# Chapter 19: Installer Checklists

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19. INTRODUCTION

Checklists are invaluable tools for the Installer to use at any stage of a roof installation. By definition, a checklist is merely a list of items for comparison. Checklists may be created by anyone interested in documenting some aspect of the roof installation. (Figure 19-1)

Roofing checklists may include installer activities such as receipt and inventory of materials, progress and completion of tasks, or inspection and evaluation of a roof (new or old).

Checklists help the installer to:

- **Ensure** the right materials, supplies, and tools are available and in the right quantity before attempting to perform a task.
- **Schedule** work which needs to be performed, and avoid delays by shifting or re-adjusting the installation based on the checklist information.
- **Document** key information; the "who, what, when, and where" of the job.
- **Provide** legal documentation (especially when signed, dated, and kept on file) of important information in the event of litigation.

**Installer Note**

Installers are free to develop their own checklists for any aspect of a job where they feel it will be a benefit. Such lists may be items to bring to the job site from the home office, documents to sign and verify at the end of the day, or items to bring "roof top" from the truck or ground level. Remember, when it gets written down, it gets harder to forget.

19.1 Pre-installation Checklists

An installation progresses much smoother when all the necessary tools, materials, and equipment are available in the right quantity and in the right location. Documents used during the job estimation and order processes are types of checklists, and usually evolve into what is commonly called the Bill of Materials, or BOM. This BOM is used to check the material, supplies, or special tools (those required to be bought, rented, or leased) required for the job. Be aware that the BOM may have part numbers unique to the distributor or manufacturer which make it difficult to identify some components. Often, the manufacturer provides checklists as shown in Figure 19-2 of tools, materials, and products necessary for the installation. This information, along with packing slips, installation instructions, and other important documentation is often shipped along with the material. The specific box containing this documentation is individually marked on the outside of the package.
19.2 Checklists During Installation

Checklists used *during* the installation most often check and track activities, progress, and communication items. Each log should include the date and names or initials of key people. This includes not only the person completing the checklist, but also the person(s) performing specific tasks, such as sealing, gutter cleaning, or other trades performing work on the roof. Examples of detailed items a daily checklist may include are:

- Install underlayment
- Squares installed = ________
- Remove protective film from installed panels
- Check and clean gutters
- Notify electrician
- Notify/schedule HVAC reconnect
- Cover and secure stage material
- Store ladders and lock gate
- Photos
- Clean-up

When such checklists are completed on a regular, or even a daily basis, then filed, a comprehensive record of the installation is created without any additional effort.

A useful, but often overlooked, item to include on a daily log is the addition of a section for random notes of significance. Such notes would include key factors like weather and jobsite conditions, delays, or injuries, of any nature.

19.3 Post-installation / Inspection / Maintenance Checklists

Checklists do not stop when the installation is completed. A checklist at this stage of the roof installation will help ensure that for new installations:
The new roof is in its best condition for the customer and sign-off on the job.

The jobsite is left in an acceptable manner; clean, neat, and secured.

There are no tools, equipment, or material left on the roof, or at the jobsite.

On maintenance or re-roof installations:

- Documentation of changes, damage, or modifications since the initial installation or last inspection.
- Areas requiring cleaning.
- Areas requiring touch-up or resealing, such as terminations and masonry interfaces.

A checklist designed for the inspection or maintenance of a roof which has already been installed and in service for a period of time will have sections containing historical information to help the installer evaluate the current roof situation. As shown in the following examples, this type of checklist will include sections documenting:

- General roof information (Figure 19-3)
- Roof specification information (Figure 19-4)
- A roof plan grid (Figure 19-5)
- Building owner maintenance inspection checklist (completed by owner or owner maintenance members) (Figure 19-6)
- Inspection Checklist (completed by roofing professional) (Figure 19-7)
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Figure 19-4
Roof Specification Information on a Roof Maintenance Checklist

Figure 19-5
Roof Plan Grid on Checklist

Figure 19-6
Owner Maintenance Inspection Checklist

Figure 19-7
Inspection Checklist (General)
Such checklists provide the installer with additional income opportunities, and allow preventative, scheduled maintenance rather than costly, emergency repairs. When such a checklist does reveal a need for work to be done, it also becomes the basis for developing a list of materials and the information necessary to develop a job quotation for the customer.

19.4 Inspection Procedures

Each inspection should follow a prescribed routine that enables the person performing the inspection to examine each visible component of a roof system and identify areas requiring attention.

The following procedures can be used for both new and re-roof installations. However, some items may not be as applicable to some roof designs, or certain jobs.

19.4.1 Building Interior (Figure 19-8)

The starting point of any roof inspection should be on the ground, actually inside the building. A thorough inspection should check the interior for leaks and signs of water and staining. This includes:

- Interior walls
- Ceilings
- Insulation

19.4.2 Gutters (Figure 19-9)

Gutters, whether they are hung at the eaves or hidden, should provide positive drainage. This is one component that should be inspected most rigorously, and several times, during the installation. Look for the following:

- Loose or missing fasteners
- Displaced or loose joints in the metal

If any suspicious areas are found, a floor plan and/or roof plan (Figure 19-5) should be developed from this interior inspection, and indicate where there may be problems at the roof level.

After inspecting the interior, the exterior walls and overhangs should be inspected for moisture, cracks, and signs of movement.
Corrosion of metal components
Debris and vegetation growth
Attachment at eaves, broken or loose gutter straps, and brackets
Sealants or solder displaying signs of cracking, weathering or aging at all joints and connections
A secondary drainage system that is operational (e.g., front edge overflow)

19.4.3 Downspouts (Figure 19-10)

Downspouts and/or interior roof drains provide drainage for the gutter system. They should be checked for the following:

- Outlets are sealed properly and not clogged
- Elbows / miters are open and free-flowing
- Attachment is in place, secure and effective
- Joints are properly sealed and not leaking
- Downspouts are not damaged / crushed so as to impede the flow of water
- Downspouts and connections are not blocked or clogged

19.4.4 Edge and Rake Metal (Figure 19-11)

Edge and rake metal is used to terminate, waterproof, and provide wind-uplift protection for a roof system's edges. Proper installation and maintenance will prevent water damage to a building's structural components, insulation, and interior. Carefully look for the following:

- Loose or missing fasteners
- Missing or displaced metal sections, joint covers or closures
- Open ends. or lap joints and covers
- Exposed sealants, displaying gaps, or signs of cracking, weathering, or aging; or new sealant which is missing, smeared, or misapplied.
- Signs of expansion/contraction
- Corroded metal
- Cleat securement
19.4.5 Hips and Ridges  
(Refer to Figure 19-12 below)

Hips and ridges are terminations. Either non-vented, or vented; these terminations are used to close off the top of a panel system. They are located at the peak or high end of a metal panel roof system. When inspecting hip and ridge covers, check for the following:

- Loose or missing fasteners
- Cleat securement
- Open ends, or lap joints and covers
- Loose or displaced closures and baffles
- Damage from foot traffic
- Damage from expansion and contraction
- Sealants displaying gaps, or signs of cracking, weathering or aging; or new sealant which is missing, smeared, or misapplied.
- Corroded metal
- Slippage of hip covers (downslope)

19.4.6 Valleys  
(Refer to Figure 19-13 below)

Valleys allow for water flow and drainage from a metal roof system and should be checked for the following:

- Loose or missing fasteners
- Open ends, or lap joints and covers
- Exposed sealant, tape, and mastics displaying gaps, or signs of cracking, weathering, or aging; or new sealant which is missing, smeared, or misapplied.
- Metal panels improperly secured or misaligned at valley edges
- Damage from foot traffic
- Obstructions blocking water now
- Corroded metal
- Signs of expansion and contraction
19.4.7 Roof-to-Wall Flashings
(Refer to Figure 19-14 below)

Roof-to-wall flashings (counterflashings) are roof panel terminations generally located at walls and curbs. Because of the many conditions that require flashings, a variety of problems may occur at these vulnerable locations. When inspecting flashings, check for the following:

- The top terminations are secure and sealed
- Loose or missing fasteners
- Open ends, or lap joints and covers
- Loose or displaced closures
- Damaged metal flashings from foot traffic
- All inside and outside corners are properly sealed
- Roof panels and flashings move independently
- Corroded metal

Figure 19-14
Roof to Wall Flashings Vary Widely

19.4.8 Penetrations
(Refer to Figure 19-15 below)

Penetrations are pipes, curbs, and other items that penetrate a roof panel. Penetrations must be flashed properly to ensure a watertight roof system. Any inspection should examine the following to ensure that:

- Pipe flashings have a weathertight seal at the panel surface
- The tops of the pipe flashings have weathertight seals at the pipes
- Penetrations are secure (i.e., not prone to movement)
- Curbs are properly flashed, particularly at the corners
- Curbs and penetrations are properly cricketed to allow for positive drainage
- Skylight domes/panels are not deteriorated
- Penetrations do not impede the flow of water
- Metal is not corroded
- Fasteners are not loose or missing
- Corners are properly sealed or soldered with no gaps

Figure 19-15
Inspection of Roof Penetrations
19.4.9 Metal Panels and Seams
(Figure 19-16)

The metal panel is a one piece item and is easily damaged. Metal panels make up the field, or surface membrane, of a metal panel roof system; seams provide the watertight integrity of a metal panel roof system. Panels and seams should be examined closely for the following:

- Dust, dirt, and any surface or finish damage (new panels)
- Open, damaged, loose, or improper laps
- Open, damaged, loose, or bent seams
- Improperly sealed seams
- Loose seam caps
- Loose fasteners (e.g., from oversized holes) that may require replacing with oversized fasteners; and / or encapsulated with the appropriate sealant
- Missing fasteners
- Surface rust, corrosion of metal components and seams
- Loose debris or vegetation growth
- Physical damage from traffic, snow removal, bullets, etc.

- Damage from contamination
- Adequate drainage
- Loose or unsecured snow guards

Summary

Any tool that can save the installer time, money, and make the job easier is a valuable tool. The checklist is such a tool. Whether used to check material upon arrival, daily progress of the job, quality of the completed installation, or roof condition during a yearly inspection, this simple tool documents the important information.

If there is information, or details, materials, and activities that cannot be overlooked during the installation, creating a simple checklist will reduce the risk of overlooking the necessary items.

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