SECTION 01790CP – CAMPUS UTILITY CONNECTIONS AND INTERRUPTIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Brown University operates and maintains an extensive campus utility distribution system. These systems include: water, chilled water, process water, steam, medium and high temperature hot water, electrical distribution (low and medium voltage), fire alarm, security, building automation systems (BAS) and metering systems. This section details minimum coordination requirements for connections and required utility system interruptions that may be required for new construction and renovation projects.

B. Facilities Management (FM) Operations and Engineering staff will assist the architect/ engineer in identifying the necessary valves or switching required to accommodate the tie-in of new utility systems or shutdown of existing systems for these projects.

C. Prior to any utility system shutdowns and tie-ins, an outage procedure checklist shall be prepared by the Contractor and submitted to Brown, clearly identifying the following essential issues:

- Project impacts (what buildings, utility systems and/or system loads are impacted by the work);
- Outage schedule (time/date of when work will be performed and outage durations);
- Required prep work required to be completed or to be in place prior to support the actual outage work (install portable generator(s), pipe flushing procedures, filling and venting procedures, etc.);
- Brief description of the actual outage work and essential tasks being performed during the outage (Switches or valves being opened/closed, piping connections, etc.);
- Note key coordination issues that need to be included as a part of the outage (need for portable generators to maintain power, street closure(s), police details, etc.);
- For hydronic systems, include how system draining, flushing, refilling and venting will be accomplished.
- Listing of key contacts and phone numbers for the Contractor, Brown FM staff and affected building staff.

1.2 REQUIREMENTS

A. If a project or contract work requires the shutdown or de-energizing of any campus central utility or building system, FM operations and Engineering staff must be first contacted for direction and scheduling prior to the work being performed. Refer to Scheduling and Coordination section.

B. In general, Contractors are not allowed to operate valves open or closed, or energize and de-energize switches without prior coordination and approval from FM Operations staff. Exceptions to this policy are for new construction or within buildings that are closed for total renovation, where the utilities affected are within the construction zone and have been verified ahead of time not to have an adverse effect on other building or campus operations.

C. Contractors shall provide a minimum 48 hour notice requesting shutoff or turn on of campus utilities. FM personnel will generally perform this work for the Contractor. Prior to commencing of work, it is the responsibility of the Contractor to ensure that required utilities are actually disconnected. Proper lockout/tagout procedures will be followed by both the Contractor and FM staff.

D. Contractors shall coordinate to have the building fire alarm system disabled prior to performing any work, such as cutting or welding that may cause inadvertent operation of the fire alarm system, and arrange for it to be enabled at the completion of the work.

E. Shutdown requirements shall be included in the bid documents by the architect or engineer. This information is required for scheduling, maintaining integrity of existing systems, and rerouting of services during construction. Shutdown requirements shall be reviewed with FM Operations and Engineering staff during the design development stage of the project.

F. Chilled water, high temperature hot water and steam shutdowns can be scheduled only during off-peak seasons with limited exceptions such as an emergency repair.

G. Location of the isolation switches, valves, bypasses, and temporary services shall be a coordinated effort between FM Operations, Engineering staff, the FM Project Manager the engineer, and the architect who are responsible for the final description and documentation for the contractor.

H. Other than Brown-owned or operated utilities shall be coordinated directly with the respective utility owner by the project manager.

1.3 SCHEDULING AND COORDINATING INTERUPTIONS

A. The FM project manager shall coordinate the shutdown details required for the project with the FM Operations and Engineering staff and with the contractor. A minimum of two (2) weeks notice is required for shutdown scheduling and proper notice to those affected; four (4) weeks is preferred for major shutdowns.

B. A coordination meeting shall be held with representatives of the Contractor, affected building Users, and other concerned parties to review the planned outage sequences and timing. FM Operations, Service Response and Engineering staff will advise of what campus operations and building Users will be affected by the proposed outage or shutdown; the project manager is in turn responsible to contact all the affected groups to determine the proper time for the shutdown and any special requirements to be provided during the shutdown.

C. A Utility Outage draft checklist (Section 01791) is required to be filled out by the Contractor and the project manager (Blank copy attached). This checklist includes

relevant pre-outage work required prior to the outage, sequence(s) of work to be performed during the outage, expected outage times and durations, and key contact (cell phone) information for the Contractor, FM staff and affected Users. The checklist will be reviewed and updates provided by FM Operations and Engineering staff, with updates to be complete by the Contractor. The completed checklist requires sign-off from key FM Operations personnel.

D. The FM Project Manager will submit the signed checklist to the Brown Service Response Office as well as a Project Support Service Order for the appropriate Divisional resource allocation to perform and monitor the shutdown. Service Response will in turn formally notify all affected parties of the planned outage date(s) by e-mail and physical posting of the impacted buildings.

1.4 UTILITY CONNECTION COSTS

A. All costs incurred for shutdowns, interconnecting of temporary utilities, valving, switching, or connection of temporary electrical lines and services shall be paid for by the project.

1.5 RECORD DRAWINGS

A. New lines, valves, and switches installed as part of the project are to be included on the Campus Record Utility drawings. The architect or engineer shall include these details on the as-built documentation to be delivered at the completion of the project.

END OF SECTION