NOTE TO CONSULTANTS: Edit, with Track Changes turned on, any text in this section that appears in Bold and Italics then, after approval of the edits, accept changes for the final version. (Remove this Note).

PART 1 - GENERAL

1.01 SUMMARY:

A. This section includes administrative and procedural requirements for cutting and patching.

1.02 RELATED SECTIONS: The following sections contain requirements that relate to this section:

A. Refer to other sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
1. If work involves cutting, patching, and restoration of areas of the site outside the boundaries of unlimited Contractor access, such activities must be completed in accordance with applicable City of Seattle standard requirements for use of limited access areas, and so as to avoid creating safety hazards or inconvenience for the public using such areas of limited Contractor access.
2. Requirements of this section apply to mechanical and electrical installation ***(Edit if applicable only) (or) Refer to Division 26 and 33 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.***

1.03 SUBMITTALS:

A. Cutting and Patching Proposal: When the Engineer's approval of cutting and patching procedures is required, submit a proposal for the Engineer's review describing procedures well in advance of the time cutting and patching will be performed. Request approval to proceed. Include the following information, as applicable, in the proposal:

1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the Work's appearance and other significant visual elements.
3. List products to be used and firms or entities that will perform work.
4. Indicate dates when cutting and patching will be performed.
5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
6. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structure.

7. Approval by the Engineer to proceed with cutting and patching does not waive the Engineer's right to later require complete removal and replacement of the unsatisfactory work.

1.04 QUALITY ASSURANCE:

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
   a) Foundation construction.
   b) Bearing and retaining walls.
   c) Structural concrete.
   d) Structural steel.
   e) Lintels.
   f) Timber and primary wood framing.
   g) Structural decking.
   h) Stair systems.
   i) Miscellaneous structural metals.
   j) Equipment supports.
   k) Piping, ductwork, vessels, and equipment.

B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
   a) Primary operational systems and equipment.
   b) Air or smoke barriers.
   c) Water, moisture, or vapor barriers.
   d) Membranes and flashings.
   e) Fire protection systems.
   f) Noise and vibration control elements and systems.
   g) Control systems.
   h) Communication systems.
   i) Conveying systems.
   j) Electrical wiring systems.

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Engineer's opinion, reduce the Work's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace any construction cut and patched in a visually unsatisfactory manner, as determined by the Engineer.

1.05 WARRANTY:

A. Existing Warranties: Replace, patch, and/or repair materials and surfaces modified or damaged by construction activities in such a manner as to maintain any existing warranties currently in effect. The Contractor shall request from the Engineer information about existing warranties in effect before associated work commences.

PART 2 - PRODUCTS

2.01 MATERIALS - GENERAL:

A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.01 INSPECTION:

A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.02 PREPARATION:

A. Temporary Support: Provide temporary support of work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Work that might be exposed during cutting and patching operations.

C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Avoid cutting existing pipe, conduit, or ductwork serving the Project but schedule to be removed or relocated until provisions have been made to bypass them.

3.03 PERFORMANCE:

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.

1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. To avoid marring existing finished surfaces, but or drill from the exposed or finished side into concealed surfaces.
3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
4. Comply with requirements of applicable Division 2 sections where cutting and patching requires excavating and backfilling.
5. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug-and-seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after bypassing and cutting.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Where removal of walls and partitions extends one finished area into another, patch and repair floor, wall, and ceiling surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing ceiling system or finish, and floor and wall coverings, and replace with new materials, if necessary, to achieve uniform color and appearance.
   a) Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
4. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.04 CLEANING:

A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION