Electrical Safety

1. PURPOSE

The purpose of this program is to ensure the safety of employees who may work on or near electricity or electrical equipment and that departments understand and comply with safety standards related to electrical work.

2. SCOPE

This program contains requirements pertaining to the safeguarding of employees against the hazards of work on or near electrical systems at 50 volts and above.

The program applies to all Notre Dame employees who work on or near electrical equipment, including construction, maintenance, and electrical equipment. It does not apply to electrical work performed as part of research.

3. RESPONSIBILITIES

3.1. Environmental Health and Safety (EHS) shall:

- 3.1.1. Review this program annually and make revisions as necessary.
- 3.1.2. Ensure training and retraining is made available to qualified and unqualified employees.

3.2. Utilities Department shall:

- 3.2.1. Maintain all electrical equipment over 600V using qualified contract electricians.
- 3.2.2. Provide and maintain all One Line Diagrams for campus distribution systems and buildings.
- 3.2.3. Issue any necessary Energized Electrical Work Permits (**Appendix A**) and oversee the work, including pre-job safety briefings (**Appendix B**). No energized work may be performed by Notre Dame employees or any non-Utilities approved and managed contractors.
- 3.2.4. Keep all copies of Energized Electrical Work Permits (Appendix A) for a minimum of 1 year.
- 3.2.5. Ensure the Incident Energy Analysis of the power plant and distribution system are completed at intervals not to exceed 5 years or after major changes to the system.

3.3. Departments shall:

- 3.3.1. Identify and maintain a list of qualified persons within their department, including training records.
- 3.3.2. Provide all Qualified Persons the appropriate personal protective equipment (PPE) and tools to perform their work safely at no cost. See Section 8 for PPE requirements for tasks.
- 3.3.3. Document PPE Requirements for electrical tasks using **Appendix C** or similar form. Ensure that all PPE is appropriately maintained and tested per applicable requirements.

3.4. Supervisors shall:

- 3.4.1. Ensure employees comply with this program.

3.4.2. Develop Safe Work Practices and procedures for work on or near electrical equipment. Appendix C provides an example format for this documentation.
3.4.3. Perform annual documented evaluations of each employee on electrical safety procedures (**Appendix D**).

3.5. Qualified Employees shall:
3.5.1. Use appropriate tools, equipment, and PPE for the scope of work.
3.5.2. Follow all Safe Work Practices and procedures.
3.5.3. Recognize, understand, and communicate electrical hazards, and report all hazards to their supervisor for correction.
3.5.4. Care for, maintain, inspect, and perform pre-use inspections of all PPE.
3.5.5. Complete required training.
3.5.6. **Not** perform any energized electrical work.

3.6. Unqualified Employees shall:
3.6.1. Attend general awareness training.
3.6.2. Stay away from electrical hazards and live equipment and respect all approach boundaries.
3.6.3. Report all hazards or issues with electrical equipment to their supervisor immediately.

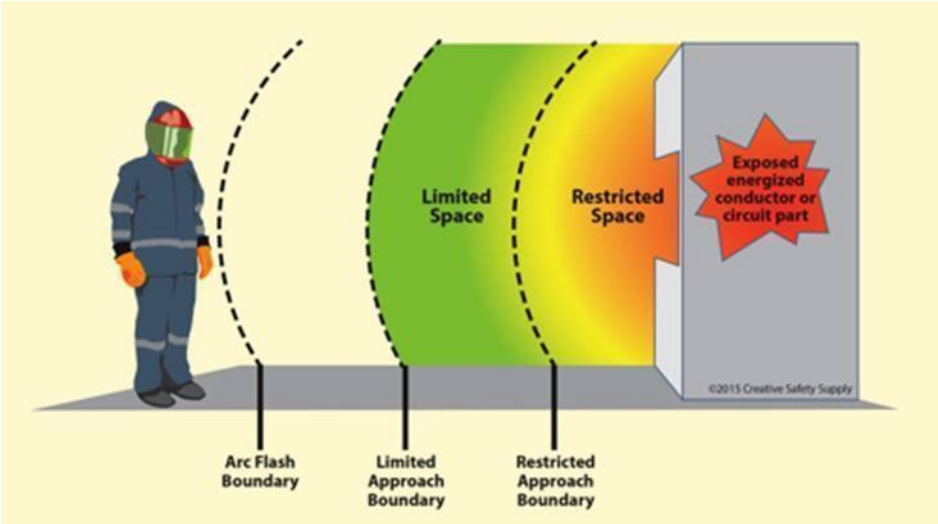
3.7. Contractors shall:
3.7.1. Ensure their personnel are properly trained to perform their tasks.
3.7.2. Recognize, understand, and communicate electrical hazards that could impact their work.
3.7.3. Notify the Notre Dame Project Manager of changing work conditions that relate to potential electrical hazards.
3.7.4. Provide their employees with appropriate PPE and tools that are adequately rated for the task and ensure these items are appropriately maintained.
3.7.5. Do not perform energized electrical work unless it has been authorized and approved by the Utilities Department.

4. DEFINITIONS

4.1. **Accessible (equipment)** - Admitting close approach; not guarded by locked doors, elevation, or other effective methods.

4.2. **Approach Boundaries** – A system of identifying critical distances from energized conductors or parts for the purpose of controlling exposure to electrical shock, flash, and blast hazards. Boundaries are in units of feet or meters from the point of the hazard (see Figure 1).
4.2.1. Arc Flash Boundary – When an arc flash hazard exists, an approach limit from an arc source at which incident energy equals 1.2 cal/cm2.
4.2.2. Limited Approach Boundary – An approach limit at a distance from an exposed energized electrical conductor or circuit part within which a shock hazard exists.
4.2.3. Restricted Approach Boundary – An approach limit at a distance from an exposed energized electrical conductor or circuit part within which there is an increased likelihood of electric shock, due to electrical arc-over combined with inadvertent movement.

Figure 1:



4.3. **Arc Flash Hazard** – A source of possible injury or damage to health associated with the release of energy caused by an electric arc.

4.4. **Arc Flash Suit** – A complete arc-rated clothing and equipment system that covers the entire body, except for the hands and feet. (Such a suit may include pants or overalls, a jacket or a coverall, and a beekeeper-type hood fitted with a face shield).

4.5. **Arc Rating** – The maximum incident energy resistance demonstrated by a material (or a layered system of materials) prior to break-open or at the onset of a second-degree skin burn. Arc rating is usually expressed in cal/cm2.

4.6. **Barricade** – A physical obstruction such as tape, cones, or A-frame type wood or metal structures intended to provide a warning and to limit access.

4.7. **Barrier** – A physical obstruction that is intended to prevent contact with equipment or live parts or to prevent unauthorized access to a work area.

4.8. **De-energized** – Free from any electrical connection to a source of potential difference and from electrical charge; not having an electrical potential different from that of the earth.

4.9. **Electrical Hazard** – A dangerous condition such that contact or equipment failure can result in electric shock, arc flash burn, thermal burn, or arc blast injury.

4.10. **Electrically Safe Work Condition** – A state in which the conductor or circuit part has been disconnected from energized parts, locked/tagged in accordance with University procedure, tested to verify the absence of voltage, and, if necessary, temporarily grounded for personnel protection.

4.11. **Energized** – Electrically connected to, or is, a source of voltage.

4.12. **Exposed (as applied to live parts)** – Capable of being inadvertently touched or approached from closer than a safe distance by a person. It is applied to parts that are not suitably guarded, isolated, or insulated.

4.13. **Exposed Unqualified Personnel** – Personnel who in the performance of their job may be required to enter a room or area containing exposed energized conductors or components, who may approach exposed conductors, or who are required to operate or use a machine or equipment on which electrical servicing or maintenance may be performed under use of the Safe Electrical Permit.

4.14. **Fault Current** – The amount of current delivered at a point on the system during a short-circuit condition.

4.15. **Fault Current, Available** – The largest amount of current capable of being delivered at a point on the system during a short-circuit condition.

4.16. **Grounded** – Connected to earth or to some conducting body that serves in place of the earth.

4.17. **Ground-Fault Circuit Interrupter (GFCI)** – A device intended for the protection of personnel that functions to de-energize a circuit or portion of a circuit within an established period of time when a current to ground exceeds the values for a Class “A” device.

4.18. **Incident Energy** – The amount of thermal energy impressed on a surface, a certain distance from the source, generated during an electrical arc event. Incident energy is typically expressed in calories per square centimeter (cal/cm2).

4.19. **Maintenance, Condition of** – The state of the electrical equipment considering the manufacturers’ instructions, manufacturers’ recommendations, and applicable industry codes, standards, and recommended practices.

4.20. **Nominal Voltage** – A nominal value assigned to a circuit or system for the purpose of conveniently designating its voltage class.

4.21. **OEM (Original Equipment Manufacturer) –** OEM equipment has been listed and labeled to be used as defined by the manufacturer, and cannot be modified.

4.22. **Overcurrent** – Any current in excess of the rated current of equipment or the ampacity of a conductor. It may result from overload, short circuit, or ground fault.

4.23. **Overload** – Operation of equipment in excess of normal, full-load rating, or of a conductor in excess of rated ampacity that, when it persists for a sufficient length of time it could cause damage or dangerous overheating.

4.24. **Qualified Person** – Someone that has received specific training and demonstrated the skills necessary to work safely on or near energized equipment. Some persons may be qualified to do some work, but not other work. For example, a Maintenance Technician may be

qualified to safely change a light fixture or outlet, but not qualified to perform work over 277V, while a Building Controls Technician may work on a Variable Frequency Drive up to 480V.

4.25. **Risk Assessment** – An overall process that identifies hazards, estimates the likelihood of occurrence of injury or damage to health, estimates the potential severity of injury or damage to health, and determines if protective measures are required.

4.26. **Shock Hazard** – A source of possible injury or damage to health associated with current through the body caused by contact or approach to energized electrical conductors or circuit parts.

4.27. **Testing** – A procedure or methodology for determining or evaluating a characteristic of some process, equipment, or person. For electrical equipment, this typically involves an evaluation of various forms or combinations of voltage, current, impedance, resistance, or capacitance.

4.28. **Troubleshooting** – A procedure or methodology for evaluating the condition of some process, equipment, or person with the intent of determining a deficiency and some means of corrective action to resolve that deficiency. For electrical equipment, this typically involves performing some type of testing of various forms or combinations of voltage, current, impedance, resistance, or capacitance.

4.29. **Unqualified Person** – A person who is not a qualified person. Personnel who face a risk of electrical shock which has not been reduced to a safe level (less than 50 volts) and has had applicable electrical safety awareness training per Section 12. Also includes employees who have had little or no training as far as recognizing and avoiding the hazards of working on, near, or with exposed electrical parts and are not designated by the facility as qualified.

4.30. **Voltage Testing** – A procedure for determining or evaluating the voltage potential between two electrical parts. This activity is typically performed with the use of a voltage meter.

4.31. **Working Distance** – The distance between a person's face and chest area and a prospective arc source.

4.32. **Working near (live parts)** – Any activity within a Limited Approach Boundary.

4.33. **Working on (live parts)** – Intentionally coming in contact with energized electrical conductors or circuit parts with the hands, feet, or other body parts, with tools, probes, or with test equipment, regardless of the PPE a person is wearing. There are two categories of "working on": Diagnostic (testing) is taking readings or measurements of electrical equipment with approved test equipment that does not require making any physical change to the equipment; repair is any physical alteration of electrical equipment (such as making or tightening connections, removing or replacing components, etc.)

5. General Electrical Safety Requirements:

5.1. Notre Dame employees must follow general electrical safety requirements while working with portable electrical equipment, or anything that plugs into an electrical outlet. Notre Dame Employees shall:

5.1.1. Perform a pre-use inspection of all cord and plug tools and equipment at least once per shift. This includes looking for missing ground pins, damage to cord insulation, and/or broken plugs. Any equipment found deficient must be removed from service until repaired or replaced.

5.1.2. Use Ground Fault Circuit Interrupters (GFCI's) in damp areas, or where water or other conductive liquids may be found. GFCI pigtails must be used with extension cords, and are to be plugged in at the outlet, upstream of the extension cords.

5.1.3. Extension cords shall be designed for hard or extra hard use (Type S, ST, or SO type), and cannot be homemade. Any damaged cords must be disposed of.

5.1.4. Extension cords must be protected from damage, and running through doors or windows should be avoided.

5.1.5. Extension cords may not be used for longer than 90 days.

5.1.6. Extension cords in a walkway must be placed in a way to avoid trip hazards and protected by a cord protector or other means.

5.1.7. No electrical cords may be modified or altered in a way that interrupts the continuity of the grounding conductor. Clipping or bypassing the ground prong is not allowed.

6. **Establishing an Electrically Safe Work Condition:**

6.1. General.

6.1.1. Prior to starting work that requires a circuit to be powered off, which includes tasks such as: changing an outlet, a lighting ballast or fixture, changing a VFD, changing a motor, or any other equipment operating at > 50V without a plug and cord to easily disconnect from a power source, you must establish an electrically safe work condition.

- Notre Dame employees are **NOT** allowed to work on any electrical equipment > 600V. All work > 600V is to be referred to the Utilities Department and a specific contracted electrician.

6.1.2. All equipment must be locked out in accordance with the EHS Lock, Tag, and Try Zero Energy Procedure unless it can be demonstrated that de-energizing the equipment will create additional or increased hazards or is infeasible due to equipment design or operational limitations. These exceptions shall be referred to the Utilities Department as Energized Electrical Work and shall be conducted per the permit process.

6.1.3. The Safe Work Practices for establishing an electrically safe work condition apply to those working on electrical equipment or near energized equipment. Any electrical

equipment that has not been determined to be in an electrically safe work condition should be treated as live and energized.

6.1.4. Appropriately rated PPE must be worn until the Electrically Safe Work Condition has been established. Refer to **Table 1 f**or PPE requirements.

6.2. Process Steps

6.2.1. Identify the equipment that needs to be de-energized and put into an Electrically Safe Work Condition.

6.2.2. Identify the voltage level, power source, and disconnecting means of the equipment, which can include multiple sources of power. Control circuits and interlocks are not adequate to be used as disconnecting means.

6.2.3. After making appropriate communications to those affected by the work, de-energize the equipment. Refer to **Table 1** for who is qualified to make certain disconnects.

6.2.4. Apply all locks and tags.

6.2.5. Using an adequately rated voltmeter or multimeter and wearing the appropriate PPE, test that your meter is working properly on a known voltage source that is the same magnitude and type as the voltage you are disconnecting. (Use a known voltage source of AC if testing AC, DC for DC, and use the same voltage wherever possible).

6.2.6. Immediately test the equipment you are working on, phase to phase, for 3 phase systems, and phase to ground.

6.2.7. Retest your voltmeter on a known voltage source to ensure that it is still in good working order. This process is known as Live-Dead-Live Testing and is used to verify that your meter is working properly.

6.2.8. Some systems have stored energy, in the form of capacitors or batteries. Ensure you are following all OEM or applicable processes to drain energy from these sources, or isolate them properly (capacitor discharge time should be a minimum of 5 minutes). Once the absence of voltage is verified and stored energy is released, begin work.

6.2.9. After work is completed, review your work area, and inspect that the work is completed, and no tools or other equipment are left in the work area. Replace all covers, screws, and bolts as required.

6.2.10. Make appropriate communications to those affected by the work, remove locks, and energize the equipment. If you are not in direct line of sight with the work area, you may need a spotter of the work area to keep it clear when energizing.

6.3. The Utilities Department shall oversee all work > 600V. While the process for establishing an Electrically Safe Work Condition is similar, some considerations must be made to include

different PPE, larger approach boundaries, and the installation of personal protective grounds. Refer to the PPE section of this policy as well as NFPA 70E for any requirements for any requirements for this type of work, which is performed by contract employees only.

7. WORKING ON OR NEAR ENERGIZED PARTS

7.1. All energized work shall be referred to the Utilities Department to oversee.

7.2. Energized work is defined as work on or within the restricted approach boundary of energized equipment > 50V. Examples include changing breakers on panels or inserting or removing motor control center (MCC) buckets.

7.3. Energized electrical work permits are required when:
- 7.3.1. Work is performed on energized electrical conductors or circuit parts at 50V or greater and unable to be put into an electrically safe work condition and,
- 7.3.2. The employee must enter the limited approach boundary or interact with the equipment where conductors or circuit parts are not exposed, but an increased likelihood of an arc flash hazard exists.

7.4. Notre Dame's Energized Electrical Work Permit is shown in **Appendix A**. The permit must be completed for each shift, and must be signed by the Associate Vice President of Utilities and Maintenance or their designee. It must also provide ample justification for the energized work, such that it would be more dangerous to de-energize the circuit. Inconvenience is not an adequate reason for energized work. **No energized work can be performed on equipment with an Arc Flash Incident rating of 40 cal/cm^2 or greater.**

7.5. All appropriate PPE must be worn when working on energized equipment, and safe work discussions must be held and documented by the person authorizing the work and the qualified employees performing the work.

7.6. Exceptions to the energized work permit requirements are:
- 7.6.1. Testing, troubleshooting, or voltage measuring.
- 7.6.2. Thermography, ultrasound, or visual inspections if the restricted approach boundary is not crossed.
- 7.6.3. Access to an area with energized electrical equipment if electrical work is not performed and the restricted approach boundary is not crossed.
- 7.6.4. General housekeeping and miscellaneous non-electrical tasks if the restricted approach boundary is not crossed.

8. PERSONAL PROTECTIVE EQUIPMENT

PPE to protect against Electrical Hazards can be defined in two (2) types; Shock, which is voltage dependent, and Arc Flash, which takes various properties of electricity into account.

8.1. Shock PPE:

8.1.1. Includes voltage rated gloves, which are defined by classes:
- Class 00: Maximum of 500VAC, 750VDC
  Note: ***This is the glove classification to be used by most Notre Dame Employees***
- Class 0: Maximum 1,000VAC, 1,500VDC
- Class 1: Maximum 7,500VAC, 11,250VDC
- Class 2: Maximum 17,000VAC, 25,500VDC

8.1.2. Rubber gloves must be worn with leather protectors at all times. Any damage to electrical gloves will compromise the integrity of the rating and could result in injury to the wearer.

8.1.3. Rubber gloves must be inspected before each use, with both a visual inspection to check for cuts, holes, tears, punctures, cracks, as well as a softening, hardening, or other blemishes. They must also be inflated to check for leaks or escaping air. This test does not need to be documented.

8.1.4. Rubber gloves must also be electrically tested in an accredited testing facility every 6 months or disposed of and replaced with new.

8.2. Arc-Rated PPE:

8.2.1. Arc-Rated clothing is necessary when working on 3 phase circuits > 50V at all voltage levels. This can include an arc rated shirt, pants, coverall, or full suit to protect the body and an arc rated face shield with a balaclava or full suit hood to protect the face and neck.

8.2.2. Notre Dame requires a minimum of Category 2 PPE for three phase circuits 208V up to 600V, unless otherwise marked to require Category 4 PPE.

- Category 2 PPE ratings meet a minimum of 8 cal/cm^2
  - Arc-rated long-sleeve shirt and pants or arc rated coverall
  - Arc-rated face shield and arc rated balaclava
  - Hard Hat
  - Safety glasses or goggles
  - Hearing protection
  - Insulated rubber gloves with leather protectors
  - Leather footwear

- Category 4 PPE ratings meet a required minimum of 40 cal/cm^2
  - Arc-rated long-sleeve shirt and pants or arc rated coverall
  - Arc-rated arc flash suit jacket and pants
  - Arc-rated arc flash suit hood
  - Arc-rated gloves or rubber insulating gloves with leather protectors
  - Hard hat
  - Safety glasses or goggles
  - Hearing protection
  - Leather footwear

8.2.3. No energized work shall be performed on any equipment with an arc flash rating of greater than 40 cal/cm^2.

8.2.4. Arc Rated clothing should be kept clean and be inspected before use. Holes, grease spots, or dirt can compromise the integrity of the rating and could result in injury to the wearer. Users should remove damaged items from use.

8.2.5. No conductive articles of jewelry or clothing may be worn under arc-rated clothing.

Table 1: PPE Requirements for Work on or near Energized Equipment

Nominal Voltage Level	Example Equipment or Task	PPE Requirement for SHOCK	PPE Requirement for ARC FLASH (3)	Who can work on this? (4)	Note
> 50V up to 277V, single phase (1)	Changing an outlet, light switch, or fixture	Class 00 Gloves with leather protectors	None	FDO Maintenance Technicians, Building Controls, and I&C Technicians	UND Utilities has determined that the risk of Arc Flash for this task is minimal
> 50V up to 480V, three phase (2)	Replacing or troubleshooting electric heaters, motors, some lighting systems, VFD's	Class 00 Gloves with leather protectors	Category 2 Arc Flash PPE	Building Controls, I&C Technicians, Some non-FDO Maintenance Technicians	Non-FDO includes UOES (Campus Dining)
> 50V up to 600V, three phase	Power distribution systems, motors, MCC's	Class 00 Gloves with leather protectors at a minimum	Verify PPE with the Arc Flash Label. Category 2 Arc Flash PPE at a minimum.	**Only** Contract Electricians may work on this.	UND shop electricians and construction contract electricians may work on equipment up to 600V, including troubleshooting and maintenance, but no UND employees may work on this equipment
> 600V, three phase	Power distribution systems, MCC's, large motors	Verify the voltage of the equipment to select the appropriate gloves. Class 00 Gloves with leather protectors at a minimum	Verify PPE with the Arc Flash Label. Category 2 Arc Flash PPE at a minimum.	Only Utilities contract electricians.	All work > 600V must be referred to Utilities contract electricians, both project and maintenance.

1. Voltage of 120V and 277V are examples of Single-Phase equipment. 2 Pole equipment is Single Phase.
2. Voltages of 208V and 480V or higher are examples of Three Phase equipment.
3. This PPE does not supersede any other UND required PPE.
4. Refer any abnormal conditions to the Utilities Department.

9. OPERATION OF CIRCUIT BREAKERS AND DISCONNECTS

9.1. Operating circuit breakers or disconnects may or may not require electrical PPE. If the equipment meets the following criteria, PPE to operate a circuit breaker or disconnect is not required. If any one of these conditions is not met, PPE is required and the work should be referred to Utilities as Energized Electrical Work.

9.1.1. The equipment is properly installed.

9.1.2. The equipment is properly maintained.

9.1.3. The equipment is rated for the available fault current.

9.1.4. The equipment is used in accordance with instructions included in the listing and labeling and in accordance with manufacturer's instructions.

9.1.5. The equipment doors are closed and secured.

9.1.6. All equipment covers are in place and secured.

9.1.7. There is no evidence of impending failure.

10. ELECTRICAL INSTALLATION REQUIREMENTS

10.1. All installations at Notre Dame must comply with the National Electrical Code (NEC), OSHA, and manufacturer's instructions.

10.2. All electrical panels and disconnects must be labeled to indicate the circuit's function and voltage.

10.3. All live parts must be guarded or enclosed. Any missing covers, breaker blanks, or other broken parts must be covered and corrected immediately.

11. OVERHEAD WIRES

Note of Clarification - The University of Notre Dame does not own or operate any overhead lines, and any overhead lines on campus are owned by public utilities.

11.1. All efforts should be made to avoid work on or near overhead lines. If work must be done, the overhead lines must be de-energized and grounded and coordinated with the appropriate electric utility.

12. TRAINING

12.1 Qualified Persons (qualified electrical personnel) – All Notre Dame employees designated as qualified electrical personnel must complete qualified electrical training in eNDeavor annually.

12.1.1. Qualified employees must also have annual hands-on training that is overseen and evaluated by their supervisor. All training must be documented using **Appendix D** and maintained by each department.

12.1.2. Hands-on training must, at a minimum, demonstrate the ability to properly identify voltages, proper use of a voltmeter for live-dead-live testing, and operating circuit breakers or disconnects.

12.2. Unqualified Persons exposed to electrical hazards shall complete the University's general electrical awareness training (Electrical Safety Training – Unqualified) course annually.

13. RECORD RETENTION

13.1. Training records shall be maintained for the duration of employment.

13.2. Each department shall maintain a list of employees classified as qualified persons.

13.3. Documentation of the annual Electrical Work Evaluation Checklist (**Appendix D**) shall be maintained by the department for the duration of employment.

14. REFERENCES

14.1. NFPA 70E, "Standard for Electrical Safety in the Workplace", 2024 edition.

14.2. OSHA 29 CFR 1910 Subpart S – Electrical.

15. REVISION LOG

History	Effective Date
Electrical Safety procedure developed	Feb 2020
Revised procedure ● Condensed written document ● Updated PPE requirements ● Updated training requirements	Mar 2025
Updated to explicitly define and limit what groups can perform live electrical work (3.2.3, 3.5.6, 3.7.5, and permit). Updated approval authority title	July 2026
Updated department name Updated paragraph 6.2 (when locks applied)	October 2026

UNIVERSITY OF NOTRE DAME

Appendix A: Energized Electrical Work Permit
Per 3.2.3 For Use by Utilities Department ONLY

This authorization must be available at the work location. This permit is valid for one shift.

1. Location/Space *(To be completed by permit requestor)*		
Building:	Location:	
Date:	Issue Time:	Expiration Date/Time:

2. Work to be Performed *(To be completed by permit requestor)*
Description of the project and location (e.g. install circuit breaker in…):
Justification why the circuit/equipment cannot be de-energized:

3. Safety Precautions *(Completed by the qualified person doing the work)* **Enter the details for each step**		
Shock Risk Assessment	Voltage personnel will be exposed to:	
	Limited Approach Boundary (70E Table 130.4(D(a))	
	Restricted Approach Boundary (70E Table 130.4(D(a))	
Arc Flash Risk Assessment	Arc Flash PPE Category (From equipment label or 70E Table 130.7(C)15(a) or (b).	
	Arc Flash Boundary (From equipment label or 70E Table 130.7(C)15(a) or (b).)	
Safe Work Practices to be used **Use Appendix B & ensure all workers sign**		
Other Hazards Present (e.g. working at height)		

Additional Permits (check as appropriate)
☐Hot Work ☐Permit-required Confined Space ☐Other (describe)___

Required PPE
- ☐ Hearing protection
- ☐ Voltage-rated gloves Class _____
- ☐ Leather protectors
- ☐ F/R clothing
- ☐ Arc-rated face shield
- ☐ Safety glasses with side shields
- ☐ Other (as required by NFPA 70E)
- ☐ Hard hat ☐ Class E ☐ Class G

How are unqualified persons restricted from the work area?	

4. Approvals *Associate Vice President of Utilities and Maintenance or designee*			
Print Name	**Signature**	**Date**	**Approval**
			☐ Approved ☐ Disapproved

5. Pre-Job Coordination	
Has a job briefing/discussion been conducted & documented to discuss hazards? (check when complete)	
Is emergency communications equipment on site? ☐ Radio ☐ Phone ☐ Other (check when complete)	

Do you agree the work described above can be done safely? ☐Yes ☐No (if no, do not perform the work)
Name of person(s) doing the work:_____ Signature_____
_____ Signature_____

6. Notification	
Personnel who may be in or near the area, and may be impacted, have been informed.	
☐Yes ☐No	**Name(s)**

7.Work Completion		
Electrical Work Complete:	Date:	Time:

Appendix B: Pre-Job Briefing Checklist for Live Electrical Work

Date:_____

	Name	Title
Person Authorizing Work		
Qualified Employee(s)		

Review and discuss the following with the qualified employees to be performing the assigned task.

1.) Description of Task to be performed:

2.) Electrical hazards associated with the work tasks:

3.) Safe Work Practices/Procedures that shall be followed:

4.) Any special precautions required by working conditions:

5.) Energy sources to be controlled:

6.) PPE required for the Job:

PRE-JOB BRIEFING SIGN OFF – INVOLVED EMPLOYEES

JOB POSITION	PRINT	SIGN

By: _____ Date / Time:_____

Appendix C: Electrical Tasks & PPE Requirements

This appendix, or equivalent, is mandatory and shall be completed for each electrical task that is conducted within the department. Job safety planning and risk assessments are important components to ensuring safety of workers and personnel in the area where the work is being performed.

This document shall be reviewed with all qualified workers (those conducting the task) and made available to them.

Task Description	Equipment	Voltage	Specific PPE to be Worn

Use additional pages if necessary….

UNIVERSITY OF NOTRE DAME

Appendix D: Annual Workplace Electrical Safety Evaluation Form

Evaluator Name:_____ Date : _____Time:_____ AM/PM

Worker Observed:_____

Job & Location:_____

Please check the boxes below including a brief description of the discrepancy related to each "No" checked. In the comment section or back side of form.

I. **PERSONAL SAFETY**

	Yes	*No*	*N/A*		**Comments**
Wearing Proper Clothing					____ Cal/cm^2 or PPE Category ____
Face and Eye Protection Used (if necessary)					
Rubber Gloves: in Tolerance, Tested, Used					
Leather Protector Gloves Used					
Insulated Tools Used					
GFCI Portable Device Used					

II. **PROPER WORK METHODS**

	Yes	*No*	*N/A*
Can Identify Potentially Energized Parts: Nominal Voltage:_____volts			
Can State Approach Boundaries: Limited:_____Restricted:_____Arc Flash:_____			
Lockout/Tagout Equipment and Procedures Used Properly			
Sufficiently Illuminated			
Testing properly with Appropriate Meter to Determine all Parts are De-energized			
Housekeeping Clean and Neat on Job Site			
Visually Inspect Equipment, Meters, Cords and Test Leads			
Demonstrate Knowledge of Construction and Operation of Equipment			

III. COMMENTS

Please explain any "NO" answers and note any other deficiencies that are not specifically covered by a checklist item:

Employee Signature		**Date**	
Evaluator Signature		**Date**	