ELECTRICAL RISK ASSESSMENT FORM

1. GENERAL

Date:	Equipment:	Nominal System Voltage Range, Phase to Phase:
Subcontractor:	Location:	
Qualified Personnel:	Already accurately labeled ? ☐ Y ☐ N	☐ Exposed Movable Conductor ☐ Exposed Fixed Circuit Part

2. TASK

- ☐ Reading a panel meter while operating a meter switch
- ☐ Normal operation of a circuit breaker (CB), switch, contactor, or starter
- ☐ Work on energized electrical conductors and circuit parts, including voltage testing
- ☐ Voltage testing on individual battery cells or individual multi-cell units
- ☐ Removal or installation of CBs or switches
- ☐ Removal or installation of covers for equipment such as wireways, junction boxes, and cable trays that does not expose bare energized electrical conductors and circuit parts
- ☐ Removal of bolted covers (to expose bare energized electrical conductors and circuit parts).
- ☐ Removal of battery intercell connector covers
- ☐ Opening hinged door(s) or cover(s) (to expose bare energized electrical conductors and circuit parts)
- ☐ Perform infrared thermography and other noncontact inspections outside the restricted approach boundary. This activity does not include opening of doors or covers.
- ☐ Application of temporary protective grounding equipment after voltage test
- ☐ Work on control circuits with exposed energized electrical conductors and circuit parts, 120 volts or below without any other exposed energized equipment over 120 V including opening of hinged covers to gain access
- ☐ Work on control circuits with exposed energized electrical conductors and circuit parts, greater than 120 V
- ☐ Insertion or removal of individual starter buckets from motor control center
- ☐ Insertion or removal (racking) of CBs or starters from cubicles, doors open or closed
- ☐ Insertion or removal of plug-in devices into or from busways
- ☐ Insulated cable examination with no manipulation of cable
- ☐ Insulated cable examination with manipulation of cable
- ☐ Work on exposed energized electrical conductors and circuit parts of equipment directly supplied by a panelboard or motor control center
- ☐ Insertion and removal of revenue meters
- ☐ For dc systems, insertion or removal of individual cells or multi-cell units of a battery system in an enclosure or open rack.
- ☐ For dc systems, maintenance on a single cell of a battery system or multi-cell units in an open rack
- ☐ For dc systems, work on exposed energized electrical conductors and circuit parts of utilization equipment directly supplied by a dc source
- ☐ Insertion or removal (racking) of CBs from cubicles
- ☐ Insertion or removal (racking) of ground and test device
- ☐ Insertion or removal (racking) of voltage transformers on or off the bus
- ☐ Opening voltage transformer or control power transformer compartments
- ☐ Outdoor disconnect switch operation (hookstick operated) at 1 kV through 15 kV
- ☐ Outdoor disconnect switch operation (gang-operated, from grade) at 1 kV through 15 Kv
- ☐ Other Tasks, EXPLAIN:

3. POTENTIAL ELECTRICAL HAZARDS

Arc flash potential determined from NFPA 70E Table (C)(15)(A)(a)

☐ Electrical shock ☐ Arc flash

4. POTENTIAL RISKS

Potential Severity of Injury or Damage to Health

- ☐ Irreversible — trauma, death
- ☐ Permanent — skeletal damage, blindness, hearing loss, third degree burns
- ☐ Reversible — minor impact, hearing damage, second degree burns
- ☐ Reversible — minor laceration, bruises, first degree burns

Frequency of 10 Minute Exposures

☐ ≤ 1 per hour	☐ 1 per 2 weeks – 1 per year
☐ 1 per hour – 1 per day	☐ > 1 per year
☐ 1 per day – 1 per week	

Likelihood of Hazardous Event	Likelihood of Avoiding Injury
☐ Very high	☐ Impossible
☐ Likely	☐ Rare
☐ Possible	☐ Probable
☐ Rare	
☐ Negligible	

Protective Measures Already Established

☐ Barriers	☐ Training
☐ Signage	☐ PPE
☐ SOPs	☐ Other Controls, Explain

5. SHOCK APPROACH BOUNDARIES

From NFPA 70E Table 130.4(D)(a) or (b)

Restricted Approach Boundary (feet) =	Limited Approach Boundary (feet) =

6. ARC FLASH BOUNDARY

From NFPA 70E Table 130.7(C)(15)(A)(b) or (B)

Method for determining Arch Flash Boundary:

- ☐ Arc Flash PPE Categories Method *(from NFPA 70E Table 130.7(C)(15)(A)(b) or (B))*
- ☐ Incident Energy Analysis Method (select method and attach calculations)
  - ☐ Ralph Lee Calculation Method
  - ☐ Doughty Neal Calculation Method
  - ☐ Institute of Electrical and Electronics Engineers 1584 Calculation Method
  - ☐ Detailed Arcing Current and Energy Calculations Method

Arc Flash Boundary (feet) =	PPE Category =

7. ARC FLASH PPE REQUIREMENTS

From NFPA 70E Table 130.7(C)(16) or H.3(b)

Protective Clothing and PPE:	Protective Equipment: