

3.1 Mandatory Procedures & Best Practices

The Forest Planning and Practices Regulation (FPPR) requires the government to construct a Forest Service road in a manner that achieves certain resource protection objectives or meets specific criteria. One component of a road's development that addresses such objectives or criteria is its survey and design.

To address safety, and resource protection and mitigation measures related to road layout, it is necessary to 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.

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

Table 3-1 Road Survey and Design

Results to be achieved:

- Do not cause landslides or gully processes that would have a material adverse effect on forest resources (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)
- Protection of fish passage (FPPR s. 56)
- No deposition or transport of deleterious materials into licensed waterworks drinking water (FPPR s. 59)
- No road construction within a specified distance from a spring in a community watershed, or within 100m upslope of a licensed water intake or spring in a community watershed (FPPR s. 60, 62)
- Road is safe for industrial use (FPPR s. 72)

Legislation supported: FPPR sections 37, 38, 57, 59, 69, 70, 72: do not cause landslides or gully processes that will have a material adverse effect on forest resources

M1

A geometric road design **must** be carried out for all roads that will cross areas with a moderate or high likelihood of landslides. [see Geometric Road Design Requirements]

B1

Ensure that at least a location survey level 3 is carried out for road crossing landslide prone terrain.

	[see Survey Level 3]
B2	Ensure a geometric road design is carried out for other roads that need to be accurately constructed. [see Geometric Road Design Requirements]
B3	Ensure that the road design incorporates any measures prepared by an appropriately qualified professional to protect worker and user safety, fish, fish habitat, water quality, wildlife, wildlife habitat features, visual and heritage resources. [see Geometric Road Design Requirements]
Legislation supported: FPPR section 39 : maintain surface drainage patterns	
B4	Ensure that locations of proposed cross drain culverts are marked on the road plans, subject to on-site modification. [see Cross Drain]
Legislation supported: FPPR section 50 : no construction in riparian management areas, except as provided.	
B5	Ensure that the road is designed in the location identified by the layout, and where no exception has been provided in accordance with FPPR, the design places the road beyond the riparian management areas for each stream. [see riparian]
Legislation supported: FPPR sections 38 and 54 : no gully process or fan destabilization on the coast	
B6	Ensure that a road design on the Coast incorporates any protective measures prepared by an appropriately qualified professional as part of a gully process or fan stability assessment. [see ensure]
Legislation supported: FPPR section 56 : protection of fish passage	
B7	Ensure that any crossing design does not result in a material adverse effect on fish passage in a fish stream [see fish stream]
Legislation supported: FPPR sections 59 , 60 , 62 : no construction near (1) licensed waterworks in community watersheds or (2) springs that are a source of water for licensed waterworks in community watersheds	
B8	Ensure that the road design places the road at least 100m distance from any (1) licensed waterworks in community watersheds or (2) springs that are a source of water for licensed waterworks in community watersheds.
Legislation supported: FPPR section 72 : roads and structures are safe for industrial users	
B9	Ensure that the road design incorporates professional design measures related to landslides [see slope stability considerations]
B10	Ensure that the road design incorporates horizontal and vertical road alignments that provide for equipment use and for user safety. [see road alignment]
Legislation supported: FPPR section 78 : minimize clearing width	

B11	Ensure that clearing widths marked on the road plans provide for the minimum clearing width considering operational requirements, safety, drainage, stability and topography [see clearing width]
Legislation supported: FPPR sections 37 , 38 , 39 , 50 , 54 , 56 , 57 , 59 , 60 , 62 , 69 , 70 , 72	
M2	Road plans must be reviewed and accepted by the Coordinating Member [see Survey & Design Outputs]
M3	The Coordinating Member must sign (and seal as appropriate) the Road Project Assurance Statement (PDF) . [see Chapter 8: Professional Responsibilities & Considerations]
B12	Ensure that the necessary steps in the road layout process were undertaken and issues addressed [see Project Tracking Checklist]

In the above table of chronological events:

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