

2.1 Mandatory Procedures & Best Practices

The *Forest and Range Practices Act* (FRPA) and the Forest Planning and Practices Regulation (FPPR) require the ministry to construct a Forest Service road in a manner that achieves certain resource protection objectives or meets specific criteria. In doing so, a key component of a road's development is the layout of the road.

To address safety, resource protection and mitigation measures related to road layout, provide appropriate levels of expertise and resources to pre-construction of a road, and suitable checks and balances to ensure that the work is proceeding according to plan.

For each regulatory requirement, ensure that:

- suitable levels of data collection are applied;
- professional input is obtained as required;
- reconnaissance information is appropriate in terms of quality and quantity; and
- assurance that the necessary steps were taken and issues addressed (see [Project Tracking Checklist](#)).

Following is a table that summarizes in approximate chronological order the mandatory procedures and best practices with respect to the layout of Forest Service roads.

Table 2-1 Road Layout

Results to be achieved:

- a road layout identifies and addresses land alienations such as private property and First Nations land (FA s.1(1) - definition of forest service road)
- FSP results/strategies are achieved or carried out for visual quality or cultural heritage resources (FRPA s. [21\(1\)](#))
- do not cause landslides or gully processes that would have a material adverse effect on the subjects contained in FRPA s. 149 (FPPR s. [37](#), [38](#))
- maintain natural surface drainage patterns (FPPR s. [39](#))
- no construction of a road in a riparian management area (FPPR s. [50](#))
- no fan destabilization that would have a material adverse effect on forest resources (FPPR s. [54](#))
- no road construction within a specified distance from a spring in a community watershed, or within 100 m upslope of a licensed waterworks in a community watershed (FPPR s. [60](#), [62](#))
- comply with any general wildlife measures, or do not damage or render ineffective any resource feature or wildlife habitat feature (FPPR s. [69](#), [70](#))
- road is safe for industrial use (FPPR s. [72](#))
- meet the requirements for a road site plan (FRPA s. [10](#), [11](#))

Legislation supported: FA section 1(1)

M1	The CM must ensure that the land status along the proposed route has been checked, to identify alienated lands and other potential conflicts that may require land acquisition; (see <u>land alienations</u>)
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Legislation supported: FRPA section 21(1), FPPR sections 37, 38, 39, 50, 54, 60, 62, 69, 70, 72

M2	The CM must ensure that the FSP or other applicable planning process has been completed with respect to the proposed road layout; (see <u>Road Layout Professional Responsibilities & Considerations</u>)
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B1	Ensure that consultations were carried out at the time of the FSP preparation, and that further consultations and assessments are carried out concurrent with the road layout; (see <u>Road Layout Professional Responsibilities & Considerations</u> and <u>consultations</u>)
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B2	Ensure that the person conducting field reconnaissance has established skill sets. [see <u>Field Reconnaissance Procedures & Records</u>]
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B3	Mark the centreline (P-line or L-line) of all proposed routes with intervisible flagging tape, and include cumulative chainages and control points on the flagging tape. [see <u>Field Reconnaissance Procedures & Records</u>]
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B4	Ensure that appropriately qualified forest visuals professionals and archaeological professionals carry out office and field reviews as necessary to ensure that the road layout achieves the visual and cultural objectives. [see <u>Use of Appropriate Professionals</u>]
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B5	Consider the visual impacts of the road and the road corridor on the surrounding landscape. Where visual quality objectives (VQOs) have been established or visual impact issues can be foreseen, consider alternate route locations to lessen the visual impact of road [see <u>Visual Impact</u>].
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Legislation supported: FPPR sections 39: maintaining natural surface drainage patterns

B6	Ensure that the Reconnaissance Report includes information about all continuous and intermittent drainage flow channels, springs, seeps, and wet areas [see drainage]
Legislation supported: FPPR section 50 : no construction in a riparian management area except as provided	
B7	Ensure that the Reconnaissance Report identifies the riparian areas of the streams near the road. [see riparian].
B8	Ensure that the layout places the road beyond the riparian management areas for each stream, except as provided in section 50 (1) of FPPR [see Riparian].
B9	Ensure that the Reconnaissance Report identifies the fish stream crossings, so that suitable crossing structures can be designed and built. [see stream crossings]
Legislation supported: FPPR section 54 : no fan destabilization	
B10	Where a proposed road will cross an alluvial or colluvial fan, ensure that an appropriately qualified professional carries out a fan stability assessment to determine the potential impact on forest resources from debris flows, debris floods or water floods. [see fan destabilization]
Legislation supported: FPPR sections 56 , 57 : protection of fish passage and fish habitat	
B11	Ensure that the Reconnaissance Report identifies stream riparian classes and crossing data, and describes measures to protect fish and fish habitat at stream crossings. [see stream crossings]
Legislation supported: FPPR sections 60 , 62 : no construction near licensed waterworks or springs in a community watershed	
B12	Ensure that the Reconnaissance Report identify licensed waterworks and springs in community watersheds [see locations], and, unless there is an exception in accordance with FPPR, the layout places the road centre-line so as not to damage a waterworks and to achieve at least 100m distance from any such waterworks or springs in community watersheds.

Legislation supported: FPPR sections 69, 70: wildlife measures, resource features and wildlife habitat features

B13 Ensure that the Reconnaissance Report determines potential impacts on other resources, so as to locate roads in such a manner as to address general wildlife measures, resource features or wildlife habitat measures. [see applications]

Legislation supported: FPPR section 72: roads and structures are safe for industrial users

M3 A terrain stability assessment **must** be conducted by a qualified professional to determine whether measures are required to reduce the likelihood of a landslide occurring, or to reduce the likelihood of a landslide affecting forest resources, in the following situations:

- terrain stability mapping indicates that the road is located on terrain that is unstable or potentially unstable;
- the mapping referred to in paragraph (a) has not been done, and the road is located on terrain with slopes greater than 60%; or
- the road is located on terrain where there are indicators of slope instability. [see terrain stability]

B14 Where no geometric road design will be required, ensure that the Reconnaissance Report provides suitable horizontal and vertical road alignment criteria in a road layout and design schedule. [see maximum]

B15 Ensure that the professional specialists who have been retained to do the work are in fact qualified to do this work. [see Use of Appropriate Professionals]

B16 Ensure that each reconnaissance report addresses terrain conditions and road sections that are in unstable or potentially unstable terrain. [see Reconnaissance Report]

Legislation supported: FRPA sections 21 (1), FPPR sections 37, 38, 39, 50, 54, 60, 62, 69, 70, 72

M4 The Reconnaissance Report **must** be reviewed and accepted by the Coordinating Member. [see Reconnaissance Report]

M5	The Coordinating Member must sign (and seal as appropriate) the <u>Road Project Assurance Statement (PDF)</u> . [see <u>Chapter 8: Professional Responsibilities & Considerations</u>]
B17	Ensure that the necessary steps in the road layout process were undertaken and issues addressed [see <u>Project Tracking Checklist</u>]
Legislation supported: FRPA section <u>10</u> , <u>11</u>	
B18	For BCTS projects, as the holders of a FSP, ensure that a Reconnaissance Report provides sufficient details to address the requirements of a road site plan. [see <u>site plan</u>]

In the above table of chronological events:

- **M** = Mandatory procedures
- **B** = Best practices