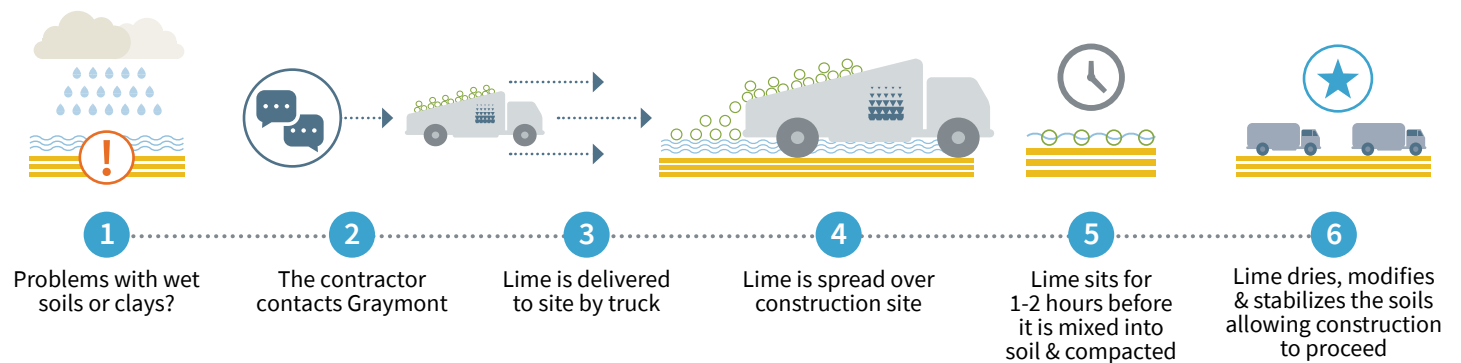


# Lime Treated Soils Save Time & Money



**Why Wait, Use Lime.** Extend your construction season, eliminate costly and carbon intensive cut and fill operations, modify soil texture, avoid issues related to expansive soils and permanently stabilize weak soils using lime — an economical and effective solution to dry, repurpose and strengthen soils in construction sites



## Soil-Lime Treatment: Types of Applications

Lime can be effectively used for 3 soil improvement applications:

- Soil Drying
- Soil Modification
- Soil Stabilization

Typical dosing ranges from 1% to 6% quicklime (CaO) by mass of dry soil depending on application type.

## Lime for Soil Drying

Lime can dry up most soil types due to the heat released during hydration of quicklime to achieve optimal working moisture. Typical lime application rate for soil drying ranges from 1% to 3%.



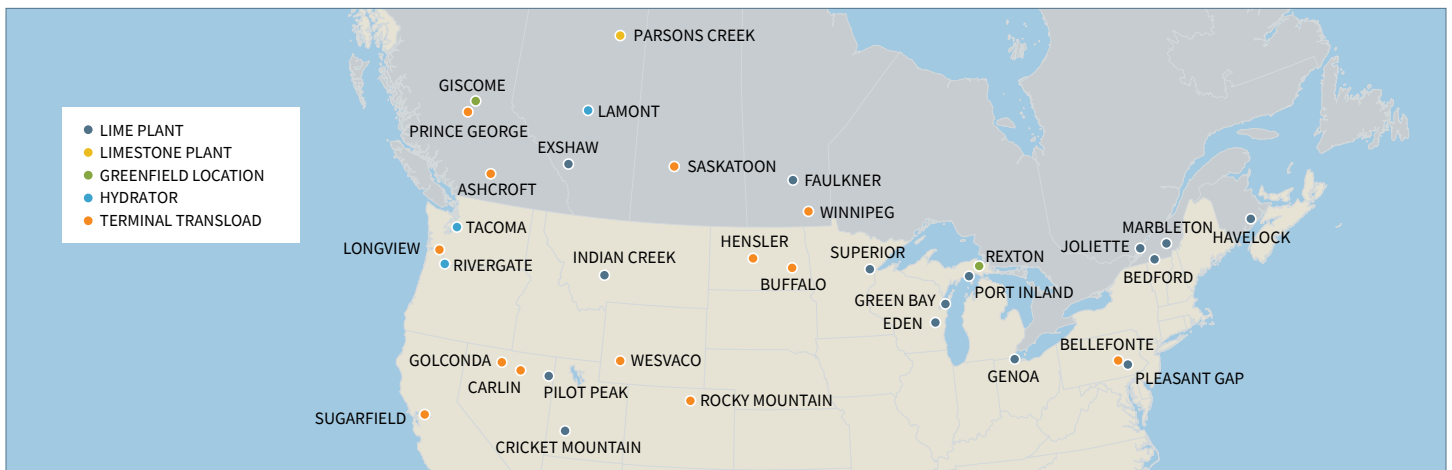
### Key Benefits:

- Speeds up construction and extends the construction season
- Creates a stable, all weather working platform that supports heavy machinery
- Saves time and money by repurposing on-site or salvaged soils

Graymont has experts to help you find the right soil-lime solution for your project. Our services include:

- Guidance on site specific soil testing to achieve desired results
- Recommendations regarding choice of lime product and application rates
- Delivered supply chain solutions from plant to site
- Field application techniques including spreading information and coordination
- Information about safe handling of lime products

# Product Supply Points



## Soil Modification & Stabilization

Lime modifies the texture of fine-grained soils and permanently stabilizes silty and clayey soils through pozzolanic reactions. Typical lime application rate for soil modification and stabilization ranges from 2% to 6%. For certain soils composed of both sands and clays, pre-treatment with lime to modify the clays may be necessary before treatment with cement.

### Key Benefits:

- Reduces soil plasticity
- Improves compactability
- Eliminates soil expansion
- Permanently increases strength
- Prevents cracks and provides freeze-thaw resistance
- Saves money by reducing thickness of overlying pavement layers
- Maximizes use of low cost, on-site materials



Wet & highly plastic native soil



Modified soil after lime treatment

## Application Technique

The goal is to effectively mix lime with the soils to induce drying and chemical reactions.

Application of lime in the field involves 5 main steps after site clean-up and grading:

1. Spreading lime either uniformly across the width or in windrows
2. Initial mixing to required depth (typically 6 to 12 in.) and watering
3. Mellowing of soils for 24 to 72 hrs. to breakdown soils and induce chemical reactions with lime
4. Final mixing and compaction to achieve desired dry density
5. Final curing using water or approved emulsion

**Note:** Watering during initial mixing, mellowing and final curing steps are not applicable for soil drying applications.

## Lime Products for Soil Treatment

- High calcium quicklime (CaO) is most widely used for soil improvement applications
- Depending on site specific requirements dolomitic quicklime or hydrated lime can also be used
- Graymont lime products are available at multiple plants and terminals across the US and Canada

Proper safety protocols must be followed during the handling of lime products. Graymont is here to guide and provide you with education and safety data sheets and other resources to help ensure safe lime application at your job site.



### CORPORATE OFFICE - NORTH AMERICA

200-10991 Shellbridge Way  
 Richmond, BC, Canada V6X 3C6  
**PHONE** 1.604.207.4292 or 1.604.276.9331  
**FAX** 1.604.207.9014 or 1.604.276.9337

[graymont.com/en](http://graymont.com/en)

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### NORTH AMERICA - EASTERN REGION

206-25, De Lauzon Street | Boucherville, QC, Canada, J4B 1E7  
 1.450.449.2262 | [easternregionsales@graymont.com](mailto:easternregionsales@graymont.com)

### NORTH AMERICA - CENTRAL REGION

200-215 North Main Street | P.O. Box 57, West Bend, WI, United States, 53095  
 1.800.433.0036 | [centralregionsales@graymont.com](mailto:centralregionsales@graymont.com)

### NORTH AMERICA - WESTERN REGION

585 W Southridge Way | Sandy, UT, United States, 84070  
 1.801.262.3942 | [westernregionsales@graymont.com](mailto:westernregionsales@graymont.com)