

## Environmental Protection Table of Content

Environmental Protection Table of Content.....	1
13 - Environmental Protection Policy .....	2
1. Our Commitment .....	2
2. Our Procedures and Practices:.....	2
13.1 - Environmental Construction Operations Plan .....	3
1 - Project Setting & Site Activities .....	3
1.1 PROJECT DESCRIPTION.....	3
1.2 ENVIRONMENTAL SENSITIVITIES .....	3
1.3 SITE ACTIVITIES.....	3
13.2 - Project Schedule and Site Drawing.....	5
2.1 Project Schedule .....	5
2.2 Site Drawings.....	5
13.3 - Potential Environmental Impacts and Controls.....	5
3.1 Potential Environmental Issues and Impacts.....	5
3.2 Permits and Authorizations .....	5
3.3 Mitigations Strategies .....	5
3.4 Erosion & Sediment Control.....	6
13.4 - Hazardous Materials & Waste Management .....	6
13.5 - ECO PLAN IMPLEMENTATION.....	7
5.1 Training and Communication.....	7
5.2 Monitoring and Reporting .....	7
5.3 Documentation .....	7
5.4 ECO Plan Update .....	8
13.6 - EMERGENCY RESPONSE PROCEDURES .....	9
Emergency Response Procedure .....	9
Emergency Numbers.....	9

## **13 - Environmental Protection Policy**

### **1. Our Commitment**

Canadian Road Builders Inc. recognizes environmental protection as one of our guiding principles and a key component of sound business performance. We are committed to providing quality products and services in a manner that ensures a safe and healthy workplace for our employees and minimizes our potential impact on the environment. We will operate in compliance with all relevant federal, provincial and municipal legislation and we will strive to use pollution prevention and environmental best practices in all we do.

### **2. Our Procedures and Practices:**

Canadian Road Builders Inc. will:

- Integrate the consideration of environmental concerns and impacts into our decision making activities;
- Promote environmental awareness among our employees and encourage them to work in an environmentally responsible manner;
- Train, educate and inform our employees about environmental issues that may affect their work;
- Reduce waste through re-use and recycling and by purchasing recycled, recyclable or re-furnished products and materials where these alternatives are available, economical and suitable;
- Promote efficient use of materials and resources throughout our facility and job sites including water, electricity, raw materials and other resources, particularly those that are non-renewable;
- Avoid unnecessary use of hazardous materials and products, seek substitutions when feasible, and take all reasonable steps to protect human health and the environment when such materials must be used, stored and disposed of;
- Maintain appropriate emergency and spill response programs;
- Regularly communicate our environmental program to our employees, clients and suppliers and encourage them to support it;
- Strive to continually improve our environmental performance by periodically reviewing our environmental policy in light of our current and planned future activities.

## **13.1 - Environmental Construction Operations Plan**

### **1 - Project Setting & Site Activities**

#### 1.1 PROJECT DESCRIPTION

The Work to be completed under this ECO plan may consist of the following;

- Cold Milling Asphalt Pavement
- Chip Sealing
- FiberMat
- Coletanche
- Micro Seal
- Cold plastic road markings
- Thermo plastic road markings
- Highway paint markings
- Line removal

#### 1.2 ENVIRONMENTAL SENSITIVITIES

Environmental sensitivities vary from job site to job site and will be recognized and noted in the FLRA for all sites.

#### 1.3 SITE ACTIVITIES

The Work Activities for these projects are as follows;

##### a) Cold Milling Asphalt Pavement

Cold milling asphalt pavement is the process of removing existing pavement from the roadway to the lines and dimensions shown on the plans or as directed by the Consultant.

##### b) Chip Sealing

- Chip Sealing combines a layer of asphalt with a layer of fine aggregate.
- The surface is then smooth rolled.
- Loose aggregate is then swept off the road surface.

##### c) FiberMat

The FiberMat system is installed by a specially developed machine that in a continuous application uniformly applies fibreglass strands, sandwiching them between two layers of emulsion prior to the application of an aggregate cover.

## d) Coletanche

- A bituminous geo-membrane used to protect soil and water from contamination
- The product is laid down manually or with a hydraulically operated beam
- It is then “welded” together using a gas burner or hot air.

## c) Micro Surfacing

- A mix of fine sand and oil used to cover, protect and prolong road surfaces.
- Applied by specialized trucks.

## e) Cold plastic road markings

- A mixture of “A” and “B” component cold plastics are used to adhere to the road surface.
- Material is applied by a powered applicator and a manually pushed applicator that uses application shoes as well as the use of hand forms.
- The material is finished off by adding addition highway safety spheres (glass beads) to it for maximum reflectivity.

## f) Thermo plastic line markings

- A heated thermo plastic is used and as it cools, it adheres to a milled area of the road surface and can also be surface applied.
- The thermo plastic can be applied by a motorized unit, a thermoliner (push buggy) with an application shoe as well as the use of hand forms.
- The material is finished off by adding addition highway safety spheres (glass beads) to it for maximum reflectivity.

## g) Highway paint markings

- Paint is applied to the road surface by way of a paint truck or a line laser (portable sprayer).
- The material is finished off by adding highway safety spheres (glass beads) to it for maximum reflectivity.

## h) Line removal

- A milling machine or a H-92 line remover is used to remove road markings from the road surface.
- All materials are removed from the site when the job is completed.

## 13.2 - Project Schedule and Site Drawing

### 2.1 Project Schedule

Project schedules vary depending on the amount and type of work planned for each site. Weather also plays a role in determining the length of a project.

### 2.2 Site Drawings

Site drawings will be made available on each site by the designated foreman. A copy of the FLRA, Containing all environmental sensitive areas will also be made available.

## 13.3 - Potential Environmental Impacts and Controls

### 3.1 Potential Environmental Issues and Impacts

Potential risk of an oil or fuel spill while working in close proximity to storm drains, creeks or rivers.

### 3.2 Permits and Authorizations

Work will be limited to the existing asphalt structure. There is no need for Department of Fishery and Oceans permits.

### 3.3 Mitigations Strategies

#### *ACTIVITY*

Refuelling and Servicing of equipment

#### **Potential Environmental Impact(s)**

Hydrocarbon Spills

#### **Environmental Mitigation Measure**

Ensure spill kits are readily available on site and workers are trained in their use.

No fuelling of equipment is to take place within 100 meters from water bodies.

Prior to bringing equipment onto site, the operator must conduct an inspection of the equipment. The inspection will cover the following items:

- Equipment is clean (free of mud, dirt and oil)

- Equipment is in good working order

**3.4 Erosion & Sediment Control**

All work is to occur on the surface of the road. No disturbance of the side slope is expected. Under no circumstances shall material be swept into any water bodies.

**13.4 - Hazardous Materials & Waste Management**

Material to be Handled	Estimated Quantity	Handling Procedure	Disposal
<b>Non-hazardous</b>			
Asphalt Millings	Varies	Place material in 1-ton bags and transport off-site.	Material to be taken to designated maintenance yard
Emulsion used in the following processes: CIR Fibermat Chipseal	Varies	Stored in containment vessel or transport vehicle.	Excess emulsion used on other projects or returned to manufacturer. Storage tanks cleaned by licensed operator
Coletanche	Varies	Stored on-site.	Excess material used on other projects or disposed of into landfill
Fiberglass strands	Varies	Stored on-site.	Excess material used on other projects
<b>Hazardous</b>			
Fuel	Varies	Stored in Jerry cans on service vehicles. Service vehicles to be stored off-site during non-work hours.	Excess fuel to be used in other vehicles.
Propane Gas	Varies	Stored in cube vans while on-site.	Excess Propane used on other projects

## 13.5 - ECO PLAN IMPLEMENTATION

### 5.1 Training and Communication

Canadian Road Builders Inc. is aware that all personnel have the potential to create a significant impact on the environment and therefore require appropriate training. This includes staff and subcontractors. To address this, Canadian Road Builders Inc. will review the ECO Plan with them as it relates to their activities and the protection of the environment. Staff and subcontractors through training sessions will be made aware of:

- The importance of conformance with the policy, procedures and requirements of the site ECO Plan.
- The significant environmental impacts, actual or potential, of their work activities and the environmental benefits of improved personal performance.
- Their roles and responsibilities in achieving conformance with the policy, procedures and requirements of the site ECO Plan including emergency preparedness and response.
- The potential consequences of not following the procedures in the ECO Plan.

Changes to the ECO Plan are to be communicated and understood by the staff and subcontractors. The ECO Plan will be discussed at the site meetings held between staff and subcontractors, the consultant and client representative. Information and changes to the ECO Plan will be discussed at these meetings. Minutes of these meeting will be retained and made available upon request.

### 5.2 Monitoring and Reporting

All dangerous goods spills are to be reported to the crew foreman or Contract Supervisor immediately. The crew foremen or contract supervisor is then to report the spill to other parties as per reporting procedures. Crew foreman and/or Contract supervisor are to ensure that any spill of a reportable level has been immediately reported to the Provincial Emergency Program at 1-800-272-9600, the consultant and the owner. Documentation of the spill is completed and kept on record.

Minutes of all site meetings will be retained.

### 5.3 Documentation

A master hard copy of the ECO plan will be retained at the construction site and made available to all personnel and for inspection at all times. The following information will be retained (as required) on site for this project

- ECO Plan (including previously amended versions)
- All necessary regulatory permits and approvals
- Construction schedules

- Record of any environmental incidents recorded on that site (e.g., spill and release records)
- TDG manifests
- Waste manifests (as required)
- Inspection Forms
- Site orientation and tailgate meeting minutes
- Relevant memos relating to environmental matters

#### 5.4 ECO Plan Update

The ECO plan is a living document and is designed to change according to site conditions with the goal of continuous improvement throughout the life of the project.

Changes to the ECO plan will be communicated to consultant for review and approval. Once that is done the ECO plan will be updated and the changes will be communicated to the staff and subcontractors. A copy of the revised plan will be kept on site for made available to all personnel on the project site.



## **13.6 - EMERGENCY RESPONSE PROCEDURES**

### 6.1 Emergency Response Procedures

In the event of a dangerous goods spill the following procedure is to be implemented.

#### **Spill Response Plan**

The response plan will provide an easy-to-follow set of instruction to use in the event of a spill. This will include potential health and environmental hazards, personal protective equipment, first-aid, emergency contact list and procedures for immediate containment.

(Refer to S.D.S.)

#### **Spill Investigation**

All reportable dangerous goods spills must be reported to government agencies and all spills shall be investigated. The crew foremen and or contract supervisor shall meet with the person or persons involved in that spill and establish what has happened and how it can be prevented from occurring again.

### Emergency Numbers

The following Emergency numbers will be associated with this work.

#### Emergency Service Telephone

Emergency (Police, Fire & Ambulance) 911

Utility Emergencies (Gas & power) 1-800-242-3447

Dangerous Goods Incidents / Disaster Services Agency 1-800-272-9600

Alberta Environment Emergency Response 1-800-222-6514

Occupational Health and Safety 1-866-415-8690

Safety Manager / Environmental: Sam Dehod 780-908-1194

Company General Manager: Nick Bucyk 780 289-9000