

# **2010 TAC ENVIRONMENTAL ACHIEVEMENT AWARD SUBMISSION**

*The Harmonized ECO Plan Framework*

**Alberta Transportation – The City of Calgary – The City of Edmonton**

March 2010



# Environmental Construction Operations (ECO) Plan Framework

2009 EDITION



## **Introduction**

The Environmental Construction Operations Plan (ECO Plan) Framework is a tool that facilitates effective environmental management on the work site and is the Contractor's plan for the identification and mitigation of potential environmental impacts that may occur as a result of their activities. In 2000 Alberta Transportation developed the ECO Plan framework as a means of ensuring that the roles and responsibilities with respect to preventing, or minimizing, the environmental impacts associated with project work are clearly identified prior to the commencement of work.

In 2003 The City of Calgary approached Alberta Transportation about the prospect of adopting the ECO Plan framework for their work sites. The City of Calgary was granted this permission and shortly thereafter ECO Plans were being used on work sites for city projects. However, beyond the initial request to share the ECO Plan framework the two jurisdictions did not work closely together with respect to coordinating ECO Plan development and the two frameworks quickly became distinctly different documents. The City of Edmonton did not have an ECO Plan, or equivalent, in place prior to 2008.

In 2008, Alberta Transportation, and The Cities of Calgary and Edmonton developed a common Environmental Construction Operations (ECO) Plan Framework (the Framework) to meet the needs of the three jurisdictions. The creation a common ECO Plan Framework was driven by:

- a need expressed by contractors and consultants to streamline environmental processes
- a need to achieve consistency among the three jurisdictions
- the recognition that environmental issues on construction sites are similar, regardless of the jurisdiction in which they occur

In February 2008 representatives from Alberta Roadbuilders and Heavy Construction Association's Environment Committee were consulted to discuss potential improvements to the framework. It was from the feedback from this discussion and Alberta Transportation's and the Cities of Calgary and Edmonton past experiences that the harmonized ECO Plan was created.

## **Category 1: Protection and Enhancement of the Environment**

The primary objective of the ECO Plan is to prevent and/or minimize environmental impact(s) on those projects where environmental sensitivities exist. When outsourcing work to Contractors it is imperative that the Contractor take ownership of the ECO Plan and provide assurance to the owner that an appropriate plan to protect the environment is in place. The development and implementation of site-specific ECO Plans ensure that environmental considerations are part of the decision-making process and demonstrate an environmental commitment by all parties involved, both in writing and in action, to stakeholders and the public.

There are two main components to the harmonized ECO Plan 'program'. The first component is the ECO Plan framework which details a Contractor's roles and responsibilities so that the ultimate goal of environmental protection is achieved. These roles and responsibilities include, but are not limited to, identification of the following items in the ECO Plan:

- the environmental setting of the project
- potential environmental impacts and mitigation measures
- the on-site individual responsible for addressing environmental issues
- approvals, authorizations, permits and guidelines applicable to the project
- monitoring, training, communication and review of the ECO Plan

Industry now has a tool that provides a consistent approach with respect to: 1) the environmental components that must be considered at the outset of a project, and 2) the expectations regarding documenting and managing environmental protection measures throughout the duration of the job. These expectations are starting to become entrenched in the road building industry as it has been noticed that the quality of ECO Plans being submitted continues to increase. This consistency assures the three jurisdictions that work site activities have considered impacts to the environment and are working within compliance of relevant federal/ provincial legislation and relevant municipal by-law.

The second component of the ECO Plan program includes the development of common ECO Plan audit protocols that allow the three jurisdictions to compare results (i.e. apples to apples) on an annual basis so that future training and/or awareness programs may be developed in concert as a means of addressing the road building industry as a whole. It is expected that efficiencies with this coordinated training effort could lead to substantial increases in environmental performance throughout the entire province.

Alberta Transportation now has five years worth of ECO Plan audit data and the results show that 2008 (the first year of the harmonized ECO Plan in implementation) was Alberta Transportation's best year performance wise in terms of reversing a trend that had been developing where we were seeing an increase in the number of findings year after year. In terms of how the audit program translates to increased environmental protection, the audit results show that erosion and sediment control issues are the number one non-compliance/ non-conformance issue faced on Alberta Transportation's work sites and therefore strategies are being developed to address this issue. Interestingly, the audits also uncovered that fact that 23% of findings found against the Contractor where as a direct result of Consultants not fulfilling their environmental obligations. The summer of 2010 will be the first season in which the common audit protocols will be used on all three jurisdictions work sites and we look forward to comparing audit results and developing strategies to improve environmental performance.

The implementation of the harmonized framework and audit protocols demonstrates a willingness between various jurisdictions and their service providers (e.g. consultants/contractors) to work together for the betterment of the environment.

## **Category 2: Degree of Innovation**

The creation of both the harmonized framework and audit protocols is truly – innovative! Benefits from this innovative approach extend province wide! Beneficiaries include: contractors, consultants, Alberta Transportation, The City of Calgary, The City of Edmonton and, in fact, most earthworks jobs in Alberta regardless of jurisdiction because of a work force that knows how to manage work site activities and understands the value proper planning. The creation of harmonized ECO Plan Framework illustrates innovation on many levels:

- The ability of Alberta Transportation, The City Of Calgary, and the City Of Edmonton to be able to recognize the importance of the environment and to work closely together to develop a new industry standard for environmental protection throughout Alberta.
- Other jurisdictions are welcome to adopt the harmonized ECO Plan Framework for their own usage thereby increasing the consistency of environmental management in Alberta even further.
- The development of common auditing protocols allows the three organizations to compare results on an annual basis so that future training and/or awareness programs can be developed in concert to address industry as a whole. It is expected that this coordinated training effort should lead to substantial increases in environmental performance throughout the entire Province.
- Post secondary institutions have seized this opportunity and are now offering ECO Plan training sessions as part of their curriculum. Prior to the Harmonized ECO Plan Framework this had not occurred due to the lack of a common standard with respect to environmental protection.
- Consultation with the Alberta Roadbuilders and Heavy Construction Association ensured that industry's ideas were heard and buy-in achieved.

## **Category 3: Financial Implications**

While difficult to measure in actual dollars realized there is no doubt that the harmonized ECO Plan has saved, and will continue to save, time and money for both service providers and the three jurisdictions.

Service providers are becoming more efficient in ECO Plan preparation and review because of the consistency and clarity of their roles and responsibilities as outlined within the harmonized ECO Plan. The ECO Plan includes six clear and concise how-to steps designed to assist Contractors in completing their ECO Plan. An ECO Plan checklist is also provided that ensures all the components of the ECO Plan are addressed. Feedback from the Alberta Roadbuilders and Heavy Construction Association's Environment Committee has indicated that the

new framework has significantly reduced 'guess work' during ECO Plan preparation and, therefore, their time and money.

As any project manager knows having a regulator shut down an active work site can be very costly as well as potentially embarrassing. One of the best tools that an organization can have in place to avoid this unfortunate situation is to have a well trained pool of service providers that are able to do the right-things at the right-times. An essential component to ensuring success on the work site is for service providers to be able to verify that environmental sensitivities have been considered and that compliance requirements are understood and documented prior to the start of work. The harmonized ECO Plan strives to accomplish these objectives so that the likelihood of a non-compliance situation, and the associated costs of work stoppage, is greatly reduced.

#### **Category 4: Applicability to Transportation**

As all Canadian road authorities know all too well there is an abundance of provincial and federal legislation that must be carefully considered for each and every project, and as each year goes by there is more environmental legislation coming on-line that must be considered. Therefore, it is imperative that prior to the commencement of work that all parties involved are assured that a plan is in place. A properly prepared ECO Plan is an excellent due diligence defense. An ECO Plan itself may not prevent incidents from occurring but they may prevent the courts from finding a road authority negligent.

The harmonized ECO Plan has been structured in a manner that allows it to be usable for both road and bridge construction/maintenance regardless of the jurisdiction. Benefits from this innovative approach extend province wide! Beneficiaries include: contractors, consultants, Alberta Transportation, The City of Calgary, The City of Edmonton and, in fact, most earthworks jobs in Alberta regardless of employer because of a work force that knows how to manage work site activities and understands the value proper planning.

Alberta Transportation, The City of Calgary, and the City of Edmonton are very pleased with the outcomes of this initiative to date and believe that other jurisdictions across Canada may wish considering adopting a similar approach to environmental management. Thus far our experiences have been only positive and as a result Alberta Transportation would be more than willing to share our experiences with other Canadian jurisdictions that might consider using this approach.

With the implementation of the harmonized ECO Plan framework and the ECO Plan audit program the bar has been raised with respect to environmental protection in Alberta!

**Nominees/Team Members**

**Alberta Transportation**

*Darren Carter (Lead Contact)*

*Ron Middleton*

**City of Calgary**

*Lisa Sutherland*

*Norma Posada-Flarhety*

**City of Edmonton**

*Jim Andrais*

*Steve Reynolds*

