**SECTION 26 05 02**

**ELECTRICAL DEMOLITION FOR REMODELING**

**BASED ON DFD MASTER ELECTRICAL SPEC DATED 03/01/21**

This section has been written to cover most (but not all) situations that you will encounter. Depending on the requirements of your specific project, you may have to add material, delete items, or modify what is currently written. The Division of Facilities Development expects changes and comments from you.

***The consultant shall edit this section to match the project requirements. This section shall be deleted if no remodeling is being done.***

**PART 1 - GENERAL**

**SCOPE**

The work under this section includes **[Note to A/E: Provide a brief description of the major electrical demolition work involved on the project].** Included are the following topics:

PART 1 - GENERAL

 Scope

 Related Work

PART 2 - PRODUCTS

 Materials and Equipment

PART 3 - EXECUTION

 Examination

 Preparation

 Demolition and Extension of the Existing Electrical Work

 PCB Ballast Handling

 Lamp and PCB Ballast Disposal

RELATED WORK

Applicable provisions of Division 1 govern work under this Section.

**PART 2 - PRODUCTS**

**MATERIALS AND EQUIPMENT**

Materials and equipment for patching and extending work as specified in the individual Sections.

**PART 3 - EXECUTION**

**EXAMINATION**

Verify field measurements and circuiting arrangements as shown on Drawings.

Verify that abandoned wiring and equipment serve only abandoned facilities.

Verify whether or not PCB ballasts exist in light fixtures which will be disposed of. If PCB light fixture ballasts exist, then follow requirements in **PCB BALLAST HANDLING** and **LAMP AND PCB BALLAST DISPOSAL** below.

Demolition Drawings are based on casual field observation and/or existing record documents. Report discrepancies to the User Agency, Architect/Engineer and DFD Field Representative before disturbing existing installation.

***The following sentence is not intended to absolve the consultant of the responsibility for thoroughly checking existing conditions and showing those conditions on the drawings.***

Beginning of demolition means installer accepts existing conditions.

**PREPARATION**

Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.

Coordinate utility service outages with the User Agency, DFD Field Representative, and Architect/Engineer. Also, if applicable, coordinate utility service outages with the local Utility Company.

Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations and follow the safe working practice requirements of NFPA 70E.

***The consultant shall review the following four paragraphs for each project and remove the ones which don't apply and edit the ones which do.***

***Define all systems in addition to those listed herein. These systems shall include, but not be limited to, security, controls, paging, etc.***

Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from the User Agency and DFD Field Representative at least [48] [\_\_\_\_\_] hours before partially or completely disabling system. Minimize outage duration. If required, make temporary connections to maintain service in areas adjacent to work area.

Existing Fire Alarm System: Maintain existing system in service until new system is accepted. Disable system only to make switchovers and connections. Obtain permission from the User Agency, DFD Field Representative and local Authority Having Jurisdiction at least [48] [\_\_\_] hours before partially or completely disabling system. Minimize outage duration. If required, make temporary connections to maintain service in areas adjacent to work area.

Existing Communication/Data System: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from the User Agency, DFD Field Representative and local Telephone Utility. If required, make temporary connections to maintain service in areas adjacent to work area.

***Use the following paragraph as many times as necessary for each special system.***

Existing [\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_] System: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from the User Agency and DFD Field Representative at least [48] [\_\_\_] hours before partially or completely disabling system. Minimize outage duration. If required, make temporary connections to maintain service in areas adjacent to work area.

**DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK**

Remove, relocate, and extend existing installations as necessary, to accommodate new construction and to meet all requirements of these specifications. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

Remove abandoned wiring to source of supply.

Remove exposed abandoned conduit and abandoned conduit above accessible ceiling finishes, unless noted otherwise on drawings. Cut conduit flush with walls and floors, and patch surfaces. If certain conduits and boxes are abandoned but not scheduled for removal, they shall be shown on the "As Built Drawings".

Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit and wiring servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not removed.

Disconnect and remove abandoned panelboards and distribution equipment.

Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.

Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.

Disconnect and remove [ .]

Provide revised typed circuit directory in panelboards that have circuits removed.

Repair adjacent construction and finishes damaged during demolition and extension work.

Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate.

Provide supplemental support for conduits that are routed through demolition area, and are to remain. Supplemental support shall be added so that the conduit meets the support requirements of electrical specification section 26 05 33.

**PCB BALLAST HANDLING**

Generally, all high power factor fluorescent light ballasts manufactured before 1978 and some HID ballasts contain polychlorinated biphenyl (PCB) compounds in their capacitors. The Contractor shall inspect all ballasts in all light fixtures and take the actions described below.

The disposal of all ballasts labeled as "NON-PCBs" or "NO PCBs" shall become the responsibility of the Contractor. If the PCB content is not stated on the ballast label, the ballast shall be handled as a PCB ballast.

All PCB ballasts shall be removed from the light fixtures and shall have the wires clipped off. However, before removal, all PCB ballasts shall be carefully inspected for leaks. If a ballast appears to be leaking (evidenced by potting compound leaking out or by an oily film on the ballast surface) the ballast must be handled per EPA and DNR PCB regulations. Basically, this means the ballast is to be carefully removed from the fixture and placed in an approved drum. See paragraph below for the drum specifications. The person removing the ballast from the fixture shall wear protective gloves, eye protection, and protective clothing as necessary.

If the fixture has also been contaminated, it must be cleaned to less than 10 micrograms/100 square centimeters contamination before disposal. This cleaning must be done by an approved PCB contractor and is not considered a part of this contract. Contact DFD for contractor approval before commencing with the cleanup.

The PCB ballasts shall then be placed in US DOT approved drums (barrels). The contractor may furnish their own drums or obtain them from **Veolia ES Technical Solutions (800-255-5092 or 262 255-6655**). The quantity and size of the drums will be determined by the contractor at the time of construction, 30 and 55 gallon drums are typically available.

These PCB drums shall be placed in storage with the cover that came with the barrels, in a location within a building, as designated by the Building Manager or DFD Field Representative. The drums are not to be placed outside where they are exposed to weather.

THESE PCB BALLASTS ARE NOT TO BE REMOVED FROM THE WORK SITE BY THE CONTRACTOR. To do so would be a violation of DNR and DOT hazardous waste regulations and may result in a fine to the Contractor.

The Contractor shall label and mark the PCB storage drums with EPA approved PCB labels and the storage area with signs, marks and lines to meet the regulations of Wisconsin Code NR 157 – Management of PCBs and Products Containing PCBs.

The Contractor shall also provide approved PCB absorbent materials to be stored immediately adjacent to the drum storage area. Do not place loose absorbent material in the drums.

The Contractor shall provide to the DFD Field Representative, in written form, a total count of these ballasts (or their total weight by drum) and where they are stored.

See Lamp and PCB Ballast Disposal instructions below.

**LAMP AND PCB BALLAST DISPOSAL**

All lamps (fluorescent, incandescent, and HID) contain mercury and/or lead (in the base) as well as other heavy metals and compounds which are regulated by the EPA and DNR during the disposal process. As a result, regulations have been issued covering the handling and disposal of all lamps. Lamps which have been removed from service for disposal shall be handled as follows by the Contractor:

The Contractor shall very carefully remove all lamps (fluorescent, incandescent, and HID) from light fixtures before removal of the fixture from its mounted position. This is to reduce the likelihood that the lamp(s) will be broken. The Contractor will be charged the cost difference between disposal of broken and unbroken lamps, for all lamps broken in excess of 1% of the total lamps removed in the project.

The contractor shall contact **Veolia ES Technical Solutions** **(800-255-5092 or 262-255-6655)** to coordinate the storage and pickup of disposed lamps and PCB ballasts. The contractor may furnish their own containers or obtain them from **Veolia ES Technical Solutions**. Removed lamps and PCB ballasts shall be placed in containers by the contractor, marked with the number and type of lamp and PCB ballast, and placed in storage at a location on the user agency’s property. The contractor shall label the area as “Hazardous Material Storage”. The contractor shall make arrangements for pickup of the lamps and PCB ballasts with **Veolia ES Technical Solutions**, shall provide a count of all stored lamps and PCB ballasts, and shall fill out any required forms.

When making disposal arrangements with **Veolia ES Technical Solutions**, the contractor shall make sure to notify them of the DFD project number, DFD project name and DFD Project Manager, for invoicing purposes. Invoicing from **Veolia ES Technical Solutions**, shall be sent to the DFD Project Manager for direct charge payment from the project (lamp and PCB ballast disposal costs to be paid by DFD), and shall indicate the proper DFD project number, name, and PM.

The contractor shall coordinate the lamp and PCB ballast disposal with the DFD Field Representative.

END OF SECTION