

SECTION 01 7329

CUTTING AND PATCHING

PART 1 GENERAL

1.1 SUMMARY

- A. Provide cutting, fitting, and patching including attendant excavation and backfill, required to complete the Work, and to:
 - 1. Make its several parts fit together properly;
 - 2. Join new work to existing work;
 - 3. Uncover portions of the work to provide for installation of any ill-timed work;
 - 4. Remove and replace defective work;
 - 5. Remove and replace work not conforming to requirements of contract documents;
 - 6. Remove samples of installed work as specified for testing; and
 - 7. Provide routine penetrations of non-structural surfaces for installation of piping, duct work and electrical conduit.
- B. For additional requirements for cutting and patching, excavating and backfilling, see respective specifications sections.

1.2 DEFINITIONS

- A. Cutting: Removal of in place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.3 SUBMITTALS

- A. Cutting and Patching: Submit a method describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate 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. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
 - 7. Architect's Approval: Obtain approval of cutting and patching before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
 - 1. Insert list of elements that might otherwise be overlooked as structural elements and that require Architect's approval of a cutting and patching proposal.
- B. Operational Elements: Do not cut and patch the following operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety without prior approval by the Owner.
 - 1. Primary operational systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Fire-protection systems.
 - 4. Control systems.
 - 5. Communication systems.
 - 6. Conveying systems.
 - 7. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety without prior approval by the Owner.
 - 1. Water, moisture, or vapor barriers.
 - 2. Membranes and flashings.
 - 3. Exterior curtain-wall construction.
 - 4. Equipment supports.
 - 5. Piping, ductwork, vessels, and equipment.
 - 6. Noise- and vibration-control elements and systems.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- E. Cutting and Patching Conference: Before proceeding, meet at 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.

1.5 WARRANTY

- A. Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void warranties.

PART 2 PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. In Place Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in place materials.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 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 in place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 1. In general, use hand or small power tools designed for sawing and 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. In Place Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 5. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: 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. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the

- patch. Provide additional coats until patch blends with adjacent surfaces.
4. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

END OF SECTION