SECTION 070150.19 - PREPARATION FOR REROOFING

Revise this Section by deleting and inserting text to meet Project-specific requirements.

This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
	* + 1. RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

* + - * 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
			1. SUMMARY
				1. Section Includes:

Full tear-off [**of entire roof system**] [**of roof system at areas indicated on Drawings**].

Partial tear-off [**of entire roof area] [of roof areas indicated on Drawings**].

Removal of flashings and counterflashings.

Temporary roofing.

* + - 1. DEFINITIONS

Retain terms that remain after this Section has been edited for a project.

* + - * 1. Full Roof Tear-off: Removal of existing roofing system down to existing roof deck.
				2. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.
			1. PREINSTALLATION MEETINGS

Retain "Preliminary Roofing Conference" paragraph below for all reroofing projects.

* + - * 1. Preliminary Roofing Conference: Before starting removal Work, conduct conference at Project site.

Retain subparagraphs below if required. If retaining, revise to include Project-specific requirements. Insert additional requirements to suit Project.

Meet with Director’s Representatives, [ **Construction Manager**,] insurer if applicable, testing and inspecting agency representative, roofing Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.

Review methods and procedures related to roofing tear-off, including, but not limited to, the following:

Revise subparagraphs below to include Project-specific requirements if needed. Coordinate with preliminary and preinstallation conference requirements in replacement roofing system Section.

Reroofing preparation, including roofing system manufacturer's written instructions.

Temporary protection requirements for existing roofing system components if any are to remain.

Existing roof drains and roof drainage during each stage of reroofing, and roof-drain plugging and plug removal.

Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.

Existing roof deck conditions requiring Director’s Representative notification.

Condition and acceptance of existing roof deck.

Structural loading limitations of roof deck during reroofing.

Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that affect reroofing.

HVAC shutdown and sealing of air intakes.

Shutdown of fire-suppression, -protection, and -alarm and -detection systems.

Asbestos removal and discovery of asbestos-containing materials.

Governing regulations and requirements for insurance and certificates if applicable.

Existing conditions that may require Director’s Representative notification before proceeding.

* + - 1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Product Data: For each type of product.

Retain "Temporary Roofing Submittal" paragraph below if Contractor may propose, or is required to propose, temporary roofing. Usually delete submittal if temporary roofing is specified in the Section Text.

* + - * 1. Temporary Roofing Submittal: Product data and description of temporary roofing system.

If temporary roof is part of the final roof system, and is to remain in place, include surface preparation requirements needed to receive permanent roof.

Retain "Field Test Reports" paragraph below if mechanically fastening components of new roofing system, including recover board.

* + - * 1. Field Test Reports:

Fastener pull-out test report.

* + - * 1. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.

Submit before Work begins.

Landfill records may be required by Owner, especially if discarded materials contain hazardous wastes.

* + - * 1. Landfill Records: Indicate receipt and acceptance of [ demolished roofing materials and] hazardous wastes, such as asbestos-containing materials, by a landfill facility licensed to accept them.
			1. CLOSEOUT SUBMITTALS

Retain this article for projects that include existing warranted roof systems interfacing with the Work of this Section.

* + - * 1. Certified statement from <**Insert name of manufacturer for existing warranted roof system**> stating that existing roof warranty has not been affected by Work performed under this Section.
			1. QUALITY ASSURANCE

Retain first option in "Installer Qualifications" paragraph below if existing roof is to remain, is warranted, and is to be worked on. Retain last option if asbestos-containing material is present or could be present and a licensed contractor is required.

* + - * 1. Installer Qualifications: Approved by warrantor of proposed roofing system to work on temporary roofing and licensed to perform asbestos abatement in jurisdiction where Project is located.
				2. Regulatory Requirements:

Comply with governing EPA notification regulations before beginning roofing removal.

Comply with hauling and disposal regulations of authorities having jurisdiction.

* + - 1. FIELD CONDITIONS

"Existing Roofing System" paragraph below is a basic description of roofing system. Revise to include more details of existing roofing system if applicable.

* + - * 1. Existing Roofing System Scheduled for removal: [**Built-up asphalt] [Built-up coal-tar] [APP-modified bituminous] [SBS-modified bituminous] [EPDM] [CSPE] [KEE] [PVC] [TPO] [APP-modified bituminous protected membrane] [SBS-modified bituminous protected membrane] [Fluid-applied protected membrane] [Coated foamed] <Insert roof type**> roofing.

Retain, revise, or delete paragraphs in this article to suit Project. Insert other limitations if necessary, such as when adjacent floors are occupied.

* + - * 1. Director’s Representative [will] [will not] occupy portions of building immediately below reroofing area.

Conduct reroofing so Director’s Representative's operations are not disrupted.

Provide Director’s Representative with not less than [**72**] <**Insert number**> hours' written notice of activities that may affect Director’s Representative's operations.

Coordinate work activities daily with Director’s Representative so Director’s Representative has adequate advance notice to place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.

Retain subparagraph below if known impaired deck areas or if special protection is not provided below work area.

Before working over structurally impaired areas of deck, notify Director’s Representative to evacuate occupants from below affected area.

Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.

* + - * 1. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
				2. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

Retain first paragraph below and revise to suit Project.

* + - * 1. Conditions existing at time of inspection for bidding will be maintained by Director’s Representative as far as practical.

Retain three subparagraphs below if applicable.

A roof moisture survey of existing roofing system is available for Contractor's reference.

The results of an analysis of test cores from existing roofing system are available for Contractor's reference.

Retain first paragraph below if limiting construction loads on existing roof deck and building structure. Verify load limit combinations with structural engineer, and insert maximum wheel loads (concentrated point loads) and maximum distributed loads for stored or demolished materials. Revise to suit Project.

* + - * 1. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed.
				2. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

Remove only as much roofing in one day as can be made watertight in the same day.

Retain one of two "Hazardous Materials" paragraphs below or delete if no hazardous materials. Asbestos-containing materials may be encountered during reroofing; asbestos felt was formerly used in roofing, especially for base flashing. Coordinate statements with the General and Supplementary Conditions. Retain first "Hazardous Materials" paragraph if asbestos is present and Director’s Representative has a separate contract to abate asbestos before reroofing preparation begins.

* + - * 1. Hazardous Materials: It is not expected that hazardous materials, such as asbestos-containing materials, will be encountered in the Work.

Hazardous materials will be removed by Director’s Representative before start of the Work.

Existing roof will be left no less watertight than before removal.

Retain subparagraph below to cover instances where hazardous materials are unexpectedly found and must be remediated.

If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Director’s Representative and Director’s Representative.

Hazardous materials will be removed by Director’s Representative under a separate contract.

Retain "Hazardous Materials" paragraph below if asbestos abatement is part of the Work of this Contract. Consult a professional liability insurance carrier for current recommendations. Indemnification and a waiver of claims may be required from Director’s Representative as a condition for providing services related to asbestos abatement.

* + - * 1. Hazardous Materials: A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.

Hazardous material remediation is specified elsewhere in the Contract Documents.

Do not disturb hazardous materials or items suspected of containing hazardous materials except according to procedures specified elsewhere in the Contract Documents.

Coordinate reroofing preparation with hazardous material remediation to prevent water from entering existing roofing system or building.

* + - 1. WARRANTY

Retain this article if portions of existing roof are to remain or if an adjoining existing roof is under warranty.

* + - * 1. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty issued by <**Insert name of manufacturer for existing warranted roof system**>.

Notify warrantor before proceeding with the Work.

Notify warrantor of existing roofing system on completion of reroofing, and obtain documentation verifying that existing roofing system has been inspected and warranty remains in effect.

Submit documentation at Project closeout.

1. PRODUCTS (Not Used)
2. EXECUTION
	* + 1. PREPARATION
				1. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
				2. Shut off rooftop utilities and service piping before beginning the Work.
				3. Test existing roof drains to verify that they are not blocked or restricted.

Immediately notify Director’s Representative of any blockages or restrictions.

Depending on duration of equipment shutdown and occupancy of building, revise first paragraph below if necessary to specify special work hours (for example, nights or weekends) for portions of roof near air intakes. If necessary to deactivate all or a portion of fire-detection system, revise paragraph to add special measures, such as a fire watch.

* + - * 1. Coordinate with Director’s Representative to shut down air-intake equipment in the vicinity of the Work.

Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.

Retain first paragraph below if removing existing roofing and base flashings.

* + - * 1. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.

Retain paragraph below for roof drains.

* + - * 1. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.

Prevent debris from entering or blocking roof drains and conductors.

Use roof-drain plugs specifically designed for this purpose.

Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.

If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.

Do not permit water to enter into or under existing roofing system components that are to remain.

* + - 1. ROOF TEAR-OFF

Retain option in first paragraph below if Director’s Representative intends to authorize each day's work. Specify restrictions or limitations that are placed on Installer to limit unscheduled delays.

* + - * 1. Notify Director’s Representative each day of extent of roof tear-off proposed for that day.
				2. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.

Retain first paragraph below for existing aggregate-ballasted elastomeric or thermoplastic roofing systems or for aggregate-surfaced foamed roofing. Retain option or revise to suit Project.

* + - * 1. Remove aggregate ballast from roofing. [ **Store aggregate ballast for reuse in manner not to exceed structural loading limitations of roof deck**.]

Retain first paragraph below for existing aggregate-surfaced, built-up bituminous roofing.

Retain first paragraph below if applicable.

* + - * 1. Remove pavers and accessories from roofing.

Retain subparagraphs below or revise to suit Project.

Store and protect pavers and accessories for reuse in manner not to exceed structural loading limitations of roof deck.

Discard cracked pavers.

Retain first paragraph below for protected roofing membrane.

* + - * 1. Full Roof Tear-off: [**Where indicated on Drawings, remove**] [**Remove**] existing roofing and other roofing system components down to the existing [**roof deck**] [**concrete fill**].

Retain one or more subparagraphs below; revise to suit Project.

* + - 1. DECK PREPARATION
				1. Inspect deck after tear-off of roofing system.

Retain first paragraph below if deck is not made of cast-in-place concrete.

* + - * 1. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Director’s Representative.

Do not proceed with installation until directed by Director’s Representative.

* + - * 1. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Director’s Representative.

Do not proceed with installation until directed by Director’s Representative.

If retaining first paragraph below, revise to add fastening requirements.

* + - 1. TEMPORARY ROOFING

Retain this article if required.

Retain one of first two paragraphs below. Retain first if Contractor proposes construction of temporary roofing. Retain second if Architect prescribes type of temporary roofing.

* + - * 1. Install approved temporary roofing over area to be reroofed.

Retain first paragraph below if built-up temporary roofing is required. Revise to suit Project if another type is applicable.

Retain one of two paragraphs below. Retain first if removal of temporary roofing is required. Retain second if temporary roofing is to remain.

* + - * 1. Prepare temporary roof to receive new roofing [**according to approved temporary roofing proposal**].

Restore temporary roofing to watertight condition.

Obtain approval for temporary roof substrate from roofing manufacturer.

* + - 1. BASE FLASHING REMOVAL
				1. Remove existing base flashings.

Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.

* + - * 1. Do not damage metal counterflashings that are to remain.

Replace metal counterflashings damaged during removal with counterflashings [**of same metal, weight or thickness, and finish as existing.] [specified in Section 076200 "Sheet Metal Flashing and Trim."] [specified in Section 077100 "Roof Specialties."]**

Retain first paragraph below if reusing existing parapet sheathing.

* + - * 1. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage.

If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify Director’s Representative.

Retain first paragraph below if replacing parapet sheathing.

* + - * 1. Remove existing parapet sheathing and replace with new parapet sheathing to comply with Section 061600 "Sheathing."

If parapet framing, wood blocking, curbs, or nailers have deteriorated, immediately notify Director’s Representative.

* + - * 1. When directed by Director’s Representative, replace parapet framing, wood blocking, curbs, and nailers to comply with [**Section 054000 "Cold-Formed Metal Framing."**] [**Section 061000 "Rough Carpentry."**] [**Section 061053 Miscellaneous Rough Carpentry."**]
			1. FASTENER PULL-OUT TESTING
				1. [**Perform**] [**Retain independent testing and inspecting agency to conduct**] fastener pull-out tests according to SPRI FX-1,and submit test report to [**Director’s Representative**] [**and**] [**roofing manufacturer**] before installing new roofing system.

Obtain [**Director’s Representative's] [roofing manufacturer's**] approval to proceed with specified fastening pattern.

[**Director’s Representative] [Roofing manufacturer**] may furnish revised fastening pattern commensurate with pull-out test results.

* + - 1. DISPOSAL
				1. Collect removed materials and place in containers.

Promptly dispose of demolished materials.

Do not allow demolished materials to accumulate on-site.

Storage or sale of demolished items or materials on-site is not permitted.

* + - * 1. Transport and legally dispose of demolished materials off Director’s Representative's property.

END OF SECTION 070150.19