Chapter 5.7 Completing Application Information Details: Maps and Plans

5.7 Maps and Plans Information Tab

Maps and plans support activity applications and the requirements differ depending on the energy resource and/or associated activity selected as well as the technical and engineering information provided.

Applications should have one map for the entire application, not individual sets of maps per activity within the application.

Applications must include mapping illustrating in detail the location and extent of planned activities, as required. Required mapping information includes the following.

- Construction plans – this is a mandatory requirement for most applications
- 1:20,000 and 1:250,000 plans
- Diversion plan for short term water use applications
- CIAS Sketch plan - Mandatory for all stand alone CIAS applications and technical only amendments that include CIAS. Where CIAS is included in new multi-activity applications or land amendments for ERAA or CER, the CIAS activity may be shown on the construction plan and the CIAS Sketch plan is optional
- Individual Ownership Plan (IOP) for activity on private land.

Please Note:

This manual is written as a whole and provided to industry in sections to allow permit holders to access activity chapters. It is prudent of the permit holder to review the manual in its entirety and be aware of the content in other sections of the manual.

All construction plans and maps should include the following information, as applicable for the application:

1) Title Block information:
    - Applicant company name.
    - Project name, if applicable.
    - BCGS mapsheet.
    - Legal description of the project.
    - Date plan prepared (yyyy/mm/dd).
    - Scale.
    - Version number (i.e.: revision #1, amendment #1).
    - Survey company name, address and phone number.
    - Sheet numbers (e.g., sheet 1 of 2).
    - Survey company job number.
    - Survey company drawing number.
    - Table of crossings.
    - Crossing number.
    - Drawing number.
    - Approved by and checked by name.
    - Project manager.
    - Notes.
    - Revision information (number, completed by and date of revision).
2) Area block to summarize the following in the legend:
    - Total area of Crown
    - Total area of private land
    - Total area within MoTI rights-of-way.
        1. Total area of new cut within MoTI rights of way
    - Total area of new cut within any woodlot required to be included with the cutting authorization
    - Total area of new Crown land disturbance (excluding the areas of MoTI and woodlot, if broken out separately in the tables)

- Area of existing Crown land disturbed.

3) Scale bar placed above the title block where it will not interfere with the drafted areas.

4) Body of the plan should include, as applicable:

- Surveyed Crown land (District Lot Numbers; NTS; DLS legal descriptions, etc., including theoretically surveyed Crown land posted, but not titled), as applicable.
- Unsurveyed Crown land, if applicable
- Private land should indicate the owner name, parcel identifier number (PID no.), title number and the areas of disturbance
- North arrow.
- Construction corridors and activities within the corridor, the energy resource activity (e.g. pipeline or well), deck sites, workspaces, brush pushouts, or any other associated activities required must be indicated on the construction plan and listed in the plan area tables, etc.. The construction corridor should be indicated on the construction plan, using dashed lines and mark “Construction Corridor”. The area table on the construction plan should reference the total area (in hectares) encompassed by the construction corridor; this area will be reflected in the spatial data within the total application areas. See Figure 3-C for an example.
- UTM coordinates for the activity; including from and to locations or beginning and end UTM coordinates for all linear proposed projects.
- Activity specific information (such as disturbance measurements in meters or kilometers), if applicable.

5.7.1 Map Detail

This section provides detailed instructions of the Regulator’s requirements for maps and plans.

BCGS Map sheet(s) refer to all BC Geographic Series map sheets (BCGS) and must include all areas affected by the proposed activity. Hand sketches are not acceptable as map attachments. In addition to the mapping information listed in section 5.7, maps and plans requirements include:

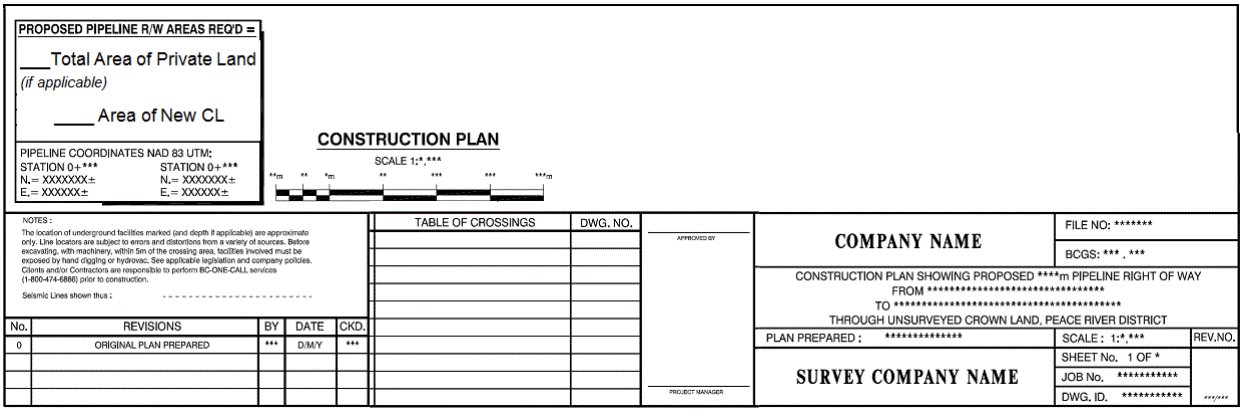
1) 1:20,000 Maps:
    - Project area along with brief description of all proposed areas e.g. “Proposed 10x30m Workspace (new cut)”.
    - Permitted projects in the area (existing wellsites, pipelines, sumps, or associated activities).
    - All roads including temporary access roads.
    - Seismic/Trails.
    - Cut blocks and woodlots.
    - Contours.
    - Trappers, Guides and Range Tenures.
    - Water features (including labels).
2) 1:250,000 Access map:
    - Access to project
    - Access description text box marking out KM to project showing all route changes
3) Diversion map (at appropriate scale) mandatory for all short-term water use water applications to illustrate in detail the location and extent of planned activities. The map should include the following:
    - Include access to each point of diversion (POD).
    - Show existing tenures impacted. (e.g. Rights Holders as per WSA, tenured water source dugouts)
    - Water features.
4) CIAS Sketch Plan (at appropriate scale) to illustrate in detail the location and extent of the changes in and about a stream activity.

5.7.2 Construction Plans

Construction plans inform the Regulator about the company's plans for constructing the proposed works, including details about the location and size, associated activity sites and other details of the project's development. Applicants must include construction plans with applications. See Figure 5-F for an example of a table of information.

This section provides instructions on the requirements for all construction plans plus additional information required for specific authorizations including facilities, pipelines, wells, roads and water.

Figure 5-F Sample of Construction Plan Title Block Information



5.7.3 Construction Plan Basic Requirements

In addition to the requirements listed in section 5.7, construction plans must include:

1) Label on plan indicating:
    - Dimensions and area of Crown land.
    - Dimensions and area of linear segments, if applicable.
    - Location of Agricultural Land Reserve (ALR), if applicable.
    - NTS and/or DLS coordinates (units, block, and group).
    - Chainages.

- Deflections.
- Crossing numbers, if any, to correspond to the table of crossings.
- Vegetation changes (brush/tree types).
- Dimensions and area of associated activity sites (decking sites, temporary workspaces, etc.), if applicable.
- Cut blocks, range tenures, guide outfitter areas, Indian reserves, coal tenures and all other areas of special interest.

2) Plan diagram to indicate:
    - Dimensions and area of Crown land (including any associated activity sites).
    - Dimensions and area of linear segments, if applicable.
    - Location of Agricultural Land Reserve (ALR), if applicable.
    - Woodlot area clearly marked.
    - Cut blocks, range tenures, guide outfitter areas, Indian reserves, coal tenures and all other areas of special interest should be indicated and labelled on plan.
    - NTS coordinates (units, block, group); chainages; deflections; crossing numbers, if any, to correspond to the table of crossings; vegetation changes (brush/tree types) and a North arrow.
3) Plan diagram to indicate and classify waterbodies within 100 metres of a proposed energy resource activity or Crown land application (i.e. campsite, storage site, borrow pit, etc.).
4) Stream crossings are required for all stream and waterbody crossings required to carry out energy resources activity and identified in the application (Section 11 of the Water Sustainability Act). The crossing number must match the crossing identified in the construction plan. UTM Coordinates (NAD 83 CSRS) must be identified and the name of the stream or waterbody. The crossing number, UTM coordinates and the name of the stream or waterbody must also be identified in the Crossing Table.

Additional Construction Plan Requirements: Facilities

Construction plans for facility applications must include all roads, rights-of-way, public utilities, easements, road allowances and places of public concourse located within 60 metres of storage tanks and production equipment, and/or within 80 metres of flare stacks and incinerators. The plan must also show

drainages and the proximity to the lease, adjacent surface improvements and surveyed polygons of facilities.

Additional Construction Plan Requirements: Pipelines

Construction plans for pipelines should identify well authorization numbers. Applicants should also indicate previously assessed construction corridors for activity permitted under separate AD #'s.

Construction plans must indicate the constructed and unconstructed MoTI road allowance within the body of the plan and ensure the area table has road allowances separated from the pipeline right of way and/or associated activity areas. The construction plan area table must clearly indicate the new cut and existing area for road allowances.

Indicate the total hectares of (total area of Crown or private land) what is included on the construction plan, including the right of way and any workspaces, pushouts, deck sites, shoofly's, etc.

Indicate pipeline coordinates in NAD 83 UTM CSRS, for example:

- Station 0 + 000 Northing & Easting.
- Station 1 + 123 Northing & Easting.
- Lateral from Station 0 + 035 Northing & Easting.
- Lateral to Station 0 + 456 Northing & Easting.

Additional Construction Plan Requirements: Roads

Construction plans should include a detailed table of road segments. Road segments must not include more than one land type. For example, a road including a portion on Crown land and a portion on private land would include two segments, with the to and from locations starting at the intersection of the land types. Road segment tables should include:

- Segment land type status (e.g. Crown land, private land, road allowance, woodlot tenure).
- Segment legal description: from and to locations.
- Segment NAD 83 UTM coordinates northing / easting: from and to locations.

- Segment length.
- Maximum segment width.
- Segment area (hectares), broken down by new or existing disturbance.

Additional Construction Plan Requirements: Amendments

Construction plans submitted with amendment applications should show all the changes for the proposed activity.

- Revised construction plans should include a detailed table of amended areas.
- Within body of the revised plan, highlight the amended areas and include a text box with a description of areas amended.

Additional Construction Plan Requirements: Wells

If horizontally drilled wells are selected on the application, both the heel and the bottom-hole location must be provided on the construction plan. If a sump is being applied for with the application, it must also be shown on the construction plan.

Mapping Requirements Specific to Geophysical Programs

In addition to the mapping requirements for all projects, proposed geophysical projects require the following mapping:

1) 1:20,000 Map (or appropriate scale):
   - 2D project maps require UTM (NAD 83 CSRS) or latitude and longitude coordinates at the start and end of each line.
   - 3D project maps require UTM (NAD 83 CSRS) or latitude and longitude coordinates at the corners of the project area.
   - Forestry cutblocks (colour coded to status) and any other overlapping tenure.
   - Mechanical creek crossings.

- Approximate number of push outs to be constructed; total to be confirmed on the final plan.
- If heli-assisted operations are proposed, amount and size of helipads must be indicated on the legend; total to be confirmed on final plan.
- Include staging areas and campsites (if required for less than 100 days).

2) 1:250,000 Access Map (this can be inset into the above map or on a separate map):

- Access to the project highlighted in yellow.
- Project outline.
- Trapper boundaries and numbers.

5.7.4 Emergency Planning Zone Mapping Requirements

The Emergency Planning Zone (EPZ) map must show details about public facilities and residences (seasonal or otherwise) within the EPZ and the Emergency Awareness Zone, and should match the boundary of the emergency awareness zone. Map sheets scale should be 1:20,000 and should not be larger than 76 x 122 cm (30 x 48 inches). Inserts to show necessary detail should be used as needed.

The map must show:

- The EPZ (default to the greater of either drilling radius or completion radius for wells).
- The Emergency Awareness Zone (twice the EPZ radius).
- Public or private facilities such as schools, churches, community halls, hospitals, campgrounds.
- Residences and urban centers within the zones.
- Location of trap lines or other tenures (guide outfitter areas, grazing leases, etc.
- Well, facility and/or pipeline location.
- Trails, roads, numbered and named highways, railroads, airports, rivers and lakes.
- All industrial activity sites.

- Known egress issues.
- Other information relevant to an emergency.