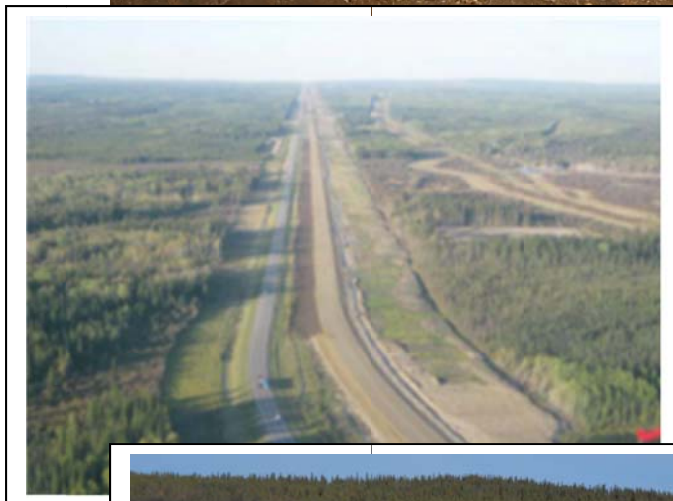


2014

Cochrane Technical Services Resume & Project Experience



Bruce Cochrane

Microsoft

2/4/2014

History

Cochrane Technical Services (CTS) was formed in 2010 by Bruce Cochrane. Bruce brings over 30 years' experience in the heavy civil construction field to the company and in these years has been fortunate to work in several top construction firms in a variety of roles in varying disciplines. The experience gained over these years has progressed Bruce into a mentor role for many young professionals entering the field. It was because of this role that Bruce recognized the opportunity with CTS to utilize this knowledge on a broader scope. Many of today's firms lack experienced estimators and project setup personnel, those who have seen the pitfalls and can anticipate and compensate for the issues before they become money losing problems. Experience is the only safeguard against these issues.

Bruce S. Cochrane C.E.T.

Bruce is currently the principal of Cochrane Technical Services, providing construction management and heavy civil construction estimating services to the construction industry. Bruce has extensive knowledge and experience in several disciplines within the heavy construction field including, earth moving, mine reclamation, concrete and asphalt paving, utility construction, and mine development and support operations.

Bruce has experience on a variety of project delivery methods including design build, cost plus, and conventional bid build work. He is well versed in the skills of project management as it relates to sub trades, suppliers, engineering consultants and owners.

Education

Graduate of the Civil Engineering Technology Program at Red River College, Winnipeg, Manitoba, 1978

Professional Associations

- Member in good standing with Certified Technicians and Technologists Association of Manitoba
- University of Manitoba Mid-Management Business Course Graduate
- Past Board Member of the Winnipeg Construction Association and Chair of the Subtrades Division

Past Employment

Sigfusson Northern Ltd. **2008-2010**

As Operations Manager, Bruce was responsible for all management duties of a heavy civil contractor working across Western Canada. He developed annual operating budgets, planned the management structure for on-going operations of Sigfusson Northern Limited. Bruce was directly responsible for a staff of 5 project managers, 5 superintendents, 15 foreman, and approximately 200 hourly personal, including estimating and field operations. During his employment at Sigfusson Bruce was tasked with the purchase and set up of the ***Heavy Bid estimating system developed by HCSS*** for this heavy civil and mine development firm.

Bituminex Paving Ltd. ***1995-2008***

As Construction Manager from 2004 to 2008, Bruce was responsible for the daily operations of a paving and site development company with a staff of 100, involving asphalt and concrete road works, sewer and water, aggregate production and sub-contractor management.

1997-2004

As senior Estimator, Bruce was responsible for an estimating staff of 3, and was involved in tendering a multitude of projects. During his employment at Bituminex, Bruce was tasked with the development of the ***Hard Dollar estimating system*** to meet the needs of this asphalt & concrete paving firm.

1995-1997

As a project Manager Bruce was involved in supervising multiple projects including the Charleswood Corridor P3 Design/Build Project

Donco Enterprises (1989) Ltd. ***1989-1994***

During this period Bruce was the President and General Manager of a small concrete restoration company specializing in coatings and sealants for the commercial construction industry.

B.A. Construction (Division of BACM) 1978-1989

1993-1995

Concrete Division Manager

As division manager Bruce was responsible for a staff of 85 involved in urban and highway concrete road construction.

1990-1993

As a project manager Bruce was involved in several major roadway projects throughout Manitoba, directly responsible for the daily management of site specific projects

1978-1990

As an estimator Bruce was involved in the bidding and award of many projects in Manitoba, Ontario and Saskatchewan. It was during this "pencil & paper" era that the foundations of estimating were instilled in Bruce. Many of these same principles and practises are used today in computer estimating.

The Fundamentals of Estimating

I have best described an estimate to people about to embark on their first attempt as, “being given a model that has been put together for you, breaking it apart to its individual components and rebuilding it, hopefully in a more productive way”.

In other words, taking a set of specifications and drawings from a designer, breaking it apart to the individual activities that will be required to construct the project, and attaching assumptions and pricing to these activities to come up with an accurate representation of the requested final product in the most productive and cost efficient method possible.

Secondly, providing an estimate that, with minimal explanation, the field personnel will be able to follow your thought process and see the constructability of your estimate. This is of the utmost importance; if you can achieve these things then your estimate is a success.

Contact Information

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**The following pages include some highlighted recent projects from over
30 years in the heavy civil construction industry.**

PROJECT DESCRIPTION	YEAR	LOCATION	ESTIMATE	SUPERVISE	PROJECT MGMT
Mt. Milligan Copper/Gold Project for Terrane Metals. Consisting of the development of a new open pit mine site in Northern BC. Construction of till core earthen dams for tailings storage, water runoff management items and site preparation	2010	BC	X		
Sherridon Mine Rehabilitation for Province of Manitoba. Including the removal of Acid Generating Tailings from an existing abandoned mine site and neutralization by draining an existing lake and submerging the tailings in the lake bottom	2009-10	MB	X		X
Suncor Light/Heavy Civil Works, Fort McMurray, Alberta. This 5 year contract involved muskeg, overburden, sodic overburden and road building within the Suncor Oilsands site. Average yearly volumes exceeded 100 Million cubic meters	2010	AB	X		
Trend Mine Road Upgrades, Tumbler Ridge, B.C.. Successful bidder to the owner, Peace River Coal, to upgrade an existing mine access road to facilitate 75 tonne coal haul trucks from the mine site to load out area. This project was bid as "not to exceed" contract and was successfully completed to within 10% of bid with some major design changes.	2008	BC	X		X
Elkview Coal Operation, Sparwood, B.C.. Various site related estimates for underground utilities, pond construction and cleanout and road building for the owner, Tech Coal.	2010	BC	X		X
Faro Mine Site, Lynn Lake, Manitoba. Remediation of an abandoned mine site included aggregate processing for tailings cover, tailings removal and a bentonite clay liner for cover and neutralization of the PAG rock.	2010	MB	X		
Musselwhite Mine, Goldcorp, Northwest Ontario. Involved in numerous support surface projects for this producing gold mine including, tailings raise, vent shaft construction, redi-mix concrete supply and facility sewer & water upgrades.	2008-10	ON	X		X
Makwa Open Pit Mine, Lac Du Bonnet, Manitoba. Performed a budget cost feasibility for this new Ni, Co, Cu mine in north-eastern Manitoba. Included was site establishment items and the removal of 39 million tonnes of waste/ore material by drill blast.	2011	MB	X		
Galore Creek PFS, Bob Quinn, B.C. This Pre-Feasibility study was performed for Fluor Canada to confirm real cost of pre-mine development of this valley in northern British Columbia. Job specific challenges included air only access for additional equipment, not presently in the valley, requiring a critical path schedule using both equipment present in the valley from the 2007 operation, as well as minimizing the number of pieces of equipment that will need to be "broken down" and flown into the valley via helicopter. This cost estimate was critical in the owners decision to proceed with development of the site (see attached article)	2011	BC	X		
Kilmarnock Water Diversion, Sparwood, B.C. Cost estimate was performed for this Selenium diversion project to provide a channelized diversion, both open cut and cut/cover, to divert stream flow around tailings spoil piles. Upon successful pricing and award to this time sensitive schedule, we produced the cost budget and assisted in the start up of this successful project.	2011	BC	X		X

Manachewan Open Pit Gold Mine, Timmins, Ontario. Provided a detailed cost estimate for the development and mining of ROM (Run of Mine) material to the owners mill site. Items included drilling & blasting, ROM mucking and hauling, as well as crushing ore to 8" minus for mill crusher to further refine.	2011	ON	X		
Line Creek Contract Mining, Sparwood B.C. A Teck Resources existing operation, The Line Creek Pit included two areas that had been previously mined by the owners forces and required further development to remove the metallurgical coal for processing. Upon submission of a successful low estimate the contract was performed with a higher strip ratio than targeted, resulting in bonus payments to the contractor	2011	BC	X		X
Fort Knox Low Grade Ore Haul, Fairbanks, Alaska Successful low bid for the removal and placement of 14 million tons of low grade ore into the owners heap leach pad using a fleet of 100 ton trucks and both excavators and rubber tire loading tools.	2011	USA	X		X
Huckleberry Mine Tailings Dam, Houston B.C. Provided a detailed construction estimate to a short listed contractor for a new till core tailings dam and numerous saddle dams for the existing Imperial Metals Gold Mine.	2012	BC	X		
Fort Knox Heap Leach Pad Extension, Fairbanks, Alaska This project included a 60 mil liner to be installed on the vally floor, along with the construction of the leachate recovery system and pad liner utilizing local materials that were to be crushed to specification by the contractor.	2012	USA	X		
Red Chris Mine, Dease Lake B.C. Submitted the succesful estimate for the site preparation of a new gold mine in Northern BC. Since award of the contract numerous additional services have been estimated and added to the orginal scope including Care of Water items and a NAG rock borrow source development.	2012	BC	X		X
Trend Mine Contract Mining, Tumbler Ridge B.C. Provided the estimate for the coal mining of the Gething Pit, including desgn of the pit access ramps and construction feasabilty assesment of this narrow mine with a extremely steep coal seam dip.	2012	BC	X		
Sunshine Oilsands West Ells, Ft McMurray Alta. Provided both the successful estimate and Project Management for the construction of Well Pad #3 and the Water Well Access Road for the SAGD facility 150 KM North West of Ft McMurray. Completed both projects within a 11 week duration to avoid the spring breakup period in this predominately muskeg area.	2013	AB	X		X
Dover McKay River SAGD Project, Ft McMurray Alta., Provided the successful estimate for the Labour, Equiment, Material (LEM) budget for a two year mainteneance/construction contract	2013	AB	X		
Coalspur Vista Mine Site Development, Hinton Alta. As part of a joint venture estimate team, CTS provided the costing for the improvements to Hwy 16, a new 8km access road from Hwy 16 to the mine site and site establishment for the processing and coal loadout areas for this new open pit coal mine in northwest Alberta.	2013	AB	X		

PROJECT DESCRIPTION	YEAR	Location	ESTIMATE	SUPERVISE	PROJECT MGMT
Charleswood Bridge Design Build Project in Winnipeg, Manitoba. Winnipeg's first D/B project consisting of approx. 1.5 km of new roadway, rebuilding approx. 2 km of existing road infrastructure as well as new river crossing 4 lane bridge	1995-96	MB	X		X
Provincial Road 373 Realignment & Widening for the Province of Manitoba. Two separate contracts to upgrade 44 km of existing highway in northern Manitoba utilizing scrapers, excavators and off road trucks, material processing and base laying operations.	2009-10	MB	X		X
Moray Street Extension for The City of Winnipeg. Over 13,000 M3 of red-mix concrete was utilized in the construction of this 6 lane freeway including a pedestrian crossing bridge and utilities.	2005	MB	X	X	
Trans-Canada Highway Upgrades in Golden, British Columbia. This Bid/Build Project involved twinning a 14 km stretch of the Trans-Canada through mountain terrain with extreme daily traffic counts. This 50 million dollar project included over 600,000 m3 of earth and rock removal, base work, paving and three grade separation structures , including MSE walls.	2009	BC	X		
HIGHWAY 93 Twinning and By-Pass structures, Fort McMurray, Alberta. Twinning of this major thoroughfare to Alberta's tar sands north of Fort McMurray included MSE walls and structures to provide bypass lanes for the extremely large loads that would not fit under a conventional bridge structure.	2008	AB	X		
Highway 596 Upgrades, Minaki, Ontario. Over 25 km long stretch in some of Northern Ontario's roughest terrain, this project included major curve realignment and grade improvements.	1982	ON		X	
Provincial Road 201, Letellier, Manitoba. Realignment of 2 km of PR 201 and a major river crossing of the Red River, prone to major seasonal flooding was undertaken as a joint venture with Ruskin Construction of Prince George, B.C.	2010	MB	X		X
Trans-Canada Highway Upgrades in Golden, British Columbia. This Design/Build JV project included 12 km of highway twinning, one vehicle grade separation structure and two wildlife crossings. As well as being part of the estimating team responsible for the roadwork's and utilities section of the contract, I was the company sponsor on the JV executive committee that oversaw the presentation submittal and subsequent short listing by the client.	2009	BC	X		
Highway 93 Twinning Earthworks Contact in Wandering River, Alberta. Successful low bidder on this 20 Million dollar project that included 32km of clearing, and 18 km of muskeg excavation and borrow haul to produce an additional two lanes of the main highway to Fort McMurray's Oil sands. Earth/Muskeg quantities exceeded 4 million cubic meters.	2009/10	AB	X		X
SYD Road Upgrades, Fort Nelson, B.C. Upgrades and reconstruction of 30 KM of this critical access to the Oil/Gas fields in Northern British Columbia. The successful tender was then completed ahead of schedule and under budget but the contractor	2011/12	BC	X		
Tulsequah Chief Access Road, Atlin B.C. Provided the estimate for 120 KM of new road, including 7 bridge structures for a new access road into this remote mine site. Severe terrain and extensive construction modeling was required to perform an accurate costing of this project. Our estimate was short listed by the owner before the project was shelved due to lack of financing.	2012	BC	X		
NICO Mine Access Road, Whati NWT. Provided the estimate for this 52 km overland road 160 km northwest of Yellowknife. The site and the project is currently only accessible by a winter road network from Hay River. The project included two river crossing structures, drill & blast rock work and aggregate processing. Detailed calculations were necessary for men & materials hauled during winter road months vs. air transport during the summer construction season.	2013	NWT	X		

PROJECT DESCRIPTION	YEAR	Location	ESTIMATE	SUPERVISE	PROJECT MGMT
Relocation of the Intermodal Yard for Canadian National Railway, Winnipeg, Manitoba. This project included 750,000 tonnes of aggregate placement, 29,000 tonnes of hot mix asphalt and 8000 m2 of concrete pavement, all performed in 63 days.	2003	MB	X		X
Wuskwatum Hydro Electric Dam, Northern Manitoba. This pre-dam construction project included aggregate production, main channel rock excavation, coffer dam construction and site development to prepare site for the main civil contract for this 180 MW project.	2008	MB	X		
New School Site, North Spirit Lake, Ontario. This remote community, accessible by air only and winter road, included site clearing and development, aggregate production from a solid rock quarry, erection of, and supply of a redi-mix concrete plant, and general site development. All materials and equipment needed to transported via winter road requiring extremely accurate equipment and material estimates	2010	ON	X		X
Club Regent Casino Development, Winnipeg, Manitoba. The new development of a 10 acre parking site for a new casino. The works involved asphalt and concrete roadways, asphalt parking areas, storm sewer system and signage.	2001	MB	X		X
South East Transport, Steinbach, Manitoba. This project involved a complete new 7 acre site development from "pasture" to operational status for a long haul trucking firm including grade preparation, granular base preparation, asphalt parking and concrete dolly pads installation.	1995	MB		X	
WAC Bennet Dam, Fort St. John, BC. This BC Hydro tender involved slope stabilization of the spillway, including drill & blast rock excavation, rock bolting and shotcrete installation.	2011	BC	X		
Enbridge Pipelines, Fort McMurray, Alberta. Right of Way Clearing project for a new pipeline travelling from Suncor to Anzac, Alberta for a distance of 48 km.	2011	AB	X		
Swift Power "Run of the River" Hydro Electric Project, Terrace, B.C. As part of an estimating team for this private hydro project near Terrace BC, was personally responsible for the cost estimate for the clearing, road building and installation of the pipe penstock. Also assisted our team when interviewed as one of three second stage selected companies.	2011	BC	X		
Keewatinow Converter Station, Gillam MB. Provided the successful estimate for the development of the converter station pad for the Bipole III Power Grid line for Manitoba Hydro. Project includes 1 million meters of muskeg/permafrost stripping, 900,000 m3 of granular pad fill, 4km of underground utility placement and aggregate processing.	2013	MB	X		X
Keyask Hydroelectric Dam, Gillam MB. Priced numerous subcontract items for General Contractor including 5 million meters of aggregate processing, impervious fill dyke construction and internal road construction for this new 695 megawatt hydroelectric project.	2013	MB	X		
Bipole III Transmission Line Tower Foundations, The Pas MB. Provided the estimate for 175 km of tower foundations, both precast & cast in place for the new Bipole III transmission line in northern Manitoba. Sites are accessible during winter months only requiring the use of chemical grout for all cast in place work.	2013	MB	X		

PROJECT DESCRIPTION	YEAR	Location	ESTIMATE	SUPERVISE	PROJECT MGMT
Fisher River First Nation Upgrades, Fisher River, Manitoba. Project included 13,000 lm of fused HDPE sewer & watermain piping, a two cell sewage lagoon, as well as water and sewage treatment plants.	2009	MB	X		X
Forcemain Upgrades, Conklin, Alberta. This project involved approximately 8000 lm of sewage and water forcemain upgrades including open cut as well as directional drill installations.	2008	AB	X		
New School Site, North Spirit Lake, Ontario. This remote community, accesible by air only and winter road, involved 2,000 lm of sewer and water forcemain installation to service the new school site. All materials and equipment needed to transported via winter road requiring extereMLEY accurate equipment material estimates	2010	ON	X		X
Community Upgrades, Fairford First Nation, Manitoba. A new twin cell PVC lined sewage lagoon , a well as 8,000 lm of water & sewer pipe was included in this project. An extension for a new 45 lot subdivision was added to the contract.	2009	MB	X		X
New Subdivision Servicing, Weyburn, Saskatchewan. Water and sewer piping was installed for a new development in southern Saskatchewan.	2008	SK	X		X