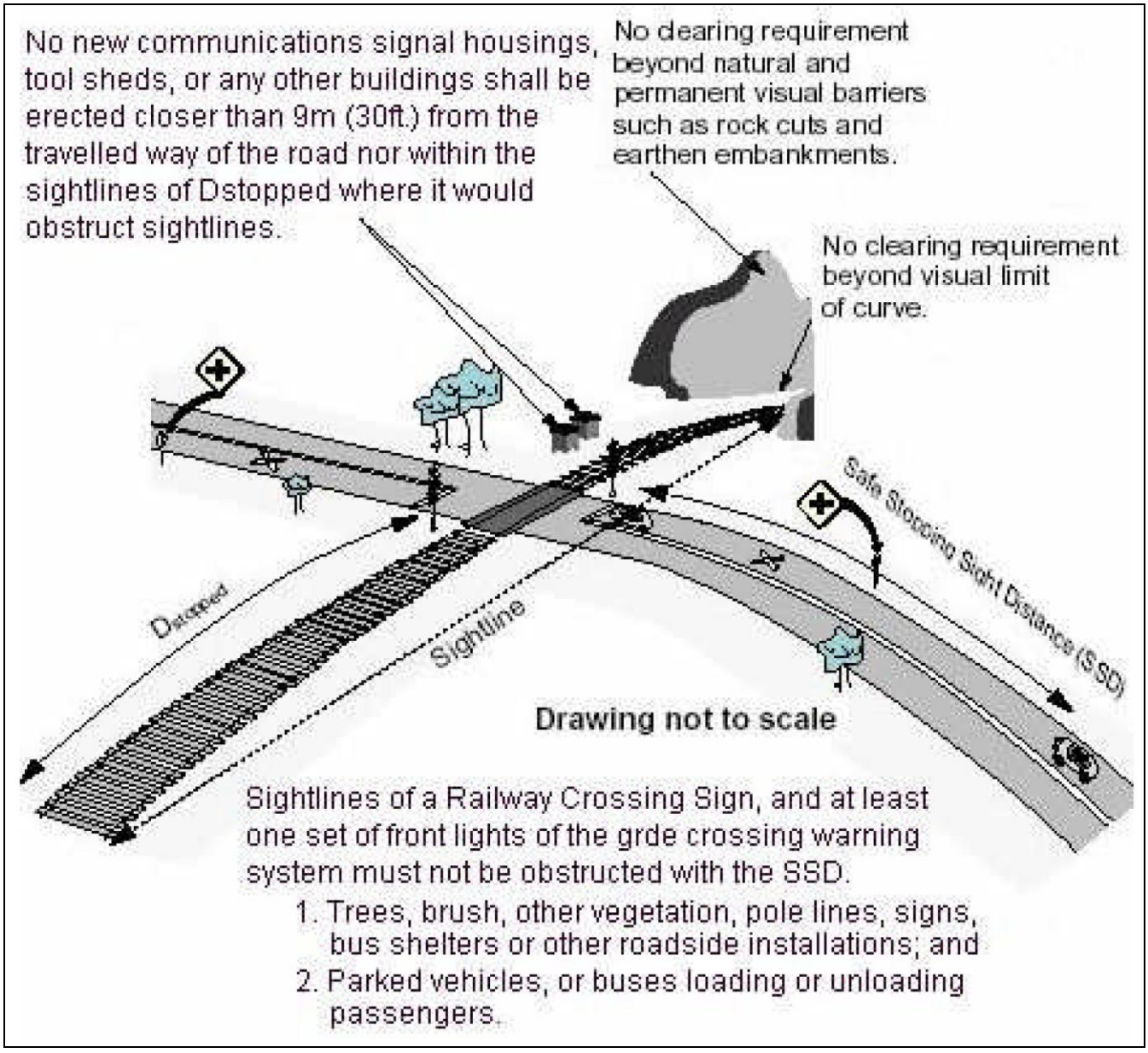
Figure 4-8 Typical Level Railway Crossing (Transport Canada 2002)



Outlined below is a detailed description of each inbound/outbound track:

1. BLR inbound track for full iron ore cars:
    a. About every eight hours, one incoming train composed of approximately 80 full iron ore cars with two lead locomotives, will slow down at the west end of the BLR – QNS&L switching yard entrance switch before entering this area at a speed not to exceed 15 miles/hr (24 km/h);
    b. The BLR crew will uncouple the loaded iron ore cars from the lead locomotives after and only after the train has come to a complete halt within the boundaries of the BLR inbound track area;
    c. The BLR crew will then proceed by moving the lead locomotives onto the middle track with multiple crossovers by way of the crossovers before coupling the empty iron ore cars to the two lead locomotives on the BLR outbound track by way of the adjacent crossovers;
    d. It is to be noted that no manoeuvres will take place on the Wabush double track railway crossing during these switching operations.
2. BLR outbound track for empty iron ore cars:
    a. About every eight hours, one outgoing train composed of approximately 80 empty iron ore cars with two lead locomotives, will leave this area at a speed not to exceed 15 miles/hr (24 km/h);
    b. The train need not stop at the west end of the BLR – QNS&L switching yard entrance switch when proceeding onto the mainline towards the BLR ore car loading bin near the border in Labrador;
    c. It is to be noted that no manoeuvres will take place on the Wabush double track railway crossing during these switching operations.
3. QNS&L inbound track for empty iron ore cars:
    a. About every 24 hours, one incoming train composed of approximately 240 empty iron ore cars with two lead and one middle locomotive, will slow down at the north end of the BLR – QNS&L switching yard entrance switch before proceeding to enter this area at a speed not to exceed 15 miles/hr. The Wabush double track railroad crossing will be occupied for a period of time not to exceed more than approximately 6 - 7 minutes.
    b. Once the train is completely within the boundaries of the QNS&L inbound track area and only after the train has come to a complete halt will the QNS&L railway crew uncouple the empty iron ore cars form the two lead and one middle locomotives;
    c. The QNS&L railway crew will then proceed by moving the two lead and one middle locomotives unto the middle track with multiple crossovers by way of the crossovers before coupling the full iron ore cars onto the QNS&L outbound track by way of the adjacent crossovers. It is to be noted that no manoeuvres will take place on the Wabush double track railway crossing during these switching operations.
4. QNS&L outbound track for full iron ore cars:
    a. About every 24 hours, one outgoing train composed of approximately 240 full iron ore cars with two lead and one middle locomotive, will leave this area at a speed not to exceed 15 miles/hr. The Wabush double track railroad crossing will be occupied for a period of time not to exceed more than approximately 6 - 7 minutes.
    b. The train need not stop at the north end of the BLR/QNS&L switching yard entrance switch before proceeding onto the QNS&L mainline toward Sept-Iles in Québec.

Important notice:

- Because one will be dealing with a double track instead of a single track railway crossing in Wabush, restrictive “General Operating Bulletin (GOB)” special notices will need to be included in the respective companies “Operating Manual”.
    - For instance, both the Privately Owned and QNS&L Railroad Companies could implement a certain time delay between simultaneous or successive trains that require switching manoeuvres that will occupy the double railway crossing. For example, a 20 minute minimal time delay may be required between two successive trains between 6h00 – 20h00, seven days per week and a 10 minute minimal time delay may be required between two successive trains between 20h00 to 6h00, seven days per week;
    - In an effort to prevent two trains from occupying the Wabush double track railway crossing simultaneously or successively, the departure and arrival times of the respective trains that need to occupy the double track railway crossing, will have to be rigorously respected by the two railroad companies “Timetable”, that is, the Privately Owned Railroad Company and the QNS&L Railroad Company, respectively.
    - All arrival, departure, switching and train formation switching operations within the Bloom Lake – QNS&L switching yard and Wabush double track railway crossing limits are respectively and without exception, both railroads responsibilities. All regulation changes or respective requests must be mutually agreed upon by both railroads in an effort to minimise the double railway crossing occupancy time.
- All special notes, instructions, procedures, exceptions or interchange regulations will be included in the respective railroads “Operating Manual”. The “Daily Operating Bulletin (DOB)” will compliment daily operations.

4.1.6 Proximity of Railway to Existing Quarry Activities at Huguette Lake

The railway route in the Huguette Lake area was optimized to provide a 500 m minimum buffer zone between the center of the rail and the edge of the existing quarry activity in efforts to eliminate interference (Figure 4-9).

4.1.7 Rail Route at Newfoundland and Labrador Hydro Wabush Terminal Station

The rail route in the marshalling yard adjacent to the Wabush Terminal Station, owned and operated by Newfoundland and Labrador Hydro, will not impede upon the property or associated easements (Figure 4-10).

Figure 4-9 Rail Route Around Huguette Lake

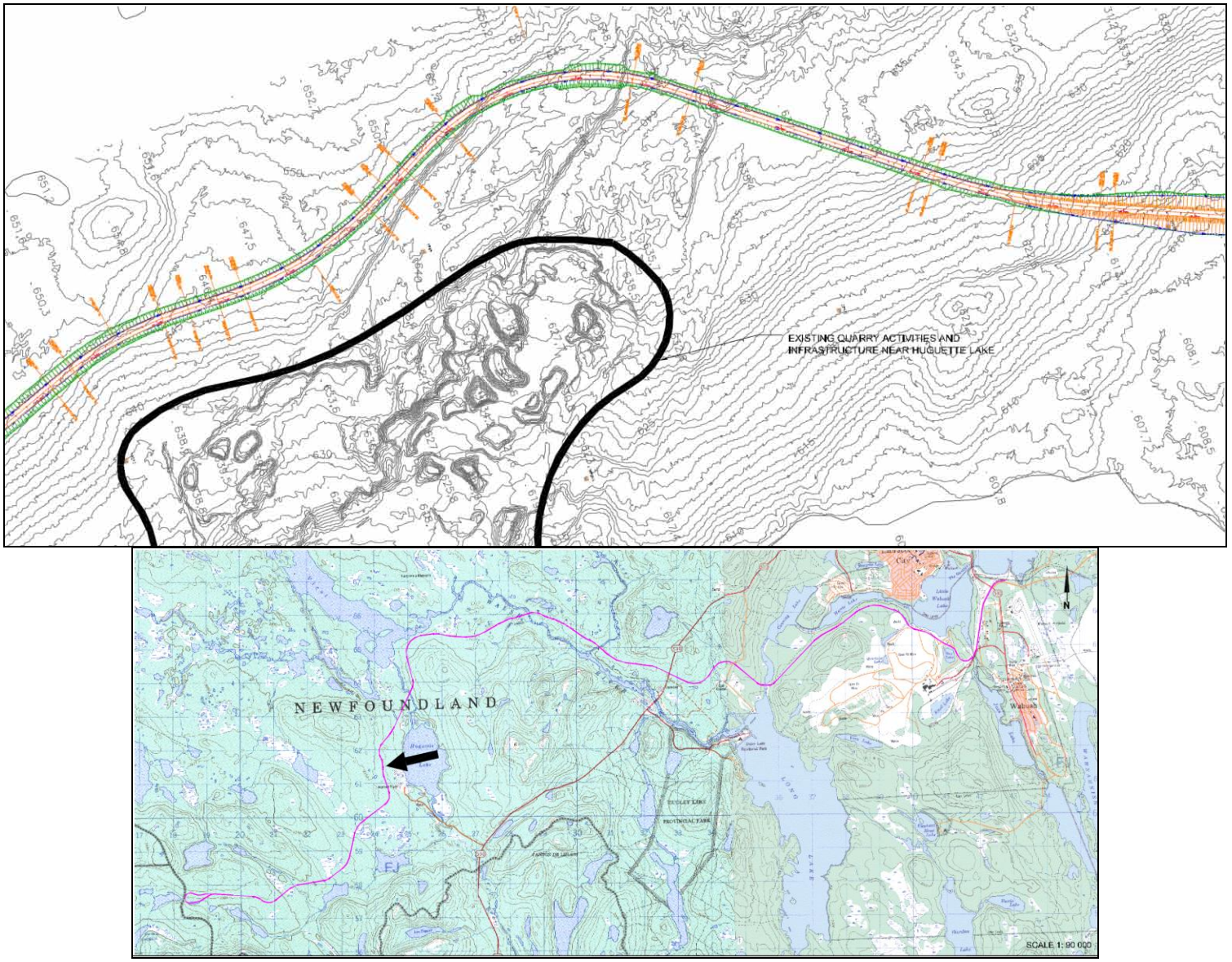
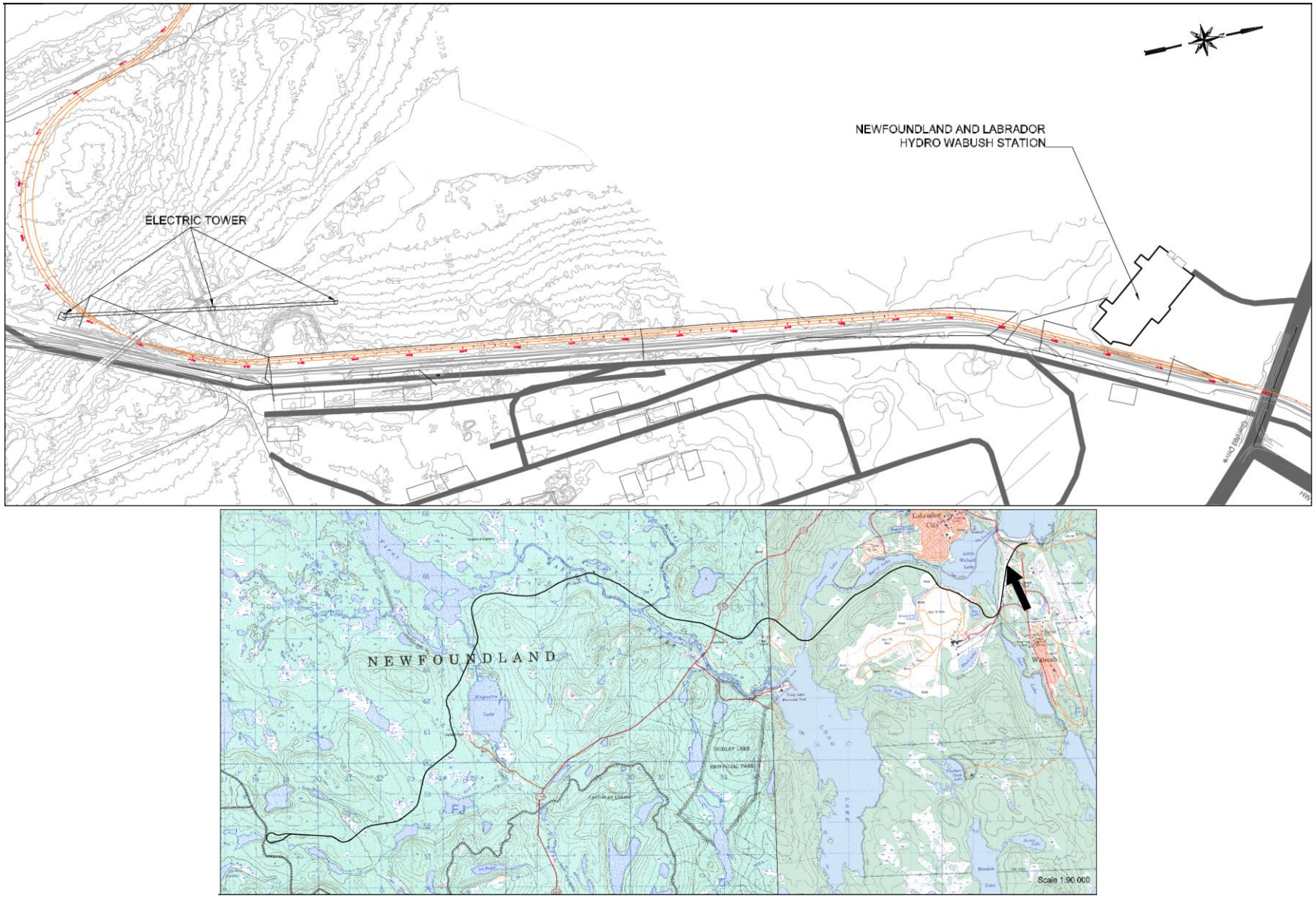


Figure 4-10 Rail Route at Newfoundland and Labrador Hydro Wabush Terminal Station



4.2 Construction

Construction of the Project is expected to begin in late-2008, with duration of approximately one year. Operations are tentatively scheduled to begin in late-2009 (Figure 4-11).

Figure 4-11 Bloom Lake Railway Project Schedule Overview

4.2.1 Civil Works

4.2.1.1 Schedules

Civil works will start before the end of October 2008 and complete fall of 2009 (Figure 4-11).

4.2.1.2 General

Civil works include the clearing of vegetation and grading and drainage activities. All pertinent permits will be obtained before any of the activities are commenced. It is anticipated that simultaneous activities will be done at various locations along the proposed areas of construction.

4.2.2 Bridges

4.2.2.1 Schedules

Bridge construction will start in mid November 2008 and complete fall of 2009 (Figure 4-11).

4.2.2.2 General

Bridge construction will include the construction of cofferdams, local excavations, planting of piles, concrete pouring of foundations, construction of piers and abutments and the installation of bridge spans and concrete decks. All bridges will be ballasted to accommodate the track structure. All works will be out of the water. All pertinent permits will be obtained before any of the activities are commenced.

4.2.3 Track Construction – Rail Works

4.2.3.1 Schedules

Rail works will start in mid November 2008 and complete fall of 2009 (Figure 4-11).

4.2.3.2 General

It is recommended that review of all track material requirements be ongoing and finalized only upon completion of embankment design or as close as practicable. Under review at this time are best practices for the track material and construction methods given the constraints.

Track construction currently under consideration includes preplated[1] wood ties with spikes and/or clips, continuous welded rail (CWR) and/or jointed rail trackage and variations of traditional construction methods. This applies to all mainline, interchange and siding track construction. Mainline tracks are recommended to have 136 lb rail, spiked on #1 wood ties while interchange and siding tracks are recommended to have 115# rail, spiked on #1 wood ties. All interchange and siding turnouts are recommended to be #12-136 lb turnouts with wooden hardwood switch ties. All bad order rail car turnouts are recommended to be #8 special-136 lb turnouts with wooden hardwood switch ties

4.2.3.3 Track Construction

A better part of the wood ties will be preplated during non-construction season. Weather permitting, the bundalized preplated wood ties would be delivered on site via rail car and rubber tired trucks and placed on a pre-constructed rail embankment and roadbed where possible. Preplated wood ties would be unloaded via appropriate self-propelled cranes and/or boom trucks.

Weather permitting, turnout materials, other track materials (OTM) and +/- 78 feet rails would be delivered on site via flat rail cars and specialized rubber tired trucks and unloaded in pre-designated work areas along the right-of-way. Rails, OTM and turnouts would be unloaded via appropriate self propelled lifting equipment. Rails would be flash butt welded together on-site with welding gang during the construction season into continuous welded rails (CWR) varying in length from 400 to 1500 feet.

The sequence of events would involve the distribution of the CWR with rail/tie gangs using loaders and speed swings along the pre-constructed rail embankment and roadbed, then the laydown of the preplated wood ties with boom trucks, the insertion of the CWR onto the preplated wood ties with loaders/speed swings, followed by fixing in place the CWR with specialized machinery. CWR would be laid down with minimum 19.5 ft staggered joints connected with appropriate splice bars. On the mainline, the use of 19.5 ft staggered joints allows train operation of over 30 mph. Once the track structure would be in place, surfacing crews for ballasting would precede using ballast cars, trackmobiles, tampers and ballast regulators. The thermic welding of the joints between the CWR sections on the mainline would be executed with a welding gang after the ballasting operations and would require de-stressing. De-stressing would be performed immediately following welding operation. Preferred Rail Laying Temperature Range (PRLTR) needs to be established prior to welding.

[1] Preplated wood ties have track tie plates already attached

4.2.3.4 Miscellaneous

Pertinent interchange turnouts are to be equipped with cold air blowers, the power source being dependant on the utilities available locally.

4.2.4 Road Crossing and Railway Signal Construction

Crossings complete with protection will be constructed to Transport Canada RTD 10 Standards.

The railway line will not be opened for traffic until all installations are approved.

4.3 Operations

4.3.1 Summary of Operations

- The railway will be built to Cooper E90 loading.
- Operating conditions are harsh due to low temperature and snow fall.
- Railway support in this remote area is almost non-existent.
- Interchange trackage in Bloom Lake Railway will be built off QNS&L property
- Three 240 car train sets will be broken down into 86, 77, 77 car trains at Wabush to Bloom Lake.
- The railway will be engineered to be constructed on as level a grade and as on as many tangents as possible.

The trains will loop between Bloom Lake and Labrador City during a 24-hour cycle as follows:

- Train 1 will depart from the proposed Bloom Lake Railway Yard at Wabush with 86 empty rail cars and two locomotives. The train will arrive at Bloom Lake ore car loading bin for loading. This process anticipates loading of one minute per car.
- Train 1 loaded with 86 cars filled with 118 tons of product and 25 tons railcar tare weight equalling 143 tons departs from Bloom Lake rail load-out system. The train will temporally terminate in Bloom Lake Railways proposed Wabush Yard. Repeating the same process, crew and locomotives from train 1 will continue with two other train sets totalling 240 cars and will consolidate at the Railway Yard.

At the Bloom Lake ore car loading bin, a loop of approximately 9,000 ft (2,743 m) will be constructed in order to accommodate a 240-car train. Additionally, one siding of approximately 3,300 ft (1,006 m) will be built to accommodate normal railway operations for peak operational conditions, meets, and pass conditions.

The QNS&L will move the traffic interchanged by the Bloom Lake Railway.

4.3.2 Train Operations

4.3.2.1 Bloom Lake to Wabush Yard

The operator will be required to hire and dismiss employees and train them to be locomotive engineers or conductors. A certificate of fitness will be required for the operator. All labour relations and human

resource issues will be in the domain of the operator and they must demonstrate that they have a credible record of accomplishment in this area. The operator will also assist and will be consulted to determine the method of train control.

A system of tracks will be constructed at Wabush so that trains can be temporarily stored. The method of operation dictates that at least 3 tracks (including two siding tracks) capable of holding 240 car trains or 9,000 ft (2,743 m) be constructed with sufficient crossovers in place to move into the interchange without obstructing the railway/road crossing in the city of Wabush during switching and shunting of cars. The crossover switches will be configured so that trains are able to pull into the interchange tracks and make up the departure trains so that they will not affect the railroad crossing.

Experienced people will be utilized to build track and get heavy equipment to the site due to limited road access. Empty cars will be available at the Bloom Lake end to maintain operations. This works for summer operation however, in winter loading the ore cars will be delayed somewhat until they are ready to move.

4.3.2.2 Wabush to Arnaud Junction

The train operation from Wabush to Arnaud junction, near Sept-Iles, will be handled by the QNS&L crews. The interchange of the trains is established through regulations and procedures governed by Transport Canada. Generally, adoption of inspection locations, Brake testing procedures and qualification of inspectors will be to the same standard as QNS&L. This will ensure uniformity in operations along with efficient and effective interchange of traffic and the forwarding of trains.

4.3.3 Mechanical Maintenance

Scheduled maintenance on the locomotives will be required to be performed every 90 days to meet Transport Canada requirements

4.3.3.1 Regulatory – Cars and Diesel Engines

Regulations exist that include the design, operation, and maintenance of railway equipment.

4.3.3.2 Inspection Locations

An inspection location will be established on Bloom Lake Railway property. It is anticipated that the Inspection Location be at the proposed new interchange to be constructed - Wabush Interchange. An inspection location is prescribed by Transport Canada and will favour smoother operations with QNS&L to ensure that the car inspectors are trained and qualified to perform safety inspections of ore cars in compliance with these rules. Car inspectors must demonstrate by means of oral or written examinations and on-the-job performance knowledge and ability concerning safety inspection of railway ore cars. Car inspectors shall be issued a certificate attesting to the employee's qualifications.

4.3.3.3 Predeparture Inspection Procedure by Other Than a Qualified Car Inspector

At each location where an ore car is placed in a train and a certified car inspector is not on duty for the purpose of inspecting ore cars, the ore car shall, as a minimum requirement, be inspected for these specific conditions.

Safety inspections shall be performed at locations where trains are made up, on cars added to trains, or when interchanged. Such inspections may occur before or after a car is placed in a train at that location.

At locations where a certified car inspector is not on duty for purposes of inspecting ore cars, a pre-departure inspection of the train or the cars added shall be performed by a qualified person, as a minimum, for those conditions listed. Thereafter, a safety inspection will be performed by a certified car inspector at the first safety inspection location designated for that train by the railway company in the direction of travel.

The railway company shall file with Transport Canada a list of its safety inspection locations and railway schedules. Any changes to the list of safety inspection locations shall be filed by the railway company with Transport Canada 60 days prior to implementing such changes.

The railway company shall maintain a safety inspection record for the cars it places in service at each safety inspection location. This information will be retained for 90 days and will be made available to a railway safety inspector upon request.

The railway company shall ensure the ore cars it places or continues in service are free from all safety defects described in Part II of these rules, and that such cars comply with General Order No. 0-10, “Regulations Respecting Railway Safety Appliance Standards”.

A railway car identified with safety defects may be moved to another location for repair including placing a loaded car for unloading, when authorized by a person in charge, who will ensure that:

- the car is safe to move;
- a means to protect the car’s safe movement is implemented, including identifying for the employees involved the nature of the defects and the movement restrictions, if any, and;
- the appropriate records will be retained for a period of 60 days;

The movement of a car with safety defects shall be controlled and protected by the use of a bad order information system, or by the use of a bad order or home shop card.

Every railway company shall reply in writing or by acceptable electronic means, within fourteen days, to Transport Canada’s regional office concerned, on the corrective action taken to correct a violation/defect reported by a railway safety inspector. The reply, from an appropriate railway officer, shall also include the ore car initials and number and the date and location of the corrective action taken.

4.3.3.4 Repairs

The railway on which the bad order is detected, should execute Road repairs. The car/mechanical repair contractor will most likely be equipped with Hi Rail equipped road repair vehicles so that car repairs between Wabush and Bloom Lake can be affected directly from the right of way.

4.3.3.5 Bad Order Set Off Locations

Due to lack of accessibility, the set off location will be at the siding. As stated previously, road side repair will be limited so an „on track’ repair truck will be utilized by the contractor.

4.3.3.6 Track Maintenance

Transport Canada Track Safety Rules will be used as the minimum track standards. Any deviations from such standards, appropriate remedial actions will be taken to assure the safe operations of trains.

Track maintenance will be scheduled between train operations whenever possible.

4.3.3.7 Regulatory

Transport Canada Track Safety Rules will be used.

4.3.3.8 Track Inspection

Qualified personnel will be available to supervise restorations and renewals of track under traffic conditions. Such supervisors will also be qualified to inspect tracks for defects.

Track inspector shall undertake track inspections at frequencies and by methods as to ensure that the line of track is safe for the operation of trains at the authorized speeds.

Walking

- Priority locations (areas with known problems) monitored as conditions dictate. the car is safe to move;

Track Inspection Vehicle

- Three times/week with one inspection by Track Inspector. the car is safe to move;
- Once per month by Track Supervisor. the car is safe to move;

Train Riding

- Once per month by Track Supervisor. the car is safe to move;

NOTE: Daily Track Inspection Vehicle inspections during Extreme Cold weather. Daily Track Inspection Vehicle inspections during Extreme Hot weather between 11:00 and 20:00.

Each inspection will be documented. There are numerous items including track material, drainage, vegetation, right of way, clearances, road crossings and signs that will be inspected during walking and Track Inspection Vehicle inspections. Train ride inspections will also monitor some of the criteria.

Track material has numerous categories for track and turnout components.

4.3.3.9 Bridge Inspection

The focus of bridge inspections is to ensure the safety of train operations over the bridge structures and the surrounding area.

A qualified engineer or inspector will do annual inspections of all bridges to assure the safe operations of trains over such structures. Any identified deficiencies will be documented and addressed by appropriate remedial actions.

Detailed bridge inspections of all bridges will be carried out every five years or earlier, as conditions may warrant. If any deficiencies are identified, they will be documented and appropriate remedial actions will be taken to assure the safe operations of trains over the bridges.

Remedial work identified in the annual or detailed inspections will be addressed in the maintenance and/or capital work programs for the bridges.

4.3.3.10 Culverts and Drainage

Each drainage structure or other water carrying facility under or immediately adjacent to the roadbed must be maintained and kept free of obstruction, to accommodate expected water flow for the area concerned.

Detailed culvert inspections will be carried out when the flow of water is at a minimum to allow a more thorough examination of the culvert. When necessary to observe culverts under heavy water flow or frozen grade conditions, additional special inspections shall be made.

4.3.3.11 Animal and Pest Control

Drainage can be greatly affected by the construction of Beaver Dams and in areas where this is a concern, a program to monitor and initiate remedial measures is essential.

4.3.3.12 Weed Control

Must be controlled so that it does not:

- become a fire hazard to track-carrying structures;
- obstruct visibility of railway signs and signals;
- interfere with railway employees performing normal track side duties;
- prevent proper functioning of signal and communication lines; or
- prevent railway employees from visually inspecting moving equipment from their normal duty stations.

4.3.3.13 Crossings

Every party responsible for a road or a railway line involving a grade crossing must consult Transport Canada Grade Crossing Regulations.

Minimum safety criteria are set out for construction or alteration, maintenance, including inspection and testing, of grade crossings, and of their road approaches and other land adjoining the land on which the railway line is situated insofar as the safety of the grade crossings may be affected.

5.0 ENVIRONMENT – BIO-PHYSICAL

To facilitate review of the bio-physical environment section the information provided is organized to match that required by the EPR Guidelines (Appendix A).

5.1 Design and Installation Details of Watercourse Crossings

5.1.1 Bridges

Four clear-span bridges will be required along the 31 km rail line (Figure 4-2). The names, locations, and preliminary designs of the bridges are:

- Canning Narrows Bridge (N52 54.522 W66 58.950) (Figure 5-1);
- Ironstone River Bridge (N52 55.245 W67 03.385) (Figure 5-2);
- Walsh River Bridge (N52 55.823 W67 05.181) (Figure 5-3); and
- Virot River Bridge (N52 54.648 W67 08.460) (Figure 5-4).

Bridge supports will be constructed using temporary coffer dams that will be installed above the high water level. No temporary or permanent structures are required to be in water or below the high water mark. No infilling is required for bridge construction.

A clear-span bridge is a structure that completely crosses a watercourse without altering the stream bed or bank. The bridge structure (including bridge approaches, abutments and footings) are built outside of the channel and above the high water mark such that no infilling of the stream channel occurs and stream flows are not constricted. A clear-span bridge is more preferred than a culvert as no structures are placed in the stream bed or banks and therefore there is no alteration of natural channel processes.

Figure 5-1 Preliminary Design of Canning Narrows Bridge

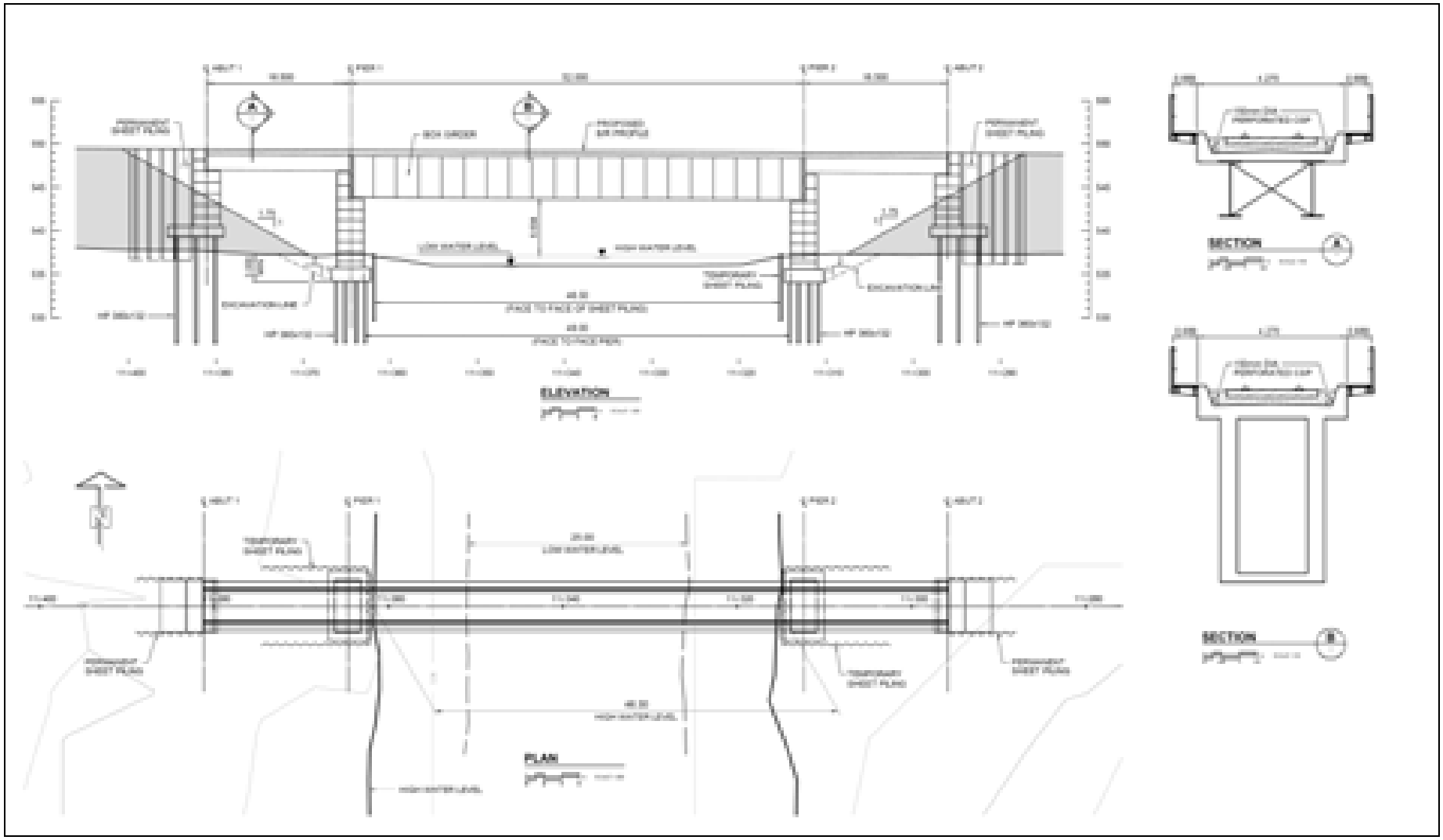


Figure 5-2 Preliminary Design of Ironstone River Bridge

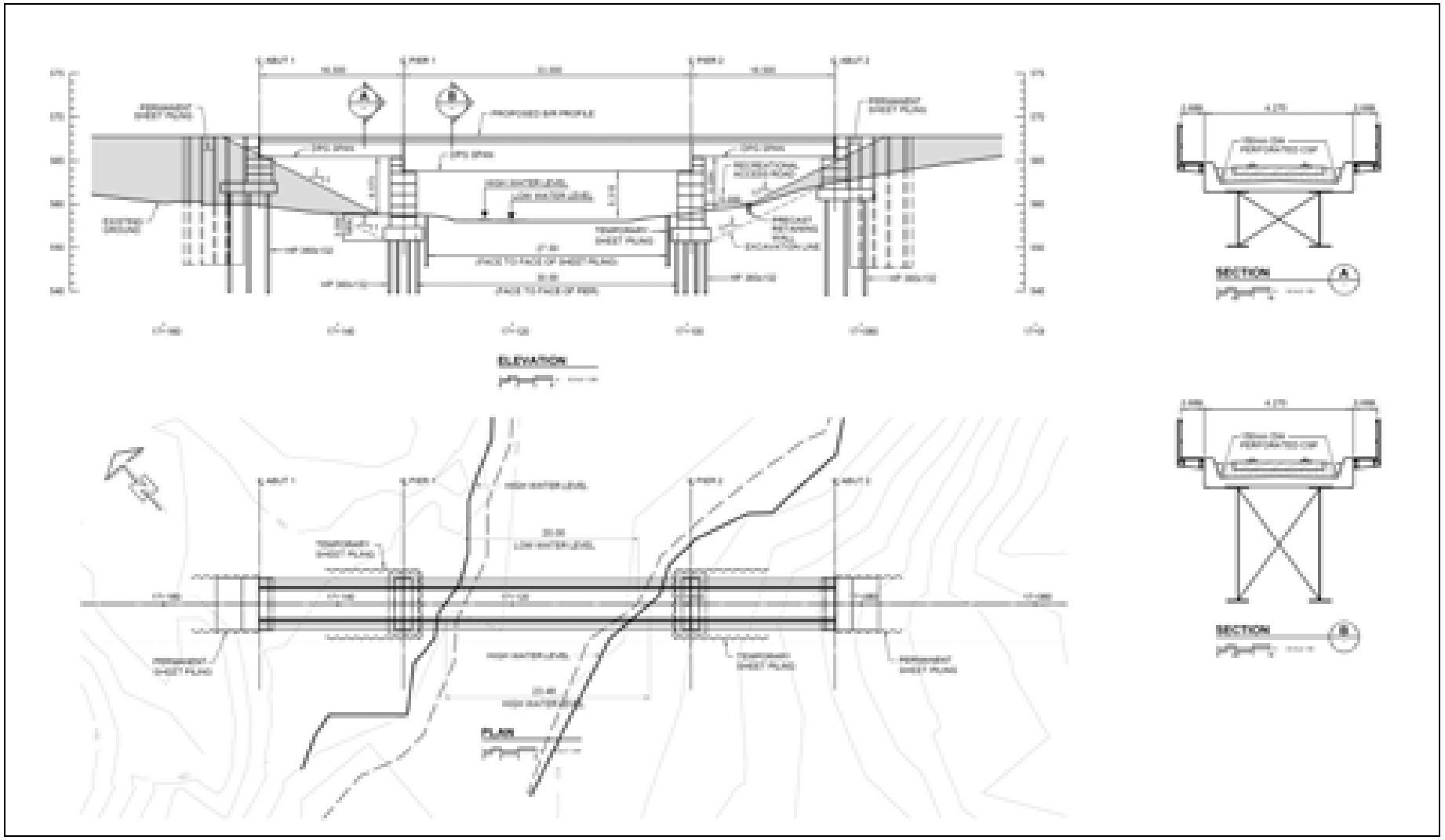


Figure 5-3 Preliminary Design of Walsh River Bridge

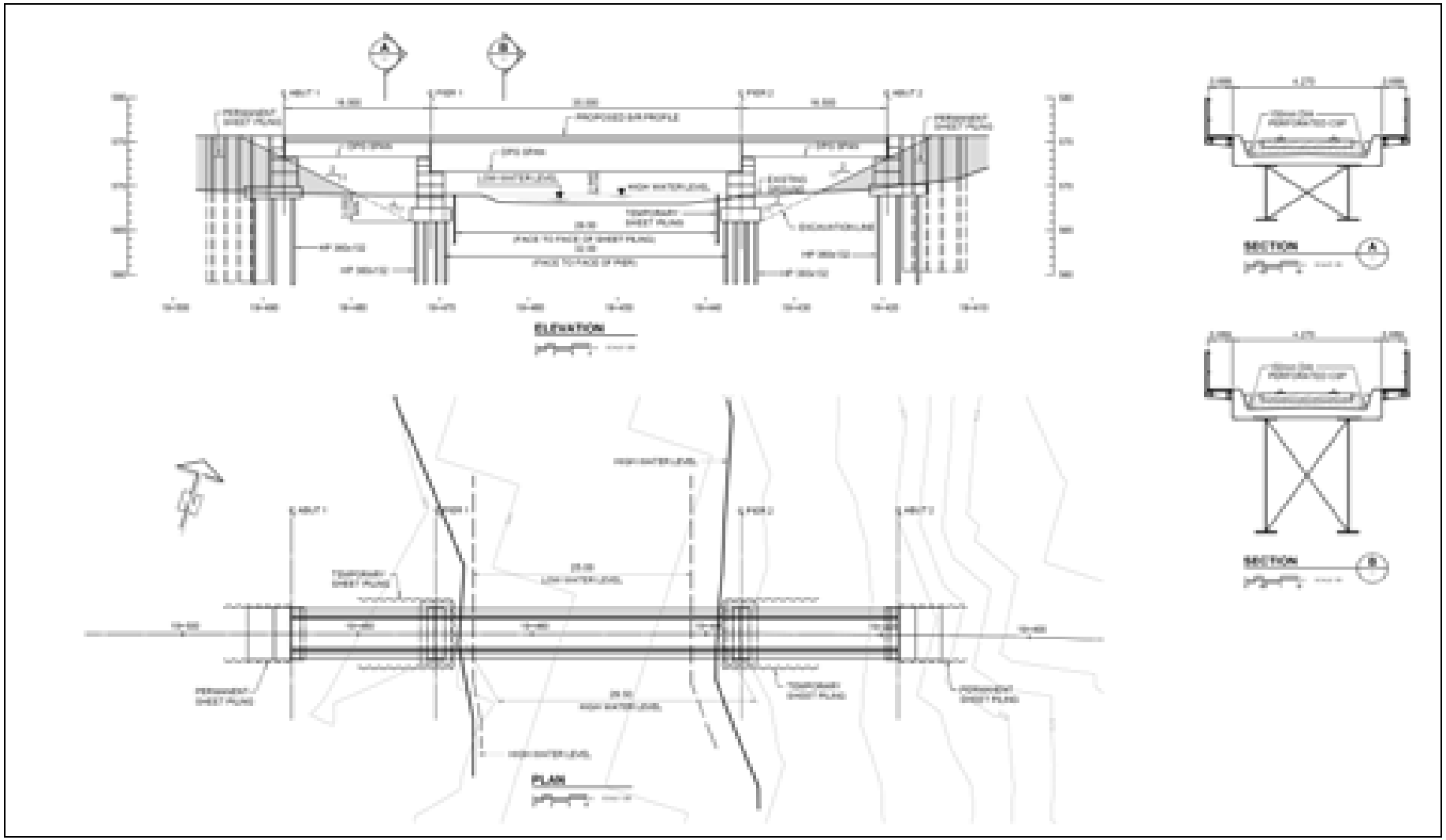
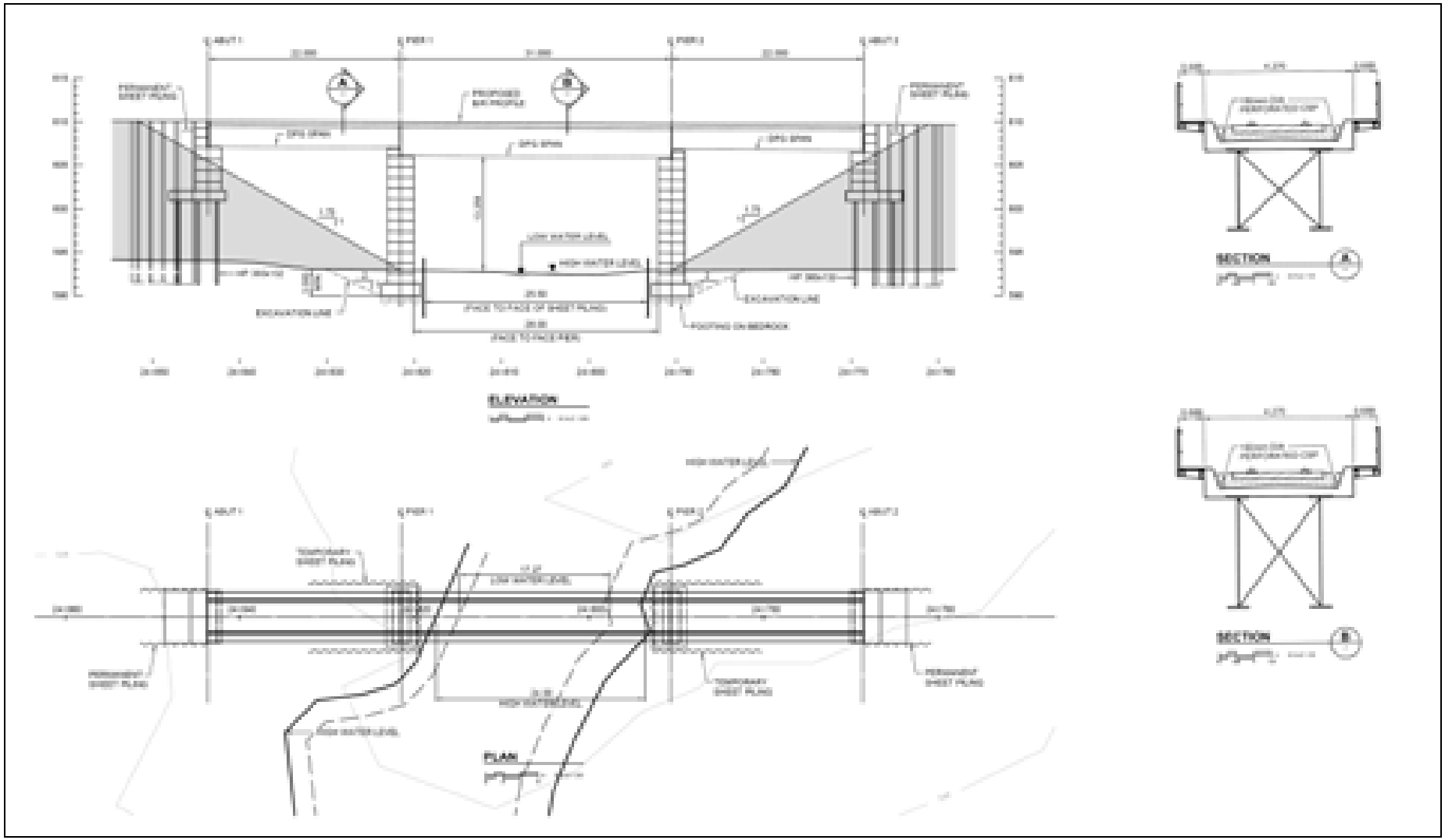


Figure 5-4 Preliminary Design of Virot River Bridge



5.1.2 Culverts

The railway route is shown in Figure 4-2. Stream crossing and bridge locations are indicated.

No infilling is required for the project:

- for construction of the railbed;
- near the large ponds located in the wetland southwest of the asphalt plant.
- for construction of the bridges;
- all culvert installations will be as wide as or wider than the stream.

The stream crossing at 6B (existing Wabush Mines twin culverts) will be constructed to avoid in-water work and any infilling (Figure 5-5). The existing headwall will be extended upward to hold fill that is adequate for the construction of a track parallel to the existing track. Thus, the culverts will not be altered or extended by the railway construction; no infilling will occur

All of the installed culverts will be of a similar design, as the crossings are all fairly narrow (1-3 m wide) and shallow (<1 m deep). Culverts will be of a standard design and installation including the following features:

- Culverts will be either cylindrical culverts or pipe arch culverts (Figure 5-6), depending on the size.
- Culverts will be countersunk;
- Substrate material (cobble) will be placed in the culvert to provide a range of flows and to provide resting and cover for fish;
- Culverts will be installed to keep water at both ends (Figure 5-7);
- For steeper gradients, baffles will be installed according to DFO guidelines to facilitate fish passage and maintain water throughout the culvert (Figure 5-8);
- Culverts may be oversized (with regard to the hydraulic design requirements). This will allow adequate countersinking, substrate placement and water depth for the protection of fish and fish migration; and
- Culvert width will be as wide as or wider than stream width, removing any need to infill around culvert installations.

Figure 5-5 Preliminary Design of Culvert 6B in Wabush Mines Rail Yard

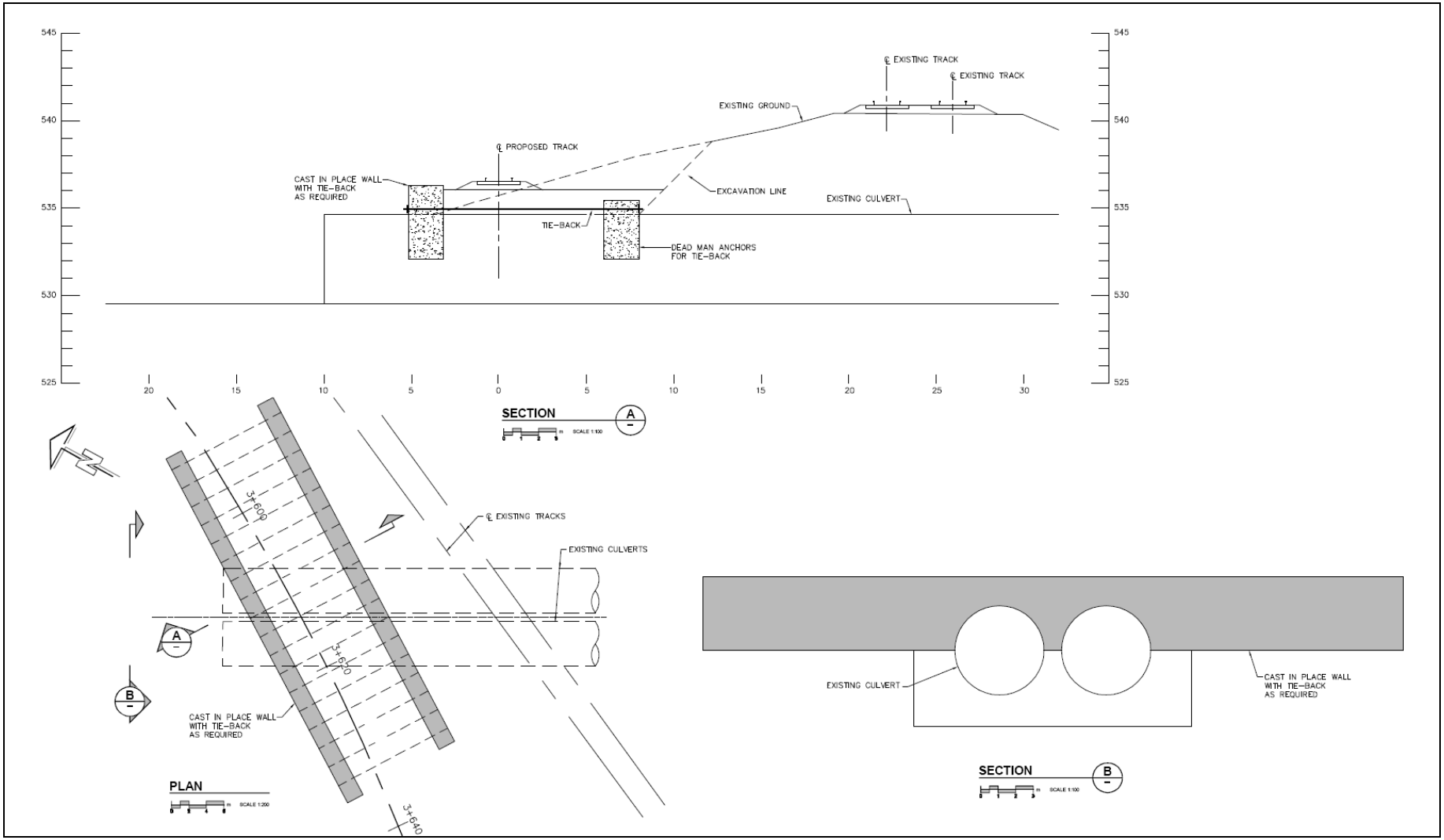
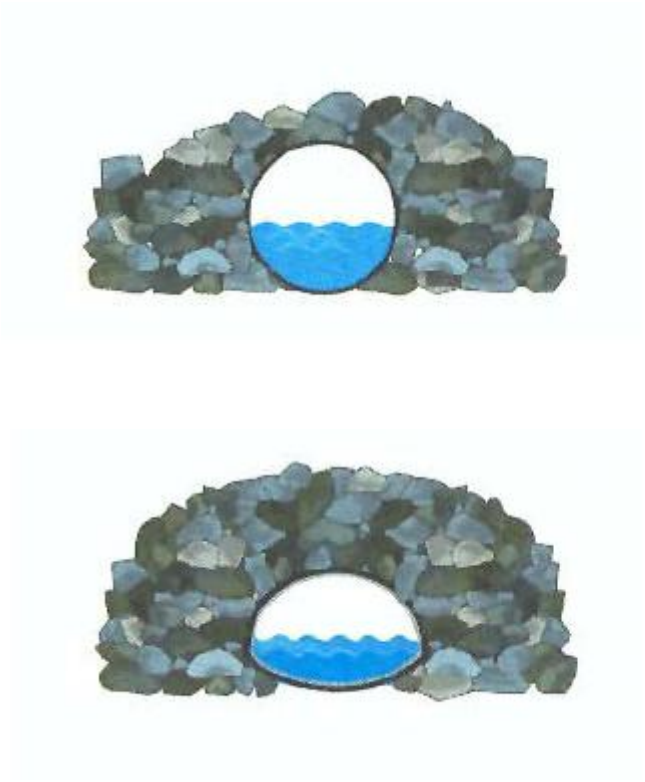


Figure 5-6 Diagram of Cylindrical and Pipe Arch Culverts



Cylindrical Culvert
If properly designed and installed does not limit fish passage. Can constrict stream width and create high velocities.

Pipe Arch Culvert
Good for low clearance installations. Wide bottom area allows for retention of natural substrates.

Source: Gosse et al. 1998

Figure 5-7 Typical Culvert Design Details

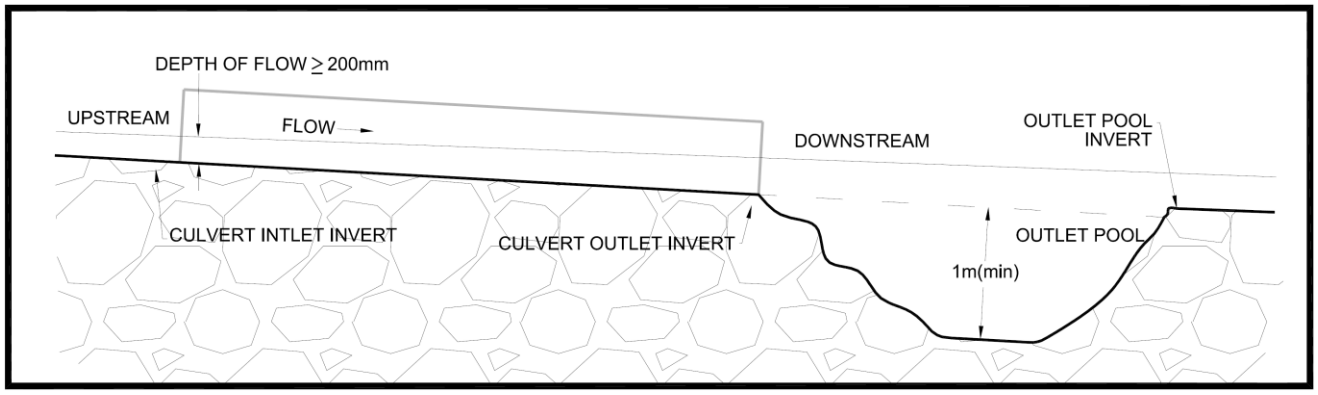
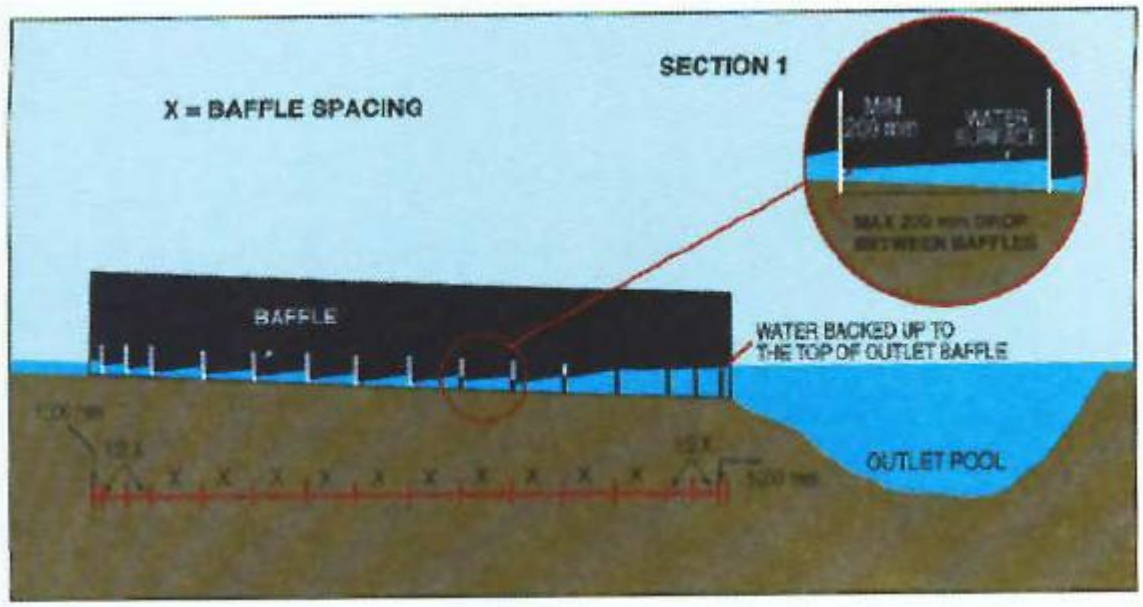


Figure 5-8 Typical Placement of Baffles in a Culvert



Source: Gosse et al. 1998

The Environmental Protection Plan (EPP) details the methods and precautions that should be implemented during culvert construction, as follows.

In those locations where culverts are required, application will be made as necessary to Newfoundland and Labrador Department of Environment and Conservation (DOEC) and Fisheries and Canada (DFO). The culverts used will be constructed in accordance with the Environmental Guidelines for Culverts from the DOEC, Water Resources Division. The following measures will also be implemented:

i) install culvert(s) in accordance with good engineering and environmental practices;

ii) unless otherwise indicated, all work should take place in dry conditions, either by the use of cofferdams or by diverting the stream.

- installation of cylindrical culverts shall be counter sunk only where necessary to protect fish habitat such that the culvert bottom is one-third the diameter below the streambed in the case of culverts less than 750 mm outside the diameter; for culverts greater than 750 mm outside diameter, the culvert bottom shall be installed a minimum of 300 mm below the streambed;
- in multiple (gang) culvert installations, install one culvert at an elevation lower than the others;

iii) ensure that the natural low flow regime of the watercourse is not altered;

iv) a culvert will not be installed before site specific information such as localized stream gradient, fish habitat type and species present have been evaluated. Culverts are to be installed using the guidelines provided in Gosse et al. (1998).

v) riprap outlets and inlets to prevent erosion of fill slopes;

vi) use culverts of sufficient length to extend a short distance beyond the toe of the fill material;

vii) use backfilling material that is of a texture that shall support the culvert and limit seepage and subsequent washing out;

viii) align culverts such that the original direction of stream flow is not significantly altered;

ix) remove fill and construction debris from the culvert area to a location above the peak flow level to prevent its entry into the stream;

x) confine construction activity to the immediate area of the culvert;

xi) fill material shall not be removed from streambeds or banks; except when installing a culvert when removal of material is necessary to ensure a flat foundation;

xii) minimize and restrict the use of heavy equipment in and near watercourses; where possible, an excavator will be used from shore rather than a bulldozer in the watercourse. Where it is absolutely necessary to do so, instream work will be performed by rubber tired vehicles only and will only be done in compliance with approvals from DOEC and DFO, respectively;

xiii) as required, cofferdams of non-erodible material shall be used to separate work areas from the watercourse when excavating for culverts and footings; and

xiv) cofferdams shall be removed upon completion of construction and the streambed returned as closely as possible to its original condition.

5.2 Buffer Zones, Blasting and Access Road Upgrades

Buffer zones of a minimum of 15 m of undisturbed vegetation will be maintained around all water bodies where possible. Generally, the railway route does not come within that distance of fish bearing water except for the stream crossings, which have been identified along the route. Erosion control measures will be implemented at stream crossing locations as described in the EPP. Buffer zones for various Project activities will follow the guidelines listed in Table 5-1.

Blasting activities in and near water will follow the guidelines provided by DFO (Wright and Hopky 1998).

Existing roads will be upgraded/expanded (minimal new construction) and used as a temporary access road during the construction period only. Some examples include the golf course road, the Walsh River road and the quarry road leading to Bloom Lake. The railway road bed itself will be used for primary access during construction. Some culverts may be replaced on the existing roads.

Table 5.1 Recommended Minimum Buffer Zone Requirements for Activities near Watercourses

Activity	Recommended Buffer Width
Development around watercourses in urban or other developed area	15 m depending upon site specific considerations
Resource roads or highways running adjacent to water bodies	20 m + 1.5 X slope (%)
Piling of wood and slash Grubbing	30 m
Construction of site camps Fuel storage Quarries and borrow pits	100 m
Source: Gosse et al. 1998	

5.3 Mitigation to Protect Fish Habitat

Measures to protect fish and fish habitat that will be detailed in an EPP are included in Appendix C. Sediment and erosion control measures are included in several of the EPP measures.

5.4 Fish and Fish Habitat

Four bridge locations and 13 culvert locations have been identified at stream crossings (Figure 4-2). Additional culverts will be installed for cross drainage at locations to be determined during final design.

Preliminary hydrological information on the crossing locations was determined in June 2008 from topo maps and an aerial survey. The results are summarized in Table 5-2 that includes:

- crossing identifier (number for culverts and names for bridges);
- location (Lat & Long);
- stream order;
- approximate upstream drainage area;
- presence of an upstream pond or lake;
- distance to upstream pond or lake;
- presence of downstream lake or river main stem (Walsh's River);
- distance to lake or main stem; and
- comments on bog drainage, intermittent nature, existing culverts.

This hydrological information indicates the size of the required water transfer structure (culvert or bridge) based on stream order[2], upstream drainage area, and whether the stream has a headpond or is bog drainage.

Preliminary fish habitat information, on the crossing locations, obtained at the same time, is summarized in Table 5-3 and includes:

- crossing identifier (number for culverts and names for bridges);

[2] Stream order is 1 if there are no upstream tributaries, 2 if there is one upstream tributary, 3 if there are two upstream tributaries, and so on…

- estimated mean channel width by category;
- flow type (Table 5-4);
- estimated substrate (Table 5-5); and
- comments on bog drainage, intermittent nature.

Table 5.2 Preliminary Hydrological Information for Stream Crossing Locations

				Upstream		Downstream		
Stream Crossing [1]	**Coordinates**	**Stream Order**	**Approximate Watershed Area (km^2)**	**Pond or Lake [2]**	**Distance to Crossing (km)**	**Lake or Main Stem [3]**	**Distance from Crossing (km)**	**Comment**
1A	N52 51.427 W67 14.540	1	<1	N	-	P	0.18	Intermittent [4]
1B	N52 51.400 W67 13.929	1	1-2	P	0.25	P	0.2	
1C	N52 51.562 W67 11.531	1	>2	P	1.8	P	1.0	Bog drainage area
1D	N52 51.832 W67 10.391	1	>2	N	-	P	1.2	Intermittent [5] Bog drainage [6]
2A outflow	N52 52.464 W67 09.911	2	>2	P	0.2	P	2.0	Bog drainage [6]
2A inflow	N52 52.538 W67 09.769	1	>2	N	-	P	0.1	Intermittent [5] Bog drainage [6]
Virot	N52 54.648 W67 08.460	3+	10+	L	0.98	L	1.2	
3A	N52 55.710 W67 05.968	1	<1	N	-	M	1.0	Bog drainage [6]
Walsh	N52 55.823 W67 05.181	3+	10+	L	3.6	M	-	
4A	N52 55.806 W67 04.632	1	<2	P	0.03	M	1.2	Intermittent [5]
4B	N52 55.416 W67 03.786	1	2	N	-	M	0.56	Intermittent [5] Bog drainage [6]
Ironstone	N52 55.245 W67 03.385	3+	10+	L	5.1	M	0.3	
5A	N52 55.026 W67 02.592	1	<2	N	-	M	0.6	Intermittent [4]
5B	N52 54.896 W67 00.357	3+	<10	P	1.9	M	2.1	
Canning	N52 54.522 W66 58.950	3+	10+	L	0.3	L	1.6	Lake habitat 0.1 km
6A	N52 55.454 W66 55.076	1	<1	L	0.4	L	0.01	Existing culverts
6B	N52 54.960 W66 53.430	3+	10+	L	0.7	L	0.01	Existing culverts

Notes:
1. Stream culvert crossings are numbered, bridges are named
2. Pond or Lake: P (pond), L (lake), or N (none)
3. Lake or Main Stem: P (pond), L (lake), or M (main stem of Walsh River)
4. Not shown on topo map
5. Identified as intermittent on topo map
6. Bog drainage area as shown on topo map

Table 5.3 Preliminary Fish Habitat Information for Stream Crossing Locations

Stream Crossing [1]	Channel Width [2]				Flow Type [3]	Substrate.[4]	Comment
	0-2 m	2-5 m	5-20 m	>20 m			
1A	√				Intermittent	Co, Bo, F	Intermittent [6]
1B	√				Riffle-Steady	Co, Bo, F	
1C	√				Riffle-Steady	Co, Bo, F	Bog drainage area [7]
1D	√				Riffle-Steady	Co, Bo, F	(intermittent) Bog drainage area
2A	√				Steady	F	Bog drainage
Virot			√		Riffle	Co, Bo	Bridge
3A	√				Intermittent		(intermittent) Bog drainage area
Walsh				√	Run	Co, Bo	Bridge
4A	√				Steady	F	(intermittent)
4B	√				Steady	Co, Bo, F	(intermittent) Bog drainage area
Ironstone				√	Rapids	Co, Bo	Bridge
5A	√				Intermittent	Co, Bo, F	intermittent
5B	√				Riffle-Steady	Co, Bo, F	
Canning				√	Rapids	Co, Bo, F	Bridge
6A	N/A				N/A	Co, Bo, F	Existing culvert
6B	N/A				N/A		Existing culvert

Notes:

1. Stream culvert crossings are numbered, bridges are named
2. Widths are estimated from the air or by measurements conducted by Genivar or JW
3. Flow is based on observations from aerial surveys on 10 and 27 June
4. Substrate: cobble (Co), boulder (Bo), fines (F)
5. Beak habitat types are generally only valid for salmonids
6. Streams observed to be intermittent or designated (intermittent) based on topo map
7. Bog drainage area as shown on topo map
8. N/A means not applicable as stream is already in a culvert

Table 5.4 Classification of Flow

Flow Type	Description
Run	Swiftly flowing water with some surface agitation but no major flow obstructions, coarser substrate (gravel, cobble, boulder).
Riffle (Rif)	Shallower section with swiftly flowing, turbulent water with some partially exposed substrate (usually cobble or gravel-dominated).
Pocketwater	Turbulence increased greatly by numerous emergent boulders, which create eddies or scour holes (pockets) behind the obstructions.
Steady (or Flat)	Water surface is smooth and substrate is made up of organic matter, sand, muck, and fine gravel. This habitat differs from a pool due to length, associated with low gradient. This habitat type generally has a flat bottom.
Pool	Deeper area comprising full or partial width of stream; due to depth or width, flow velocity is reduced. Pool has rounded surface on bottom.
Cascade (Cas) (rapids)	Area of steeper gradient with irregular and rapid flows, often with turbulent white water. Rapids are primarily associated with larger stream sections and rivers. In larger rivers, it is recommended that the survey crew not attempt to conduct cross sections in these types of habitat.
Glide	Wide, shallow pool flowing smoothly and gently, with low to moderate velocities and little or no surface turbulence. Substrate usually consists of cobble, gravel and sand.
Source: Sooley et al. (1998)	

Table 5.5 Classification of Substrate

Substrate	Description
Bedrock (Br)	Continuous solid rock exposed by scouring forces.
Boulder (B)	Boulder-sized rocks from 25 cm to greater than 1 m in diameter.
Rubble (R)	Large rocks from 14 to 25 cm in diameter.
Cobble (C)	Moderate to small size rocks from 3 to 13 cm in diameter.
Gravel (G)	Small stones from 2 mm to 3 cm in diameter.
Sand (Sa)	Fine deposits ranging from 0.06 to 2 mm in diameter.
Silt (Si)	Fine material less than 0.06 mm in diameter, often carried by currents.
Muck (M)	Silt and clay containing greater than 85% organic (detritus).
Clay (Cl)	Material of inorganic origin with greasy feel between fingers and no apparent structure.
Adapted from: Bradbury et al. (2001).	

In July 2008, a field team from Jacques Whitford ground surveyed all stream crossing and bridge locations identified in Iteration 4. Each crossing location was identified by GPS coordinates and the site was surveyed for 25 m (or 50 m) upstream and downstream of that location. Stream width, depth, and flow were recorded and flow measurements were obtained at most crossings. Substrate and bank material were noted as well as riparian vegetation.

Culverts will be installed in fish bearing streams. The fish habitat information on these locations is summarized in Table 5-6 and the preliminary culvert dimensions are shown in Figure 5-7.

Some culvert crossing locations were shifted in Iteration 5 (provided to Transport Canada, DFO, and Department of Environment and Conservation, Assessment Division on 17 July 2008) and some may be shifted again in subsequent iterations. However, the information gained at the surveyed crossings (Table 5-6) will adequately characterize the types of crossings and likely habitat that is present, even if the crossings are shifted. Additional information on „new' crossing locations will be obtained by ground survey teams who are gathering information for detailed culvert design. Representative photos of the stream crossing (culvert locations are in Appendix B, which also contains photos of the Virot and Ironstone bridge locations. Photos of the Walsh River and Canning Narrows bridge locations are in Section 5.9 below. A summary of information at bridge crossing locations is presented in Table 5-8. As these are clear-span structures, all fish habitat descriptors have not been included in the table.

Fish sampling (electrofishing and gillnet) was conducted where possible at all stream crossing and bridge locations surveyed by the field team. The sampling program produced catches of brook trout, burbot, lake chub, longnose dace, longnose sucker, and slimy sculpin. The fish species found at each bridge and culvert location are listed in Table 5-6 and 5-8.

Additional gillnet sets were conducted in Huguette Lake to determine species presence in the larger standing waterbodies. This resulted in catches of lake trout, lake whitefish, and round whitefish. Prior studies conducted in the Wabush Lake area and ponds and stream around Wabush Mines took additional species that included creek chub and northern pike. Ouananiche (land-locked Atlantic salmon) have also been taken locally by anglers (Carson Gibson pers. comm.).

Table 5.6 Summary of Fish Habitat Information for Culvert Crossings

Crossing Number	Depth (m)	Width (m)	Flow Type	Substrate					Bank Vegetation	Estimated Gradient	Fish Present	Flows at Crossing (m/s)	Comments
				M	G	C	R	B					
1A	0	0	-	-	-	-	-	-	-	-	-	no visible flow	Could not land at this location. Video and photos taken from the air. No stream was observed just a few pockets of water.
1B	0-1	1.8	Steady	40	10	10	10	30	G, S, T	0-1%	Brook trout	0, 0, 0 0, 0, 0 0.29, 0, 0.29	No flows upstream at 50m (stream goes underground), however flows were taken at 50 m downstream.
1C	0-1	0.7	Riffle/ Pool	0	15	30	30	25	G, S, T	1-3%	Brook trout Burbot Longnose dace Lake chub	0.04, 0.11, 0.03 0.09, 0.16, 0.08 0, 0.08, 0.09	Flows taken as well at 50 m downstream and 50 m upstream from crossing site at 1/4, 1/2 and 3/4 of stream width
1D	0-1	1.6	Flat/ Riffle	20	5	0	5	70	B, G, S, T	0-1%	Brook trout	0.04, 0.03, 0 0, 0, 0 0, 0.06, 0.14	No flow at crossing site, however flows were taken at 50 m upstream and downstream of crossing site at 1/4, 1/2, 3/4 of stream width
2A Outflow	0-1	0.9	Run	10	10	10	10	60	G, S, T	0-1%	Brook trout Burbot Slimy sculpin	0, 0, 0 0.04, 0.08, 0.04 0.10, 0.09, 0	No flows upstream at 50m however flows were taken downstream at 50m
2A Inflow	0-2	0.6	Flat/ Steady	100	0	0	0	0	B, G, S, T	0-1%	Brook trout	no visible flow	No flow in this section
3A	0-1	0.3	Flat/ Riffle	100	0	0	0	0	B, G, S, T	0-1%	No sampling	flow not possible 0, 0.27, 0 flow not possible	No electrofishing too warm, no fish observed. Flow taken at middle of channel at crossing site, no flow at 1/4 and 3/4 of stream width. No flows at 50 m downstream and 50 m upstream from crossing site.
4A	0-1	1.3	Steady	100	0	0	0	0	B, G, S, T	0-1%	No sampling	0, 0.08, 0 0, 0, 0 0, 0.06, 0	No electrofishing too warm, few fish observed. Flows taken as well at 50 m downstream and 50 m upstream from crossing site at 1/4, 1/2 and 3/4 of stream width
4B	0-1	1	Riffle	75	5	5	5	10	B, G, S, T	0-1%	Brook trout	no visible flow 0.11, 0.07, 0 no visible flow	No flows taken at 50 m downstream (no flow), no flows at 50 m upstream (stream goes underground)
5A	0-1	0.3	Riffle	95	5	0	0	0	NA	NA	NA	no visible flow	No flows, no channels, flowing water underground (forest), could not electrofish, not enough water
5B	0-1	1.9	Riffle	0	20	50	30	10	B, G, S, T	1-3%	Brook trout	0.54, 0.30, 0.21 0.33, 0.63, 0.48 0.19, 0.23, 0.27	Flows taken as well at 50 m downstream and 50 m upstream from crossing site at 1/4, 1/2 and 3/4 of stream width
6A	-	-	-	-	-	-	-	-	-	-	-	-	Existing culvert waste rock and haul road
6B	-	-	-	-	-	-	-	-	-	-	-	-	Existing culvert under Wabush Mines railway

Legend for Table 5.6

Crossing #	Locations are shown on Figure 4-2 and coordinates provided on Table 5-2
Depth	Range in water depth in metres
Width	Stream width at crossing location
Flow	As defined in Table 5-4
Substrate	Muck (M), Gravel (G), Cobble (C), Rubble (R), Boulder (B) – little or no clay, silt, sand and bedrock (Table 5-5)
Vegetation	Bog (B), Grass (G), Shrubs (S), Trees (T)
Flows	Measured at 60% depth at ¼, ½, and ¾ stream width – at up to three locations
Comments	Comments recorded in the field notes

Table 5.7 Preliminary Culvert Dimensions

Crossing Number	Water Depth (m)	Stream Width (m)	Culvert Length (m)	Culvert Width (m)	Culvert Height (m)
1A	0	0	13	2.5	1.8
1B	0-1	1.8	31	2.6	1.8
1C	0-1	0.7	36	3.9	2.5
1D	0-1	1.6	25	4.1	2.6
2A Outflow	0-1	0.9	52	2.9	2.0
2A Inflow	0-2	0.6	52	2.9	2.0
3A	0-1	0.3	27	2.1	1.6
4A	0-1	1.3	22	2.5	1.8
4B	0-1	1	19	2.5	1.8
5A	0-1	0.3	52	2.5	1.8
5B	0-1	1.9	48	6.3	4.0

Table 5.8 Summary of Stream Crossing Information for Bridges

Stream Crossing	Location	Width (m)	Depth (m)	Water Velocity [1]	Substrate	Vegetation	Fish Species
Virot Bridge	N52 54.648 W67 08.460	13	0-1	Riffle/run (12)	Bo, R, (G, Co)	G, S, T	B, BT, LC, LND, SS
Walsh Bridge	N52 55.823 W67 05.181	~20	0 to>2	Run (2)	Bo, R, G	G, S, T	BT, LC, LND, SS
Ironstone Bridge	N52 55.245 W67 03.385	17	0-1	Run/riffle (16)	Bo, R, (Co, G)	G, S, T	BT, LND
Canning Bridge	N52 54.522 W66 58.950	38	0 to >1	Rapids (9)	Bo, R, Co, G, F	G, S, T	B, BT, LC, LND, LNS, SS

Legend:
1. Number of velocity measurements are listed in brackets

Substrate:
fines (F), gravel (G), cobble (C), rubble (R), boulder (Bo), bedrock (B) – Listed in order of prevalence

Vegetation:
bog (B), grass (G), shrubs (S), trees (T)

Fish:
brook trout (BT), burbot (B), lake chub (LC), longnose dace (LND), longnose sucker (LNS), slimy sculpin (SS)

5.5 Walsh River and Canning Narrows Bridges

Two of the bridges, Canning Narrows (N52 54.522 W66 58.950) and Walsh River (N52 55.823 W67 05.181), have been deemed to be on navigable waters by Transport Canada. Information on these two structures has been provided to Transport Canada along with a request for Project Review (dated 18 August 2008).

5.6 Property Ownership

The area surrounding the proposed Walsh River Bridge is Crown Lands and intent to apply for title from Crown Lands Division was advertized on 19 July 2008.

The land above high water on the east side of the proposed Canning Narrows Bridge is under Mining Lease to Wabush Mines. The land on the west side of the bridge is Crown Lands and intent to apply for title from Crown Lands Division was advertized on 19 July 2008.

5.7 Walsh River and Canning Narrows Watercourse Descriptions

The details of the waterways at the proposed bridge sites are provided in Table 5-9.

Table 5.9 Watercourse Details at Proposed Walsh River and Canning Narrows Bridge Locations

Dimension	Walsh River Bridge	Canning Narrows Bridge
Width at low water	25 m	25 m
Width at high water	27 m	50 m
Approximate maximum depth	1-2 m	1 m
Approximate mean depth	1 m	< 1 m
Flow characteristic	Smooth run	Rapids
Predominant substrate	Boulder, rubble, gravel	Boulder, rubble, cobble
Bank material	Boulder, rubble	Boulder, rubble, cobble
Upstream channel	200 m to rapids	300 m to Long Lake
Downstream channel	100 m to rapids	1400 m to Canning Lake

5.8 History of Waterway Use

Walsh River is an area of recreational boating use and winter snowmobiling. There are no outfitting or other commercial activities in this area (Carson Gibson pers. comm.). Canning Narrows is also an area of recreational boating.

5.9 Photographs of Walsh River and Canning Narrows Bridge Locations

The Canning Narrows Bridge location is indicated with a line on Photos 1 and 2 (Figure 5-9), which provide upstream and downstream views of the stream. The Walsh River Bridge location is indicated with a line on Photo 3 (Figure 5-9). Upstream and downstream views at the Walsh crossing are shown in Photos 4 and 5 (Figure 5-9).

Figure 5-9 Photos of Canning Narrows and Walsh River Bridge Locations

1 Canning Narrows Looking Upstream

2 Canning Narrows Looking Downstream

3 Walsh River Bridge Location

4 Walsh Crossing Looking Upstream

5 Walsh Crossing Looking Downstream

5.10 Preliminary Construction Drawings of Bridges

Preliminary construction drawings of Canning Narrows and Walsh River bridges are shown above in Figures 5-1 and 5-3.

5.11 Inbound Goods and Materials

There are no plans to move inbound goods, materials, substances and operational supplies including dangerous goods (and associated frequencies) along the railway line in the mine/mill/railway construction and operation phases.

5.12 Type of Rail Car for Transport of Iron Concentrate

Concentrate will be transported in open rotary gondolas.

5.13 Sources of Quarry and Ballast Material

All quarry and ballast material that cannot be supplied from cut & fill operations along the right-of-way will be supplied by a contractor.

5.14 Cut and Fill Volumes

Based on the current route optimization (Iteration 6B), the estimated quantities of cut and fill are: 1,000,000 m^3 of rock cut and 1,030,000 m^3 of required fill. There will also be 1,830,000 m^3 of overburden removed.

5.15 Roadbed Aggregate on Wabush Mines Property

Roadbed aggregate required for construction on the Wabush Mines property will be supplied by a contractor from sources determined by the contractor.

6.0 ENVIRONMENT – SOCIO-ECONOMIC

6.1 Detailed Socio-economic Impact Statement

6.1.1 Background

Iron mining activity, especially by the Iron Ore Company of Canada (IOC) and Wabush Mines, has made a major contribution to the economy of Western Labrador and the Province of Newfoundland and Labrador as a whole. Recent increases in metal prices have led to new iron ore mining investments and plans, including an IOC expansion and new or revived mining projects by Labrador Iron Mines, New Millennium Capital and Consolidated Thompson.

The Bloom Lake Railway Project (the Project) will facilitate further such economic development by making a major contribution to the development of the industrial transportation infrastructure of, and related to, Western Labrador. In particular, the Project will:

- be constructed and operated by a Labrador-based third party consortium (referred to as the „Bloom Lake Railway'), which will be available for use by other companies and will improve the commercial viability of mineral resources along and in close proximity to it. There is a number of such prospects, and if potentially commercial reserves are discovered that could benefit from the railway, the Bloom Lake Railway will cooperate in their development by facilitating use, and if necessary realignment, of the line;
- participate with QNS&L in expanding its capacity over and above what is required to ship Bloom Lake concentrate ore; and
- see the construction of new multi-user port shipping facilities in Pointe-Noire, Québec. This multi-million dollar investment will increase the competitiveness of existing and potential Labrador mines by allowing them, for the first time, access to such a facility, permitting them to use super cape-size carriers to ship ore to world markets.

6.1.2 Economic Benefits Approach

In addition to providing new infrastructure that will contribute to the economic development of Labrador and the Province, there will also be substantial direct and indirect impacts resulting from first, the construction of the railway and secondly, from its operation. These benefits will include direct employment of and income to those working directly on the Project, indirect employment and income impacts to workers employed with the main contractors providing goods and services to the Project, and induced impacts, which are generated by those working directly and indirectly on the project spend their incomes in the economy.

This section provides direct, indirect and induced employment estimates for each of the construction and operating phases of the Project.

6.1.3 Construction Phase Impacts

6.1.3.1 Direct Impacts

There will be substantial short-term employment benefits during the construction phase of the Project. This will involve an average total of 160 workers employed over the 12 month duration of construction, for a total of 160 direct person-years of employment. The construction phase employment is described, by NOC Code, in Table 6-1.

Table 6.1 National Occupation Classification Codes, Construction

Occupation	# of Employees	NOC Code
Purchasing / Material Manager	1	0113
Contract Manager	1	0113
Engineering Manager	1	0211
Camp Manager	1	0632
Construction Manager	1	0711
Purchasing Agent	1	1225
Civil Engineer	3	2131
Bridge Engineer	1	2131
Environmental Engineer	1	2131
Geotechnical Engineer	2	2144
Land Surveyor	2	2154
Legal Surveyor	1	2154
Weld Inspector	1	2261
Bridge Inspector	1	2264
Construction Inspector	1	2264
Railway Construction Inspector	1	2264
Excavating Contractor	1	7217
Foreman/woman, Railway Gang	2	7217
Track Laying Foreman/woman – Railway	3	7217
Railway Road Bed Construction Foreman/woman	1	7217
Steel Fabricator	6	7263
Concrete Finisher	6	7282
Construction Equipment Mechanic	1	7312
Railway Mechanic, Heavy Equipment	1	7312
Boom Truck Crane Operator – Railway	2	7371
Bridge Crane Operator	1	7371
Blaster, Construction	2	7372
Driller, Construction	2	7372
Truck Driver	15	7411
Backhoe Operator	3	7421
Bulldozer Operator	6	7421
Excavator Operator	8	7421
Grader Operator	2	7421
Heavy Equipment Operator	12	7421
Ballast Regulator Operator – Railway	1	7432
Equipment Operator, Railway	6	7432
Machine Operator – Railway	6	7432
Rail Saw Operator – Railway	1	7432
Spike Machine Operator – Railway	1	7432

Occupation	# of Employees	NOC Code
Tie Tamper Operator – Railway	1	7432
Flagman/Woman	2	7611
Construction Labourer	20	7611
Concrete Former Helper	1	7611
Helper, Steel Erector	2	7611
Railway Labourer	25	7622
Total	**160**	

Many of these positions can be filled from within Labrador West, which will receive hiring preference under the Consolidated Thompson/Bloom Lake Railway Benefits Policy (Appendix D). However, given the tight construction labour market in Newfoundland and Labrador, and in Labrador West in particular, Bloom Lake Railway will (like the companies constructing such other current projects as Voisey's Bay and Duck Pond mines, and such proposed ones as the Lower Churchill hydroelectric generation project and Vale-Inco Long Harbour mineral processing plant) fill any positions that cannot be filled locally by using a commute system. This will see Provincial Airlines Limited (PAL) flying construction workers to and from airports elsewhere in Labrador, and in Newfoundland, via Wabush Airport.

This commute system will deliver Project-related economic benefits to those parts of Labrador and the Province in which workers and their families live, as well as contributing to the economic health and viability of the Wabush Airport. In addition, the construction and use of a complex providing accommodations and recreation and canteen facilities potentially for up to 200 construction workers, management personnel and consultants will require additional construction and catering workers. The complex will also ensure that the Project does not contribute to the housing market and related social problems currently being experienced in Western Labrador (see Section 6.2).

This high-quality accommodations complex will be constructed and managed by a specialist industrial accommodations contractor. While it may be decommissioned upon completion of the Project, Bloom Lake Railway understands from potential accommodations contractors that it may be kept in service, assisting in addressing the housing needs of other subsequent projects.

Project construction will last from October 2008 to September 2009. As such, it will be complete in advance of the construction labour requirements of such Labrador projects as the Lower Churchill hydroelectric generation project (peak employment 1,700, construction period 2010 to 2018) and Aurora uranium mine (peak employment 700, construction period 2011 to 2014), and it will therefore not be competing with these projects for labour. Indeed, the Project will provide an opportunity for some local and other Newfoundland and Labrador residents to further develop their skills and employment experience, thereby assisting in the development of the labour force for these subsequent projects. The expansion projects being undertaken by IOC are, however, ongoing and will compete with the Bloom Lake Railway Project.

Overall, it is anticipated that between 80 and 90 percent of construction phase direct employment will accrue to Newfoundland and Labrador, much of it in Labrador. It is anticipated that the railway-specific engineering, design and specialized project management positions will be filled from outside the Province.

6.1.3.2 Indirect Impacts

The local share of supply and services contracts will be maximized through the Consolidated Thompson/Bloom Lake Railway Benefits Policy (Appendix D), which builds on, and is consistent with,

Consolidated Thompson's past performance in delivering local benefits. For example, the following contracts have been awarded to Newfoundland and Labrador companies:

- Air Travel: Consolidated Thompson has contracted St. John's-based Provincial Airlines Limited (PAL) to provide air transportation to and from the Wabush Airport for contractor crews and Bloom Lake Railway employees and management. This contract will extend through construction and operations to transport workers from all points in Newfoundland and Labrador. (PAL will also be providing air transportation, through Wabush, for the associated mine at Bloom Lake, Québec (see below).)
- Pumps: All of Consolidated Thompson's operating pumping devices have been purchased from Weir Canada's Labrador City office and shop, which will maintain them on a continuous basis. This contract is worth over $3 million.
- Crane and Pickup Rentals; Environmental Cleaning Services: Provided by GSC in Labrador City under a contract worth in excess of $100,000.
- Trucks: Consolidated Thompson has purchased 13 pick-ups from Carol Auto Labrador City, which also maintains them.
- Geotechnical Surveys: Consolidated Thompson has entered into a contract with Jacques Whitford Limited in St. John's to perform required geotechnical surveys on the railway footprint in order to determine the final routing.
- Geotechnical Assistance: Provided by RSM Mining in Labrador City.
- Environmental Preview Report: Jacques Whitford was retained to prepare this report as the next phase of the environmental review for the Project.
- Land Surveying: Parrott Surveying in Happy Valley-Goose Bay is being retained to conduct all required land surveys in the proposed right-of-way.

The construction of the Bloom Lake Railway will see the procurement of a wide range of goods and services, the majority of which are available locally. They include:

- Construction camp catering, janitorial and security services;
- Fuel and refuelling services;
- Welding and machining goods and services;
- Hotels and catering services;
- Taxi, car rental and rail passenger and air services;
- Repair shops;
- Hardware stores miscellaneous tools and small equipment;
- Heavy equipment rental (cranes, excavators, loaders); and
- Local contractors (construction, electrical, mechanical).

The construction-related contracts to be let include the following that are expected to be awarded, as per the Consolidated Thompson/Bloom Lake Railway Benefits Policy (Appendix D), to Labrador or Newfoundland companies include:

- Camp and catering;
- Clear cutting;
- Rail bed preparation;
- Bridge and culvert installation;
- Highway crossing installation; and
- Independent environmental monitoring.

In some cases, Project materials and services are not available in Labrador or, indeed, the Province, and there is no reasonable expectation of this being changed as a result of the Bloom Lake Project or any foreseeable level of provincial demand. For example, the following materials and services will in all likelihood need to be brought to the Project site from outside the Province:

- Rails and other track materials (e.g. tie plates, spikes and splice bars);
- Rail ties and switch ties;
- Track installation;
- Railway maintenance of way (MOW) equipment;
- Signalling and communication equipment and services; and
- Railway engineering consulting services.

Depending on the source and characteristics, these materials will be transported by road from or through Québec, or by sea to Sept-Iles and then to the site via the QNS&L. In the latter case, this will represent back-haul traffic and hence it will not interfere with normal iron ore traffic on the QNS&L.

Based on the Project parameters, and in particular the fact that a significant portion of the capital costs are related to rail track materials which are not available in the Province, it is anticipated that between 50 percent and 60 percent of the value of all construction phase contracts will accrue to Newfoundland and Labrador, the great majority of them to Western Labrador.

The multipliers used to estimate the indirect and induced impacts were selected based on a review of various economic impact reports (Hatch Mott Macdonald, 2004; Economics and Statistics Branch Department of Finance, 2003; Minerals Development Branch, 2008) combined with the consulting teams' experience with developing multipliers for the Newfoundland and Labrador economy. When combined with the specific project parameters, employment multipliers of 0.3 to 0.6 for indirect employment and 0.7 to 0.8 for induced employment resulted in the following employment impacts for the construction phase (Table 6-2).

Table 6.2 Direct, Indirect and Induced Employment During Construction

Employment Type	Person-Years
Direct	160
Indirect	48 to 96
Induced	112 to 128
Total Employment	**320 to 384**

6.1.4 Operation Phase Impacts

The Bloom Lake Railway Project will also help build the capacity of, and support, local labour market and businesses during operations. For example, the operating costs of the railway will provide a smaller level of long-term (an estimated 34-years duration) employment benefits to Western Labrador. It will directly require 12 full-time positions, including a rail operations manager, a logistics manager, train operations personnel, inspection and maintenance personnel in Wabush to operate line (Table 6-3).

Table 6.3 National Occupation Classification Codes, Operations and Maintenance

Occupation	# of Employees	NOC Code
Operations Manager	1	0713
Supply Chain Coordinator	1	0713
Locomotive Engineer	4	7361
Utility Person	4	7431
Track Maintenance Employee	1	7431
Track Maintenance Foreman	1	7221
Total	**12**	

The number of rolling stock maintenance personnel based in Wabush may increase over time, as the rolling stock ages and as and if the amount of such equipment grows as Bloom Lake Railway traffic increases or as new companies use it. Bloom Lake Railway will be proactive in seeking to increase the amount and types of rolling stock maintenance occurring in Western Labrador, providing such activity can be justified on a commercial basis.

The majority of the railway operation workers will be hired locally, given the nature of the occupations involved, the lead time available to train local people for them, and the Consolidated Thompson/Bloom Lake Railway Benefits Policy. This policy (see Appendix D), which will apply to Bloom Lake Railway and Project contractors, will give employment preference to, first, qualified residents of Labrador, and then qualified residents of the Province as a whole. The hiring process will see all positions being advertised in Labrador and on the Island. Bloom Lake Railway will also liaise with the College of the North Atlantic to investigate training local residents for these positions. However, it is recognized that there are few senior and experienced railway operation personnel in Labrador or Newfoundland, and these positions may have to be filled from elsewhere.

All these Bloom Lake Railway operations workers and their families will live in Western Labrador and contribute to its economy and community life. In the former regard, these workers will have an average annual total income of approximately $90,000.

These operations positions will have modest spin-off employment effects. It is estimated that, in Western Labrador over the course of Project operations the project will result in the creation of an

additional 12 to 15 full-time equivalent (FTE) indirect and induced jobs for a total Project operations phase employment of 24 to 29 FTE positions.

Railway operations will also require a wide range of goods and services, the majority of which are available locally. For example, a review of local capabilities indicates that the following will be available on a commercial basis from within Western Labrador:

- Fuel and refuelling services;
- Welding and machining goods and services;
- Hotels and catering services;
- Taxi, car rental and rail passenger and air transportation services;
- Repair shops;
- Hardware stores miscellaneous tools and small equipment;
- Heavy equipment rental (e.g. cranes, excavators and loaders); and
- Local contracting services (e.g. construction, electrical and mechanical).

6.1.5 Conclusions

In conclusion, the Bloom Lake Railway Project will make a significant contribution to the further economic development of the Province and, in particular, Western Labrador, by:

- Providing local employment and incomes during construction and operations;
- Providing local business during construction and employment;
- Increasing the capacity and skills of local labour force and businesses, in advance of Lower Churchill and other projects;
- Facilitating further mining development by putting in place these new labour and business capabilities and new transportation infrastructure, thereby making existing and new Labrador projects more competitive globally;
- The possible development of rolling stock maintenance capabilities within Labrador; and,
- Facilitating access to market for existing and developing Labrador mining operations through the construction of the new multi-user port facility at Pointe-Noire.

6.2 Community Effects

The closest communities to the Bloom Lake Railway are, at its eastern end, Labrador City and Wabush. As was discussed above, they will be the location of the railway's corporate office, the home of many Project employees and contracting companies, and the site of a construction accommodations complex. Wabush Airport will be used by many Project personnel and some supplies.

6.2.1 Communities Overview

Labrador City and Wabush are located in the Labrador interior, about 30 km from the Québec border, and are commonly referred to as Labrador West. While fully provided with services and amenities for residents, the communities are more than 550 km away from any other major center. The main economic engines of Labrador City and Wabush are two iron ore mining companies, IOC and Wabush

Mines, which employ approximately 1,900 and 990 workers respectively (Hyron Regional Development Corp. 2007).

Iron ore deposits were first examined in Western Labrador in 1933 and Labrador City, or Carol Lake as it was originally known, was constructed as a mining town in 1959. It was incorporated in 1961. Wabush was originally an exploration camp about 2 km from its current location. It began its transition into a town in 1962 and was incorporated in 1967. Initially workers, supplies, construction materials and heavy equipment had to be airlifted into the towns, but in 1960 the QNS&L rail line was completed, connecting Labrador West and the Québec North Shore (Labrador West 2008).

Labrador West is experiencing rapid changes in its demographics. Third generation families are becoming commonplace and a large percentage of retirees are choosing to remain in Labrador West. However, the total populations of both Labrador City and Wabush declined between 2001 and 2006. In 2006, the population of Labrador City was 7,240, a decline of 6.5 percent from 2001. The population of Wabush was 1,739 in 2006, down 8.2 percent from 2001 (Statistics Canada 2006).

The Trans Labrador Highway (TLH) is the primary public highway in Labrador. Phase I of the TLH, Route 500, is a two-lane gravel highway between Labrador West and Happy Valley-Goose Bay. Between 1997 and 1999, this section of the TLH was upgraded to a high-standard gravel surface highway. The 2007 provincial budget included $15 million (cost-shared with federal government) to provide a sealed surface on Phase I of the TLH, to be completed in 2011 (NLDF 2007; AMEC Earth & Environmental Ltd. and Gardner Pinfold 2008). Westward, the TLH connects with Québec Route 389, which runs 570 km north from Baie-Comeau to the Québec-Labrador border.

Wabush Airport is owned and operated by Transport Canada. The principal communities within its catchment area are Wabush, Labrador City and Fermont, Québec. Five airlines have regular flights through Wabush: Air Canada Jazz, Labrador Airways Ltd., Provincial Airlines, Ltd., Air Inuit and Prince Edward Air (Transport Canada 2006). The number of boarding and deplaning passengers at Wabush Airport fluctuates depending on the number of airplanes serving the airport and the amount of business activity related to the two Labrador mines (AMEC Earth & Environmental and Gardner Pinfold 2008). Between 2006 and 2007, air passenger movements at the Wabush Airport increased by 6.2 percent, from 67,180 to 71,344 (Newfoundland and Labrador Department of Tourism, Culture and Recreation 2008).

The IOC operates the 418 km long QNS&L, which IOC built to move iron ore from the Québec and Labrador interior to Sept-Îles. It also provides regularly scheduled, year-round, passenger service (NLDTW 2006). In 2005, Tshiuetin Rail Transportation Inc. (TRT) acquired the northern section of the QNS&L (the Menihek Subdivision), which runs between Emeril Junction, Labrador, and Schefferville, Québec. TRT now operates this portion of the line for passenger and freight rail services (IOC and TRT ND).

Labrador West has a number of education and healthcare facilities. There are three schools: A.P. Low Primary in Labrador City, J.R. Smallwood Middle School in Wabush, and Menihek High School in Labrador City (Labrador School Board 2008). Located in Labrador City, the Labrador West Campus of the College of the North Atlantic has full time enrolment of 300 students a year in both trades and academic programs (CNA 2008). The Labrador-Grenfell Health Authority operates the Captain William Jackman Memorial Hospital in Labrador City. The hospital has 20 beds and includes long term and acute care facilities as well as surgical services (Labrador Grenfell Health 2008)

Labrador West is currently undergoing an economic boom related to the ongoing mine development in the area. In August 2007, IOC announced a $60 million investment to increase concentrate production capacity (NLDF 2008). In March 2008, this was followed by the announcement of a $500 million expansion of IOC's existing operations. As a result of the expansion, its workforce in the area is expected to grow by 200. This growth has caused some concerns in an area already dealing with a shortage of workers (Braughtim 2008). The shortage of workers has been reported to have had a negative effect on local business (Braughtim 2007). Ongoing growth has also raised concerns regarding housing vacancy rates and escalating housing costs (Braughtim 2008), and put pressure on a wide range of community infrastructure and services, including in the areas of education, health care, policing, recreation and leisure.

6.2.2 Effects on Community Infrastructure and Services

The operation of the Bloom Lake Railway will have a negligible additional direct effect on such infrastructure and services. As was noted in Section 6.1.4, the Railway will only employ approximately 12 workers, some of whom will already be residents of Labrador West when hired. As a result, only a very small number of workers will move to the region as a result of the Project operations, and the incremental impact them and their families, if any, will have on the communities of Labrador City and Wabush will be insignificant. On the contrary, it is to be expected that they, as long-term fully employed residents, will make a positive contribution to the local economy and society.

While there will be some multiplier effects of operations, these will have an even smaller incremental effect, especially as most of this employment will go to local residents working for supply and service companies, retail outlets, restaurants, etc. While it will make a minor long-term contribution to the economy of Western Labrador, it is very unlikely that the operations phase spin-off employment will need to be met through in-migration into the region.

As was indicated in Section 6.1.3.1, construction of the Bloom Lake Railway will involve the employment of approximately 160 workers for a total duration of about one year, commencing in the Fall of 2008. Consistent with its Benefits Policy, the Bloom Lake Railway will seek to employ residents of Western Labrador (Appendix D). However, as is generally the case with construction projects, many workers will come from outside the region.

These non-local construction workers will be employed on a „fly-in' basis, alternating between periods working on the Project and periods living in their home communities. During their work periods they will live, unaccompanied by their families, in Labrador West. Given the housing shortages in the region, the Consolidated Thompson has decided to provide a custom built, state of the art, residential complex in Labrador City. It will provide single-room accommodations with ensuite bathrooms, in-room television and internet connections, a kitchen and dining hall, a commissariat, first-aid facility, weight room, and leisure facilities. This complex will be a key initiative to mitigate potential adverse community effects of the Project. Allied to the standard work day and the fact that they will not be accompanied by family members, the complex will minimize interactions between the construction workers and local communities.

All construction workers will receive an orientation which will include a request that they are respectful of the local communities and their residents, and this will be reinforced through the terms of employment. Any worker reported to have breached this requirement will, upon completion of an appropriate investigation, be dismissed and provided transportation to their home community.

The effects of construction on local healthcare infrastructure and services will also be minimized by the fact that the workers will mostly be men and women in the prime of life, and accidents will be minimized through rigorous enforcement of occupational health and safety standards. Most workers will continue to receive general healthcare in their home communities. Any minor injuries or health problems will be addressed through the provision of first-aid at the worksite and in the accommodations complex, further reducing the effects on community healthcare facilities and services.

As has been discussed above, there will be some multiplier effects of construction employment. However, this indirect and induced employment will mostly benefit local residents working for supply and service companies, retail outlets, restaurants, etc. Given the nature and relatively short duration of these spin-off employment opportunities, it is unlikely that such multiplier employment will lead to much in-migration, or hence to other than very minor effects on the communities of Labrador City and Wabush.

6.3 Land Use and Zoning Effects

The Bloom Lake Railway will have very minor effects on local recreational land use or values, including respecting the Tamarack Golf Club, and will require no zoning changes.

While the Railway will intersect the access road to the Tamarack Golf Club, trains will take a minute or less to cross the road, thus providing only a very minor inconvenience to those travelling to and from the course. The tracks will not be visible from the course or practice range, and the noise effects will be both minor and of limited duration, given that there will only be six trains a day.

The Railway route also intersects a corner of a nature area being managed by the Eastern Habitats Joint Venture, under the terms of a stewardship agreement with Labrador City. Consolidated Thompson will be taking the appropriate measures to seek approval to pass through this area.

It was recognized that the original alignment of the Bloom Lake Railway in the vicinity of Little Wabush Lake and Harrie Lake could be viewed negatively by the residents of some developed portions of Labrador City, with concerns being expressed about possible aesthetic and noise impacts. In order to address these concerns and mitigate any effect, the route of the railway has been realigned, moving it an average of approximately 300 metres to the south. This provides an additional densely forested buffer zone, beyond the width of the river or lake, such that the Railway will be neither visible nor have noise effects on Labrador City residents.

6.4 Consultation

Public consultation and participation is a central part of the environmental assessment process as a means of ensuring that concerns and interests are identified and addressed. The Project was registered on 25 April 2008, which was followed by a 35 day public review period. On 03 July 2008 the Minister of Environment and Conservation called for preparation of an Environmental Preview Report, which will also be subject to public review.

In preparation for the Project, Consolidated Thompson has been conducting consultations with the local municipalities, businesses, interest groups, cabin owners, and aboriginal groups in western Labrador, beginning in 2006. A highlight of the community consultation program was the Supplier Development Workshop, held 22 March 2007 (see Appendix E for presentation and supplier questionnaire). This Workshop was organized by the local communities and Labrador West Chamber of Commerce, in

association with Consolidated Thompson and its procurement consultants Brenton Banville and Associates. Through this initiative, Consolidated Thompson was successful in identifying and registering potential suppliers from the Labrador West region.

6.4.1 Community Consultation

To ensure that all community concerns related to the Project were addressed Consolidated Thompson conducted engaged the local municipalities (Labrador City and Wabush), local cabin owners (Walsh River Cabin Owners Association), local recreation groups (White Wolf Snowmobile Club, Cross Country Ski Club, and Tamarack Golf Course), and local business owners through the Labrador West Chamber of Commerce. A chronology of community consultation undertaken in association with the Project is provided in Table 6-4.

Table 6.4 Chronology of Community Consultation

Date	Consultation
June 2006	Consolidated Thompson (CLM) met with Mayor and Councillors of Town of Labrador City to brief on Bloom Lake Railway Project and discuss opportunities for Labrador West.
July 2006	CLM commences dialogue with the Town of Labrador City on concerns raised in a letter (dated 12 July) to Dept of Environment in response to CLM rail project registered in April, 2006.
16 November 2006	CLM President does a luncheon presentation to the Labrador West Chamber of Commerce.
15 November 2006	CLM does a public presentation at Labrador City with over 60 persons in attendance. The President and CEO of CLM address concerns and questions raised by several community groups.
17 December 2006	CLM initiates a meeting with the Walsh River Cabin Owners Association to discuss optimized rail route and potential compensation.
January – March 2007	CLM organizes a Steering Committee with representatives from Labrador City, Wabush, Fermont and Sept-Iles responsible for arranging Supplier Information Sessions in their respective communities. These sessions are for the business community and enabling CLM to develop a database of qualified companies in the region.
27 February 2007	CLM initiates a meeting in Labrador City to initiate the “Economic Development Committee” comprised of representatives from the municipalities, chambers of commerce and the Innu from Wabush, Labrador City, Fermont and Sept-Iles. The mandate of the Committee is to organize supplier development sessions for potential suppliers in their respective towns. A follow-up meeting was held March 14, 2007 in Sept-Iles to finalize planning and preparations.
22 March 2007	Supplier Development Session held at Labrador City. Over 80 business persons in attendance and received questionnaires to pre-qualify for opportunities at Bloom Lake (see attached presentation and questionnaire).
February – September 2007	CLM has frequent consultation with both town councils and affected community groups (i.e. Walsh River cabin Owners Association) to inform them of the conveyor option and its advantages versus rail.
October – December 2007	CLM communicates to the towns and community groups in Labrador West the optimized rail option is now the preferred option as a result of the failed Wabush Mines bid.
November 2007	CLM has a meeting with the joint councils of Labrador City/Wabush and with the Walsh River Cabin Owners Association.
28 February 2008	CLM has a follow-up meeting with the Walsh River Cabin Owners Association and begins to frame out a legal agreement to provide power to each individual cabin.
14 May 2008	CLM has meeting with joint councils of Labrador City and Wabush as well as representatives of the Tamarack Golf Course, the annual Loppett event, and the local driving range. Meetings were held later with the White Wolf Snowmobile Club and the Walsh River Cabin Owners Association.
29 May 2008	CLM has meeting with the Town of Wabush, Tamarack Golf Course, local driving range operator and the Walsh River Cabin Owner’s Association.

Date	Consultation
06 June 2008	CLM issues a letter to Mayor Jim Farrell committing to financial consideration toward the construction of an overpass at Route 500 between Labrador City and Wabush.
12 June 2008	CLM meets with private individual with land adjacent to the rail development.
07 June 2008	CLM issues a letter to Mayor Graham Letto informing that the final routing of the rail will not impede on the Tamarack Golf Course.
20 July 2008	CLM meets representative from Walsh River Cabin Owners Association to finalize agreement.
21 July 2008	CLM has meetings with the Town of Wabush, Town of Labrador City, the executive of the Tamarack Golf Course and a private individual with land adjacent to the rail development.
July 2008 – present	Ongoing finalization and signing of the agreement with the Walsh River Cabin Owners Association.

As a result of the consultations listed above, Consolidated Thompson has committed to:

- Relocate the rail line near the Walsh River cabins to the north boundary of the corridor, the farthest distance from the existing cabins. The new routing will diminish noise concerns and address safety issues (a confidential legal agreement committing Consolidated Thompson to provide electricity to the affected cabins is currently being ratified and signed by the Walsh River Cabins Owners Association);
- Relocate the railway line on the south side of Harrie Lake ensuring the minimum average distance separating the line from Labrador City residences will be 300 m with a dense tree barrier providing both a visual and sound barrier between the rail and Harrie Lake subdivision;
- Provide its proportionate contribution towards the industry-share of the cost to construct an overpass on Route 500 at the railway crossing between Wabush and Labrador City;
- Expand the proposed bridge at Ironstone River to accommodate the snowmobile trails and grooming equipment;
- Ensure full safety measures are taken at all rail crossings with the respective trails of the Menihek Nordic Ski Club and White Wolf Snowmobile Club;
- Suspend all train operations during the annual one-day Loppet event; and,
- Provide assurance to the Tamarack Golf Course that the rail route has been adjusted to provide maximum distance from the course and therefore negligible effects on its operations.

Through these several meetings with both the Town of Labrador City, and the Town of Wabush, Consolidated Thompson have addressed many concerns raised including: local procurement, employment and benefits, issues with proximity of the railway to the Harrie Lake subdivision and Walsh River cabins, issues with respect to the Tamarack Golf Course, and most importantly, public safety issues pertaining to the Route 500 rail crossing between Labrador City and Wabush.

6.4.2 Aboriginal Consultations

There have been numerous consultations with the Innu communities in both Québec and Labrador. Discussions are on-going with the Innu Nation. Tables 6-5 through 6-7 list the meetings held with the Innu communities since 2006.

Table 6.5 Chronology of Consolidated Thompson Meetings with the Innu, 2006

Date	Attendees	Location
19 April 2006	CLM, ITUM	Sept-Iles
26 June 2006	CLM, ITUM, MLJ	Montréal
27 June 2006	CLM, ITUM	Sept-Iles
28 September 2006	Presentation to Innu Youth Retreat	Schefferville
11 October 2006	CLM, ITUM	Wabush
18 October 2006	CLM, ITUM	Montréal
08 November 2006	CLM, Innu Nation	Montréal
12 November 2006	Public Innu Presentation	Sept-Iles
27 November 2006	CLM, ITUM, MLJ, Innu Nation	Montréal
07 December 2006	CLM, ITUM	Sept-Iles
14 December 2006	CLM, ITUM	Montréal
Note: CLM = Consolidate Thompson ITUM = Innu Takuaikan Uashat mak Mani-Utenam (Sept-Iles) MLJ = Matimekush Lac-John (Schefferville) Innu Nation (Labrador)		

Table 6.6 Chronology of Consolidated Thompson Meetings with the Innu, 2007

Date	Attendees	Location
08 January 2007	CLM, ITUM, Innu Nation	Montréal
19 January 2007	CLM, ITUM, Innu Nation	Sept-Iles
08 February 2007	CLM, ITUM	Sept-Iles
21 February 2007	CLM, ITUM	Montréal
27 February 2007	Economic Development Meeting	Labrador City
14 March 2007	Economic Development Meeting	Sept-Iles
24 March 2007	CLM, ITUM	Montréal
03 April 2007	CLM, ITUM	Montréal
17 April 2007	CLM, ITUM	Montréal
18 April 2007	Signing of MOU (CLM, ITUM, Innu Nation)	Montréal
24 April 2007	CLM, ITUM, Innu Nation	Sept-Iles
22-23 May 2007	CLM, ITUM, Innu Nation	Happy Valley-Goose Bay
28 May 2007	CLM, ITUM	Québec City
29-31 May 2007	CLM, ITUM	Val-d'Or
7,8 June 2007	CLM, ITUM	Sept-Iles
16 June 2007	NEW BAND COUNCIL ELECTED IN SEPT-ILES	
19 June 2007	CLM Public Presentation	Fermont
27 June 2007	CLM, Innu Nation	Happy Valley-Goose Bay
28 June 2007	CLM, ITUM	Montréal
July 2007	NEW BAND COUNCIL ELECTED IN SCHEFFERVILLE	
16 July 2007	CLM, ITUM	Sept-Iles
26 July 2007	CLM, Innu Nation	Montréal
04 August 2007	CLM, ITUM	Sept-Iles
13 August 2007	CLM, ITUM	Sept-Iles
14 August 2007	CLM, ITUM	Montréal
15 August 2007	CLM, ITUM	Letter
21 August 2007	CLM, ITUM	Letter
24 August 2007	CLM, ITUM	Letter
28 August 2007	BAPE Hearing	Fermont
31 August 2007	CLM, ITUM	Sept-Iles
03-06 September 2007	CLM, ITUM	Sept-Iles
05 September 2007	CLM, ITUM	Sept-Iles
07 September 2007	CLM, ITUM	Montréal
18 September 2007	CLM, ITUM	Montréal

Date	Attendees	Location
24-26 September 2007	BAPE Hearings	Fermont, Sept-Iles, Schefferville
02 October 2007	CLM, ITUM	Letter
04 October 2007	CLM, ITUM	Letter
04 October 2007	CLM, ITUM	Letter
October 2007	NEW EXECUTIVE ELECTED - INNU NATION	
15 October 2007	CLM, ITUM	Letter
22 October 2007	CLM, ITUM	Letter
23 October 2007	CLM, ITUM	Letter
24 October 2007	CLM, ITUM	Sept-Iles
07 November 2007	CLM, ITUM	Montréal
16 November 2007	CLM, ITUM	Sept-Iles
November 2007	CLM, Innu Nation	St. John's
December 2007	CLM, Innu Nation	Telephone
09 December 2007	ITUM, Innu Nation	Sept-Iles
Note: CLM = Consolidate Thompson ITUM = Innu Takuaikan Uashat mak Mani-Utenam (Sept-Iles) MLJ = Matimekush Lac-John (Schefferville) Innu Nation (Labrador)		

Table 6.7 Chronology of Consolidated Thompson Meetings with the Innu, 2008

Date	Attendees	Location
04 January 2008	CLM, ITUM, Federal & Provincial Governments	Sept-Iles
21 January 2008	Signing of MOU (CLM, ITUM, MLJ)	Sept-Iles
06 February 2008	CLM, ITUM, MLJ	Sept-Iles
01 February 2008	CLM, Innu Nation	
12 February 2008	CLM, ITUM, MLJ	Sept-Iles
13 February 2008	CLM, ITUM, MLJ	Sept-Iles
14 February 2008	CLM, ITUM, MLJ	Montréal
19 February 2008	CLM, ITUM, MLJ	Sept-Iles
20 February 2008	CLM, ITUM, MLJ	Sept-Iles
28 February 2008	CLM, ITUM, MLJ	Wabush
29 February 2008	CLM, ITUM, MLJ	Wabush
12 March 2008	CLM, ITUM, MLJ	Montréal
13 March 2008	CLM, ITUM, MLJ	Montréal
19 March 2008	CLM, ITUM, MLJ	Québec City
20 March 2008	CLM, ITUM, MLJ	Québec City
25 March 2008	CLM, ITUM, MLJ	Sept-Isles
02 April 2008	CLM, ITUM, MLJ	Montréal
08 April 2008	CLM, ITUM, MLJ	Wabush
15 April 2008	CLM, ITUM, MLJ	Sept-Iles
23 April 2008	CLM, Innu Nation	Telephone
25 April 2008	CLM, Innu Nation	Happy Valley-Goose Bay
28 April 2008	CLM, ITUM, MLJ	Montréal
29 April 2008	CLM, ITUM, MLJ	Montréal
30 April 2008	CLM, ITUM, MLJ	Montréal
01 May 2008	CLM, ITUM, MLJ	Montréal
02 May 2008	CLM, ITUM, MLJ	Montréal
03 May 2008	CLM, ITUM, MLJ	Montréal
13 May 2008	CLM, Innu Nation	Telephone
30 May 2008	IBA Signature Ceremony (CLM, ITUM, MLJ)	Sept-Iles
04 June 2008	CLM, Innu Nation	St. John's
17 June 2008	CLM, Innu Nation	Toronto

Date	Attendees	Location
18 June 2008	CLM, ITUM	Sept-Iles
08 June 2008	CLM, ITUM, Prov. Gov't	Montréal
15 June 2008	CLM, Innu Nation	Québec City
06 August 2008	CLM, ITUM	Sept-Iles
12 August 2008	CLM, Innu Nation	Telephone
13 August 2008	CLM, ITUM	Sept-Iles
22 August 2008	CLM, Innu Nation	Montréal
Note: CLM = Consolidate Thompson ITUM = Innu Takuaikan Uashat mak Mani-Utenam (Sept-Iles) MLJ = Matimekush Lac-John (Schefferville) Innu Nation (Labrador)		

6.5 Maintenance of Way

The Bloom Lake Railway is a third party consortium that will be responsible for the operation and up-keep of the rail line. Maintenance of way and routine maintenance of locomotives and rolling stock will be conducted in Labrador West by the third party consortium.

The number of rolling stock maintenance staff based in Labrador West may increase over time, as the rolling stock ages and as and if the amount of such equipment grows as Bloom Lake Railway traffic increases or as new companies use it. Bloom Lake Railway will be proactive in seeking to increase the amount and types of rolling stock maintenance occurring in Labrador West, providing such activity can be justified on a commercial basis.

6.6 Implications of the Transportation of Other Resource Based Goods

The Bloom Lake Railway is a separate operation from QNS&L, with its own distinct activity and responsibility, using its own locomotives and rolling stock on infrastructure that it will build and own. On that note, and the fact that the rail line is completely with the Province of Newfoundland and Labrador, the Bloom Lake Railway is not subject to regulation by the Canadian Transportation Agency (CTA). However, as discussed in Section 6.1, the Bloom Lake Railway will be available for use by other companies at commercially reasonable terms as per the commitment provided to the Government of Newfoundland and Labrador by Consolidated Thompson. Should further exploration determine a commercially viable deposit within the rail corridor, the third party consortium will take all reasonable steps to accommodate the development of such deposits. Based on Consolidated Thompson's commitments, this new transportation infrastructure could be very beneficial to any and all new developments within close proximity of its corridor.

6.7 Consolidated Thompson – QNS&L Transportation Agreement

On 01 August 2008 Consolidated Thompson and QNS&L announced an agreement to transport Bloom Lake iron ore concentrate from on the QNS&L from Wabush Junction to Sept-Iles Junction. Please see Appendix F for the press release.

6.8 Consolidated Thompson – Wabush Mines Discussions

Discussions are on-going between Consolidated Thompson and Wabush Mines with respect to finalizing an agreement to allow for the proposed rail development and operations on Wabush Mines property and for Bloom Lake concentrate to be moved along the southern Wabush Mines Arnaud railway line. The most recent meetings were held on 19-20 August 2008 to work on the operational details. Both companies have entered into a confidentiality agreement regarding these discussions.

6.9 Protective Measures at Wabush Mines Property

During operation, trains will traverse surface lot 2 North belonging to Canadian Javelin Limited and will pass between 250 and 500 m from active mining and blasting operations at Wabush Mines Limited.

For safety, it will be absolutely mandatory that the dispatcher, the train crews and the mine have a written policy in place in the „'Operations Manual'' and that it is communicated and reinforced daily as described below.

6.9.1 Written instructions in the Daily Operating Bulletins

These are instructions given to the train crews on every train. If the railway dispatcher contacted the mine and established times of blasting, the information would be put into a Daily Operating Bulletin (DOB). If the times of blasting changed, the mine would contact the dispatcher who in turn would contact the train and relay the new schedule. There would also have to be communication back to the mine as to when the train will be in the area so they don't change their blasting schedule to a time when the train is already in the blasting area. These communications would have to be copied, repeated and signed by both parties every time.

A blasting expert will be contacted to define a "Safe Distance" to determine which blasting activities would be close enough to the track to impact train operations. This will minimize unnecessary interruptions to train movements and mine operations.

A good working relationship between the mine and the railway will minimize interruption to rail traffic if not eliminate it all together. The time in which a train will be within the blasting zone would not be more than 30 minutes at the most and the mine/Railroad will work its schedule around this.

7.0 PROJECT RELATED DOCUMENTS

The following documents have been produced in association with the Project and Bloom Lake Iron Ore Mine:

- Scoping Study for the Bloom Lake Iron Ore Project (21 October 2005)
- Environmental Impact Study (December 2006)
- Feasibility Study for the Bloom Lake Project @ 5 Mtpa of Iron Ore Concentrate (04 April 2006)
- Feasibility Study for the Bloom Lake Project @ 7 Mtpa of Iron Ore Concentrate (11 April 2007)
- Bureau d'audiences publiques sur l'environment (BAPE) – Rapport 250 (December 2007)
- Bloom Lake Iron Project Railway Registration (25 April 2008)
- Preliminary Archaeology Report (25 August 2008)

8.0 APPROVAL OF THE UNDERTAKING

Consolidated Thompson acknowledges:

> "Given its current configuration, the proposed Bloom Lake Railway (BLRW) will fall under provincial jurisdiction. Under the Executive Council Act and this Province's Railway Act, the Minister responsible for transportation related matters, including those involving the regulation of intraprovincial railways, is the Minister of Transportation and Works… Among other things, the Department of Transportation and Works, in exercising its jurisdiction in regulating the BLRW reserves the right to establish and adopt by legislation, regulation or otherwise what it considers to be best practices with respect to regulating the design, construction, operation and maintenance of BLRW as an intraprovincial railway and the right, should it in its discretion decide to do so, to enter into an agreement with the federal Minister of Transport under the Canada Transportation Act with respect to matters referenced in section 157.1 of the Canada Transportation Act. The Department of Transportation and Works, on behalf of the Province of Newfoundland and Labrador as one of the conditions for the development of the BLRW also reserves the right to insist upon, any crossing or grade-separated crossing of any highway being of dimensions, construction type and standards acceptable to the Department of Transportation and Works and reserves the right to specifically insist that BLRW acting in its own right or in concert with any other railway or other company be required to establish grade- separated crossings where the BLRW crosses Highway 500 in or around the Municipalities of Wabush and Labrador City… It shall be a condition of any such approval that the Province of Newfoundland and Labrador will not be required to fund or contribute to the funding of any work or undertaking related to construction of the BLRW or the maintenance and operation of the same."

Table 8-1 is a list of the main permits, licenses, approvals, and other forms of authorization required for the Project, together with the names of the authorities responsible for issuing them.

Table 8.1 Permits/Approval/Authorizations that may be Required for the Bloom Lake Railway

Department/Agency	Applicable Legislation	Approval/Certificate/ Permit	Project Element
Federal Government Requirements			
Department of Fisheries and Oceans	*Fisheries Act*	Letter of advice	Work in or near water (culvert installations)
Transport Canada	*Navigable Waters Protection Act*	Permit to construct a bridge over navigable waters	Walsh and Canning bridges
	Transportation of Dangerous Goods Act, 1992	Permit to store, handle and transport dangerous goods	Storage, handling and transportation of fuel and chemicals
Provincial Government Requirements			
Department of Environment and Conservation, Environmental Assessment Division	*Environmental Protection Act – Environmental Assessment Regulations*	Approval of the Environmental Preview Report	Bloom Lake Railway
Department of Environment and Conservation, Crown Lands Division	*Lands Act*	Permit to occupy Crown Lands	Railway right-of-way on Crown Lands
Department of Environment and Conservation, Water Resources Management Division	*Water Resources Act*	Certificate of environmental approval to alter a body of water ▪ Fording ▪ Culvert installation ▪ Bridge construction ▪ Site Drainage	Activities within 15 m of a body of water
	Environmental Protection Act (GAP Regulations)	Certificate of approval for storage and handling of gasoline and associated products	Storage, handling and transportation of fuel and chemicals
	Wildlife Act and *Regulations*	Authorization to control nuisance animals	Construction activity
Department of Natural Resources, Forestry Branch	*Forestry Act*	▪ Cutting permit ▪ Permit to burn ▪ Operating permit	Clearing right-of-way
Department of Government Services	*Environmental Protection Act*	Waste Disposal Permit	Hazardous Waste Disposal
		Permit to access a Protected Road	Highway access
Department of Government Services, Occupational Health & Safety Division	*Occupational Health & Safety Act* and *Regulations*	Blaster's Certificate	Blasting
Department of Works, Services and Transportation	*Dangerous Goods Transportation Act,* 1995 and *Regulations*	Compliance standard; no permit required	Storage, handling and transportation of fuel

Department/Agency	Applicable Legislation	Approval/Certificate/ Permit	Project Element
Department of Works, Services and Transportation	*Rail Service Act, 1993*	Approval to Construct and Operate a Railway in Newfoundland and Labrador	Bloom Lake Railway
Municipal Government Requirements			
Labrador City Town Council	Municipal Development Plan and regulations	Approval for development within the Municipal Planning Area Approval for waste disposal	Construction and operation of the railway in Municipal Planning Area Waste disposal
Town of Wabush Town Council	Municipal Development Plan and regulations	Approval for development within the Municipal Planning Area	Construction and operation of the railway in Municipal Planning Area

9.0 FUNDING

This undertaking does not depend upon a grant or loan of capital funds from a government agency, federal, provincial or otherwise.

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