

ELECTRICAL SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. Basic electrical Requirements, in addition to NFPA 70.

LAYOUT OF THE WORK

- A. Examine the site and all the drawings before proceeding with the layout and installation of this work. Conduit, boxes, etc., essentially as shown on the drawings but in exact layout determined on the job to suit actual conditions.
- B. Complete all cutting and patching.
- C. Arrange exposed work as closely as practicable to structures or surfaces in an accurate alignment.

INTERFERENCES

A. Notify Owner and the Engineer to resolve such interference or discrepancy. The Contractor, when directed by owner/engineer shall make such changes or off-sets as required so that the work shall be properly located. Failure to comply with the foregoing will not relieve contractors responsibility of making such changes. Such changes shall be completed at no additional cost to the Owner.

WORKMANSHIP

A. All work shall be performed in a professional manner, the contractor shall be considered Owners point of contact for daily communications.

REFERENCES

A. Conform to requirements of NFPA 70, 2017 Michigan Electric Code, 2015 Michigan Building Code, and Local Codes.

REGULATORY REQUIREMENTS

- A. Conform to applicable Building Code.
- B. Conform to requirements of NFPA 70, 2017 Michigan Electric Code, 2015 Michigan Building Code, and Local Codes.
- C. Equipment: U.L. tested and approved for its purpose.

PROJECT/SITE CONDITIONS

A. Install Work in locations shown on drawings.

RECORD DRAWINGS

A. Furnish as-built drawings as part of project close-out. As-built plans shall include a marked up drawing set, returned to the engineer.

BUILDING WIRE

- A. Description: Single conductor insulated wire or MC cable is acceptable.
- B. Conductor: Copper.
- C. Insulation Voltage Rating: 600 volts.
- D. Insulation: Type THHN/THWN 75°C.

CONDUIT

- A. EMT Conduit
- B. Flexible Metal Clad

WIRE/CABLE INSTALLATION

- A. Neatly train and lace wiring inside boxes.
- B. All wiring shall be installed in conduit unless noted otherwise.

INTERFACE WITH OTHER PRODUCTS

A. Identify wire and cable at surface end and load.

FIELD QUALITY CONTROL

- A. Perform field inspection and testing.
- B. Inspect wire and cable for physical damage and proper connection.
- C. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- D. Verify continuity of each branch circuit conductor.

SUPPORTING DEVICES

- A. Conduit and equipment supports.
- B. Anchors and fasteners.

PRODUCT REQUIREMENTS

- A. Materials and Finishes: Provide adequate corrosion resistance.
- B. Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products.
- C. Anchors and Fasteners:
  - 1. Concrete Structural Elements: Use expansion anchors.
  - 2. Steel Structural Elements: Use beam clamps.
  - 3. Concrete Surfaces: Use self-drilling anchors and expansion anchors.
  - 4. Hollow Masonry, Plaster, and Gypsum Board Partitions: Use toggle bolts and hollow wall fasteners.
  - 5. Solid Masonry Walls: Use expansion anchors.
  - 6. Sheet Metal: Use sheet metal screws.
  - 7. Wood Elements: Use wood screws.

INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
  - B. Do not fasten supports to pipes, ducts, mechanical equipment, and conduit.
  - C. Do not use spring steel clips and clamps.
  - D. Do not use powder-actuated anchors.
- Do not drill or cut structural members.





ELECTRICAL IDENTIFICATION

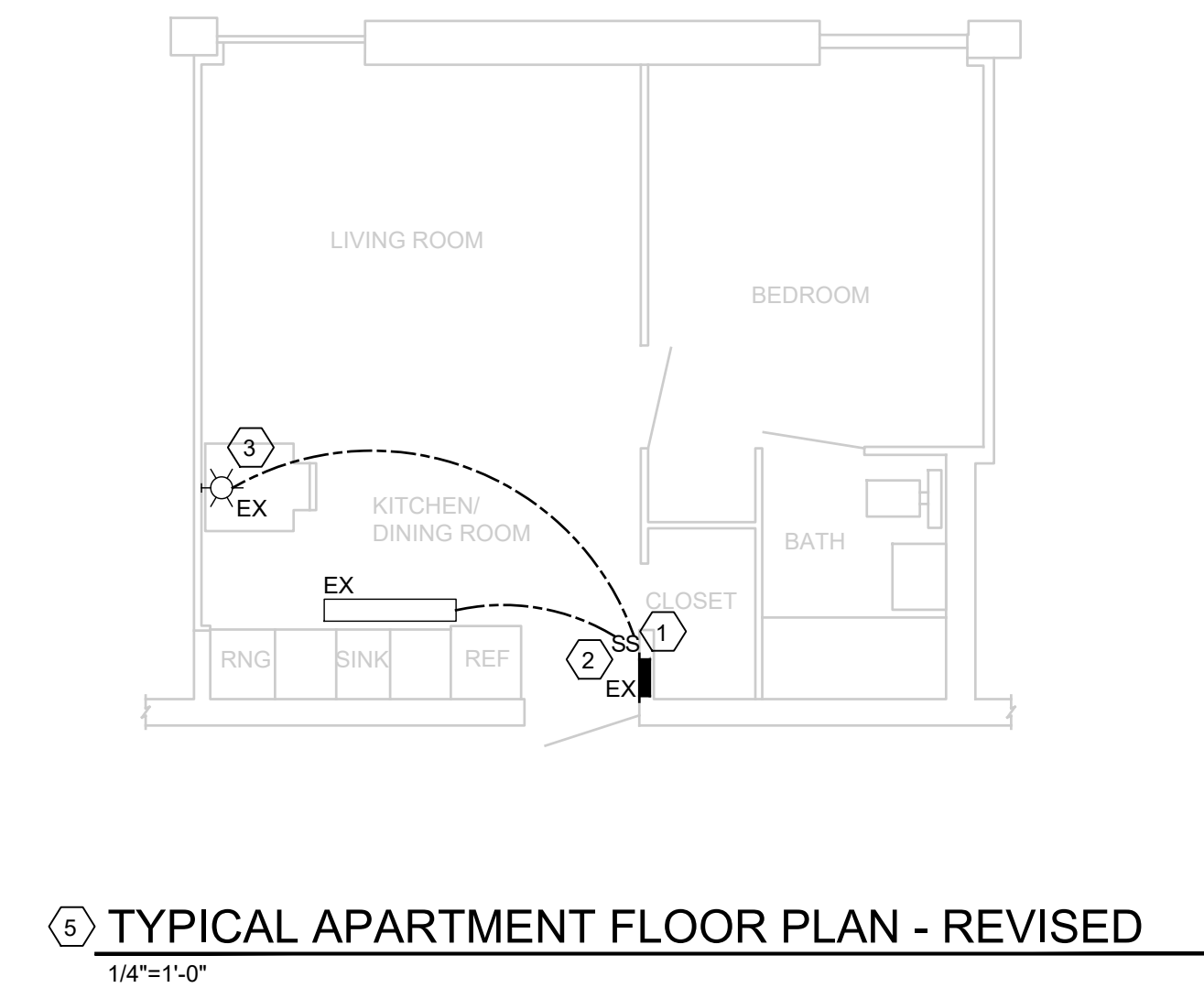
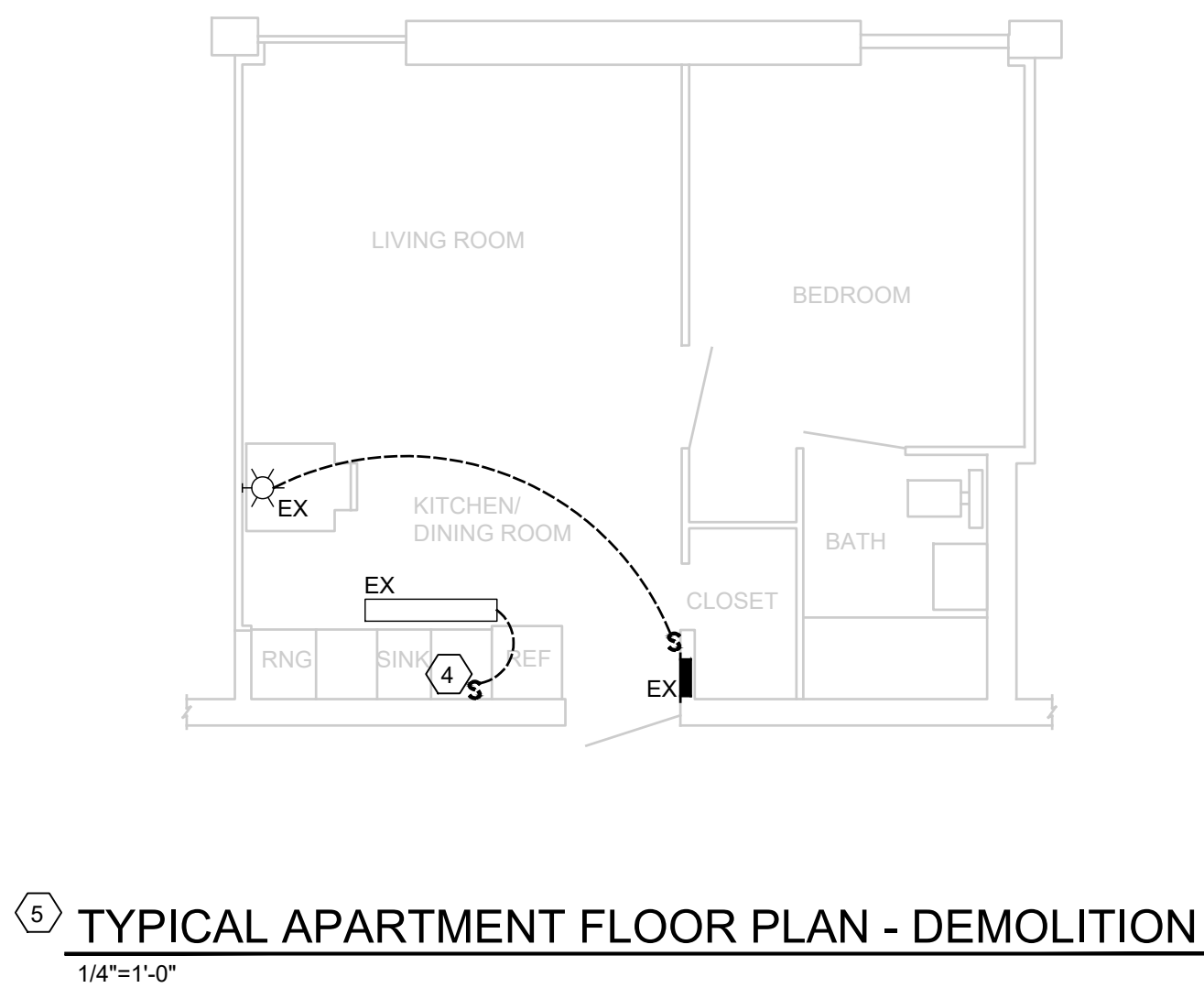
- A. Update panel schedules with new type written circuit directory.
- B. Install typed circuit identification on all fixtures clear tape with black letters.

WIRE MARKERS

- A. Manufacturers:
  - 1. Brady, Cable Line, 3M.
- B. Description: Tape or tubing type wire markers.

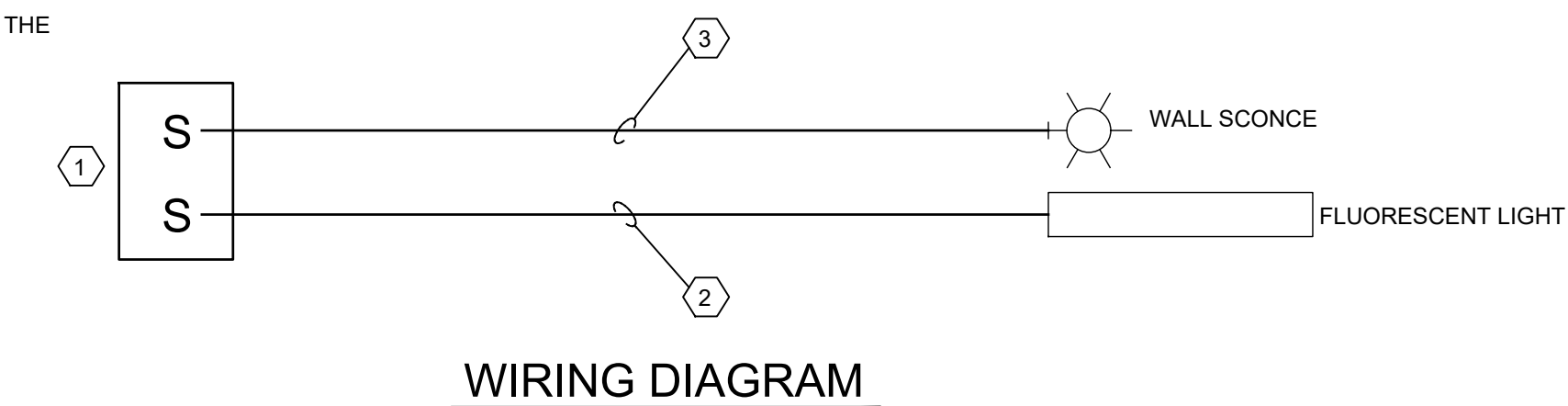
ELECTRICAL SYMBOLS

-  FLUSH MOUNTED PANEL
-  PANELBOARD
-  WALL SCONCE LIGHT
-  FLUORESCENT LIGHT
- EX EXISTING
- GFI GROUND FAULT CIRCUIT INTERRUPTER



KEYED NOTES

- 1 EC SHALL REUSE THE EXISTING SINGLE GANG ROUGH IN BOX TO INSTALL A NEW 20 AMP DUPLEX SINGLE POLE SWITCH.
- 2 EXTEND/MODIFY THE EXISTING WIRING IN A MANNER THAT THIS SWITCH CONTROLS THE EXISTING KITCHEN FLUORESCENT LIGHT.
- 3 RECONNECT THIS SWITCH TO CONTROL THE APARTMENT'S WALL SCONCE.
- 4 EC SHALL PROVIDE A BLANK COVERPLATE OVER THE EXISTING ROUGH IN BOX.
- 5 EC SHALL PERFORM THIS WORK AS DIRECTED BY THE OWNER FOR 71 APARTMENTS.



ISSUED FOR BIDS		10/22/2020
REV.	DESCRIPTION	BY DATE
<b>MALONEY MANOR APARTMENT LIGHT SWITCH RECONFIGURATION</b>		
<b>ELECTRICAL APARTMENT FLOOR PLANS</b>		
 <b>MacMILLAN ASSOCIATES</b> CONSULTING ENGINEERS 714 EAST MIDLAND STREET • BAY CITY, MICHIGAN 48706 (989) 894-4300 • FACSIMILE (989) 894-9930 www.macmillanassociates.com		
APPROVED BY	EAB	DATE 08/27/20
CHECKED BY	JF	JOB No. 2020-0111
DRAWN BY	DCT	DWG. No.
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