BRITISH COLUMBIA Ministry of Forests Revenue Branch

MEMORANDUM

File: 282-20/195-30/IAPP

September 30, 2002

To: Regional Managers - Interior

From: The Honourable Michael de Jong
Minister of Forests

Re: Amendment No. 9 to the *Interior Appraisal Manual*

I hereby approve Amendment No. 9 to the *Interior Appraisal Manual*, and attach a copy for your use. The following sections have been amended

Section 4.3.1(2):	New text is added which requires that the Director of Revenue Branch must approve any costs associated with reconstruction or upgrade of a Ministry of Transportation road prior to their inclusion in an appraisal.
Section 4.5.4:	A Francois Lake Ferry cost estimate ($0.31 per cubic metre) is added to the list of special transportation cost estimates.
Section 4.12:	Additional Trend Factors for October 1, 2002 to December 1, 2002.

This amendment will come into force on October 1, 2002. Further amendments or revisions to this manual require my approval.

for Michael de Jong
Minister

Attachment

pc: Bill Howard, Director, Revenue Branch

All Subscribers, *Interior Appraisal Manual*

BRITISH COLUMBIA Ministry of Forests

MANUAL REVISION TRANSMITTAL

FOR FURTHER INFORMATION CONTACT:

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MANUAL TITLE	
Interior Appraisal Manual	
REVISION No.	**ISSUE DATE**
9	October 1, 2002
PUBLICATIONS CO-ORDINATOR	
Judy Laton Revenue Branch	
AUTHORIZATION (Name, Title)	
W. Howard Director, Revenue Branch	

Please make the following changes to your copy of the above Ministry manual. Please insert the following specified pages and **file this notice** immediately after the Amendments Tab.

ACTION (Remove/Insert)	(VOL.) CHAPTER-SECTION-SUBJECT TABLE OF CONTENTS	PAGE(S)	COMMENTS
REMOVE	Chapter 4	7 - 12 43 – 44 59 - 62	
INSERT	Chapter 4	7 - 12 43 – 44 59 - 62	
REMOVE	Index	1 - 2	
INSERT	Index	1 - 2	
INSERT	Minister's Letter and Transmittal Sheet		Behind Amendments Tab

Where applicable, these cruised volumes and development cost estimates must be segregated on the basis of legal boundaries.

4.3.1 Development Cost Categories

Development cost allocation (Section 4.3.1.1) applies to all cost estimates made under this section.

1. New Construction

   New construction is defined as the following construction phases: subgrade construction, placement of additional stabilizing material and the construction and installation of drainage and other pertinent structures.

   New construction costs are allocated to the first tributary cutting authority (subject to Section 4.3.1.1.5).

   a. Road Cost Estimates

      i. Tabular cost estimates

         Each road section cost estimate is determined from the appropriate tables (Section 4.3.2). These section costs are totalled to give a road cost estimate for each road. The road costs for all roads are then totalled to give a total cost for tabular roads.

      ii. Detailed engineering cost estimates

         Each project cost is estimated according to Section 4.3.3. These projects may include: (see Section 4.3.3 for a complete listing).

   The total of the estimated costs for each project is summed to give a total cost ($) for engineered roads.

   b. Drainage Structure Cost Estimates

      Each drainage structure cost estimate is determined either from the appropriate table (Section 4.3.2.4) or as a detailed engineering cost estimate (Section 4.3.3).

      Where materials are reused by the original purchaser at a second or subsequent location, the cost estimate will include dismantling, transportion and installation at the new site. The initial materials cost and delivery costs are excluded.

      Where used bridge materials are purchased from a legally non-associated party, the cost of purchase and shipping those materials will be included in the cost estimate. The requirements of Section 4.1 still apply.

The total of the estimated costs for all bridges are summed to give a total cost for bridges.

The total costs for tabular roads, engineered roads, and bridges are totalled and then divided by the total net cruise volume to give a unit cost ($/m^3$) for new construction.

2. Reconstruction and Replacement

Reconstruction and Replacement are defined as:

a. replacement or structural repair of a major drainage structure (e.g., replacing stringers, cross ties, or cribbing), or

b. major resurfacing, which means resurfacing sections of more than 0.3 km in length that were initially surfaced but have deteriorated due to long term wear and tear, or

c. major reconstruction, which means restoring at least 0.1 km of road (per occurrence) that requires complete rebuilding of the subgrade.

The costs approved under this section must not qualify under routine maintenance as described in Section 4.6.

Bridges replaced on forest service roads that are included in the Forest Renewal B.C. five year "Bridge Replacement Program on Forest Service Roads", or are otherwise funded by the Crown will not be included in any appraisal. Other major Forest Service road reconstruction or upgrades that are funded by the Crown will not be included in appraisals.

Where a Ministry of Transportation (public) road requires reconstruction or upgrade to Forest Service standards for hauling Crown timber, the project must be approved in advance by the Director of Revenue Branch before it can be included in an appraisal of tributary timber. The detailed engineering cost estimate for each project must be based on arms length competitive bids. The approved project costs may be apportioned to multiple users as per Section 4.3.1.1.5.

Reconstruction and replacement cost estimates are determined as detailed engineering cost estimates (Section 4.3.3) and must be approved in advance by the District Manager. The cost estimates may be applied to remaining tributary timber (i.e., applicable volume) provided the project was not known of or planned for at the time of appraisal. If the cost estimate is not applied to the remaining tributary volume, it must be applied to the first tributary cutting authority appraised over the reconstruction or replacement. Section 4.3.1.1.5 may be applicable for main roads. Cost estimates for reconstruction and replacement are not to exceed the tabular costs for new construction under similar conditions.

Costs will not be recognized if the licensee has been negligent or has not followed approved plans or standards as defined under the *Forest Practices Code* and Regulations.

3. Access Management

Access management is defined as the temporary removal of a major drainage structure or construction of a barrier, including a gate, excavation, or placement of boulders with the purpose of temporarily eliminating all vehicle access.

An access management cost estimate will be determined by a detailed engineered estimate.

The access management required in the cutting authority must be based on a formal access management strategy approved in the forest development plan.

Costs may be determined for more than one removal/replacement of the structure/barrier if the cutting authority term warrants it.

Costs approved under this section must not qualify under routine maintenance as described in Section 4.6 or overhead as described in Section 4.8.1.

4.3.1.1 Development Cost Allocation

Where proration is required for Section 4.3.1.1.1, 4.3.1.1.2 and 4.3.1.1.3:

$$\text{Crown Share} = \text{Total Estimated Cost} * \frac{\text{Appraised Timber Volume}}{\text{Total Timber Volume}}$$

Where:

Crown Share ($)		Dollar amount to be allocated to stumpage-bearing timber in the cutting authority being appraised.
Total Estimated Cost ($)	=	Dollar amount of the total development cost estimate.
Appraised Timber Volume (m^3)	=	Volume of Crown timber that is tributary to the project and under the control of the licensee or a company legally associated with the licensee, including volume in all areas contributing to the allowable annual cut determination.
Total Timber Volume (m^3)	=	Total volume of Crown and private timber that is tributary to the project and under the control of the licensee or a company legally associated with the licensee.

In all cases volumes are estimated from the latest approved operational or inventory cruise data and maps of the area within the drainage to the height of land.

The Crown share is a dollar amount which is included in the appraisal of a tributary cutting authority, subject to Section 4.3.1.1.5.

Development cost estimate is allocated according to the outline below (see also Appendix III).

4.3.1.1.1 Development Cost Estimates on Crown Lands

1. Development providing access to appraised timber only:

   Total estimated costs are included in the appraisal.

2. Development providing access to non-appraised timber only:

   Cost estimates are not included in the appraisal.

3. Development in appraised timber areas providing access to both appraised and non-appraised timber held by the licensee or a company legally associated with the licensee:

   All costs are prorated between appraised and non-appraised timber. The appraised timber portion is then included in the appraisal.

4.3.1.1.2 Development Cost Estimates for Full Appraisal on Timber Licence (TL) Cutting Authorities

1. New development will be allocated as in Section 4.3.1.1.1.

2. Unamortized development on the TL that is required for access to the cutting authority area will be included in the appraisal of that cutting authority. Unamortized development is defined as:

   a. the development started after January 1, 1988,

   b. development cost estimates that were not included in any prior appraisal calculation for Crown timber (or were considered as zero), and

   c. having had no non-appraised timber transported over the development (excluding right-of-way timber).

   Costs for this type of existing development are exempt from Section 4.3.1.1.4.

Cost estimates for these existing roads will be derived from the nearest appraised cutting authority area by doing both of the following:

1. Establishing the average road cost per kilometre from that appraised estimate, excluding bridges and pertinent structures.

2. Multiply that $/km by the kilometres of tributary road in the TL cutting authority area.

   Cost estimates for bridges or pertinent structures will be determined according to Section 4.3.2.4, or from the detailed engineering estimates as defined in Section 4.3. At reappraisal, these initial cost estimates for existing development will be trended as provided for in Section 4.12, but will not otherwise be revisited.

4.3.1.1.3 Development Cost Estimates on Private Land

When a new or reconstructed road or structure on private land is required for Crown timber extraction, the estimated cost of the road or structure will be included in the appraisal of a tributary cutting authority according to the procedures of Section 4.3.1.1 and the following guidelines:

1. Development provides access to appraised timber only:

   The total estimated costs are included in the appraisal.

2. Development provides access to non-appraised timber only:

   Cost estimates are not included in any appraisal.

3. Development provides access to both non-appraised and appraised timber.

   All cost estimates are prorated between non-appraised and appraised timber (Section 4.3.1.1) and then the Crown portion is included in the appraisal.

4.3.1.1.4 Existing Roads and Structures

The following are defined as existing roads for the cutting authority being appraised and are not eligible for inclusion in development cost estimates:

1. Costs of constructed roads that have been previously considered in appraisals of Crown timber within another cutting authority.

2. Roads, drainage and other pertinent structures previously constructed and used to haul non-appraised timber (excluding right-of-way).

3. Roads previously constructed all or in part for purposes unrelated to logging the cutting authority area being appraised.

4. All roads, drainage and other pertinent structures previously constructed, repaired or reconstructed on private land before August 1,1996.

If the existing road requires reconstruction or replacement after August 1, 1996, the cost estimate is made as described in Section 4.3.1. If the existing road is on private land, road and land use charges may be recognized as described in Section 4.7.

A road on private land that has previously been included in an appraisal because it was required for only short term timber extraction (as per previous policy) shall continue to be included upon reappraisal.

4.3.1.1.5 Extended Road Amortization

Where the development cost estimate exceeds $\$4.00/m^3$ a written agreement may be made which apportions the main access road cost estimate to two or more tributary cutting authorities. The main access road ends at the far boundary of the first cutting authority being appraised.

The agreement is subject to the following conditions:

1. Only main access roads serving the tributary cutting authorities (as defined in Section 4.3) may be considered.

2. With exception of woodlot licences, each cutting authority must be in the licensee's approved forest development plan.

3. For woodlot licences, each cutting authority to which costs are amortized must be approved and appraised during the ten year period from the signing of the agreement. Reappraisals may continue to carry the costs until the cutting authority expires.

4. The agreement must be reviewed by the Regional Manager or the Regional Manager's designate prior to being signed by the licensee and the licensor before it can be included in the appraisal or reappraisal.

5. The amount apportioned will be a fixed lump sum which will be trended to the manual cost base and as provided for in Section 4.12 but not otherwise revisited.

6. The term of the agreement must not exceed the terms of the cutting authorities.

7. The agreement will only be valid under CVP and confers no obligation for the Crown to compensate licensees for any unamortized costs.

4.3.2 Tabular Cost Estimates

These roads are generally a single lane width with turnouts. These roads may or may not be stabilized (ballasted or surfaced) with additional materials.

2. Barge/Ferry Used for Truck Haul (Private)

   When a truck haul road is interrupted by a body of water and the operation of a barge system is feasible to provide the road link for logging trucks, the cost estimate for this phase, regardless of ownership is:

Reservoir Lakes	$\$/m^3 = \$3.98$
Natural Lakes	$\$/m^3 = \$2.02$

3. Barge/Ferry Not Used for Truck Haul (Private)

   The cost estimate includes all costs associated with the operation of the systems and includes bubble systems where applicable.

   When a cutting authority can be served only by water, and daily (operating days only) ferry/barge services are feasible for crew transportation, the cost estimate for this phase, regardless of ownership is:

All lakes	$\$/m^3 = \$0.72$

4. Francois Lake Ferry (Private/Public)

   When the least cost truck haul includes using the Francois Lake Ferry crossing, the cost estimate for the ferry phase is:

Francois Ferry	$\$/m^3 = \$0.31$

4.6 Road Maintenance

Where the licensee is obliged to carry out road maintenance, routine road maintenance includes but is not limited to, the following:

- grading
- snowplowing and freezing in
- sanding
- spot gravelling (< 0.3 km distance)
- culvert repairs and thawing
- culvert removal (< 950 mm)
- culvert replacement (< 950 mm)
- non-structural maintenance of bridges
- bridge re-decking/wearing surface replacement
- ditching
- snow road reconstruction
- road use charges paid to other licensees
- seasonal erosion control
- roadside treatments
- sign maintenance
- dust control
- brushing
- minor flood and storm damage repair
- slough removal (restricted to 250 m^3 or less material volume per slough)
- water bar construction (seasonal)
- road ripping
- cross ditch construction
- grass seeding

The cost estimate for all routine maintenance carried out on logging operations depends on the geographic location of the cutting authority area (refer to Table 4-7).

Cutting authorities issued under forms of tenure not located administratively within a Tree Farm Licence area or Timber Supply Area will be assigned the routine road maintenance cost estimate for the TFL or TSA/Supply Block in which the cutting authority is geographically located.

The geographic location is recognized by Forest Region, Timber Supply Area and Supply Block, and Tree Farm Licence as follows.

4.12 Cost Trend

Cost trend factors are separately applied to the total logging, silviculture and manufacturing cost estimates. The factors cover the period from the effective date of the cost base to the effective date of the rate calculation. Cost trend factors are applied at the appraisal effective date and at the date of each stumpage adjustment.

For trend factors applicable prior to July 1, 2001, refer to earlier *Interior Appraisal Manuals.*

Appraisal Effective Dates From October 1, 1993 to September 30, 1994

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	1.443	1.0
January 1 to March 31, 2002	1.443	1.0
April 1 to June 30, 2002	1.443	1.0
July 1 to September 30, 2002	1.443	1.0
October 1 to December 31, 2002	1.443	1.0

Appraisal Effective Dates From October 1, 1994 to July 31, 1995

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	1.403	1.0
January 1 to March 31, 2002	1.403	1.0
April 1 to June 30, 2002	1.403	1.0
July 1 to September 30, 2002	1.403	1.0
October 1 to December 31, 2002	1.403	1.0

Appraisal Effective Dates From August 1, 1995 to July 31, 1996

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	1.303	1.0
January 1 to March 31, 2002	1.303	1.0
April 1 to June 30, 2002	1.303	1.0
July 1 to September 30, 2002	1.303	1.0
October 1 to December 31, 2002	1.303	1.0

Appraisal Effective Dates From August 1, 1996 to November 30, 1997

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	1.183	1.0
January 1 to March 31, 2002	1.183	1.0
April 1 to June 30, 2002	1.183	1.0
July 1 to September 30, 2002	1.183	1.0
October 1 to December 31, 2002	1.183	1.0

Appraisal Effective Dates From December 1, 1997 to August 31, 1998

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	1.083	1.0
January 1 to March 31, 2002	1.083	1.0
April 1 to June 30, 2002	1.083	1.0
July 1 to September 30, 2002	1.083	1.0
October 1 to December 31, 2002	1.083	1.0

Appraisal Effective Dates From September 1, 1998 to September 30, 1999

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	1.02	1.0
January 1 to March 31, 2002	1.02	1.0
April 1 to June 30, 2002	1.02	1.0
July 1 to September 30, 2002	1.02	1.0
October 1 to December 31, 2002	1.02	1.0

Appraisal Effective Dates From October 1, 1999 to August 31, 2000

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	0.97	1.0
January 1 to March 31, 2002	0.97	1.0
April 1 to June 30, 2002	0.97	1.0
July 1 to September 30, 2002	0.97	1.0
October 1 to December 31, 2002	0.97	1.0

Appraisal Effective Dates From September 1, 2000 to June 30, 2001

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
October 1 to December 31, 2001	0.99	1.0
January 1 to March 31, 2002	0.99	1.0
April 1 to June 30, 2002	0.99	1.0
July 1 to September 30, 2002	0.99	1.0
October 1 to December 31, 2002	0.99	1.0

Appraisal Effective Dates On or After July 1, 2001

Appraisal Effective Date or Stumpage Adjustment Date	Trend Factor	
	Logging and Silviculture	Manufacturing
July 1 to September 30, 2001	1.0	1.0
October 1 to December 31, 2001	1.0	1.0
January 1 to March 31, 2002	1.0	1.0
April 1 to June 30, 2002	1.0	1.0
July 1 to September 30, 2002	1.0	1.0
October 1 to December 31, 2002	1.0	1.0

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