HOMEWORKS
PAINTING

# New Hire Training Manual

Name: _____ Start Date: _____

Welcome to the Home Works Painting team! The purpose of this manual is to evaluate what skills and knowledge you currently possess, and identify the areas to improve upon. We want all employees to work in similar fashions to help maintain the type of quality work we expect each and every day. With this in mind, we have put together a list of the everyday skill sets to test you on. By the end of this training, you will be able to work on any crew and produce at a high level.

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# Interior Quality & Assurance Guidelines

- ❑ The PDCA Standard P1-04 states a properly painted surface is defined as:
  • Uniform in appearance, color, texture, hiding, and sheen.
  • Free of foreign material, lumps, skins, runs, sags, holidays, misses, or insufficient coverage.
  • Free of drips, spatters, spills or overspray caused by HWP.
  • When a surface is "properly painted" it shall be examined without magnification at a distance of 39 inches (1 meter) or more, under finished lighting conditions and from a normal viewing position.
- ❑ Shop area should be neat, organized for efficiency, safe, out of traffic area and located as close as possible to work area.
- ❑ A properly set-up area is one in which all surfaces not being painted are protected.
- ❑ Taped edges are burnished properly.
- ❑ On stained surfaces, filled holes should blend in with the color of the wood so as not to be noticeable.
- ❑ There should be no hard edges, skips, bubbles, or voids on any repairs.
- ❑ Areas should be free of visible sanding marks.
- ❑ All surrounding areas should be free of patching materials, dust and debris.
- ❑ Substrate should be sound so as to prevent further cracking due to movement of substrate.
- ❑ After the priming is complete, the repaired areas should not be obvious.
- ❑ No gaps should be visible within paint trim elements and adjacent walls & ceilings after caulking.
- ❑ Caulking should be smooth with no texture or ridges.
- ❑ Caulking should not fill trim profiles.
- ❑ Properly cleaned surface is free of dust, grease, dirt, oils, nicotine, furniture polish, tape, adhesives, scuff marks, mildew, hairspray, soap, detergents, residual cleaning agents, soot etc.
- ❑ All cut lines should be sharp and consistent at any adjacent surface not to be painted with the same material.
- ❑ All brush applied areas should blend into roller work with no picture framing effect.
- ❑ Roller stipple texture should be consistent with company standards and/or client approved samples.
- ❑ No raised wood grain areas on trim elements.
- ❑ No scraper marks, such as gouges and chatter marks.
- ❑ Nail holes and gouges filled flush and smooth.
- ❑ Brush strokes should be in the direction of the wood grain.
- ❑ Coating should create a seal onto the glass when appropriate. Glazing at glass (if applicable) should be sound and free of any cracking, crazing, or gaps.
- ❑ No visible gaps where glass surfaces meet wood surfaces.
- ❑ No scratches on glass.
- ❑ There should be no coating between moving surfaces (sash) and non-moving surfaces (jamb tracks/liners).

- ❑ All glass surfaces should be free of glazing oil, adhesive residue, primer splatter, wisps, uneven paint lines, (excessive paint from edges of muntins, rails, and stiles).
- ❑ The hardware should be properly installed with no paint on it.
- ❑ All debris has been removed.
- ❑ All tools and materials have been removed from the area.
- ❑ Furniture, fixtures, outlet and switch covers, and window coverings have been returned to original location.

# Interior Job Site Setup

## Production Rate:

- ❑ Timely manner relative to job size

## Materials & Supplies:

- ❑ Floor protection (drop cloths, rosin paper, etc.) ❑ plastic sheeting ❑ tape – appropriate size & type ❑ trash bags

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Determine a convenient safe area for the shop. Make sure the shop is not near the stove, boiler, furnace or water heater or any open flame. | |
| 2 | Protect floor & surrounding area with impervious floor protection. Use extra precaution where paint will be stored. | |
| 3 | Bring equipment and materials into shop area and organize appropriately. | |
| 4 | Organize materials in sequence of use such as shop supplies, primers, finishes. | |
| 5 | Make sure that all materials in the shop are sealed or resealed properly after use. | |
| 6 | Make sure MSDS, fire extinguisher & first aid kit are readily available. | |
| 7 | At the end of each work day, all rags used with solvents or oil should be secured properly. | |
| 8 | Take special care that the shop is secure from children and pets. | |
| 9 | Shop should be left in a neat and orderly fashion each day. | |

**Professional Techniques:**

- ❑ Commercial air cleaners can be used to filter out airborne dust.
- ❑ An ozone air purifying machine can be used to remove odors if needed
- ❑ Cover walls not to be painted, including wallpapered walls, w/ static charged plastic sheeting. This plastic will usually adhere to the wall without the use of tape.
- ❑ When working in areas that have smoke or fire detectors, cover them first if allowed by local fire code. You MUST remove the covers at the end of the day.

# Masking & Dust Protection

**Production Rate:**

- ❑ Various according to task

**Materials & Supplies:**

❑ masking film ❑ tape – appropriate size & type ❑ masking paper ❑ plastic sheeting
❑ impervious floor protection ❑ reinforced floor paper ❑ plastic bags

**Tools & Equipment:**

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ hand masking tool ❑ screw gun

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Insure that personal property has been moved to a safe location. | |
| 2 | Move furniture to provide for easy access to surfaces to be worked on. | |
| 3 | Protect or remove all window treatments. | |
| 4 | Remove dust from all surfaces that are to be masked. | |
| 5 | Cover floor with appropriate floor protection. | |
| 6 | Cover furniture, personal property and any surfaces not to be painted or worked on appropriately. | |
| 7 | Cover lighting fixtures, sprinkler heads, smoke detectors and ceiling fans, if necessary. Follow local fire codes when covering sprinkler heads and smoke detectors and make sure you remove the covers at the end of the day. | |
| 8 | Protect cabinets, bookcases and built-ins appropriately taking special care to prevent dust from entering them. | |
| 9 | Remove switch plates and outlet covers and keep in a secure location. | |

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| **10** | Remove or protect hardware when necessary. | |

## Professional Techniques:

- ❑ Note any damages on surfaces not to be painted, take photos if possible.
- ❑ Test masking tape on surface prior to masking to prevent damage to existing coating.
- ❑ Remove hardware, put in a zip lock bag and label it with the area name on it. Put all bags in secure area.
- ❑ Cover walls not to be painted, including wallpapered walls, w/ static charged plastic sheeting. This plastic will usually adhere to the wall without the use of tape.
- ❑ When moving a refrigerator, be careful not to damage the water supply line.
- ❑ Be careful with floors when moving heavy furniture or refrigerator. Use thin plywood or furniture sliders. Hold harmless MUST be signed for refrigerator.
- ❑ Use blue booties on smoke detectors to keep dust from setting them off if allowed by local fire regulations. Be sure to remove them at the end of every work day.
- ❑ Mark drop cloths for top and bottom to prevent placing soiled side down.
- ❑ It's a good idea to photograph a room before you begin to work so you can return everything to its exact location.
- ❑ Rather than masking door hinges, replace hinges with temporary hinges.
- ❑ To prevent paint from seeping under tape, try burnishing the tape edge.

# Filling Nail Holes

## Production Rate:

- ❑ Various according to task

## Materials & Supplies (assumes caulk is acrylic/latex):

❑ filling material ❑ appropriate sandpaper

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ hand sander ❑ electric sander ❑ sanding block

| # | Procedure Steps | Completed Properly |
|---|---|---|
| **1** | Check that all nail heads have been properly set to form holes that are between ⅛" – ¼" deep. | |
| **2** | Take a small amount of filler material on your putty knife and press firmly down into the nail hole. Repeat once or twice to ensure that hole is completely filled. When using products that might shrink, overfill slightly, leaving a slight build-up. This will compensate for any shrinkage during drying, and any excess should easily sand off leaving a smooth, flush surface. | |
| **3** | For clear-coated trim, fill holes with colored putty after 1st clear coat has been applied. Be sure to clean off filler material residue surrounding the hole. | |

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| 4 | After holes have been filled and fillers other than putty have dried, the surfaces should be sanded. Putty should not be sanded. | |

## Professional Techniques:

- ❑ Store bought colored putty can be lightened with glazing compound.
- ❑ Putty that is excessively oily or too sticky can be made more workable by kneading whiting, powdered patching material or corn starch into it. It can also be kneaded into an absorbent rag to help remove excess oil.
- ❑ Oil putty should be used only under oil based finishes, otherwise it will flash and/or fail.
- ❑ Some "light weight" spackles may leave pock marks or other texture.
- ❑ Sand wood only in the direction of the grain.
- ❑ To shorten the drying time when using putty, mix it with plaster of paris.
- ❑ When using putty on stained & varnished trim, press putty firmly into the hole with the thumb of one hand, and while maintaining pressure, slide a putty knife under the thumb, cutting the putty off flush with the surface you are finishing. Use a clean rag to rub putty residue off from around the filled hole.

# Repairing Cracks in Drywall

## Production Rate:

- ❑ Rates will vary on condition of substrate and size of repair
- ❑ 10 feet per hour

## Material & Supplies:

❑ drywall tape – paper or fiberglass mesh ❑ patching material ❑ appropriate sandpaper
❑ drywall screws, appropriate size ❑ plaster buttons ❑ water ❑ primer ❑ caulk

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ screw gun ❑ hand sander ❑ electric sander ❑ sanding block ❑ sponge ❑ drill

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Use an appropriate tool, such as a triangle scraper, 5-in-1 etc., to dig all loose material from crack to form a V-shaped opening. | |
| 2 | Remove dust and debris from the crack. Make sure the crack edges provide a solid substrate for patching adhesion. If surface is loose, chalky, crumbling or wet, prime the surface first. | |
| 3 | If the crack is deep, fill it with patching materials before installing the joint tape. Be sure not to overfill the crack, fill it flush or slightly under fill it. | |
| 4 | Apply drywall tape over the crack. Apply a thin coat of the appropriate patching material with a 3" broad knife to cover the drywall tape and overlap 2 inches onto the wall from the edge of the tape. | |

| | | |
|---|---|---|
| **5** | When dry, lightly sand patch material. | |
| **6** | Apply a 2nd coat of patching material with a 6" or 12" knife extending approximately 4-8 inches onto the wall from the edge of the tape. | |
| **7** | When dry, inspect, evaluate and repeat as many times as needed. | |
| **8** | Sand the area with a hand sander, sanding block or electric sander to blend into the existing wall area. | |

## Professional Techniques:

- ❑ Food coloring, universal tints or chalk can be added to the patching compounds before applying. The patches are then more visible for sanding.
- ❑ In some cases, installing drywall screws or plaster buttons around a crack will stabilize the area.
- ❑ It is critical to contain dust. Refer to COP Masking & Dust Protection.
- ❑ To match existing roller stipple on newly repaired areas, a number of techniques can used such as rolling thinned out joint compound or high build primer.
- ❑ Products are available to cover spider web type cracks. The flexibility and bridging capabilities of these products will help prevent cracking.
- ❑ Adhesive backed metal patches can be for repairing drywall cracks as well as holes.
- ❑ A commercial paper cutter/trimmer gives a nice clean edge to metal patches and sandpaper.
- ❑ Wet sanding can minimize dust.
- ❑ Per manufacturer recommendations, do not apply powdered joint compound over ready-mixed joint compound because of the different rates of expansion and contraction.
- ❑ Use fast drying powdered joint compound to provide multiple patching coats at shorter intervals than ready-mixed compound.
- ❑ Plaster of Paris may be used to fill deep cracks because it dries fast but then it must be covered with a flexible bridging material.
- ❑ Areas to be repaired have to be sealed to ensure adhesion of patching compounds.
- ❑ Shining a light up/across a wall or across a ceiling at a shallow angle will make it easier to identify defects in the surface.
- ❑ Make sure broad knives are clean to provide smooth patching finishes.
- ❑ Make sure ready mix compound containers are wiped down on the inside to prevent dried pieces from contaminating the compound.
- ❑ Apply an ounce or two of water on top of the ready mix before putting the lid on to prevent compound from drying.
- ❑ Mark areas requiring repair with tape, extension pole or back of putty knife.
- ❑ Use of a heat gun may be required to help speed up the drying process, keep about one foot away from surface and move with slow steady movements.
- ❑ Use floor fan to speed up drying process.

# Repairing Holes in Drywall/Plaster

## Production Rate:

- ❑ Rates will vary on condition of substrate and size of repair
- ❑ 3-6 inch diameter holes – up to 1 hr
- ❑ Install drywall patch 24 inch x 16 inch – up to 2 hrs.

## Materials & Supplies:

❑ drywall tape (paper or fiberglass mesh) ❑ patching material ❑ appropriate sandpaper
❑ wood ❑ appropriate size drywall ❑ drywall screws, appropriate size
❑ construction adhesive ❑ metal patches with adhesive backing ❑ water

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ metal straight edge ❑ screw gun ❑ hand sander ❑ electric sander ❑ sanding block
❑ sponge ❑ wood saw ❑ electric drill & bits

| # | Procedure Steps | Completed Properly |
|---|---|---|
| | Holes can be repaired in a variety of ways and different commercially available products can be used. The following are some recognized methods for repair. | |

| | METHOD I - Repair with Metal/Mesh Screens | |
|---|---|---|
| 1 | One way to repair holes of up to 6 inches in diameter is to use a square metal screen with an adhesive back that is commercially available. This patch can be cut to size so the metal screen overlaps the hole sufficiently to provide proper support. | |
| 2 | Attach the metal screen to cover the hole. | |
| 3 | Apply patching materials to thinly cover the metal screen and overlap 2 inches onto the wall from the edge of the screen. | |
| 4 | When dry, lightly sand patch material. | |
| 5 | Apply 2nd coat of patching material extending approximately 4 – 6 inches onto the wall from the edge of the screen. | |
| 6 | When dry, inspect, evaluate and repeat as many times as needed. | |
| 7 | Sand the area with a hand sander, sanding block or electric sander to blend into the existing wall area. | |

| | METHOD II - Repair with Drywall | |
|---|---|---|
| 1 | Cut a piece of drywall slightly larger than the hole to be repaired. | |
| 2 | Lay drywall over the hole and trace around the perimeter. | |
| 3 | Cut existing wall along traced lines. | |
| 4 | Install wood backing strip(s) on the back of the existing wall across the hole. Extend the strips approximately 4 inches past the top and bottom of the hole. Secure with drywall screws through existing wall into backing strip(s). Install as many backing strips as needed to provide structural integrity. | |
| 5 | Install drywall patch into hole and secure with drywall screws into wood backing strips. | |
| 6 | If necessary, fill any gaps between the existing drywall and newly installed drywall with patching material. | |
| 7 | Apply drywall tape over the gaps between the existing surface and the newly installed drywall piece. Apply a thin coat of the appropriate patching material to cover the drywall tape overlapping onto the wall approximately 4 inches from the edge of the tape. | |
| 8 | Apply as many layers of patching materials as needed per steps #5, #6, #7 & #8. | |

| | METHOD III – Stud to Stud Repair | |
|---|---|---|
| 1 | Use a drywall saw or cutting tool to make horizontal cuts in the drywall above and below the hole until you reach the vertical stud on the left and right of the hole. Complete the cutout by cutting vertically along the inside edge of the studs and remove damaged piece of wall. Preserve the cutout for use as a template for the new patch. | |
| 2 | Cut two 2 x 4s approximately 4 inches longer than the height of the cutout to support new patch and existing drywall. | |
| 3 | Pre-drill holes in the 2 x 4 pieces so screws slide easily through. Secure one piece to each existing stud, extending the new wood pieces approximately 2 inches above and below the edges of the hole. Be sure the 2 x 4 is pulled flush against the existing drywall. | |
| 4 | Lay cutout template on a new piece of drywall and trace around the perimeter and cut out a new patch. Make sure you have the correct thickness of drywall and appropriate type ( i.e. green board if required). | |
| 5 | Apply adhesive to the two exposed edges of the vertical studs. | |

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|---|---|---|
| **6** | Install drywall patch and secure with drywall screws. | |
| **7** | Make sure surrounding drywall is secure by installing drywall screws as needed. | |
| **8** | If necessary, fill any gaps between the existing drywall and newly installed drywall with patching material. | |
| **9** | Apply drywall joint tape as per #15. | |
| **10** | Apply as many layers of patching materials as needed per steps #5, #6, #7 & #8. | |

## Professional Techniques:

- ❑ Food coloring, universal tints or chalk can be added to the patching compounds before applying. The patches are then more visible for sanding.
- ❑ It is critical to contain dust. Refer to COP Masking/Dust Protection.
- ❑ To hold wood strips in place while securing, use a screw inserted into the backing strip as a handle.
- ❑ To match existing roller stipple on newly repaired areas, a number of techniques can used such as rolling thinned out joint compound or high build primer.
- ❑ Wet sanding can minimize dust.
- ❑ Per manufacturer recommendations, do not apply powdered joint compound over ready-mixed joint compound because of the different rates of expansion and contraction.
- ❑ Use fast drying powdered joint compound to provide multiple patching coats at shorter intervals than ready-mixed compound.
- ❑ Plaster of Paris may be used to fill deep cracks because it dries fast but then it must be covered with a flexible bridging material.
- ❑ Areas to be repaired have to be sealed to ensure adhesion of patching compounds.
- ❑ Shining a light up/across a wall or across a ceiling at a shallow angle will make it easier to identify defects in the surface.
- ❑ Make sure broad knives are clean to provide smooth patching finishes.
- ❑ Make sure ready mix compound containers are wiped down on the inside to prevent dried pieces from contaminating the compound.
- ❑ Apply an ounce or two of water on top of the ready mix before putting the lid on to prevent compound from drying.

# Interior Caulking

## Production Rate:

❑ approximately 75 linear feet per hour

*Production rate may vary with the scope of work*

## Materials & Supplies (assumes caulk is acrylic/latex):

❑ caulk ❑ protective gloves ❑ chip brush ❑ water ❑ backer rod ❑ sponge

❑ caulk smoothing tool ❑ rags

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Ensure that all surfaces are completely cleaned, scraped, **primed**, patched, and sanded as needed. Surfaces should be clean, dry, and free of oils, wax, grease, dirt, dust, loose or chalking paint, and loose caulking. | |
| 2 | Fill any gaps greater than ¼" (6mm) deep or greater than 3/8" (10mm) wide with backing material such as backer rod. | |
| 3 | Insert the caulk tube in the caulking gun and pull the trigger until the plunger is snug against the bottom of the tube. Cut the nozzle tip of the caulk tube at a 30 – 45 degree angle to the desired thickness of the caulk bead. Refer to nozzle tube for bead size. Puncture the inner seal of the nozzle if needed. | |
| 4 | Place the open tip of the caulk tube nozzle in the joint. Hold the flat open side of the nozzle tip against the joint/substrate surface so the caulk will flow into the joint. | |
| 5 | Draw a bead of caulk by squeezing the trigger of the caulking gun and pulling it along the joint in a smooth continuous motion. Release pressure on the trigger to stop the bead flow at the end of the joint. | |
| 6 | Smooth the caulk bead using a damp finger, cloth, sponge or caulk smoothing tool. Leave enough caulk to bridge and adhere to the two surfaces. Wipe the excess off your finger with a cloth or rinse it off in a bucket of water. | |
| 7 | To minimize build-up in molding corners etc. use a small finger or thin rag. For even more detail, use a damp "chip" brush to tool the caulk to the shape of the molding profile. | |
| 8 | Caulking should proceed in the Most Efficient Sequence (MES), generally top down and unit by unit (doors, windows, etc.). | |
| 9 | Allow the caulk to dry/cure sufficiently per the manufacturer's specifications prior to painting. Painting too quickly can lead to discoloration or to cracking. | |

### Professional Techniques:

- ❑ Be aware if caulk is not completely dry, it can crinkle the finish coat.
- ❑ To create a straight caulk edge adjacent to a surface not to be painted such as stone, tile, back splashes, etc., apply painters tape to the surface in a straight line. Remove the tape as soon as the caulking has been completed, before it starts to dry.
- ❑ For small areas requiring backing material, foam from a sanding pad or similar type product may be used.
- ❑ Leave the largest bead of caulk possible while maintaining appropriate appearance. Larger beads accommodate more movement and reduce the chance of cracking.
- ❑ If using a wet rag to tool the caulking, be careful not to get residue from the rag on surfaces not to be painted, as this will leave a visible residue when dried.
- ❑ In detailed areas, remove excess caulk with a damp rag wrapped over a putty knife.
- ❑ If silicone caulk has previously been used, either prime it with a specialty bonding primer or cut it out and re-caulk.

## Wallpaper Removal

### Production Rate:

- ❑ Approximately 35 – 50 square feet/hr
  *Production rates for wallpaper stripping are highly variable. Conditions that may affect production rate include vinyl-lined paper, stubborn paste, painted wallpaper, improperly installed coverings, re-glued seams or unusually high ceiling.*

### Materials & Supplies:

❑ wallpaper stripping agent ❑ plastic sheeting ❑ sponges ❑ synthetic scouring pads
❑ protective gloves ❑ trash bags ❑ tape – appropriate size & type ❑ water
❑ appropriate cleaning agent

### Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ garden sprayer ❑ wallpaper razor scraper ❑ wallpaper scoring tool ❑ fan

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Inspect area for electrical hazards. Ensure GFI cords are used for all electrical equipment. Ensure all switch plates and outlet covers are securely installed. Tape over all light switches in the off position. Protect electrical outlets, switches, thermostats and sconces from moisture. | |
| 2 | Tape plastic to the wall ½ inch above the baseboard and extend approximately 3 feet onto the floor. This will keep water that runs down the wall from running behind the baseboards and on to the wood floors and carpets. Place drop cloths or other absorbent products on top of the plastic to soak up water and paste residue. | |
| 3 | Determine the type of wallpaper to be stripped. First try dry peeling the wallcovering. If most of the wallpaper comes off the wall, leaving only paste residue and minimal paper backing, then it is dry strippable | |

| | | |
|---|---|---|
| | wallpaper, which is a solid vinyl covering and the easiest to remove. If the decorative pattern portion of the wallpaper comes off but leaves a paper layer and paste on the wall, then it is a peelable wallpaper and slightly harder to remove. If little bits & pieces of wallcovering come off but no large pieces then it is falls into the non-peelable category and will have to be scored to remove properly. This process takes the longest and includes foil and mylar wallcoverings. | |
| **4** | Strip a test area to evaluate the wallcovering and substrate before proceeding. Be aware of any damage to the substrate and if damage occurs, re-evaluate for alternative stripping methods. | |
| **5** | **Dry Strippable & Peelable Wallpaper Procedure**<br>Begin working at a seam and try to get under the paper with a wallpaper razor scraper to remove as much of the wallcovering and paper backing as possible. | |
| **6** | Mix the wallpaper stripper with hot water. Follow the directions on the back of the container for appropriate water to stripper proportions. Apply the solution with an appropriate sized sprayer. Typically one gallon of solution is enough as you want to keep the water as hot as possible. Mix additional batches as needed. | |
| **7** | Apply the solution from the ceiling to the floor in an approximate 3-4 feet wide strip. Let soak long enough for the paste/paper to soften. Use a wallpaper razor scraper, broad knife, and/or scouring pad to aid in removing paper and paste from the walls working from the bottom up. Repeat step as many times as necessary. | |
| **8** | Rinse walls with clean warm water to remove any paste/paper residue. Alternatively, sand walls to remove any paste/paper residue and seal with a primer/sealer that will not reactivate paste. | |
| **9** | Take plastic off the wall and discard. Make sure there is no paper/paste below the line of plastic sheeting. Be sure floors and carpets are free of paper debris, paste and tools. Take drop cloth outside and shake out over disposable plastic sheeting. | |
| **10** | Wipe residue off of adjacent surfaces as needed, including trim work and ceilings. | |
| **11** | **"Non-Peelable" Wallpaper Procedure:**<br>Score the surface of the paper and soak it to soften the paper before attempting to remove it. Run a scoring tool or knife blade over the wallcovering making cuts or X's with enough pressure to puncture the wallpaper surface but not harming or gouging the substrate. Course sandpaper can also be use to score the surface. This will allow the wallpaper solution to thoroughly penetrate the wallcovering. | |
| **12** | Mix wallpaper solution as per step #6. | |
| **13** | Apply solution to a small 2-3 square ft. section and wait long enough for wallcovering to become thoroughly soaked. Remove paper and paste residue as per step #7. Wallcovering will probably need to soak longer and stripping solution will need to be re-applied more times | |

| | | |
|---|---|---|
| | than for dry strippable or peelable wallcovering. Always keep the surface to be stripped wet in order for the solution to be active.<br><br>**Note:** The size of the area being sprayed can vary depending on how much solution is being absorbed in the wallpaper. You will be able to judge how large an area you can keep wet and strip before the solution dries out. Sometimes spraying a whole wall ahead of you will help in loosening the wallpaper and paste prior to stripping. | |
| 14 | Rinse or sand/seal wall and clean up as per steps #8, #9 & #10. | |

## Professional Techniques:

- ❑ Pat dry or use a fan to accelerate drying time so you can start other prep or painting.
- ❑ Change rinse water often to assure that all residues are thoroughly removed.
- ❑ Prior to washing, have a wet/dry vacuum available and use if necessary.
- ❑ Cleaning agents may have to sit on a surface for a few minutes to be fully effective.
- ❑ Synthetic abrasive scrub pads may be needed in difficult to clean areas.
- ❑ Round off corners of a broad knife with sandpaper to prevent ridges and gouges.
- ❑ When removing paper or paste from the wall, it should be immediately discarded into a trash container.
- ❑ To avoid gouging the surface, reverse the wallpaper blade from the sharp edge to the dull edge.
- ❑ If drywall facing paper comes off with the wallpaper, use alternative stripping method.
- ❑ A wallpaper steamer may be used to loosen wallcovering and adhesive as an alternative to chemical strippers.

# Wall & Ceiling Prep

## Production Rate:

- ❑ Varies depending on the condition of the surfaces

## Materials & Supplies:

- ❑ drywall tape – paper or fiberglass mesh ❑ patching material ❑ appropriate sandpaper
- ❑ primer ❑ razor blades

## Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools & supplies
- ❑ hand sander ❑ electric sander ❑ pole sander

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Determine if nails and picture hooks need to be removed per job specifications. Remove if warranted. | |

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| **2** | Wash surfaces if needed (see COP Wall & Ceiling Washing). | |
| **3** | Pole-sand surfaces. | |
| **4** | Carefully examine all ceilings and walls by shining a light across the surface to show all defects on the surface and mark areas that require repair working from the ceiling down. | |
| **5** | Remove all failed plaster, caulk, filler and patches. | |
| **6** | Repair all holes and cracks (see COP on Repairing Holes in Drywall/Veneer Plaster Systems & COP on Repairing Cracks in Drywall/Veneer Plaster Systems). | |
| **7** | Repair all nail/screw pops, drywall corner bead failure and joint tape failure per job specifications. | |
| **8** | Repair surface imperfections including drips, sags, dents, ridges, tool marks, etc, per job specifications. Shave, sand or patch as needed. | |
| **9** | Remove all of the dust and debris with a dust brush or vacuum. | |
| **10** | Depending on the job specifications, either spot prime the walls and ceiling or apply one full coat of primer to the entire walls and/or ceiling. | |
| **11** | Inspect surfaces, fine-tune and sand as needed. | |

## Professional Techniques:

- ❑ Use a very sharp blade to scrape paint to increase appearance quality and production speed.
- ❑ Shave paint ridges, existing drips, runs or sags down with the scraper. This will minimize the time needed for feather sanding and patching.
- ❑ Always allow adequate dry time for primed surfaces.
- ❑ Food coloring, universal tints or chalk can be added to the patching compounds before applying. The patches are then more visible for sanding.
- ❑ It is critical to contain dust; refer to COP Masking/Dust Protection.
- ❑ Wet sanding can minimize dust.
- ❑ Per manufacturer recommendations, do not apply powdered joint compound over ready-mixed joint compound because of the different rates of expansion and contraction.
- ❑ Use fast drying powdered joint compound to provide multiple patching coats at shorter intervals than ready-mixed compound.
- ❑ Shining a light up/across a wall or across a ceiling at a shallow angle will make it easier to identify defects in the surface.
- ❑ Make sure broad knives are clean to provide smooth patching finishes.
- ❑ Round off corners of broad knives with sandpaper to minimize ridges.

- ❑ Make sure ready mix compound containers are wiped down on the inside to prevent dried pieces from contaminating the compound.
- ❑ Apply an ounce or two of water on top of the ready mix before putting the lid on to prevent compound from drying.
- ❑ Mark areas requiring repair with tape, back of putty knife etc. Do NOT use pencil.

# Ceiling Painting

## Production Rate:

- ❑ 200 square feet/hr to cut in and roll walls 8' high in a room that is clear of furniture and has "normal" trim elements, excluding set up and preparation.

## Material & Supplies:

- ❑ paint ❑ tape – appropriate size & type ❑ appropriate sand paper ❑ rags
- ❑ roller covers ❑ paint strainer

## Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools
- ❑ roller tray or bucket & grid ❑ extension pole ❑ pole sander

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Prior to painting the ceiling, evaluate for proper ceiling preparation.<br>• Ensure that all surfaces are properly patched, sanded and primed (see COP for Wall & Ceiling Preparation RI-PR-7)<br>• Ensure there is appropriate floor & room protection (see COP for Masking/Dust Protection for Interior Furnished Area RI-GL-3)<br>• Ensure all fixtures are protected.<br>• Ensure the ceilings and all adjacent areas are clean, including trim.<br>• Remove dust using appropriate methods such as a dust brush, rags, dry mop or vacuum. | |
| 2 | Cut-in ceilings to walls or crown molding in the entire room. Keep brush wet, do not dry brush. If adjacent surface (walls or crown molding) is to be painted then lap ceiling paint onto that surface provided coverage of that surface is not a concern. Be sure to feather out the lapped paint. | |
| 3 | Load roller with as much paint as it will hold, removing only the excess paint. | |
| 4 | Roll the paint on the ceiling in two phases:<br>1. For Uniform Coverage<br>Unload the paint from the roller in an outward direction then a backward direction onto the ceiling, in a "N" shape.<br>2. Smooth for Appearance<br>Back roll over the surface to smooth the paint for an even application. | |

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| 5 | Working from dry areas backwards into wet areas, spread the material over approximately a 3 - 5 foot ceiling section evenly using light pressure. Work in strips narrow enough so that you can maintain a wet edge at all times. | |
| 6 | Using a damp roller, remove any heavy edges using light pressure and blend the roller work into the previously cut-in area. | |
| 7 | Continue this process until you get to a natural break point. Do not stop or pause part way through a ceiling. | |

## Professional Techniques:

- ❑ All paint (primer) should be clean or thoroughly strained before being applied.
- ❑ If area is too warm or too dry, paint will dry quickly making it hard to maintain a wet edge. If possible, increase the humidity, lower the temperature or close air ducts.
- ❑ Clean all surfaces in the work area before any finish painting to avoid dust getting into the finish coat.
- ❑ All preparation work should be completed prior to applying any top coats. If additional preparation is required after the first of two top coats, remember that additional steps and time will be required.
- ❑ Run a new roller cover up and down along a length of tape to remove excess fuzz prior to dipping in paint.
- ❑ For water based paints, pre-wet the roller and lightly spin excess water out to leave a damp roller cover. This will help the roller cover load with more paint.
- ❑ Keep brushes conditioned and clean during usage for optimum efficiency and paint release.
- ❑ Use brushes with bristles that have good loading and release capacity along with stiffness that balances a smooth finish with a straight edge.
- ❑ Use the largest brush that will provide for appropriate cut-lines.
- ❑ Always allow adequate dry time for primed surfaces to avoid flashing.
- ❑ The cut-in strip only needs to be wide enough to provide adequate space between edges and the roller. For a typical 8 foot ceiling, that is about 4 inches. However, when using a long extension pole, bring your cut lines ~6 inches from the walls or crown molding.
- ❑ To paint narrow areas that your standard roller is too big for use a smaller hot dog / sausage roller. Be sure that the roller nap quality and thickness is comparable to your standard roller cover.
- ❑ Keep the roller tray / bucket right near you. The time lost walking around to load the roller can be much greater than most would expect.
- ❑ When necessary, to eliminate roller lines, tilt the roller cover on each of its end corners and roll on the wall to remove the excess paint. Immediately roll over those lines to smooth them out.
- ❑ When deciding which way to roll, you must weigh the following: 1. the direction of natural light, 2. the entrance into the room, 3. artificial lighting.
- ❑ Use a roller pole whenever possible to improve production and appearance quality.

- ❑ When painting a large ceiling, use existing items in the room as reference points to keep track of completed areas.
- ❑ When painting a textured ceiling, roll as close to the corners as possible and cut in remaining areas afterwards. This will improve production.
- ❑ Do not roll too close to corners, ceiling, base, or trim with a heavily loaded roller cover that would leave excess paint build-up.
- ❑ On outside corners use special care to avoid excess paint build up.
- ❑ Tailor your nap size to the task at hand. For smooth surfaces, use ¼" or 3/8" naps to minimize roller stipple. On textured surfaces, use a ½" or ¾" nap to hold additional paint for getting into those crevices.
- ❑ Use a light to aid in seeing how the paint is being applied to avoid imperfections.
- ❑ Roll smooth ceilings first prior to any textured ceilings to avoid "trash" being transferred to smooth ceiling area.

# Wall Painting

## Production Rate:

- ❑ 250 square feet/hr to cut in and roll walls 8' high in a room that is clear of furniture and has "normal" trim elements, excluding set up and preparation.

## Material & Supplies:

- ❑ paint ❑ tape – appropriate size & type ❑ appropriate sand paper ❑ rags
- ❑ roller covers ❑ paint strainer ❑ wet paint sign

## Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools
- ❑ roller tray or bucket & grid ❑ extension pole ❑ pole sander

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Prior to painting the wall, evaluate for proper wall preparation.<br>• Ensure that all surfaces are properly patched, sanded and primed (see COP for Wall Preparation RI-PR-7)<br>• Ensure there is appropriate floor & room protection (see COP for Masking/Dust Protection RI-GL-3)<br>• Ensure all switch plate covers, outlet covers, etc. have been removed and that hardware is protected.<br>• Ensure the walls and all adjacent areas are clean, including trim, remove dust using appropriate methods such as a dust brush, rags, dry mop or vacuum. | |
| 2 | Cut-in all wall to ceiling, trim and baseboard areas one wall at a time. Keep brush wet, do not dry brush. | |
| 3 | Load roller with as much paint as it will hold, removing only the excess paint. | |
| 4 | Roll the paint on the wall in two general phases:<br>1. For Uniform Coverage<br>Unload the paint from the roller in an upward direction then a downward direction onto the walls, in an "N" shape. | |

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| | 2. Smooth for Appearance<br>Back roll over the surface to smooth the paint for an even application. | |
| **5** | Working from floor to ceiling and from dry areas backwards into wet areas, spread the material over approximately a 2-3 foot wall section evenly using light pressure using a ½" nap roller. Work in strips narrow enough so that you can maintain a wet edge at all times. | |
| **6** | Using a damp roller, remove any heavy edges using light pressure and blend the roller work into the previously cut-in area. | |
| **7** | Continue this process until you get to a natural break point (corner). Do not stop or pause part way through a wall. | |

## Professional Techniques:

- ❑ All paint (primer) should be clean or thoroughly strained before being applied.
- ❑ If area is too warm or too dry, paint will dry quickly making it hard to maintain a wet edge. If possible, increase the humidity, lower the temperature or close air ducts.
- ❑ Clean all surfaces in the work area before any finish painting to avoid dust getting into the finish coat.
- ❑ All preparation work should be completed prior to applying any top coats. If additional preparation is required after the first of two top coats, remember that additional steps and time will be required.
- ❑ Run a new roller cover up and down along a length of tape to remove excess fuzz prior to dipping in paint.
- ❑ For water based paints, pre-wet the roller and lightly spin excess water out to leave a damp roller cover. This will help the roller cover load with more paint.
- ❑ Keep brushes conditioned and clean during usage for optimum efficiency and paint release.
- ❑ Use brushes with bristles that have good loading and release capacity along with stiffness that balances a smooth finish with a straight edge.
- ❑ Use the largest brush that will provide for appropriate cut-lines.
- ❑ Always allow adequate dry time for primed surfaces to avoid flashing.
- ❑ The cut-in strip only needs to be wide enough to provide adequate space between edges and the roller. For a typical 8 foot ceiling, that is about 4 inches. However, when using a long extension pole, bring your cut lines ~6 inches from the walls or crown molding.
- ❑ To paint narrow areas that your standard roller is too big for use a smaller hot dog / sausage roller. Be sure that the roller nap quality and thickness is comparable to your standard roller cover.
- ❑ Keep the roller tray / bucket right near you. The time lost walking around to load the roller can be much greater than most would expect.
- ❑ When necessary, to eliminate roller lines, tilt the roller cover on each of its end corners and roll on the wall to remove the excess paint. Immediately roll over those lines to smooth them out.
- ❑ When deciding which way to roll, you must weigh the following: 1. the direction of natural light, 2. the entrance into the room, 3. artificial lighting.
- ❑ Use a roller pole whenever possible to improve production and appearance quality.

- ❑ When painting a large ceiling, use existing items in the room as reference points to keep track of completed areas.
- ❑ When painting a textured ceiling, roll as close to the corners as possible and cut in remaining areas afterwards. This will improve production.
- ❑ Do not roll too close to corners, ceiling, base, or trim with a heavily loaded roller cover that would leave excess paint build-up.
- ❑ On outside corners use special care to avoid excess paint build up.
- ❑ Tailor your nap size to the task at hand. For smooth surfaces, use ¼" or 3/8" naps to minimize roller stipple. On textured surfaces, use a ½" or ¾" nap to hold additional paint for getting into those crevices.
- ❑ Use a light to aid in seeing how the paint is being applied to avoid imperfections.
- ❑ Pay special attention to surfaces that are exposed to natural light.
- ❑ When painting walls, chair rails & baseboards need to be protected or wiped clean of paint splatter.
- ❑ Catch drips, runs, sags in process before the material sets up.

# Molding & Trim Prep

## Production Rate:

- ❑ 50 to 100 linear feet per hour. Prep time will vary with size of running trim, how many compound pieces make up the trim, distance above the floor and amount of prep needed.

## Material & Supplies:

- ❑ primer ❑ appropriate sand paper ❑ caulk ❑ tape – appropriate size & type
- ❑ filling material ❑ patching material ❑ tack cloths ❑ appropriate cleaning agent

## Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools & supplies
- ❑ electric sander ❑ hand sander ❑ sanding block ❑ molding scraper

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Protect surrounding area. (See COP Masking/Dust Protection for Interior Furnished Area RI-GL-3) | |
| 2 | Examine the trim surface and hardware for any damaged or broken parts, existing misapplied paint or scratches and report if necessary. | |
| 3 | Remove hardware and bag, label and store securely as needed. | |
| 4 | Clean trim as needed. | |
| 5<br><br>5A<br><br>5B | Paint scraping and sanding procedure:<br><br>Run your paint scraper tool along any gaps at wood joints to remove loose paint.<br><br>Scrape all loose paint, use a 5-in-1, claw scraper, or molding scraper. | |

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| 5C | Sand paint ridges to feather into the wood surfaces where needed. Take special care to smooth the transition areas from bare wood to painted surfaces. This will give you a superior final product. | |
| 5D | Scuff sand or lightly abrade all surfaces to ensure adhesion of the coating. | |
| 5E | Run your paint scraper tool or 5-in-1 along the joints formed by multi-piece trims. Your objective is to remove any loose paint or failed caulk from these gaps. | |
| 6 | Paint scraping and sanding sequence for molding & trim: | |
| 6A | Start in one corner of the room and work your way around the room back to the starting point. | |
| 6B | In rooms where there are more than one level of running trim (for example – base, chair rail and crown molding) start with the upper most molding first and then the lower trim in the most efficient sequence for your particular job. | |
| 7 | Set all nails approximately 1/8" deep if needed. | |
| 8 | Fill nail holes with filling material (see COP Filling Nail Holes in Trim RI-PR-3). | |
| 9 | Sand all filled nail holes flush. | |
| 10 | Remove all of the dust and debris from the trim using a dust brush and/or vacuum. | |
| 11 | Depending on the job specifications, either spot prime the bare wood or apply one full coat of primer to the trim (see COP for Molding & Trim Painting RI-PT-3). | |
| 12 | After the primer has dried, patch gouges and existing paint ridges as needed. | |
| 13 | Feather sand repaired areas as needed. | |
| 14 | Quality check all the trim. Scrape, sand, patch or fine sand all the trim to remove any rough surfaces and runs or sags in the primer as needed. | |
| 15 | Spot prime any bare areas or newly patched areas and lightly sand as needed. | |
| 16 | After the primer is dry, caulk all gaps and joints where needed. | |

## Professional Techniques:

- ❑ Use a very sharp blade to scrape paint to increase appearance quality and production speed.
- ❑ Shave paint ridges, existing drips, runs or sags down with the scraper. This will minimize the time needed for feather sanding and patching.
- ❑ Be aware if caulk is not completely dry, it can crinkle the finish coat.
- ❑ Sand wood only in direction of grain.
- ❑ All paint (primer) should be clean or thoroughly strained before being applied.
- ❑ Think of each piece of wood as its own section, to be painted in the direction of the wood grain.
- ❑ Catch drips, runs, and sags in process before the material sets up.

# Molding & Trim Painting

## Production Rate:

- ❑ 25 – 40 linear feet per hour.

## Material & Supplies:

❑ paint ❑ paint strainer ❑ tape – appropriate size & type

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Check to see that the trim is properly prepared and that all hardware has been removed or properly protected (see COP for Molding & Trim Preparation RI-PR-4). | |
| 2 | Before applying paint, tack cloth any residual dust. | |
| 3 | Painting sequence for molding & trim: Start in one corner of the room and work your way around the room back to the starting point. In rooms where there are more than one level of molding or trim (example: base, chair rail and crown molding) start with the upper most molding first then proceed to the lower molding in the most efficient sequence (MES) for your particular job (for example – all high crown around the room and then the chair rail and base done together around the room because these may be reached from one position). All further work should be performed using the most efficient sequence (MES) as determined at this point. | |
| 4 | Apply paint to the trim in two steps:<br>• Apply the paint to achieve uniform coverage.<br>• Lay the paint off with one stroke per trim element/brush width in the direction of the grain to the previous painted section. Keep the sections short enough to minimize visible lapping and brush marks. | |
| 5 | Replace hardware when trim is dry. | |

### Professional Techniques:

- ❑ All paint (primer) should be clean or thoroughly strained before being applied.
- ❑ If area is too warm or too dry, paint will dry quickly making it hard to maintain a wet edge. If possible, increase the humidity, lower the temperature or close air ducts.
- ❑ Clean all surfaces in the work area before any finish painting to avoid dust getting into the finish coat.
- ❑ All preparation work should be completed prior to applying any top coats. If additional preparation is required after the first of two top coats, remember that additional steps and time will be required.
- ❑ Keep brushes conditioned and clean during usage for optimum efficiency and paint release.
- ❑ Use brushes with bristles that have good loading and release capacity along with stiffness that balances a smooth finish with a straight edge.
- ❑ Use the largest brush that will provide for appropriate cut-lines.
- ❑ Avoid using traditional tack cloths when using water based finishes because they can leave residue that will impair adhesion.
- ❑ Use a hot dog/sausage roller to speed up the application of the material and then use a brush to lay off the finish.
- ❑ Think of each piece of wood as its own section, to be painted in the direction of the wood grain.
- ❑ If walls are to be painted after trim, lap paint onto the wall surface to provide for an easier & sharper paint cut line.
- ❑ Catch drips, runs, sags in process before the material sets up.
- ❑ There is tack cloths specifically designed to use with waterborne enamel paint to avoid surface contamination.

## Window Prep

### Production Rate:

- ❑ 35 minutes to prep and spot prime 6 over 6 true divided light double hung sashes standard size (window with minimal wear and tear, i.e. 5 year old window). Prep time will vary on condition of window.
- ❑ 15 minutes to prep standard 3” window casing

### Material & Supplies:

- ❑ primer ❑ appropriate sand paper ❑ caulk ❑ tape - appropriate size & type ❑ tack cloths
- ❑ azor blades ❑ patching material ❑ filling material ❑ glazing compound ❑ rags
- ❑ ziplock bags

### Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools & supplies
- ❑ claw scraper ❑ molding scraper

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Protect surrounding area (see COP Masking/Dust Protection for Interior Furnished Area RI-GL-3). | |
| 2 | Examine the window for any damaged or broken parts and report if necessary. | |
| 3 | Remove hardware and bag, label and store securely as needed. | |
| 4 | Remove existing paint from hardware if possible without causing damage per job specifications. | |
| 5 | Clean sash and casing as needed. | |
| 6 | Scrape all loose paint, using a 5-in-1, claw scraper or molding scraper. | |
| 7 | Sand existing paint ridges to feather into the wood surfaces where needed. Take special care to smooth the transition areas from bare wood to painted surfaces. | |
| 8 | Score residual dried paint along glass/wood joint to avoid paint from chipping/peeling from mullions. Razor scrape any excess paint, putty or adhesive to make a clean paint line where the paint meets the glass. | |
| 9<br><br>9A<br><br>9B<br><br>9C<br>9D<br><br>9E<br><br>9F<br><br>9G<br><br>9H | Paint scraping and sanding sequence:<br><br>Do scraping procedure first and follow up with the sanding procedure in the following order:<br><br>Reverse the sashes by pulling the upper sash down and the lower sash up.<br><br>Prepare all mullion bars surrounding each lite before continuing to adjacent lite.<br>Prepare the lower row of window lites and the meeting rail at the bottom of the upper sash.<br><br>Return the sashes to their original closed position.<br><br>Prepare the remainder of the upper sash.<br><br>Prepare the lower sash in full.<br><br>Prepare the window frame/casing trim. | |

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| **10** | Set all nails approximately 1/8” deep if needed. | |
| **11** | Fill nail holes with filling material (see COP for Filling Nail Holes RI-PR-3). | |
| **12** | Sand all filled nail holes flush. | |
| **13** | Remove all of the dust and debris from the window and frame using a dust brush and/or vacuum. | |
| **14** | Depending on the job specifications, either spot prime the bare wood and repaired areas or apply one coat of primer to the entire window and frame (see COP for Window & Sash Painting RI-PT-5). | |
| **15** | After the primer has dried, patch gouges and existing paint ridges as needed. | |
| **16** | Feather sand repaired areas as needed. | |
| **17** | Apply glazing or caulk to any gaps between wood and glass. Remove residue from glass with a rag or razor tool. | |
| **18** | Quality check the entire window preparation. Scrape, sand, patch or fine sand the entire window to remove any rough surfaces and runs or sags in the primer as needed. | |
| **19** | Spot prime any repaired or bare wood areas. | |
| **20** | After primer is dry, caulk all gaps and joints as needed. | |

## Professional Techniques:

- ❑ Use a very sharp blade to scrape paint to increase appearance quality and production speed.
- ❑ Shave paint ridges, existing drip, runs or sags down with the scraper. This will minimize the time needed for feather sanding and patching.
- ❑ Whenever sanding near glass, great care should be taken to avoid scratching the glass. Use your fingers as a buffer between glass and any sanding products to prevent scratching glass. If you fold a sheet of sandpaper, always have the folded edge of sandpaper closest to the glass surface without touching it.
- ❑ Be aware if caulk is not completely dry, it can crinkle the finish coat.
- ❑ Sand wood only in direction of grain.
- ❑ All paint (primer) should be clean or thoroughly strained before being applied.

- ❑ Think of each piece of wood as its own section, to be painted in the direction of the wood grain.
- ❑ Catch drips, runs, and sags in process before the material sets up.
- ❑ To cut a line in sealant, or adhesive that is to be removed from glass use the pick on a 5-in-1. Do not use a utility knife because the sharp blade will easily cut into and damage the wood.
- ❑ Remove factory adhesives/sealants when the window is not exposed to sunlight, this will make it much easier to remove the adhesive. When the adhesive is heated by the sun it gets gummy and is much more difficult to remove.
- ❑ Check all exterior window surfaces for misapplied interior paint (primer) as you are working.
- ❑ Use a 5-in-1 to push on a wood surface that has wet coating in order to slide a sash up or down.
- ❑ Close the lower sash as close to the sill as possible without touching it prior to painting the sill and surrounding trim. This is to prevent wind from blowing dust into wet coating and from wind drying the coating too quickly.
- ❑ Jamb liners should not be caulked.

# Window Painting

## Production Rate:

- ❑ 35 minutes to paint 6 over 6 true divided light double hung sashes, standard size
- ❑ 15 minutes to paint standard window trim

## Material & Supplies:

- ❑ paint ❑ tack cloths ❑ appropriate sand paper ❑ paint strainer
- ❑ tape – appropriate size & type ❑ razor blades

## Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Remove window hardware if needed and store securely. | |
| 2 | Ensure window is prepared properly for painting (see COP for Window Sash & Casing Preparation, Double–Hung with Divided Lites RI-PR-11). | |
| 3 | Scrape all excess paint and putty residue off glass surfaces as needed. On final coat, be sure to not break the paint seal between wood and glass. | |
| 4 | Before applying paint, tack cloth off any residual dust. | |
| 5 | Reverse the sashes by pulling the upper one down and the lower one up. | |

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| **6** | Paint the lower row of window panes and the meeting rail at the bottom of the upper sash. | |
| **7** | Un-reverse the sashes, slide the upper sash so that it is almost closed leaving a small gap at the top. | |
| **8** | Paint the remainder of the upper sash. | |
| **9** | Paint the lower sash in full. | |
| **10** | Mullion bars should be painted in the following sequence: starting in upper left corner, paint ALL inner edges. After completed, move in the following order: middle left, lower left, bottom middle, middle middle, upper middle, upper right, middle right, bottom right (snaking pattern). | |
| **11** | Remove all unwanted paint off glass. | |
| **12** | Paint the window trim top to bottom, doing the edges first then the faces of the trim. The stool and apron should be done last after the casing. | |
| **13** | Check for and remove rollover paint beads on edges. | |

## Professional Techniques:

- ❑ All paint should be clean or thoroughly strained before being applied.
- ❑ If area is too warm or too dry, paint will dry quickly making it hard to maintain a wet edge. If possible, increase the humidity, lower the temperature or close air ducts.
- ❑ Clean all surfaces in the work area before any finish painting to avoid dust getting into the finish coat.
- ❑ All preparation work should be completed prior to applying any top coats. If additional preparation is required after the first of two top coats, remember that additional steps and time will be required.
- ❑ Keep brushes conditioned and clean during usage for optimum efficiency and paint release.
- ❑ Use brushes with bristles that have good loading and release capacity along with stiffness that balances a smooth finish with a straight edge.
- ❑ Use the largest brush that will provide for appropriate cut-lines.
- ❑ Avoid using traditional tack cloths when using water based finishes because they can leave residue that will impair adhesion.
- ❑ Think of each piece of wood as its own section, to be painted in the direction of the wood grain.

- ❑ If walls are to be painted after trim, lap paint onto the wall surface to provide for an easier & sharper paint cut line.
- ❑ Catch drips, runs, sags in process before the material sets up.
- ❑ If painting multiple coats, use the non final coat(s) to bridge the gap between wood and glass then scrape the unwanted dry paint off the glass. For the final coat cut the paint just barely shy of the glass so no scraping, or minimal scraping needs to be done.
- ❑ When scraping dry paint off of glass, be careful not to break the paint seal at the wood/glass joint.
- ❑ Use a 5-in-1 to push on a wood surface that has wet coating in order to slide a sash up or down.
- ❑ Close the lower sash as close to the sill as possible without touching it prior to painting the sill and surrounding trim. This is to prevent wind from blowing dust into wet coating and from wind drying the coating too quickly.
- ❑ The customer should be instructed to move each sash up and down daily for one week to prevent the window from sticking.
- ❑ There are tack cloths specifically designed to use with waterborne enamel paint to avoid surface contamination.

# Six Panel Door Painting

## Production Rate:

- ❑ 20 – 30 minutes per side
  *Production rate may vary with the scope of work.*

## Materials & Supplies:

- ❑ tack cloths ❑ paint ❑ paint strainer ❑ tape – appropriate size & type
- ❑ wet paint sign

## Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools & supplies

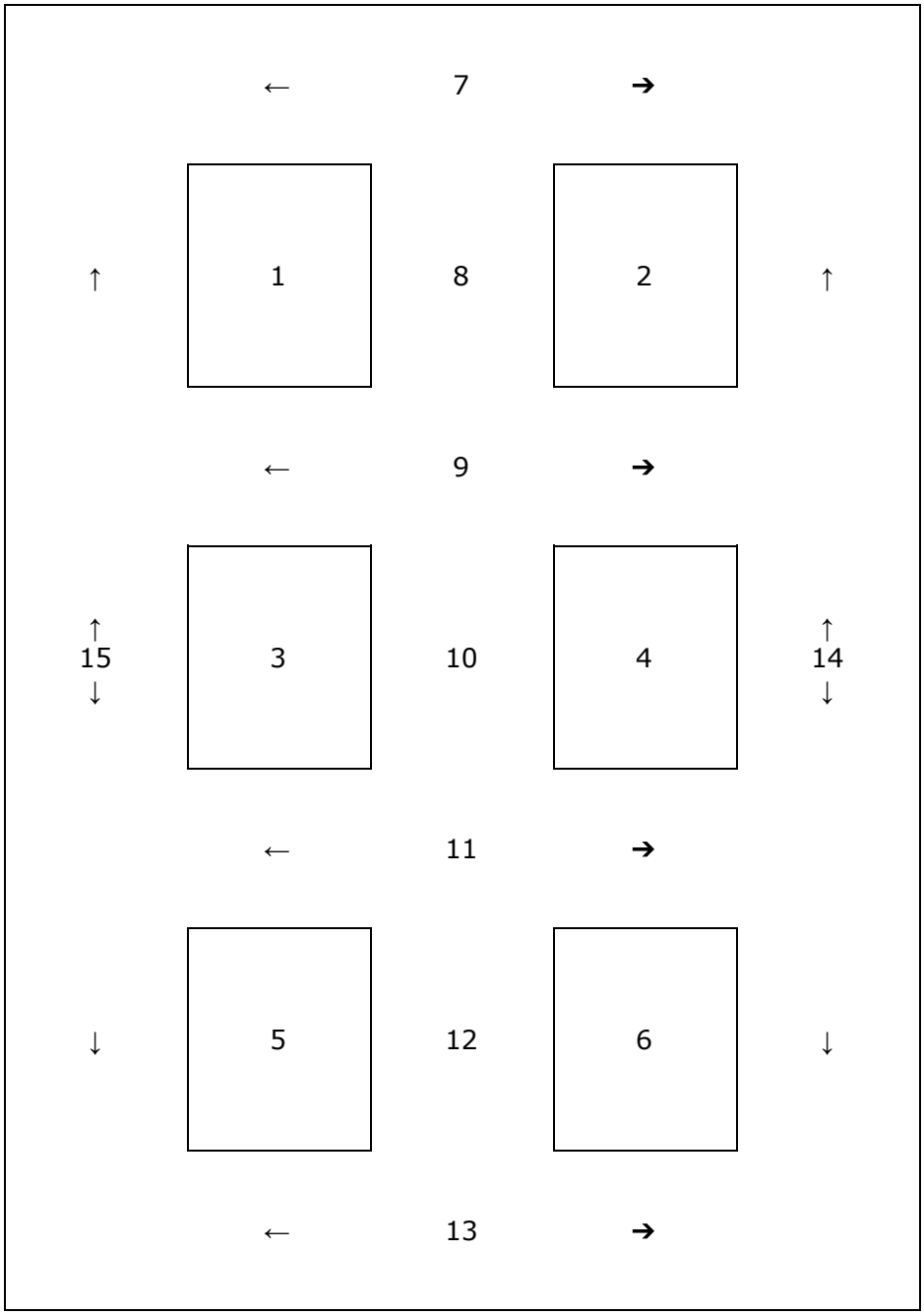
| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Check to see that the door is properly primed, sanded, dusted, wiped with a tack cloth and that all hardware has been removed or properly protected. | |
| 2 | Paint top and bottom edges if they have not been previously painted. | |
| 3 | Paint hinge or latch edge (whichever edge is revealed when the door is open). | |
| 4 | Paint panel #1 - at each panel, paint the moldings and borders first, then the flat panel surface. Apply paint liberally, then lay off the moldings and borders followed by the flat portion of the panels. Brush in the direction of the grain and wipe off or feather brush out any excess paint from stiles and rails. | |

| | | |
|---|---|---|
| 5 | Paint panel #2 - following the application procedures outlined above. | |
| 6 | Paint panel #3, panel #4, panel #5, panel #6, stile #7, rail #8, stile #9, rail #10, stile #11, rail #12, rail #13, stile # 14, and then finally stile #15. | |
| 7 | Do a quality check as outlined in the Appearance & Quality Assurance Guidelines. | |
| 8 | When door is dry, replace hardware and remove any tape. | |

## Professional Techniques:

- ❑ All paint (primer) should be clean or thoroughly strained before being applied.
- ❑ If area is too warm or too dry, paint will dry quickly making it hard to maintain a wet edge. If possible, increase the humidity, lower the temperature or close air ducts.
- ❑ Clean all surfaces in the work area before any finish painting to avoid dust getting into the finish coat.
- ❑ All preparation work should be completed prior to applying any top coats. If additional preparation is required after the first of two top coats, remember that additional steps and time will be required.
- ❑ Keep brushes conditioned and clean during usage for optimum efficiency and paint release.
- ❑ Use brushes with bristles that have good loading and release capacity along with stiffness that balances a smooth finish with a straight edge.
- ❑ Use the largest brush that will provide for appropriate cut-lines.
- ❑ Use a hot dog/sausage roller to speed up the application of the material and then use a brush to lay off the finish.
- ❑ Catch drips, runs, sags in process before the material sets up.
- ❑ If the door is closed be sure no one can open the door from the opposite side while you are working on it. Post a warning sign on the opposite side or block off the opposite side with equipment.
- ❑ There are tack cloths specifically designed to use with waterborne enamel paint to avoid surface contamination.
- ❑ Think of each piece of wood as its own section - catch drips, runs, sags “in process” before the material sets up to avoid dragging.
- ❑ Tops and bottoms of doors should be painted to slow down expansion and contraction and to meet door manufacturer’s warranty requirements.
- ❑ Use a mirror to check if the bottoms and tops have been coated.
- ❑ Be aware that areas around door knobs may have excess dirt and oil.
- ❑ Rather than masking door hinges, replace hinges with temporary hinges.

**Painting 6 Panel Door**



# Area Final Completion

## Production Rate:

- ❑ 1-2 hours per room ; production rate may vary with the scope of work.

## Material & Supplies:

- ❑ trash bags ❑ appropriate cleaning agents ❑ denatured alcohol or product to remove dried paint ❑ protective gloves

## Tools & Equipment:

- ❑ standard personal work tools & supplies ❑ standard job site tools & supplies
- ❑ broom and dust pan ❑ wet mop ❑ sponge ❑ screw gun

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Remove unnecessary tools, lights, and ladders from the work area. Leave a brush out for each coating product for final touch-up. Keep brushes and coatings covered when not in use. | |
| 2 | Remove masking plastic, paper, and tape from walls and trim elements, starting at the ceiling. Roll up the plastic/paper as it is removed in order to contain dust. Bag all disposable protective products. | |
| 3 | Wash your hands and make sure you have no wet paint on your person. | |
| 4 | Replace outlet covers, switch plates, hardware, etc. | |
| 5 | Inspect all surfaces<br>1) painted surfaces – remove dust/debris, and touch up as needed<br>2) glass - scrape paint off as needed<br>3) non-painted surface (hardware etc.) – clean off paint as needed<br>4) inspect for any damages, address as needed | |
| 6 | Replace window coverings as needed. | |
| 7 | Uncover furniture if necessary and roll up plastic. Bag all disposable protective products as they are removed. | |
| 8 | Remove floor protection. If drop cloths are used, roll them up to contain dust and bring outside to shake out and fold. If floor paper or similar product has been used, start from furthest corner, roll up and dispose of it. | |
| 9 | Check floor for paint, dust, or debris. Clean or vacuum as needed. | |

| | | |
|---|---|---|
| **10** | Replace furniture to original positions. | |
| **11** | Dispose of refuse properly. | |
| **12** | Properly label all paint to be left with the customer. | |
| **13** | Lock-up & secure worksite as needed. | |

## Professional Techniques:

- ❑ On freshly dried latex, rub out sags with denatured alcohol instead of sanding.
- ❑ Commercial air cleaners can be used to filter out airborne dust.
- ❑ A hair dryer can aid in removing masking tape and prevent it from lifting off existing coatings.
- ❑ An ozone air purifying machine can be used to remove odors.
- ❑ Keep doors to rooms shut while bagging plastic and rolling up dropcloths to prevent dust from migrating into other rooms.
- ❑ When moving a refrigerator, be careful not to damage the water supply line.
- ❑ If non-drop cloth floor protection (paper, masonite, carpet protector) has a lot of dust, vacuum it before removing.
- ❑ Be careful with floors when moving heavy furniture or refrigerator. Use masonite, thin plywood, furniture sliders or a clean folded dropcloth.
- ❑ Use extreme care when cleaning paint off of hardware and fixtures so as not to damage those surfaces. First try warm water and a soft cloth, then a detergent cleaner, then, if necessary, use a special cleaner for removing dried paint.
- ❑ Allow halogen lights to cool down before packing.
- ❑ Apply tape to vacuum tools to avoid scratching or marring surfaces.
- ❑ Customer to be present for final inspection.

# Exterior Quality & Assurance Guidelines

- ❑ The PDCA Standard P1-04 states a properly painted surface is defined as:
  - Uniform in appearance, color, texture, hiding, and sheen.
  - Free of foreign material, lumps, skins, runs, sags, holidays, misses, or insufficient coverage.
  - Free of drips, spatters, spills or overspray caused by HWP.
  - When a surface is "properly painted" it shall be examined without magnification at a distance of 39 inches (1 meter) or more, under finished lighting conditions and from a normal viewing position.
- ❑ Shop area should be neat, organized for efficiency, safe, out of traffic area and located as close as possible to work area.
- ❑ Surrounding areas that are not going to be coated are protected from drips, spatters, spills or overspray.
- ❑ Surrounding areas that are not going to be worked on are covered to allow for collection of all debris.
- ❑ Precautions have been taken to protect landscaping without causing damage.
- ❑ A plan for positioning scaffolding and ladders has been considered.
- ❑ Openings around house are protected against dust infiltration.
- ❑ Surfaces should be sound with the necessary profile for paint to adhere properly
- ❑ Surfaces should be free of tool marks, sanding marks caused by HWP workforce when viewed at a distance of 39" (1 meter) or more from a normal viewing position after finished coating.
- ❑ Surfaces should not have sharp edges or ridges greater than the specified preparation level of the work scope when viewed from a normal viewing position after finished coating.
- ❑ Filled holes should be flush with the surrounding surface with no ridges or irregularities greater than the specified preparation level per PDCA Standard P14-06 when viewed from a normal viewing position and distance.
- ❑ On surfaces receiving a transparent or translucent coating, filled holes should blend in with the color of the finished wood.
- ❑ Patched area should match the surrounding profile.
- ❑ Areas should be free of visible sanding marks.
- ❑ No scraper marks such as gouges and chatter marks.
- ❑ No gaps should be visible within painted trim elements and adjacent siding.
- ❑ Caulking should be smooth with no ridges when viewed from a normal viewing position
- ❑ Caulking should not fill trim profiles from a normal viewing position.
- ❑ Caulking material should be applied in sufficient amount to allow for adhesion during movement (expansion and contraction) of adjoining substrates.
- ❑ All cut lines should be sharp and consistent at any adjacent surface not to be painted with the same material.
- ❑ After priming is complete, the repaired areas should satisfy job appearance specification.
- ❑ Glass must be free of paint splatter, new glazing compound, adhesives and scratches that were not pre-existing when viewed from the inside.

- ❑ Coating should create a seal onto the glass. Glazing at glass should be sound and free of any cracking or gaps.
- ❑ No visible gaps where glass surfaces meet wood surfaces.
- ❑ No scratches on glass from contractor's work force.
- ❑ There should be no coating between moving surfaces (sash) and non-moving surfaces (jamb tracks/liners) from contractor's work force.
- ❑ All glass surfaces should be free of: glazing oil, adhesive residue, paint splatter and streaks.
- ❑ Paint lines at the glass should be straight.
- ❑ Hardware should be properly installed with no paint on previously unpainted surfaces.
- ❑ Brush strokes should be in the direction of the individual component or wood grain.
- ❑ Deck surfaces should be free of rough wood that could splinter.

# Exterior Job Site Setup

## Production Rate:

- ❑ Timely manner, will vary depending on size and scope of work

## Material & Supplies:

❑ impervious ground protection ❑ plastic sheeting ❑ tape – appropriate size & type
❑ trash bags ❑ sealable metal container

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Determine a safe and convenient location for the job site shop and get approval from the client. Factors to consider include:<br>• Care of landscaping and grass<br>• Proximity to work area<br>• Protection from elements<br>• Vehicle locations<br>• Foot traffic pattern<br>• Client access to entries<br>• Security of equipment<br>• Client Safety<br>• Secure from pets | |
| 2 | Protect ground & surrounding area with impervious protection. Use extra precaution where paint and solvents will be stored. | |
| 3 | Determine a safe and convenient location for ladder storage and get approval from the client. Factors to consider include:<br>• Care of landscaping and grass<br>• Proximity to work area<br>• Security of equipment<br>• Client Safety | |

| | | |
|---|---|---|
| 4 | Bring equipment and materials into shop area if applicable and organize in sequence of use including supplies, primers and finishes. | |
| 5 | Make sure MSDS, fire extinguisher & first aid kit are readily available. | |
| 6 | Make sure that all materials in the shop are sealed or resealed properly after use. | |
| 7 | At the end of each work day, organize the work shop making sure to:<br>● Secure all cleaners/solvents/coatings<br>● Organize tools, supplies and equipment<br>● Store rags containing oils/stains in a sealable metal container and dispose of properly at the end of the job<br>● Properly fold dropcloths and coil extension cords<br>● Secure the area from children and pets<br>● Protect shop from the elements if necessary | |
| 8 | Secure ladders at the end of each work day making sure to:<br>● Lower all ladders and remove from building<br>● Stack horizontally in the designated area<br>● Lock them for security and safety | |

### Professional Techniques:

- ❑ Shop storage options can include: job box, trailer, van, portable garage/canopy, client's garage/basement, etc.
- ❑ Sometimes it makes sense to create a mini-shop closer to your actual work area but away from your main shop area.
- ❑ Ladders may be stacked on sawhorses to minimize damage to grass/vegetation.
- ❑ Store ladders or shop area on mulch, dirt, cement or asphalt if possible.
- ❑ If the work shop is set up on grass, be aware of potential damage to the area.

## Exterior Protection

### Production Rate:

- ❑ Timely manner, will vary depending on size and scope of work

### Material & Supplies:

❑ Plastic sheeting ❑ masking film ❑ masking paper ❑ appropriate tapes

### Tools & Equipment:

❑ standard personal work tools ❑ standard job site tools ❑ hand masker ❑ staple gun
❑ rope ❑ Protective coverings: canvas drop cloths, landscape fabric, mosquito netting, polypropylene (blue) tarps

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Evaluate work site, work scope and the extent of the area requiring protection. | |

| | | |
|---|---|---|
| **2** | Clear the work area as much as possible in order to provide for access and effective ground protection:<br>▪ Remove hardware, fixtures and movable items.<br>▪ Pull or tie back shrubs or trees.<br>▪ Have vehicles and other personal property removed.<br>▪ Take appropriate measures to protect fragile vegetation. | |
| **3** | Protect the ground or flat surface (deck, driveway patio, etc) below the work area using one of the following methods:<br>▪ Lay appropriate protective covering over surfaces that are below work areas. Overlap adjoining covering 6-12 inches to ensure that no areas are exposed.<br>▪ Secure protective covering to the face or bottom of the lowest element of trim/siding. Overlap adjoining covering 6-12 inches to ensure that no areas are exposed.<br>Secure protective covering to flat surface to prevent from shifting or moving. | |
| **4** | Protect shrubs and plants with a breathable covering – **do not use plastic.** | |
| **5** | Protect vertical surfaces below work areas that will not be coated (i.e., brick, screened areas, etc.) and secure. | |
| **6** | Protect windows and doors as needed per work scope. | |
| **7** | Protect items that remain on the building and are not being coated (light fixtures, hardware, awnings, shutters, down spouts, etc.). Remove flammable protection from light fixtures at the end of every work day. | |
| **8** | Protect roof surfaces below work areas. Secure protective covering. Be sure to follow all OSHA safety guidelines. | |
| **9** | Protect surrounding areas and personal property that are not part of the structure being worked on that may be damaged by work activities. | |

## Professional Techniques:

- ❑ Tips on how to pull back/tie back shrubs and trees:
  - Place plywood against the shrubs.
  - Place protective covering on one side of the bush and pull away from the work area. Tie corners together and stake into the ground.
  - Rope may be tied to the corners of the protective covering and fastened to a stake.
- ❑ Keep adhesive tape to a minimum to reduce residue left on surface.
- ❑ Tips on how to protect delicate vegetation:
  - Light landscape fabric or mosquito netting.

- Suspend your drop cloths over the top of the landscaping by inserting tomato sticks in the ground to support the weight of the drop cloth.
- Create a work platform above the vegetation by placing planks on cinder blocks, saw horses or step ladders.

❑ Spring hand clamps or small C clamps may be used to secure protective covering.
❑ Protective covering on flat surfaces may be secured by using spikes, weights, rocks, etc.
❑ Mark protective covering to indicate top and bottom sides to prevent placing soiled side down.
❑ Be aware that chips and dust may collect in gutters and clog down spouts.
❑ On slate or tile roofs, duct tape may be used to secure protective covering.
❑ To protect windows, storms, screens or doors, a hand masker and masking film may be used.
❑ Doors that need to be used during the project may be draped or wrapped (not secured or sealed) in protective covering.
❑ Below balconies or elevated decks, use protective covering to drape the ground, side of the house or any items below the deck/balcony to catch drips.
❑ Wood strapping/furring can be screwed to side of house to secure protective covering.

# Scraping & Sanding

## Production Rate:

❑ Production rate will vary with the scope of work.

## Material & Supplies:

❑ scraper blades ❑ appropriate sand paper

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools

| # | Procedure Steps | Completed Properly |
|---|---|---|
| **1** | Know the scope and the preparation level for all procedure steps. | |
| **2** | For all procedure steps:<br>● Inspect each surface for damage and pre-existing conditions.<br>● Verify that the scope matches actual conditions.<br>● Report discrepancies per company procedures. | |
| **3** | Protect surrounding area. | |
| **4** | Determine if nails, hardware, staples, etc need to be set or removed and proceed according to work scope. | |
| **5** | Remove all loose, peeling, blistering, flaking coatings, surface imperfections or other adhesion failures as per the scope of work. | |

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| | ● Scrape against the edge of the failure using a pull scraper to remove unsound coating.<br>● For areas where a pull scraper does not remove all the unsound coating, a putty knife may be slid under the coating to remove it.<br>● To remove the sharp edge of the existing coating created by scraping, shave the edge by pulling the scraper parallel to the edge with the blade perpendicular to the edge. Apply pressure to the edge while being careful not to gouge the surface. The purpose of removing the sharp edge is to ensure durability of the coating system. | |
| **6** | Sand to ensure durability of the coating system using hand sand paper, sanding block or sponge, electric sander etc. per company procedures.<br>● Rough sand edges of scraped areas, bare surfaces and scraper marks with coarse sandpaper.<br>● Scuff sand the entire surface to improve adhesion with medium sandpaper.<br>● If the scope of work requires, feather edges of scraped areas, smooth rough areas and surface imperfections by sanding with medium and fine sandpaper to enhance the appearance. | |
| **7** | Quality check the entire area, repeat any previous steps as needed. | |
| **8** | When scraping and sanding are completed, properly dispose of all debris. | |

## Professional Techniques:

- ❑ Adhesion tests can be helpful to determine the level of coating removal needed.
- ❑ Tapping the surface may produce a hollow sound which may indicate poor coating adhesion.
- ❑ All wood species are prone to “mill glaze” which may have been painted over without having the “glaze” removed. If you can see sheen on the bare wood surface, it must be sanded with 80 grit paper.
- ❑ A vacuum can be connected to an electric sander to reduce dust and cleanup time.
- ❑ A pull scraper provides more leverage and is more effective at coating removal than a 5-in-1 type tool.
- ❑ Smaller scrapers may be more efficient than larger ones in some situations.
- ❑ Always have a variety of scrapers on hand including molding scrapers and multiple sized pull scrapers and putty knives to improve efficiency and quality.
- ❑ Scraper blades should always be sharp.
- ❑ Carbide blades will hold their sharp edge longer than traditional steel blades but need to be professionally sharpened.

- ❑ Cross grain scraping may damage the substrate and should be kept to a minimum.
- ❑ High-build primers may be used to reduce the amount of sanding required to enhance appearance.
- ❑ Do the scraping & sanding sequentially area by area to eliminate trips up and down ladders.
- ❑ Tool belts or pouches are helpful to keep all tools easily accessible.
- ❑ Clean sand paper frequently with a dust brush to increase the longevity of the paper.
- ❑ Electric sanders may allow sanding/abrading to be performed more efficiently.
- ❑ Glossy surfaces may need to be lightly abraded to dull the surface and allow for a good mechanical bond with the new coating.
- ❑ Scuff sanding all surfaces promotes adhesion.
- ❑ Various tools including Scraper, sandpaper, wire brush, etc. can be used to remove coatings.

# Filling Nail Holes

## Production Rate:

- ❑ 75-200 square feet/hour for filling only, nail setting will require additional time.

## Material & Supplies:

❑ exterior rated filling material ❑ appropriate sandpaper ❑ exterior rated colored putty

## Tools & Equipment:

❑ standard personal work tools & equipment ❑ standard job site tools & equipment
❑ electric sander

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Countersink nails and screws that are to have the holes filled to a depth of 1/8" (3mm) as needed. | |
| 2 | **For Opaque Coatings** (paints, solid stains, pigmented stains)<br>a) Determine what type of exterior filling material to use based on the hole size, coating to be used, and other factors.<br>b) Refer to manufacturer's specifications to determine if priming is necessary prior to filling. Prime as needed.<br>c) Remove all dust, loose paint and other debris from the hole and surrounding area.<br>d) If nails are rusty, apply an acrylic DTM (Direct To Metal) paint or primer.<br>e) Apply filler with a clean putty knife and press firmly into the hole. Smooth the filling material flush with the substrate and remove any excess filler.<br>f) Sand excess filler flush and smooth after it has dried, as needed. | |
| 3 | **For Transparent Coatings**<br>a) Fill holes after at least one transparent coat has been applied and before the final clear coat. | |

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|---|---|---|
| | b) Determine what type of putty to use (oil or water based) consistent with the type of clear coating to be applied<br>c) Select putty color to match the surrounding wood, multiple colors may need to be mixed together.<br>d) Remove all dust, loose paint and other debris from the hole and surrounding area.<br>e) Fill holes with putty by applying it with your thumb or clean knife.<br>f) Press firmly into the hole with the thumb of one hand, and while maintaining pressure, slide a putty knife under the thumb, cutting the putty flush.<br>g) Smooth the putty in the opposite direction with your hand<br>h) Rub the putty residue off from around the filled hole using a clean rag. | |

**Professional Techniques:**

- ❑ Two part epoxy fillers are available to fill exterior holes and may be particularly effective for large or deep holes.
- ❑ Pre-colored putty can be lightened with glazing compound.
- ❑ Glazing compound can be used to fill small holes and does not require sanding.
- ❑ Putty/Glazing Compound that is too sticky can be kneaded into an absorbent material such as a rag, craft paper or cardboard to help remove excess oil or water.
- ❑ Oil putty and glazing compound should be used only under oil-based products; otherwise it will flash or fail.
- ❑ If nails or screws are not countersunk enough the filling material may fail prematurely.
- ❑ Stainless steel nails or screws will never cause rust stains or nail bleeding.
- ❑ Keep putty knife clean at all times.
- ❑ Do not sand any putty-type filling material in transparent coatings.

# Rot Repair with Epoxy Fillers

**Production Rate:**

- ❑ Production rate will vary with the scope of work.

**Material & Supplies:**

❑ disposable gloves ❑ flat surface to mix thick epoxy fillers on
❑ clear graduated container to measure and mix liquids in ❑ stir stick for mixing
❑ plastic spatula ❑ mold release products: wax paper, plastic film or paste wax

**Tools & Equipment:**

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ respirator ❑ eye protection ❑ moisture meter ❑ rotary tools ❑ rasp

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Know the scope and the preparation level for all procedure steps. | |
| 2 | For all procedure steps:<br>• Inspect each surface for damage and pre-existing conditions<br>• Remedy the source of water infiltration or damage prior to proceeding with repair<br>• Determine if wood should be replaced or repaired<br>• Address damages per company procedures and scope of work<br>• Verify that the scope matches actual conditions<br>• Report discrepancies per company procedures | |
| 3 | Protect the surrounding area. | |
| 4 | Remove all existing coatings from surfaces surrounding areas to be repaired. Epoxy repairs should be made on bare, clean and dry wood. Make sure surface to be repaired is free of contaminants, coatings or liquid stripper residue. | |
| 5 | Remove all soft damaged wood or previously used filler from area to be repaired. | |
| 6 | Ensure that the area to be repaired has a moisture content of 15% or less by using a moisture meter. If area is wet, promote drying using the following techniques: drill holes in wood and/or use a hair dryer or heat gun. | |
| 7 | To improve the integrity of the repair, drill 3/8” diameter holes until firm wood is reached. | |
| 8 | Clean the area to be repaired and extract all the shavings and dust. | |
| 9 | Mix a 2 part liquid epoxy primer/bonding agent to prepare the surface for the thicker filler epoxy. | |
| 10 | Coat the repair area with the mixed epoxy primer/bonding agent. Recoat area until wood is saturated. Allow the epoxy primer/bonding agent the appropriate amount of time to cure per the manufacturer’s instructions. | |
| 11 | If necessary, create a temporary mold or form to contain and help shape the filler epoxy. | |
| 12 | Mix the thicker filler epoxy which is used to replace the rotted or damaged wood. | |
| 13 | Fill the damaged area, then mold and shape the filler epoxy to blend into and match the surrounding surfaces. | |

| | | |
|---|---|---|
| **14** | When the filler epoxy is firm but not yet fully cured, fine sculpt and shape it to match the surrounding surfaces. Be aware the cure time varies considerably based on temperature, humidity levels and specific products. | |
| **15** | After the filler epoxy is fully cured, sand the repaired area smooth. | |
| **16** | Perform a quality check and repeat any previous steps if needed. | |

### Professional Techniques:

- ❑ For large holes use wood blocking for the major filler, then epoxy the voids. This is less expensive than a solid fill of epoxy.
- ❑ Only mix as much epoxy as you need or can apply before the products begin to set/harden to avoid waste.
- ❑ Be aware that there setting and drying times vary between when the primer/bonding agent is applied and when the filler epoxy product is applied. Check the manufacturer's directions.
- ❑ A small screwdriver or 5-in-1 are good tools to evaluate the condition of the wood. Be aware that temperature and humidity will greatly affect the working and curing time of the epoxy products.
- ❑ There are epoxy dispensing guns that automatically mix the two-part epoxies.
- ❑ Some manufacturers offer warm weather (slower setting) and cold weather (faster setting) epoxy products.
- ❑ Heating the area with a hair dryer may promote further penetration of the epoxy into the wood.
- ❑ Micro-beads may be mixed with 2-part epoxy to make it less fluid and more workable.
- ❑ For structural repairs, refer to manufacturer's directions.
- ❑ Rotary tools and/or molding scrapers can be used to sculpt or carve the epoxy.
- ❑ Carving tools and knives can be dipped in water to prevent sticking when shaping uncured epoxy.
- ❑ There are some thin two-part penetrating epoxies that can be used to harden surfaces as a consolidant. Be sure to check manufacturer's specifications.
- ❑ Wax paper, plastic film, or wax can be used on form/mold surfaces to prevent sticking. Note that any residue from these products must be removed before coating.
- ❑ Plexi-glass may be used to make forms to prevent epoxy from sticking.
- ❑ If additional strength is needed to adhere the epoxy patch to the existing wood, dowels or fiberglass rods can be inserted to reinforce the repair.

## Exterior Caulking

### Production Rate:

- ❑ Approximately 100 linear feet per hour (may change depending on height)

### Material & Supplies:

❑ caulk ❑ rags ❑ protective gloves ❑ water/solvent ❑ backer rod ❑ smoothing tool

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ water bucket

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Caulk should be applied to all gaps where water will naturally flow into including but not limited to:<br>• Window casing and sill joint<br>• Door casing and threshold<br>• Siding/trim joint<br>• Balustrades<br>• Wood to masonry contact joints<br>• Any joints where water may puddle<br>• Exposed end grain<br>• Trim at base of columns, corner boards, pilasters, etc.<br>Caulk should not be applied to areas where moisture needs to escape such as:<br>• Storm window weep holes<br>• Underside of clapboards | |
| 2 | Ensure existing caulk is properly bonded. Remove all failed caulk that is loose or lifting along the edges as needed. | |
| 3 | Remove dust and loose material. | |
| 4 | Ensure that the areas to be caulked as well as all surrounding surfaces have been properly:<br>• Cleaned<br>• Scraped<br>• Primed<br>• Patched<br>• Sanded<br>• And are appropriately dry | |
| 5 | Fill any gaps greater than approximately ¼" (6mm) deep and greater than approximately 3/8" (10mm) wide with backing material such as a backer rod. The backing material should be at least 1/8" beneath the finished surface. | |
| 6 | Cut the nozzle tip approximately ½" from the end of the nozzle at an approximate 45 degree angle to the desired width of the line of caulk. Puncture the inner seal of the nozzle if needed. Insert the caulk tube in the caulking gun and pull the trigger until the plunger is snug against the bottom of the tube. | |
| 7 | Place the tip of the caulk tube nozzle in the joint. | |
| 8 | Draw a bead of caulk by squeezing the trigger of the caulking gun and pushing the caulk ahead of the nozzle along the joint in a smooth continuous motion. The curvature of the nozzle will shape the bead of caulk. Release pressure on the trigger to stop the flow of caulk at the end of the joint. | |

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| **9** | Smooth the applied caulk using a finger, cloth, sponge or caulk smoothing tool as needed. For water-based caulk, dip your finger or tool into clean soapy water. For solvent-based caulk, dip a cloth into solvent and wrap it over your gloved finger or tool.<br><br>For corner joints, the tooled caulk should have the following characteristics:<br>• Minimum surface contact area of 1/4" onto each substrate<br>• Concave/cove-shaped<br>• Tapered smooth with no ridges on the edges<br>For flush joints, the tooled caulk should be flush and smooth with no excess caulk on the adjacent surfaces. | |
| **10** | For high visibility detailed moldings, such as doors and entrance areas, to minimize build-up in molding corners etc. use a damp rag wrapped around a small putty knife or similar tool. | |
| **11** | Caulking should proceed in the Most Efficient Sequence (MES). When possible, combine with other preparation steps in order to minimize ladder movements etc. | |
| **12** | Allow the caulk to dry/cure sufficiently, depending on weather/temperature and caulking specifications. Painting too quickly can lead to discoloration or cracking. | |

## Professional Techniques:

- ❑ Be aware if caulk is not completely dry, it can crackle the finish coat.
- ❑ To create a straight caulk edge adjacent to a surface not to be painted such as stone, windowsills or masonry chimneys, apply painters tape to the surface in a straight line. Remove the tape as soon as the caulking has been completed, before it starts to dry.
- ❑ For areas requiring backing material, foam backer rod is recommended but if it is not available, other items such as foam from a sanding pad or similar type products may be used.
- ❑ Leave the largest bead of caulk possible while maintaining appropriate appearance. Larger beads accommodate more movement and reduce the chance of cracking.
- ❑ If using a wet rag to tool the caulking, be careful not to get residue from the rag on surfaces not to be painted. The caulk residue will leave a visible film on these surfaces when it dries.
- ❑ If silicone caulk has previously been used, either prime it with a specialty bonding primer or cut it out and re-caulk.
- ❑ A linoleum knife (hook blade/wooden handle) can be a useful tool for removing caulk.
- ❑ Select a high performance caulk/sealant to provide additional durability.
- ❑ If the tube opening is too large, squeeze the opening with pliers to reduce the flow of caulk.
- ❑ Some areas may be caulked purely for appearance purposes as opposed to for moisture protection such as soffits.
- ❑ Avoid gaps when caulking siding to trim by applying the caulk from the bottom up assuring butt end of clapboard is sealed.
- ❑ Keep a bucket of clean water with you to clean fingers and tools.
- ❑ Clear caulk can be used to seal the edge of masking tape to prevent paint bleeding.

- ❑ Clear caulk can also be used to fill gaps along surfaces not to be painted.
- ❑ 100% silicone based sealants cannot be painted over.
- ❑ A properly applied exterior caulk bead may not need to be tooled.
- ❑ There is a variety of caulking materials available, select the best for your application.

# Bare Wood Prep

## Production Rate:

- ❑ Production rate will vary with the scope of work and type and size of substrate.

## Material & Supplies:

❑ scraper blades ❑ appropriate sand paper ❑ patching compound ❑ caulk

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ electric sander

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Know the scope and the preparation level for all procedure steps. | |
| 2 | For all procedure steps:<br>• Inspect each surface for damage and pre-existing conditions.<br>• Verify that the scope matches actual conditions.<br>• Report discrepancies per company procedures. | |
| 3 | Protect surrounding area. | |
| 4 | Wash and clean surfaces where needed to remove possible mildew, mill glaze, oils, surface dirt etc. and allow surfaces to dry before proceeding. | |
| 5 | Determine if nails, hardware, staples, etc. need to be set or removed and proceed according to work scope. | |
| 6 | Fill holes per scope of work. | |
| 7 | Sand all patching material flush. | |
| 8 | Scuff sand all bare wood and factory primed surfaces with medium grit sandpaper to remove decayed wood fibers, mill glaze or inferior/ deteriorated primer. | |
| 9 | Remove dust from surfaces. | |
| 10 | Seal knots with de-waxed shellac such as BIN. | |

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| **11** | Prime all bare wood surfaces, patching materials and re-prime factory primed surfaces as needed per scope of work. | |
| **12** | Caulk gaps and joints per scope of work. | |
| **13** | Quality check the entire area and repeat any previous steps if needed. Make sure to establish a consistent systematic pattern for your work to avoid missed areas and to maximize quality, productivity and safety. | |

**Professional Techniques:**

- ❑ If you can see sheen on the bare wood surface (mill glaze), it must be sanded with medium grit paper.
- ❑ All wood species are prone to "mill glaze" which may cause adhesion failure, so be aware that factory primer may have been applied without having the "glaze" removed.
- ❑ Adhesion tests can be helpful to determine if the primer has proper adhesion.
- ❑ Electric sanders may allow sanding/abrading to be performed more efficiently.
- ❑ Use patching/filling material that is suitable for exterior use and bare surfaces.
- ❑ The woodwork manufacturer's tech line can be called to determine compatibility and performance characteristics.

# Exterior Trim Prep

**Production Rate:**

- ❑ Production rate will vary with the scope of work.

**Material & Supplies:**

❑ scraper blades ❑ appropriate sand paper

**Tools & Equipment:**

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ electric sander ❑ vacuum (HEPA where required)

| # | Procedure Steps | Completed Properly |
|---|---|---|
| **1** | Know the scope and the preparation level for all procedure steps. | |
| **2** | For all procedure steps:<br>• Inspect each surface for damage and pre-existing conditions and report per company procedures.<br>• Evaluate the most effective course of action based on budget, conditions, time, preparation level, appearance level, etc.<br>• Determine appropriate action such as:<br>- removal of failed sections of coating<br>- removal of total coating<br>- repair of substrate | |

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| | - replacement of substrate<br>• Verify that the estimated scope matches actual requirements of the job and report discrepancies per company procedures. | |
| **3** | Protect surrounding area. | |
| **4** | Determine if nails, hardware, staples, etc. need to be set or removed and proceed according to work scope. | |
| **5** | Evaluate the best method of coating removal for the specific area you are working on to limit damage and maximize quality and production. Consider the type of hand tools, power tools and appropriate grit of abrasives. | |
| **6** | Establish a consistent, systematic pattern for your work to avoid missed areas and to maximize quality, productivity and safety. (MES) | |
| **7** | Scrape/sand to remove all loose, peeling, blistering, flaking or otherwise failed coatings and failed caulk:<br>• Ensure that you don't damage the substrate during the scraping/sanding process.<br>• Be sure to maintain the existing profile.<br>• Use molding scrapers for curved profiles.<br>• Scrape in the direction of the wood grain as much as possible. | |
| **8** | Scrape/sand to maximize the performance of the new coating system per company procedures and PDCA Standard P14-06 Level 2:<br>• Remove sharp edges of the existing coating by shaving the edge with a pull scraper or by sanding with coarse sandpaper.<br>• Rough sand bare wood surfaces with coarse sandpaper.<br>• Slightly round sharp wood corners with sandpaper.<br>• Scuff sand the remaining areas as needed to improve adhesion. | |
| **9** | Detail sand for enhanced appearance if the work scope requires it as per PDCA Standard P14-06. | |
| **10** | Quality check each section before starting the next section. Repeat any previous steps as needed. | |
| **11** | Scrape and sand the next section, proceed section by section until the entire area is completed. | |

## Professional Techniques:

- ❑ Adhesion tests can be helpful to determine the level of coating removal needed.
- ❑ Tapping the surface may produce a hollow sound which may indicate poor coating adhesion.

- ❑ All wood species are prone to “mill glaze” which may have been painted over without having the “glaze” removed. If you can see sheen on the bare wood surface, it must be sanded with medium grit paper.
- ❑ A pull scraper provides more leverage and is generally more effective at coating removal than a 5-in-one type tool.
- ❑ Smaller scrapers may be more efficient than larger ones in some situations.
- ❑ Various tools including multiple sized pull scrapers, sandpaper, wire brushes, putty knives, 5-in-ones, etc. can be used to remove coatings in different situations.
- ❑ Scraper blades should always be sharp.
- ❑ Carbide blades will hold their sharp edge longer than traditional steel blades but need to be professionally sharpened or replaced.
- ❑ Cross grain scraping may damage the substrate and should be kept to a minimum.
- ❑ On end to end trim joints, turn the scraper to a diagonal orientation before crossing adjoining joints to minimize the tendency to “tear out.”
- ❑ High-build primers may be used to reduce the amount of sanding required to enhance appearance.
- ❑ Electric sanders may allow sanding/abrading to be performed more efficiently.
- ❑ A vacuum can be connected to an electric sander to reduce dust and cleanup time and it will also extend the life of the sandpaper.
- ❑ Scuff sanding surfaces promotes adhesion. This is especially valuable on hard, glossy surfaces.
- ❑ Local power companies will provide protective covering around above-ground electrical service to ensure protection from electric shock.
- ❑ Be aware of varied substrate, coating and surface conditions and adjust your scraping, hand pressure, sanding technique and sandpaper grit accordingly.
- ❑ The typical work zone when working on a ladder is from a comfortable height above your head to the top of the ladder. Work in a section that is the width of your arm span while centered on the ladder.
- ❑ Working from the bottom up will keep your work surface cleaner and will increase productivity.
- ❑ Use a straight edge as a guide for scraping vertical grooves to keep scraper from gouging delicate profiles.
- ❑ In some cases, it’s more efficient to replace a piece of trim instead of repairing it.

# Exterior Trim Painting

### Production Rate:

- ❑ Rate will vary with scope of work and height

### Material & Supplies:

❑ paint ❑ roller covers ❑ paint strainer

### Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Know the scope, painting sequence and color of trim edges that meet siding. Be aware of various styles/techniques of the cut-in procedure. | |
| 2 | Protect all surfaces not to be painted. | |
| 3 | Evaluate surfaces for proper preparation. | |
| 4 | Check the moisture content of the substrate with a moisture meter. Refer to manufacturer's specifications for acceptable moisture levels. | |
| 5 | Remove dust and debris as needed. | |
| 6A<br><br>6B<br><br>6C | Apply the coating to the trim using a brush, roller, or sprayer.<br><br>Work coating into surface texture with brush or roller.<br><br>Lay the paint off with one stroke per trim element/surface (if possible) in the direction of the grain to the previous painted section. Keep the sections short enough to minimize visible lapping and brush marks. | |
| 7 | Proceed in the following sequence:<br><br>• Start at a top corner of your work area.<br>• Paint to a natural break point such as the end of a trim element.<br>• Apply the coating in the largest sized sections possible while maintaining a wet edge at all times. Work from unpainted areas into freshly painted areas. This may maximize production while avoiding lap marks/flashing. | |
| 8 | Perform a quality appearance check on each section before moving on to a new section. As you proceed with your work, check for rollovers on edges. | |
| 9 | Repeat steps 4 – 7 until the entire area is complete. | |
| 10 | Perform an appearance quality check on the entire area and address as needed. | |

## Professional Techniques:

- ❑ If a surface is hot to the touch, it may be too hot to paint.
- ❑ If possible, work out of direct sunlight.
- ❑ Allow enough time for the paint to dry prior to exposure to direct sunlight to avoid blistering or wrinkling.

- ❑ For water-based paints, wet the roller cover prior to use and spin out excess water. This will help the roller cover load more paint.
- ❑ Keep brushes conditioned and clean during usage for optimum efficiency and paint release.
- ❑ Use the largest brush that will provide for appropriate cut-lines and consistent coating finish.
- ❑ Use a mini-roller to increase production.
- ❑ To increase production, use a thicker nap roller but make sure it's shed resistant.
- ❑ Siding colors may often be taken up to, and including, the side edge of trim elements to create a straight color contrast line (as opposed to breaking the siding color at the inside corner of siding and trim element). Be sure to know what the work scope is as this can have a great impact on labor hours.
- ❑ The sequence of painting trim vs. siding may change depending on the specifics of each individual job.
- ❑ The size of sections that can be coated without creating lap marks will vary significantly depending on drying factors such as temperature and humidity.
- ❑ Check moisture levels at moisture-prone areas such as horizontal trim elements, behind bushes, joints etc.
- ❑ When painting balustrades, develop a systematic pattern so no surfaces are missed, a wet edge is maintained and efficiency is maximized.
- ❑ If one person is painting balustrades, check the other side often for rollovers to maintain an even finish.
- ❑ When painting balustrades or railings, it's more efficient to have two painters working simultaneously, one on each side.

# Wood Shutter Prep

## Production Rate:

- ❑ 20 - 30 minutes to prep a standard size louvered shutter per side, production rate may vary with the scope of work, shutter style and height

## Material & Supplies:

❑ primer ❑ appropriate sand paper ❑ caulk ❑ exterior patching material
❑ appropriate cleaning agent ❑ can of hornet spray

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Know the scope and the preparation level for all procedure steps. | |
| 2 | For all procedure steps:<br>• Inspect each surface for damage and pre-existing conditions.<br>• Address damages per company procedures and scope of work.<br>• Verify that the scope matches actual conditions. | |

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| **3** | Protect the surrounding area. | |
| **4** | ONLY IF painting the siding/brick behind shutters:<br>1. Establish a logical system for removing and labeling the shutters.<br>2. Remove the shutters one at a time and label immediately. Remove and bag any hardware not to be painted.<br>3. Wash both sides of the shutters. | |
| **7** | Scrape/sand to remove all loose, peeling, blistering, flaking or otherwise failed coatings:<br>• Start with the louvers on the front of the shutter. Be sure to remove any failed coating from the corners of the louvers and stiles.<br>• Proceed to the face and edges of the shutter paying special attention to the top of the shutter that gets the most weather damage.<br>• Repeat the process on the back of the shutter (only if removed) | |
| **8** | Scrape/sand to maximize the performance of the new coating system per company procedures and PDCA Standard P14-06:<br>• Remove sharp edges of the existing coating by shaving the edge with a pull scraper or by sanding with coarse sandpaper.<br>• Rough sand bare wood surfaces with sandpaper.<br>• Slightly round sharp wood corners with sandpaper.<br>• Scuff sand the remaining areas as needed to improve adhesion. | |
| **9** | Detail sand for enhanced appearance if the work scope requires it as per PDCA Standard P14-06. | |
| **10** | Quality check each shutter before starting the next shutter. Repeat any previous steps as needed. | |
| **11** | Remove all of the dust and debris from the shutter using a dust brush and/or vacuum. | |
| **12** | Prime all bare wood or apply a full coat of primer depending on the scope of the work. If both sides are being painted, prime the back first, then the front. | |
| **13** | Patch holes, gouges or other surface imperfections as needed after the primer has dried. | |
| **14** | Sand all patching material flush and prime patches. | |
| **15** | Caulk all gaps and joints as needed, pay particular attention to the top edge of the shutter and rail/stile joints. | |
| **16** | Perform a quality check on the shutter and repeat any previous steps if needed. | |

### Professional Techniques:

- ❑ Use a very sharp blade in the paint scraper to increase appearance quality and production speed.
- ❑ Shave paint ridges, existing drips, runs or sags with a scraper . This will minimize the time needed for feather sanding and patching.
- ❑ Be aware that there may be an old numbering system on the shutters. Be careful not to mix it up with your numbering system.
- ❑ If removing hardware, take care not to lose hidden parts and springs. These pieces may be very difficult to replace.
- ❑ Corner detail sander with a triangular shape could be used to get into small corners.
- ❑ Do not fill hinge, fastener or screw holes where the shutter mounts to the building.
- ❑ Some shutter labeling methods include the following: paper tag attached by wire, nail punch , Dremel engraver, 5-in-1, duct tape, metal tab, metal stamp & die or slotted screwdriver.
- ❑ Some numbering system options for shutter removal and re-installing: numbered by side with an abbreviation such as F = front or N = north, F-1, F-2…..starting at top left going left to right and top to bottom.
- ❑ The top rail is always smaller than the bottom rail so make sure the shutter is reinstalled properly.
- ❑ The shutters need to be installed with the louvers angled in the proper direction per the work scope. Historically accurate installation may have the lower edge of the louvers angled down toward the house while most modern installations (nonfunctional) have the lower edge of the louvers angled down away from the house.
- ❑ If the louvers are operable when starting, make sure they are still operable when finished.
- ❑ Watch out for bats and bees when removing shutters. Power washing prior to removing shutters is advisable.
- ❑ Often times it's more efficient to spray prime shutters than to prime by hand.
- ❑ It is critical that all shutter surfaces (front and back) are coated to prevent warping and to protect from deterioration.

## Wood Shutter Painting

### Production Rate:

- ❑ 20 - 30 minutes to paint a standard size louvered shutter per side, production rate may vary with the scope of work, shutter style and height

### Material & Supplies:

- ❑ paint

### Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Protect all surrounding surfaces not to be painted. | |
| 2 | Evaluate surfaces for proper preparation and address as needed. | |
| 3 | Check moisture content to ensure wood is dry enough to paint. | |
| 4 | Remove dust and debris from all surfaces to be painted. | |
| 5 | Establish a consistent, systematic pattern for your work to avoid missed areas and to maximize quality and productivity. If both sides of the shutter are to be painted, start with backside first. | |
| 6 | For brush application:<br>1. Starting at a top corner of the upper louvered section, apply the coating to the inside edge of the vertical stile and louver joints.<br>2. Repeat at the opposite end of the louvers just painted.<br>3. Paint the remaining surface of the louvers between the painted edges.<br>4. Work down the shutter in groups of louvers as large as possible while maintaining a wet edge between the louvers and stile joints.<br>5. Feather brush or wipe off excess paint from stile and rail faces while paint is wet.<br>6. After each louvered section is complete, check the flipside for runs and sags, feather brush as needed.<br>7. Repeat process until louvers are completely coated.<br>8. Paint top, bottom and side edges.<br>9. Paint rail and stile faces.<br>10. Paint flipside if necessary per scope of work using the same above procedure.<br>11. Periodically check your work for drips and sags, and touch up as needed.<br><br>For spray application with back brush:<br>1. Apply paint to the entire side and edges of the shutter.<br>2. Work paint into the louver/stile joints on both ends of the louvers and brush out the louvers as per brush application.<br>3. Brush out top, bottom and side edges.<br>4. Brush out rail and stile faces.<br>5. Paint flipside if necessary per scope of work using the same above procedure.<br>6. Periodically check your work for drips and sags, and touch up as needed. | |

### Professional Techniques:

- ❑ Be aware of the numbering system and make sure it is not obscured by the paint.
- ❑ The shutters need to be installed with the louvers angled in the proper direction per the work scope. Historically accurate installation may have the lower edge of the louvers angled down toward the house while most modern installations (nonfunctional) have the lower edge of the louvers angled down away from the house.
- ❑ Often times it's more efficient to spray shutters than to coat by hand.
- ❑ Make sure that all areas between louvers are sufficiently coated when reviewing your work.
- ❑ Make sure the top edge of the shutter is completely coated and sealed.
- ❑ If painting shutter vertically, insert a nail or screw into the bottom of each stile and paint the bottom edge of the shutter first. Stand the shutter on the nails/screws and lean against a vertical surface.

## Double Hung Window Prep

### Production Rate:

- ❑ 60 minutes for glazed 6 over 6 standard size sashes (does NOT include re-glazing)

### Material & Supplies:

❑ primer ❑ caulk ❑ razor blades ❑ exterior patching material ❑ glazing compound ❑ glazier's points

### Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | |
|---|---|---|
| 1 | Examine the window for any damaged or broken parts including scratches and cracks in glass, broken sash cords, paint on jambs and interior surfaces, proper movement, etc. Report per company procedures. | |
| 2 | Protect the surrounding area. | |
| 3 | Unlock the sashes. Support upper sash while unlocking to ensure that it won't slam down. | |
| 4 | Remove storm windows as needed. Place padding between panels and surface to be leaned against. | |
| 5 | Remove unused hardware per scope of work. | |
| 6 | Reverse the sashes if possible to expose the meeting rail of the lower sash and the upper rail of the upper sash. Scrape and sand these areas as well as the windowsill area under the lower sash. Take precautions to prevent dust and chips from getting inside the building. | |

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| **7** | Close the window. | |
| **8** | Remove any excess paint, adhesive, etc. from the glass using a razor scraper. Remove loose glazing compound but be sure not to twist the razor scraper in an effort to remove it that could break the glass. If possible, create a straight line where the glass and paint meet. | |
| **9** | Remove any remaining loose glazing compound by running a paint scraper along the edge of the muntin bars and all areas where wood meets glass with medium pressure. Do not try to remove any glazing compound that is secure. That is not necessary and it could crack the glass. | |
| **10** | Remove all loose paint from the sashes using a paint scraper and/or sandpaper. | |
| **11** | Remove all loose paint from the jamb as needed so the sashes can slide freely. | |
| **12** | Remove all loose paint from the window trim. | |
| **13** | Feather sand paint ridges, rough areas, and surface imperfections as needed. | |
| **14** | Scuff sand all non-sanded areas as needed for adhesion. | |
| **15** | Remove all of the dust and debris from the window using a dust brush and/or vacuum. | |
| **16** | Prime all bare wood, including any bare wood on the muntin bars where glazing compound will be applied. | |
| **17** | Patch nail holes and other surface imperfections as needed. | |
| **18** | Sand patching material and raised wood grain flush as needed. Spot prime as needed. | |
| **19** | Apply Glazing Compound:<br><br>1. Sashes with Wood muntin bar stops:<br>a. Apply glazing compound where needed.<br>b. Remove residue on the glass with a rag or razor scraper.<br><br>2. Sashes with glazing compound:<br>a. Replace any missing glazier's points.<br>b. Replace missing glazing compound by applying with a broad knife, fingers, or by creating a roll of glazing. Be sure to cover glazier's points where needed.<br>c. Tool glazing compound with a putty knife (3/4" – 1.5") or a glazier's knife to create a smooth uniform surface with a sharp | |

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| | inside corner at approximately the same width as the inside muntin and/or the exiting surrounding putty.<br>d. Make sure the glazing compound is not higher than the interior wood mutin bar or the surrounding putty.<br>e. Remove residue on the glass with a rag or razor scraper.<br>f. Prime new glazing compound, if required by manufacturer, after adequate drying time. | |
| **20** | Caulk all gaps and joints as needed. | |
| **21** | Quality check all sash preparation, repeat any previous steps as needed. | |

## Professional Techniques:

- ❑ Use a very sharp blade to scrape paint to increase appearance quality and production speed.
- ❑ Shave paint ridges, existing drip, runs or sags down with a scraper. This will minimize the time needed for feather sanding and patching.
- ❑ Whenever sanding near glass, great care should be taken to avoid scratching the glass. Use your fingers as a buffer between glass and any sanding products to prevent scratching glass. If you fold a sheet of sandpaper, always have the folded edge of sandpaper closest to the glass surface without touching it.
- ❑ Rags or stir sticks may be wedged into open gaps between sashes and the head frame or sill to prevent dust or chips from getting inside the building.
- ❑ A razor scraper may be used to remove wet paint or primer from glass as you are working. It may be easier to remove wet paint on the glass immediately than risk damaging your finish or new glazing compound by removing hardened paint from glass at a later time.
- ❑ A putty knife with a rag wrapped around the end can be used to remove wet primer from glass.
- ❑ To cut a line in paint, sealant, or adhesive that is to be removed from glass use the pick on a 5-in-1. Do not use a utility knife because the sharp blade will easily cut into and damage the wood.
- ❑ A high quality ¼” chisel may be used to remove factory adhesives and sealants.
- ❑ Remove factory adhesives/sealants when the window is not exposed to sunlight, this will make it much easier to remove the adhesive. When the adhesive is heated by the sun it gets gummy and is much more difficult to remove.
- ❑ Check all interior window surfaces for misapplied exterior paint (primer).
- ❑ Use a 5-in-1 to push on a wood surface that has wet coating in order to slide a sash up or down.
- ❑ If an upper sash is painted shut, a bender pad may be used to paint the exterior meeting rail of the lower sash from the inside.
- ❑ Be aware that damaged or nicked razor blades will scratch glass.
- ❑ There are specialized tools with serrated edges designed to break the paint seal between the sash and the window frame.

- ❑ Prime muntin bars before applying glazing compound so the moisture from the glazing compound does not migrate into the wood too quickly. This would cause the glazing compound to fail prematurely.
- ❑ When moving the sashes remember to return locks to the locked position so the meeting rails are not damaged when they pass each other.
- ❑ After oil-based glazing has been applied it can be smoothed out with a clean dust brush to help seal with glass and remove debris.
- ❑ To remove glazing compound oil off of the glass, whiting powder may be rubbed on the glass in lieu of using razor blades.

# Double Hung Window Painting

## Production Rate:

- ❑ Thirty-five minutes to paint six over six true divided light double hung sashes.
- ❑ Fifteen minutes to paint standard window trim.
- ❑ Production rate may vary with the scope of work.

## Material & Supplies:

❑ paint ❑ paint strainer ❑ razor blades

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Examine the window for any damaged or broken parts including scratches and cracks in glass, broken sash cords, paint on jambs and interior surfaces, proper movement, etc. Report per company procedures. | |
| 2 | Protect the surrounding area. | |
| 3 | Unlock the sashes. Support upper sash while unlocking to ensure that it won't slam down. | |
| 4 | Ensure window is prepared properly for painting. | |
| 5 | Remove any dust. | |
| 6 | Reverse the sashes if possible to expose the meeting rail and the upper row of lites of the lower sash. Paint these areas and remove excess paint from glass immediately. | |
| 7 | • Close the lower sash, leaving a small gap at the bottom. | |
| 8 | • Paint the remainder of the lower sash and remove excess paint from glass immediately. | |

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| **9** | Check for new paint on interior jambs, parting bead and top of meeting rail. Clean as needed. | |
| **10** | Paint the upper sash in full and remove excess paint from glass immediately. Be sure not to rollover any paint to the interior surface of the meeting rail. | |
| **11** | Close the upper sash, leaving a small gap at the top. | |
| **12** | Check for new paint on exterior jamb and parting bead that are not to be painted and clean as needed. | |
| **13** | Paint the muntin bars in the following sequence: all downward facing horizontal edges, then all vertical edges facing in one direction, then all vertical edges facing the opposite direction, finally paint all upward facing horizontal edges. Paint should bridge the gap (form a seal) at the putty and glass especially on horizontal upward facing surfaces. Note: the four edges of individual glass panes should NOT be painted together pane by pane, this is much slower. | |
| **14** | Paint, stain or oil the jamb and parting bead below the upper sash per job scope. | |
| **15** | Paint the window trim top to bottom. The sill and exterior face of the stool should be done last after the casing. | |
| **16** | Quality check all trim and sash painting and repeat any previous steps as needed. Ensure that all glass is free of excess paint. Ensure that there is no paint rollover to interior surfaces such as at parting bead, stool and meeting rails of the upper and lower sashes. | |

## Professional Techniques:

- ❑ When disposing of a razor blade, first wrap with tape to prevent injury.
- ❑ If a surface is hot to the touch, it may be too hot to paint.
- ❑ If possible, work out of direct sunlight.
- ❑ Allow enough time for the paint to dry prior to exposure to direct sunlight to avoid blistering or wrinkling.
- ❑ Siding colors may often be taken up to the outside edge of trim elements to create a straight color contrast line (as opposed to breaking the siding color at the inside corner of clapboard siding and trim element). Be sure to ask.
- ❑ Using painter's tape to mask glass may slow down the process and prevent a good seal between the wood/glazing and glass and can be difficult to remove
- ❑ Think of each piece of wood as its own section, to be painted in the direction of the wood grain.
- ❑ The sides of the sash should be painted independently of parting bead to avoid loading that operating joint with paint (to avoid window being painted shut).
- ❑ If siding is to be painted after trim, lap paint onto the wall surface to provide for an easier and sharper paint cut line.

- ❑ If painting multiple coats, use the non-final coat(s) to bridge the gap between wood and glass and then scrape the unwanted dry paint off the glass. For the final coat, cut the paint just barely shy of the glass so no scraping or minimal scraping needs to be done.
- ❑ When scraping dry paint off of glass, be careful not to break the paint seal at the wood/glazing and glass joint.
- ❑ A razor scraper may be used to remove wet paint from glass as you are working. It may be easier to remove wet paint on the glass immediately than risk damaging your finish or new glazing compound by removing hardened paint from glass at a later time.
- ❑ A putty knife with a rag wrapped around the end can be used to remove wet paint from glass.
- ❑ To minimize scraping of dry paint from glass, remove as much paint as possible when it is wet.
- ❑ When razor scraping dry paint, wet the glass first with a soapy solution.
- ❑ Be aware that some glass has a coating or film that should not be scraped. Refer to manufacturer's directions.
- ❑ Use a 5-in-1 to push on a wood surface that has wet coating in order to slide a sash up or down.
- ❑ The customer should be instructed to move each sash up and down daily for one week to prevent the window from sticking.

# Panel Door Prep

## Production Rate:

❑ 60 minutes to prep one side of a standard size six-panel door.

## Material & Supplies:

❑ primer ❑ appropriate sand paper ❑ caulk ❑ tape – appropriate size & type
❑ filling material ❑ appropriate cleaning agent ❑ wet paint sign

## Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ electric sander ❑ sanding block

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Examine the door and hardware for any damage, broken parts, scratched glass, and for proper fit. Report per company procedures. | |
| 2 | Protect the surrounding area including interior area when door is opened. | |
| 3 | Clean door as needed. | |
| 4 | Clean hardware as needed. | |

| | | |
|---|---|---|
| 5 | Based on age/condition of hardware, mask or remove hardware and bag, label and store securely as needed. | |
| 6 | Close door to prevent dust and debris infiltration. | |
| 7 | • Set all nails approximately 1/8” deep if needed. | |
| 8 | • If glass lites exist prep them as you would prep a window.<br>• | |
| 9 | Remove loose paint and caulk from all joints of moldings, panels, rails, and stiles using a paint scraper. | |
| 10 | Remove loose paint from curved moldings using a paint scraper and/or sandpaper. | |
| 11 | Remove loose paint from flat surfaces of panels, rails, and stiles using a paint scraper, sandpaper, and/or power sander. | |
| 12 | Feather sand paint ridges, rough areas, and surface imperfections as needed. | |
| 13 | Scuff sand entire door for adhesion. | |
| 14 | Open door and remove loose paint from surfaces previously covered. Feather sand and scuff sand as needed. | |
| 15 | Remove all of the dust and debris from the door using a dust brush and/or vacuum. | |
| 16 | Prime all bare surfaces or the entire door as needed/specified. | |
| 17 | Patch nail holes and other surface imperfections as needed after the primer has dried. | |
| 18 | Sand all patching material flush and prime patches as needed. | |
| 19 | Fine sand primed areas. | |
| 20 | Caulk all gaps and joints as needed. | |
| 21 | Quality check the entire door preparation, repeat any previous steps as needed. | |

### Professional Techniques:

- ❑ Use a very sharp blade to scrape paint to increase appearance quality and production speed.
- ❑ Shave paint ridges, existing drip, runs or sags down with the scraper. This will minimize the time needed for feather sanding and patching.
- ❑ Be aware if caulk is not completely dry, it may crinkle the finish coat.
- ❑ All paint (primer) should be clean or thoroughly strained before being applied.
- ❑ Think of each piece of wood as its own section, to be painted in the direction of the wood grain.
- ❑ Catch drips, runs, and sags in process before the material sets up.
- ❑ Be aware that areas around doorknobs may have excess dirt and oil.
- ❑ Removing detachable weather stripping may allow you to close the door when drying without damaging the wet coating.
- ❑ If weather stripping is not detachable, painter's tape may be applied to the weather stripping to prevent paint from sticking. Tape may need to be left on for up to four days.
- ❑ Electrostatic dry wipes may be used for more thorough dust removal in place of tack cloths.
- ❑ Use elastomeric caulk to compensate for panel movement.
- ❑ Coating work should be done early in the day to allow for proper drying before closing the door.
- ❑ Secure area from pets.
- ❑ After primer/paint has dried to touch, use Vasoline on the weather stripping & hinges to prevent sticking.
- ❑ Use extreme care when cleaning paint off of hardware and fixtures so as not to damage those surfaces. First try warm water and a soft cloth, then a detergent cleaner, then, if necessary, use a special cleaner for removing dried paint.
- ❑ Use exterior grade patching materials with proven results, do not rely on the product labels.

## Panel Door Painting

### Production Rate:

- ❑ 30 minutes per side of a standard size six-panel door.

### Material & Supplies:

❑ rags ❑ tack cloths ❑ paint ❑ paint strainer ❑ tape – appropriate size & type ❑ wet paint sign

### Tools & Equipment:

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ electric sander ❑ sanding block

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Inspect the door to ensure that it is properly prepared. Finalize preparation if needed. | |

| | | |
|---|---|---|
| **2** | Protect the surrounding area including interior area when door is opened. | |
| **3** | Mask or remove hardware and bag, label and store securely as needed. | |
| **4** | Lightly sand the entire door as needed. | |
| **5** | Remove all of the dust and debris from the door using a dust brush, tack cloth, and/or vacuum. | |
| **6** | Paint top edge if they have not been previously painted. | |
| **7** | Paint hinge or latch edge (whichever edge is revealed when the door is open). | |
| **8** | Remove any new paint that wraps around the edge onto the front and/or back of the door. | |
| **9** | If there are glass lites, paint them as you would a window. | |
| **10** | Paint all the panels per the sequence shown in the diagram with the following technique:<br>● Apply paint liberally for uniform coverage to the entire panel including the molding, border, and flat areas.<br>● Lay off the moldings and borders followed by the flat portion of the panels, brushing in the direction of the individual component or wood grain.<br>● Wipe off or feather brush out any excess paint on stiles and rails. | |
| **11** | Paint stiles and rails per the sequence shown in the diagram with the following technique:<br>● Paint each stile/rail as a separate component (reference the dotted lines in the diagram).<br>● Apply paint liberally for uniform coverage.<br>● Overlap joints slightly onto adjoining unpainted sections.<br>● No additional paint should be applied to sections just painted.<br>● Lay the paint off in the direction of the component starting from an end of each rail or stile. Be sure to cut a straight line at the joints of the rails or stiles that have just been painted.<br>● Feather brush any paint overlap onto adjoining unpainted sections in the direction of the component.<br>● Check all panels to ensure that there is no paint overlap or any paint pooling in the bottom corners of the panels. | |
| **12** | Quality check the door and surrounding area as outlined in the Appearance & Quality Assurance Guidelines. Remove paint from any non-painted surfaces immediately. | |
| **13** | When coating is dry, replace hardware and remove any tape. | |

**Professional Techniques:**

- ❑ A mini roller may speed up the application of the material, but use a brush to lay off the finish.
- ❑ There are tack cloths specifically designed to use with waterborne enamel coatings to avoid surface contamination.
- ❑ Removing detachable weather stripping may allow you to close the door when drying without damaging the wet coating.
- ❑ If weather stripping is not detachable, use Vasoline on weather stripping to prevent sticking.
- ❑ Coatings should be done early in the day to allow for proper drying before closing the door.
- ❑ If coating is not adequately dried when the door must be closed, insert a piece of wax paper between the door and jamb to keep it from sticking.
- ❑ Each section should be laid off once. If a section needs to be laid off again, the application sequence or brushing technique needs to be refined. Additional lay off steps will create excessive brush strokes and will reduce production.
- ❑ Use a mirror to check if the tops have been coated.
- ❑ Tops should be painted to slow down expansion and contraction and to meet door manufacturer's warranty requirements.
- ❑ Wedge door stop may be used to secure the door while you are painting.
- ❑ When brushing the panel corners, brush away from the corners rather than into the corners to minimize paint pooling.

# Deck Prep & Staining

**Production Rate:**

- ❑ Production rate will vary with the scope of work and type and size of substrate.

**Material & Supplies:**

❑ oxalic acid or wood brightener ❑ wood cleaner

**Tools & Equipment:**

❑ standard personal work tools & supplies ❑ standard job site tools & supplies
❑ garden pump sprayer ❑ pressure washer ❑ scrub brush

| # | Procedure Steps | Completed Properly |
|---|---|---|
| 1 | Know the scope and the preparation level for all procedure steps. | |
| 2 | For all procedure steps:<br>• Inspect each surface for damage and pre-existing conditions.<br>• Verify that the scope matches actual conditions.<br>• Report discrepancies per company procedures. | |

| | | |
|---|---|---|
| **3** | Protect surrounding area. Install signs at all entrances to working area to prevent traffic until work is complete and all surfaces have dried. | |
| **4** | Remove all furniture, plants, grills etc. if possible, otherwise the deck will need to be done in separate phases. | |
| **5** | Clean the deck (refer to Exterior Washing COP). | |
| **6** | If a translucent or semi-transparent stain is to be applied and wood appears gray, discolored or contains rust stains, apply a solution of oxalic acid or commercially available wood brightener and warm water. This will remove stains and return the wood back to a more natural color and uniform appearance. Allow the solution to sit on the deck for 15 – 20 minutes. Make sure the solution does not dry on the wood. Re-apply as necessary. Lightly scrub surfaces as needed. Rinse/power wash the solution from the deck with clean water. To keep from damaging the wood, do not exceed 500 PSI. | |
| **7** | Remove debris from between boards as best as possible. | |
| **8** | If the scope of work calls for surface sanding after cleaning, allow the surface to dry sufficiently. Use 60 - 80 grit paper on a random orbital or finish sander. Remove all dust when finished. | |
| **9** | If the deck is to be painted, follow manufacturer's recommendations for preparation and priming. | |
| **10** | Quality check the preparation of the entire area and repeat any previous steps if needed. | |
| **11** | Prior to coating or staining, allow the surface to dry thoroughly. Test with a moisture meter to ensure the moisture content is equal to or less than manufacturer's recommendations. | |
| **12** | Apply deck coating (paint, semi-transparent stain, translucent wood finish, etc.).<br>● Start in an area that allows you exit the deck without having to step on a wet surface.<br>● Work on multiple boards in groups that will allow you to maintain a wet edge.<br>● Work the entire length of the boards or to a natural break keeping a wet edge to avoid lap marks.<br>● Always work in the direction of the grain.<br>● Establish a consistent systematic pattern for your work to avoid missed areas and to maximize quality, productivity and safety.<br>● Apply second coat if needed per scope of work only if recommended by manufacturer. | |

| | | |
|---|---|---|
| **13** | When using a translucent wood finish, after approximately 10 – 30 minutes, remove any excess that has not soaked into the wood. If a rag has been used for this, be sure to soak it in water to avoid spontaneous combustion. | |
| **14** | Quality check the entire area and repeat any previous steps if necessary. | |

## Professional Techniques:

- ❑ If you can see sheen on the bare wood surface (mill glaze), it must be sanded with medium grit paper or removed with an appropriate cleaner.
- ❑ All wood species are prone to "mill glaze" which may cause adhesion failure, so be aware that factory primer may have been applied without having the "glaze" removed.
- ❑ Due to the variety of different types of stains and coatings available and varying directions, be sure to read and understand all manufacturers directions.
- ❑ Always test the stain or finish on an obscure area of the deck. Color can vary with application, porosity and type of wood.
- ❑ A leaf blower is good for blowing dust off the deck.
- ❑ If possible, avoid working in direct sunlight.
- ❑ Stain or coating may be applied with a variety of applicators including sprayer, brush, pad, roller or car wash brush. If coating is applied with a sprayer, it should be back brushed or rolled into the wood grain.
- ❑ Be aware of rain forecasts when planning deck restoration to allow for adequate drying.
- ❑ Be sure to protect the area underneath the deck if it's being used as a storage area or if the surfaces are finished.

# Definitions

**Apron** – the interior trim piece under the stool of a window
**Backer rod** - a flexible foam rod that is 3/8 inch to 3 inches wide. It is used to fill gaps prior to applying caulk in order to stop the flow of caulk through the joint being sealed. It prevents the caulk from adhering to 3 rigid surfaces which helps maintain flexibility.
**Backing Strip** – material used to support drywall patch
**Balustrade** – a row of repeating posts that support a railing, staircase or porch
**Baseboard (also known as Mop board) -** trim at the base of the wall
**Caulk** - a soft, flexible compound applied as a bead to fill/bridge joints or gaps.
**Caulking gun** - dispenser for tube of caulk
**Chair rail** – wall molding approximately 30" above floor to protect walls from damage due to being bumped by chairs
**Chip brush** - disposable inexpensive brush
**Church Key** – sharp, pointed scraping tool
**Countersink** - To cause the head of a screw or nail to sink into the substrate below the surface
**Craters-** small depressions caused when holes have not been completely filled or filler has shrunk
**Crown molding** – trim at the wall/ceiling interface
**Cutting-in** – painting the corners of a room, the perimeter of walls, ceiling and abutting trim components with a brush prior to the roller application of paint to the walls and ceiling
**Drop Cloth -** floor protection impervious to liquids, water & solids
**Dry Rolling** - incomplete application of paint which occurs when the roller sleeve does not have sufficient paint on it
**Feathering** – reducing or tapering the thickness of the edge of a filler or coating by sanding or abrading prior to recoating.
**Filling Material (filler) –** A heavily bodied material used to fill voids, holes, pores, depressions, etc. in a substrate.
**Flashing –** The non-uniform appearance of a coating applied to walls or other surfaces, where there are noticeable variations in the gloss or color. This can be caused by application to an inconsistently sealed surface (suction spotting), excessive film build where roller paths overlap (lapping), etc**.**
**Glazing Compound** – A dough-like material consisting of pigment and vehicle, used for sealing window glass in frames. It differs from putty in that it retains its plasticity for an extended period.
**Glazier's Knife –** a bent rigid knife approximately 1-inch wide for tooling glazing compound.
**Glazier's Points -** small metal pieces that hold the glass in the sash.
**Hardware** – fittings, hinges, locks, handles, knobs, etc.
**High-build primer** – a specialty primer designed to be applied at high mil thicknesses to create a smooth surface.
**Joint tape**- a special tape usually of heavy paper or fiberglass mesh, used to bridge joints between sections of sheetrock. It can also be used as a reinforcement to bridge cracks, gaps, or holes when repairing plaster or damaged sheetrock.

**Lap Marks –** to lay or place one coat so its edge extends over and covers the edge of a previous coat (often already dry), causing an increased film thickness appearing as a slightly different color or gloss.
**Lay-off** – final light strokes of the brush during a paint operation
**Lites** – individual glass panes in a window or door
**Louvers** – series of horizontal angled wood slats
**Meeting (Check) rail** – the rail of a sash where the two sashes meet to create a seal
**MES** - Most Efficient Sequence for performing each task
**Mill glaze –** a varnish-like glaze that appears on the surface of the wood during the milling process and when the wood is being dried. Because the glaze is an unstable barrier between the primer and wood, the primer will fail if this glaze is not sanded off.
**Moisture Content** – the amount of water vapor or liquid water contained within a substrate (eg wood, concrete, masonry, wallboard etc.)
**Molding Scraper** – a pull scraper with a contoured blade
**Mud Pan** – a small deep tray that is used to mix patching materials
**Mullion (Muntin)** – a strip separating panes of glass
**Non-Peelable Wallpaper** – wallcovering that will not come off on the wall in strips or sheets such as foil or Mylar wallcovering
**Oxalic acid –** An acidic type of wood bleach used to remove stains such as cedar bleed (tannins), rust, etc
**Panel** – areas of the door that are recessed from the surface
**Parting Bead** - a strip of wood applied to the jamb to track a double hung window (single hung has no parting bead)
**Peelable Wallpaper –** decorative vinyl layer wallcovering with a paper backing
**Picture Framing** – these are the visible paint brush marks left behind at the junction of the brushed and rolled areas
**Picture rail** - typically a 1.5" – 2" molding on walls at approximately 12" – 16" below the ceiling on which special hooks were hung that allowed pictures to be suspended
**Pilaster** – a slightly raised architectural column built into or applied to the face of a wall
**Plaster Buttons/Washers** – thin disks approximately 1 inch in diameter with a hole in the center for a drywall screw. They are used to secure loose plaster and wallboard by screwing into studs or wood lath.
**Profile** – contour or roughness of a surface
**Pull Scraper** – a tool designed to be pulled across (as opposed to pushed) to remove coatings and foreign matter from a surface.
**Putty-** a compound used for filling nail holes, cracks, etc., usually made from oil combined with pigments/fillers such as calcium carbonate, etc. Putty is usually quite dense and heavy, and will remain flexible for a long time. Newer water-based putty has also been developed in recent years.
**Rails** – horizontal pieces of wood excluding panels
**Rollovers** – where excess paint extends past and around the edge of the face of a surface being painted
**Sash** – the framework in which panes of glass are set in a window
**Sash Stop** - trim piece that tracks the sash in the jambs

**Sealant** – often used as a synonym for "caulk". Usually means a compound that has greater performance than a caulk i.e it can accommodate movement in a joint or crack. The binder type used dictates the use and resistance properties. Examples are: latex, acrylic, epoxy/urethane, silicone, butyl.
**Semi-transparent Stain** –stain that changes the natural color of the wood, but allows the grain and texture to show through
**Shutter –** louvered wood was originally used to close over windows for protection in a storm but now mostly used for decorative purposes
**Sill** – bottom exterior horizontal piece of the window frame pitched for proper drainage
S**packle-** usually a pre-mixed patching compound in paste form used for repairing holes in walls, wood and other surfaces. Spackle is water-based but can be used under most coatings. Some brands may be sold in powder form and require mixing.
**Stile** – vertical pieces of wood excluding panels
**Stool** – the interior horizontal trim at the base of a window frame that is affixed to the sill (often incorrectly referred to as a sill)
**Strippable Wallpaper –** fabric backed vinyl wallcovering
**Tack cloth** – sticky cheese cloth used to remove fine dust particles
**Tooth** – the profile of a substrate, created to promote coating adhesion
**Top Coat (Finish Coat)** – Non-primer of coating in a painting operation. The finish coat is specifically formulated for environmental resistance and appearance.
**Translucent Stain** – stain that lightly tones/colors wood, but allows much of the natural color of the wood to show through
**Universal Colorants-** pigments used to color or "tint" coatings, filler material, or similar products. Universal colorants can be used in either oil or water-based products as well as shellac, varnish, etc.
**Wallcovering Adhesive Paste –** adhesive material in powder or premixed form used to apply wallcovering to a substrate.
**Wet Edge** – the edge or end of a wet, coated area that is still workable and will blend easily
**Window Jamb** - fixed frame parts that surround the sashes
**Window Jamb Liner** - metal or plastic covering the inside surface of the jambs
**Wood Fillers-** there are many types of wood fillers on the market, made from several different ingredients. Some are sold as ready-mixed compounds, while many are in powder form and require mixing.

# Interior Training Questions

1. List 5 characteristics that a good shop should possess:
    a. _____
    b. _____
    c. _____
    d. _____
    e. _____
2. _____ can be used to cover walls not to be painted without the use of tape.
3. What can be used instead of tape to secure plastic sheeting? _____.
4. Airborne dust can be effectively filtered using _____.
5. What is the most important thing to remember when covering smoke or fire detectors? _____.
6. When working around outlets and switches, it is important they remain _____ at all times to avoid electrical shock.
7. At the end of each day, it is important the shop is _____.
8. Odors can be removed using _____.
9. Floor protection that is impervious to liquids, water and solids is called a _____.
10. All materials in the shop should be _____ properly after use.
11. The shop should be safe and secure from _____ and _____.
12. What is the correct order supplies should be organized in based on order of use?
    a. Shop supplies, primers, finishes
    b. Primers, shop supplies, finishes
    c. Finishes, shop supplies, primers
13. Name 3 things to remove during masking & dust protection setup
    a. _____
    b. _____
    c. _____
14. Name 4 materials & supplies used for masking & dust protection
    a. _____
    b. _____
    c. _____
    d. _____

15. Owner's personal property should be _____ before work begins.
16. Floors and carpets should be protected with _____.
17. It is important to notify the customer if any _____ are discovered.
18. Why is it important to notify the customer of previous damages? _____.
19. When moving a refrigerator, be careful not to damage the _____ or _____.
20. To prevent paint from bleeding under the tape, it's a good idea to _____.
21. New drop clothes should always be marked top & bottom to help prevent _____.
22. What is another way to protect door hinges other than masking them? _____.
23. Why is it important to clean trim pieces before taping them? _____.
24. _____ is the next step after nail holes have been filled and are dry.
25. Lightweight spackle may leave _____ or other texture.
26. The small depressions caused when holes have not been completely filled or when the fill has shrunk are called _____.
27. The product used to fill nail holes, cracks etc and is usually made from oil combined with pigments/filles is called _____.
28. Why would you overfill a hole with putty? _____.
29. You should ALWAYS sand in which direction? _____.
30. What are the two forms in which wood fillers come?
    a. _____
    b. _____
31. When a surface is stained, the filled hole should _____ with the color of the wood.
32. _____ is water-based but can be used under most coatings.
33. List the two factors that affect the production rate for filling nail holes:
    a. _____
    b. _____
34. What is the approximate production rate for filling nail holes? _____.
35. Nail heads should be set about _____ deep.
36. What is the purpose of Plaster of Paris? _____.
37. One way to look for defects on a wall is to _____.

38. A repaired area should always be free of _____.
39. Why should you never use powdered joint compound over ready-mixed? _____.
40. When applying a 2nd coat of the patching material over a patched hole, it should extend about _____ past the 1st coat.
41. On holes smaller than _____ you can use several layers of fiberglass mesh tape.
42. When using a piece of drywall for the patch, it's important that the drywall is the same _____ and _____ as what's there now.
43. What two types of varieties does drywall tape come in?
    a. _____
    b. _____
44. The tray used to mix patching material is called a _____.
45. When applying a drywall patch to a large hole, the two 2x4s should be cut about _____ longer than the height of the cutout.
46. Which is faster drying?
    a. Powdered joint compound
    b. Ready mixed joint compound
47. The material used to support a drywall patch is called _____.
48. What three types of sanders can be used to blend the patching material?
    a. _____
    b. _____
    c. _____
49. In order for broad knives to provide a smooth patch they should always be _____.
50. Before putting the lid back on the patching compound, it is good practice to _____.
51. An inexpensive, disposable brush is called a _____.
52. List 4 different ways that you can smooth a caulk bead:
    a. _____
    b. _____
    c. _____
    d. _____
53. According to the PDCA Appearance Guidelines, caulking should be smooth with no _____ or _____.
54. _____ is used to fill gaps prior to caulking (if needed).
55. You can create a straight caulk edge to a surface not to be painted by applying _____.
56. Caulking should NOT fill _____.

57. Name 3 things that can happen if caulk if painted before it is dried or cured:
    a. _____
    b. _____
    c. _____
58. What can you do to stop the flow from a caulking gun?
    _____.
59. List 4 materials and supplies used in caulking:
    a. _____
    b. _____
    c. _____
    d. _____
60. What is the approximate production rate for caulking? _____.
61. List 3 items you can use to tool the caulk to minimize build-up in corners:
    a. _____
    b. _____
    c. _____
62. _____ can be used if the backer rod is too big for a gap.
63. Most interior caulks are _____ or _____.
64. What angle should the nozzle on a tube of caulk be cut at? _____.
65. List two ways to deal with previously existing silicone caulk:
    a. _____
    b. _____
66. It is always important to follow all manufacturer's _____ for materials used during wallpaper removal.
67. Prior to stripping wallpaper, tape plastic approximately __feet onto the floor.
68. List 4 non-standard tools used in removing wallpaper:
    a. _____
    b. _____
    c. _____
    d. _____
69. Wallpaper stripping solution should always be mixed with _____ water.
70. The approximate production rate for removing wallpaper is _____.
71. The hardest type of wallpaper to remove is called _____.
72. The easiest wallpaper to remove is called _____.
73. What is the approximate sized section to work on when stripping non-peelable wallpaper? _____.
74. All light switches should be taped in the _____ position.
75. After wallpaper has been removed and walls are prepped, what is the next step? _____.

76. Bleach should NEVER be mixed with _____ as it can cause toxic gases to be released.
77. A _____ is an alternative to using a chemical stripper.
78. How do you mark an area requiring repair? _____ or _____.
79. It is best to _____ of a broad knife to minimize ridges during repairs.
80. Broad knives should be _____ to provide a smooth finish.
81. Before prepping walls, remove _____ and _____.
82. Use a _____ or _____ to remove any dust or debris.
83. You can use a _____ to deal with ridges, drips, runs and sags.
84. There should be no visible _____ between trim and walls/ceilings.