

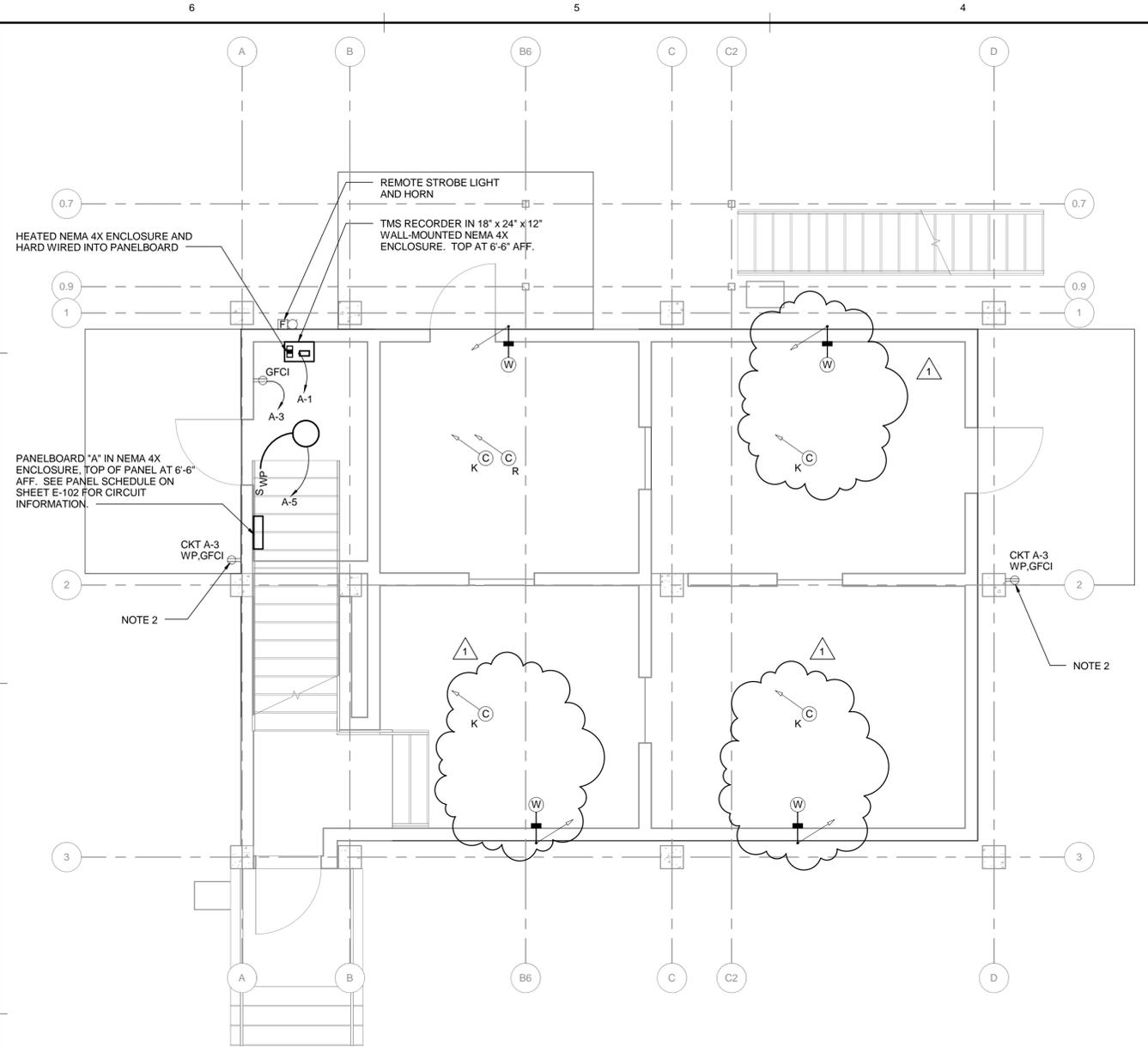


**MONTGOMERY COUNTY BURN  
BUILDING PROP**

BLACKSBURG, VIRGINIA

NO.	DATE	REVISION DESCRIPTION
1	03/24/2016	ADDENDUM #2

COMM NO: 215248  
DATE: 02/19/2016  
DRAWN: RSE DESIGN: RSE  
CHECK: WPM  
SHEET TITLE  
**ELECTRICAL PLANS,  
LEGEND, ABBREVIATIONS  
AND GENERAL NOTES**  
SHT. NO. **E-101** REV. NO. **1**



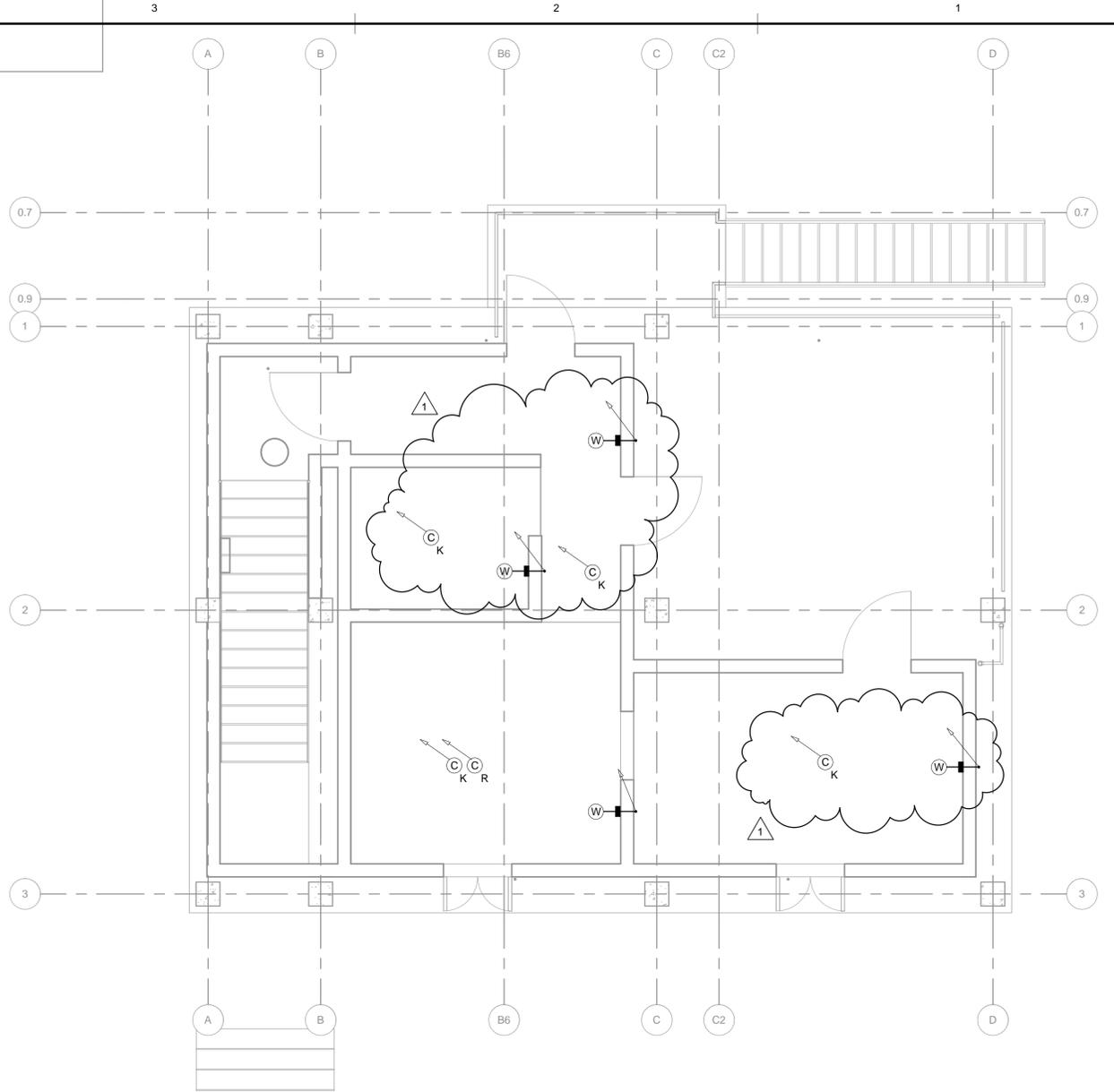
PLAN NORTH  
**2** **FIRST FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**NOTES:**

- ELECTRICAL PANEL "A" SHALL BE 120/240V, SINGLE PHASE 100A MAIN CIRCUIT BREAKER, WITH 12 OR MORE POLES IN A SURFACE MOUNTED NEMA 4X ENCLOSURE RATED FOR SERVICE ENTRANCE WITH GREATER THAN FAULT CURRENT AVAILABLE, BUT NO LESS THAN 22 KAIC. CONTRACTOR SHALL COORDINATE SERVICE FEEDER CONDUCTORS FOR <2% VOLTAGE DROP AT PANEL WITH 80% LOAD WITH MINIMUM CONDUCTOR AMPACITY SHALL BE 100A. CONDUIT SHALL BE RUN AT A MINIMUM OF 36" BELOW GRADE AND SHALL BE PVC COATED RIGID STEEL. SERVICE SHALL BE BONDED AND GROUNDED PER NEC.
- PROVIDE INSTALLATION OF EXTERIOR WEATHERPROOF DUPLEX RECEPTACLES. RECEPTACLES SHALL BE SURFACE MOUNTED. PROVIDE CAST IRON RECEPTACLE BOX. COVERPLATE DUPLEX RECEPTACLE SHALL BE SPECIFICATION GRADE.
- ALL ELECTRICAL DEVICES SHALL BE GFCI.
- USE MINIMUM CONDUCTOR SIZE OF 12 AWG IN 3/4" RIGID STEEL CONDUITS, UNLESS OTHERWISE NOTED.
- ALL HORIZONTAL CONDUIT FOR CEILING MOUNTED AND WALL MOUNTED THERMOCOUPLES SHALL BE LOCATED AT THE CENTER OF THE SECOND FLOOR SLAB.
- ALL CONNECTORS SHALL BE THREADED AND WATERTIGHT.

**GENERAL NOTES:**

- PROVIDE ALL NECESSARY LABOR, EQUIPMENT, ETC. FOR ALL WORK INDICATED AND REQUIRED FOR A COMPLETE INSTALLATION TO COMPLY WITH THE LATEST APPLICABLE EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
- ELECTRICAL SUB CONTRACTOR TO PROVIDE SYSTEM DESIGN AND PLAN LAYOUT FOR REVIEW AND APPROVAL.
- THE ELECTRICAL CONTRACTOR SHALL KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL AND RUBBISH DAILY AND AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE PREMISES ALL RUBBISH, IMPLEMENTS, AND SURPLUS MATERIALS AND LEAVE THE BUILDING "BROOM CLEAN."
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY STATING THAT ALL MATERIALS AND WORKMANSHIP ARE FREE FROM DEFECTS FOR A PERIOD OF 12 MONTHS FROM DATE OF FINAL ACCEPTANCE.
- MATERIALS:**
  - WIRE AND CABLE SHALL BE COPPER WITH THHN/THWN INSULATION AND BE SIZED AS PER THE LATEST APPLICABLE NEC.
  - WIRING RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE, WHERE APPROVED BY THE DESIGNER, EXPOSED RACEWAYS SHALL BE RUN PARALLEL AND PERPENDICULAR TO THE BUILDING CONSTRUCTION.
  - DISCONNECT SWITCHES SHALL BE SQUARE D GENERAL DUTY FUSIBLE WITH CLASS "R" FUSE CLIPS OR EQUAL.
  - FUSES SHALL BE TIME-DELAY DUAL ELEMENT TYPE AND SHALL BE SIZED AS REQUIRED AND QUANTITY.
  - ALL SWITCHES AND RECEPTACLES SHALL BE SPECIFICATION GRADE AND COLOR AS CHOSEN BY OWNER.
- THE ELECTRICAL CONTRACTOR MUST INSPECT JOB SITE PRIOR TO BIDDING JOB AND WILL INCLUDE COMPLETE RESPONSIBILITY FOR ALL LABOR AND MATERIALS AS SPECIFIED ON PLANS.
- ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE UTILITY BEFORE PURCHASE OF SERVICE ENTRANCE EQUIPMENT.
- ELECTRICAL CONTRACTOR SHALL VERIFY EQUIPMENT CAPACITY AND ENSURE PANEL AMPACITY, NUMBER OF POLES, PHASES, AND VOLTAGES REQUIRED ARE COMPATIBLE WITH SERVICE PANEL BEFORE ROUGH-IN, AND PURCHASE OF SERVICE ENTRANCE EQUIPMENT.
- ALL WIRING SHALL BE IN RIGID METAL CONDUIT AND BE 12 AWG UNLESS OTHERWISE SPECIFIED. CONDUIT IN THE "MONITORING EQUIPMENT ROOM" MAY BE EMT.
- CONDUIT IN OR UNDER SLAB SHALL BE PVC-COATED RIGID METAL, AND SHALL BE BELOW THE FROST LINE, WHEN BELOW GRADE.
- ALL CONDUIT SHALL BE GALVANIZED.



PLAN NORTH  
**3** **SECOND FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**NOTE:**

- ALL HORIZONTAL CONDUIT FOR CEILING MOUNTED AND WALL MOUNTED THERMOCOUPLES SHALL BE LOCATED AT THE CENTER OF THE HIGH ROOF SLAB.

**ABBREVIATIONS**

- A AMPERE
- AFF ABOVE FINISHED FLOOR
- AIC AMPERE INTERRUPTING CAPACITY
- AWG AMERICAN WIRE GAUGE
- BKR BREAKER
- CKT CIRCUIT
- DWG DRAWING
- GB GROUND BUS
- GFCI GROUND FAULT CIRCUIT INTERRUPTER
- GND GROUND
- KAIC THOUSAND AMPERE INTERRUPTING CAPACITY
- kVA KILOVOLT AMPERES
- MCB MAIN CIRCUIT BREAKER
- MIN MINIMUM
- NEU NEUTRAL
- PH PHASE
- SN SOLID NEUTRAL
- TL THERMAL LINING
- TMS TEMPERATURE MONITORING SYSTEM
- UNO UNLESS OTHERWISE NOTED
- V VOLTS
- W WATT, WIRE (AS APPLICABLE)
- WP WEATHERPROOF

**LEGEND**

- WEATHERPROOF CEILING MOUNTED, 100W, 120V, INCANDESCENT FIXTURE
- WEATHERPROOF SINGLE POLE 20A SWITCH, SURFACE MOUNTED 42" MOUNTING HEIGHT AFF.
- WEATHERPROOF DUPLEX RECEPTACLE, 20A, 125V, GROUNDING TYPE, HAVING NEMA TYPE 5-20R CONFIGURATION, SURFACE MOUNTED, 18" MOUNTING HEIGHT AFF.
- CONDUIT RUN TO RECORDER FOR TEMPERATURE MONITORING SYSTEM, UNO
- BRANCH CIRCUIT CONDUIT WITH 2(12) AWG + GROUND WIRE, UNO, RUN EXPOSED TO PANELBOARD
- WALL-MOUNTED TYPE K DUPLEX THERMOCOUPLE, 60" AFF, SEE DETAIL 1 ON DWG E-102
- RECESSED CEILING-MOUNTED TYPE K DUPLEX THERMOCOUPLE, SEE DETAIL 2 ON DWG E-102
- RECESSED CEILING-MOUNTED TYPE R DUPLEX THERMOCOUPLE, PLACED BEHIND INSULATION OF THERMAL LINING. SEE DETAIL 2 ON DWG E-102.
- CONNECTION POINT



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