Keys to an Effective Project Scope

1st Edition
Overview

Effectively determining scope is the most important task for a building consultant. Without an accurate scope of work, a definitive cost estimate cannot be completed. An accurate scope includes determining an accurate quantity of damages, grade/quality of materials, and pertinent jobsite conditions.

DEFINITION

“Scope” or “Scope of Work” is the extent of work for each individual trade and element of work that must be accounted for to fully complete the project. This includes quantities that account for installation, waste, trim, etc.

Keys to Accurate Scope Preparation

KNOWLEDGE & EXPERIENCE

Being able to identify the scope of damage, dependent on the extent of damage, is based on many levels of experience. While years of experience and exposure to a vast array of damage, structures, and circumstances lead some consultants to become proficient and masterful at scoping a project, some smaller or more objective scopes require less experience. Part of scoping is knowing which experience level and expertise is needed to determine all or part of the scope of a project. Experts in property damage, estimating, restoration, construction, roofing, engineering, MEP (Mechanical, Electrical, and Plumbing), equipment, and EH&S (Environmental, Health, and Safety) can collaborate to accurately determine the scope of repair or replacement, availability of materials, and possible use of modern equivalent replacement.

Exposure to a wide variety of circumstances and structures is necessary to become a master of scoping damage. Site inspections for fire, water, wind, and weather-related occurrences all have unique scoping challenges. Each, however, have a common theme of quantification and how one damaged component may relate to another.

In a fire, damaged components may require the removal of undamaged components for repair and/or replacement to occur. This can have implications on the scope regarding the actual repairing or replacing of affected areas within the structure.

Another example is a multi-family structure, where the location of utilities can impact undamaged areas. If the utility’s service is in a common area, consideration of scope must be given to all units regardless of the extent of damage to the individual units.
A third example would be identifying shoring requirements for the purpose of making repairs. A structural engineer may be required to determine if temporary shoring for site inspection is required or to provide confirmation that the building is safe to enter. The engineer can determine the structural scope and address building code compliance.

REPAIR VS. REPLACE

Knowing when to repair or replace a component requires a thorough understanding of the materials being repaired or replaced, construction methodologies, and assemblies. These may require additional expertise.

The repair or salvaging of components is a common occurrence in water damage events. The expertise of a hygienist may be required to access the reuse of components based on acceptable drying and/or decontamination methodology. It is also necessary to have knowledge of the building assembly to determine if repairs can be accomplished.

Replacement is customarily suggested when the building component’s integrity is compromised to an extent that restoration will not restore its value, rating, or finish. A second consideration is reviewing applicable building codes to determine repair vs. replacement requirements. A third consideration is age and any warranties in place which could prevent the acceptance of repair.
IDENTIFYING MATERIALS

Identifying materials is related to both repair and replacement of a component as well as cost consideration. Three examples of these considerations are availability of the material and lead time, quality of material being considered, and matching of existing finishes.

Availability of the material and lead time, in both commercial and residential sectors, for components such as windows, interior and exterior finishes, electrical and mechanical systems, and millwork can take several months to bring on site. This process can affect the length of repair and cost of the project.

Material quality and grade has a direct effect on pricing. A key part of the scoping process, often overlooked, is the importance of documenting the quality and grade of the pre-existing component. It is important to identify these through research or invoice retrieval. During the site inspection, brand names and serial/model numbers should be noted, whenever possible, for accurate scope reporting.

Components such as floor and paint finishes, wallcovering, siding, and roofing are often the most difficult components to match due to exposure. Fading, weathering, and marring occur to all of these components and must be taken into consideration during the scoping process. While conducting the site inspection, acceptable stopping or breaking points should be noted. Examples of stopping or breaking points could include exterior elevation changes and interior hard corners or room separations.

AVAILABILITY OF LIKE, KIND, AND QUALITY MATERIALS OR ACCEPTIBLE SUBSTITUTIONS

Recording manufacturer information and model numbers will make the research for like, kind, and quality materials more simple. When like, kind, and quality materials are no longer available, or the lead time is determined to be too long, substitutions may be considered. With proper documentation, a suitable substitution could be provided.

It should be noted that like, kind, and quality is impacted by design. Both interior and exterior custom millwork, labor intensive designs, inlaid flooring, and mosaic tile work are a few examples that require accurate notation during the scoping process.

AGE AND CONDITION

Observing the age and condition of components when performing on-site inspections will provide the necessary information for the determination of effective life; use of like, kind, and quality materials; or need for material substitution. In these circumstances, matching will also need to be considered.

Age can also affect code requirements and the materials that must be used in code compliant repairs. During scoping, any considerations for code compliance should be itemized and kept separate for further consideration. Varying code adoption can occur down to a local level and should always be confirmed to consider the governing jurisdiction’s code requirements.
Other strictly enforced code requirements involve life safety issues. Examples include egress doors, window placement and size, fire/smoke/CO-2 detectors, and in some cases the addition of a fire suppression system.

LOCATION / SITE CONDITIONS

City, suburb, or rural locations will be a factor when determining the scope and pricing of a file. All locations require a labor force specific to the area as well as site-specific conditions.

City locations may require union labor trades to complete the project. In addition, parking, on-site material storage and movement, hours of operation, and access to the area of damage need to be considered and noted when scoping a project in a city or other specific locations.

Three items to further consider are demolition and removal of damaged materials, loading or staging of new materials, and protection of common, undamaged areas. An example of a demolition consideration would be the size and type of containers that can be used in the building and transported to loading docks and/or dumpster locations. Staging and movement of new materials requires the ability to have loading space and sufficient room within the building. The size of materials needs to be considered in multi-storied buildings with special limitations. Exterior rigging may be necessary when larger than capacity materials are being brought into the project. Observation of the elevators and
stairwells is necessary to determine the capacity for loads and hours of operation to determine the length of time necessary to stage the project.

In rural areas, the demolition and staging of materials requires consideration for the site’s landscaping and topography. Placement of dumpsters and materials should be in areas where the least amount of damage to landscaping and hardscape will occur. The labor force challenge in these areas is finding qualified tradesmen and time to commute to and from the job site.

PHOTOS

While on site, all damaged and undamaged areas should be photographed with the latest technology available. A white board or comparative method should be used to identify each location being photographed. The exterior elevations, as well any commercial signage, should be included in the photo documentation and all photos should be labeled so that others can easily identify the items in the photograph. Details such as model numbers and serial numbers should be documented as well.

RESEARCH

The function of research is to determine like, kind, and quality materials; availability of materials; and appropriate substitutions. Acceptable means of research include internet searches with make and model numbers, contact with direct suppliers, recognized research publications, and qualified industry experts.

Conclusion

This paper represents a basic outline to assist in the development of an accurate project scope when inspecting a site. The main takeaways are:

- Complete accurate interior/exterior measurements including building and ceiling heights. Prior to leaving the site check these measurements to ensure they are correct.
- Locate all utility locations for water, gas, waste, and electric to determine any possible effect on making required repairs and/or replacements.
- Inspect all areas surrounding the damaged areas for possible additional damage during repairs. Example: Common hallways or stairwells in multi-unit or commercial buildings.
- Take adequate photos to relate damage, conditions, and materials while ensuring they are labeled according to location.
- Take clear notes, prepare floor plans as required, and develop detailed sketches to explain structural damage or other building details.
- Take adequate notes for the research and determination of building code requirements.
• Note site conditions for access, material delivery, size, and staging of materials in work areas. Ensure the required material will fit into the building and check to see if a lift will be needed. For city locations, note if delivery will require any streets to be shut down.

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