

Mural Notes

Overview

Murals bring art into the public sphere. Mural artists are often commissioned by public bodies to enhance buildings with colourful depictions of historical and daily life. In Alberta, towns and cities abound in murals — and there is room for many more. The Paint Spot has been helping mural artists for a long time, and has amassed practical knowledge on the creation and preservation of murals. We can help the mural artist to plan, prepare, paint, preserve, and price murals. **Mural Notes** is designed so that you can find out what you need to know, but if you have further questions, the store staff will be happy to assist.



Mural completed by students at Allendale School Edmonton Alberta

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Mural painting enjoys a long history in world art. In Greco-Roman times, murals were created in encaustic paint, in which pigment mixed with molten beeswax was applied to plaster walls. Fresco, another early form of mural painting, usually involves the artist applying wet paint to wet plaster; drying binds the two together. Oil paint was employed by many artists in the Renaissance to create huge works on panels in their studios then install them indoors elsewhere. Extant murals are mostly indoors, although you see outdoor murals, faded and chipped after many centuries, in old countries. Murals in more recent times are often acrylic. Spray paint is the most recent addition to the family of mural media, its use often inspired by graffiti art.

According to Wikipedia, “World-famous murals can be found in Mexico, New York, Philadelphia, Belfast, Derry, Los Angeles, Nicaragua, Cuba and in India.”



Mural by Tim Heimdal on the Old Strathcona Performing Arts Centre 8426 Gateway Boulevard Northwest, Edmonton

1. What Kind of Mural? — Exterior or Interior

If your mural is **indoors**, you'll probably be working on plaster (e.g., drywall) painted with interior latex or perhaps on unpainted brick. If your mural is **outdoors**, the surface you are working on may be brick, masonry, or cement. It may be latex painted, or unfinished. It may be new and clean or old and grimy.

The individual qualities of each surface must be considered during planning, preparing and painting your mural. A second consideration to be introduced early in your thinking is whether it might be preferable to paint on **panels** rather than directly onto the surface at hand. If the wall you are working on is rough, dirty, patchy, or heavily textured you may prefer to use smooth, primed wood panels that can be installed over it.

Other considerations that might result in your choosing panels are:

- If change of imagery is desirable in the foreseeable future, for example if you are asked to create an impermanent mural;
- If you are working with groups of children or others, panels can be a safer, cleaner alternative to working outdoors on ladders or scaffolding;
- If working conditions are too difficult (in a noisy or dusty area, for instance);
- If weather or other atmospheric conditions are severe enough to affect outdoor art adversely, endangering the mural.

Panels can be made of wood, such as birch, pressed wood, particle board or metal. MDO (medium density overlay) plywood is a good bet. (Panels will be discussed in detail in Section 4.)

In the field

The field experience of artists who have painted murals may help you choose between working onsite and working on panels —

“A rough plaster wall will require more preparation. It will use more paint and varnish. It will also wear out brushes quicker.”

“Masonry walls are known to crack and deteriorate over time. The mural may suffer the same fate and require extensive repairs.”

“A mural painted on 4x8' panels can be relocated anytime, or can be removed for wall repair. It will not be damaged if the wall cracks or seeps water.”

“Scaffolding rental will be minimized if the mural is done on panels rather than directly on the wall.”

“It is quite difficult for an artist to paint and create while high on a scaffold, standing less than six feet from the wall, in what will often be hot (or cold), rainy or windy weather. For these reasons it could require about twice as long to do the same work.”

“Artists will be more likely to guarantee their work if they can do it under familiar and comfortable conditions, on a surface they know.”

“The artist can work much more efficiently on panels in his or her studio. They can paint in known conditions, night or day, in any weather. They can even work on the project all year round.”

“If painted on panels in a studio, the project can be overseen by progress inspections done in the artist’s studio, or the artist can mail photos, post digital pictures on the web, or mail dvd’s.”

“Panels can be transported and displayed in various locations before the final installation. Some groups take advantage of this for publicity and fundraising opportunities.”

One caution about panels: “Be very careful in handling and shipping completed panels: do not allow painted surfaces to touch one another as they can adhere, can pull paint off, *even if varnished.*”

In short, panels are generally preferable to other surfaces for mural painting, especially outdoors, because of their ease of preparation, handling, painting, and preservation. Caution should be exercised in transporting and installing panels.



2. What Kind of Paint? — Optimal Mural Paint

Murals are large paintings, and it may be tempting to choose latex house paint rather than artist-quality paint, particularly when considering paint costs or thinking about covering large areas with one single colour. Latex certainly will cost less to buy in large amounts, but the long-term costs can end up being higher, not just in terms of money spent.

Artist-quality paint includes acrylics and other paints found in art supply stores. It is formulated for brightness, purity of colour, longevity of surface integrity, and lightfastness. Artist-quality paint is the best choice for murals, chiefly because:

- Artist-quality paint is more durable. Artist-quality paint is formulated to last for generations, not just for a few years, as is the case with house paint. For a pigment to be considered for use in artists' materials, it has to be lightfast (the paint will neither fade nor darken), and the binder (which provides paint particles with cohesion and consistency) cannot be susceptible to cracking or peeling. Properly treated, a conserved mural in artist-quality paint — even one facing north in this northern climate — can last a quarter century or more.
- Artist-quality paint's colour range is superior. The brighter, richer palette is further enhanced by its mixability. By mixing a few basic colours the muralist can create hundreds of hues. Household latex, by contrast, is not so rich, owing to the fillers and opacifiers used in their manufacture to lower costs. Neither is it so versatile.
- Artist-quality paint can be used with additives or mediums to create effects and to extend the pigment without jeopardizing the integrity of the paint film.

In the past, some towns used house paints for their murals with the intention of bringing the original artists back every few years to 'touch them up', and making this 'correction session' a tourist attraction in itself. However, they found that this was neither viable nor economical after all. They discovered that the faded areas were more extensive than expected, and the cost and inconvenience of engaging the artist, removing the protective coatings, repainting as necessary, and then refinishing the art work, not to be viable. Furthermore, this process had to be repeated about every 5 to 8 years.

Oil vs Acrylic Paints?

Oil paint is a medium suited to **indoor** work, specifically work on panels of wood or canvas rather than directly on walls. Oil paint is slow-drying and may tend to pick up dust and dirt from its surroundings. In fact, drying and curing time for oils is 4 to 6 months, and many projects can't wait that long. It is a medium that requires specific practical knowledge about its use; the indoor muralist who chooses to use oil paint ought to have an extensive knowledge of its properties before making a commitment to it.

Oil paint is **not** recommended for outdoor artworks, because it continues to oxidize over time becoming harder, more brittle, and less flexible. Oil paint does not breathe, so moisture cannot be transmitted away from a painted wall should it become wet. The oil-painted surface requires more attentiveness and protection than is practical in an outdoor setting.

For durability and weather resistance, artist-quality acrylic paint is most often the **outdoor** muralist's medium of choice. (Acrylic is equally at home **indoors**, too.) Acrylic paints can be applied to outdoor surfaces, such as brick or cement, and, of course, to panels as well. Using Golden Artist Colors as our example, we can list several options for the muralist working with acrylics:

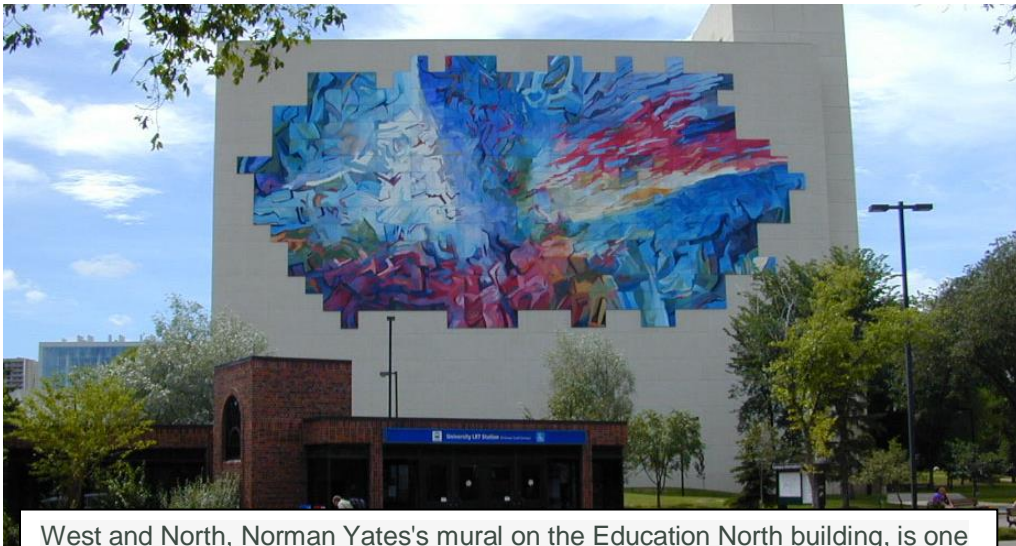


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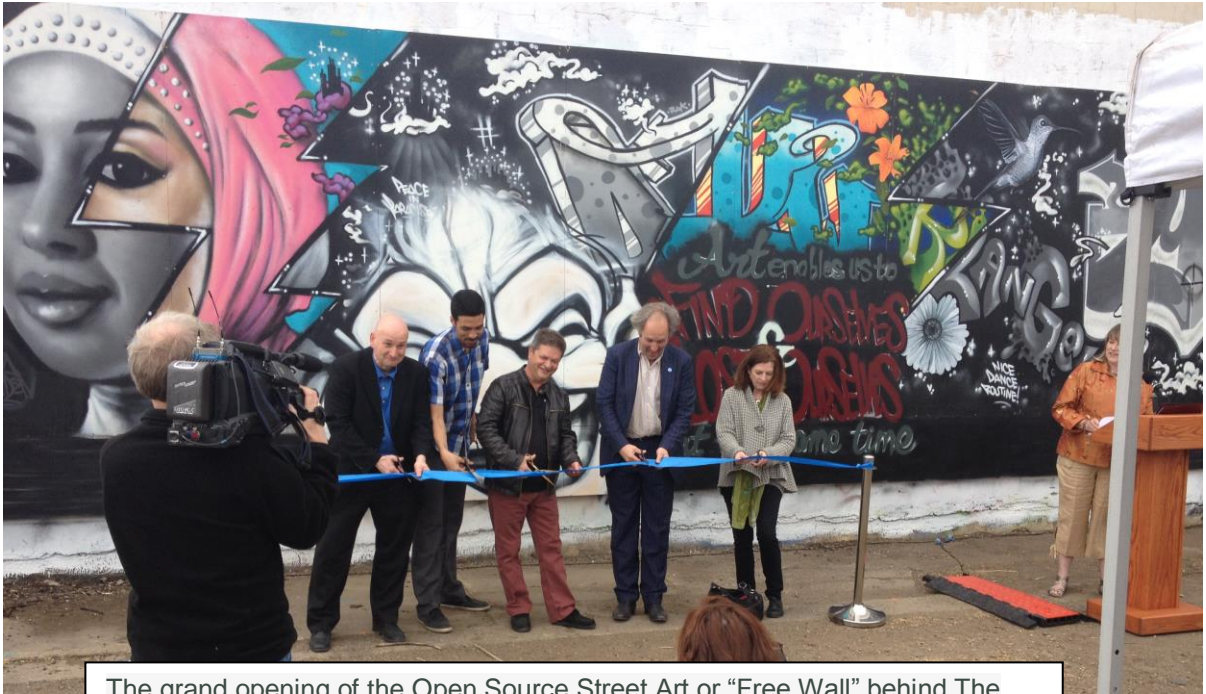
- **Heavy Body:** the relatively thick paint familiar to acrylic artists; available in tubes and jars. More than 100 tints are listed in Golden's Heavy Body Tint Chart, offering a huge range of colour choices. To extend Heavy Body paint, and thin its consistency for ease of brushing (especially useful if your support has a rough surface, like brick or cement) add GAC 200. GAC 200 is one of Golden's additives, designed to increase adhesion, paint film hardness and strength. Golden recommends it for use in outdoor murals.
- **Fluid:** Similar to heavy body paint in pigmentation, but available in fewer tints, Golden Fluid may be your choice if you are used to working with relatively liquid paint or, again, if your surface requires flowing paint for good coverage. "When mixed with Golden Airbrush Medium, the Fluid Acrylics perform very well for airbrushing, offering the artist still further choices in color selection" (Golden Artist Colors website).
- **Airbrush Colors:** Airbrushing is a good way to create thin, luminous but tough paint skins. Golden recommends its airbrush paints be used with Transparent Extender, an additive formulated to increase durability. Airbrush artwork has a distinctive, smooth surface, and the fine pattern of paint droplets allows for certain effects that are difficult to obtain otherwise. Airbrushing may be a logical choice, depending upon your themes and desired effects.

When it comes to colour choice, lightfastness is a consideration for both indoor and outdoor murals. Artists' pigments are generally rated by their manufacturers for lightfastness and permanency. Using colours with the best rating is advisable. Avoiding low-rated colours is recommended; cadmiums, e.g., should be avoided outdoors because, while relatively expensive, they will fade relatively quickly.



West and North, Norman Yates's mural on the Education North building, is one of the most recognizable landmarks on the University of Alberta campus

For the mural artist whose background is visual art, acrylics will probably be the easiest, most familiar and most pleasing paints to use. Although other paint choices are possible (some industrial-type paint form a permanent bond with brick or concrete, but the pigment must be mixed in onsite), they are not only time-consuming and expensive, but they also demand practical experience in their preparation and use. Commercial enamels will probably not be as satisfying as artist-quality acrylics, either.



The grand opening of the Open Source Street Art or “Free Wall” behind The Paint Spot 10032 81 Avenue Edmonton AB

Oil VS Acrylic Based aerosol paints

Urban art is another source of mural materials, both images and paints. Aerosol or spray paints, originally used in ‘outlaw’ graffiti, are available in oil and acrylic bases, in many colours, in art supply stores. The Paint Spot carries Montana Gold and Black lines, both of which come in myriad colours.

In the case of aerosol paint, both oil and acrylic based paint are used outdoors. Safe use includes masking your face against the paint spray, which includes pigment in fine dispersion and chemicals. Using either of them indoors, i.e., on an indoor mural or on panels being prepared indoors for mounting outdoors, would make safety measures mandatory: the spray is so fine that inhaling it is easy but very unhealthy. If you are considering making reference to urban art styles, aerosol paint is well worth considering. It does require practical knowledge, since the handheld can of spray paint is very responsive to hand movements. According to Wikipedia’s article on aerosol paint, “A wide array of actuators, or caps, is available, from standard ‘skinny’ caps to wider ‘fat’ caps, as well as caps that control the softness or crispness of the spray. Calligraphy caps create fan spray instead of the standard round.” Stenciling is also a means of creating aerosol images.

The mural artist who is engaged in exploring street art, urban art and graffiti, or who is working with youth, might consider the bold, vibrant, fluid imagery that can be created with aerosol. Aerosol paint can be applied to many surfaces, which makes it worth considering as an option when working directly on an existing outdoor surface. Current information about the longevity of either the oil or acrylic based aerosols is scarce. Certainly, there are many ways in which aerosol paint can be removed from walls (devised to combat graffiti), so varnishing the finished mural is highly recommended. (Varnishing and protecting murals will be discussed in Section 7.)



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3. What Else is Needed? — Artist Supplies

If you are using acrylic paint for your mural, you will need to get some additives. Within the Golden family of paint, GAC 200 is used with heavy body acrylic to improve flow and strengthen the paint film, while the Airbrush Medium is added to Fluid Acrylics to make them suitable for use with an airbrush.

According to Golden's website, "Airbrush Transparent Extender can be blended with Golden Opaque or Transparent Airbrush Colors in any ratio desired, allowing artists to precisely control of the transparency of the colors. These attributes are very important for techniques such as shading and smooth gradations. Airbrush Transparent Extender can also be used with any of the Golden Heavy Body [or] Fluid...Acrylics. When the mixture of paint and Airbrush Medium exceeds a ratio of 1:2 or more, the Extender can be added to further thin and extend. This will keep the retarder level balanced for a quicker drying film, without sacrificing sprayability."

It is likely, then, that you will be able to make good use of the above variety of Golden additives and mediums, whether you are using Heavy Body, Fluid or Airbrush Golden paint.

Mural Notes refers to Golden products most often for several reasons, one of which is the tradition Golden has built of participating in mural painting, and another is the extensive information Golden makes available to the mural artist about almost every aspect of mural painting. Further information about Golden products is available from the Golden website, www.goldenpaints.com.

Besides paint, the mural artist may need sketchbooks, drawing and painting tools, even a projector or an airbrush kit, in the course of planning and creating a mural. Think: Large brushes! Following its completion, suitable protective coatings, i.e., isolation coats and varnishes, will also be required (see Section 7).

Brushes: Think big!

Use big synthetic brushes for all your mural needs, indoor or outdoor.

They last longer than natural hair brushes (not used for acrylic paint). They are also easier to clean, and give better, crisper edges to your lines.

4. Anything Else? — Hardware Supplies

Supposing you have chosen to use plywood panels for your mural. You will need to purchase your wood, primer, edge sealer, and application brushes and rollers from a hardware or lumber store. The preferred plywood is MDO, or medium density overlay, one brand of which is Crezon® (further information on this brand is available at www.greatnorthernlumber.com.) MDO's strength is in its construction, its finish, and its durability.

A smooth surface with good tooth for holding the paint can be achieved by priming clean, dry MDO with a primer designed to be painted over with waterborne paint if you are creating a mural, indoor or outdoor, using acrylics. You can prime with gesso, as you would for a painting on panel or canvas, if yours is an indoor mural; gesso is available at art supply stores, rather than hardware stores.

The prime coat is the most important coat. ...The surface should be clean and dry before painting. No other surface preparation is needed. Do not apply too thin a prime coat. The primer should be applied to yield about 1 mil dry film thickness. Apply within the spreading range recommended by the manufacturer to obtain proper thickness. — www.greatnorthernlumber.com



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You should also seal the edges of each panel with two coats of edge sealer to prevent water seeping into the wood. The importance of priming and preparing any surface before painting cannot be emphasized too much; in the case of panels priming is not a difficult task. Your paint will perform properly only on a well-prepared surface, and sealing all edges is a practical preventive measure.

If you are painting on surfaces other than new, clean panels, you will need to get supplies for cleaning and preparing them. Cleaning, destroying mould and mildew, filling cracks and grooves – if needed – require various approaches, depending on the surfaces themselves. The next section summarizes procedures you may need to undertake to prepare your surface. Again, if you are painting new, clean MDO panels, priming the surface and sealing the edges is all you need to do before you begin to paint.

5. Surface Preparation

Cleaning and creating a good ground

If you are not working on prepared MDO panels, you will have to ensure that the surface on which you are working is both perfectly clean and absolutely dry. Don't under-prepare your surface, as problems with proper bonding between your paint and the old surface may reappear later: mould may return, sticky grime may emerge through your paint, peeling may recur. If you power wash your surface, allow it to dry for about a week before proceeding to prime. What follows is a brief summary of some means to prep your surface before priming. More specific and detailed information is available through a Web search of particular surfaces and problems.

Indoor painted wood – test to see if the paint is oil or acrylic based by scrubbing a small patch using cloth wetted with isopropyl alcohol; oil colour will not be picked up, but acrylic will. Wash with soapy water, rinse thoroughly. When completely dry, wood can be primed with good latex primer or gesso, as for panels. Enamel (alkyd) paint should be abraded with sandpaper to give the surface sufficient tooth prior to priming.

The artist must be concerned with the nature of the surface to be painted. If the surface is already painted, then consider what kind of paint it is and its physical condition (the artist should realize that any surface that still has the previous coating on it will not be as permanent as one that has been completely stripped and freshly coated). If the paint is a water-based polymer, chances are good that the GOLDEN paints will adhere sufficiently. If it is a high gloss oil paint (or of unknown materials), then it must be abraded (or removed) for good adhesion. If the existing paint film is deteriorating, then it is best to have it removed (sandblasted, power-washed, scraped, etc.). It is critical to wash any painted surface, even a newly painted surface, with soap and water prior to application of acrylic products. A major coatings manufacturer states that as much as 80% of all coatings failure can be directly related to insufficient surface preparation. Golden Artist Colors website

Outdoor unpainted wood – clean, dry unpainted wood should be primed as soon as possible, with temperatures ideally between 18° and 24°C, not lower than 10°C, but not if it is rainy or foggy. Knots should be sanded and spot-primed; cracks or splits should be caulked with acrylic caulk, then spot-primed. Follow with wood primer or gesso.

Painted wood – remove loose, peeling paint; sand rough patches smooth. Commercial cleaners or detergent solutions can be used to clean away deposits of dirt, grease, oil, etc. Power washing is another option. Remove mould and mildew with bleach or appropriate commercial cleaner. Take precautions: wear rubber gloves, protect eyes, avoid getting on skin. **Never mix bleach with any substance with ammonia content!** Glossy surfaces may be abraded with sandpaper, household abrasive cleaner or liquid de-glosser; clean well with soapy water. Always rinse thoroughly and allow surface to dry completely before continuing.

Bare masonry – clean, mature masonry should be treated with masonry conditioner; porosity reduced will block filler before priming with latex primer.

Painted masonry – take off loose material, power wash; check that surface is clean of grease, oil, and waxy, resistant substances; scrape away old coatings, then abrade by sanding or sand-blasting for good adhesion. Special primers from industrial paint suppliers may make sandblasting unnecessary yet provide a good bondable surface.

Metal surfaces – all metal surfaces also need to be completely clean and roughed lightly for paint adhesion. Each metal requires specific treatment. If you are painting on metal, check the Web for information pertaining to prepping the specific metal, e.g. aluminum, steel, etc.

Brick – brick, especially old brick, tends to be absorbent. Masonry conditioner can be used with brick surfaces. Golden's GAC 100, mixed with water at a 2:1 or 1:1 ratio, will seal the surface.

If there are doubts about how to prepare any surfaces or about what sort of materials to use on them, consult with experts before you begin. They will have current information about products and suggestions on how to use them. They will understand the kinds of problems you may encounter with the kinds of surfaces you are covering.

6. Environment

Even indoors, temperature and humidity should be considered during paint application. Work in a space that is temperate and dry and your work will thrive, and you will be comfortable, too. Oil paint, if you are using it for an indoor mural, is easier to apply at moderate temperatures, and it dries best in a space with warmth, sunlight and fresh air.

Avoid painting outdoors when the weather is wet; relative humidity hinders drying; try to avoid working in relative humidity over 70%. Paint films cannot dry well if the weather is cold; again, avoid working in temperatures lower than 10°C. Temperatures higher than 24°C will also affect paint: drying times will be sped up. Climatic extremes during application can result in less stable paint films.

The Golden website advises: "Avoid painting in adverse weather conditions, such as rain and fog. This addition of moisture can affect the drying times and will re-introduce water back into recently dried paint films. It is especially important to allow proper drying/curing time between the isolation coat and the varnish layer. Trapped moisture can severely hinder adhesion, and can cause clouding of a clear layer. It should also be noted that sufficient drying time should be allowed between washing the surface and the initial primer or conditioner coats. Architectural coating manufacturers recommend waiting 30 days after washing concrete and cinder-block surfaces under normal drying conditions."



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7. Surface Protection

Once you have completed your mural you will want to ensure its safety and longevity by protecting its surface. Do not leave your paint surface exposed to weather, the sun's rays, pollutants, or graffiti. Provide your mural with a protective, resistant coating.

First, apply an isolation coat. This layer will isolate the paint from the overlying varnish, so that when the varnish is removed, the paint will remain unaffected. "An isolation coat also develops a thicker layer of acrylic, which will give better protection and durability and serves to unify the acrylic paint layer" (Golden website). Golden recommends a 2:1 mixture of GAC 500 with Transparent Airbrush Extender if you are spraying on your isolation coat. If you are using a brush, it recommends a 2:1 mixture of Soft Gel Gloss to water.

Allow the isolation coat to dry for 2 to 5 days, and then apply varnish. You have a couple of choices to consider:

- A. Apply an artist quality varnish, such as Golden Mineral Spirit Acrylic (MSA) varnish, which has UV (ultraviolet light) protection, to keep colors fresh. MSA varnish "provides a tough, durable surface that increases resistance to moisture and pollutants. ...[It] is removable in mineral spirits, turpentine and various aromatic solvents, which is a useful property for either graffiti removal or maintenance purposes. Spray application is recommended (1-3 coats)" (Golden website). **OR**
- B. Apply a solvent-based polyurethane coating. These form tough, durable protective layers over acrylic paint. They are not artist supplies, however, and you will want to research them further by getting detailed information from the manufacturers and researching online for any artists' reactions to them.

The varnish can be removed and renewed as needed over time.

NB: Application of a varnish such as Golden MSA varnish or commercial polyurethane will seal the mural's surface. If the mural is on a masonry wall, breathing space ought to be left at the edge, so that no harmful gas or moisture is trapped behind the paint film.

8. Maintenance

Your mural should be inspected for integrity once or twice each year, especially in spring. If any visible failure of the varnish becomes noticeable, such as cracking or flaking, remove the loose flakes, then apply a fresh coat of varnish. If the mural is painted onto panels, then pay particular attention to their edges, looking for loose varnish or cracking paint. If the cracks are minor, a new application of varnish will consolidate the protective film without the need to remove existing varnish. If the mural needs cleaning to remove accumulated dust, simply wash by hand with a mild, gentle soap (no ammonia), warm water and a sponge. Don't use a pressure washer; avoid mineral solvents.

In the event of graffiti, cleaning can be done, but is best done by or in consultation with an experienced person, such as a conservator. Care for the paint surface is paramount. The Canadian Conservation Institute has a very thorough, downloadable form for tracking reporting on the condition of outdoor murals in Canada.

The artist is wise to create an agreement with the commissioners of the mural about how it will be maintained. A dated document that includes all the materials employed in the mural should be kept on file by both the artist and the commissioners.



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9. Working Out the Costs

We hope The Paint Spot's **Mural Notes** provide useful information when you come to setting a mural's budget. Pricing out the paint cost for a mural is tricky because it depends on your painting style. A thick impasto style will use more paint than a thin wash style. Painting on location will require more paint, owing to paint loss/waste through its drying on palette. Group projects can use more paint than expected. Many artists have offered opinions about paint usage. Their experience suggests that budgeting for grounds, colours, mediums, isolation coats, and varnishes should be set at about \$2 to \$3 per square foot. Brushes, rollers, drop cloths, and scaffolding, should you need them, are extra to this sum.

One experienced and frugal painter created a 14x112 foot mural using Stevenson acrylics for only \$650 net. The math works out to \$0.42 per square foot. Normally, she budgets about \$300 to \$400 for paint only to create a 10x20 foot mural (approximately \$1.75 per square foot).

Tim Heimdal's 1995 mural in Old Strathcona worked out to be \$2.41 per square foot (15x10 foot for a total of \$2170), including grounds, acrylic paint, isolation coat, and varnish.

Average paint coverage is the same for gesso, paint, isolation coats and varnish. Consider about 100 square feet per liter. Most paint companies suggest a gallon covers about 300 square feet.

Remember larger murals mean more paint, and more paint means better discounts. Ask about our discount policy!



The "Free Wall" behind The Paint Spot 10032 81 Avenue Edmonton AB provides a large wall for urban artists to practice and document works for their portfolios. You can see work in progress nearly any sunny day year long.