

## SECTION 01045 – CUTTING AND PATCHING

### PART 1 – GENERAL

#### 1.1 DEFINITION

- A. “Cutting and Patching” is defined to include the cutting and patching of nominally completed and previously existing concrete, steel, wood and miscellaneous metal structures; piping and pavement, in order to accommodate the coordination of WORK, or the installation of other facilities or structures or to uncover other facilities and structures for access or inspection, or to obtain samples for testing, or for similar purposes.

#### 1.2 REQUIREMENTS OF STRUCTURAL WORK

- A. Structural WORK shall not be cut and patched in a manner that results in a reduction of load-carrying capacity or load/deflection ratio.
- B. Prior to cutting and patching the following categories of WORK, the CONTRACTOR shall obtain the ENGINEER’s approval to proceed with:
  - 1. Structural steel
  - 2. Miscellaneous structural metals, including equipment supports, stair systems and similar categories of WORK
  - 3. Structural concrete
  - 4. Foundation construction
  - 5. Timber and primary wood framing
  - 6. Bearing and retaining walls
  - 7. Structural decking
  - 8. Exterior curtain wall construction
  - 9. Pressurized piping, vessels and equipment
  - 10. Asphalt pavement, concrete or asphalt curb/gutter, and concrete sidewalk.

#### 1.3 OPERATIONAL AND SAFETY LIMITATIONS

- A. The CONTRACTOR shall not cut and patch operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in the manner intended or resulting in decreased operational life, increased maintenance or decreased safety.
- B. Before cutting and patching the following categories of WORK, the CONTRACTOR shall obtain the ENGINEER’s approval to proceed with:
  - 1. Sheeting, shoring and cross bracing
  - 2. Operating systems and equipment
  - 3. Water, moisture, vapor, air, smoke barriers, membranes and flashing
  - 4. Noise and vibration control elements and systems
  - 5. Control, communication, conveying and electrical wiring systems.

#### 1.4 VISUAL REQUIREMENTS

- A. The CONTRACTOR shall not cut and patch WORK which is exposed on the exterior or exposed in occupied spaces, in a manner resulting in a reduction of visual qualities or

## SECTION 01045 – CUTTING AND PATCHING

resulting in substantial evidence of the cut and patch WORK, both as judged solely by the ENGINEER. The CONTRACTOR shall remove and replace WORK judged by the ENGINEER to have been cut and patched in a visually unsatisfactory manner.

### 1.5 APPROVALS

- A. When prior approval for cutting and patching is required, the CONTRACTOR shall submit the request and obtain approval prior to performing the WORK. The request should include a description of why cutting and patching cannot reasonably be avoided; how it will be performed; how structural elements (if any) will be reinforced; products to be used; firms and tradespeople who will perform the WORK; approximate dates of the WORK; and anticipated results in terms of structural, operational, and visual variations from the original WORK.

### PART 2 – PRODUCTS

#### 2.1 MATERIALS USED IN CUTTING AND PATCHING

- A. Unless otherwise indicated, the CONTRACTOR shall provide materials for cutting and patching which will result in an equal-or-better product than the material being cut and patched, in terms of performance characteristics and including visual effects where applicable. The CONTRACTOR shall use material identical with the original materials where feasible.
- B. Materials shall comply with the requirements of the Technical Specifications wherever applicable.

### PART 3 – EXECUTION

#### 3.1 PREPARATION

- A. The CONTRACTOR shall provide adequate temporary support for WORK to be cut to prevent failure
- B. The CONTRACTOR shall provide adequate protection of other WORK during cutting and patching.

#### 3.2 INSTALLATION

- A. The CONTRACTOR shall employ skilled tradespeople to perform cutting and patching. Except as otherwise indicated, the CONTRACTOR shall proceed with cutting and patching at the earliest feasible time and perform the WORK promptly.
- B. The CONTRACTOR shall use methods least likely to damage WORK to be retained and WORK adjoining.
  - 1. In general, where physical cutting action is required, the CONTRACTOR shall cut WORK with sawing and grinding tools, not with hammering and chopping tools. Openings through concrete WORK shall be core-drilled.
  - 2. Comply with the requirements of Technical Specifications wherever applicable.

## **SECTION 01045 – CUTTING AND PATCHING**

3. Comply with the requirements of applicable sections of Division 2 where cutting and patching requires excavation and backfill.
- C. The CONTRACTOR shall patch with seams which are as invisible as possible and comply with specified tolerance for the WORK.
  - D. The CONTRACTOR shall restore exposed seams of patched area; and, where necessary, extend finish restoration onto retained WORK adjoining, in a manner, which will eliminate evidence of patching.

**END OF SECTION**