

PRACTICE ADVISORY

PROFESSIONAL ROLES AND RESPONSIBILITIES FOR THE LIFE CYCLE OF FOREST ROAD CROSSINGS

Version 1.0, Published August 12, 2019

INTRODUCTION

This practice advisory explains:

- a) the roles and responsibilities of project participants involved in the design, construction, maintenance, and deactivation of forest road crossings; and
- b) the regulation of the relevant areas of practice by professional regulatory bodies and by the government.

A project described in this practice advisory may include one or more of the life-cycle phases referred to herein.

Tables A to F categorize and distinguish the roles and responsibilities of the following persons and entities at the various life-cycle phases:

- Professionals carrying out work relating to such crossings ("Practitioners")
- Forest road operators with legislated performance obligations ("Road Operators")
- The professional regulatory bodies that license the Practitioners ("Professional Associations")
- The provincial Ministry responsible for regulating such crossings, and oversight of the delivery of those obligations ("Government/Governance")

This practice advisory complements the guidance of the Engineers and Geoscientists British Columbia/Association of British Columbia Forest Professionals (ABC FP) joint practices publication entitled *Guideline for Professional Services in the Forest Sector - Crossings V.2, June, 2014* (the "Crossing Guideline").

The goal of this practice advisory is to deal with life-cycle phases beyond the scope of the *Crossing Guideline*, including inspection, maintenance, and bridge removal. The *Crossing Guideline*, other current guidelines, such as the *Guideline for Professional Services in the Forest Sector – Forest Roads, June 2012* (the “Roads Guideline”), or potential future guidelines may be revised or created to provide guidance on these phases and integrate the content of this practice advisory. Note that the roles of the Coordinating Registered Professional (“CRP”) and the Coordinating Member (“CM”), as defined in the *Crossing Guideline* and the *Roads Guideline*, respectively, have not been changed or redefined in this document. The titles of CRP and CM are used synonymously in this document to describe the coordinating registered professional taking responsibility for the crossing at any particular point in time during its life cycle.

Note that there may be site-specific situations that require professional input or oversight under other statutes or regulations. One example may be the *Occupational Health and Safety Regulation* under WorkSafeBC as applied to worker safety.

This practice advisory explains professional roles and responsibilities only, and there is no intent to provide guidance on specific technical or professional practices (e.g., how to design or construct a bridge) that may be found in other publications or developed through professional training and experience.

While the concepts discussed here could be considered for various types of roads and structures, the specific advice and the referenced external sources apply only to forest roads permitted or tenured under the *Forest Act* or the *Forest and Range Practices Act*.

The tables in this document are intended to remind experienced project participants of the various project phases and the requirements for each, and to introduce new participants to these topics.

OVERVIEW OF PROJECT PHASES

For each phase or project associated with a forest road crossing, a Practitioner must be assigned overall professional responsibility. The overview table ([Table A](#)) explains definitions and summarizes the roles and responsibilities of project participants.

The subsequent tables describe five forest road crossing phases:

- General ([Table B](#))
- Planning and Design ([Table C](#))
- Construction ([Table D](#))
- Inspection and Maintenance ([Table E](#))
- Deactivation and Bridge Removal ([Table F](#))

Professional responsibility can be handed off within or between the project phases, when circumstances are not suitable for a single continuing coordinating professional.

HOW TO USE THIS DOCUMENT

The tables in this document describe the roles and responsibilities of project participants who are involved in the design and construction of forest road crossings. The overview table ([Table A](#)) explains definitions and summarizes the roles and responsibilities of project participants, and subsequent tables are presented in order of each project phase, as described above.

Each table contains numbered notes, hyperlinks, and references that correspond to the content of that particular table. Links to detailed information related to each topic appear in the corresponding Notes sections that follow each table.

Therefore, each individual project phase table may be used either as a “stand-alone” document or as the set of tables. Note, however, that the responsibilities listed in the General table ([Table B](#)) may still need to be referred to along with some of the project phase tables, where indicated.

VERSION HISTORY

VERSION NUMBER	PUBLISHED DATE	DESCRIPTION OF CHANGES
1.0	August 12, 2019	Initial version.

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TABLE A: OVERVIEW AND DEFINITIONS

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
<p>“Practitioners” are the professionals who are typically involved in the construction of forest road crossings. This column describes the roles, responsibilities, and qualifications of Practitioners.</p> <p>Practitioners include:</p> <ul style="list-style-type: none"> • Coordinating Registered Professionals (CRP) [Note A1] and • Professionals of Record (POR) [Note A2]. <p>Practitioners are members of Engineers and Geoscientists British Columbia (Engineers and Geoscientists BC) or the Association of British Columbia Forest Professionals (ABCFFP) who are responsible for overall project professional work or individual phase preparation.</p> <p>These include:</p> <ul style="list-style-type: none"> • professional engineers; • professional foresters; and • registered forest technologists. <p>Other professional specialists may be consulted by the CRP or POR, including members of the College of Applied Biologists.</p> <p>For any project, there must be a CRP who takes professional responsibility for that work; however, the role of CRP may be transferred or handed off as necessary where more than one CRP is needed during the lifespan of the project.</p> <p>In addition, for forest crossing design and construction projects, there must be both a CRP and a POR, although the CRP may undertake both roles.</p>	<p>“Road Operators” are authorized in respect of a road under the <i>Forest Planning and Practices Regulation</i> (FPPR) [Note A3], and may include the following:</p> <ul style="list-style-type: none"> • Tenure holders, forest licensees, timber sale licence (TSL) holders, woodlot holders, or other industrial users. • BC Timber Sales (BCTS). <ul style="list-style-type: none"> – For forest service roads operated and maintained by BCTS where no TSL holder has been assigned the responsibility for maintenance, BCTS is defined as a “road operator.” – Where BCTS has provided a crossing design to a TSL holder, and the TSL holder is implementing that design, BCTS must provide for a CRP and POR during the preparation of the design and ensure the transfer of responsibility to the TSL holder. The TSL holder must, in turn, provide for a different CRP and POR moving forward during construction of the crossing structure. • FLNRO Districts/Engineering Branch. <ul style="list-style-type: none"> – For forest service roads operated and maintained by FLNRO districts where no industrial user has been assigned responsibility for maintenance, the FLNRO district is defined as a “road operator.” 	<p>The “Professional Associations” provide regulatory oversight for members whose right to practice includes works on forest access structures.</p> <p>For the purposes of this document:</p> <ul style="list-style-type: none"> • the primary Professional Associations are Engineers and Geoscientists BC and ABCFFP, whose members would be the CRP and/or the POR; members of either or both of these Professional Associations would be involved in all crossing projects; and • other Professional Associations that may provide ancillary and specialist professional work as needed for individual crossing projects. <p>These Professional Associations have statutory mandates to establish and enforce standards for the qualification and practice of their members. From time to time, the Professional Associations publish professional practice guidelines on specific professional services or activities where additional guidance is necessary.</p>	<p>The Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRO or “Ministry”) enforces legislation and regulations that govern the construction of forest road crossings by the “Road Operators.”</p> <p>Note that:</p> <ul style="list-style-type: none"> • for forest service roads operated by BCTS, where a TSL holder has been assigned the responsibility for maintenance, BCTS is defined as “government”; and • for forest service roads operated by FLNRO districts where an industrial user has been assigned the responsibility for maintenance, the FLNRO district is defined as “government.”

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NOTES

NOTE NO.	DESCRIPTION	SOURCE	SECTION / PAGE NO.	LINK
A-1	Definition of “Coordinating Registered Professional”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 1	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
A-2	Definition of “Professionals of Record”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
A-3	Definition of “Authorized in respect of a road”	<i>Forest Planning and Practices Regulation</i>	Section 1	http://www.bclaws.ca/civix/document/id/loo83/loo83/12_14_2004#section1

ABBREVIATIONS & ACRONYMS

ABBREVIATION	TERM	ABBREVIATION	TERM
ABC FP	Association of BC Forest Professionals	FLNRO	Forests, Lands, Natural Resource Operations and Rural Development
BC	British Columbia	POR	Professional(s) of Record
BCTS	BC Timber Sales	TSL	Timber sale licence
CRP	Coordinating Registered Professional		

REGULATIONS AND REFERENCES

Forest and Range Practices Act, [SBC 2002], Chapter 69.

Forest and Range Practices Act, Forest Planning And Practices Regulation, B.C. Reg. 14/2004.

Engineers and Geoscientists British Columbia (formerly APEGBC) and Association of British Columbia Forest Professionals (ABC FP). 2014. Guidelines for Professional Services in the Forest Sector – Crossings, V.2. APEGBC/ABC FP Professional Practice Guidelines. Burnaby, BC: Engineers and Geoscientists BC and ABC FP. [accessed: 2019 May 13]. <https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx>.

TABLE B: PROJECT PHASE – GENERAL

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
<p>The Coordinating Registered Professional (CRP) [Note B1] is responsible for:</p> <ul style="list-style-type: none"> • delivering professional work in accordance with legislation, professional bylaws, and codes of ethics, including documentation requirements [Note B2]; • carrying out works in a manner consistent with professional association practice guidelines [Note B3]; • considering user safety and other resources at risk due to the crossing; • coordinating or carrying out the professional work and its documentation as required for a crossing project; • engaging qualified specialists and other Members, and assigning tasks to the POR, Specialists, and other Members, as required; and • completing, signing, and sealing the appropriate CRP Crossing Assurance Statement [Note B4] and CRP Transfer of Responsibility documents, where applicable. <p>The Professional of Record (POR) [Note B5] is responsible for:</p> <ul style="list-style-type: none"> • delivering professional work related to planning, design, and construction, in accordance with legislation, professional bylaws, and codes of ethics; • carrying out works in a manner consistent with professional association practice guidelines [Note B6, Note B3]; • assigning the work to Specialists or other Members and overseeing their work, and ensuring that they: <ul style="list-style-type: none"> – are qualified to do the work, – are used in an appropriate manner, and – have access to project information and to other project personnel; and 	<p>Road Operators [Note B10] are responsible for:</p> <ul style="list-style-type: none"> • assigning or retaining a CRP and a POR to coordinate and carry out professional works on crossings; • providing a project framework and working with professionals to comply with statutory requirements and best practices for crossing planning, design, construction, inspection and maintenance, and deactivation; • obtaining approvals, licenses, and permits; • directing their own professional employees to appropriately provide professional services and/or oversight of external professionals, from project inception to completion (project tracking); • including details of acceptable practices and applications of professional works in contracts with outside professionals; • ensuring the project documents, including those for field reviews and design reviews, are prepared and retained [Note B11]; • ensuring project professionals possess the necessary skills to coordinate a project or carry out portions of the project; • ensuring Assurance Statements are completed and signed off; and • reviewing, accepting, and integrating the products of professional work. 	<p>The Association of British Columbia Forest Professionals (ABCFFP) is responsible for:</p> <ul style="list-style-type: none"> • administering and enforcing the <i>Foresters Act</i> [Note B12], which defines the practice of professional forestry [Note B13] and stipulates the requirements of a member of the ABCFFP for carrying out professional forestry; • governing the members of the association in accordance with the <i>Foresters Act</i>; and • establishing and enforcing bylaws [Note B14] that include: <ul style="list-style-type: none"> – identification of professional work (signing and sealing the work); – a code of ethics (defined principles and rules of conduct for all Members); and – professional practice standards (dealing with competence, independence, integrity, due diligence, and stewardship). <p>Engineers and Geoscientists British Columbia (Engineers and Geoscientists BC) is responsible for:</p> <ul style="list-style-type: none"> • administering and enforcing the <i>Engineers and Geoscientists Act</i>, which defines the practice of professional engineering and professional geoscience [Note B15], and stipulates the requirement to be a member of Engineers and Geoscientists BC to carry out such professional work; • establishing and enforcing bylaws [Note B16] that include items of professional practice, such as: <ul style="list-style-type: none"> – a code of ethics (that provides defined principles and rules of conduct for all Members, including the undertaking of professional assignments only when qualified by training or experience); and – quality management processes. 	<p>The Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRO) is responsible for:</p> <ul style="list-style-type: none"> • administering legislation and regulations respecting applications to forest road crossings (<i>Forest and Range Practices Act</i>, Section 22 [Note B17]) and compliance with plans [Note B18]; • reviewing proponents' adherence to the legislation and regulations, and enforcing penalties and mitigation for non-compliance; • developing documents, policy, and guidelines to apply to Ministry staff carrying out professional works or oversight of such works on its crossing projects; and • preparing and delivering training on documents, policy, and guidelines for Ministry staff. <p style="text-align: right;"><i>Continued...</i></p>

Table B: Project Phase – General, continued

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
<ul style="list-style-type: none"> completing, signing, and sealing the POR Crossing Assurance Statement [Note B7]. 			
<p>Specialists [Note B8] and other Members [Note B9] are responsible for:</p> <ul style="list-style-type: none"> obtaining relevant project information from the CRP or the POR, and carrying out the specific duties and tasks that have been assigned to the Specialist by the CRP or the POR; and signing and sealing output documents to demonstrate their professional responsibility for the work. 		<p>Other Professional Associations are responsible for:</p> <ul style="list-style-type: none"> regulating the practices of their members. 	

NOTES

NOTE NO.	DESCRIPTION	SOURCE	SECTION / PAGE NO.	LINK
B-1	Definition of “Coordinating Registered Professional”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 1	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-2	Quality Management	Guidelines for Professional Services in the Forest Sector – Crossings	Section 5.1 Page 19	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-3	Conduct	Guidelines for Professional Services in the Forest Sector – Crossings	Section 2.3 Page 6	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-4	CRP Crossing Assurance Statement	Guidelines for Professional Services in the Forest Sector – Crossings	Appendix A Page 25	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-5	Definition of “Professionals of Record”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-6	Skill Set	Guidelines for Professional Services in the Forest Sector – Crossings,	Section 6.0 page 21	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-7	POR Crossing Assurance Statement	Guidelines for Professional Services in the Forest Sector – Crossings	Appendix A Page 27	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-8	Definition of “Specialist”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
B-9	Definition of “Member”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 2	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx

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Table B: Project Phase – General, continued

NOTE NO.	DESCRIPTION	SOURCE	SECTION / PAGE NO.	LINK
B-10	Definition of “Authorized in respect of a road”	<i>Forest Planning and Practices Regulation</i>	Section 1	http://www.bclaws.ca/civix/document/id/loo83/loo83/12_14_2004#section1
B-11	“Retaining information”	<i>Forest Planning and Practices Regulation</i>	Section 77	http://www.bclaws.ca/civix/document/id/loo91/loo91/14_2004#section77
B-12	“Duty and objects of the association”	<i>Foresters Act</i>	Section 4	http://www.bclaws.ca/civix/document/id/complete/statreg/03019_01#section4
B-13	Definition of “practice of professional forestry”	<i>Foresters Act</i>	Section 1	http://www.bclaws.ca/civix/document/id/complete/statreg/03019_01#section1
B-14	Bylaws	<i>Foresters Act</i>	Section 9	http://www.bclaws.ca/civix/document/id/complete/statreg/03019_01#section9
B-15	Definition of “practice of professional engineering” and “practice of professional geoscience”	<i>Engineers and Geoscientists Act</i>	Section 1	http://www.bclaws.ca/civix/document/id/consol30/consol30/96116_01#section1
B-16	Bylaws	<i>Engineers and Geoscientists Act</i>	Section 10	http://www.bclaws.ca/civix/document/id/consol30/consol30/96116_01#section10
B-17	“Application”	<i>Forest and Range Practices Act</i>	Part 3, Division 2, Section 22	http://www.bclaws.ca/civix/document/id/complete/statreg/02069_01#section22
B-18	“Compliance with Plans”	<i>Forest and Range Practices Act</i>	Part 3, Division 1, Section 21	http://www.bclaws.ca/civix/document/id/complete/statreg/02069_01#section21

ABBREVIATIONS & ACRONYMS

ABBREVIATION	TERM	ABBREVIATION	TERM
ABC FP	Association of BC Forest Professionals	FLNRO	Forests, Lands, Natural Resource Operations and Rural Development
BC	British Columbia	POR	Professional(s) of Record
CRP	Coordinating Registered Professional		

REGULATIONS AND REFERENCES

Engineers and Geoscientists Act, [RSBC 1996], Chapter 116.

Foresters Act, [SBC 2003], Chapter 19.

Forest and Range Practices Act, [SBC 2002], Chapter 69.

Engineers and Geoscientists British Columbia (formerly APEGBC) and Association of British Columbia Forest Professionals (ABC FP). 2014. Guidelines for Professional Services in the Forest Sector – Crossings, V.2. APEGBC/ABC FP Professional Practice Guidelines. Burnaby, BC: Engineers and Geoscientists BC and ABC FP. [accessed: 2019 May 13]. <https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx>.

TABLE C: PROJECT PHASE – PLANNING AND DESIGN

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
<p>In addition to the responsibilities detailed in the General section (Table B), Practitioners have the following responsibilities:</p> <p>The Coordinating Registered Professional (CRP) [Note C1] is responsible for:</p> <ul style="list-style-type: none"> ensuring conformance with plans such as the Forest Stewardship Plan (FSP) and site plan, under the <i>Forest and Range Practices Act</i> and the <i>Forest Act</i>; ensuring approvals, licenses, and permits have been obtained; ensuring other users are contacted and potential forest practice impacts are considered (e.g., water licences); ensuring other legislation and regulations related to the crossing have been considered, and plans and procedures are consistent with those statutes, regulations, and policies (e.g., WorkSafeBC, <i>Water Act</i>, fish habitat, archaeological); planning and locating the crossing; and ensuring general arrangement design and drawings are prepared, signed, and sealed. <p>The Professional of Record (POR) [Note C2] is responsible for:</p> <ul style="list-style-type: none"> ensuring any site surveys and site plans are completed; preparing, signing, and sealing the conceptual design and general arrangement design and drawings [Note C3] with the use of design aids [Note C4] where applicable; ensuring independent peer review of designs as required [Note C5]; specifying appropriate equipment and techniques for specialized erection procedures; and preparing a plan of field reviews during construction and the required frequencies of the field reviews. 	<p>In addition to the responsibilities detailed in the General section (Table B), Road Operators [Note C8] are responsible for:</p> <ul style="list-style-type: none"> ensuring plans such as FSPs and site plans are signed off and made available to the practitioners; and ensuring planning and design documentation is obtained and retained. 	<p>No additional responsibilities beyond those detailed in the General section (Table B).</p>	<p>In addition to the responsibilities detailed in the General section (Table B), the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRO) is responsible for:</p> <ul style="list-style-type: none"> providing for arm’s length oversight of forest practices related to the planning and design of crossings.

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Table C: Project Phase – Planning and Design, continued

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
Specialists [Note C6] and other Members [Note C7] are responsible for: <ul style="list-style-type: none"> carrying out site surveys, site plans and other tasks that may have been assigned to them by the CRP or the POR. 			

NOTES

NOTE NO.	DESCRIPTION	SOURCE	SECTION / PAGE NO.	LINK
C-1	Definition of “Coordinating Registered Professional”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 1	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
C-2	Definition of “Professionals of Record”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
C-3	General Arrangement Drawings	Guidelines for Professional Services in the Forest Sector – Crossings	Section 4.3.7 Page 15	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
C-4	Crossing Design Aids	Guidelines for Professional Services in the Forest Sector – Crossings	Section 4.3.2 Page 12	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
C-5	Independent Peer Review	Guidelines for Professional Services in the Forest Sector – Crossings	Section 5.3 Page 20	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
C-6	Definition of “Specialist”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
C-7	Definition of “Member”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 2	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
C-8	Definition of “Authorized in respect of a road”	<i>Forest Planning and Practices Regulation</i>	Section 1	http://www.bclaws.ca/civix/document/id/loo83/loo83/12_14_2004#section1

ABBREVIATIONS & ACRONYMS

ABBREVIATION	TERM	ABBREVIATION	TERM
CRP	Coordinating Registered Professional	FSP	Forest Stewardship Plan
FLNRO	Forests, Lands, Natural Resource Operations and Rural Development	POR	Professional(s) of Record

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REGULATIONS AND REFERENCES

Forest Act, [RSBC 1996], Chapter 157

Forest and Range Practices Act, [SBC 2002], Chapter 69.

Water Act, [RSBC 1996], Chapter 483.

Engineers and Geoscientists British Columbia (formerly APEGBC) and Association of British Columbia Forest Professionals (ABC FP). 2014. Guidelines for Professional Services in the Forest Sector – Crossings, V.2. APEGBC/ABC FP Professional Practice Guidelines. Burnaby, BC: Engineers and Geoscientists BC and ABCFP. [accessed: 2019 May 13]. <https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx>.

TABLE D: PROJECT PHASE – CONSTRUCTION

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
<p>In addition to the responsibilities detailed in the General section (Table B), Practitioners have the following responsibilities:</p> <p>The Coordinating Registered Professional (CRP) [Note D1] is responsible for:</p> <ul style="list-style-type: none"> ensuring there is an appropriate quality assurance process in place, and documentation available, to confirm conformance of fabricated structural elements to the approved structural design drawings and specifications; ensuring field reviews are carried out, including construction inspections and materials inspections [Note D2]; communicating with and updating Road Operators; and completing, signing, and sealing the appropriate CRP Crossing Assurance Statement [Note D3]. <p>The Professional of Record (POR) is responsible for:</p> <ul style="list-style-type: none"> carrying out field reviews or compiling materials and construction documentation, including documented confirmation of an appropriate quality assurance process for fabrication of structurally designed elements, and the outcomes of construction inspections; addressing required design revisions that become evident during construction, and consulting with any Specialists who have completed the earlier design work; ensuring the plans and designs meet appropriate acts, regulations, and professional guidelines; confirming that material delivered to site or produced on-site, particularly structurally designed elements, conform to the specifications in the crossing design; preparing and signing off on record drawings and the POR Construction Assurance Statement [Note D4]. 	<p>In addition to the responsibilities detailed in the General section (Table B), Road Operators [Note D7] are responsible for:</p> <ul style="list-style-type: none"> ensuring the CRP signs and seals a CRP Crossing Assurance Statement [Note D3]; ensuring the POR signs and seals a POR Construction Assurance Statement [Note D4]; ensuring as-built (record) drawings and other relevant construction documentation are obtained and retained; and ensuring that, for those structures or structural components that are purchased as prefabricated items prior to assigning a CRP, there is an appropriate quality assurance process in place to confirm conformance of fabricated structural elements to the approved drawings and specifications, and providing the quality assurance documentation to the CRP and POR to support their responsibilities. 	<p>No additional responsibilities beyond those detailed in the General section (Table B).</p>	<p>In addition to the responsibilities detailed in the General section (Table B), the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRO) is responsible for:</p> <ul style="list-style-type: none"> providing for arm’s length oversight of forest practices related to the construction of crossings.

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Table D: Project Phase – Construction, continued

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
Specialists [Note D5] and other Members [Note D6] are responsible for: <ul style="list-style-type: none"> • carrying out environmental monitoring; • carrying out construction inspections; • completing record documents; and • any other tasks that have been assigned to the Specialist by the CRP or the POR. 			

NOTES

NOTE NO.	[CODE] DESCRIPTION	SOURCE	SECTION / PAGE NO.	LINK
D-1	Definition of “Coordinating Registered Professional”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 1	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
D-2	Construction and Field Reviews	Guidelines for Professional Services in the Forest Sector – Crossings,	Section 4.4 Page 17	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
D-3	CRP Crossing Assurance Statement	Guidelines for Professional Services in the Forest Sector – Crossings	Appendix A Page 25	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
D-4	POR Crossing Assurance Statement	Guidelines for Professional Services in the Forest Sector – Crossings	Appendix A Page 27	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
D-5	Definition of “Specialist”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
D-6	Definition of “Member”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 2	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
D-7	Definition of “Authorized in respect of a road”	<i>Forest Planning and Practices Regulation</i>	Section 1	http://www.bclaws.ca/civix/document/id/lo083/lo083/12_14_2004#section1

ABBREVIATIONS & ACRONYMS

ABBREVIATION	TERM	ABBREVIATION	TERM
CRP	Coordinating Registered Professional	POR	Professional of Record
FLNRO	Forests, Lands, Natural Resource Operations and Rural Development		

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REGULATIONS AND REFERENCES

Forest and Range Practices Act, [SBC 2002], Chapter 69.

Forest and Range Practices Act, Forest Planning And Practices Regulation, B.C. Reg. 14/2004.

Engineers and Geoscientists British Columbia (formerly APEGBC) and Association of British Columbia Forest Professionals (ABC FP). 2014. Guidelines for Professional Services in the Forest Sector – Crossings, V.2. APEGBC/ABC FP Professional Practice Guidelines. Burnaby, BC: Engineers and Geoscientists BC and ABCFP. [accessed: 2019 May 13]. <https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx>.

TABLE E: PROJECT PHASE – INSPECTION AND MAINTENANCE

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
<p>In addition to the responsibilities detailed in the General section (Table B), Practitioners have the following responsibilities:</p> <p>The Coordinating Registered Professional (CRP) [Note E1] is responsible for:</p> <ul style="list-style-type: none"> ensuring a bridge maintenance plan is completed and includes the schedule and details of structure inspections, whether they are routine or close-proximity inspections; ensuring the structures are inspected by qualified individuals, including Specialists [Note E2] where necessary; ensuring a bridge maintenance plan contains any remedial measures for structures, including those specified by Specialists, or by reference to standard operating procedures (SOPs); and preparing and signing an Assurance Statement to confirm preparation of a bridge maintenance plan and completion of the works in accordance with that plan. <p>Specialists and other Members [Note E3] are responsible for:</p> <ul style="list-style-type: none"> preparing a bridge maintenance plan; providing a load rating for each structure that is deemed potentially unable to safely carry the design load; and providing input into more complex or higher risk bridge maintenance projects. 	<p>In addition to the responsibilities detailed in the General section (Table B), Road Operators [Note E4] are responsible for:</p> <ul style="list-style-type: none"> preparing a budget based on the maintenance service plan (including the required levels of inspection) that describes the maintenance work to be carried out for those crossings for which the Road Operator is responsible for inspection and maintenance; ensuring a CRP is assigned the responsibility for developing and implementing a bridge maintenance plan consistent with that service plan; providing a set of SOPs for routine structure maintenance practices; ensuring inspections and remedial works on bridges are scheduled and carried out; ensuring load ratings are completed, and ensuring each structure not capable of carrying the design load is identified as such with signage or is barricaded to prevent vehicle use; and ensuring inspection and maintenance documentation is obtained and retained. 	<p>No additional responsibilities beyond those detailed in the General section (Table B).</p>	<p>In addition to the responsibilities detailed in the General section (Table B), the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRO) is responsible for:</p> <ul style="list-style-type: none"> providing for arm’s length oversight of forest practices related to the inspection and maintenance of crossings.

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NOTE NO.	DESCRIPTION	SOURCE	SECTION / PAGE NO.	LINK
E-1	Definition of “Coordinating Registered Professional”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 1	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
E-2	Definition of “Specialist”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
E-3	Definition of “Member”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 2	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
E-4	Definition of “Authorized in respect of a road”	<i>Forest Planning and Practices Regulation</i>	Section 1	http://www.bclaws.ca/civix/document/id/loo83/loo83/12_14_2004#section1

ABBREVIATIONS & ACRONYMS

ABBREVIATION	TERM	ABBREVIATION	TERM
CRP	Coordinating Registered Professional	SOP	Standard Operating Procedure
FLNRO	Forests, Lands, Natural Resource Operations and Rural Development		

REGULATIONS AND REFERENCES

Forest and Range Practices Act, [SBC 2002], Chapter 69.

Forest and Range Practices Act, Forest Planning And Practices Regulation, B.C. Reg. 14/2004.

Engineers and Geoscientists British Columbia (formerly APEGBC) and Association of British Columbia Forest Professionals (ABCFFP). 2014. Guidelines for Professional Services in the Forest Sector – Crossings, V.2. APEGBC/ABCFFP Professional Practice Guidelines. Burnaby, BC: Engineers and Geoscientists BC and ABCFFP. [accessed: 2019 May 13]. <https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx>.

TABLE F: PROJECT PHASE – DEACTIVATION AND BRIDGE REMOVAL

PROJECT PARTICIPANTS, REGULATORS, AND THEIR RESPECTIVE ROLES AND RESPONSIBILITIES			
PRACTITIONERS	ROAD OPERATORS	PROFESSIONAL ASSOCIATIONS	GOVERNMENT / GOVERNANCE
<p>In addition to the responsibilities detailed in the General section (Table B), Practitioners have the following responsibilities:</p> <p>The Coordinating Registered Professional (CRP) [Note F1] is responsible for:</p> <ul style="list-style-type: none"> ensuring bridge removal measures are prepared, as part of road deactivation [Note F2] whether the measures are part of a standard operating procedure (SOP) or subject to a site-specific analysis; assigning the analysis of bridge removal measures, as required, to Specialists and other Members; providing details of bridge removal to the CRP responsible for the road deactivation project; and determining the number and timing of any field reviews for more complex bridge removals, and delegating or carrying out those field reviews. <p>Specialists [Note F3] and other Members [Note F4] are responsible for:</p> <ul style="list-style-type: none"> determining the extent of structure removal; and developing specialized procedures for complex or higher risk bridge removal projects. 	<p>In addition to the responsibilities detailed in the General section (Table B), Road Operators [Note F5] are responsible for:</p> <ul style="list-style-type: none"> providing a set of SOPs for routine structure deactivation practices; ensuring all bridge superstructures (and designated bridge substructures) on deactivated roads have been removed, and the roads barricaded (FPPR S.82) [Note F2]; and ensuring a CRP signs and seals an Assurance Statement related to the road deactivation. 	<p>No additional responsibilities beyond those detailed in the General section (Table B).</p>	<p>In addition to the responsibilities detailed in the General section (Table B), the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRO) is responsible for:</p> <ul style="list-style-type: none"> providing for arm’s length oversight of forest practices related to the deactivation of crossings.

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NOTE NO.	DESCRIPTION	SOURCE	SECTION / PAGE NO.	LINK
F-1	Definition of “Coordinating Registered Professional”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 1	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
F-2	Road Deactivation	<i>Forest Planning and Practices Regulation</i>	Part 5 Section 82	http://www.bclaws.ca/civix/document/id/loo83/loo83/12_14_2004#section82
F-3	Definition of “Specialist”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 3	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
F-4	Definition of “Member”	Guidelines for Professional Services in the Forest Sector – Crossings	Section 1.0 Page 2	https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx
F-5	Definition of “Authorized in respect of a road”	<i>Forest Planning and Practices Regulation</i>	Section 1	http://www.bclaws.ca/civix/document/id/loo83/loo83/12_14_2004#section1

ABBREVIATIONS & ACRONYMS

ABBREVIATION	TERM	ABBREVIATION	TERM
CRP	Coordinating Registered Professional	FPPR	Forest Planning and Practices Regulation
FLNRO	Forests, Lands, Natural Resource Operations and Rural Development	SOP	Standard Operating Procedure

REGULATIONS AND REFERENCES

Forest and Range Practices Act, [SBC 2002], Chapter 69.

Forest and Range Practices Act, Forest Planning And Practices Regulation, B.C. Reg. 14/2004.

Engineers and Geoscientists British Columbia (formerly APEGBC) and Association of British Columbia Forest Professionals (ABCFFP). 2014. Guidelines for Professional Services in the Forest Sector – Crossings, V.2. APEGBC/ABCFFP Professional Practice Guidelines. Burnaby, BC: Engineers and Geoscientists BC and ABCFFP. [accessed: 2019 May 13]. <https://www.egbc.ca/getmedia/97dcbad3-5482-416a-9bc0-55b3c662e71a/APEGBC-Guidelines-for-Forest-Sector-Crossings.pdf.aspx>.