4 disconnect to 200A/200A fused. Changed feeder to 4 No. 3/0 + G – 63mmC
  - ii. Revised Panel R. Panel R no longer subfeeds Panel C
  - iii. Change Panel C to be connected from distribution center #4. Feed from existing 200A disconnect with new 120A fuse.
  - iv. Change transfer switch (feeding distribution center #5) to 100A.
    - 1. Change normal power disconnect to 100A/90A fused.
    - 2. Change incoming normal power feeder to 3 No.3 + G – 35mmC.
    - 3. Change outgoing feeder to 3 No. 6 + G – 35mmC.
    - 4. Change standby power disconnect to 60A/60A fused.
    - 5. Change incoming standby power feeder to 3 No. 6 + G – 35mmC.
  - v. Change 45kVA secondary side feeder to 4 No. 1/0 + G – 53mmC
  - vi. Change distribution center #5 disconnect to 200A/125A fused.
  - vii. Change transfer switch (feeding distribution center #3) to 100A.
    - 1. Change normal power disconnect to 100A/100A fused.
    - 2. Change incoming normal power feeder to 3 No. 3 + G – 35mmC.
    - 3. Change outgoing feeder to 3 No. 3 + G – 35mmC
    - 4. Change standby power disconnect to 60A/60A fused.
    - 5. Change incoming standby power feeder to 3 No. 6 + G – 35mmC
    - 6. Add signal to disconnect heat pumps on Panels H & J
  - viii. Revised elevator distribution to agree with elevator supplier documentation.
  - ix. Added note on distribution center #3 – Fuses acceptable if time delay
  - x. Added general notes for transfer switches and feeder sizes.
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Changed Panel C feeder to 3 No. 2 + G – 41mmC
  - ii. Changed standby generator to 60kW
  - iii. Changed Generator output feeder to 3 No. 3 + G – 53mmC PVC (U/G)
  - iv. Changed distribution center #7 from 120/208V 3Ø 3W 400A to 120/208V 3Ø 4W 400A
  - v. Added note on generator and transfer switches.
  - vi. Change MAU-1 disconnect to 60A/35A fused.
  - vii. Change P-6 feeder to 3 No.12 + G – 21mmC
  - viii. Change MAU-2 breaker to 15A-3P

### 3. Drawing E-3

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Added connection to kitchen exhaust hood.
  - ii. Add combination smoke/CO alarms in units (revised in revision 11)

- b. Revision 10: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. Revised generator location, connection of accessories, and noted noise and emission control by supplier.
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Revised generator accessories connections.
  - ii. Added underground conduits from generator and cut/patch and waterproof at building entry
  - iii. Add new breaker for MAU-2 convenience receptacle.
  - iv. Changed combination smoke/CO alarms in units to smoke alarms except in units adjacent to gas fired equipment.

#### **4. Drawing E-4**

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. No Change
- b. Revision 10: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. No Change
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Added smoke alarms in suites in existing building
  - ii. Changed communications receptacle from ceiling mounted in enclosure to wall mounted. Revised circuiting.

#### **5. Drawing E-5**

- a. Revision 10: Jan 23, 2016 - Issued for service change to 600V & Standby power system addition.
  - i. Revised connections to mechanical equipment where added, removed, or changed – see list of mechanical changes sent out April 1<sup>st</sup> 2016 for equipment changes.
  - ii. Added connection for transfer fan TF-1
  - iii. Added air conditioner to data room.
  - iv. Revised electrical distribution for service change to 600V. Added 75kVA and 45kVA transformers and corresponding distribution.  
See single line diagram 1/E-2
- b. Revision 11: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. No Change
- c. Revision 12: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. Added additional lighting contactor and timeclock for exterior lighting on standby power.
  - ii. Revised elevator connection for 600V and to agree with elevator supplier documentation – see update in revision 13
    - 1. Added 120V disconnects for lighting and control
    - 2. Added elevator wiring schematic.

- iii. Revised catch basin heat trace. Added contactor and controller. Revised heat trace (for 5 catch basins) shown on drawing E-1.
- d. Revision 13: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Added elevator supplier designation to elevator equipment for clarification
  - ii. Revised elevator wiring schematic to more accurately describe requirements of elevator supplier.
  - iii. Changed distribution center #7 from 120/208V 3Ø 3W 400A to 120/208V 3Ø 4W 400A
  - iv. Relocated new linen chute and standpipe supervised valves and flow switches.
  - v. Added new standpipe supervised valve and flow switch.
  - vi. Changed communications receptacle from ceiling mounted in enclosure to wall mounted. Revised circuiting.
  - vii. Added CO alarm in boiler room.
  - viii. Changed combination smoke/CO alarms in units to smoke alarms.
  - ix. Add low temperature sensing thermostat

#### **6. Drawing E-6**

- a. Revision 11: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. No Change
- b. Revision 12: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. No Change
- a. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - ii. Existing building corridor lighting locations and quantities adjusted for expanded suites.
  - iii. New building corridor lighting locations adjusted for bulkhead locations.
  - iv. Relocated new ground floor supervised valve and flow switch.
  - v. Changed communications receptacle from ceiling mounted in enclosure to wall mounted. Revised circuiting.
  - vi. Changed combination smoke/CO alarms in units to smoke alarms.

#### **7. Drawing E-7**

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Added condensing unit for data room air conditioner
- b. Revision 12: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. No Change
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Relocated new second floor supervised valve and flow switch.
  - ii. Changed communications receptacle from ceiling mounted in enclosure to wall mounted. Revised circuiting.
  - iii. Changed combination smoke/CO alarms in units to smoke alarms.

#### **8. Drawing E-8**

- a. Revision 11: Feb 10, 2016 - Re-Issued for pricing & Construction

- i. No Change
- b. Revision 12: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. No Change
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Relocated new third floor supervised valve and flow switch.
  - ii. Changed communications receptacle from ceiling mounted in enclosure to wall mounted. Revised circuiting.
  - iii. Changed combination smoke/CO alarms in units to smoke alarms.

#### **9. Drawing E-9**

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Revised the following panel schedules:
    - 1. Panel H
    - 2. Panel J
    - 3. Panel K
    - 4. Panel R
- b. Revision 10: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. Revised the following panel schedules:
    - 1. Panel J
    - 2. Panel P
    - 3. Panel R
  - ii. Add contactors to de-energize heat pumps on panel H & J
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Relocated new fourth floor supervised valve and flow switch.
  - ii. Changed communications receptacle from ceiling mounted in enclosure to wall mounted. Revised circuiting.
  - iii. Changed combination smoke/CO alarms in units to smoke alarms.
  - iv. Added smoke detector at top of elevator shaft (zone previously indicated on fire alarm schematic).

#### **10. Drawing E-10**

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Added connection for elevator shaft exhaust fan EXH-2
  - ii. Added connection for kitchen exhaust fan EXH-3
- b. Revision 10: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. No Change
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. No Change

#### **11. Drawing E-11**

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Revised the following panel schedules:
    - 1. Panel D

- 2. Panel F
    - 3. Panel G
  - ii. Added schedule for Panel Q
- b. Revision 10: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. Revised schedule for panel F
  - ii. Added heat pump load shedding schematic
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Revised the following panel schedules:
    - 1. Panel C
    - 2. Panel Q
  - ii. Revised heat pump load shedding schematic

## **12. Drawing E-12**

- a. Revision 9: Feb 10, 2016 - Re-Issued for pricing & Construction
  - i. Added specification items:
    - 1. Automatic transfer switch
    - 2. Dry type transformers
  - ii. Revised mechanical equipment schedule
- b. Revision 10: Mar 02, 2016 - Update for Standby Generator Connection Revision
  - i. No Change
- c. Revision 11: Apr 4, 2016 - Issued for Revisions Indicated
  - i. Revised automatic transfer switch specification
  - ii. Revised resident call system specification
  - iii. Added standpipe supervised valve on fire alarm schematic.