

## 5.7 Maps and Plans Information Tab

Maps and plans support activity applications and are required depending on the oil and gas and associated activity selected and the technical and engineering information provided. This section provides detailed instructions of the Commission's requirements for uploading maps and plans.

This section provides details on maps, construction plans and emergency planning requirements which are critical for all applications.

### **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.

### 5.7.1 Map Detail

Every application must include a complete set of maps and plans illustrating in detail the location and extent of planned activities. 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.

Maps include:

- 1) 1:20,000 Maps:
  - Project area along with brief description of all proposed areas e.g. "Proposed 10x30m Workspace (new cut)".
  - Beginning and end UTM coordinates for all linear proposed project.

- Permitted projects in the area (existing wellsites, pipelines, sumps, ancillaries).
  - All access roads.
  - Seismic/Trails.
  - Cut blocks and woodlots.
  - Contours.
  - Trappers, Guides and Range Tenures.
  - Water features (including labels).
- 2) 1:50,000 Maps:
- Project area.
  - Permitted projects in the area (existing wellsites, pipelines, sumps, ancillaries).
  - All access roads.
  - Seismic/Trails.
  - Cut blocks and woodlots.
  - Water features.
- 3) 1:250,000 Access Maps:
- Access to project.
  - Access description text box marking out km to project showing all route changes.
  - Project area.
  - Trapper boundaries and numbers, Guides and Range Tenures.
  - Water features including labels.
- 4) Diversion map (at appropriate scale) required for all short-term use of water applications to illustrate in detail the location and extent of planned activities. The map should include the following:
- Include access to each diversion.
  - Show existing tenures impacted. (e.g. Rights Holders as per WSA, tenured water source dugouts)
  - Surveyed Crown land (District Lot Numbers, sections, etc., including theoretically surveyed Crown land posted, but not titled).

- Unsurveyed Crown land.
  - Private land should indicate the owner name, parcel identifier number (PID no.), title number.
  - Water features.
- 5) All maps should clearly indicate:
- Applicant name.
  - Project name.
  - Map date.
  - NTS and BCGS map sheet numbers on legend and on maps.
  - North arrow.
  - Version number (i.e.: revision #1, amendment #1).

Applications should have a single set of maps applicable to the entire application, not individual sets of maps per activity within the application.

In addition, applicants should include and/or consider:

- Total area of Crown land in hectares and matching what is shown on the construction plan, including the OGAA activity and any related associated oil and gas activity.
- Total area of private land indicated in hectares and matching what is shown on the construction plan, (same as above).
- Total area within MOT rights-of-way.
- Where applied for, construction corridors should be shown on all maps using a dashed line indicating “construction corridor”. The construction plan must clearly identify proposed activities, proposed location(s), and the total proposed area of each activity within a defined construction corridor. See Figure 5-E for an example.
- UTM coordinates: from and to locations.

- Activity specific information (such as disturbance measurements in meters or kilometers).

## 5.7.2 Construction Plans

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

Amendments to permissioned areas should show all changes.

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-E: Sample Wellsite Review Corridor Map

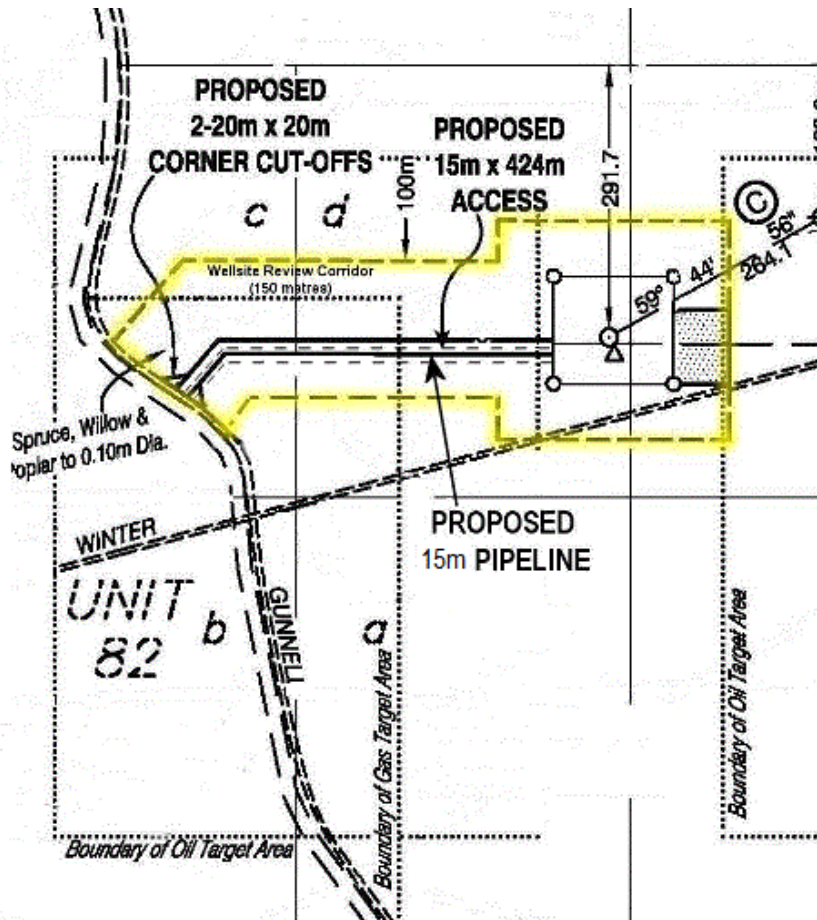


Figure 5-F Sample of Construction Plan

<b>PROPOSED PIPELINE R/W AREAS REQ'D =</b> ____ Total Area of Private Land <i>(if applicable)</i> ____ Area of New CL		<b>CONSTRUCTION PLAN</b> SCALE 1:" :*** 																						
PIPELINE COORDINATES NAD 83 UTM: STATION 0+***      STATION 0+*** N.= XXXXXX±      N.= XXXXXX± E.= XXXXXX±      E.= XXXXXX±		TABLE OF CROSSINGS	DWG. NO.	APPROVED BY																				
NOTES: The location of underground facilities marked (and depth if applicable) are approximate only. Line locations are subject to errors and distortions from a variety of sources. Before excavating, with machinery, within 5m of the crossing area, facilities involved must be exposed by hand digging or hydrovac. See applicable legislation and company policies. Clients and/or Contractors are responsible to perform BC-ONE-CALL services (1-800-474-6886) prior to construction. Sismic Lines shown thus: -----																								
<table border="1"> <thead> <tr> <th>No.</th> <th>REVISIONS</th> <th>BY</th> <th>DATE</th> <th>CKD.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>ORIGINAL PLAN PREPARED</td> <td>***</td> <td>D/M/Y</td> <td>***</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		No.	REVISIONS	BY	DATE	CKD.	0	ORIGINAL PLAN PREPARED	***	D/M/Y	***											PROJECT MANAGER	<b>COMPANY NAME</b> FILE NO: ***** BCGS: ** , ***	
No.	REVISIONS	BY	DATE	CKD.																				
0	ORIGINAL PLAN PREPARED	***	D/M/Y	***																				
CONSTRUCTION PLAN SHOWING PROPOSED *****m PIPELINE RIGHT OF WAY FROM ***** TO ***** THROUGH UNSURVEYED CROWN LAND, PEACE RIVER DISTRICT		PLAN PREPARED : *****	SCALE : 1:" :***	REV. NO.																				
<b>SURVEY COMPANY NAME</b> SHEET No. 1 OF * JOB No. ***** DWG. ID. *****		*****																						

### 5.7.3 Construction Plan Basic Requirements

The basic requirements for a construction plan must include:

- Label on plan indicating:
  - North arrow.
  - 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 oil and gas activity sites (decking sites, temporary workspaces, etc.), if applicable.
  - Surveyed Crown land (District Lot Numbers, sections, etc., including theoretically surveyed Crown land posted, but not titled).
  - Unsurveyed Crown land.
  - Private land should indicate the owner name, parcel identifier number (PID no.), title number and the areas of disturbance.

- Cut blocks, range tenures, guide outfitter areas, Indian reserves, coal tenures and all other areas of special interest.
- Agricultural Land Reserve (ALR), if applicable.
- Construction corridor(s), if applicable.

2) Title Block information:

- Applicant company name.
- Applicant file number.
- BCGS mapsheet.
- Legal description of the project.
- Date plan prepared (yyyy/mm/dd).
- Scale.
- Revision number.
- 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).

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

4) Area block to summarize the following in the legend:

- Total area of Crown and private land.
- Total area within MOT rights-of-way.

- Total area of new Crown land disturbance minus any woodlot and MOT rights-of-way areas included in the project area and/or minus any previously cleared areas (where stumpage has already been collected).
  - Area of existing Crown land disturbed.
- 5) Plan diagram to indicate:
- Dimensions and area of Crown land (including any associated oil and gas activity sites).
  - Dimensions and area of linear segments, if applicable.
  - Location of Agricultural Land Reserve (ALR), if applicable.
  - Woodlot area clearly marked.
  - Surveyed Crown land (district lot numbers, sections, etc., including theoretically surveyed Crown land posted, but not titled) and unsurveyed Crown land should be labelled on the plan.
  - Private land should indicate the owner name, parcel identifier number (PID#), title number and the areas of disturbance broken down into OGAA activity area, associated oil and gas activity area, etc. within each parcel.
  - 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.
  - ABA enhanced management and regulatory policy areas for all ABA values.
  - Construction corridor(s).
- 6) Plan diagram to indicate and classify waterbodies within 100 metres of a proposed oil and gas activity or Crown land application (i.e. campsite, storage site, borrow pit, etc.).
- 7) Construction corridor and within the corridor, the oil and gas activity (e.g. pipeline or well), deck sites, workspaces, brush pushouts, or any other associated oil and gas activities required must be indicated on the construction plan and listed in the plan legend. 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. The construction review corridor should include the proposed location of future activities where applicable. E.g. The location of a future pipeline within the wellsite construction corridor area.

- 8) Stream crossings are required for all stream and waterbody crossings required to carry out oil and gas 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, right-of-ways, 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**

Applicants may use a previously assessed construction corridor shown on a wellsite construction plan. The well authorization number and the Commission file number must appear on the pipeline construction plan and should be identified as a wellsite construction corridor. This should match the information provided with the application.

Construction plans must indicate the constructed and unconstructed 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 oil and gas 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, a portion within a road allowance and a portion on private land would include three segments, with 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**

- 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**

An associated oil and gas activity permit for investigative use, water source well testing may authorize the holder to drill water source well holes for the purpose of proving a water source. Where water source wells are being applied for, the location must be clearly indicated on the construction plan submitted with the application. Once a water source well has been proven, a well permit and associated Water Sustainability Act authorization must be acquired before the well can be put into production.

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.

## **Additional Construction Plan Requirements: Woodlot Areas**

Clearly mark woodlot areas on the construction plan if application includes a woodlot area. On the construction plan and within application, woodlot areas should be:

- Excluded from the area of new cut on Crown land entered on the forestry tab (which is used to calculate the cutting permit area).

## Mapping Requirements Specific to Geophysical Programs

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

- 1) 1:50,000 Maps:
  - 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. 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.

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.

## 5.7.5 Maps and Plans: Data Field Completion

Table 5-G below provides detailed instructions for each of the data fields requiring input (not auto populated) within the Application Management System.

**Table 5-G: Application Instruction Table for the Maps and Plans**

Label	Instructions
Construction Plan Attached	Refer to Section 5.7.3 of this Oil and Gas Activity Application Manual for mapping requirements.
Survey Company	Select the name of the Survey Company that completed the construction plan.
Job Number	Enter the job number associated with the uploaded construction plan.
Sheet Number	Enter the sheet number(s) that correspond with the plan submitted.

Label	Instructions
Original Plan Date	Select the original plan date associated with the uploaded construction plan.
Revised Plan Date	Select the last revision date associated with the uploaded construction plan.
Revision Number	Enter the last revision number associated with the uploaded construction plan.
Upload 1:20,000 BCGS Map	Refer to Section 5.7.1 of this Oil and Gas Activity Application Manual for mapping requirements.
Upload 1:250,000 BCGS Map	Refer to Section 5.7.1 of this Oil and Gas Activity Application Manual for mapping requirements.
Diversion Map Attached	Upload a Diversion map illustrating in detail the location and extent of the proposed short-term water use.