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Minister's Office

MEMORANDUM

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To: Jim Gowriluk, Regional Executive Director, Coast Forest Region

From: The Honourable Pat Bell
Minister of Forests and Range

I hereby approve Amendment No. 6 to the *Coast Appraisal Manual* and attach a copy for your use. The following sections have been amended.

- | | |
|---------------------|--|
| Section 1.1 | Definitions of "Appraisal Data Submission" and "old growth coniferous timber" have been revised. |
| Section 4.2 | "Location" and "Gambdist" variables now specify using Albers projection. |
| Section 5.1 (2) (a) | Clarifies where costs may be included in an appraisal. |
| Section 6.1.1(1) | Section reference corrected. |
| Section 7.7(2) | Housekeeping. |
| Appendix VI: | Coleman Creek has been added. |
| Appendix | Housekeeping. |



This amendment will come into force on November 1, 2008. Further amendments or revisions to this manual require my approval.

J.P. Peterson
ACTING DEPUTY MINISTER

Pat Bell
Minister

Attachment

pc: Murray Stech, Director, Revenue Branch

<p>FOR FURTHER INFORMATION OR IF YOU HAVE A CHANGE OF ADDRESS, PLEASE CONTACT:</p> <p>George Silvestrini Senior Timber Pricing Forester (Coast) Revenue Branch Ministry of Forests 1st Floor, 1520 Blanshard Street Victoria, BC V8W 3K1 Phone: 250 - 387-8377 Email: George.Silvestrini@gov.bc.ca FAX: 250 - 387-5670</p>	MANUAL TITLE	
	Coast Appraisal Manual	
	AMENDMENT	ISSUE DATE
	Amendment No. 6	November 1, 2008
MANUAL CO-ORDINATOR		
Judy Laton Manuals Co-ordinator		
AUTHORIZATION (Name, Title)		
Murray Stech Director, Revenue Branch		

Please make the following changes to your copy of the above Ministry manual.

ACTION (Remove/Insert)	(VOL.) CHAPTER-SECTION-SUBJECT	PAGE(S)	COMMENTS
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Insert		3 - 4	
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Insert		3 - 4	
Remove	Chapter 4	3 - 6	After Chapter 4 Tab
Insert		3 - 6	
Remove	Chapter 5	1 - 2	After Chapter 5 Tab
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Remove	Chapter 7	9 - 10	After Chapter 7 Tab
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Remove	Appendices	21 - 22 31 - 32	After Appendices Tab
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Definitions and Interpretations **1**

1.1 Definitions and Interpretations

In this manual:

"**Act**" means *Forest Act*;

"**Appraisal Data Submission**" means the information required by the person who determines the stumpage rate to determine that rate including the appraisal map, cruise information (including appraisal summary report and the ASCII cruise data files, unless otherwise specified by the Director, Revenue Branch) and any other information required by the regional manager or district manager in the form required by the director, signed by a registered professional forester (RPF) or registered forest technologist (RFT), registered with the Association of British Columbia Forest Professionals;

"**Billing history record**" means a record of log scale data derived from a record kept by the Revenue Branch of log scale data reported on stumpage invoices issued by the Revenue Branch for timber scaled under section 94 of the *Act*;

"**Bonus Bid**" means a bonus bid described in section 103(1)(d) of the *Act*.

"**Bonus Offer**" means a bonus offer described in section 103(2) of the *Act*.

"**BCTS**" means British Columbia Timber Sales;

"**Coniferous cruise volume**" means that part of the total net cruise volume which is coniferous timber;

"**Cutting authority**" means:

- (a) a cutting permit issued under a forest licence, a timber sale licence, a timber licence, tree farm licence, a community forest agreement, a community salvage licence, a woodlot licence, or forestry licence to cut,
- (b) a timber sale licence that does not provide for the issuance of a cutting permit,
- (c) a licence to cut, or
- (d) a road permit;

"**Cutting authority area**" means the area where timber may be harvested under authority of:

- (a) a cutting permit,
- (b) a timber sale licence that does not provide for the issuance of a cutting permit,
- (c) a licence to cut, or
- (d) a road permit;

"**Deciduous timber**" means timber that is any of the alder, birch, cottonwood and maple species;

"**Detailed engineering**" means non-tabular;

"**Director**" means director of Revenue Branch of the Ministry of Forests and Range;

"**District manager**" means:

- (a) Except as provided in paragraph (b) of this definition, the district manager or district manager's designate.
- (b) Where the cutting authority area being appraised or reappraised is located in a controlled recreation area designated under the *Resort Timber Administration Act*, (RTAA) then district manager means an employee of the Ministry of Tourism, Sports and the Arts to whom the minister of that ministry has delegated the minister's powers and duties under section 2 of the RTAA.

"**Helicopter Selection**" means the harvesting of single trees within standing residual timber that have been felled and then removed using a helicopter;

"**Immature coniferous timber**" means coniferous timber that is younger than 121 years old;

"**Licensee**" means the holder of a cutting authority;

"**Low grade**" means grades 'X' and 'Y' of all species and 'U' grade hemlock and balsam;

"**Main Access Road**" means a long-term (i.e., in use for more than ten years) mainline road that is tributary to the appraised cutting authority area, or is used to transport bulk fuels, supplies, equipment or harvesting crews necessary to carry out day-to-day harvesting activities on that area, and has an average stabilized subgrade width greater than seven metres;

"**Manual**" means *Coast Appraisal Manual*;

"**Mature coniferous timber**" means coniferous timber that is 121 years old or older;

"**Minister**" means Minister of Forests and Range;

"**Ministry**" means Ministry of Forests and Range;

"**Net cruise volume**" means the gross volume of all species listed in section 4.2.3(1), plus alder, birch, cottonwood and maple in the cutting authority area minus the volume of

decay, waste and breakage in that timber unless otherwise specified in the *Cruising Manual*;

“Old growth coniferous timber” means **coniferous** timber that is 141 years old or greater;

“Regional manager” means regional executive director or regional executive director’s designate;

“Regulations” means regulations under the *Act*;

“Remaining volume” means the total net cruise volume of a cutting authority area minus the total volume of timber in the billing history record of the cutting authority area on the effective date of the reappraisal of the cutting authority area;

“Revenue Branch” means Revenue Branch of the Ministry;

“Second growth coniferous timber” means coniferous timber that is less than 141 years old;

“Selling price zone 51” means the table of coast market pricing system log values for old growth coniferous timber, approved by the director, Revenue Branch;

“Selling price zone 52” means the table of coast market pricing system log values for second growth coniferous timber, approved by the director, Revenue Branch;

“Stumpage price” means the market stumpage price;

“Stumpage rate” means market stumpage rate;

“Skyline” means any method of yarding where the logs are fully suspended above the ground by a short span, long span, or multi-span system using a carriage with standing or running lines;

“Total net cruise volume” of a cutting authority area (tncv) is the product of the net cruise volume per hectare of the cutting authority area (ncv/ha) multiplied by the total merchantable timbered area to be harvested under the cutting authority (tmta). Expressed as an equation:
$$\text{tncv} = \frac{\text{ncv}}{\text{ha}} \times \text{tmta};$$

“Tributary cutting authority area” means a cutting authority area from which timber must be transported over the road that is developed, or a cutting authority area to which bulk fuels, supplies, equipment and harvesting crews necessary to carry out the day-to-day harvesting activities on that area must be taken on a regular basis over the road that is developed;

“Unit cost” means cost estimate expressed in dollars per cubic metre.

4.2 Market Pricing System (MPS) Variables

STUMPAGE PRICE	The stumpage price for the cutting authority expressed in \$/m ³ .
ALP	Average coniferous log selling price estimate expressed in \$/m ³ . This is based upon a consideration of log grades and species for the cutting authority area, and schedules of log market values collected and published by the Revenue Branch.
DFIR2G	If selling price zone in the appraisal data submission is 52, then DFIR 2G is the fraction of the coniferous cruise volume that is Douglas-fir. If the selling price zone is not 52, then DFIR 2G = 0. DFIR2G is in decimal form, rounded to 2 decimal places.
HEMBAL	The fraction of the coniferous cruise volume that is hemlock and balsam. HEMBAL is in decimal form, rounded to 2 decimal places.
HEMBALOG	The fraction of the coniferous cruise volume that is hemlock and balsam, if the selling price zone is not zone 52. If the selling price zone is 52, then HEMBALOG = 0. HEMBALOG is in decimal form, rounded to 2 decimal places.
SLOPE	The average side slope percentage for that part of the cutting authority area that will not be helicopter yarded.
NHSVPH	Non-helicopter selection volume per hectare is the cruise volume of coniferous timber per hectare for that part of the cutting authority area that will not be harvested by a helicopter selection method or helicopter single standing stem selection. NHSVPH is expressed in m ³ /ha and is rounded to 2 decimal places.
HS	The fraction of the total net cruise volume, including deciduous volume, of timber in a cutting authority area that will be harvested by a helicopter selection method (excluding helicopter single standing stem selection). HS is in decimal form, rounded to 2 decimal places.
HSSSS	The fraction of the total net cruise volume, including deciduous volume, of timber in a cutting authority area that will be harvested by helicopter single standing stem selection (section 4.4.4). HSSSS is in decimal form, rounded to 2 decimal places.
VPH	$[1 - (HS + HSSSS)] * NHSVPH + (HS + HSSSS) * 442$ VPH is expressed in m ³ /ha and is rounded to 2 decimal places.
PIECESIZE	The cruise coniferous net volume per 10 m log. PIECESIZE is expressed in m ³ and is rounded to 2 decimal places.
HELI	The fraction of the total net cruise volume, including deciduous volume, of timber in a cutting authority area that must be helicopter yarded or yarded by skyline where logs are fully suspended more than 600 m in a straight line to the centre of the closest possible

landing. This is calculated by dividing the total volume of timber that must be helicopter yarded or skyline yarded over 600 m by the total net cruise volume of the cutting authority area. HELI is in decimal form, rounded to 2 decimal places.

VOL	That part of the total net cruise volume in the cutting authority area that is coniferous timber except that where the cutting authority is a timber licence or is issued under a licence with an AAC greater than 10 000 m ³ , then VOL = 19 925. VOL is expressed in m ³ , rounded to the nearest whole number.
CPI	Monthly BC Consumer Price Index (CANSIM 326-0020, 2002 = 100) multiplied by 1.1787.
CPIF	CPI divided by 109.3.
LOCATION	The net cruise volume weighted average straight line distance based on a BC Albers projection measured in kilometres between the geographic centre of each part of a cutting authority area and the latitude and longitude co-ordinate listed in table 4-1 (which lists the major centres) that is closest to that part of the cutting authority area.

Table 4-1: Latitude and Longitude Co-ordinates

Degrees and Minutes:		At or Near	Code
Latitude	Longitude		
50°01'	125°15'	Campbell River	CARV
49°11'	121°55'	Chilliwack	CHWK
54°23'	126°39'	Houston	HOUS
50°07'	120°46'	Merritt	MERR
49°10'	123°57'	Nanaimo	NANA
54°18'	130°19'	Prince Rupert	PRRU
54°31'	128°36'	Terrace	TERR
49°16'	123°06'	Vancouver	VANC
48°25'	123°21'	Victoria	VICT

GAMBDIST	POA distance is the average straight line distance based on a BC Albers projection , weighted by net cruise volume, between the geographic centre of each cutblock in the cutting authority area and Gambier Island. GAMBDIST is measured and rounded to the nearest kilometre. The Gambier Island co-ordinate is 49° 29' 09" N and 123° 26' 44" W.
DISTAVGNBID	The average number of bidders for the forest district within which the cutting authority area is located is listed in Table 4-2.
AUC2006	2006 Auctions dummy variable. AUC2006 = 1.

Table 4-2 Average Number of Bidders by Forest District

Forest District	Average Number of Bidders
Queen Charlotte Island Forest District	4.21
Chilliwack Forest District	3.94
Squamish Forest District	5.81
Sunshine Coast Forest District	5.88
South Island Forest District	6.26
Campbell River Forest District	7.35
North Island- Central Coast Forest District	5.12
North Coast Forest District	3.62

4.2.1 Log Selling Prices

1. The Revenue Branch shall:
 - a. Compile invoiced free on board log market values using prime, domestic, arm's-length sales reported to the Revenue Branch prior to sixty days before the stumpage rate adjustment date that have occurred in areas adjacent to:
 - i. the Strait of Georgia;
 - ii. the Strait of Juan de Fuca;
 - iii. Alberni Inlet east of a line drawn south from Amphitrite Point;

- iv. Johnstone Strait;
 - v. the Queen Charlotte Strait south of a line drawn west from Cape Caution; and
 - vi. Fraser River west of the bridge at the confluence of the Pitt River.
- b. Subject to subsection 2 of this section compile schedules of average log market values by species and log grade using sales data for each one-month reporting period. The data shall be summarized into a three-month schedule of average log market values by species and log grade for mature timber stumpage rate determinations. A three-month schedule of average log market values by species and log grade for second growth stumpage determinations shall also be produced. These schedules can be found at:
- <http://www.for.gov.bc.ca/hva/parameters.htm>
2. The volumes and prices of alder, birch, cottonwood and maple shall not be included in the schedules of average log market values.
 3. The director shall approve schedules of average log market values for use in stumpage appraisals, reappraisals and quarterly adjustments.

4.2.1.1 Coniferous Timber

1. The volume of old growth coniferous timber and the volume of second growth coniferous timber in a cutting authority area will each be compiled from the timber cruise of the cutting authority area on a tree by tree basis.
2. Where the volume of second growth coniferous timber in a cutting authority area is at least eighty percent of the volume of all of the coniferous timber in that cutting authority area, the cutting authority area will be appraised and reappraised as if all of the coniferous timber in that cutting authority area were second growth coniferous timber.

4.2.2 Log Grade Percentages

Log grade percentages are obtained for each species of timber in each cutting authority area being appraised or reappraised as described in section 4.2.2.1, 4.2.2.2, 4.2.2.3, 4.2.2.3.1, 4.2.2.3.2 and 4.2.2.4.

4.2.2.1 Billing History Record

1. Except as provided in sections 4.2.2.2, and 4.2.2.4, the billing history record that will be used in an appraisal or reappraisal of a cutting authority area will be determined using either Table 4-3 or Table 4-4 as may be required by this manual.

Tenure Obligation Adjustments

5

5.1 Tenure Obligation Adjustment

1. Except where a cutting authority area is the area authorized for harvest under a timber sale licence entered into under section 20 of the *Act* and subject to subsection 2 of this section, the kinds of costs that may be used in the calculation of a tenure obligation adjustment in the appraisal or reappraisal of a cutting authority area are:
 - a. the forest planning and administration costs,
 - b. the road development costs,
 - c. the road management costs,
 - d. the road use charges,
 - e. the basic silviculture costs, and
 - f. the low volume cost.
2. A cost may **only** be used in the appraisal or reappraisal of a cutting authority area **if**:
 - a. except for the low volume cost, the **holder of the cutting authority authorizing harvesting on the cutting authority area will incur that kind of cost**:
 - i. **when exercising an authority or carrying out an obligation under the cutting authority, or**
 - ii. **subject to section 5.3, when carrying out an activity on a road when acting under the authority of the Crown, a road permit holder, a road use permit holder, or a private road owner, or**
 - b. in the case of a low volume cost, where that cost may be calculated under section 5.2.1 of this manual.
3. The tenure obligation adjustment is calculated under section 5.10.

Stumpage Rate Determination

6

6.1 Stumpage Rate Calculation for a Cutting Authority Entered into Under Section 20 of the Act

Sections 6.1.1 through 6.1.5 are the policies and procedures for determining a stumpage rate for a cutting authority that is entered into under section 20 of the *Act*.

6.1.1 Indicated Upset Stumpage Rate (IUSR)

1. Notwithstanding 6.1.1(2) and 6.1.1(3) the IUSR for a timber sale licence containing twenty percent or less mature coniferous timber shall be equal to the upset stumpage rate determined by the person who determines the stumpage rate and shall be the greater of:
 - a. Seventy percent of the final estimated winning bid (FEWB) for that timber sale licence calculated according to section 4.5, or
 - b. The variable cost to prepare the timber for sale.
2. Where applications for a timber sale licence with an upset stumpage rate determined under section 6.1.1(1) have been invited but no applications have been received, the upset stumpage rate for the re-advertised timber sale shall be equal to the rate approved by the director of operations, BC Timber Sales and requested by the timber sales manager. The upset stumpage rate determined under this section shall not be greater than an estimate of the upset stumpage rate that would be determined under section 6.1.1(1) and not less than the variable cost to prepare the timber for sale.
3. Where the director of operations, BC Timber Sales, does not anticipate that applications for a timber sale licence with an upset stumpage rate determined under section 6.1.1(1) will be received due to market conditions or timber profile, the upset stumpage rate shall be equal to the rate approved by the director of operations, BC Timber Sales and requested by the timber sales manager. The upset stumpage rate determined under this section shall not be greater than the upset stumpage rate determined under section 6.1.1(1) and not less than the variable cost to prepare the timber for sale.
4. The IUSR for a timber sale licence containing greater than twenty percent mature coniferous timber shall be equal to the upset stumpage rate determined by the person who determines the stumpage rate and shall be the lesser of:
 - a. Seventy percent of the final estimated winning bid (FEWB) for that timber sale licence calculated according to section 4.5, or
 - b. The variable cost to prepare the timber for sale.
5. Where the timber authorized for harvest under a timber sale licence is low quality (including Mountain Pine Beetle attacked or pulp quality) timber, and the invitation

7.6 Decked Timber

In the case of decked timber, or timber which has been felled and bucked, such as on rights-of-way, and the volume exceeds 300 m³, an appraisal is completed on an “as is, where is” basis by using the procedures in section 7.5 to calculate the stumpage rate and adding to it the person who determines the stumpage rate’s estimate of the costs of felling, bucking, yarding and decking.

7.7 Miscellaneous Stumpage Rates

Miscellaneous Stumpage Rates

1. Unless otherwise specified in a cutting authority, Table 7-1 in effect on the date of scale shall be used to determine the stumpage rates for deciduous species, low grade logs and timber in specified areas.

Special Forest Products

2. Unless otherwise specified in a cutting authority, Table 7-2 in effect on the date of scale shall be used to determine the stumpage rates for the specified products from all sources of Crown timber.

7.7.1 Marine Log Salvage

7.7.1.1 Beachcomb

A beachcomb rate may apply to logs salvaged in the Vancouver log salvage district under Part 9 of the *Act*, and stray logs salvaged elsewhere in coastal waters.

The stumpage rate for beachcomb is listed in table 7-1.

7.7.1.2 Root Buck

A root buck rate may apply to any species where the roots are attached at the time stray logs are salvaged in coastal waters. Excludes logs salvaged from coastal waters within the boundaries of the North Coast and Kalum Forest Districts.

The rate for root buck is listed in table 7-1.

7.7.1.3 Wahleach Island Catchment Basin

The stumpage rate for logs salvaged at Wahleach Island catchment basin operated by B.C. Debris Control Board is listed in table 7-1.

7.7.1.4 Deadhead Logs

A deadhead rate may apply to deadhead logs as defined in the log salvage regulation, salvaged in coastal waters and subject to scaling requirements under part 6 of the *Act*.

The stumpage rate for deadhead logs is listed in table 7-1.

District: Campbell River					
Location	ALD Code	Co-ordinates (Approximately)			
		Latitude		Longitude	
		Degrees	Minutes	Degrees	Minutes
Quadra Island - Plumper Bay	QIPB	50	09	125	20
Royston	ROYS	49	39	124	57
Sonora Island - Barnes Bay	SIBA	50	19	125	15
Sonora Island - Horn Bay, North of Sonora Island	SIHB	50	25	125	12
Sonora Island - Innes	SIIN	50	23	125	10
Sonora Island - Nutcracker Bay	SINB	50	18	125	17
Sunderland Channel - Bessborough Bay	SCBB	50	29	125	46
Sunderland Channel - Forward Harbour, East of Hardwicke Island	SCFH	50	28	125	44
Sunderland Channel - Jackson Bay, Topaze Harbour	SCJB	50	31	125	45
Sunderland Channel - McLeod Bay	SCMB	50	28	125	57
Sunderland Channel - Shaw	SCSH	50	28	125	54
Sunderland Channel - Topaze Harbour, Jackson Bay	SCTH	50	31	125	49
Tahsis Inlet - Tsowwin River	TITR	49	46	126	38
Tahsis Inlet - West Tahsis	TIWT	49	52	126	40
Tahsish Inlet - Artlish River DLS	TIAR	50	06	127	05
Thurston - Sonora Island	THUR	50	22	125	18
Tlupana Inlet - Head Bay	TLHB	49	47	126	29
Tlupana Inlet - Deserted Lake	TLDL	49	46	126	28
Tlupana Inlet - Nesook Bay	TLNB	49	45	126	25
Union Bay - Union Bay DLS	UBUB	49	35	124	53
Wellbore Channel - Darcy Point, East of Hardwicke Island	WCDP	50	25	125	43
West Thurlow North	WTNO	50	26	125	33
West Thurlow Island - Butterfly Bay	WTBB	50	24	125	33
West Thurlow Island - Knox Bay DLS	WTKB	50	23	125	37
Zeballos Inlet - Little Zeballos	ZILZ	49	57	126	49
Zeballos Inlet - South (Ciriaco)	ZISC	49	55	126	48
Zeballos Inlet - Zeballos	ZIZE	49	59	126	51

South Island Forest District

District: South Island					
Location	ALD Code	Co-ordinates (Approximately)			
		Latitude		Longitude	
		Degrees	Minutes	Degrees	Minutes
Alberni Inlet - China Creek	ALCH	49	9	124	47
Alberni Inlet – Coleman Creek	ALCO	49	00	124	52
Alberni Inlet - Shoemaker Bay	MISB	49	13	124	50
Alberni Inlet - Spencer Creek DLS	ALSP	48	58	124	56
Barkley Sound - Cataract Lake DLS	BACA	48	58	125	16
Barkley Sound - Sarita DLS	BASA	48	54	125	00
Barkley Sound - Skull Lake DLS	BASK	49	02	125	09
Barkley Sound - Toquart Bay DLS	BATO	49	01	125	21
Barkley Sound - Tzartus Island	BATZ	48	56	125	04
Chemainus	CHEM	48	55	123	43
Coastland	COAS	49	10	123	56
Cypre River DLS, Hecate Bay	CYPR	49	14	125	56
Duke Point	DUKE	49	09	123	53
Effingham Inlet	EFIN	49	05	125	12
Flores Island - Steamer Cove	FLSC	49	22	126	11
Galiano Island	GALI	48	53	123	20
Great Central Lake - Dorothy	GCDO	49	21	125	23
Great Central Lake - Lakeside	GCLA	49	21	125	13
Great Central Lake - McBride	GCMC	49	23	125	25
Great Central Lake - Mercs	GCME	49	21	125	18
Great Central Lake - View	GCVI	49	21	125	15
Herbert Inlet - Beddingfield Bay DLS	HEBE	49	21	125	59
Jordan River	JORD	48	25	124	02
Ladysmith DLS	LADY	48	59	123	48
Ladysmith Head	LADH	49	01	123	51
Mayne Island - Horton Bay	MIHB	48	49	123	15
Mud Bay, Fanny Bay DLS	MUDB	49	27	124	47
Mooyah	MOOY	49	37	126	27
Nootka Sound - Zuciarte Channel, Mooyah Bay	NSZC	49	38	126	27
Northwest Bay, Parksville	NBPA	49	17	124	12

- ii. construction categories vary by no more than ± 1 construction category about the average construction category in the section,
 - iii. one rock mass class predominates,
 - iv. all stabilizing material is trucked or no stabilizing material is trucked,
 - v. stabilizing material is either all gravel or all rock.
- c. All sections with 60 percent or more (by length) of RMC 5 are designated as 'hard'.
 - d. If the total length of all 'hard' sections is greater than 90 percent of the total length of sections containing rock (i.e., CC 2-6), then the cost table for RMC 5 Only is applied to all roads in the appraisal.
 - e. If the roads do not qualify under 'c.' and 'd.' above, then the subgrade construction cost estimate table for other RMCs is applied to all roads in the appraisal.
12. The subgrade construction cost estimate includes the cost of clearing and grubbing, stripping, stump removal, incidental log decking, ditch construction, landing and turnout construction, and single log abutment culverts with spans less than 3.5 m. All pipe culverts 0.3 m diameter to 1.8 m diameter are estimated using Table 5-4.

Table Appendix VIII-2: Subgrade Construction Cost Estimates Expressed in Thousands of Dollars per Kilometre

a) RMC 5 ONLY						
Uphill Side Slope %	Construction Category					
	CC1	CC2	CC3	CC4	CC5	CC6
0-4	27.3	36.2	59.9	85.8	108.1	123.4
5-14	28.3	37.9	63.1	90.3	113.6	129.5
15-24	29.6	40.0	67.0	95.7	120.1	136.8
25-34	30.7	42.0	70.7	100.8	126.3	143.7
35-44	31.7	43.8	74.2	105.7	132.2	150.3
45-54	32.6	45.5	77.5	110.3	137.9	156.3
55-64	33.4	47.2	80.8	114.8	143.3	162.6
65-74	34.2	48.8	83.9	119.1	148.5	168.4
75-84	35.0	50.3	86.8	123.3	153.6	174.1
85-94	35.6	51.8	89.7	127.3	158.4	179.5
95-104	36.3	53.2	92.5	131.1	163.2	184.9
105-114	36.8	54.6	95.2	134.9	167.8	190.0
115-124	37.4	55.9	97.8	138.5	172.2	195.1
125-134	37.9	57.2	100.4	142.1	176.6	200.0
135-144	38.4	58.4	102.8	145.5	180.8	204.8
145-150	38.8	59.6	105.3	148.9	185.0	209.5

b) OTHER RMC's						
Uphill Side Slope %	Construction Category					
	CC1	CC2	CC3	CC4	CC5	CC6
0-4	27.3	34.0	51.9	72.0	89.6	101.9
5-14	28.3	35.5	54.5	75.5	93.9	106.6
15-24	29.6	37.3	57.6	79.7	98.9	112.2
25-34	30.7	39.0	60.6	83.7	103.7	117.5
35-44	31.7	40.6	63.4	87.5	108.3	122.6
45-54	32.6	42.1	66.0	91.1	112.7	127.5
55-64	33.4	43.5	68.6	94.6	116.9	132.1
65-74	34.2	44.9	71.0	97.9	120.9	136.7
75-84	35.0	46.2	73.3	101.2	124.8	141.0
85-94	35.6	47.4	75.6	104.2	128.5	145.2
95-104	36.3	48.6	77.8	107.2	132.2	149.3
105-114	36.8	49.7	79.9	110.1	135.7	153.3
115-124	37.4	50.8	81.9	112.9	139.2	157.2
125-134	37.9	51.9	83.9	115.7	142.5	161.0
135-144	38.4	52.9	85.8	118.3	145.8	164.7
145-150	38.8	53.9	87.7	120.9	149.0	168.3

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