

DGL-03

DESIGN GUIDELINE

GRAFFITI MANAGEMENT

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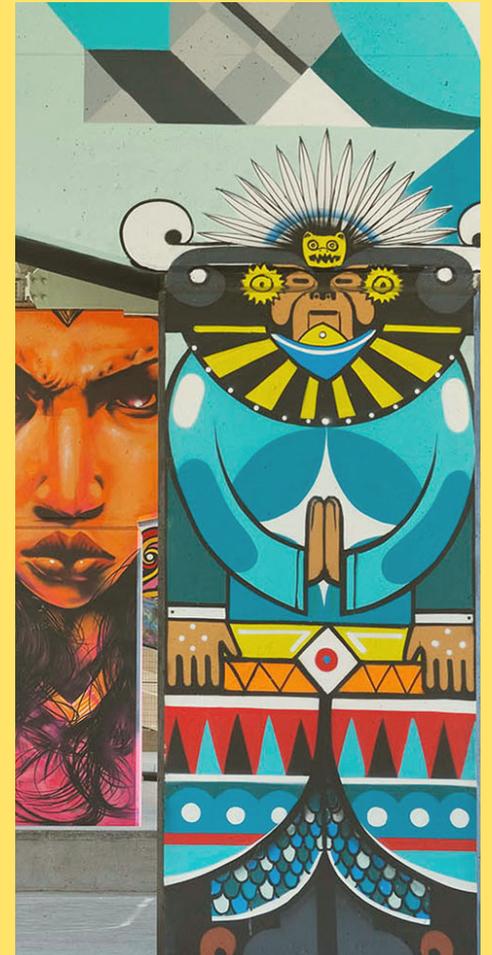


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1 INTRODUCTION

1.1 GUIDELINE OBJECTIVES

This guideline is focused on the architecture, landscape and urban design strategies that can be used to address the community impacts arising out of the expansion of transit infrastructure and services. This document is intended to serve as a reference for Metrolinx teams and their consultants in support of the community engagement, design, and project implementation processes.

1.1.1 Standardized Approach to Community Impacts

Metrolinx continues to strive to deliver a unified approach to addressing community concerns related to project impacts. The objective is to bring greater consistency to community consultation and decision making. A clearly defined framework allows Metrolinx to be proactive in addressing community impacts and formalizes the mitigation options to bring a consistent approach to community consultation and decision-making.

1.2 BENEFITS

Graffiti is a problem that if left unchecked can seriously damage the reputation of a community and adversely effect the economy and quality of life enjoyed by the residents. The benefits of graffiti management program include:

Our Values - The reduction and/or removal of graffiti in our assets enhances a customer’s sense of safety and security (actual and perceived), promoting a better customer experience across the transit network that is conducive to Crime Prevention Through Environmental Design (CPTED) principles and the Metrolinx brand.

Minimize Crime - Graffiti deterrence and removal stops the spread of vandalism and other forms of crime at, or around our stations to promote safer facilities, public realm, and neighbourhoods.

Minimizing Long-term Maintenance Costs - Graffiti deterrence strategies and the prompt removal of graffiti can prevent increased removal costs.

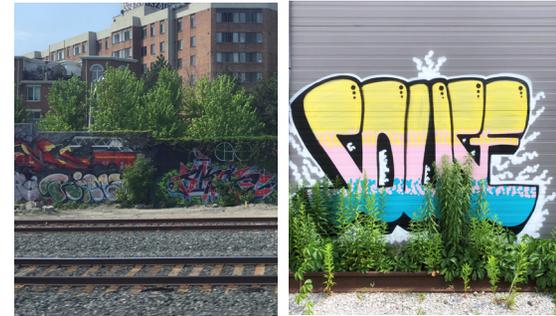


Figure 1: Image showing examples of the type of graffiti that proliferates along rail corridors



Figure 2: Transparent panels that are 3m or more above the base of a noise barrier rarely get tagged



Figure 3: Full height transparent panels are vulnerable to graffiti

2 GRAFFITI DETERRENCE

2.1 GRAFFITI MANAGEMENT

Determining the optimal graffiti management strategy is a number of factors including:

- the materials impacted
- the nature of the graffiti or tagging.
- adjacent context including land use (institutional, commercial, residential, recreational, industrial)

2.1.1 Deterrence Strategies

1. Apply graffiti resistant coatings or protectants on vulnerable surfaces
 - Pigmented coatings that can be over-painted
 - Clear anti-graffiti coatings with silicone-based "slip additives" (this stops paint from adhering to surfaces)
2. Landscaping and vegetation adjacent to vulnerable surfaces
 - Vines, plants, and shrubs (natural or artificial) are a proven graffiti deterrence strategy
3. Restrict access to walls or vulnerable areas
 - Graffiti writers will not waste their time or materials and are unlikely to return to locations that are difficult to access.
4. Increase lighting
 - Increasing lighting in vulnerable areas to discourage vandals

5. Murals

- Murals have a successful track record in reducing graffiti vandalism and replacing it with vibrant, colourful, community-engaged street art

6. Timely removal of graffiti

- Timely removal is an ongoing challenge for municipalities and transit agencies
- Timely graffiti removal or over-painting helps reduce the spread and re-occurrence of graffiti

2.1.2 Application of Anti-graffiti Coatings

Ensure anti-graffiti coatings:

- are applied to concrete columns, concrete abutments, retaining walls, noise barriers, and all surfaces requiring graffiti resistance as required for the Works;
- are non-peeling, non-yellowing and resistant to alkali attack;
- has an application that is uniform in coverage and appearance and is free of laps, voids, entrapped dust, dirt, blisters, peeling, blemishes, misses, drips, runs, or other marks or irregularities; and
- is applied to a minimum height of 2.7m above the ground and to any soffits less than 3.8m from the ground.

Note: when applying anti-graffiti coatings to panelized structures, the extent of coverage shall align to panel joints.

Illustrations: Graffiti Deterrence Strategies

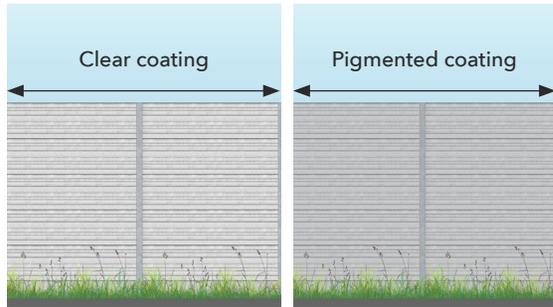


Figure 1: Graffiti resistant coatings (note: coatings result in minor visual impacts)



Figure 2: Murals have a successful track record in reducing graffiti vandalism



Figure 3: Vines and plantings to deter access or limit exposed surfaces

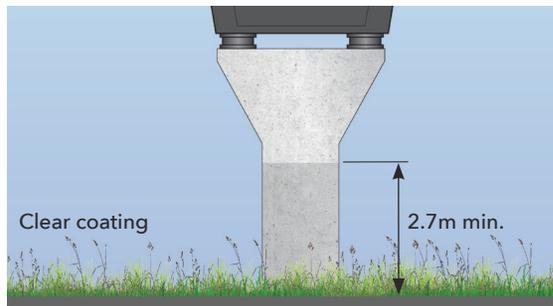


Figure 4: Clear anti-graffiti coating applied to a pier up 2.7m above grade (minimum)

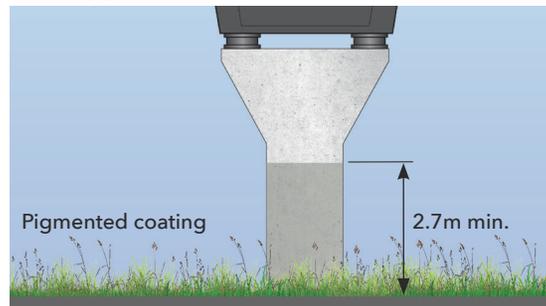


Figure 5: Pigmented anti-graffiti coating applied to a pier up 2.7m above grade (minimum)

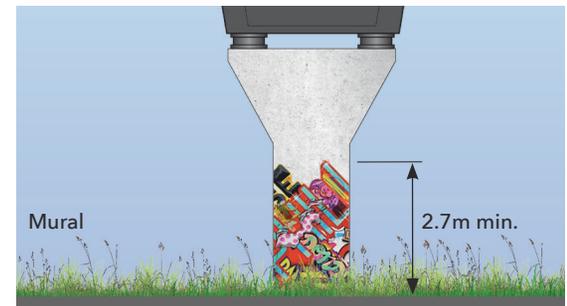


Figure 6: Piers and columns can be painted with murals to deter graffiti



Figure 7: Restrict access to walls, columns, and other vulnerable surfaces



Figure 8: Lighting and clear sightlines



Figure 9: an example of lighting design and murals used in combination to deter graffiti and tagging

3 MITIGATION STRATEGIES

3.1 GRAFFITI COVERING AND REMOVAL

1. Colour-matched over-painting:
 - this technique should only be used on surfaces that have that been treated with a paint finish or a pigmented coating that does not have any slip additives
 - the application of multiple coats of pigmented coatings may diminish the performance of absorptive panels
 - the key benefit of this process is that it is less labour intensive than the other options
2. Chemical removal process:
 - a three-step graffiti removal process
 - chemical treatment, agitation of chemicals on the impacted surface with a brush followed by a power wash
 - most effective if graffiti is removed within 5-7 days
 - the disadvantages of this process are that it is labour intensive and requires that water is transported to the site
3. One step chemical treatment
 - this process is only suitable to remove graffiti from transparent panels

3.2 MURALS

Murals have proven to be effective at deterring graffiti and tagging; however, commissioning public art, including murals, lies outside of the Metrolinx mandate. Notwithstanding this limitation, under certain conditions murals may be applied on Metrolinx infrastructure.

Murals will be considered in the following instances:

- locations where an existing mural has been impacted by the construction of a Metrolinx project
- a third party scope request to use Metrolinx infrastructure as a canvas for a mural (these art projects are typically funded, curated, and maintained by the requesting party)
 - Note: the term *third party* refers to municipalities, Business Improvement Areas (BIA), non-governmental organizations (NGO), and interested community groups
- a community benefits program which Metrolinx has agreed to be a participant

StreetARToronto: the City of Toronto mural program

StreetARToronto (StART) is a suite of innovative programs designed specifically for streets and public spaces. Initiated in 2012 as an integral part of the City's Graffiti Management Plan, StART has been successful in reducing graffiti vandalism and replacing it with vibrant, colourful, community-engaged street art.

3.3 GRAFFITI MANAGEMENT PROTOCOLS

Pigmented Coatings (Metrolinx standard practice)

- Pigmented coatings are the standard method of managing graffiti on Metrolinx infrastructure
- This process of colour-matched over-painting is widely used by municipalities as a timely and effective method of graffiti management

Clear Anti-graffiti Coatings

- The silicone-based clear coatings (that stops paint from adhering to surfaces) are also used to deter graffiti on Metrolinx infrastructure
- This process is more labour intensive, requires access to a source of water, and is not always effective at removing traces of graffiti
- Clear coatings are applied to locations where no future murals are planned and when a pigmented coating is not deemed appropriate

Murals

- Metrolinx will coordinate the installation of mural projects commissioned by municipalities or other interested parties
- When a mural is to be installed immediately following construction Metrolinx will leave the surfaces free of anti-graffiti coatings
- If a mural is planned for a future date then the wall would be protected with a pigmented coating which will allow a future mural to adhere to the surface

4 ANTI-GRAFFITI COATINGS

4.1 COATING TYPES

Anti-graffiti coatings are designed to reduce damage to surfaces that may result from graffiti and/or tagging. These treatments are defined as protective coatings. There are two main categories of protective coatings:

1. Sacrificial
2. Non-Sacrificial Coatings

4.1.1 Sacrificial Coatings

A sacrificial coating is a removable, protective film that acts as a barrier to the paint used in graffiti. It is often referred to as a “catcher-coat” because it basically catches the applied paint, preventing it from seeping into the pores of the surface onto which it has been applied.

To remove graffiti from a wall with a sacrificial coating a pressure washer, and possibly a removal product designed for the protective coating, are used. It must be noted that sacrificial coatings are removed with the graffiti, thus the graffiti is removed quite easily. However, after each graffiti removal the surface needs to be cleaned again, prepared again, and then the sacrificial coating must be applied again. This process must be repeated each time that graffiti is removed.

4.1.2 Non-sacrificial Coatings

Non-sacrificial coatings differ from sacrificial coatings in that they are non-removable, and essentially are chemical resistant paints. They provide a surface on which solvents or paint removal products can be used to remove paint applied as graffiti without affecting the non-sacrificial coating or the surface it is applied to protect. Many of these coatings also offer protection against weathering and other forces/actions which can degrade or damage a surface.

Slip Additives

Many of these non-sacrificial coatings also contain “slip additives” such as silicon, which creates a surface on which paint will not adhere properly causing it to drip/crawl down the surface. This creates a surface on which graffiti cannot be applied effectively without ruining the intended design. This feature strongly discourages graffiti artists from applying graffiti to the same wall twice, as it is simply a waste of their time.

Slip Additives should not be specified for locations where graffiti will be mitigated by colour matched over-painting.

4.1.3 Pigmented or Clear Coatings

Each of the two types of coating are available in clear or pigmented form as well as a range of gloss levels to suit the original finish of the surface. Clear coatings are best suited to originally bare surfaces when compared to pigmented coatings which are best suited to originally painted/coloured surfaces. Pigmented coatings can also serve a dual purpose by covering graffiti remnants when applied to a surface.

4.2 COATING SPECIFICATIONS

The specification of anti-graffiti coating system should consider the planned graffiti management strategies.

For example, a two-step anti-graffiti coating system that involves a topcoat with slip-additives would entail a graffiti removal process involving chemical and/or power washing.

If the graffiti management protocol is based on colour-matched over-painting, do not apply a topcoat with slip additives because it will stop paint from adhering to the surfaces to cover the graffiti.

4.2.1 Benefits and Disbenefits

Sacrificial Anti-graffiti Coatings

Successful graffiti management helps build a sense of community among inhabitants so they can gain territorial control of areas and take pride in their surroundings.

From the perspective of asset protection, anti-graffiti coatings are designed to reduce damage to surfaces that may result from graffiti and/or tagging.

Non-Sacrificial Anti-graffiti Coatings

Non-Sacrificial Coatings carry a significantly higher capital cost than Sacrificial Coatings; however, they result in reduction of maintenance costs over time. Many non-sacrificial coatings have five to ten, and even 20-year warranties and thus do not need to be re-applied after each graffiti removal/cleaning. Non-sacrificial coatings are more beneficial to a property owner. The benefit of non-sacrificial coatings is derived from the fact that, unlike sacrificial coatings, they do not have to be re-applied to the surface after each graffiti removal process.