YUKON BST

MANAGEMENT SYSTEM

2001
CONDITION REPORT

2001 UPDATE OF BST

MANAGEMENT SYSTEMS

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April 2002

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INTRODUCTION

The purpose of this report is to update *"A BST Management System for Yukon Highways"* based on field data collected in the summer of 2001. Data for Pavement Sections have been reported in a separate report and only summary pavement data are recorded in this report.

The number of sections and the number of kilometres rated is summarized as follows:

BST INVENTORY

	Data 2001		Data 1984-2001	
	Sections	Kilometres	Sections	Kilometres
Class 1	50	349.7	1,013	9,059.4
Class 2	101	717.3	1,384	11,108.3
Class 3	231	1,551.3	2,246	16,345.9
Pavement	38	255.0	531	3,747.5
TOTALS	412	2,872.6	5,174	40,261.1

BST MANAGEMENT SYSTEM

The BST Management System uses the data at three analysis levels – Section, Project and Network.

SECTION LEVEL

At the *Section Level,* the data is used to obtain a listing of potential projects for the following year. The section level analysis lists all sections where cracking, rutting, and ravelling, distortions, bleeding or ride sore are rated as poor or very poor. These are all potential candidates for rehabilitation in 2002 and it is anticipated that some of these sections would not be retained at the *Project Level* as the main objective of the *Section Level* analysis is to force a closer evaluation of these sections.

The following table lists potential rehabilitation projects by major highway sections based on the 2001 data.

SECTION ANALYSIS – Potential Projects Year 2002

HIGHWAY – BSTs					Potential Rehabilitation Projects (kms)
Alaska Highway	km	133	-	458	60.0
Alaska Highway	km	458	-	571	65.2
Alaska Highway	km	571	-	968	127.3
Alaska Highway	km	1008	-	1506	45.5

HIGHWAY – BSTs	Potential Rehabilitation Projects (kms)
Alaska Highway km 1506 - 1665	73.5
Alaska Highway km 1665 - 1966	178.0
Klondike Highway km 24 - 159	13.0
Klondike Highway km 248 - 718	63.1
Haines Road	70.0
Campbell Highway	36.3
Top of the World Highway	28.0
Other YTG Highways	50.2

PROJECT LEVEL

At the *Project Level*, a program is developed based on the potential listings from the *Section Level* analysis but is modified to account for other factors that affect the cost efficiency of good highway management. For example, a BST would not be applied on a section due for total reconstruction in the following year, and a mediocre section between two poorer sections would be repaired at the same time as the poorer sections to minimize mobilization costs.

Budget limitations dictate that not all potential sections be rehabilitated in a given year. An evaluation of the severity of the distress of an individual section may lessen the priority for its rehabilitation. For example, a section showing considerable bleeding distress but which is in otherwise good condition, would have a priority in an area with high rainfall and high traffic volumes, but a similar section in a dry area with low traffic, an appropriate strategy might be to post “slippery when wet” signs.

This year, preliminary *Project Level* plans for 2002 were available for this report. As expected, these plans show considerably fewer kilometres to be rehabilitated compared to the *Section Level* analysis. These plans which take into account the factors listed above are summarized as follows:

PROJECT LEVEL ANALYSIS – Year 2002

HIGHWAY – BSTs	Potential Rehabilitation Projects (kms)
Alaska Highway km 133 - 458	36.0
Alaska Highway km 458 - 571	0.0
Alaska Highway km 571 - 968	0.0
Alaska Highway km 1008 - 1506	36.4
Alaska Highway km 1506 - 1665	37.0
Klondike Highway km 24 - 159	0.0
Klondike Highway km 248 - 718	12.2
Haines Road	27.0
Campbell Highway	16.7
Top of the World Highway	5.0
Other YTG Highways	17.0

NETWORK LEVEL

At the *Network Level* of a pavement and BST management system, overall trends and longer-range strategies are developed.

This year's data confirmed the need for separate performance curves for Class 1 BSTs between kilometres 1635 and 1966 on the Alaska Highway. Class 2 BSTs between Fort Nelson and Watson Lake were statistically different from equivalent BST sections in other areas. Class 3 BSTs on the Haines Road displayed superior performance when compared to other Class 3 BSTs and Class 3 sections between Whitehorse and Haines Junction, Fort St. John and Fort Nelson and between Destruction Bay and Beaver Creek showed poorer performance.

Based on these revised performance curves, the expected lives of the various classes of pavement structure are summarized in the following table.

EXPECTED BST LIFE

Highway Section		Expected BST Life - Years
CLASS 1:	(except north of Haines Junction)	6 years
CLASS 1:	(north of Haines Junction)	2 years
CLASS 2:	(except between Watson Lake and Fort Nelson)	7 years
CLASS 2:	(between Watson Lake and Fort Nelson)	2 years
CLASS 3:	(except Haines Road and Alaska Highway km 0-550, 1470-1635, 1800-1966, Campbell Highway)	11 years
CLASS 3:	(Alaska Highway km 0-550, 1475-1635, 1800-1966, Campbell Highway)	5 years
CLASS 3:	(Haines Road)	13 years

FIVE YEAR PLANS

Budgets for longer range planning purposes have been calculated using the existing BCI of individual sections and performance models to calculate when an individual section will fall below a rehabilitation trigger value.

For PWGSC sections of the Alaska Highway in Northern British Columbia, it is assumed that the following sections will be reconstructed within the next five years:

Km 733 to 737 in 2004
Km 737.5 to 750 in 2006
Km 741 to 742 in 2005
Km 825 to 839.5 in 2002/3
Km 942 to 957 in 2002

The following table is based on reconstruction of the following YTG sections to Class 3 Standards within the next five years:

Alaska Highway: Km 1558 to 1788

The first year of the analysis was based on the preliminary 2002 programs supplied by PWGSC and YTG.

For PWGSC BSTs the following table assumes that 25% of Class 1 BSTs, 50% of Class 2 BSTs and 100% of Class 3 BSTs will be ripped up before overlaying and the remaining percentages for rehabilitation will consist of overlays only. For YTG BSTs, it was assumed that 90% of all classes of BSTs would be ripped and reshaped before a new BST was constructed.

BST REHABILITATION MYOP BUDGET (,000) – PWGSC

	2002	2003	2004	2005	2006	2007	2008
CLASS 1	$0	$0	$0	$399	$0	$0	$0
CLASS 2	$0	$0	$404	$0	$132	$0	$0
CLASS 3	$1,288	$940	$173	$537	$644	$504	$977
TOTAL	$1,288	$940	$578	$936	$776	$504	$977

BST REHABILITATION MYOP BUDGET (,000) – YTG

	2002	2003	2004	2005	2006	2007	2008
CLASS 1	$749	$117	$0	$0	$0	$0	$0
CLASS 2	$290	$2,746	$928	$1,087	$621	$261	$387
CLASS 3	$1,866	$1,993	$369	$158	$578	$105	$805
TOTAL	$2,905	$4,857	$1,297	$1,246	$1,199	$367	$1,193

For the Yukon sections, the 2001 estimate for 2003 exceeds the previous estimate for 2003 by $4 million. $2.8 million was for work planned in 2002 but postponed. The table indicates a major reduction in the 2004 program. Undoubtedly there will be a transfer of 2003 projects to 2004 to help balance the load with budgets of $2.0 to $2.5 million range for the next four years.

Care must be taken not to reduce the funding for years after 2003. The budget levels for 2004 and later are based on the assumption that $4.8 million in rehabilitation would be carried out in 2003. This is highly unlikely as the current rehabilitation funding is in the order of $2.0 to $2.5 million.

Previous models had predicted decreases in funding from the $4 million requirements of the early to mid 1999s for 1999 and beyond and these predictions have in fact occurred as average rehabilitation budgets are now in the $2.0 million range.

This year's analysis and previous MYOPs all indicate a significant reduction in PWGSC's requirements starting in 2002.

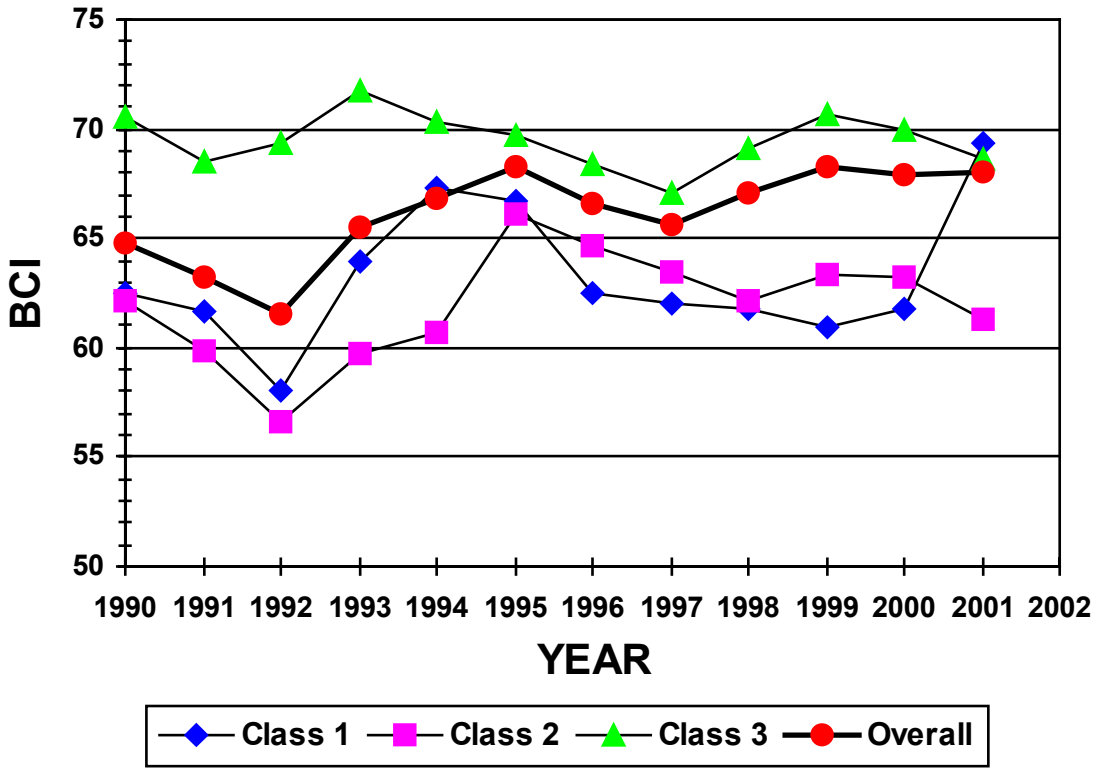
OBSERVATIONS

1. Bleeding distress on new BSTs was less of a problem than in previous years indicating that measures taken to improve construction quality are starting to have an effect. New (less than two years old) sections showing significant bleeding were:

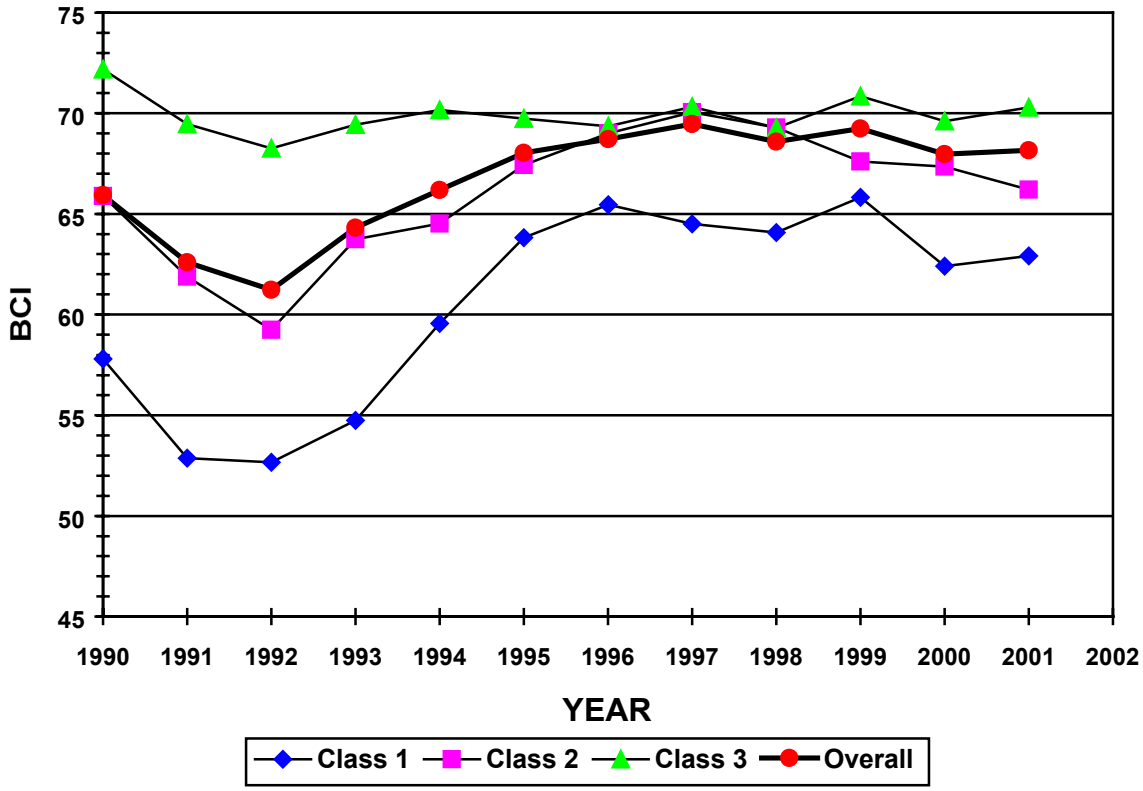
		Rating
Alaska Highway	Km 210 – 215	6
Alaska Highway	Km 548 – 556	6

2. There has been a continued decrease in the level of service on PWGSC sections of the Alaska Highway since 1999. The performance of the YTG system has decreased slightly from the 1999 and 2000 ratings.

PERFORMANCE OF PWGSC BSTs



PERFORMANCE OF YTG BSTs



Although there have been slight reductions in the levels of service since 1999, the overall performance of BSTs has improved since 1990 and particularly since 1992. This is likely due to three main factors:

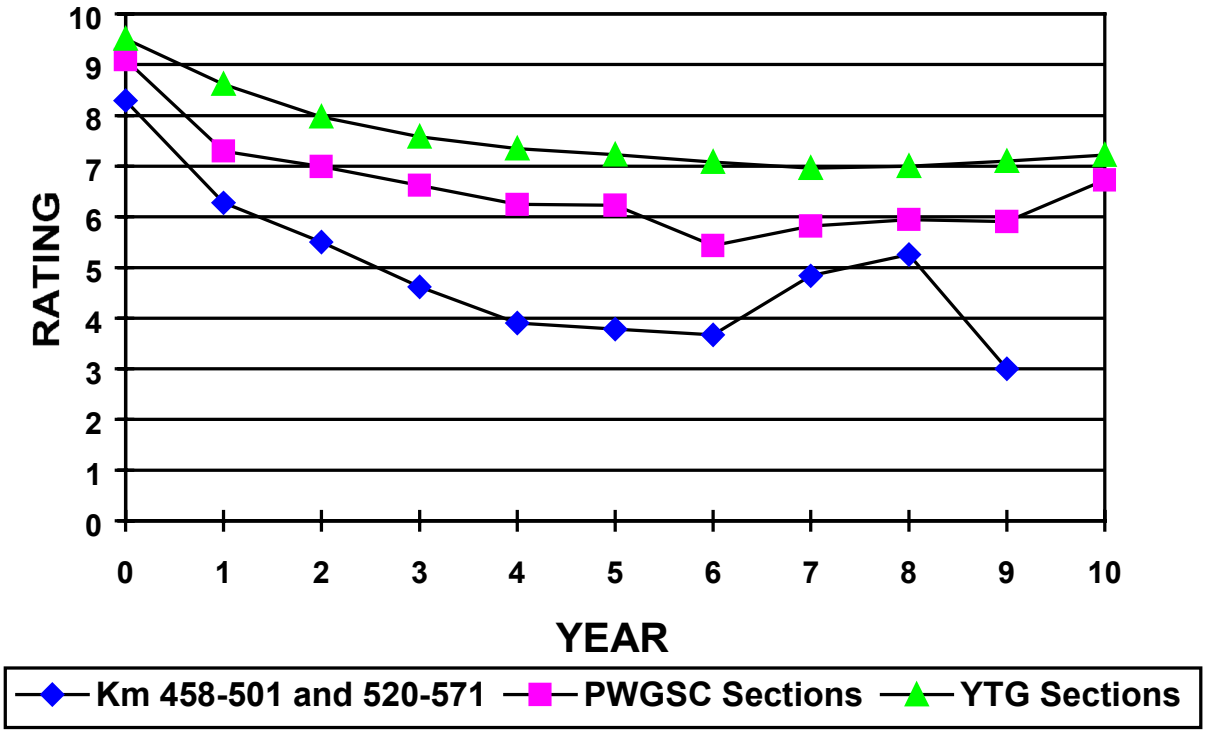
1. The replacement of Class 1 by Class 3 BSTs.

2. A review of the standard deviations for the performance curves has indicated that they are decreasing reflecting more consistent decisions regarding BST rehabilitation as a result of the BST Management System.

3. The change to reclaiming older BSTs instead of simply overlaying them has also increased the overall performance of the system.

3. Kilometres 468 to 571 show significant patching distresses. The following figure indicates the average patching ratings for Class 3 YTG sections, for PWGSC sections excluding Km 451 to 571 and the rating for the Class 3 sections between Km 451 and 571.

PATCHING CLASS 3 BSTs



As a result of the poor performance, a FWD (Falling Weight Deflectometer) study was conducted in 1999 on sections of the Alaska Highway in the Fort Nelson Area. The study recommended that:

- As-built records be improved to reflect actual base and subbase thicknesses as there were major discrepancies between drill-logs for the FWD and status of construction reports.

- As a major factor in the poor performance of sections between Km 458 and 482 was a sandy and silty base course, consideration should be given to changing the base course specification limiting the amount of sand sizes in these materials.

- The reason for the large discrepancies in fines content between the laboratory tests at the time of crushing and samples taken in the field after construction needs to be established. Whether the problem is faulty testing or aggregate breakdown with compaction or a combination of both, the causes must be determined and rectified.

- In order to increase the residual asphalt content and thereby increase binder and aggregate application rates that would result in thicker BSTs, consideration should be given to increasing the emulsion viscosity requirement from 35 – 150 to 75 – 150.

- As sections come due for rehabilitation, consideration should be given to adding additional gravel before applying a new BST, if the required additional thickness is greater than 75mm as determined from the FWD analysis.

- A more extensive laboratory evaluation of the base course between Km 458 and Km 483 needs to be conducted to determine the corrective measures required to improve the quality of the base course in these problem sections.

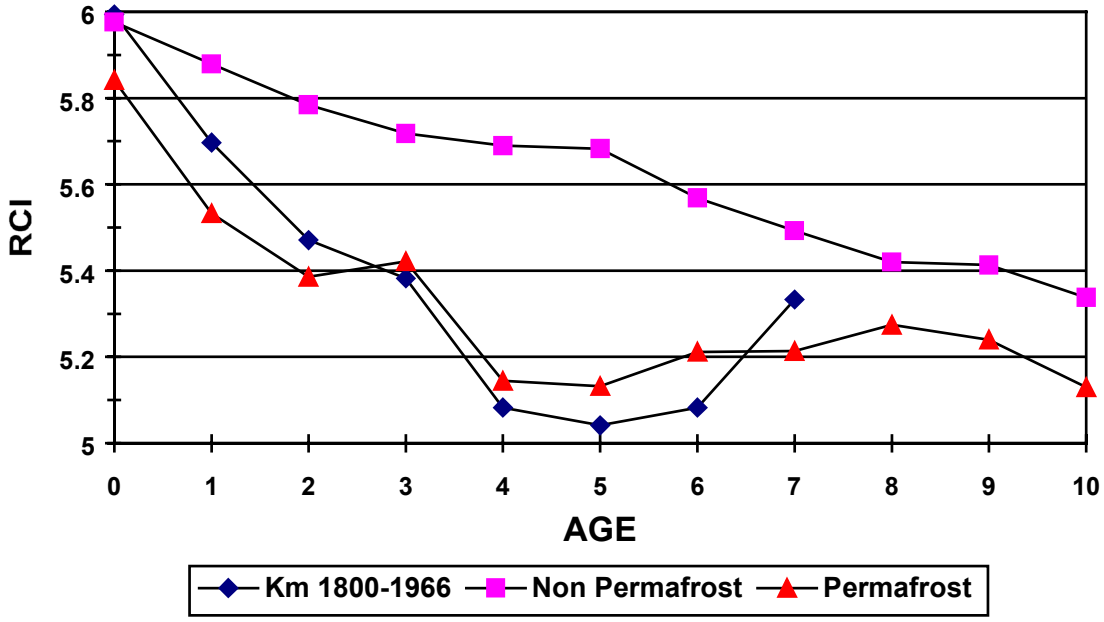
- New BST base and subbase thickness designs should be based on the modified Alaska Design method to ensure sufficient granular material to prevent detrimental frost action and checked against the relationship, as developed from the FWD testing, between subgrade strength and granular base thickness for structural strength requirements.

4. There is a significant amount of reconstruction to Class 3 standards on permafrost terrain. The performance of these Class 3 BSTs is disappointing given the additional funds expended in an attempt to limit distortions and loss of ride score due to permafrost degradation.

For purposes of this report, permafrost sections are defined as those sections of the Alaska Highway between Km 1506 and 1560 and between Km 1635 and 1966. There is limited data on reconstructed portions of the Shakwak portion of the Alaska Highway between Km 1800 and 1968 and this data is treated separately.

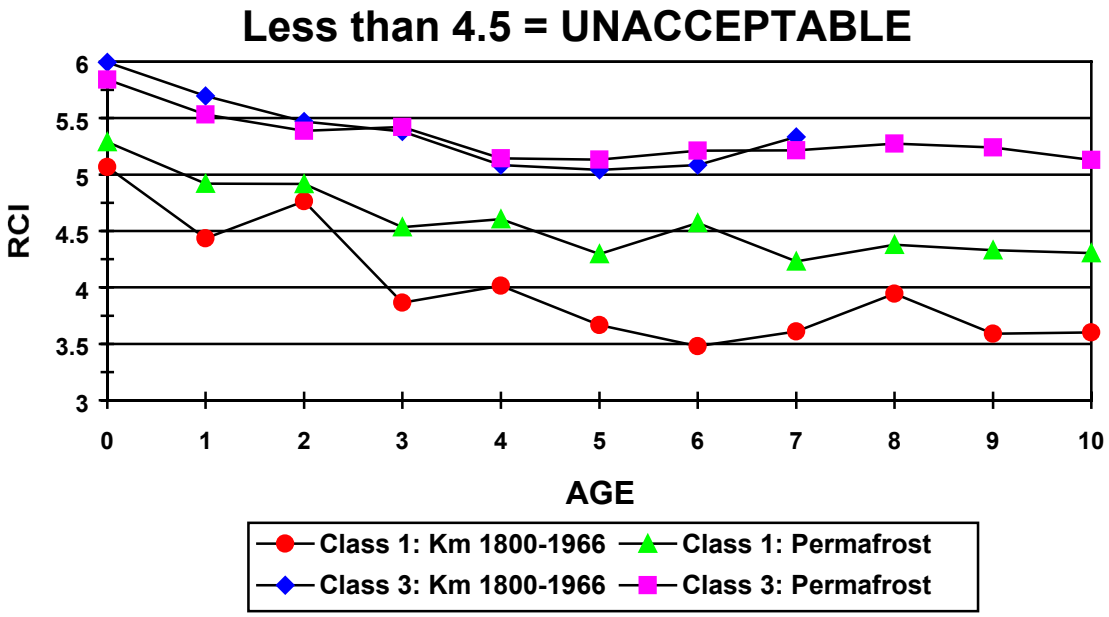
The following figure shows the differences in the ride score of Class 3 BSTs on permafrost and non-permafrost terrain. Although the ride score on the permafrost sections deteriorates more rapidly than on the non-permafrost sections, the ride score is still above 5 (acceptable limit) after 10 years even though considerable patching is required. The sections between Km 1800 and 1966 however have reached a ride score of 5 within five years of construction. The increase in ride score after five years is probably due to extensive patching work undertaken over the past three years.

CLASS 3 RCI PERMAFROST VS NON-PERMAFROST



The following figure shows a comparison of Class 3 and Class 1 BSTs on permafrost sections. Class 1 BSTs give unacceptable performance after 2 years, while Class 3 BSTs can give acceptable performance (with extensive patching) for up to 10 years.

RCI CLASS 1 AND 3 PERMAFROST SECTIONS



1. INTRODUCTION

The majority of Canada's northern roads are low-volume highways covering long distances between isolated communities. They present complicated problems for highway managers, - they are costly to maintain due to isolated maintenance centres, most trips are long distance trips where users require a higher level of service and heavy truck traffic associated with resource development constitutes a disproportionate percentage of the total traffic.

Bituminous Surface Treatments (BSTs), also known as chip seals, provide an interesting alternative for northern highways. Their dust free surfaces provide an improvement over gravel surfaces but without the costly capital outlays required for hot-mix pavements.

BST management systems are similar to pavement management systems but require changes in rehabilitation philosophy. Pavement management systems for hot-mix pavements emphasize the need for timely interventions to protect the investment in the pavement while it still has a considerable salvage value. In contrast, a BST does not have any structural value, and when it reaches an unacceptable ride score, its useful life is finished.

Since the preparation of *"A BST Management System for Yukon Highways"* in 1990, data was collected in the period from 1990 to 2000 in a series of "Update Reports". The purpose of this report is to update the reports based on field data collected in the fall of 2001.

BSTs consist of a single application of well-graded aggregate applied directly to an asphalt film sprayed on the subgrade or base course. For the roads under consideration in this report, the asphalt binder used for the most part is an HF-250S (a high float emulsion) with a typical application rate of 3.25 litres/m^2 and an aggregate application rate of 45 kg/m^2 in the Yukon. PWGSC application rates are in the range of 2.15 litres/m^2 and aggregate spreading rates are 25kg/m^2.

There are three types of surfacing structures used in Northern B.C. and the Yukon:

Class 1. BST applied directly to unimproved subgrades. These are short-lived structures where a BST is the most economical form of dust control. Truck volumes are generally low.

Class 2. BST applied on top of 75-150 mm of crushed gravel. These are light duty pavements serving moderate traffic volumes with few trucks and provide an improved level of service over Class 1 BSTs.

Class 3. Stage Construction. Initially full depths of base and subbase are placed with a BST surface instead of asphalt concrete. Service volumes (AADT) range between 300 and 700 vehicles per day. When

traffic volumes warrant and budgets permit, the BST is replaced with asphalt concrete.

The 2001 inventory and total inventory to date is summarized as follows:

BST INVENTORY

	Data 2001		Data 1984-2001	
	Sections	Kilometres	Sections	Kilometres
Class 1	50	349.7	1,013	9,059.4
Class 2	101	717.3	1,384	11,108.3
Class 3	231	1,551.3	2,246	16,345.9
TOTALS	412	2,872.6	5,174	40,261.1

Listings of the 2001 data for all sections are found in Appendices A and B.

2. BST MANAGEMENT SYSTEM

The key to the BST Management System is the collection and analysis of BST distress information.

BST sections (less than 10 kilometres in length) are visually rated using individual distress ratings. Each distress is evaluated on a scale of 1 to 10, based on the extent and severity of distress. A table showing the rating application for each distress follows on the next page. The rating panel also recommends a rehabilitation strategy, which may or may not be followed depending on funding and priorities.

BST sections were rated in early fall by a rating panel of senior PWGSC and YTG staff. The ratings are done during this period to allow an assessment of following years program after the current year BST patching has been completed, the surfaces have stabilized after the spring thaw, and as well, this time frame also permits a rating of the current year's new BSTs. This timing is suitable for Class 2 and 3 BSTs and asphalt pavements but does pose some problems for Class 1 BSTs, particularly on the B.C. portion of the Alaska Highway where there is a marked difference between spring and fall performance. In terms of BST strategy for these sections, the difference between fall and spring ratings is not all that significant in that the proposed strategy is the same – reconstruction. Spring performance, however, is a major consideration in setting reconstruction priorities.

At the project level, sections needing rehabilitation are identified for the following year's program. At the network level, a generalized model of BST performance permits the prioritization and optimization of strategies needed for long-term budgeting and planning.

BST DISTRESS PARAMETERS

	10	9	8	7	6	5	4	3	2	1	0
	VERY GOOD		GOOD		FAIR		POOR		VERY POOR		
RAVELLING	No noticeable aggregate loss		A few pock marks, less than 5 per 300 sq. mm		Intermittent or frequent pock marks, closely spaced, more than 5 per 300 sq. mm		Frequent or extreme pock marks or few surface disintegrations		Disintegration with potholes		
BLEEDING	No or very faint noticeable colour change in wheel path		Few or intermittent noticeable sections with asphalt on surface		Few or intermittent noticeable sections with asphalt on surface or more than moderate sections with noticeable asphalt on surface		Intermittent or moderate localities with free asphalt on surface, has welt look or noticeable asphalt on surface throughout		Wet look with tire noise like a wet pavement surface		
RUTTING	No visible rutting		Few or intermittent ruts less than 12 mm or less than 6 mm throughout		Few or intermittent ruts greater than 12 mm or frequent ruts less than 12 mm		Intermittent or frequent ruts greater than 19 mm		Extensive ruts greater than 19 mm		
SUBGRADE FAILURE	Few cracks at edge or few sawtooth edges		Few failures that require patching		Intermittent failures that require patching or few failures that need strengthening		Frequent breakout, minor narrowing		Extensive failures		
SHOULDER DISINTEGRATION	Few single cracks at edge		Intermittent cracks at edge or sawtooth		Extensive sawtooth, minor breakout		Frequent multiple cracks		Lane width reduced		
POTHOLES	Few minor potholes		Few deep potholes		Intermittent potholes		Frequent potholes		Extensive potholes throughout		
CRACKING	Few transverse or longitudinal cracks		Intermittent transverse or longitudinal cracks		Frequent transverse and longitudinal cracks or few alligator cracks		Frequent alligator cracking		Extensive alligator cracking		
PATCHING	Few minor patches		Few deep patches		Intermittent patches		Frequent patching		Extensive patching		
DISTORTIONS	Few instances of noticeable swaying		Good control of car with intermittent areas with noticeable swaying		Fair control of car		Poor control of car		Continuous distortions may be dangerous at speeds over 60 km per hr.		
CORRUGATIONS	Barely noticeable		Few noticeable corrugations		Intermittent noticeable corrugations or few severe enough to affect ride		Frequent severe corrugations, washboarding		Corrugations starting to pothole or severe washboarding		
STREAKING	Barely noticeable		Noticeable		Some minor ravelling		Influences steering and ride		Severe aggregate loss, potholing		
JOINTS	Barely noticeable		Noticeable		Affects ride or steering or ponds water		Speed reduction required		Ravelling, potholing at joints		

3. PROJECTS FOR 2002

The 2001 field evaluation has identified sections that should be studied in greater depth for potential rehabilitation in 2002. These sections have been summarized in Tables 1 and 2.

The tables list those sections where subgrade failures, ravelling, bleeding, rutting, potholes, cracking, patching, distortion or ride score were rated at less than 5 on the rating scale or the section had been identified by the rating panel as needing work.

The sections listed for rehabilitation in these tables must be subsequently developed into a rational program. This is beyond the scope of this report but among considerations that should be included in the development of such a program are:

1. The reconstruction program for the next 2 years. If a section is due for reconstruction (for geometric reasons, for example) within two or three years, an evaluation of whether the existing BST surface can be maintained at a minimum level of service must be made.

2. The relationship between the distressed section and the adjacent BSTs must be considered. Construction economics dictate that a mediocre section located between two poor sections be resealed at the same time given that forces must be mobilized from considerable distances.

3. An evaluation of the distress and its particular environment must be considered. An example is bleeding distress. If a section is showing considerable bleeding distress but is in otherwise good condition, an evaluation of the skidding resistance and its consequences must be made. Because of a cold climate and low traffic volumes, a decision to post “slippery when wet” signs might be adequate in a given locale, but would be unacceptable in another location with warmer summers and more traffic. Distortions due to permafrost are another example. A decision has to be made whether repairing the BST will improve the level of service or will be an exercise in futility given that the permafrost will continue to melt. A reversion to gravel might be a better solution.

4. An evaluation of long-term needs is also required to smooth out the peaks of the program. Many sections of BST could become due for rehabilitation in the same year and the program must be modified to balance rehabilitation needs over time.

4. NETWORK ANALYSIS

The network analysis uses an overall condition rating for selecting rehabilitation priorities and strategies and for investigating the impact of varying funding levels. It is based on a weighting index which combines all distress extents and severities.

4.1. Bituminous Condition Index (BCI)

The following formula is based on utility theory enabling all distress to be put on the same scale and their contributions combined to give the DMI.

$$DMI = \sum_{i=1}^{n} (w_i)(s_i)$$

Where: DMI = Distress Manifestation Index. DMI is an overall characteristic describing BST surface condition in terms of distress manifestations.

w_i = Weighting value representing the relative weight of each distress manifestation. Those distresses that are considered more serious are given larger weighting values (w_i).

s_i = Severity and extent of distress manifestations expressed on a scale from 0 to 10.

n = 12, the total number of distress types.

BST DISTRESS WEIGHTING VALUES

DISTRESS	WEIGHTING VALUE (w_i)
Ravelling	1.0
Bleeding	1.0
Rutting	1.0
Subgrade Failure	1.5
Shoulder Disintegration	0.5
Potholes	1.3
Patching	1.0
Cracking	0.5
Distortions	1.2
Corrugations	0.4
Streaking	0.3
Joints	0.3

The significance of the ride score in the ultimate decision to rehabilitate BSTs is much more important than with conventional pavements. This study establishes rehabilitation programming based on BCI – a combination of ride score and the Distress Manifestation Index. The Bituminous Condition Index (BCI) is calculated using the following formula:

$$BCI = 10 \left(\frac{DMI}{10} + \text{Ride Score} \right) / 2 = 5 \left(\frac{DMI}{10} + \text{Ride Score} \right)$$

The BCI is an overall rating of the BST section. The higher the BCI, the better the condition of the BST.

4.2. Performance of BST Highways

The addition of the 2001 data resulted in minor changes in the performance models.

As a general rule, the addition of the 2001 data lowered the standard deviation for both the ride score and BCI, indicating that the performance models are becoming more consistent with time.

Figures 1 to 3 show the performance of individual highways. Class 3 sections on the Haines Road; Class 2 BSTs on the Alaska Highway between km 450 and 1008; and Class 1 BSTs on the Alaska Highway between km 1635 and 1966 are visibly different in Figures 1 to 3, but other highways are more difficult to evaluate visually from the figures. To ascertain whether other sections were different, they were compared using the rigorous statistical analyses shown in Tables 3 to 5.

The tables confirm that the Haines Road Class 3 BSTs, Class 3 BSTs between km 0 and 550, km 1472 and 1635, km 1800 and 1968 on the Alaska Highway and Class 3 BSTs on the Campbell Highway, Class 2 BSTs between km 450 and 1000 on the Alaska Highway, and Class 1 BSTs between km 1635 and 1968 on the Alaska Highway are statistically different from the other BSTs in their respective classes.

The practical implication of Tables 3 to 5 is that overall performance curves can be used for each of the three classes except that individual curves must be developed for Haines Road Class 3 BSTs, Class 3 BSTs Fort St. John to Fort Nelson, from Haines Junction to Whitehorse, from Destruction Bay to Beaver Creek and the Campbell Highway, Class 2 BSTs between Fort Nelson and Watson Lake, and the Class 1 BSTs north of Haines Junction.

The remaining highways all belong to their representative populations with the odd exception for a given year on a given highway.

4.3. Performance Curves for BSTs

The addition of new data allowed for the recalculation of performance curves for the different BST performance categories described above. Class 1 (Figure 4), Class 2 (Figure 5) and Class 3 (Figure 6) BST performance curves are all based on multiple regression curve fits from the EXCEL® spreadsheet program.

With the addition of the 2001 data, new performance curves were generated for Class 2 BSTs. A new performance curve was generated for well-performing Class 2 BSTs and a separate curve was generated for poorer-performing BSTs between km 450 and 1008 on the Alaska Highway. The performance curves for Class 1 BSTs between km 1635 to 1966, and all other Class 1 BSTs were also modified with the addition of new data.

The performance curves for Class 3 BSTs were modified with the addition of the 2001 data. New curves were defined for Class 3 Haines Road sections, for Campbell Highway and Alaska Highway sections from km 0 to 550, 1470 to 1635, and 1800-1966. A new performance curve was also defined for all other BST Class 3 road sections.

BST performance equations are as follows:

- Class 1 except Alaska Highway km 1635 – 1966:
  $BCI = 71.653 – 5.6336 \times AGE + 1.0543 \times AGE^2 – 0.0704 \times AGE^3$
  $R^2 = 0.9833$

- Class 1 Alaska Highway km 1635 – 1966:
  $BCI = 70.653 – 7.0622 \times AGE + 1.0466 \times AGE^2 – 0.0531 \times AGE^3$
  $R^2 = 0.9731$

- Class 2 except Alaska Highway km 450 – 1008:
  $BCI = 74.148 – 4.4534 \times AGE + 0.6052 \times AGE^2 – 0.0342 \times AGE^3$
  $R^2 = 0.988$

- Class 2 Alaska Highway km 450 – 1008:
  $BCI = 69.849 – 7.98 \times AGE + 1.8256 \times AGE^2 – 0.1541 \times AGE^3$
  $R^2 = 0.9954$

- Class 3 except Haines Road, Campbell Highway, Alaska Highway 0 – 550, 1470 – 1635, 1800 – 1966:
  $BCI = 76.553 – 1.9027 \times AGE + 0.1138 \times AGE^2 – 0.0029 \times AGE^3$
  $R^2 = 0.9899$

- Class 3 Haines Road:
  $BCI = 83.608 – 3.6957 \times AGE + 0.3741 \times AGE^2 – 0.0153 \times AGE^3$
  $R^2 = 0.9715$

- Class 3 Campbell Highway, Alaska Highway 0 – 550, 1470 – 1635, 1800 – 1966:
  $BCI = 74.043 – 4.0155 \times AGE + 0.5688 \times AGE^2 – 0.0265 \times AGE^3$
  $R^2 = 0.9779$

5. STUDIES OF PRIMED, SINGLE AND DOUBLE SURFACE TREATMENTS

Over the past number of years, two separate studies were conducted to verify if additional performance could be expected from prime and/or second surface treatments.

In the late 1980's C-SHRP (Canadian Strategic Highway Research Program) undertook a number of studies to complement the American SHRP research program. A study to investigate the performance of low-volume roads was approved and construction of test sections of different pavement types was proposed. For a number of reasons, the program failed to develop, but the Yukon Department of Community and Transportation Services (now "Infrastructure") proceeded with their portion of the study and this report details the findings after 10 years in service.

Concurrent with the construction of the C-SHRP test sections, sections of the Klondike Highway and the Silver Trail were surface with a single treatment on a primed surface.

5.1. Comparison of Primed/Unprimed Sections of Klondike Hway and Silver Trail

As part of the study, seven sections (60 kms) were constructed on primed base courses on the Klondike Highway and three sections (20 kms) on the Silver Trail. Most of these sections have now been overlaid or ripped up and overlaid after six years of service. The study concluded that there was no difference in performance between primed and the unprimed sections either in terms of ride score or BCI on these sections.

5.2. Performance of Sections Constructed for the C-SHRP Project

Five test sections each 100 metres in length were constructed in 1991 on a sandy-gravel subgrade (less than 6% retained on the 80-micron sieve). The asphalt prime used was MC-70 applied at a rate of 1.0 to 1.2 l/m^2. Although the asphalt prime had a lower percentage of distillate than required by CGSB specifications, it was felt that sufficient penetration of the base had been obtained to be an effective prime coat.

For the first BST layer, the HF250S emulsion was applied at a rate varying between 2.42 and 2.52 l/m^2. The graded BST aggregate was 20 mm maximum size and was applied at a rate of 43 kg/m^2. The emulsion for the second lift was applied at the rate of 1.6 l/m^2 and the aggregate at a rate of 59 kg/m^2. Construction reports indicated surface richness in the southbound lanes.

The five test sections are summarized as follows:

C-SHRP TEST SECTIONS – KLONDIKE HIGHWAY

Section	Km Limits	Surface	Base Thickness	Subbase Thickness	Subgrade
1	315.4 – 315.5	Single	150 mm	150 mm	Sandy Gravel
2	315.5 – 315.6	Double	150 mm	150 mm	Sandy Gravel
3	315.6 – 315.7	Double & Prime	150 mm	150 mm	Sandy Gravel
4	315.7 – 315.8	Double & Prime	75 mm	0 mm	Sandy Gravel
5	315.8 – 315.9	Single	75 mm	0 mm	Sandy Gravel

The highway was subjected to two periods of concentrated loading due to ore haul from a lead/zinc mine. The approximate ESALs for the BSTs are:

YEAR	Cumulative ESALs
1991	100,000
1992	250,000
1993	325,000
1994	350,000
1995	450,000
1996	600,000
1997	700,000
1998	750,000
1999	800,000
2000	850,000
2001	900,000

Table 6 contains the results of the evaluations of the sections for the past nine years. The sections were rated using the system described previously with the exception of cracking where the number of cracks were counted in the section rather than using the 0 (very poor) to 10 (excellent) rating for cracking distress. Figure 7 indicates the performance of the various sections based on the BCI.

From Table 6 and Figures 7 to 10, the following observations can be made:

- The double treatment on 300 mm of base and subbase provided a slightly superior performance over the single treatment on an equivalent granular structure (Figure 7) initially, but by the fifth year the single treatment shows superior performance.

- After 10 years both the single and double treatments on 300 mm of granular structure gave superior performance to the equivalent treatments on 75 mm of processed granular material. (It should be noted that the subgrade in both cases was a competent granular material).

- There were no significant subgrade failures, ravel, potholes, distortions, streaking, corrugations, joint failures or patches after 10 years in any of the five sections.

- Minor shoulder failures had begun to appear in year 6.

- Minor cracking (mainly transverse) appeared the year after construction. With time, cracking increased progressively particularly on Section 5 – the single BST on 75 mm of base and to a lesser extent on the double BST on 75 mm of base after 7 years (Figure 8).

- The double seals on the primed surfaces rutted (Figure 9) more severely on both the 300 and 75 mm base sections than on the equivalent double and single seal unprimed sections. These differences were noted during the initial rating of the new sections in year 0. Whether the difference was due to construction variables or are ruts that appeared during the two-month interval between construction and the initial rating is a matter of conjecture.

- Bleeding distress was rated as fair initially (Figure 10). In most cases it has improved marginally as the surface treatment oxidized and has decreased on all sections over the past 10 years as the asphalt oxidized.

Because of randomness of the observations and performance, the data was analyzed using the Student's t-test for paired data. For example, cracking data from Section 1 was paired with cracking data from Sections 2, 3, etc., for each of the 10 years. The advantages of this procedure are that the data pairs do not need to have the same variance, do not need to be independent, extraneous factors were reduced and sections could be compared on a year-to-year basis. The disadvantage is that the analysis is based on the variation of differences. For example in the case of rutting there is a statistical difference in performance between the single BST on 300 mm of granular material and the double prime BST on 300 mm of granular material. This difference was due to an initial difference in year 0, even though the loss in rutting in subsequent years wa roughly equal.

A review of Table 7 indicates that:

- There is no difference in performance between the single and double BSTs on 300 mm of granular base and subbase.

- The BSTs on the 300 mm granular structure are performing better than the sections on 75 mm of base. (Figure 8). This is due in large part to a difference in rutting which was evident at year 0.

- The double prime on 75 mm of granular material performed more poorly than all other sections and this has remained true from the time of the initial rating.

- The ride score on the double BST – prime sections was slightly lower (0.5 on the RCI scale of 0 to 10) compared to the other test sections.

- After 10 years of service one can conclude that the treatments on 75 mm of base show more cracking.

Given that rehabilitation of these types of surfaces is not required until the BCI is less than 65, resurfacing of all the test sections is not anticipated for another five to eight years.

6. STRATEGIC PLANNING

6.1. MYOP Budgets

The predictive models can be used to estimate future budgets as well as indicate location where future work will be required in order that gravel resources can be developed.

In the case of the Yukon BSTs it was assumed that the following sections would be reconstructed within the next five years to Class 3 BSTs

Alaska Highway: Km 1558 to 1788

For PWGSC sections of the Alaska Highway in Northern British Columbia, it is assumed that the following sections will be reconstructed within the next five years:

Km 733 to 737 in 2004
Km 737.5 to 750 in 2006
Km 741 to 742 in 2005
Km 825 to 839.5 in 2002/3
Km 942 to 957 in 2002

To predict the year that rehabilitation is required the existing BCI and performance models are used. When an individual section will fall below a rehabilitation trigger value, rehabilitation is recommended. In order to account for the time lag between the evaluations (fall 2001) and rehabilitation (summer 2002) and to prevent a very large program in year 0 due to backlogs, the trigger values for year 1 were reduced from 65 to 63 for Class 3 BSTs and from 60 to 58 for the Class 1 and 2 sections. This method allows for cost predictions for a one to five-year MYOP.

The first year of the program can be refined using two methods. Instead of basing rehabilitation sections on the trigger value, projects for the first year are based on the recommendations of the panel who rated the BST. These recommendation s are considered more reliable than the model predictions but are limited to this year's (and to a limited extent – next year's) work.

The second refinement is to compare the above analysis to the preliminary programs that have been developed by field personnel that take into account:

1. Financial limitations for the current year.

2. The short-term reconstruction program. If a section is due for reconstruction within two or three years, an evaluation of whether the existing BST surface can be maintained at a minimum level of service must be made.

3. The relationship between the distressed section and adjacent sections. Economics dictate that a mediocre section located between two poor sections should be resealed at the same time given that forces must be mobilized from considerable distances.

4. An evaluation of long-term needs is also required to smooth out the peaks of the program. Many sections of BST could become due for rehabilitation in the same year and the program must be modified to rationalize equipment and labour resources.

In theory, the results from the three analyses should be the same, but there are differences that are listed in Tables 8 and 9.

In the case of YTG BSTs, two factors need to be considered when the sections recommended by the panel, BCI analyses and the preliminary program are taken into account. There is a difference between the preliminary program and the panel recommendation and BST analyses for deficient sections north of Kilometre 1800 on the Alaska Highway, which have severe settlement problems due to permafrost distortions and sections on the Top of the World Highway, which have structural problems. The YTG programs these types of repairs using patching crews that are not part of the BST program. The other factor is that there are a number of sections that are to be reconstructed in the near future. When these factors are considered, there is good agreement between the methods. Table 8 indicates a difference of 21 kilometres between the rehabilitation needs based on BCI and those based on the panel recommendations. This difference is mainly due to the section of the Haines road (km 211- km 230) where the BCI was below 63, but the panel recommended routine maintenance, as the ride was still relatively good (5.0).

There is a 17-km difference between the panel recommendations and the preliminary program proposed by YTG. This is mainly due to the section between km 603 and 616 on the Klondike Highway where the panel recommended rehabilitation even though the ride score was good (5.5). The preliminary program also included a number of sections between km 1163 and 1218 for program reasons, which were balanced by not doing work this year on the Campbell Highway.

In the case of PWGSC BSTs there were a number of sections where there was more than one panel recommended option for the section under consideration (Table 9). These were mainly Class 1 and 2 sections where the options were: rehabilitate the BST, reconstruct the section immediately, or try to maintain the section until the section was reconstructed. That decision would be made on other factors such as funding for reconstruction. Table 9 indicates that the panel recommended 113.3 kilometres for resurfacing, but when the sections that were are identified for routine maintenance/reconstruction are considered, only 33.7 kilometres were directly identified for reconstruction. This compares well with the preliminary program of 33.1 kilometres this year. However, there is a difference in the sections to be rehabilitated as the preliminary program selected some average sections to be rehabilitated (265- 301) in order to avoid returning at a later date.

In most cases for both YTG and PWGSC BSTs where the panel recommended rehabilitation in 2001, the BCI method also recommended rehabilitation within two years. This indicates that the BCI method can be used with some confidence to predict the five-year MYOPs.

In the MYOP scenarios that follow, the YTG and PWGSC preliminary programs are used for 2002, as they are believed to be the most accurate. Projects selected by the panel or by the BCI methods for 2002 but not included in the preliminary programs have been assigned to the 2003 program. All years other than 2002 and 2003 are based on the BCI method.

Figures 11 and 12 indicated the predictive model's accuracy over the past four years.

YTG SECTIONS:

Table 10 and Figure 11 contain the five-year MYOP for YTG BSTs based on the following costs and rip-up/overlay percentages:

	Rip-up %	Rip-up Costs per Km	Overlay Costs per Km
CLASS 1	90%	$22,000	$16,000
CLASS 2	90%	$24,400	$18,400
CLASS 3	90%	$27,000	$21,000

Table 10 indicates a major reduction in the 2003 program. Consideration should be given to a transfer of 2002 projects to 2003 to help balance the workload with budgets of $1.5 to 2.0 million range for the period 2004-2008.

It should be noted that Table 10 is based on the reconstruction assumptions and work on the Shakwak and the Top of the World Highways being funded separately as amounts for these highways are not included in the Table

PWGSC SECTIONS (constant dollars):

This year's analysis indicates a significant increase in 2002 and 2003 funding requirements over the 2000 estimates. This is due in large part due to the resurfacing of km 279 to 284 and km 290 to 301 in the 2002 preliminary program for programming reasons, even though the BCI and ride score ratings are adequate.

Table 11 contains the five-year MYOP for PWGSC BSTs based on the following costs and rip-up/overlay percentages:

	Rip-up %	Rip-up Costs per Km	Overlay Costs per Km
CLASS 1	25%	$15,000	$9,000
CLASS 2	50%	$15,000	$9,400
CLASS 3	100%	$28,000	
CLASS 3	Double Treatment	$37,000	

6.2. Factors Affecting MYOPs

A review of MYOPs prepared since 1994 indicates that in terms of the performance model, the predictions are relatively accurate. These predictions have been affected significantly by other factors including:

1. Budget restraints in the BST program. For example, PWGSC only rehabilitated 28 kms in 1998 due to budget requirements, which has had repercussions in later years.

2. Budget restraints in the Construction Program. In the late 1990s there was some indecision whether or not to build sections of the Shakwak project because of a lack of budget commitments from the USA.

3. Changes in traffic. The cessation of the ore haul should mean improved BST performance on the Campbell and Klondike Highways.

4. Changes in rehabilitation strategy. The change to rip-up and re-BST from simply re-BSTing has led to major changes in program costs.

5. Additions to the system. Large-scale additions to the system such as the Top of the World Highway also impact future MYOPs.

7. OBSERVATIONS

7.1. Bleeding

Bleeding distress on new BSTs was less of a problem than in previous years, indicating that measures taken to improve construction quality are starting to have an effect. New (less than two years old) sections showing significant bleeding were:

		Age	Rating
Alaska Highway	Km 319.0 to 328.0	1	6
Alaska Highway	Km 528.0 to 533.0	0	6
Alaska Highway	Km 895.0 to 900.0	0	6
Alaska Highway	Km 900.0 to 906.0	0	4
Alaska Highway	Km 906.0 to 915.0	0	6
Alaska Highway	Km 1038.0 to 1040.0	1	6
Alaska Highway	Km 1585.0 to 1588.0	0	6
Alaska Highway	Km 1615.0 to 1620.0	0	6
Alaska Highway	Km 1635.0 to 1650.0	1	6
Klondike Highway	Km 340.0 to 346.0	1	6
Takhini Hot Springs	Km 5.2 to 9.2	1	4

7.2. Patching

A rating system for current-year patching was introduced on a limited number of sections in the 1998 BST ratings and was implemented fully in the 1999 to 2001 ratings.

Patching for the current year is rated on a scale of 0 to 10. While the long-term patching rating is useful in calculating the BCI since it accounts for distresses that have been covered by the patching, the short-term patching or current-year patching rating is more applicable to the project level of pavement management as it is indicative of sections that are showing immediate distresses.

Tables 12 and 13 contain current-year patching distresses for 1998 to 2001. Of particular concern are sections showing poor performance (ratings of five or less) after five years of service or less and/or sections that have shown poor performance in two or more consecutive years.

A review of Table 12 indicates that Km 251 to 279 of the Alaska Highway had required significant patching in 1999 and 2000, but improved significantly with the 2001 year ratings. Most of this BST is old but should be monitored for rehabilitation.

The sections between Km 295.5 and 359 of the Alaska Highway showed considerable patching distress in the 2000 year report. It appears the patching work in 2000 may have solved the problems in this area. The sections between 607 to 711.7 are mid-aged BSTs that are performing poorly.

Table 13 is a similar analysis for YTG BSTs. The sections requiring significant patches are the permafrost sections of the Alaska Highway and Class 2 sections of the Top of the World Highway which are performing poorly.

In 2001, approximately 36% (239 kms) of the PWGSC system is showing significant patching distress compared to 9% (173.5 kms) of the YTG System.

There are a number of sections north of Fort Nelson showing premature failure. These failure patterns were noted in the 1998 report and are confirmed with the 1999, 2000 and 2001 data. Figure 13 indicates the average patching ratings for Class 3 YTG sections, for PWGSC sections excluding Km 458 to 571 and the rating for the Class 3 sections between Km 458 and 571. It is evident that YTG Class 3 BSTs show slightly better patching performance than PWGSC BSTs, excluding Km 458 – 571. Some of this difference is due to the different patching procedures followed. YTG tends to use small cold-mix patches for potholes, whereas PWGSC uses larger spray patches. The YTG do not have any hydro-drums in their fleet and consequently spray patching is a more difficult operation. However, the best patching is likely between these extremes with smaller potholes patched with cold-mix and “strings” of small potholes repaired with spray patches.

The sections between Km 458 and 571 are definitely showing poorer performance than other YTG and PWGSC BSTs. If a “level” of 6 is considered as acceptable, most sections do not provide satisfactory performance after one year. Clearly these BSTs are not providing the expected performance. Given the widespread and immediate deterioration of the BST, a number of factors could be involved including, the quality of the BST aggregate, the quality of the base course, the thickness of the base course and the compatibility of the emulsion and the aggregate. A structural evaluation using a FWD was undertaken in 1999 and the main findings are repeated below.

1. There were major differences between the drill logs for the FWD back-calculations and construction as-built logs. These differences were often in excess of 100 mms and varied randomly indicating that in some

sections there was more granular material than originally thought and in other sections there was considerably less.

2. In some sections the base course material was sandy having more than 70% passing the 4.75 mm sieve.

3. The base course contained considerably more fines (13.8% to 16.5%) than PWGSC specifications allow (8%). This is consistent with other third-party studies (ASTRO Claim).

4. The back-calculated subgrade moduli appeared to be consistent with the subgrade material type.

7.3. Long-Term Performance

A large number of very poor sections have been rebuilt since 1993 leading to an overall increase in the level of service of all YTG and PWGSC sections of the Alaska Highway.

The Table 14 and Figure 14 information indicate that there has been a very slight decrease in the level of service on PWGSC sections of the Alaska Highway in 2001.

Table 14 and Figure 15 indicate that overall the YTG system has decreased slightly since the 1998 ratings.

The overall performance of BSTs has improved since 1990 and particularly since 1992. This is likely due to three main factors:

1. The replacement of Class 1 by Class 3 BSTs.

2. A review of the standard deviations for the performance curves has indicated that they are also narrowing, reflecting more consistent decisions regarding BST rehabilitation as a result of the BST Management System.

3. The change to reclaiming older BSTs instead of simply overlaying them has also increased the overall performance of the system.

7.4. Permafrost Sections

There is now a significant amount of reconstruction to Class 3 standards on permafrost terrain. On a cursory basis, the performance of these Class 3 BSTs is disappointing given the additional funds expended in an attempt to limit distortions and loss of ride score due to permafrost degradation.

For purposes of this report, permafrost sections are defined as those sections of the Alaska Highway between Km 1506 and 1560 and between Km 1635 and 1966. There is limited data on reconstructed portions of the Alaska Highway Shakwak section between Km 1800 and 1966 and this data is reviewed separately in this section.

Figures 16 to 18 show the differences in the performance of Class 3 BSTs on permafrost and non-permafrost terrain. Figure 16 shows the difference in terms of distortions on a scale of 0 to 10.

Figure 17 represents a similar comparison in terms of ride. Although the ride scores on the permafrost sections deteriorate more rapidly than on the non-permafrost sections, the ride score on the permafrost sections is still above 5 (acceptable limit) after 10 years even though considerable patching is required. The sections between Km 1800 and 1966 had almost reached a ride score of 5 within six years of construction. However, performance has improved in the last two years.

Figure 18 shows a similar trend for the BCI, which includes distresses such as distortions, patching and ride score. Using an acceptable lower BCI limit of 65 for Class 3 BSTs, the anticipated life of a section on permafrost is three to four years compared to 10 years or longer for non-permafrost sections.

Figures 19 to 23 show a comparison of Class 3 and Class 1 BSTs on permafrost sections. Figure 19 indicates a difference in the amount of patching required. Figure 20 indicates that the Class 3 has a better performance when distortions are considered. Since most of the patching is for distortion repair, the combined evaluation of patching and distortions shown in Figure 21 is of some value. Figure 21 indicates that Class 1 BSTs fall below an acceptable level within five years, Class 3 BSTs, although not falling below the acceptable/non-acceptable levels, give marginal performance after nine years.

In terms of ride score, Figure 22 indicates that Class 1 BSTs give unacceptable performance after two years, while Class 3 BSTs can give acceptable performance (with extensive patching) for up to 10 years. Figure 23 shows similar trends in terms of BCI.

7.5. Double Seals

PWGSC has used double seals in a number of sections. The first application is full width (10.5 metres) and the second application is in the driving lanes only. The material costs are less than the Yukon single seal, which are at higher application rates however the labour and equipment costs are higher than the Yukon single seals.

Double seals were constructed in 1999 on the Alaska Highway between Kilometre 300 and 328. As well, relatively new BSTs in the Coal River area were given an additional seal, making them effectively double seals.

These sections should be monitored to see if they give better performance. Unfortunately these were relatively good sections as single seals and the results may be inconclusive. Figure 24, although inconclusive, indicates that if anything, single seals are performing better than double seals.

7.6. FWD Analysis of BST Sections Km 256 – 310, Km 458 – 540

An investigation was carried out using a FWD (Falling Weight Deflectometer) in June of 1999 by Thurber and Associates.

Although based on very limited data the study indicated that BST base and subbase thickness designs should be based on the modified Alaska Design method to ensure sufficient granular material to prevent detrimental frost action and checked against Figure 26 for structural strength requirements. The maximum thicknesses of base and subbase given by the two methods should be used as the final design requirement.

7.7. Problem Areas

7.7.1. Alaska Highway Km 1800 to 1966

This section of highway has been rebuilt within the last seven or eight years over permafrost zones. The highway had been rebuilt because of poor geometrics, narrow width and poor performance of the Class 1 BSTs. Despite measures taken to ensure performance of the permafrost sections, their performance has been disappointing. Many of the sections are now in poor condition with ride scores less than 5.0, thereby negating many of the benefits of reconstruction program. To date, local patch crews have handled patching, but despite spending $0.5 million in patching, the performance of these sections is still decreasing. It is becoming obvious that organizational changes are required as the limit of what existing resources and budgets can accomplish has been surpassed.

Among changes that should be considered:

1. Changes in the budget allocation. These sections require money and the “free ride” after initial construction is over.
2. Consideration could be given to separate patch crews possibly equipped with hydro-drums or a small chipper.

3. On sections that have somewhat stabilized, the profile of these sections should be “reconstructed” with base and a new surface. These sections will still have to be maintained for further distortions but at least maintenance forces are starting with something reasonable.

4. Shimming programs should be established for other sections where the subgrade had not stabilized. The use of survey crews and quality assurance of the gravel patches should be included with this program.

7.7.2. Top of the World Highway

The BST on this highway is also performing poorly. Unlike the permafrost sections of the Alaska Highway discussed above, the problems in this area are not due to distortions but rather a lack of structural strength of the highway cross section. A number of sections have been reverted to gravel and other sections have failed a second or third time despite attempts to correct the base and subbase. Obviously a different strategy is required for this highway. Suggestions for improvement of this section include:

1. Do a through engineering study to identify clearly the reasons for the failure. This study should include recommendations for strengthening sections, areas to be excavated and quality assurance of the back filling operation.
2. Consideration be given to a separate patching crew, similar to that suggested for the permafrost sections equipped with hydro-drums or a small chipper.

7.7.3. Consolidation of Sections

As part of the efficient management of BST sections, the repair of a mediocre section between two poorly performing sections is a cost efficient strategy. However, during the preparation of this report, it was noted for both YTG and PWGSC organizations this year, there was a tendency to lump some relatively good sections with the poorer sections for construction expediency to be finished in a given area to the detriment of other isolated sections that required attention. A word of caution is given that the consolidation of sections is always done in a cost efficient manner.

Vern Janz
April 2002

Reviewed by
Dr. D.R. MacLeod

The authors would like to acknowledge the work of Marc Bennard, Co-op student in the preparation of the figures and tables in this report.

APPENDIX A BST REPORT FIGURES

Figure 1 BCI by Highway Class 1 BST

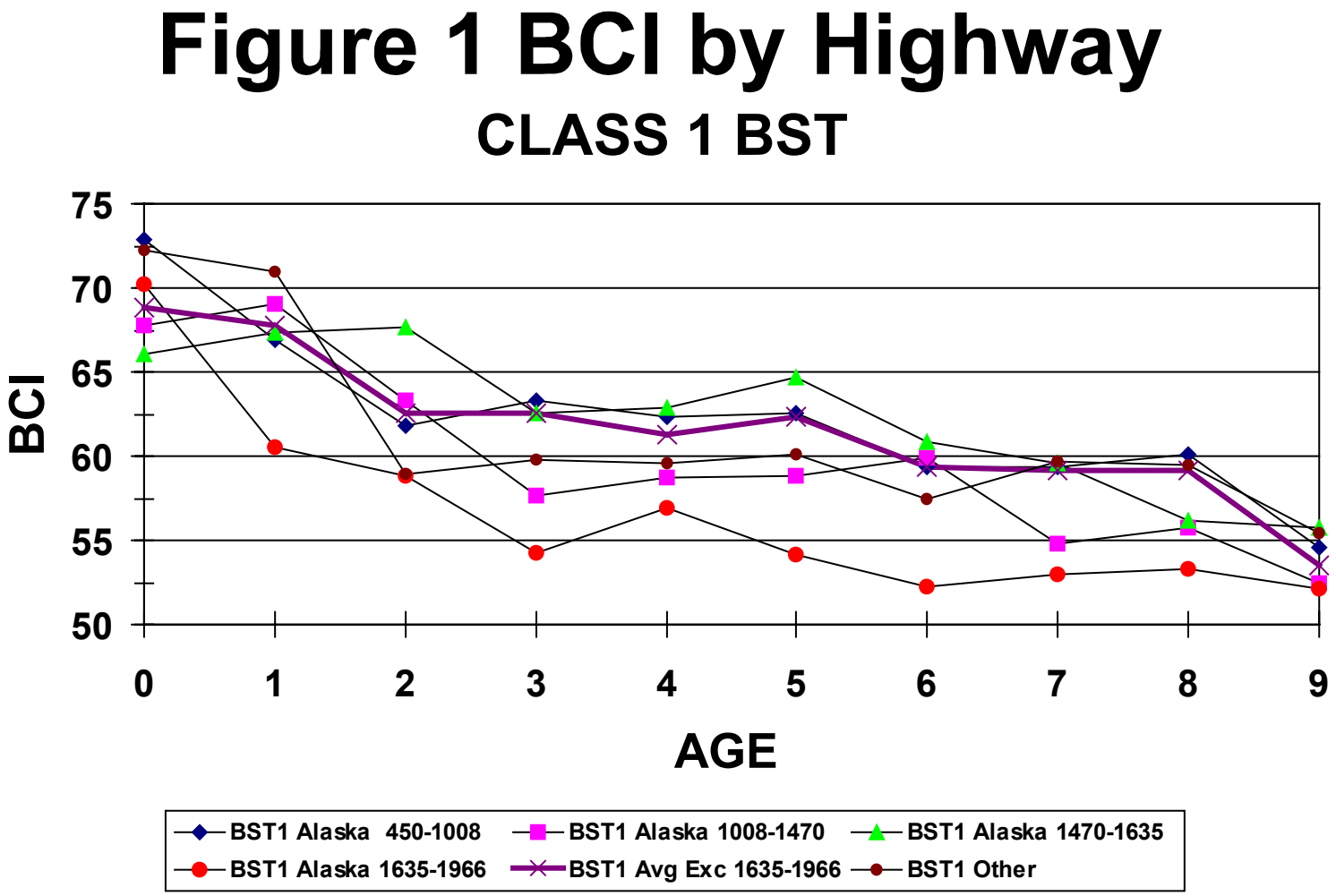


Figure 2 BCI by Highway Class 2 BST

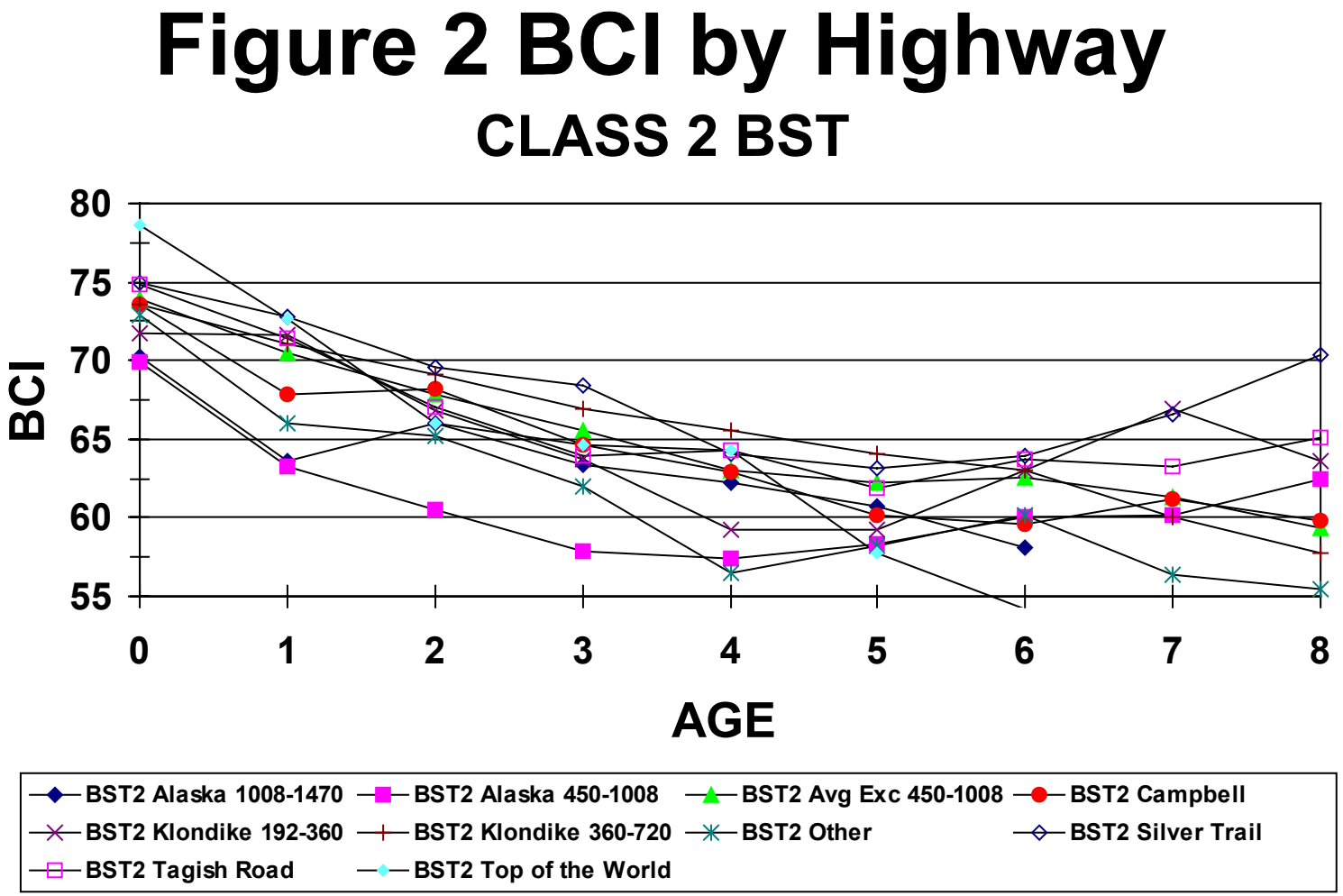


Figure 3 BCI by Highway Class 3 BST

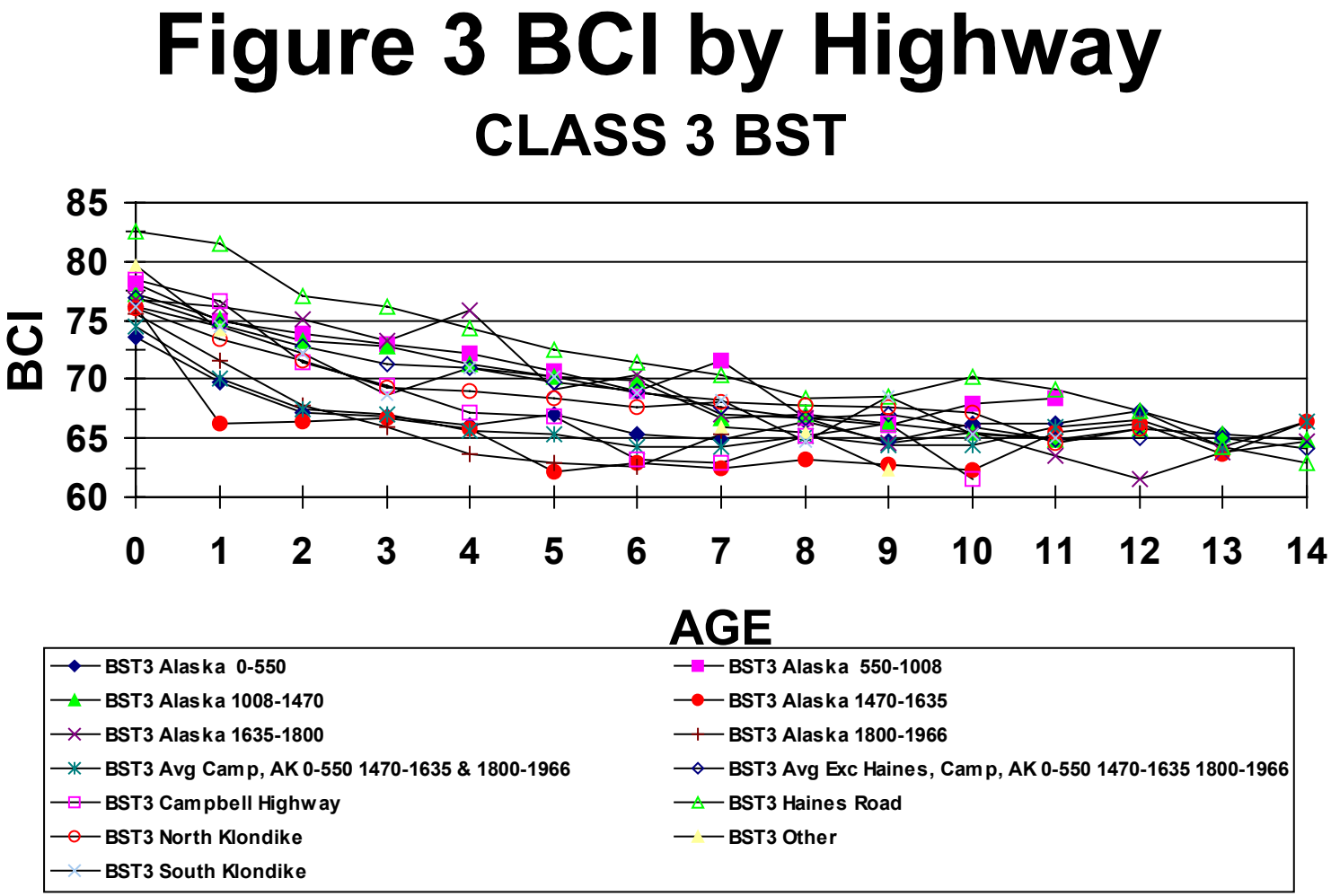


Figure 4 Class 1 BST Performance

Figure 4

CLASS 1 BST PERFORMANCE

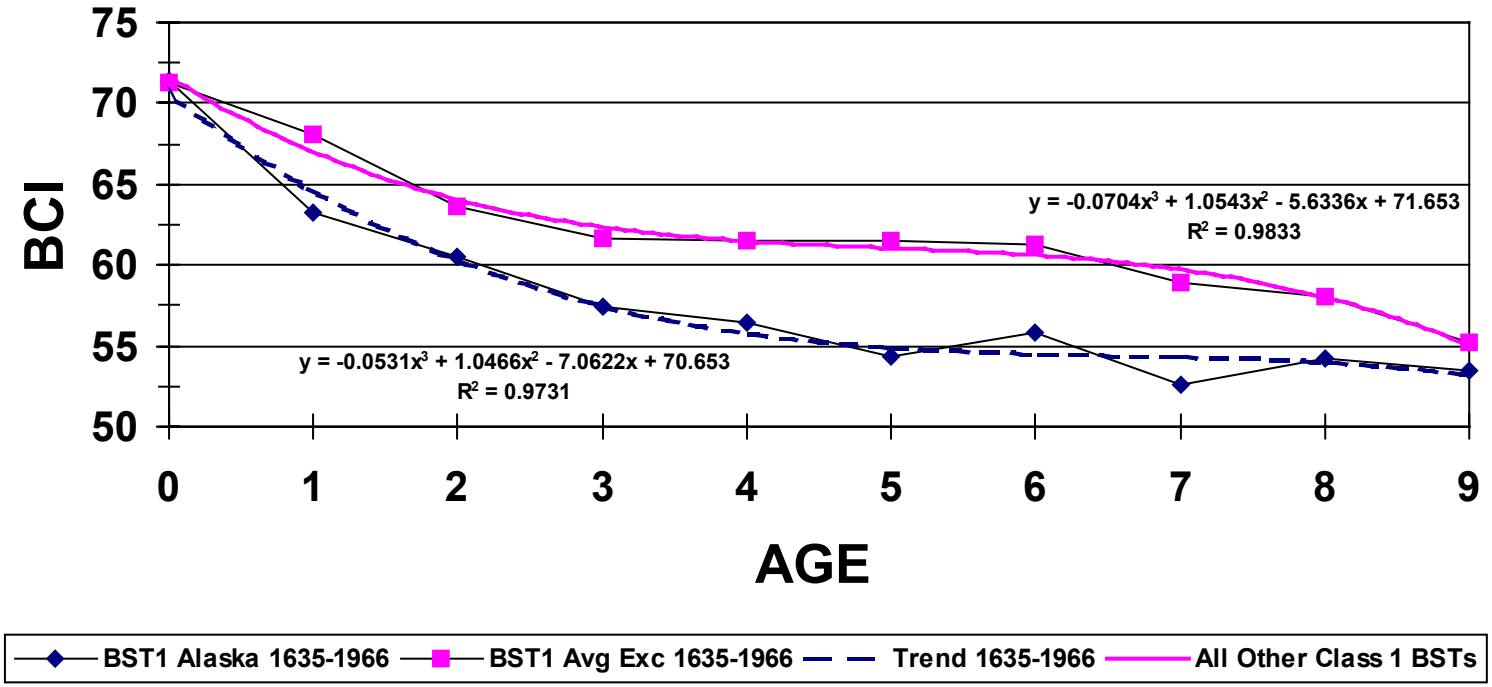


Figure 5 Class 2 BST Performance

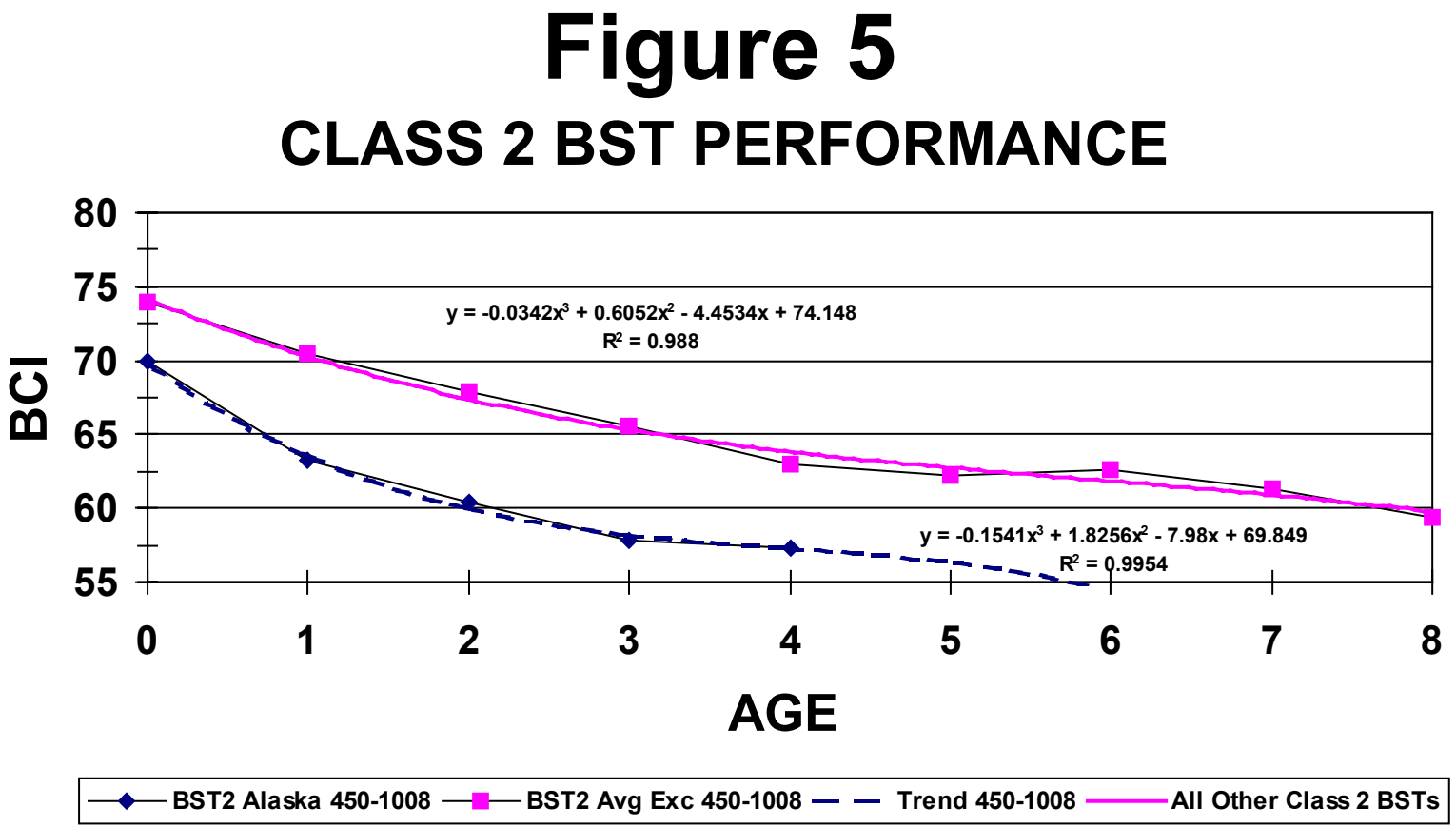


Figure 6 Class 3 BST Performance

Figure 6

CLASS 3 BST PERFORMANCE

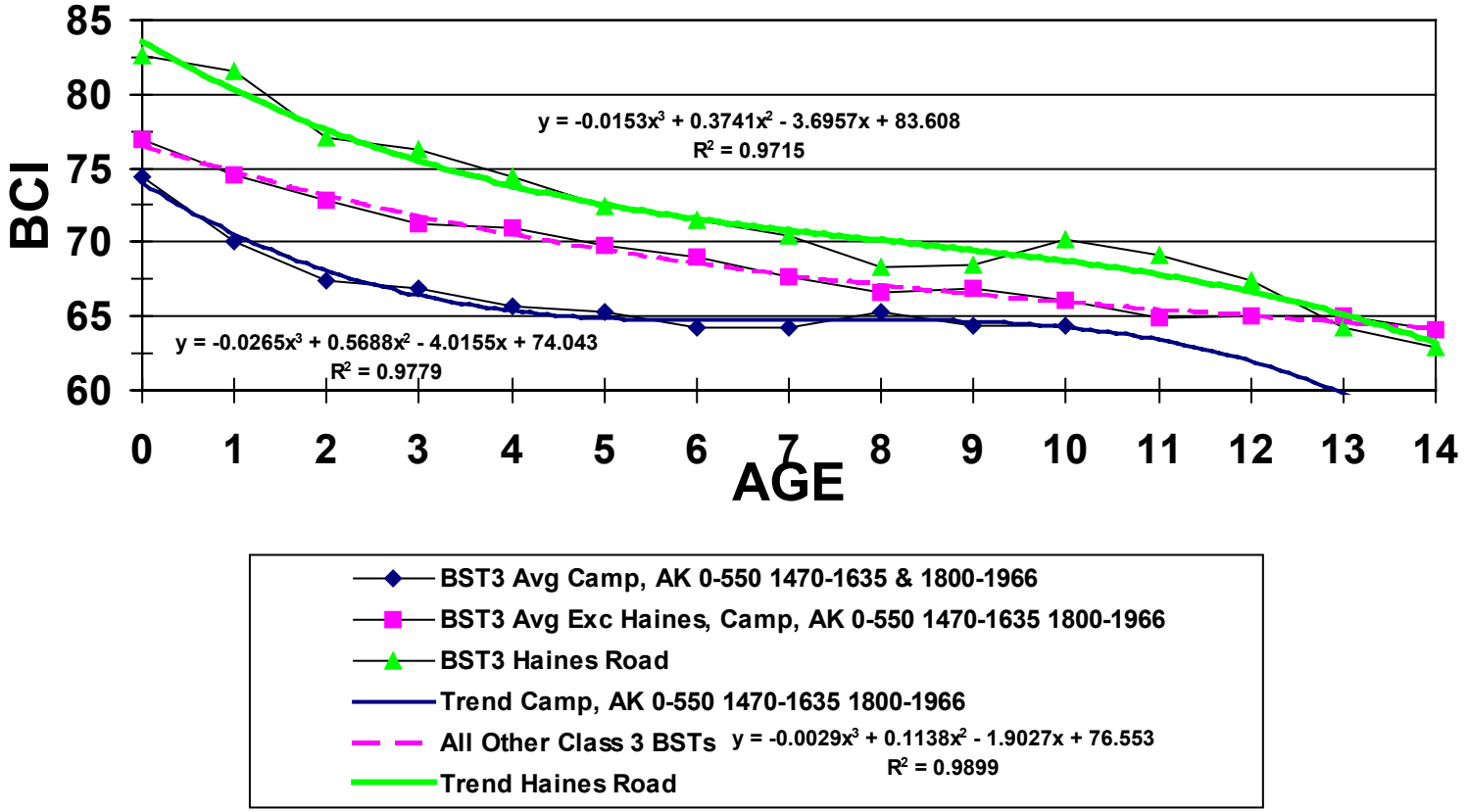


Figure 7 Comparison of BCI C-SHRP Test Sections

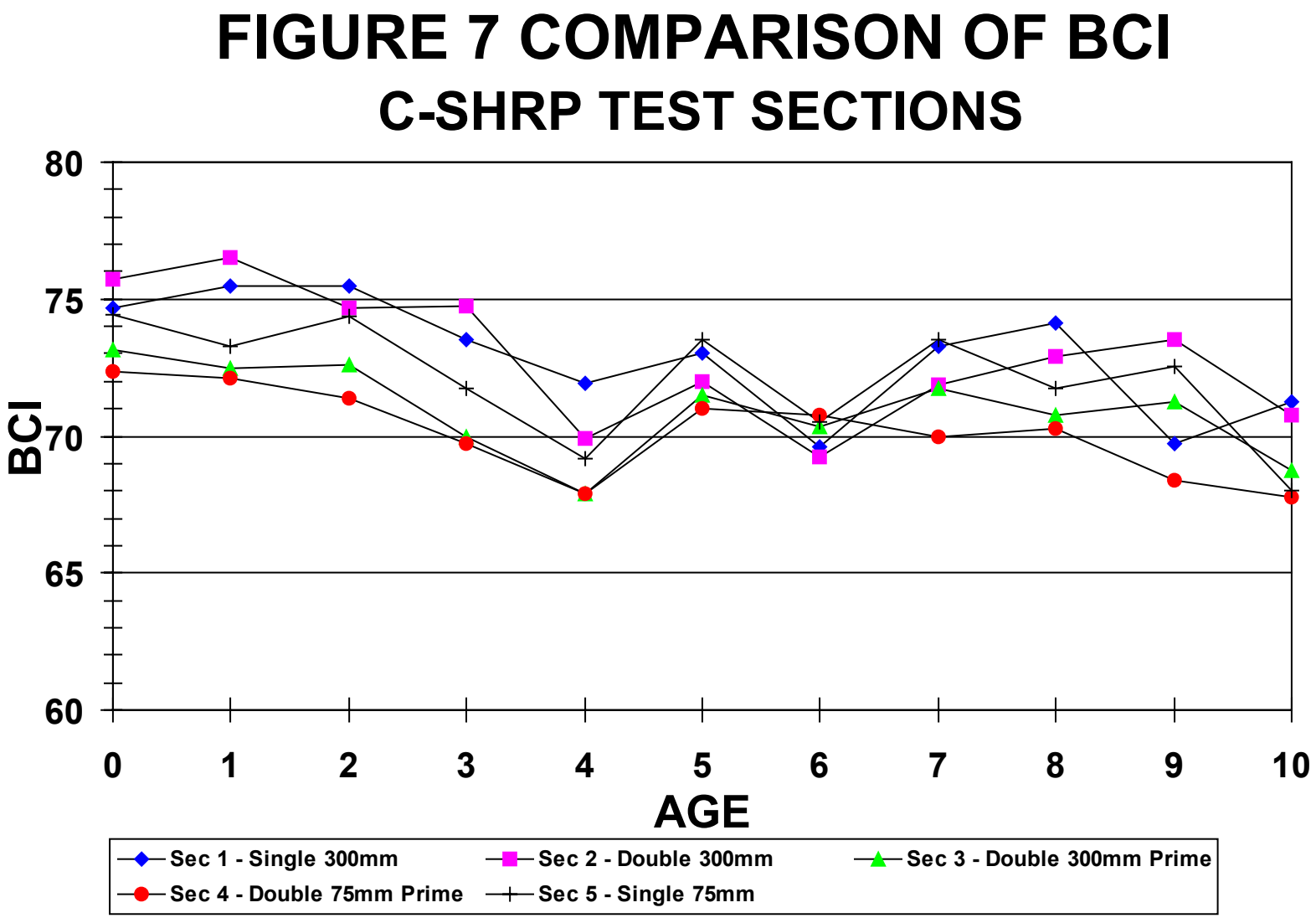


Figure 8 Cracks/100m C-SHRP Test Sections

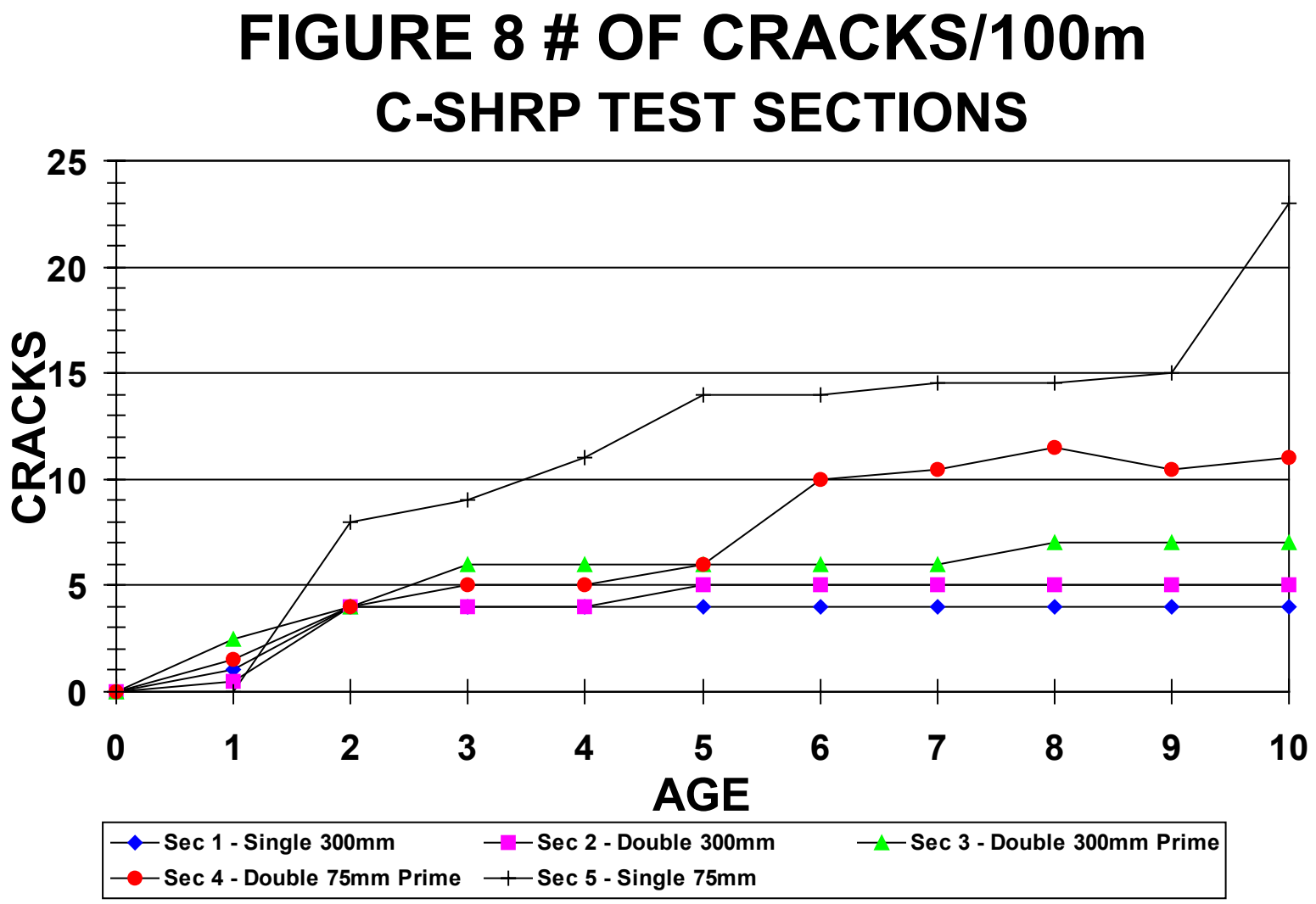


Figure 9 Rutting Performance C-SHRP Test Sections

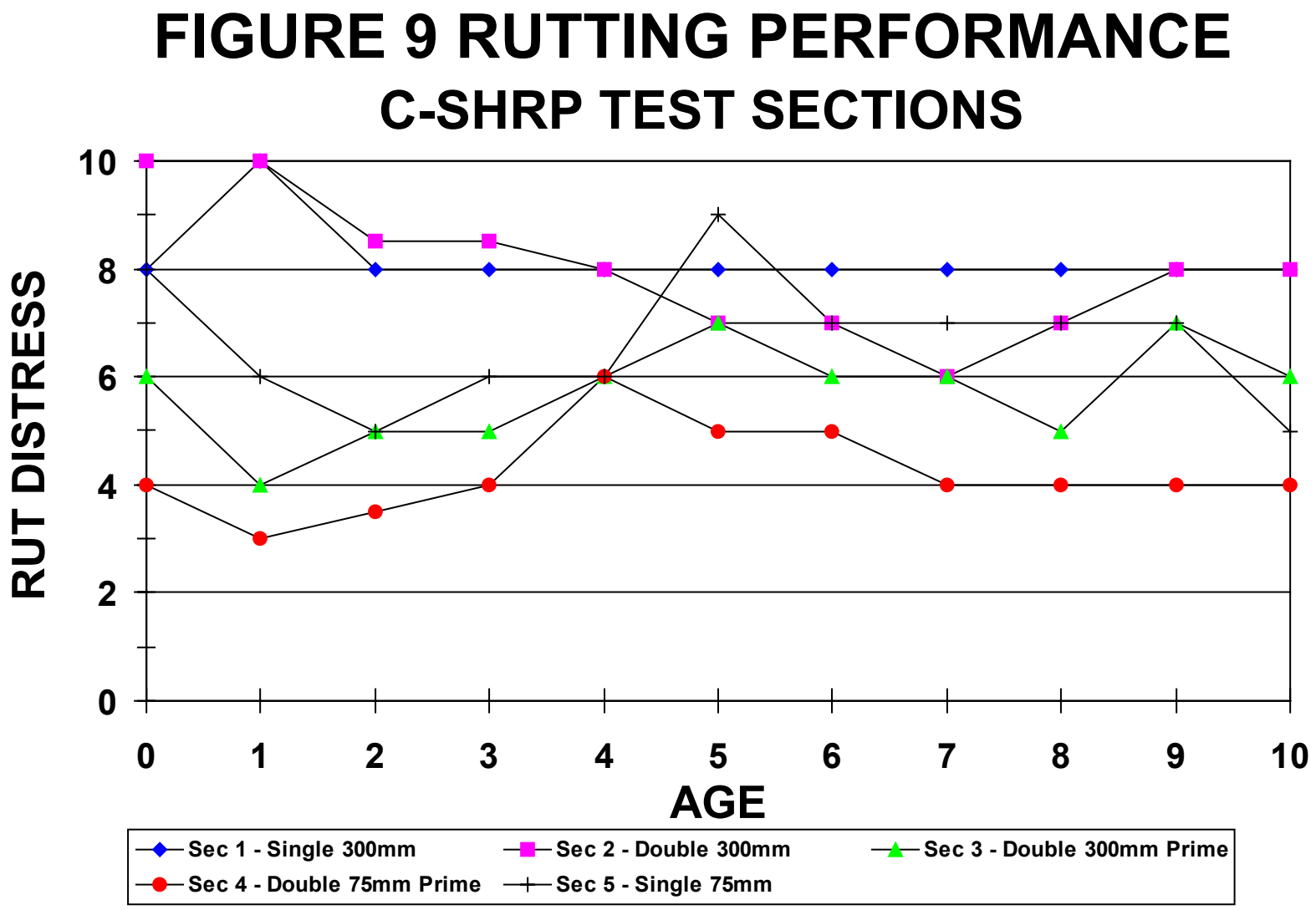


Figure 10 Bleeding Distress C-SHRP Test Sections

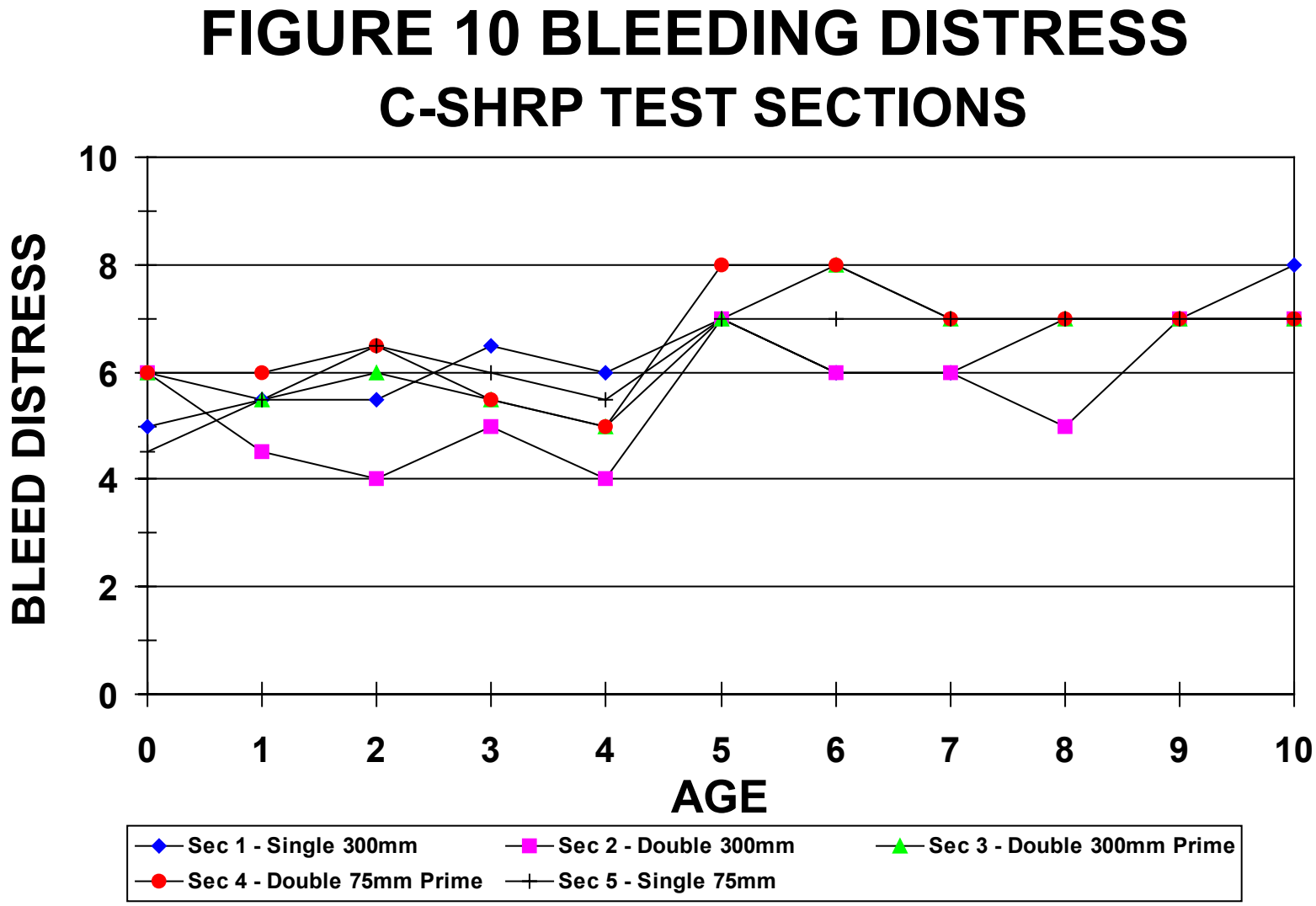


Figure 11 YTG MYOP

FIGURE 11 YTG MYOP

Excludes reconstruction and patch crew sections

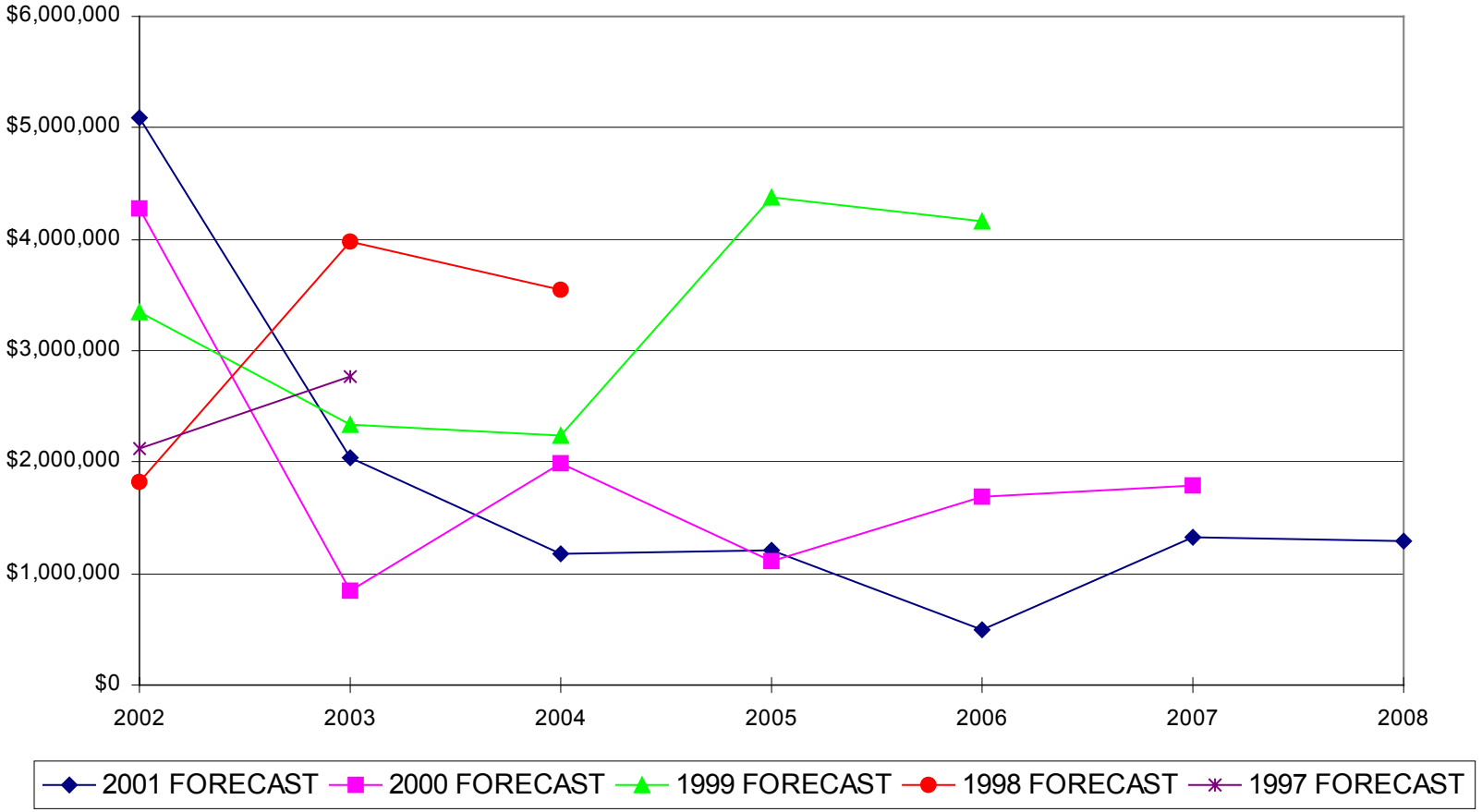


Figure 12 PWGSC MYOP

FIGURE 12 PWGSC MYOP

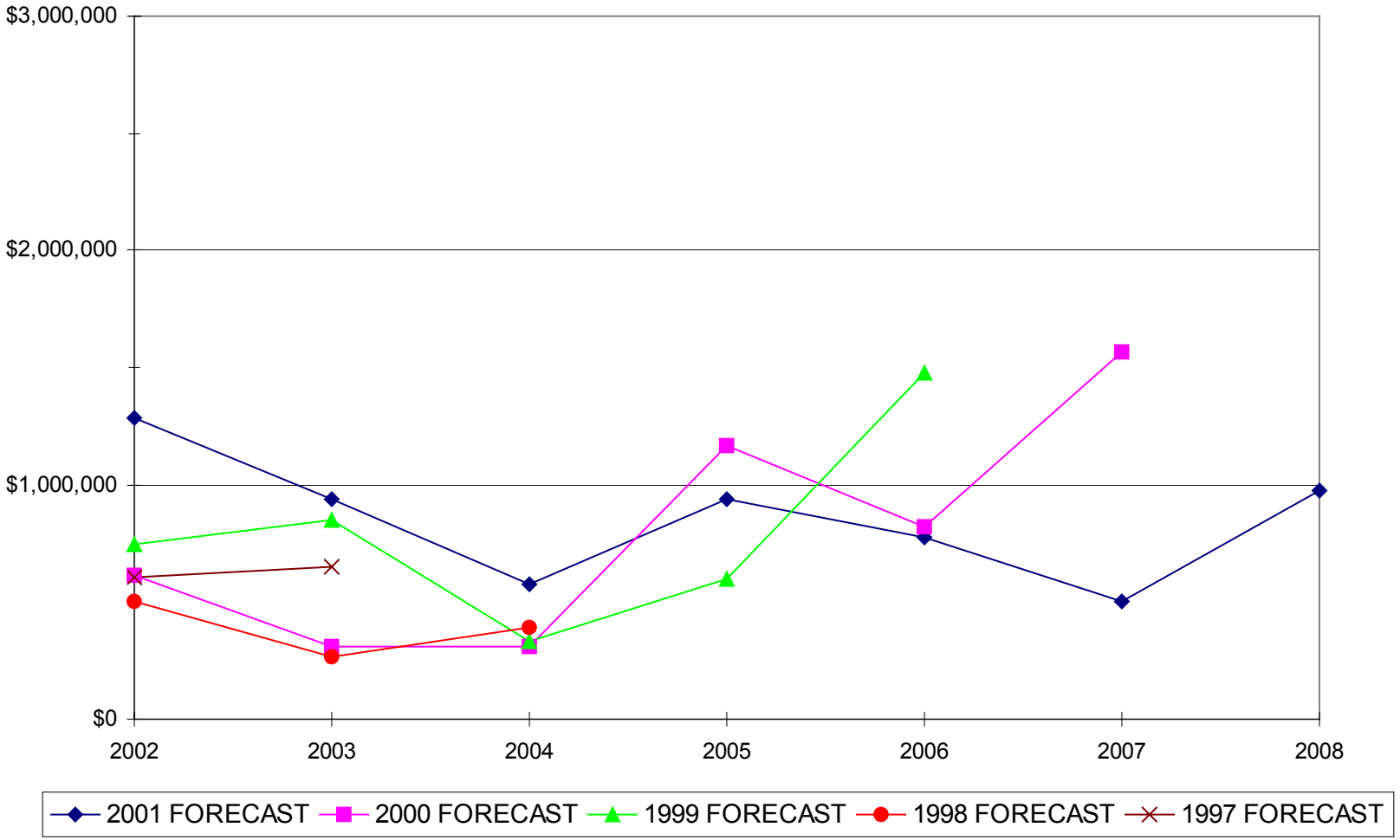


Figure 13 Patching Class 3 BSTs

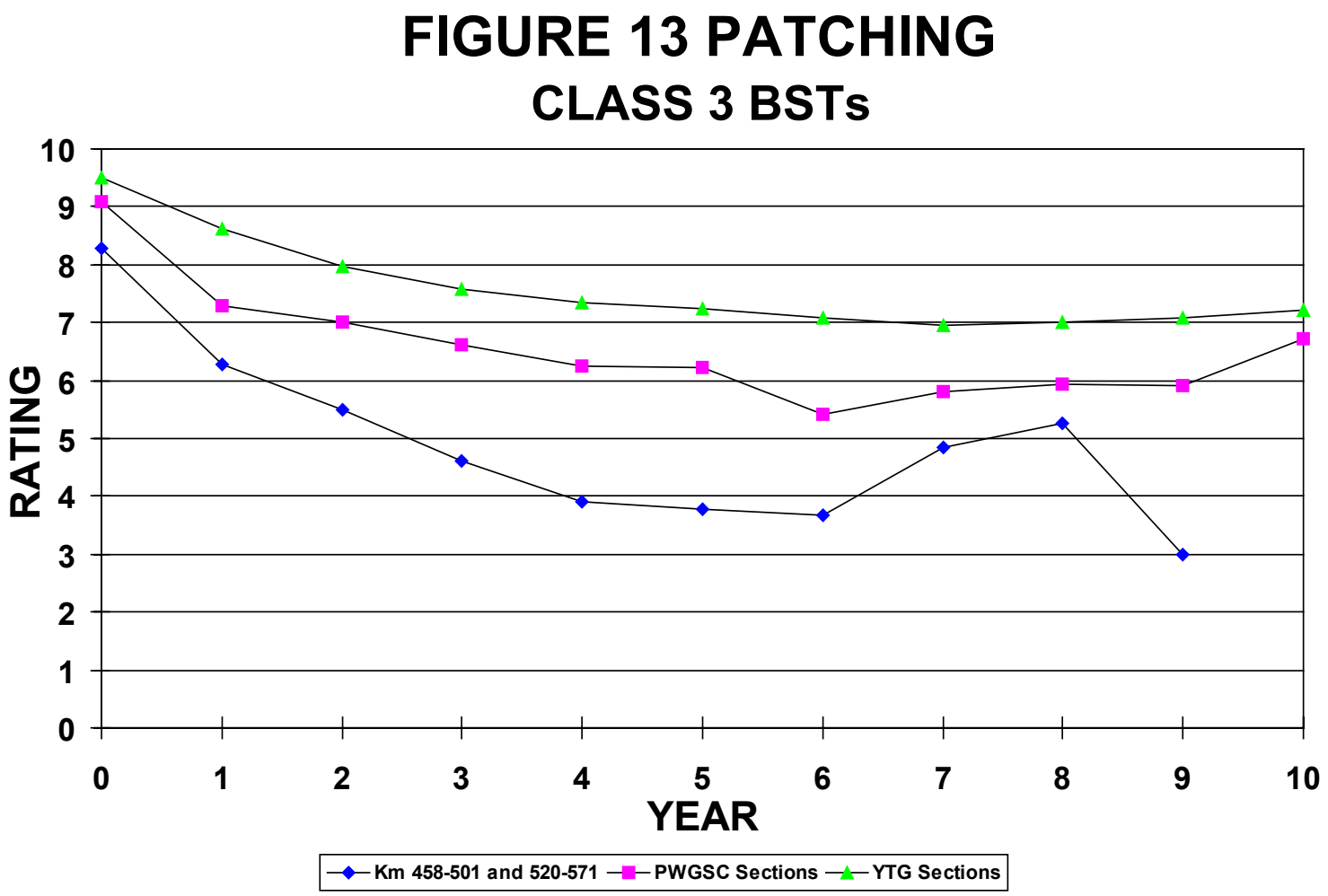


Figure 14 Performance of PWGSC BSTs

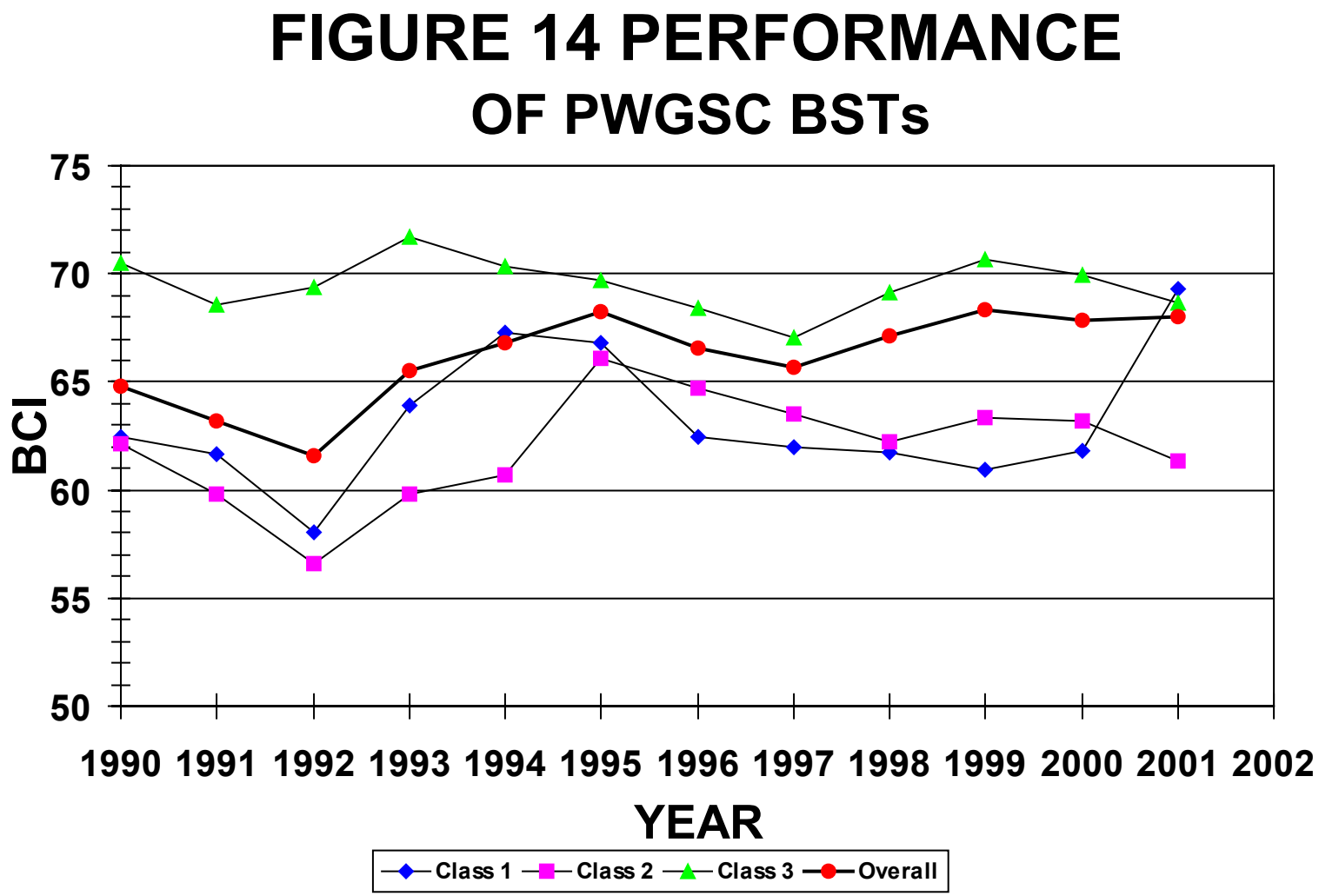


Figure 15 Performance of YTG BSTs

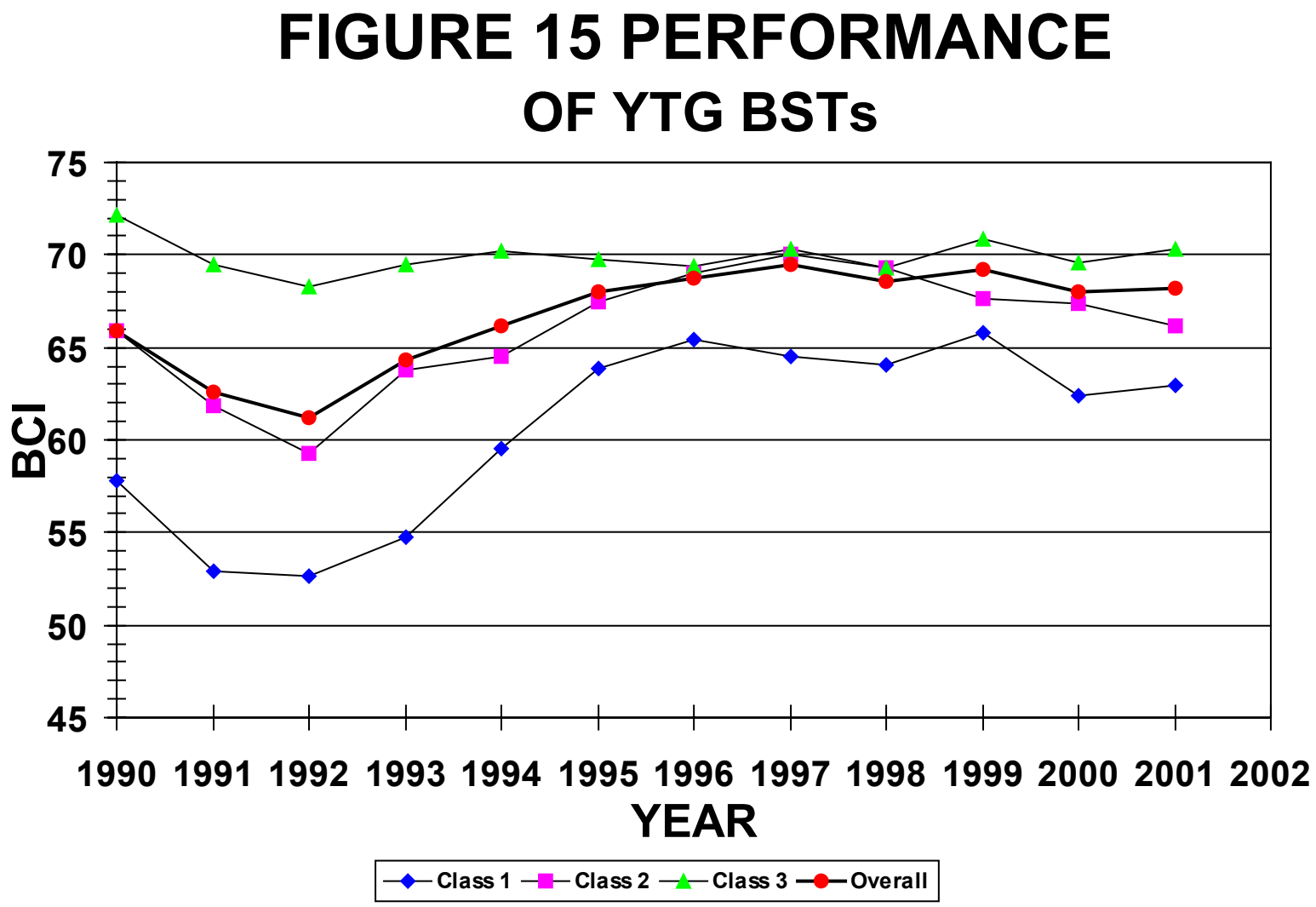


Figure 16 Class 3 Distortions Permafrost vs Non-Permafrost

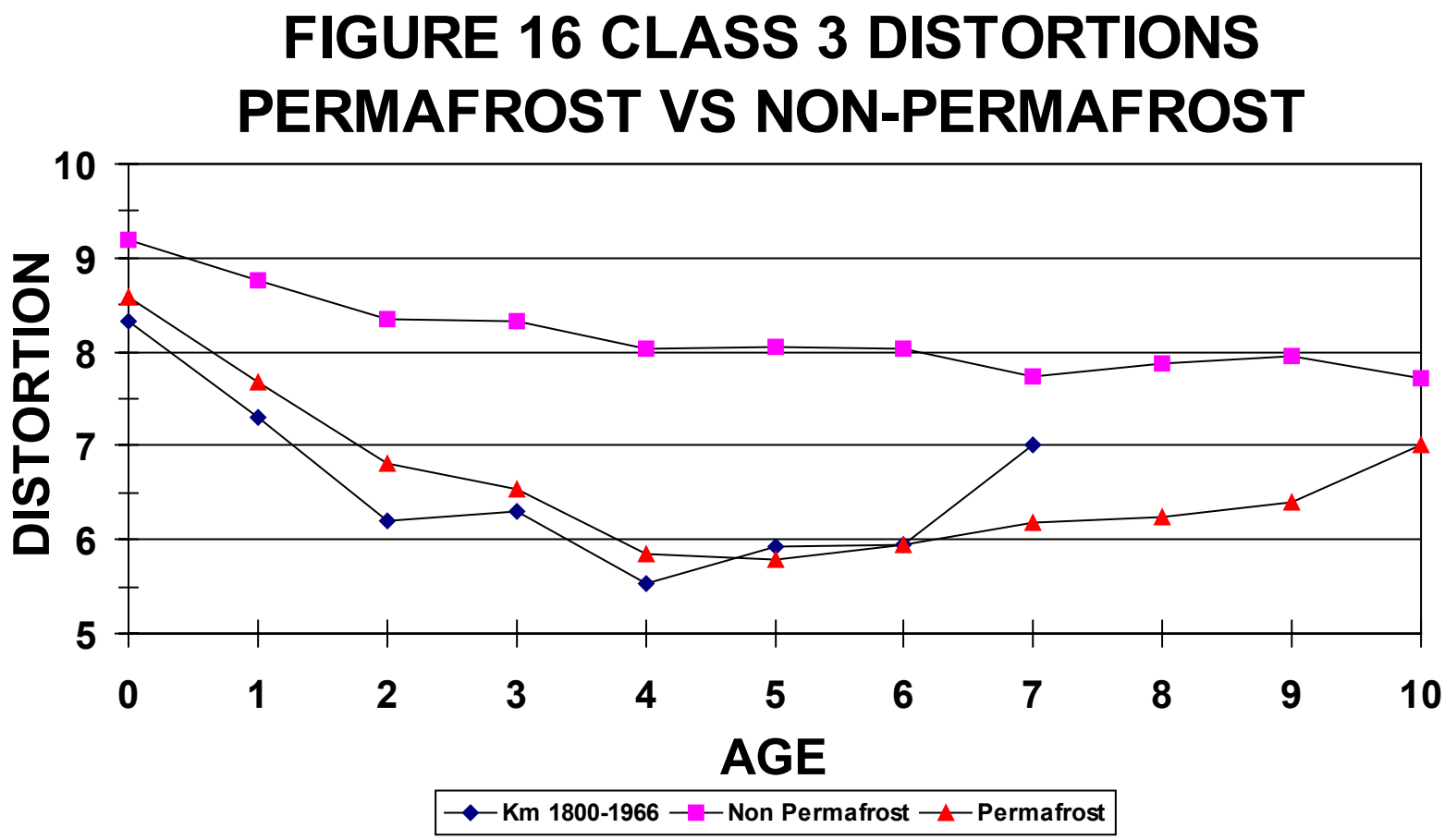


Figure 17 Class 3 RCI Permafrost vs Non-Permafrost

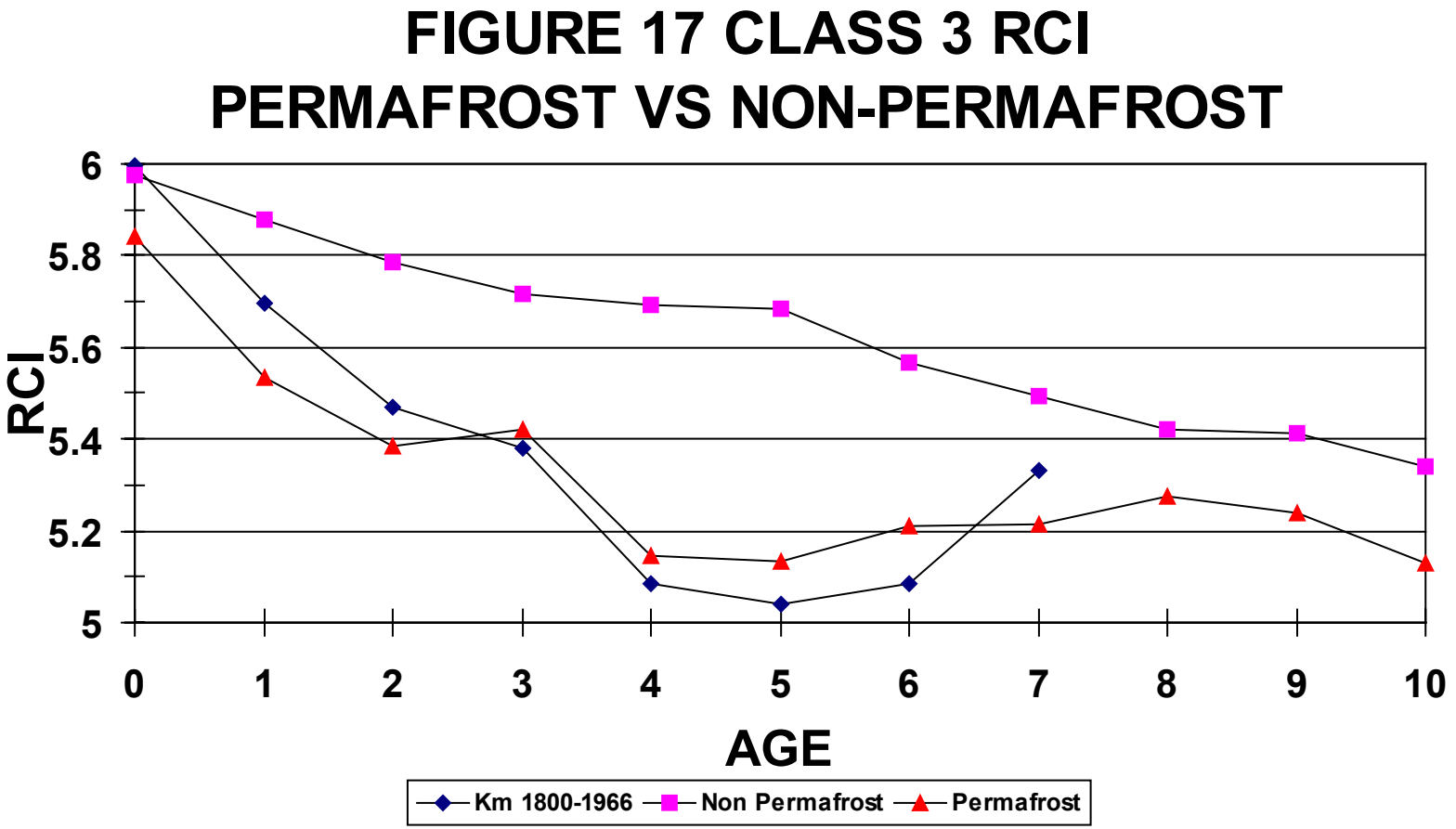


Figure 18 Class 3 BCI Permafrost vs Non-Permafrost

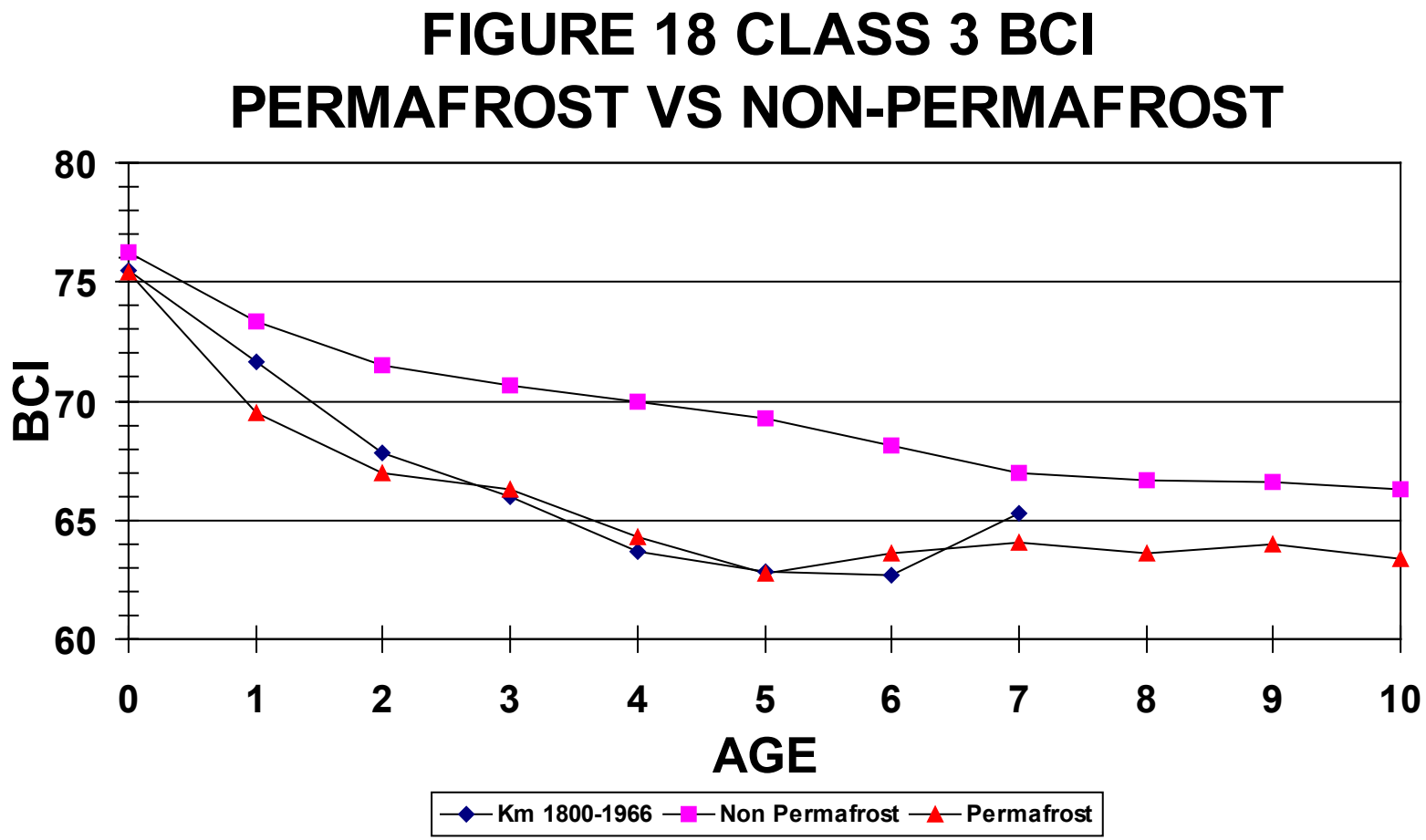


Figure 19 Patching Class 1 and 3 Permafrost Sections

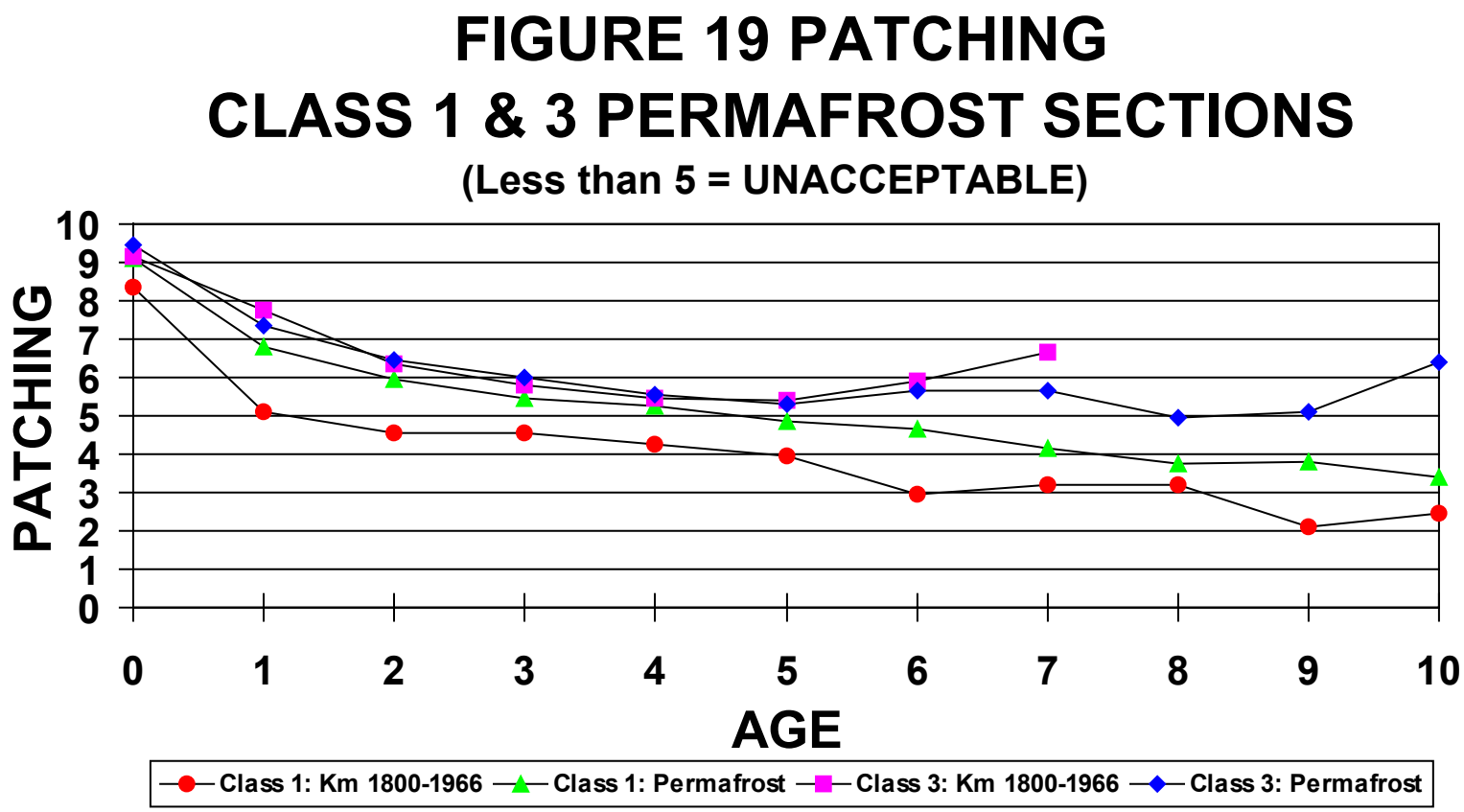


Figure 20 Distortions Class 1 and 3 Permafrost Sections

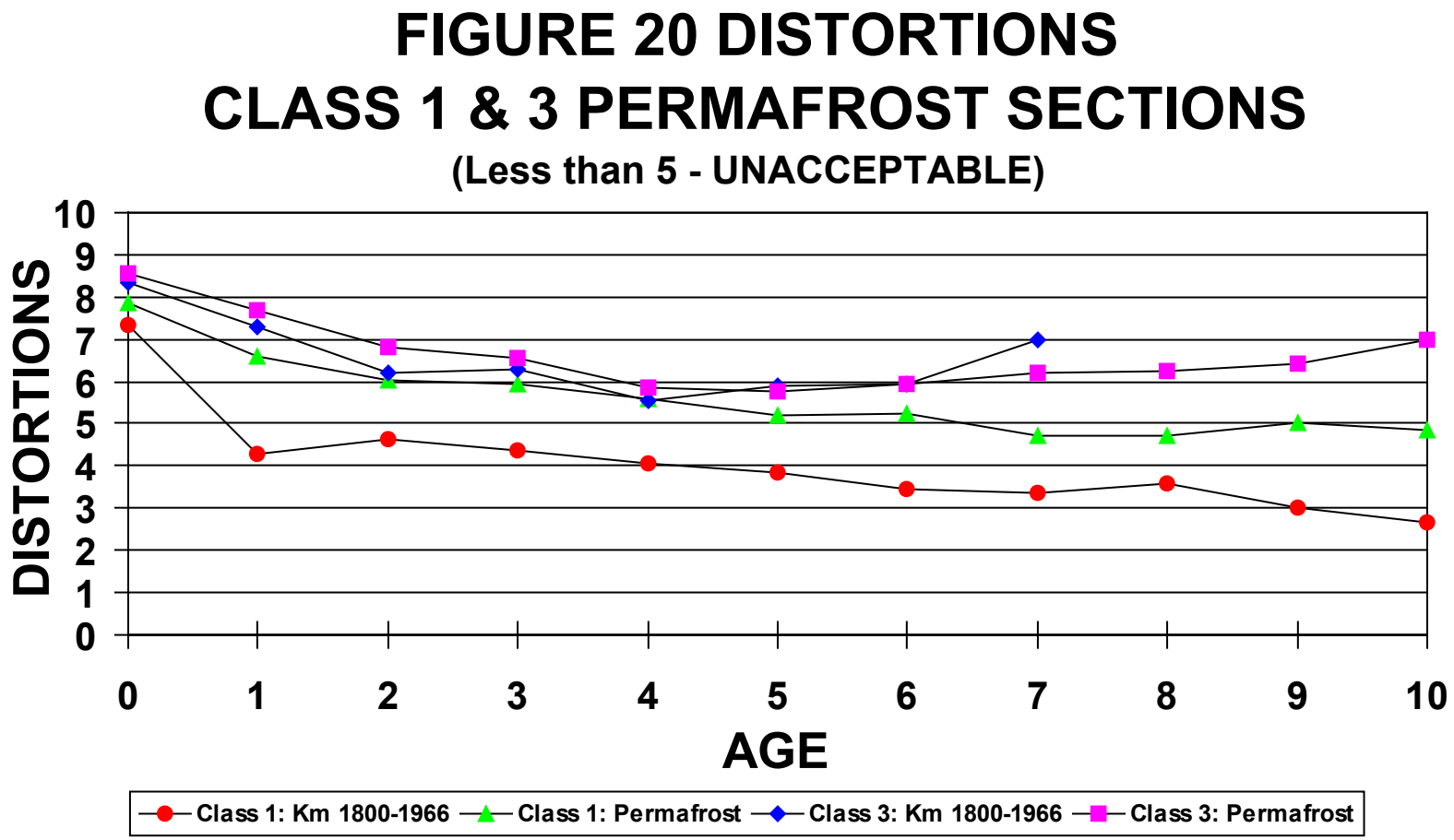


Figure 21 Patching and Distortions Class 1 and 3 Permafrost Sections

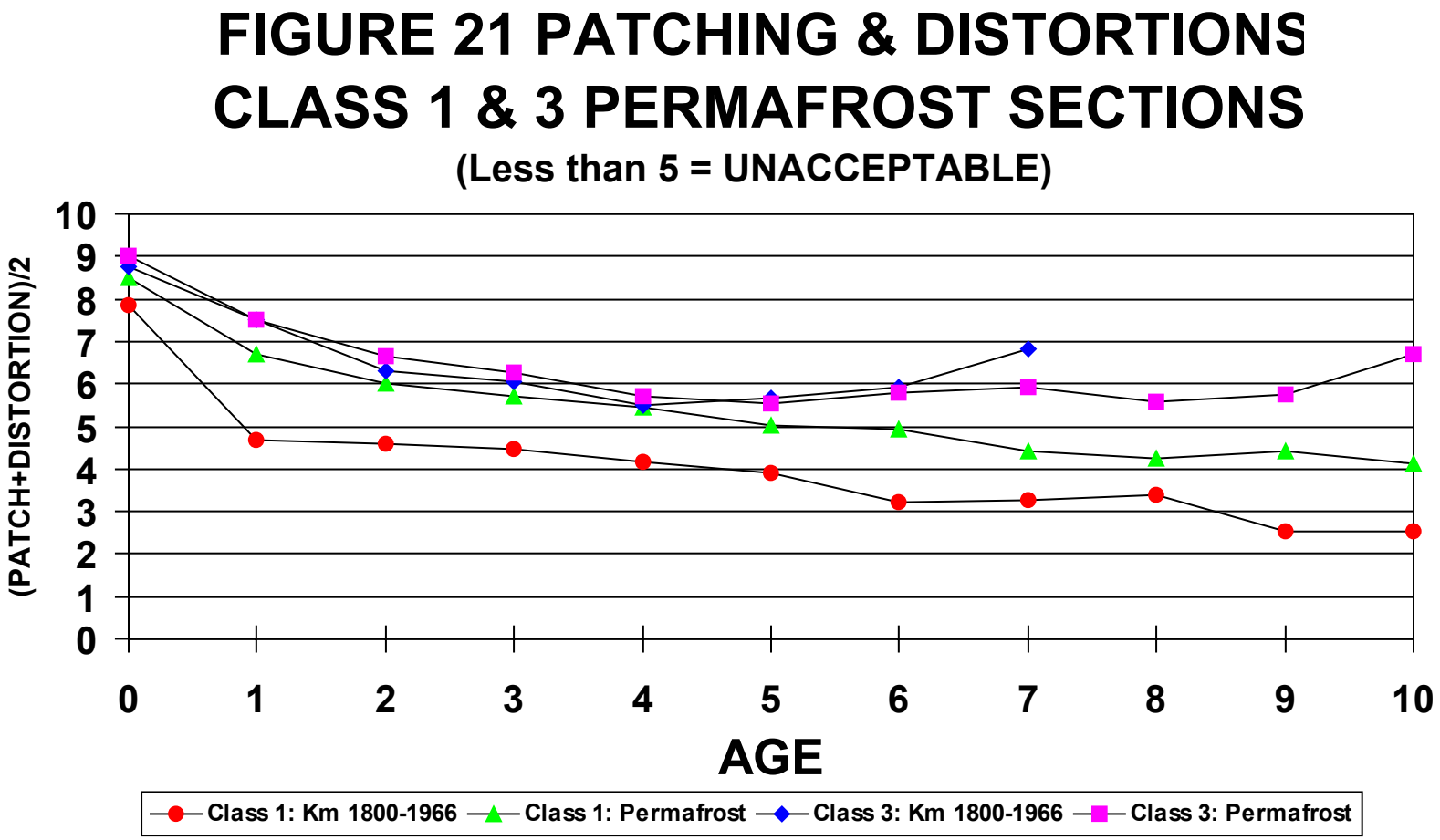


Figure 22 RCI Class 1 and 3 Permafrost Sections

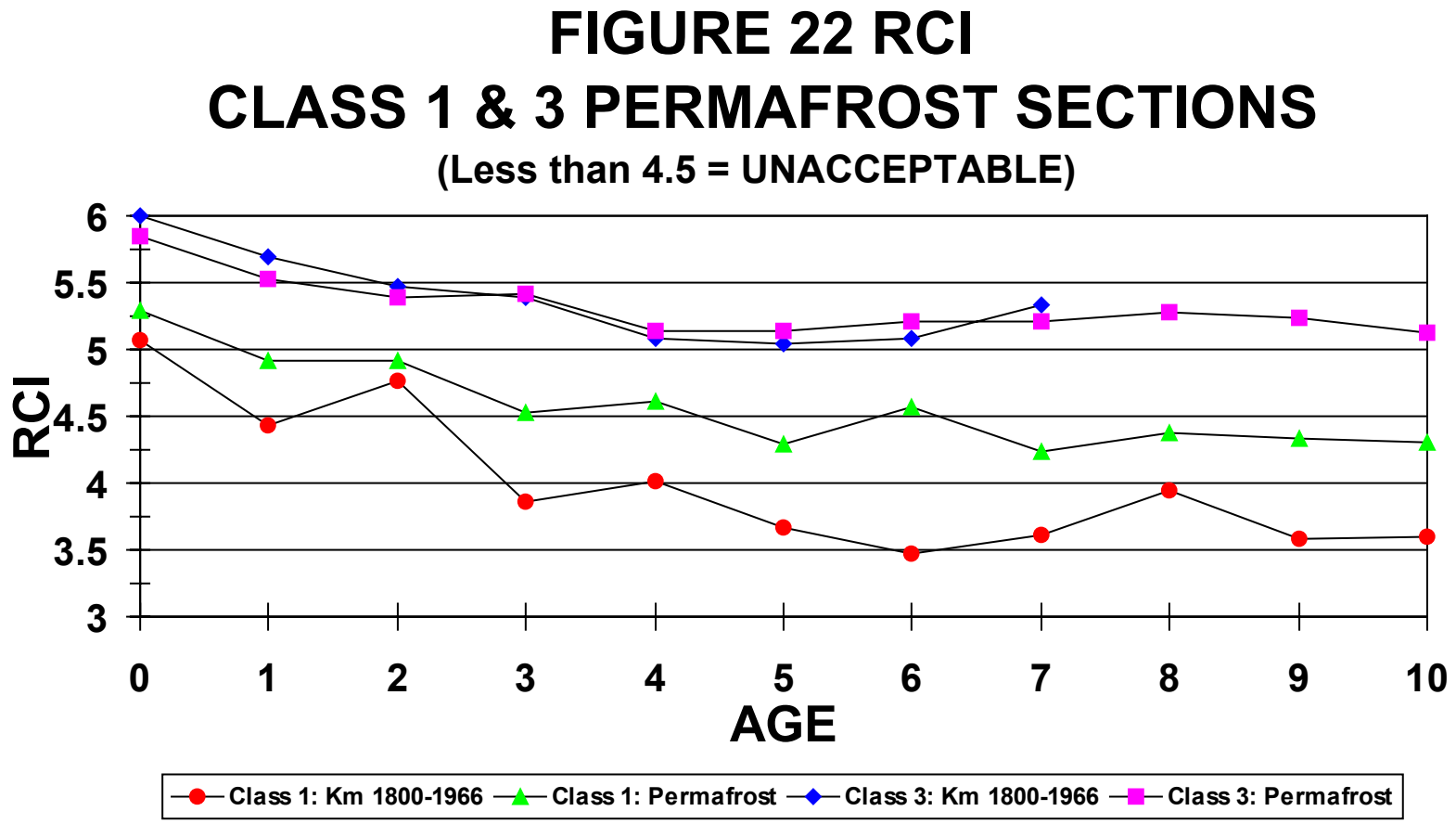


Figure 23 BCI Class 1 and 3 Permafrost Sections

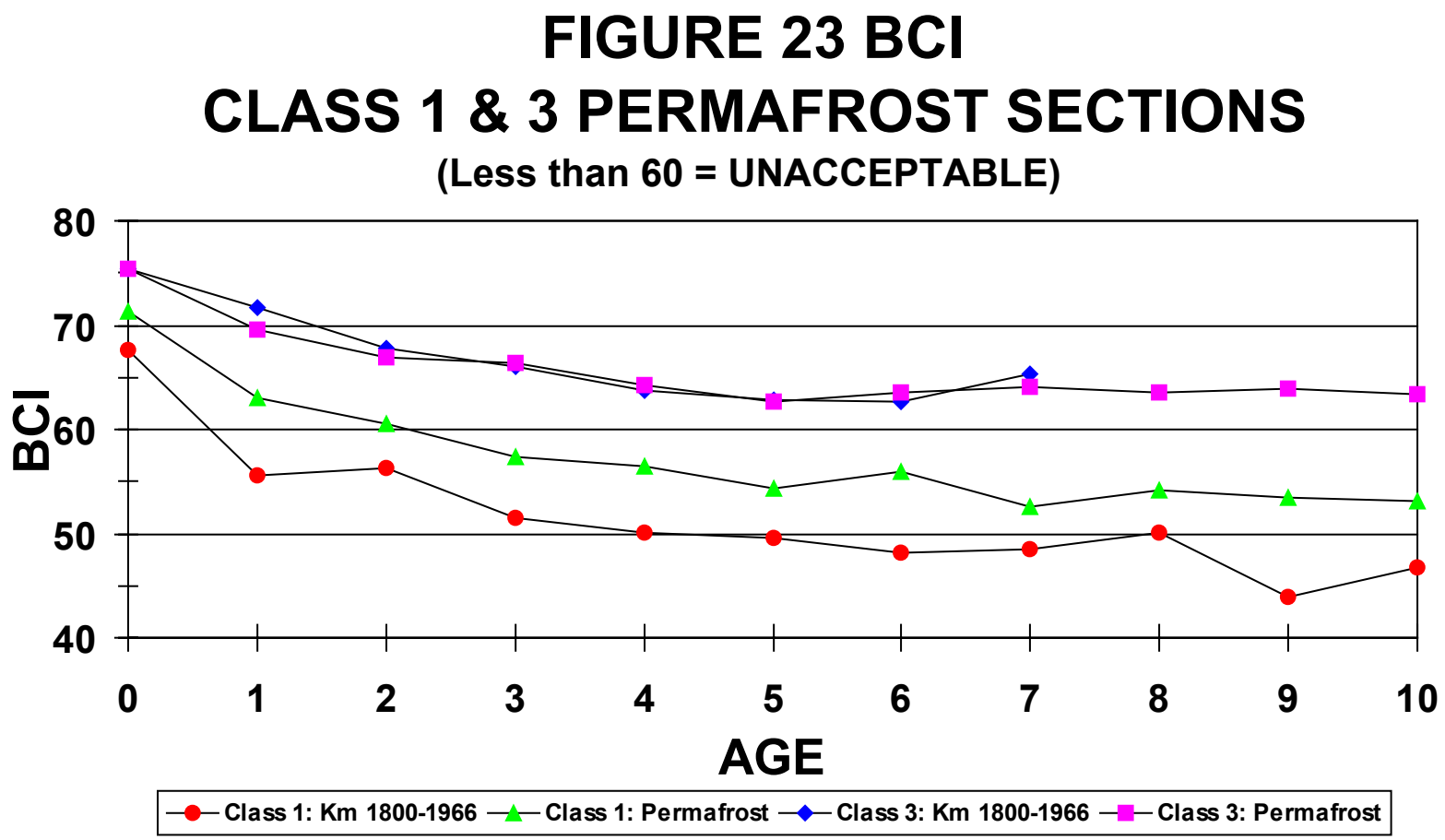


Figure 24 BCI Double Seal Sections

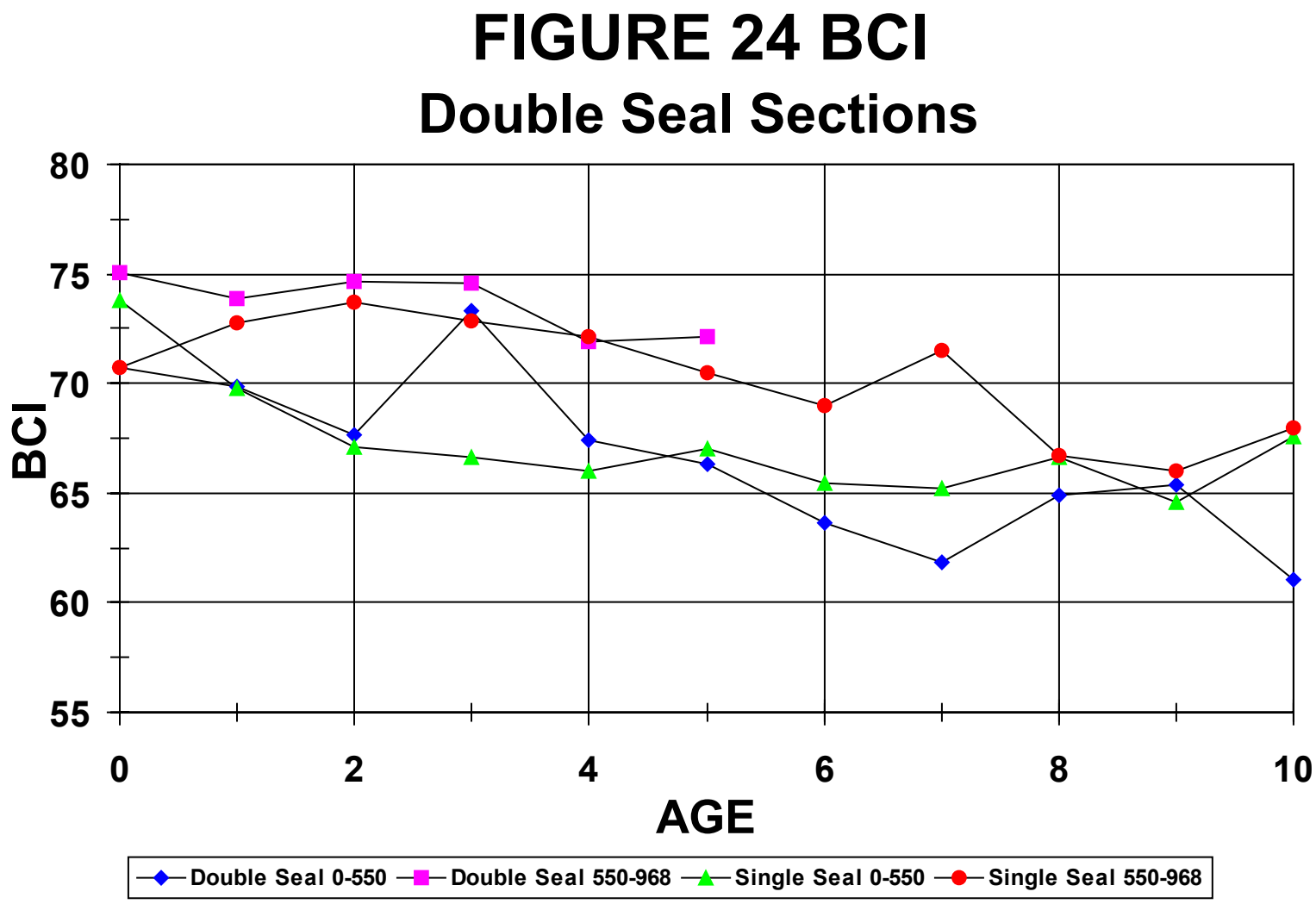
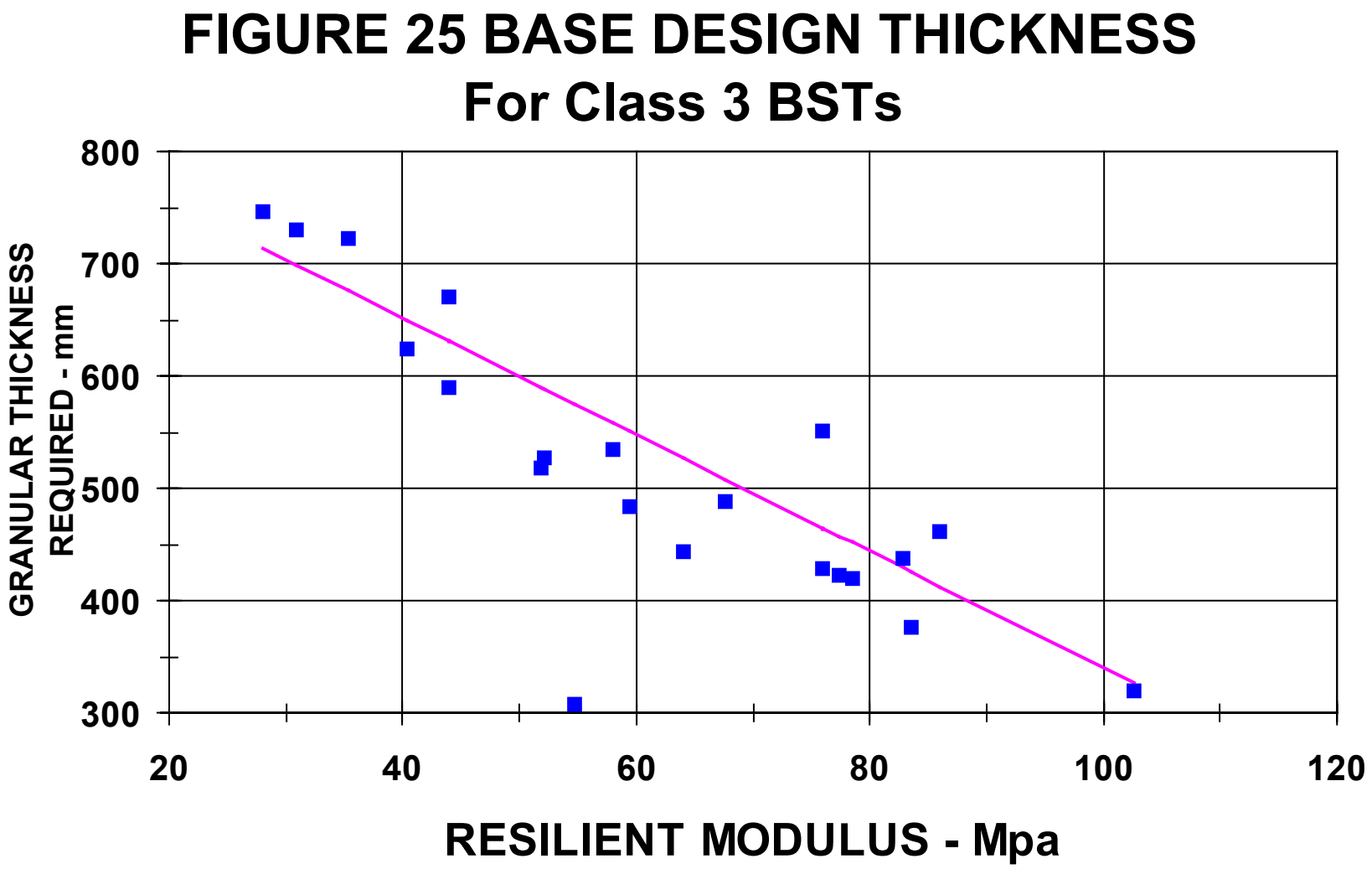


Figure 25 Base Design Thickness for Class 3 BSTs



APPENDIX B BST REPORT TABLES

Table 1
Potential BST Rehabilitation Projects
Based on 2001 Evaluations - PWGSC Sections

Highway	Start	End	Length	Class	Age	Year	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Ride Score	BCI	Action	Comments
Alaska (97)	206.0	208.0	2.0	3	5	2001	8	7	7	10	8	9	8	4	8	6	5.25	64.55	1,	Routine Maintenance-
Alaska (97)	226.0	232.0	6.0	3	7	2001	9	7	6	10	9	9	9	4	8	8	5.5	67.65	1,	Routine Maintenance-
Alaska (97)	232.0	238.5	6.5	3	7	2001	10	6	6	10	5	9	9	8	8	6	5	64.95	9,	Rip Up and ReBST < 2 Years-
Alaska (97)	249.5	251.5	2.0	3	10	2001	9	7	7	9	7	8	6	4	6	7	5.25	63.65	1,	Routine Maintenance-
Alaska (97)	251.5	254.0	2.5	3	5	2001	9	5	7	10	9	9	7	4	6	7	5.25	64.80	1,	Routine Maintenance-
Alaska (97)	265.0	279.0	14.0	3	10	2001	6	6	5	10	5	9	7	5	7	6	5	60.45	9,	Rip Up and ReBST < 2 Years-
Alaska (97)	284.0	290.0	6.0	3	11	2001	9	7	7	9	6	7	7	5	6	6	5.25	62.90	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Alaska (97)	328.0	335.0	7.0	3	4	2001	9	7	6	10	8	6	6	4	6	6	5	61.00	9,	Rip Up and ReBST < 2 Years-
Alaska (97)	335.0	347.0	12.0	3	4	2001	9	8	8	10	9	9	7	7	5	6	5.25	67.70	1,7,	Routine Maintenance-ReBST < 2 Years-
Alaska (97)	357.0	359.0	2.0	3	3	2001	9	9	9	9	9	9	9	4	10	7	5	66.45	1,	Routine Maintenance-
Alaska (97)	458.0	468.0	10.0	3	9	2001	9	5	7	10	8	6	6	3	6	7	5.25	61.85	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Alaska (97)	468.0	475.0	7.0	3	7	2001	9	7	6	10	9	8	8	3	8	8	5.25	65.00	1,	Routine Maintenance-
Alaska (97)	475.0	480.0	5.0	3	9	2001	9	8	6	10	6	8	8	3	7	8	5.25	64.75	1,	Routine Maintenance-
Alaska (97)	480.0	482.7	2.7	3	8	2001	9	8	8	8	7	8	8	3	6	7	5.25	63.90	1,	Routine Maintenance-
Alaska (97)	495.0	501.2	6.2	3	6	2001	9	7	7	8	7	7	8	3	5	8	5	62.10	9,	Rip Up and ReBST < 2 Years-
Alaska (97)	516.2	520.0	3.8	2	7	2001	10	9	10	10	10	8	10	8	8	9	4.75	69.40	1,	Routine Maintenance-
Alaska (97)	533.0	540.0	7.0	3	3	2001	8	7	8	4	8	6	8	7	5	6	5	59.00	5,	Deep Patch-
Alaska (97)	540.0	548.0	8.0	3	2	2001	9	8	4	3	7	6	3	8	3	6	4.5	53.75	5,	Deep Patch-
Alaska (97)	556.0	571.5	15.5	1	7	2001	6	6	6	8	6	4	8	2	5	6	5	55.20	13,	Reconstruct-
Alaska (97)	641.0	654.0	13.0	1	7	2001	9	6	7	9	8	7	7	2	3	7	5	60.75	9,13,	Rip Up and ReBST < 2 Years-Reconstruct-
Alaska (97)	654.0	665.0	11.0	1	7	2001	9	6	7	9	6	8	8	4	3	7	4.75	60.90	1,9,13,	Routine Maintenance-Rip Up and ReBST < 2 Years-Reconstruct-
Alaska (97)	665.0	679.0	14.0	1	6	2001	8	7	7	9	7	8	5	2	3	8	4.75	60.00	1,9,13,	Routine Maintenance-Rip Up and ReBST < 2 Years-Reconstruct-
Alaska (97)	679.0	690.0	11.0	3	6	2001	7	8	8	8	6	6	5	3	5	8	5.25	61.20	1,	Routine Maintenance-
Alaska (97)	690.0	698.0	8.0	2	6	2001	6	7	7	10	7	6	6	2	3	9	5.25	61.80	1,	Routine Maintenance-
Alaska (97)	698.0	711.7	13.7	2	6	2001	4	8	8	8	6	7	5	4	5	9	5.25	61.45	1,	Routine Maintenance-
Alaska (97)	737.5	750.0	12.5	2	6	2001	9	7	7	9	8	8	5	3	4	9	4.75	61.85	1,13,	Routine Maintenance-Reconstruct-
Alaska (97)	762.0	770.0	8.0	2	9	2001	9	7	7	9	5	8	8	2	2	8	4.75	60.75	1,13,	Routine Maintenance-Reconstruct-
Alaska (97)	770.0	774.0	4.0	2	9	2001	9	7	8	9	5	8	8	2	2	8	4.75	61.25	1,	Routine Maintenance-
Alaska (97)	823.0	825.0	2.0	3	1	2001	6	8	8	9	6	6	5	5	4	7	5.3	61.60	1,	Routine Maintenance-
Alaska (97)	825.0	830.0	5.0	2	7	2001	8	7	6	4	5	4	5	3	4	6	4.5	50.70	13,	Reconstruct-
Alaska (97)	830.0	839.5	9.5	2	7	2001	8	6	5	4	4	5	5	3	3	5	4.5	49.45	13,	Reconstruct-
Alaska (97)	855.0	865.0	10.0	3	6	2001	9	9	8	10	10	8	7	4	4	8	5.25	67.50	1,	Routine Maintenance-
Alaska (97)	962.4	968.0	5.6	3	4	2001	9	6	5	8	7	7	7	7	7	7	5	61.75	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-

Table 2
Potential BST Rehabilitation Projects
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Length	Class	Age	Year	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Ride Score	BCI	Action	Comments
Alaska	1163.0	1170.0	7.0	3	7	2001	4	8	9	10	8	8	7	6	10	8	5.75	68.50	1,	Routine Maintenance-
Alaska	1170.0	1180.0	10.0	3	5	2001	4	7	8	10	8	8	7	4	5	8	5.5	65.25	1,	Routine Maintenance-
Alaska	1190.0	1192.0	2.0	3	7	2001	6	7	8	7	8	8	7	4	7	6	5	59.80	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Alaska	1201.0	1209.0	8.0	3	10	2001	4	7	8	9	6	8	7	5	7	7	5.5	63.60	1,	Routine Maintenance-
Alaska	1218.0	1222.0	4.0	3	11	2001	5	8	8	10	6	8	7	6	8	7	5.25	64.40	1,8,	Routine Maintenance-ReBST < 3 Years-
Alaska	1273.0	1279.5	6.5	3	9	2001	7	8	8	10	4	8	7	8	9	8	5.5	68.25	1,	Routine Maintenance-
Alaska	1292.0	1300.0	8.0	3	18	2001	7	7	8	10	4	8	7	6	8	6	5	63.05	1,3,	Routine Maintenance-Correct Depressions and Long Patching-
Alaska	1506.0	1510.0	4.0	3	5	2001	9	7	8	10	9	7	8	3	5	3	4.5	58.60	1,3,	Routine Maintenance-Correct Depressions and Long Patching-
Alaska	1510.0	1516.0	6.0	3	4	2001	9	7	8	10	9	7	8	4	7	5	5	62.80	1,	Routine Maintenance-
Alaska	1516.0	1518.0	2.0	3	8	2001	9	8	7	10	8	9	7	4	10	8	5.5	67.90	1,	Routine Maintenance-
Alaska	1520.0	1522.5	2.5	3	4	2001	8	7	8	10	7	8	9	3	6	7	5.25	64.65	1,	Routine Maintenance-
Alaska	1544.0	1558.0	14.0	3	5	2001	7	7	7	10	9	8	8	6	9	4	5	62.35	1,	Routine Maintenance-
Alaska	1558.0	1570.0	12.0	1	19	2001	7	5	4	6	8	4	5	2	8	5	4.75	50.60	1,	Routine Maintenance-
Alaska	1574.0	1580.0	6.0	1	7	2001	7	7	4	9	6	6	6	6	7	6	4.75	57.65	9,13,	Rip Up and ReBST < 2 Years-Reconstruct-
Alaska	1604.0	1615.0	11.0	1	5	2001	4	7	7	9	8	6	6	7	8	8	5.25	61.90	9,11,	Rip Up and ReBST < 2 Years-Hot Mix Overlay-
Alaska	1620.0	1628.0	8.0	1	6	2001	3	7	8	9	9	5	8	6	8	8	5.25	62.30	7,	ReBST < 2 Years-
Alaska	1675.0	1680.0	5.0	1	16	2001	7	7	4	7	7	6	3	3	3	6	4.5	52.75	13,	Reconstruct-
Alaska	1680.0	1684.0	4.0	1	7	2001	8	6	7	8	8	6	7	6	8	7	4.75	59.45	13,	Reconstruct-
Alaska	1698.0	1704.4	6.4	1	7	2001	8	5	7	8	7	8	7	6	10	8	5.5	64.65	1,13,	Routine Maintenance-Reconstruct-
Alaska	1704.4	1706.7	2.3	1	20	2001	9	4	7	9	6	9	6	8	10	10	5.25	66.85	1,13,	Routine Maintenance-Reconstruct-
Alaska	1706.7	1708.0	1.3	1	13	2001	7	7	8	10	7	7	7	7	9	9	5.25	66.70	1,13,	Routine Maintenance-Reconstruct-
Alaska	1708.0	1713.7	5.7	1	4	2001	8	7	8	9	8	7	8	8	10	9	5.25	67.45	1,13,	Routine Maintenance-Reconstruct-
Alaska	1713.7	1718.0	4.3	1	5	2001	9	6	7	9	8	7	7	7	10	8	5.25	64.50	1,13,	Routine Maintenance-Reconstruct-
Alaska	1718.0	1726.0	8.0	1	4	2001	9	6	7	9	8	7	7	6	8	8	5	62.55	1,13,	Routine Maintenance-Reconstruct-
Alaska	1726.0	1734.0	8.0	1	7	2001	7	5	6	4	5	5	5	2	3	6	4.25	47.30	9,13,	Rip Up and ReBST < 2 Years-Reconstruct-
Alaska	1734.0	1743.0	9.0	1	6	2001	9	7	6	7	7	7	8	6	7	6	5	60.45	1,13,	Routine Maintenance-Reconstruct-
Alaska	1743.0	1754.0	11.0	1	6	2001	8	8	7	8	8	7	8	6	7	5	4.75	60.30	1,13,	Routine Maintenance-Reconstruct-
Alaska	1754.0	1758.0	4.0	1	6	2001	6	7	7	8	7	7	6	5	6	7	5	59.70	1,13,	Routine Maintenance-Reconstruct-
Alaska	1768.0	1773.0	5.0	1	7	2001	7	7	8	9	7	6	7	6	9	6	4.75	59.60	1,13,	Routine Maintenance-Reconstruct-
Alaska	1773.0	1780.0	7.0	1	5	2001	5	7	7	8	8	7	7	6	8	5	4.5	56.80	1,13,	Routine Maintenance-Reconstruct-
Alaska	1780.0	1787.5	7.5	1	5	2001	6	7	8	8	7	7	6	5	7	5	4.5	56.60	1,13,	Routine Maintenance-Reconstruct-
Alaska	1831.0	1845.0	14.0	3	4	2001	6	9	8	10	8	9	5	5	7	4	4.75	61.10	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Alaska	1852.0	1862.0	10.0	3	4	2001	8	8	8	10	7	7	5	5	5	4	4.75	60.20	1,3,	Routine Maintenance-Correct Depressions and Long Patching-
Alaska	1867.8	1871.4	3.6	3	3	2001	4	9	8	10	7	6	7	7	8	8	5.75	66.20	1,	Routine Maintenance-

Table 2
Potential BST Rehabilitation Projects
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Length	Class	Age	Year	Ravel	Bleed	Ruts	Subgrade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Ride Score	BCI	Action	Comments
Alaska	1871.4	1873.0	1.6	3	6	2001	8	7	8	9	9	8	6	4	4	3	4.25	57.25	3,	Correct Depressions and Long Patching-
Alaska	1881.0	1886.8	5.8	3	4	2001	7	7	8	10	6	5	5	4	5	5	4.5	56.50	3,	Correct Depressions and Long Patching-
Alaska	1893.0	1905.0	12.0	3	5	2001	8	8	8	10	8	4	4	2	5	4	4.5	55.00	3,	Correct Depressions and Long Patching-
Alaska	1905.0	1914.0	9.0	3	5	2001	8	8	8	10	7	6	7	3	4	4	4.75	59.35	3,	Correct Depressions and Long Patching-
Alaska	1921.0	1932.0	11.0	3	6	2001	8	8	8	10	7	6	5	6	0	5	5.25	63.15	3,	Correct Depressions and Long Patching-
Alaska	1942.5	1949.0	6.5	3	7	2001	6	7	8	10	6	6	7	2	5	3	4.25	53.55	9,	Rip Up and ReBST < 2 Years-
Alaska	1949.0	1960.0	11.0	3	5	2001	7	8	8	10	6	5	4	4	4	3	4.25	53.95	9,	Rip Up and ReBST < 2 Years-
Alaska	1960.0	1966.0	6.0	3	5	2001	8	8	7	10	6	5	5	5	6	5	4.75	58.75	3,9,	Correct Depressions and Long Patching-Rip Up and ReBST < 2 Years-
Klondike	44.0	50.0	6.0	3	7	2001	8	7	7	10	7	9	8	5	6	8	5.5	67.90	1,8,	Routine Maintenance-ReBST < 3 Years-
Klondike	72.0	75.0	3.0	3	8	2001	6	9	4	10	6	9	7	7	9	7	5.25	64.25	1,8,	Routine Maintenance-ReBST < 3 Years-
Klondike	75.0	79.0	4.0	3	8	2001	6	9	9	10	6	9	7	7	9	7	5.25	66.75	1,8,	Routine Maintenance-ReBST < 3 Years-
Klondike	232.1	233.0	0.9	3	10	2001	5	7	9	10	8	8	6	7	10	8	5.25	65.75	7,	ReBST < 2 Years-
Klondike	315.7	315.8	0.1	3	10	2001	8	7	4	10	8	10	5	10	10	10	5.125	68.38	1,	Routine Maintenance-
Klondike	328.0	330.0	2.0	3	5	2001	6	8	8	5	5	6	8	7	9	7	5.5	62.10	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Klondike	398.0	408.0	10.0	2	8	2001	7	8	7	5	8	6	7	6	8	8	5.25	60.45	5,9,	Deep Patch-Rip Up and ReBST < 2 Years-
Klondike	408.0	418.0	10.0	2	8	2001	8	8	4	6	8	7	5	6	7	7	5.25	60.25	5,9,	Deep Patch-Rip Up and ReBST < 2 Years-
Klondike	444.0	448.0	4.0	2	5	2001	8	8	4	10	9	9	8	8	10	9	5.5	69.00	1,	Routine Maintenance-
Klondike	596.0	603.0	7.0	2	3	2001	8	8	7	8	7	7	6	5	6	6	5	60.60	9,10,	Rip Up and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years-
Klondike	603.0	616.0	13.0	2	8	2001	6	7	6	8	7	7	6	4	6	6	5.25	59.35	9,10,	Rip Up and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years-
Klondike	622.0	626.0	4.0	2	7	2001	7	8	7	7	6	7	6	5	6	7	5.25	61.10	8,10,	ReBST < 3 Years-Add 100-150 Gravel, ReBST < 2 Years-
Klondike	657.0	659.7	2.7	2	4	2001	5	8	8	8	8	7	7	6	7	5	5	60.30	9,	Rip Up and ReBST < 2 Years-
Klondike	706.6	714.0	7.4	2	9	2001	7	8	5	6	7	7	4	5	8	8	5.25	59.65	1,13,	Routine Maintenance-Reconstruct-
Klondike	714.0	715.0	1.0	2	9	2001	6	8	7	8	2	6	6	2	0	7	5	57.10	9,	Rip Up and ReBST < 2 Years-
Klondike	715.0	716.0	1.0	2	8	2001	8	8	6	8	2	6	6	5	8	6	4.75	57.25	9,	Rip Up and ReBST < 2 Years-
Haines	124.0	136.0	12.0	3	9	2001	4	9	6	10	4	6	7	4	8	6	5	58.75	7,	ReBST < 2 Years-
Haines	159.0	174.0	15.0	3	11	2001	6	9	7	9	7	7	6	7	9	8	5.75	67.60	9,	Rip Up and ReBST < 2 Years-
Haines	174.0	188.0	14.0	3	12	2001	5	7	7	10	6	6	6	7	9	8	5.5	64.35	1,8,	Routine Maintenance-ReBST < 3 Years-
Haines	188.0	199.0	11.0	3	13	2001	6	7	8	9	7	7	5	5	9	6	5	60.40	1,8,	Routine Maintenance-ReBST < 3 Years-
Haines	199.0	211.0	12.0	3	14	2001	8	5	6	10	4	7	5	7	9	7	5.25	62.25	1,	Routine Maintenance-
Haines	240.0	246.0	6.0	3	15	2001	7	6	7	9	6	8	5	4	8	5	4.75	57.95	10,	Add 100-150 Gravel, ReBST < 2 Years-
Campbell	425.2	430.0	4.8	3	10	2001	8	9	9	9	8	8	5	5	5	5	5	63.70	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Campbell	468.0	469.0	1.0	1	6	2001	5	9	8	9	7	8	5	7	9	9	5.25	66.10	7,9,	ReBST < 2 Years-Rip Up and ReBST < 2 Years-
Campbell	469.0	479.0	10.0	1	5	2001	4	9	7	8	8	7	5	6	7	8	5.5	63.45	7,	ReBST < 2 Years-

Table 2
Potential BST Rehabilitation Projects
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Length	Class	Age	Year	Ravel	Bleed	Ruts	Subgrade	Shoulders	Potholes	Cracking	L.Tm Patch	CYr Patch	Distortion	Ride Score	BCI	Action	Comments
Campbell	508.5	514.0	5.5	1	9	2001	7	7	7	8	7	7	6	3	6	6	5	59.10	1,	Routine Maintenance-
Campbell	514.0	519.0	5.0	2	9	2001	6	9	6	6	6	6	6	4	4	7	5	57.60	10,	Add 100-150 Gravel, ReBST < 2 Years-
Campbell	519.0	529.0	10.0	2	10	2001	7	9	6	4	5	6	4	3	4	7	4.75	54.10	10,	Add 100-150 Gravel, ReBST < 2 Years-
Tagish	20.0	24.0	4.0	2	14	2001	7	7	6	8	5	6	6	6	8	7	4.75	57.90	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Tagish	24.0	35.0	11.0	2	14	2001	7	8	7	8	5	6	6	4	6	7	5	58.95	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Tagish	35.0	37.5	2.5	2	14	2001	6	7	7	8	8	6	7	5	7	8	5	60.45	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years-
Top of the Worl	38.0	50.0	12.0	2	4	2001	8	9	9	4	5	6	9	4	5	9	5	60.30	5,	Deep Patch-
Top of the Worl	50.0	58.0	8.0	2	4	2001	8	8	9	3	6	7	9	3	4	9	5	59.45	5,	Deep Patch-
Top of the Worl	88.0	93.0	5.0	2	5	2001	6	8	8	3	8	4	8	4	5	9	4.25	53.00	5,	Deep Patch-
Top of the Worl	93.0	94.0	1.0	2	6	2001	7	9	9	4	6	5	9	3	5	9	4.5	56.70	5,	Deep Patch-
Top of the Worl	94.0	96.0	2.0	2	3	2001	6	9	9	5	6	6	8	3	5	8	5	59.45	5,6,	Deep Patch-Drainage Improvements-
Silver Trail	10.0	14.0	4.0	2	5	2001	7	9	7	6	7	8	6	6	7	6	5.25	61.80	8,	ReBST < 3 Years-
Silver Trail	50.0	50.5	0.5	2	2	2001	9	9	8	9	8	8	8	8	10	4	4.75	63.60	3,	Correct Depressions and Long Patching-
Silver Trail	50.5	52.0	1.5	3	9	2001	8	9	8	8	8	7	7	6	8	5	4.75	61.05	1,2,	Routine Maintenance-Spot Patching-
Silver Trail	52.0	57.0	5.0	1	9	2001	4	8	4	7	6	6	4	6	8	8	5.25	58.20	9,	Rip Up and ReBST < 2 Years-
Takhini Hot Spri	0.0	5.2	5.2	2	4	2001	6	8	7	9	7	7	6	6	8	8	5	62.35	9,	Rip Up and ReBST < 2 Years-
Takhini Hot Spri	5.2	9.2	4.0	2	1	2001	7	4	8	9	7	5	8	6	6	8	5.25	61.40	1,	Routine Maintenance-
Mitchell Road	0.0	11.0	11.0	2	5	2001	7	8	8	8	8	7	6	3	4	4	4.75	58.20	3,	Correct Depressions and Long Patching-
Dome Road	0.0	3.0	3.0	2	7	2001	6	8	4	4	5	6	4	4	4	6	4.5	50.75	9,	Rip Up and ReBST < 2 Years-

TABLE 3

STATISTICAL COMPARISON MAJOR HIGHWAY COMPONENTS
USING THE Z TEST TO COMPARE HIGHWAYS TO THE OVERALL AVERAGE
OF CLASS 1 BSTS WITHOUT ALASKA HIGHWAY 1635-1966

	Overall Average Except Ak 1635-1966		Alaska 450-1008	Alaska 1008-1470	Alaska 1470-1635	Alaska 1635-1966
Age	Average	Std. Dev	Average	Average	Average	Average
0	71.26	8.11	72.91 Same	69.49 Same	66.95 Same	71.35 Same
1	68.08	6.74	66.58 Same	68.93 Same	67.96 Same	63.26 Not Same
2	63.62	7.24	63.17 Same	62.09 Same	67.35 Not Same	60.54 Not Same
3	61.58	6.77	62.18 Same	58.37 Same	63.28 Same	57.47 Not Same
4	61.53	6.90	63.09 Same	59.13 Same	63.03 Same	56.45 Not Same
5	61.48	5.71	61.61 Same	57.95 Same	64.41 Same	54.39 Not Same
6	61.27	6.32	62.31 Same	59.16 Same	60.56 Same	55.86 Not Same
7	58.96	5.58	59.96 Same	53.49 Not Same	60.37 Same	52.57 Not Same
8	58.01	6.52	58.81 Same	56.32 Same	58.04 Same	54.22 Not Same
9	55.14	6.51	55.85 Same	53.07 Same	55.15 Same	53.41 Same

TABLE 4

STATISTICAL COMPARISON MAJOR HIGHWAY COMPONENTS
USING THE Z TEST TO COMPARE HIGHWAYS TO THE OVERALL AVERAGE
OF CLASS 2 BSTS WITHOUT SILVER TRAIL, TOP OF WORLD AND ALASKA HIGHWAY 450-1008

	Overall Avg Exc Silver Trail, Ak 450-1008		Alaska 450-1008	Alaska 1008-1470	Klondike 192-360	Klondike 360-720	Campbell	Tagish Road	Top of the World	Silver Trail
Age	Average	Std. Dev	Average	Average	Average	Average	Average	Average	Average	Average
0	73.81	6.64	69.93 Not Same	70.29 Same	71.80 Same	73.55 Same	73.57 Same	74.83 Same	78.61 Not Same	74.94 Same
1	70.23	7.24	63.21 Not Same	63.65 Same	71.61 Same	71.06 Same	67.88 Same	71.35 Same	72.64 Same	72.74 Same
2	67.66	6.95	60.46 Not Same	65.99 Same	66.84 Same	69.05 Same	68.17 Same	67.02 Same	66.06 Same	69.53 Same
3	65.24	6.81	57.84 Not Same	63.41 Same	63.72 Same	66.88 Not Same	64.67 Same	63.93 Same	64.68 Same	68.44 Same
4	62.89	7.95	57.36 Not Same	62.27 Same	59.19 Same	65.50 Not Same	62.91 Same	64.24 Same	64.24 Same	64.09 Same
5	62.03	6.76	58.34 Not Same	60.70 Same	59.21 Same	64.10 Not Same	60.17 Same	61.90 Same	57.80 Same	63.18 Same
6	62.34	5.08	59.99 Same	58.05 Same	63.00 Same	62.97 Same	59.60 Same	63.66 Same	54.20 Same	63.99 Same
7	60.88	5.59	60.16 Same		66.95 Not Same	60.00 Same	61.22 Same	63.25 Same		66.58 Not Same
8	59.14	5.65	62.48 Same		63.63 Same	57.80 Same	59.82 Same	65.12 Not Same		70.40 Not Same

	Overall Avg Exc TOW, Ak 450-1008		Alaska 450-1008	Top of the World
Age	Average	Std. Dev	Average	Average
0	73.35	6.73	69.93 Not Same	78.61 Not Same
1	70.22	7.23	63.21 Not Same	72.64 Same
2	68.00	6.81	60.46 Not Same	66.06 Same
3	65.63	6.86	57.84 Not Same	64.68 Same
4	62.93	7.94	57.36 Not Same	64.24 Same
5	62.35	6.81	58.34 Not Same	57.80 Same
6	62.65	5.51	59.99 Same	54.20 Same
7	61.34	5.74	60.16 Same	
8	59.39	5.83	62.48 Same	

	Overall Avg Exc Ak 450-1008		Alaska 450-1008	Alaska 1008-1470	Klondike 192-360	Klondike 360-720	Campbell	Tagish Road	Top of the World	Silver Trail
Age	Average	Std. Dev	Average	Average	Average	Average	Average	Average	Average	Average
0	73.91	6.58	69.93 Not Same	70.29 Same	71.80 Same	73.55 Same	73.57 Same	74.83 Same	78.61 Not Same	74.94 Same
1	70.43	7.03	63.21 Not Same	63.65 Same	71.61 Same	71.06 Same	67.88 Same	71.35 Same	72.64 Same	72.74 Same
2	67.84	6.76	60.46 Not Same	65.99 Same	66.84 Same	69.05 Same	68.17 Same	67.02 Same	66.06 Same	69.53 Same
3	65.54	6.70	57.84 Not Same	63.41 Same	63.72 Same	66.88 Same	64.67 Same	63.93 Same	64.68 Same	68.44 Same
4	63.01	7.76	57.36 Not Same	62.27 Same	59.19 Not Same	65.50 Not Same	62.91 Same	64.24 Same	64.24 Same	64.09 Same
5	62.17	6.81	58.34 Not Same	60.70 Same	59.21 Same	64.10 Not Same	60.17 Same	61.90 Same	57.80 Same	63.18 Same
6	62.54	5.56	59.99 Same	58.05 Same	63.00 Same	62.97 Same	59.60 Same	63.66 Same	54.20 Same	63.99 Same
7	61.34	5.74	60.16 Same		66.95 Not Same	60.00 Same	61.22 Same	63.25 Same		66.58 Not Same
8	59.39	5.83	62.48 Same		63.63 Same	57.80 Same	59.82 Same	65.12 Not Same		70.40 Same

TABLE 5

STATISTICAL COMPARISON MAJOR HIGHWAY COMPONENTS
USING THE Z TEST TO COMPARE HIGHWAYS TO THE OVERALL AVERAGE
OF CLASS 3 BSTS WITHOUT HAINES ROAD AND ALASKA HIGHWAY 1470-1635

	Overall Avg Exc Haine Camp, Ak 0-550, 1470-1635, 1800-196		Alaska 0-550	Alaska 550-1008	Alaska 1008-1470	Alaska 1470-1635	Alaska 1635-1800	Alaska 1800-1966	South Klondike	North Klondike	Haines Road	Campbell
Age	Average	Std. Dev	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average
0	76.93	3.96	73.58 Not Same	78.10 Same	77.21 Same	76.12 Same	76.81 Same	75.48 Same	76.16 Same	76.04 Same	82.60 Not Same	78.42 Same
1	74.56	4.61	69.76 Not Same	75.01 Same	75.05 Same	66.26 Not Same	76.22 Same	71.65 Not Same	74.44 Same	73.47 Same	81.51 Not Same	76.57 Same
2	72.79	4.47	67.10 Not Same	73.80 Same	73.28 Same	66.39 Not Same	75.09 Same	67.82 Not Same	72.17 Same	71.58 Same	77.08 Not Same	71.44 Same
3	71.26	5.25	66.93 Not Same	72.98 Same	72.85 Not Same	66.78 Not Same	73.29 Same	65.94 Not Same	68.73 Not Same	69.30 Not Same	76.23 Not Same	69.47 Same
4	71.00	4.67	66.11 Not Same	72.16 Same	71.28 Same	65.78 Not Same	75.85 Not Same	63.66 Not Same	70.94 Same	68.97 Not Same	74.37 Not Same	67.14 Not Same
5	69.82	4.54	67.02 Not Same	70.61 Same	70.20 Same	62.11 Not Same	69.10 Same	62.85 Not Same	70.23 Same	68.31 Same	72.47 Not Same	66.90 Same
6	69.05	4.00	65.33 Not Same	69.00 Same	69.85 Same	62.82 Not Same	70.39 Same	62.64 Not Same	68.91 Same	67.57 Same	71.50 Not Same	63.20 Not Same
7	67.69	4.43	64.94 Not Same	71.51 Same	66.72 Same	62.37 Not Same	66.99 Same	65.32 Same	68.18 Same	68.13 Same	70.41 Not Same	62.83 Not Same
8	66.66	4.42	66.35 Same	66.68 Same	67.02 Same	63.19 Not Same	66.76 Same		64.76 Same	67.75 Same	68.40 Same	65.21 Same
9	66.94	4.79	64.73 Same	66.03 Same	66.30 Same	62.67 Not Same	64.51 Same		68.58 Same	67.68 Same	68.52 Same	66.18 Same
10	66.02	3.83	66.27 Same	67.95 Same	65.54 Same	62.27 Not Same	65.48 Same		65.37 Same	67.11 Same	70.21 Not Same	61.50 Same
11	64.83	3.97	66.26 Same	68.45 Same	64.87 Same	65.42 Same	63.48 Same		65.00 Same	64.50 Same	69.13 Not Same	
12	65.05	3.85	67.25 Same		65.80 Same	66.32 Same	61.55 Same			65.78 Same	67.35 Same	
13	65.03	2.97	65.30 Same		65.28 Same	63.65 Same	63.80 Same				64.24 Same	
14	64.08	2.93		58.60 Same	64.88 Same	66.45 Same	64.75 Same				62.93 Same	

	Overall Avg Camp Ak 0-550, 1470-1635 1800-1966		Alaska 0-550	Alaska 1470-1635	Alaska 1635-1800	Alaska 1800-1966	Haines Road	Campbell
Age	Average	Std. Dev	Average	Average	Average	Average	Average	Average
0	74.45	5.80	73.58 Same	76.12 Same	76.81 Same	75.48 Same	82.60 Not Same	78.42 Same
1	70.09	5.67	69.76 Same	66.26 Not Same	76.22 Not Same	71.65 Same	81.51 Not Same	76.57 Not Same
2	67.43	6.14	67.10 Same	66.39 Same	75.09 Not Same	67.82 Same	77.08 Not Same	71.44 Same
3	66.94	5.33	66.93 Same	66.78 Same	73.29 Not Same	65.94 Same	76.23 Not Same	69.47 Same
4	65.69	5.21	66.11 Same	65.78 Same	75.85 Not Same	63.66 Same	74.37 Not Same	67.14 Same
5	65.33	5.23	67.02 Same	62.11 Not Same	69.10 Same	62.85 Same	72.47 Not Same	66.90 Same
6	64.29	4.95	65.33 Same	62.82 Same	70.39 Not Same	62.64 Same	71.50 Not Same	63.20 Same
7	64.19	4.95	64.94 Same	62.37 Same	66.99 Same	65.32 Same	70.41 Not Same	62.83 Same
8	65.25	4.14	66.35 Same	63.19 Same	66.76 Same		68.40 Not Same	65.21 Same
9	64.38	2.90	64.73 Same	62.67 Same	64.51 Same		68.52 Not Same	66.18 Same
10	64.41	4.24	66.27 Same	62.27 Same	65.48 Same		70.21 Not Same	61.50 Same
11	65.89	2.61	66.26 Same	65.42 Same	63.48 Same		69.13 Not Same	
12	66.55	1.05	67.25 Same	66.32 Same	61.55 Not Same		67.35 Not Same	
13	64.20	2.80	65.30 Same	63.65 Same	63.80 Same		64.24 Same	
14	66.45	0.20		66.45 Same	64.75 Not Same		62.93 Not Same	

TABLE 6 DISTRESS RATING FOR C-SHRP TEST SECTION

AGE	RAVEL	BLEED	RUTS	SUBGRADE FAILURES	SHOULDER FAILURES	POTHOLES	CRACKS	PATCH'G	DISTOR-TIONS	CORRU-GATIONS	STREAKS	JOINTS	RIDE SCORE	BCI
Sec 1 - Single 300mm														
0	10.0	5.0	8.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	9.0	9.0	5.70	74.70
1	9.0	5.5	10.0	10.0	10.0	10.0	1.0	10.0	10.0	10.0	10.0	10.0	5.70	75.50
2	9.0	5.5	8.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	6.00	75.50
3	9.0	6.5	8.0	10.0	9.0	10.0	4.0	10.0	9.0	10.0	10.0	9.0	5.60	73.50
4	9.0	6.0	8.0	10.0	10.0	10.0	4.0	10.0	9.0	10.0	10.0	10.0	5.70	71.90
5	9.0	7.0	8.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.70	73.00
6	9.0	6.0	8.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.12	69.60
7	9.0	6.0	8.0	10.0	9.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.50	73.25
8	8.0	7.0	8.0	10.0	9.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.68	74.15
9	8.0	7.0	8.0	10.0	8.0	7.0	4.0	8.0	9.0	9.0	9.0	9.0	5.75	69.70
10	8.0	8.0	8.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.00	71.25
Sec 2 - Double 300mm														
0	10.0	6.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	9.0	9.0	5.60	75.70
1	9.0	4.5	10.0	10.0	10.0	10.0	0.5	10.0	10.0	10.0	10.0	10.0	6.00	76.50
2	9.0	4.0	8.5	10.0	9.0	10.0	4.0	10.0	10.0	9.0	10.0	10.0	6.00	74.67
3	9.0	5.0	8.5	10.0	9.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.80	74.75
4	9.0	4.0	8.0	10.0	10.0	10.0	4.0	10.0	9.0	10.0	10.0	10.0	5.50	69.90
5	8.0	7.0	7.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.70	72.00
6	8.0	6.0	7.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.25	69.25
7	9.0	6.0	6.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.37	71.85
8	8.0	5.0	7.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.68	72.90
9	8.0	7.0	8.0	10.0	9.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.65	73.50
10	8.0	7.0	8.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.00	70.75
Sec 3 - Double 300mm Prime														
0	9.0	6.0	6.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	9.0	8.5	5.60	73.12
1	9.0	5.5	4.0	10.0	10.0	10.0	2.5	10.0	10.0	10.0	10.0	10.0	5.70	72.50
2	9.0	6.0	5.0	10.0	9.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.70	72.62
3	9.0	5.5	5.0	10.0	9.0	9.0	6.0	9.0	9.0	10.0	10.0	10.0	5.50	70.00
4	9.0	5.0	6.0	10.0	10.0	10.0	6.0	10.0	9.0	10.0	10.0	10.0	5.20	67.90
5	9.0	7.0	7.0	10.0	10.0	10.0	6.0	10.0	10.0	10.0	10.0	10.0	5.50	71.50
6	9.0	8.0	6.0	10.0	8.0	10.0	6.0	10.0	10.0	10.0	10.0	10.0	5.37	70.35
7	9.0	7.0	6.0	10.0	9.0	10.0	6.0	10.0	10.0	10.0	10.0	10.0	5.25	71.75
8	9.0	7.0	5.0	10.0	10.0	10.0	7.0	10.0	10.0	10.0	10.0	10.0	5.20	70.75
9	8.0	7.0	7.0	10.0	10.0	10.0	7.0	10.0	10.0	8.0	10.0	10.0	5.33	71.25
10	8.0	7.0	6.0	10.0	7.0	10.0	7.0	10.0	10.0	10.0	10.0	10.0	5.00	68.75

TABLE 6 DISTRESS RATING FOR C-SHRP TEST SECTION

AGE	RAVEL	BLEED	RUTS	SUBGRADE FAILURES	SHOULDER FAILURES	POTHOLES	CRACKS	PATCH'G	DISTOR-TIONS	CORRU-GATIONS	STREAKS	JOINTS	RIDE SCORE	BCI
Sec 4 - Double 75mm Prime														
0	10.0	6.0	4.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	9.5	9.5	5.50	72.35
1	9.0	6.0	3.0	10.0	10.0	10.0	1.5	10.0	10.0	10.0	10.0	9.0	5.70	72.10
2	9.0	6.5	3.5	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.50	71.38
3	9.0	5.5	4.0	10.0	10.0	10.0	5.0	10.0	9.0	10.0	10.0	9.0	5.30	69.75
4	9.0	5.0	6.0	10.0	10.0	10.0	5.0	10.0	9.0	10.0	10.0	10.0	5.20	67.90
5	9.0	8.0	5.0	10.0	10.0	10.0	6.0	10.0	10.0	10.0	10.0	10.0	5.50	71.00
6	9.0	8.0	5.0	10.0	9.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	5.50	70.75
7	9.0	7.0	4.0	10.0	9.0	10.0	10.5	10.0	10.0	10.0	10.0	10.0	5.10	70.00
8	8.0	7.0	4.0	10.0	9.0	10.0	11.5	10.0	10.0	10.0	10.0	10.0	5.40	70.25
9	8.0	7.0	4.0	10.0	9.0	10.0	10.5	10.0	10.0	8.0	10.0	10.0	5.15	68.35
10	8.0	7.0	4.0	10.0	8.0	10.0	11.0	10.0	10.0	10.0	10.0	10.0	5.00	67.75
Sec 5 - Single 75mm														
0	10.0	4.5	8.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	9.5	8.5	5.70	74.45
1	8.0	5.5	6.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	10.0	10.0	5.70	73.25
2	9.0	6.5	5.0	10.0	10.0	10.0	8.0	10.0	10.0	10.0	10.0	10.0	6.00	74.38
3	9.0	6.0	6.0	10.0	10.0	10.0	9.0	10.0	9.0	10.0	10.0	9.0	5.50	71.75
4	8.0	5.5	6.0	10.0	10.0	10.0	11.0	10.0	9.0	10.0	10.0	10.0	5.50	69.15
5	9.0	7.0	9.0	10.0	10.0	10.0	14.0	10.0	10.0	10.0	10.0	10.0	5.70	73.50
6	7.0	7.0	7.0	10.0	10.0	10.0	14.0	10.0	10.0	10.0	10.0	10.0	5.50	70.50
7	9.0	7.0	7.0	10.0	10.0	10.0	14.5	10.0	10.0	10.0	10.0	10.0	5.50	73.50
8	7.0	7.0	7.0	10.0	10.0	10.0	14.5	10.0	10.0	10.0	10.0	10.0	5.50	71.75
9	7.0	7.0	7.0	10.0	10.0	10.0	15.0	10.0	10.0	9.0	10.0	10.0	5.75	72.55
10	7.0	7.0	5.0	10.0	9.0	10.0	23.0	10.0	10.0	10.0	10.0	10.0	5.00	68.00

Table 7 Comparison of C-SHRP BST Test Sections

DIFFERENCE IN PERFORMANCE AT THE 95% CONFIDENCE LEVEL

BASE THICKNESS	300 mm	300 mm	300 mm	75 mm
	Single vs Double	Single vs Double Prime	Double vs Double Prime	Double Prime vs Single
Ravelling	same	same	same	DOUBLE PRIME
Bleeding	same	same	DOUBLE PRIME	same
Rutiing	same	SINGLE	DOUBLE	SINGLE
Potholes	same	same	same	same
Cracks	SINGLE	SINGLE	DOUBLE	DOUBLE PRIME
Patching	same	same	same	same
Ridescore	same	SINGLE	DOUBLE	SINGLE
BCI	same	SINGLE	DOUBLE	SINGLE

Single - single BST layer on unprimed surface
Double - double BST layer on unprimed surface
Double Prime - double BST layer on primed surface

ALTERNATIVE WITH SUPERIOR PERFORMANCE SHOWN IN CAPITALS IN TABLE

Table 8 Comparison of 2001 BST Program
Based on BCI, Panel Recommendations and YTG Preliminary Program

Highway	Start	End	Class	Age	Ride Score	BCI 2001	Action	Kilometres to be Rehabilitated		
								Based on BCI	Based on Panel Recommendations	Based on Prelim Program
Alaska	1163.0	1170.0	3	7	5.75	68.50	1,			7.0
Alaska	1170.0	1175.5	3	5	5.5	65.25	1,			5.5
Alaska	1190.0	1192.0	3	7	5	59.80	1,9,	2.0	2.0	2.0
Alaska	1192.0	1193.0	3	7	5.5	64.35	1,			1.0
Alaska	1201.0	1209.0	3	10	5.5	63.60	1,			8.0
Alaska	1209.0	1218.0	3	10	5.5	67.00	1,			9.0
Alaska	1218.0	1218.7	3	11	5.25	64.40	1,8,			0.7
Alaska	1218.0	1222.0	3	11	5.25	64.40	1,8,		4.0	
Alaska	1218.7	1221.9	3	11	5.25	64.40	1,8,			3.2
Alaska	1506.0	1510.0	3	5	4.5	58.60	1,3,	4.0		
Alaska	1510.0	1516.0	3	4	5	62.80	1,	6.0		
Alaska	1544.0	1558.0	3	5	5	62.35	1,	14.0		
Alaska	1553.0	1554.8	3	5	5	62.35	1,			1.8
Alaska	1556.8	1558.0	3	5	5	62.35	1,			1.2
Alaska	1558.0	1570.0	1	19	4.75	50.60	1,	12.0		12.0
Alaska	1570.0	1573.0	1	9	5	61.25	1,			3.0
Alaska	1574.0	1580.0	1	7	4.75	57.65	9,13,	6.0	6.0	
Alaska	1604.0	1615.0	1	5	5.25	61.90	9,11,		11.0	11.0
Alaska	1620.0	1628.0	1	6	5.25	62.30	7,		8.0	8.0
Alaska	1675.0	1680.0	1	16	4.5	52.75	13,	5.0	5.0	
Alaska	1680.0	1684.0	1	7	4.75	59.45	13,		4.0	
Alaska	1698.0	1704.4	1	7	5.5	64.65	1,13,		6.4	
Alaska	1704.4	1706.7	1	20	5.25	66.85	1,13,		2.3	
Alaska	1706.7	1708.0	1	13	5.25	66.70	1,13,		1.3	
Alaska	1708.0	1713.7	1	4	5.25	67.45	1,13,		5.7	
Alaska	1713.7	1718.0	1	5	5.25	64.50	1,13,		4.3	
Alaska	1718.0	1726.0	1	4	5	62.55	1,13,		8.0	
Alaska	1726.0	1734.0	1	7	4.25	47.30	9,13,	8.0	8.0	
Alaska	1734.0	1743.0	1	6	5	60.45	1,13,		9.0	
Alaska	1743.0	1754.0	1	6	4.75	60.30	1,13,		11.0	
Alaska	1754.0	1758.0	1	6	5	59.70	1,13,		4.0	
Alaska	1768.0	1773.0	1	7	4.75	59.60	1,13,		5.0	
Alaska	1773.0	1780.0	1	5	4.5	56.80	1,13,	7.0	7.0	
Alaska	1780.0	1787.5	1	5	4.5	56.60	1,13,	7.5	7.5	
Alaska	1831.0	1845.0	3	4	4.75	61.10	1,9,	14.0	14.0	
Alaska	1852.0	1862.0	3	4	4.75	60.20	1,3,	10.0		
Alaska	1871.4	1873.0	3	6	4.25	57.25	3,	1.6		
Alaska	1881.0	1886.8	3	4	4.5	56.50	3,	5.8		
Alaska	1893.0	1905.0	3	5	4.5	55.00	3,	12.0		
Alaska	1905.0	1914.0	3	5	4.75	59.35	3,	9.0		
Alaska	1914.0	1921.0	3	6	5	61.40	3,	7.0		
Alaska	1942.5	1949.0	3	7	4.25	53.55	9,	6.5	6.5	
Alaska	1949.0	1960.0	3	5	4.25	53.95	9,	11.0	11.0	
Alaska	1960.0	1966.0	3	5	4.75	58.75	3,9,	6.0	6.0	
Klondike	44.0	50.0	3	7	5.5	67.90	1,8,		6.0	
Klondike	72.0	75.0	3	8	5.25	64.25	1,8,		3.0	
Klondike	75.0	79.0	3	8	5.25	66.75	1,8,		4.0	

Table 8 Comparison of 2001 BST Program
Based on BCI, Panel Recommendations and YTG Preliminary Program

Highway	Start	End	Class	Age	Ride Score	BCI 2001	Action	Kilometres to be Rehabilitated		
								Based on BCI	Based on Panel Recommendations	Based on Prelim Program
Klondike	232.1	233.0	3	10	5.25	65.75	7,		0.9	
Klondike	248.0	251.0	3	3	5	58.60	2,	3.0		
Klondike	328.0	330.0	3	5	5.5	62.10	1,9,	2.0	2.0	
Klondike	330.0	340.0	3	8	5.5	62.20	1,2,	10.0		
Klondike	398.0	408.0	2	8	5.25	60.45	5,9,		10.0	
Klondike	398.9	408.0	2	8	5.25	60.45	5,9,			9.1
Klondike	408.0	411.1	2	8	5.25	60.25	5,9,			3.1
Klondike	408.0	418.0	2	8	5.25	60.25	5,9,		10.0	
Klondike	596.0	603.0	2	3	5	60.60	9,10,		7.0	
Klondike	603.0	616.0	2	8	5.25	59.35	9,10,		13.0	
Klondike	622.0	626.0	2	7	5.25	61.10	8,10,		4.0	
Klondike	657.0	659.7	2	4	5	60.30	9,		2.7	
Klondike	706.6	714.0	2	9	5.25	59.65	1,13,		7.4	
Klondike	714.0	715.0	2	9	5	57.10	9,	1.0	1.0	
Klondike	715.0	716.0	2	8	4.75	57.25	9,	1.0	1.0	
Haines	122.0	124.0	3	9	5.5	65.50	1,			2.0
Haines	124.0	136.0	3	9	5	58.75	7,	12.0	12.0	12.0
Haines	136.0	137.0	3	8	5.25	67.35	1,			1.0
Haines	159.0	165.0	3	11	5.75	67.60	9,			6.0
Haines	159.0	174.0	3	11	5.75	67.60	9,		15.0	
Haines	174.0	188.0	3	12	5.5	64.35	1,8,		14.0	
Haines	188.0	199.0	3	13	5	60.40	1,8,	11.0	11.0	
Haines	199.0	211.0	3	14	5.25	62.25	1,	12.0		
Haines	211.0	221.0	3	14	5	61.05	1,	10.0		
Haines	221.0	230.0	3	15	5	62.05	1,	9.0		
Haines	230.0	240.0	3	15	5	62.55	1,	10.0		
Haines	240.0	246.0	3	15	4.75	57.95	10,	6.0	6.0	6.0
Campbell	425.2	430.0	3	10	5	63.70	1,9,		4.8	
Campbell	425.5	430.0	3	10	5	63.70	1,9,			4.5
Campbell	430.0	431.2	3	9	5.75	71.50	1,			1.2
Campbell	468.0	469.0	1	6	5.25	66.10	7,9,		1.0	1.0
Campbell	469.0	479.0	1	5	5.5	63.45	7,		10.0	10.0
Campbell	514.0	519.0	2	9	5	57.60	10,	5.0	5.0	
Campbell	519.0	529.0	2	10	4.75	54.10	10,	10.0	10.0	
Tagish	20.0	24.0	2	14	4.75	57.90	1,9,	4.0	4.0	
Tagish	24.0	35.0	2	14	5	58.95	1,9,		11.0	
Tagish	35.0	37.5	2	14	5	60.45	1,9,		2.5	
Top of the Worl	88.0	93.0	2	5	4.25	53.00	5,	5.0		
Top of the Worl	93.0	94.0	2	6	4.5	56.70	5,	1.0		
Silver Trail	10.0	14.0	2	5	5.25	61.80	8,		4.0	
Silver Trail	50.0	50.5	2	2	4.75	63.60	3,			
Silver Trail	50.5	52.0	3	9	4.75	61.05	1,2,	1.5		
Silver Trail	52.0	57.0	1	9	5.25	58.20	9,		5.0	5.0
Takhini Hot Spri	0.0	5.2	2	4	5	62.35	9,		5.2	
Mitchell Road	0.0	11.0	2	5	4.75	58.20	3,			
Dome Road	0.0	3.0	2	7	4.5	50.75	9,	3.0	3.0	
								270.9	352.5	134.3

Table 9 Comparison of 2001 BST Program
Based on BCI, Panel Recommendations and PWGSC Preliminary Program

Highway	Start	End	Class	Age	Ride Score	BCI 2001	Action	Kilometres to be Rehabilitated		
								Based on BCI	Based on Panel Recommendations	Based on Prelim Program
Alaska (97)	232.0	238.5	3	7	5	64.95	9,		6.5	
Alaska (97)	256.0	258.0	3	5	5.25	61.80	1,	2.0		
Alaska (97)	265.0	279.0	3	10	5	60.45	9,	14.0	14.0	14.0
Alaska (97)	279.0	284.0	3	11	5.25	64.80	1,			5.0
Alaska (97)	284.0	290.0	3	11	5.25	62.90	1,9,	6.0	6.0	6.0
Alaska (97)	290.0	295.5	3	13	5.25	65.30	1,			5.5
Alaska (97)	295.5	301.0	3	5	5.25	65.45	1,			5.5
Alaska (97)	328.0	335.0	3	4	5	61.00	9,	7.0	7.0	
Alaska (97)	335.0	347.0	3	4	5.25	67.70	1,7,		12.0	
Alaska (97)	458.0	468.0	3	9	5.25	61.85	1,9,	10.0	10.0	
Alaska (97)	495.0	501.2	3	6	5	62.10	9,	6.2	6.2	
Alaska (97)	516.2	520.0	2	7	4.75	69.40	1,			
Alaska (97)	520.0	528.0	3	1	5.25	62.60	1,	8.0		
Alaska (97)	533.0	540.0	3	3	5	59.00	5,	7.0		
Alaska (97)	540.0	548.0	3	2	4.5	53.75	5,	8.0		
Alaska (97)	556.0	571.5	1	7	5	55.20	13,	15.5	15.5	
Alaska (97)	641.0	654.0	1	7	5	60.75	9,13,		13.0	
Alaska (97)	654.0	665.0	1	7	4.75	60.90	1,9,13,		11.0	
Alaska (97)	665.0	679.0	1	6	4.75	60.00	1,9,13,		14.0	
Alaska (97)	679.0	690.0	3	6	5.25	61.20	1,	11.0		
Alaska (97)	737.5	750.0	2	6	4.75	61.85	1,13,		12.5	
Alaska (97)	762.0	770.0	2	9	4.75	60.75	1,13,		8.0	
Alaska (97)	770.0	774.0	2	9	4.75	61.25	1,			
Alaska (97)	823.0	825.0	3	1	5.3	61.60	1,	2.0		
Alaska (97)	825.0	830.0	2	7	4.5	50.70	13,	5.0	5.0	
Alaska (97)	830.0	839.5	2	7	4.5	49.45	13,	9.5	9.5	
Alaska (97)	962.4	968.0	3	4	5	61.75	1,9,	5.6	5.6	
								116.8	155.8	36.0

TABLE 10: MYOP BUDGETS FOR YTG BSTs

Excludes sections scheduled for reconstruction or permafrost sections handled by patch crews

YEAR	2002	2003	2004	2005	2006	2007	2008
CLASS 1	35.0	5.5	0.0	0.0	0.0	0.0	0.0
CLASS 2	12.2	115.4	39.0	45.7	26.1	11.0	16.3
CLASS 3	70.7	75.5	14.0	6.0	21.9	4.0	30.5
CLASS 1	$749,000	$117,700	$0	$0	$0	$0	$0
CLASS 2	$290,360	$2,746,520	$928,200	$1,087,660	$621,180	$261,800	$387,940
CLASS 3	$1,866,480	$1,993,200	$369,600	$158,400	$578,160	$105,600	$805,200
2001 FORECAST	$2,905,840	$4,857,420	$1,297,800	$1,246,060	$1,199,340	$367,400	$1,193,140
2000 FORECAST	$4,284,040	$844,800	$1,995,000	$1,117,340	$1,692,400	$1,785,980	
1999 FORECAST	$3,341,680	$2,345,080	$2,244,400	$4,378,100	$4,155,400		
1998 FORECAST	$1,828,200	$3,971,800	$3,553,600				
1997 FORECAST	$2,129,560	$2,776,220					

TABLE 11: MYOP BUDGETS FOR PWGSC BSTs

Excludes sections scheduled for reconstruction or permafrost sections handled by patch crews

YEAR	2002	2003	2004	2005	2006	2007	2008
CLASS 1	0.0	0.0	0.0	38.0	0.0	0.0	0.0
CLASS 2	0.0	0.0	33.7	0.0	11.0	0.0	0.0
CLASS 3	46.0	33.6	6.2	19.2	23.0	18.0	34.9
CLASS 1	$0	$0	$0	$399,000	$0	$0	$0
CLASS 2	$0	$0	$411,140	$0	$134,200	$0	$0
CLASS 3	$1,288,000	$940,800	$173,600	$537,600	$644,000	$504,000	$977,200
2001 FORECAST	$1,288,000	$940,800	$584,740	$936,600	$778,200	$504,000	$977,200
2000 FORECAST	$610,400	$308,000	$308,000	$1,168,900	$818,400	$1,568,150	
1999 FORECAST	$746,000	$848,400	$336,000	$602,000	$1,477,700		
1998 FORECAST	$504,000	$262,500	$392,000				
1997 FORECAST	$608,070	$648,950					

TABLE 12: SECTIONS REQUIRING SIGNIFICANT PATCHING IN 1998-2001 PWGSC SECTIONS

					CURRENT YEAR PATCHING:			
HIGHWAY	FROM	TO	CLASS	AGE	1998	1999	2000	2001
Alaska (97)	206.0	208.0	3	5		5	5	8
Alaska (97)	215.0	226.0	3	6		7	5	7
Alaska (97)	226.0	230.0	3	6			4	
Alaska (97)	226.0	232.0	3	7	8	4		8
Alaska (97)	241.0	245.0	3	7		8	5	7
Alaska (97)	245.0	249.5	3	7		8	5	7
Alaska (97)	251.5	254.0	3	5		6	5	6
Alaska (97)	254.0	256.0	3	11		5	5	8
Alaska (97)	258.0	265.0	3	6			5	9
Alaska (97)	262.0	265.0	3	9		5		
Alaska (97)	265.0	279.0	3	10		5	4	7
Alaska (97)	290.0	295.5	3	13		6	5	7
Alaska (97)	295.5	301.0	3	5		8	5	7
Alaska (97)	319.0	320.8	3	7	5			
Alaska (97)	329.2	335.0	3	3			5	
Alaska (97)	335.0	347.0	3	4	9	6	4	5
Alaska (97)	357.0	359.0	3	3		4	4	10
Alaska (97)	458.0	468.0	3	9	7	10	4	6
Alaska (97)	468.0	475.0	3	7	2	6	6	8
Alaska (97)	475.0	479.5	3	4	4			
Alaska (97)	479.5	482.7	3	5	5			
Alaska (97)	482.7	490.5	3	7	4	5	3	10
Alaska (97)	490.5	495.0	3	8	5	6	4	10
Alaska (97)	495.0	501.2	3	6	5	6	5	5
Alaska (97)	501.2	509.0	3	10	6	7	4	10
Alaska (97)	516.2	520.0	2	7	4	5	3	8
Alaska (97)	520.0	528.0	3	4	3.5	5	10	7
Alaska (97)	528.0	530.0	3	7	4	3	10	7
Alaska (97)	530.0	533.0	3	3	4	3	10	7
Alaska (97)	533.0	540.0	3	3			9	5
Alaska (97)	533.0	540.5	3	1	10	5		
Alaska (97)	540.0	548.0	3	2			9	3
Alaska (97)	554.0	561.0	3	6			4	
Alaska (97)	556.0	571.5	3	5		5		5
Alaska (97)	556.0	571.5	1	7		5		5
Alaska (97)	571.5	575.0	1	10		5	5	7
Alaska (97)	575.0	590.0	1	7		4	4	7
Alaska (97)	590.0	607.0	1	11		4	10	7
Alaska (97)	607.0	609.0	3	4		9	6	5
Alaska (97)	609.0	625.0	1	16		4	2	9
Alaska (97)	625.0	635.0	1	16		3	2	9
Alaska (97)	635.0	641.0	1	16		3	2	8
Alaska (97)	641.0	654.0	1	7		5	4	3
Alaska (97)	654.0	665.0	1	12		5	3	3
Alaska (97)	665.0	679.0	1	12		4	4	3
Alaska (97)	679.0	690.0	3	14		5	3	5
Alaska (97)	690.0	698.0	2	13		5	3	3
Alaska (97)	698.0	711.7	2	11		4	3	5
Alaska (97)	711.7	720.0	1	7		7	5	10
Alaska (97)	720.0	729.0	1	8		6	5	10
Alaska (97)	729.0	737.5	1	6		7	2	10
Alaska (97)	737.5	750.0	2	8		8	5	4
Alaska (97)	762.0	770.0	2	9		9	7	2
Alaska (97)	770.0	774.0	2	9		9	7	2

TABLE 12: SECTIONS REQUIRING SIGNIFICANT PATCHING IN 1998-2001 PWGSC SECTIONS

					CURRENT YEAR PATCHING:			
HIGHWAY	FROM	TO	CLASS	AGE	1998	1999	2000	2001
Alaska (97)	823.0	825.0	3	5		10	7	4
Alaska (97)	825.0	830.0	2	7		7	3	4
Alaska (97)	830.0	839.5	2	7		6	3	3
Alaska (97)	845.0	855.0	3	6		9	8	5
Alaska (97)	855.0	865.0	3	6		9	8	4

TABLE 13: SECTIONS REQUIRING SIGNIFICANT PATCHING IN 1998-2001 YTG SECTIONS

					CURRENT YEAR PATCHING:			
HIGHWAY	FROM	TO	CLASS	AGE	1998	1999	2000	2001
Alaska	1170.0	1180.0	3	5				5
Alaska	1506.0	1510.0	3	5				5
Alaska	1518.0	1520.0	3	16		5		9
Alaska	1675.0	1680.0	1	16				3
Alaska	1726.0	1734.0	1	7		7	6	3
Alaska	1852.0	1862.0	3	4		8	6	5
Alaska	1871.4	1873.0	3	6				4
Alaska	1871.4	1879.3	3	5		5	8	
Alaska	1881.0	1886.8	3	4		5	7	5
Alaska	1893.0	1905.0	3	5		7	7	5
Alaska	1905.0	1914.0	3	5		4	4	4
Alaska	1921.0	1932.0	3	6		5	6	
Alaska	1942.5	1949.0	3	7		6	6	5
Alaska	1949.0	1960.0	3	5		5	6	4
Campbell	425.2	430.0	3	10				5
Campbell	514.0	519.0	2	9		7	7	4
Campbell	519.0	529.0	2	10		7	6	4
Top of the World	4.0	14.2	2	3				5
Top of the World	4.0	15.6	2	2		9	5	
Top of the World	15.6	29.5	2	2		7	4	
Top of the World	29.5	34.7	2	3		1	1	
Top of the World	34.7	38.0	2	3		8	5	
Top of the World	38.0	50.0	2	4		5	4	5
Top of the World	50.0	58.0	2	4		6	5	4
Top of the World	58.0	67.0	2	3		8	4	
Top of the World	67.0	75.5	2	5		7	4	
Top of the World	88.0	93.0	2	5				5
Top of the World	93.0	94.0	2	6		9	6	5
Top of the World	94.0	96.0	2	3		6		5
Top of the World	96.0	105.0	2	3			10	5
Silver Trail	20.0	28.0	2	12		9	5	10
Mitchell Road	0.0	11.0	2	5		8	7	4
Stewart-Cassiar	0.0	2.0	2	5		5		
Dome Road	0.0	3.0	2	7		8	6	4
Dome Road	3.0	7.0	2	6		5	9	8

TABLE 14 OVERALL PERFORMANCE OF BST SECTIONS

YTG SECTIONS	RCI	BCI
1990	5.41	66.16
1991	5.25	62.33
1992	5.15	60.35
1993	5.34	63.86
1994	5.47	66.23
1995	5.57	67.73
1996	5.50	68.57
1997	5.55	69.58
1998	5.47	68.70
1999	5.48	69.07
2000	5.43	67.86
2001	5.60	68.03
PWGSC SECTIONS	RCI	BCI
1990	4.99	64.60
1991	5.02	62.85
1992	5.09	60.58
1993	5.25	64.58
1994	5.29	66.39
1995	5.51	68.67
1996	5.26	66.33
1997	5.29	65.48
1998	5.33	66.33
1999	5.35	67.74
2000	5.39	67.53
2001	5.45	67.89

Table A
BST Ratings
Based on 2001 Evaluations - PWGSC Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska (97)	206.0	208.0	3	5	8	7	7	10	8	9	8	4	8	6	9	9	8	5.25	64.55	1,	Routine Maintenance
Alaska (97)	208.0	210.0	3	2	9	7	8	10	9	7	7	9	9	9	9	9	7	5.5	69.65	1,	Routine Maintenance
Alaska (97)	210.0	215.0	3	2	9	6	7	8	8	8	8	6	8	8	8	9	9	5.25	64.55	1,	Routine Maintenance
Alaska (97)	215.0	226.0	3	5	9	9	6	10	10	8	10	7	7	10	10	10	8	5.5	71.40	1,	Routine Maintenance
Alaska (97)	226.0	232.0	3	7	9	7	6	10	9	9	9	4	8	8	9	9	9	5.5	67.65	1,	Routine Maintenance
Alaska (97)	232.0	238.5	3	7	10	6	6	10	5	9	9	8	8	6	9	9	9	5	64.95	9,	Rip Up and ReBST < 2 Years
Alaska (97)	238.5	241.0	3	3	10	8	9	10	8	10	9	7	8	5	9	9	9	5	67.75	1,	Routine Maintenance
Alaska (97)	241.0	245.0	3	7	9	7	5	10	8	9	6	6	7	7	9	9	9	5.25	65.30	1,	Routine Maintenance
Alaska (97)	245.0	249.5	3	7	9	8	6	10	7	9	8	6	7	6	9	9	9	5.25	65.95	1,	Routine Maintenance
Alaska (97)	249.5	251.5	3	10	9	7	7	9	7	8	6	4	6	7	9	9	9	5.25	63.65	1,	Routine Maintenance
Alaska (97)	251.5	254.0	3	5	9	5	7	10	9	9	7	4	6	7	9	9	9	5.25	64.80	1,	Routine Maintenance
Alaska (97)	254.0	256.0	3	11	9	8	8	10	9	9	8	6	8	8	9	9	9	5.5	69.90	1,	Routine Maintenance
Alaska (97)	256.0	258.0	3	5	7	7	7	6	7	9	5	6	7	7	9	9	9	5.25	61.80	1,	Routine Maintenance
Alaska (97)	258.0	265.0	3	1	10	8	8	10	10	10	10	9	9	9	9	9	9	5.75	75.15	1,	Routine Maintenance
Alaska (97)	265.0	279.0	3	10	6	6	5	10	5	9	7	5	7	6	9	9	9	5	60.45	9,	Rip Up and ReBST < 2 Years
Alaska (97)	279.0	284.0	3	11	8	8	7	7	10	9	7	6	8	7	9	9	9	5.25	64.80	1,	Routine Maintenance
Alaska (97)	284.0	290.0	3	11	9	7	7	9	6	7	7	5	6	6	9	9	9	5.25	62.90	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years
Alaska (97)	290.0	295.5	3	13	9	7	6	10	7	8	8	7	7	6	9	9	9	5.25	65.30	1,	Routine Maintenance
Alaska (97)	295.5	301.0	3	5	9	7	7	10	7	9	8	5	7	6	9	9	9	5.25	65.45	1,	Routine Maintenance
Alaska (97)	301.0	309.0	3	2	10	9	8	10	9	9	9	8	8	7	9	10	10	5.5	71.85	1,	Routine Maintenance; Double seal
Alaska (97)	309.0	319.0	3	2	9	8	9	10	10	10	9	9	9	8	9	9	9	5.75	74.30	1,	Routine Maintenance; Double seal
Alaska (97)	319.0	328.0	3	2	9	6	9	8	10	9	8	5	8	6	10	10	10	5.5	66.95	1,	Routine Maintenance; Double seal
Alaska (97)	328.0	335.0	3	4	9	7	6	10	8	6	6	4	6	6	9	9	9	5	61.00	9,	Rip Up and ReBST < 2 Years
Alaska (97)	335.0	347.0	3	4	9	8	8	10	9	9	7	7	5	6	9	9	9	5.25	67.70	1,7,	Routine Maintenance-ReBST < 2 Years
Alaska (97)	347.0	354.5	3	3	9	9	9	10	9	9	8	6	6	7	9	9	9	5.25	69.05	1,	Routine Maintenance;
Alaska (97)	354.5	357.0	3	0	9	9	9	9	9	9	9	10	10	7	9	10	9	5	69.45	1,	Routine Maintenance
Alaska (97)	357.0	359.0	3	3	9	9	9	9	9	9	9	4	10	7	9	10	9	5	66.45	1,	Routine Maintenance;
Alaska (97)	458.0	468.0	3	9	9	5	7	10	8	6	6	3	6	7	9	9	9	5.25	61.85	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years
Alaska (97)	468.0	475.0	3	7	9	7	6	10	9	8	8	3	8	8	9	9	9	5.25	65.00	1,	Routine Maintenance
Alaska (97)	475.0	480.0	3	9	9	8	6	10	6	8	8	3	7	8	9	9	9	5.25	64.75	1,	Routine Maintenance
Alaska (97)	480.0	482.7	3	8	9	8	8	8	7	8	8	3	6	7	9	9	9	5.25	63.90	1,	Routine Maintenance
Alaska (97)	482.7	490.5	3	7	10	6	6	10	10	9	10	10	10	7	9	10	8	5.25	69.30	1,	Routine Maintenance
Alaska (97)	490.5	495.0	3	8	9	7	7	10	10	10	10	10	10	9	10	10	10	5.25	72.15	1,	Routine Maintenance
Alaska (97)	495.0	501.2	3	6	9	7	7	8	7	7	8	3	5	8	10	10	10	5	62.10	9,	Rip Up and ReBST < 2 Years
Alaska (97)	501.2	509.0	3	10	10	9	10	10	10	9	10	10	10	10	10	10	7	5.75	77.15	1,	Routine Maintenance
Alaska (97)	509.0	516.2	2	6	10	8	9	10	10	8	10	9	9	10	10	10	10	5.75	75.45	1,	Routine Maintenance

Table A
BST Ratings
Based on 2001 Evaluations - PWGSC Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska (97)	516.2	520.0	2	7	10	9	10	10	10	8	10	8	8	9	9	9	6	4.75	69.40	1,	Routine Maintenance
Alaska (97)	520.0	528.0	3	1	8	8	8	6	7	6	8	7	7	7	9	9	9	5.25	62.60	1,	Routine Maintenance
Alaska (97)	528.0	530.0	3	1	9	6	8	10	6	6	8	7	7	8	9	9	9	5.25	65.45	1,	Routine Maintenance
Alaska (97)	530.0	533.0	3	1	9	6	8	8	9	9	9	7	7	6	9	9	9	5.25	65.70	5,	Deep Patch
Alaska (97)	533.0	540.0	3	3	8	7	8	4	8	6	8	7	5	6	9	9	9	5	59.00	5,	Deep Patch
Alaska (97)	540.0	548.0	3	2	9	8	4	3	7	6	3	8	3	6	9	9	9	4.5	53.75	5,	Deep Patch
Alaska (97)	548.0	556.0	3	2	9	7	8	9	9	7	9	8	7	8	9	9	9	5.25	67.35	1,	Routine Maintenance
Alaska (97)	556.0	571.5	1	7	6	6	6	8	6	4	8	2	5	6	9	9	9	5	55.20	13,	Reconstruct
Alaska (97)	571.5	575.0	1	0	8	8	7	8	7	7	8	7	7	7	9	9	9	5.25	64.25	1,	Routine Maintenance
Alaska (97)	575.0	590.0	1	7	9	8	8	7	7	8	8	7	7	8	9	9	9	5.25	65.75	1,	Routine Maintenance
Alaska (97)	590.0	607.0	1	0	9	8	8	9	7	9	9	7	7	9	9	7	9	5.5	69.70	1,	Routine Maintenance
Alaska (97)	607.0	609.0	3	4	10	10	9	10	10	8	8	5	5	9	9	9	9	5.5	71.60	1,	Routine Maintenance
Alaska (97)	609.0	625.0	1	0	10	10	10	10	10	10	10	9	9	9	9	10	9	6	78.55	1,	Routine Maintenance
Alaska (97)	625.0	635.0	1	0	10	8	10	10	10	10	10	9	9	9	10	10	10	5.75	76.65	1,	Routine Maintenance
Alaska (97)	635.0	641.0	1	0	9	7	10	10	10	10	10	8	8	7	9	7	6	5.5	71.45	1,	Routine Maintenance
Alaska (97)	641.0	654.0	1	7	9	6	7	9	8	7	7	2	3	7	9	9	9	5	60.75	9,13,	Rip Up and ReBST < 2 Years-Reconstruct
Alaska (97)	654.0	665.0	1	7	9	6	7	9	6	8	8	4	3	7	9	9	9	4.75	60.90	1,9,13,	Routine Maintenance-Rip Up and ReBST < 2 Years-Reconstruct
Alaska (97)	665.0	679.0	1	6	8	7	7	9	7	8	5	2	3	8	9	9	9	4.75	60.00	1,9,13,	Routine Maintenance-Rip Up and ReBST < 2 Years-Reconstruct
Alaska (97)	679.0	690.0	3	6	7	8	8	8	6	6	5	3	5	8	9	9	9	5.25	61.20	1,	Routine Maintenance
Alaska (97)	690.0	698.0	2	6	6	7	7	10	7	6	6	2	3	9	9	9	9	5.25	61.80	1,	Routine Maintenance
Alaska (97)	698.0	711.7	2	6	4	8	8	8	6	7	5	4	5	9	9	9	9	5.25	61.45	1,	Routine Maintenance
Alaska (97)	711.7	720.0	1	0	10	10	10	10	10	9	10	10	10	9	10	10	10	5.5	76.25	1,	Routine Maintenance
Alaska (97)	720.0	729.0	1	8	10	9	10	10	10	10	10	10	10	9	10	10	10	5.5	76.40	1,	Routine Maintenance
Alaska (97)	729.0	737.5	1	6	10	9	10	10	10	10	10	10	10	9	9	9	9	5.75	77.15	1,	Routine Maintenance
Alaska (97)	737.5	750.0	2	6	9	7	7	9	8	8	5	3	4	9	9	9	9	4.75	61.85	1,13,	Routine Maintenance-Reconstruct
Alaska (97)	750.0	762.0	3	1	10	9	10	10	10	10	10	8	8	10	10	10	10	7	83.50	1,	Routine Maintenance
Alaska (97)	762.0	770.0	2	9	9	7	7	9	5	8	8	2	2	8	9	9	9	4.75	60.75	1,13,	Routine Maintenance-Reconstruct
Alaska (97)	770.0	774.0	2	9	9	7	8	9	5	8	8	2	2	8	9	9	9	4.75	61.25	1,	Routine Maintenance;
Alaska (97)	774.0	782.3	3	2	7	9	9	10	10	7	9	7	7	10	10	10	6	7	78.20	1,	Routine Maintenance
Alaska (97)	782.3	787.4	3	11	9	8	6	9	6	7	8	6	6	9	10	10	10	5.75	68.45	1,	Routine Maintenance
Alaska (97)	787.4	792.0	3	2	8	8	8	10	8	9	9	8	9	9	9	9	9	6.25	74.75	1,	Routine Maintenance
Alaska (97)	792.0	793.2	3	5	9	9	9	10	10	8	8	8	8	10	10	9	10	6	75.55	1,	Routine Maintenance
Alaska (97)	793.2	795.4	3	3	9	9	9	10	10	9	9	8	8	10	10	10	10	6	76.60	1,	Routine Maintenance
Alaska (97)	795.4	803.4	3	5	8	9	9	10	5	8	9	6	6	10	10	10	10	6.25	74.45	1,	Routine Maintenance
Alaska (97)	803.4	804.2	3	3	7	9	9	10	10	6	8	6	6	10	9	9	9	6	71.90	1,	Routine Maintenance
Alaska (97)	804.2	805.0	3	4	9	9	9	10	8	8	9	8	7	10	10	10	10	6	75.45	1,	Routine Maintenance

Table A
BST Ratings
Based on 2001 Evaluations - PWGSC Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska (97)	805.0	811.5	3	4	10	10	10	10	10	10	9	9	9	10	10	9	9	6.5	81.45	1,	Routine Maintenance
Alaska (97)	811.5	813.1	3	3	9	7	10	10	9	9	10	8	8	10	8	10	10	6.25	76.95	1,	Routine Maintenance
Alaska (97)	813.1	823.0	3	4	9	8	9	10	10	10	8	9	8	10	10	10	10	6.5	79.50	1,	Routine Maintenance
Alaska (97)	823.0	825.0	3	1	6	8	8	9	6	6	5	5	4	7	8	10	6	5.3	61.60	1,	Routine Maintenance
Alaska (97)	825.0	830.0	2	7	8	7	6	4	5	4	5	3	4	6	9	9	9	4.5	50.70	13,	Reconstruct;
Alaska (97)	830.0	839.5	2	7	8	6	5	4	4	5	5	3	3	5	8	9	10	4.5	49.45	13,	Reconstruct;
Alaska (97)	839.5	842.8	3	4	9	7	7	10	10	8	8	8	9	8	10	10	10	6	72.50	1,	Routine Maintenance
Alaska (97)	842.8	845.0	3	3	9	7	7	10	10	9	8	7	8	9	10	10	10	5.75	72.00	1,	Routine Maintenance
Alaska (97)	845.0	855.0	3	6	9	9	9	10	8	8	8	5	5	7	10	10	10	5.5	69.40	1,	Routine Maintenance
Alaska (97)	855.0	865.0	3	6	9	9	8	10	10	8	7	4	4	8	9	9	9	5.25	67.50	1,	Routine Maintenance
Alaska (97)	865.0	878.0	3	5	10	7	9	10	10	9	8	8	8	8	9	10	10	6	74.45	1,	Routine Maintenance
Alaska (97)	878.0	884.0	3	6	9	8	8	10	10	8	7	6	6	9	9	9	9	5.75	71.10	1,	Routine Maintenance
Alaska (97)	884.0	886.7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,	Routine Maintenance; Gravel
Alaska (97)	886.7	889.5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,	Routine Maintenance; Gravel
Alaska (97)	889.5	895.0	3	6	9	8	9	10	10	8	8	5	7	8	10	10	10	5.75	71.25	1,	Routine Maintenance
Alaska (97)	895.0	900.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,	Routine Maintenance
Alaska (97)	900.0	906.0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,	Routine Maintenance
Alaska (97)	906.0	915.0	1	0	10	6	9	10	10	9	10	9	10	8	10	10	10	6.5	77.65	1,	Routine Maintenance
Alaska (97)	915.0	922.0	3	7	9	5	9	10	9	9	9	8	8	9	10	10	10	6	73.75	1,	Routine Maintenance
Alaska (97)	922.0	931.2	3	4	9	9	9	10	9	9	9	8	8	8	10	10	10	6	75.15	1,	Routine Maintenance
Alaska (97)	931.2	942.0	3	5	9	7	8	10	6	9	6	8	8	8	10	10	10	6	72.15	1,	Routine Maintenance
Alaska (97)	942.0	950.0	3	6	9	9	8	8	5	8	7	7	8	7	10	10	10	5.5	67.40	1,	Routine Maintenance
Alaska (97)	950.0	957.0	3	7	9	7	7	9	5	7	7	7	9	7	10	10	10	5.5	66.00	1,	Routine Maintenance
Alaska (97)	957.0	962.4	3	7	9	7	8	10	6	9	7	6	6	7	10	10	10	5.25	67.05	1,	Routine Maintenance
Alaska (97)	962.4	968.0	3	4	9	6	5	8	7	7	7	7	7	7	10	10	10	5	61.75	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years

Table B
BST Ratings
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska	1008.0	1014.0	3	4	9	8	9	10	10	10	8	9	10	9	10	10	10	6	76.40	1,	Routine Maintenance
Alaska	1024.9	1033.0	3	2	8	8	9	10	8	9	8	9	9	8	10	10	10	5.5	71.65	1,	Routine Maintenance
Alaska	1033.0	1038.0	3	2	9	7	9	10	8	9	8	9	9	9	10	10	10	5.5	72.25	1,	Routine Maintenance
Alaska	1038.0	1040.0	3	1	6	6	9	10	9	9	8	9	9	9	10	10	9	5.75	71.60	1,	Routine Maintenance; Seal ravels on centreline
Alaska	1040.0	1043.0	3	6	8	9	9	10	8	9	7	7	9	8	10	8	9	5.5	70.45	1,	Routine Maintenance
Alaska	1043.0	1056.0	3	1	8	7	9	10	9	9	8	8	8	9	10	10	8	5.75	72.45	1,	Routine Maintenance
Alaska	1056.0	1062.0	3	3	7	9	9	10	10	9	9	9	10	9	10	10	10	6	75.50	1,	Routine Maintenance; Seal ravels along centreline
Alaska	1062.0	1076.0	3	4	8	8	9	10	10	10	8	9	9	9	10	10	10	6	75.90	1,	Routine Maintenance
Alaska	1076.0	1079.0	3	6	8	8	8	10	9	9	7	7	8	9	10	10	10	5.75	72.00	1,	Routine Maintenance
Alaska	1079.0	1085.0	3	4	8	8	9	10	10	9	8	8	9	9	10	10	10	6	74.75	1,	Routine Maintenance
Alaska	1085.0	1087.0	3	2	8	7	8	10	9	9	8	8	10	9	10	10	10	5.75	72.25	1,	Routine Maintenance
Alaska	1087.0	1089.0	3	4	8	8	8	10	9	8	6	8	8	9	10	10	10	5.75	71.60	1,	Routine Maintenance
Alaska	1089.0	1102.0	3	2	8	7	8	10	10	8	8	7	7	8	10	10	10	5.75	70.75	1,	Routine Maintenance
Alaska	1102.0	1106.0	3	2	7	7	9	10	8	8	6	6	7	8	10	10	10	5.5	68.00	1,	Routine Maintenance
Alaska	1106.0	1120.0	3	0	10	9	9	10	10	10	10	10	10	10	10	10	10	6.25	80.25	1,	Routine Maintenance
Alaska	1120.0	1128.2	3	0	10	9	10	10	10	9	10	9	9	10	10	10	10	6.25	79.60	1,	Routine Maintenance
Alaska	1128.2	1134.0	3	6	6	7	8	10	6	8	7	5	7	8	10	10	10	5.5	66.25	1,	Routine Maintenance; 1128.2 - 1129.2 is badly ravelled and should be overlay or seal ravel.
Alaska	1134.0	1142.0	3	6	7	8	8	10	7	8	7	5	8	9	10	10	10	5.5	68.10	1,	Routine Maintenance
Alaska	1142.0	1152.0	3	5	8	9	9	10	7	7	7	8	9	9	10	10	10	5.75	71.70	1,	Routine Maintenance
Alaska	1152.0	1161.0	3	5	8	9	8	10	7	6	7	7	9	8	10	10	10	5.75	69.45	1,	Routine Maintenance
Alaska	1161.0	1163.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.25	81.25	1,	Routine Maintenance
Alaska	1163.0	1170.0	3	7	4	8	9	10	8	8	7	6	10	8	10	10	10	5.75	68.50	1,	Routine Maintenance; Overlay 1.5 Km Swift River Hill seal ravels 1166 - 1174
Alaska	1170.0	1180.0	3	5	4	7	8	10	8	8	7	4	5	8	10	10	10	5.5	65.25	1,	Routine Maintenance; Overlay 1 - 1.5 km south end double dips hill. Overlay 1166 - 1174
Alaska	1180.0	1190.0	3	7	8	7	8	10	7	8	7	6	8	6	9	9	9	5.5	66.30	1,	Routine Maintenance
Alaska	1190.0	1192.0	3	7	6	7	8	7	8	8	7	4	7	6	9	9	9	5	59.80	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years; Potential R&R for 2002.
Alaska	1192.0	1201.0	3	7	6	6	8	9	6	7	7	6	8	8	9	9	9	5.5	64.35	1,	Routine Maintenance; Monitor for ravels, spot seal ravels.
Alaska	1201.0	1209.0	3	10	4	7	8	9	6	8	7	5	7	7	10	9	9	5.5	63.60	1,	Routine Maintenance; Overlay in 2002. Approx 4000-5000 BST in stockpile at Screw Creek. Possible R&R.

Table B
BST Ratings
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska	1209.0	1218.0	3	10	7	8	8	10	7	7	6	7	9	7	10	10	10	5.5	67.00	1,	Routine Maintenance; Monitor in spring, possible overlay in 2002-2003.
Alaska	1218.0	1222.0	3	11	5	8	8	10	6	8	7	6	8	7	9	9	9	5.25	64.40	1,8,	Routine Maintenance-ReBST < 3 Years; Possible R&R in 2002 for program reasons.
Alaska	1222.0	1234.0	3	1	9	8	9	10	9	9	8	9	10	9	10	10	10	6.25	76.75	1,	Routine Maintenance
Alaska	1234.0	1240.0	3	15	6	8	8	10	7	8	7	8	9	8	10	10	10	5.5	68.50	1,	Routine Maintenance; Monitor in spring.
Alaska	1240.0	1251.0	3	6	9	7	7	10	9	8	8	8	9	8	10	10	10	5.75	71.00	1,	Routine Maintenance
Alaska	1251.0	1265.0	3	6	9	8	7	10	8	8	7	8	9	9	10	10	10	5.75	71.60	1,	Routine Maintenance
Alaska	1265.0	1273.0	3	4	8	9	9	10	8	8	7	8	9	9	10	10	10	5.75	72.60	1,	Routine Maintenance
Alaska	1273.0	1279.5	3	9	7	8	8	10	4	8	7	8	9	8	10	10	10	5.5	68.25	1,	Routine Maintenance; Monitor shoulder.
Alaska	1279.5	1289.5	3	0	9	9	9	10	10	10	10	10	10	10	10	10	10	6	78.50	1,	Routine Maintenance
Alaska	1289.5	1292.0	3	1	9	7	9	10	10	9	9	8	10	9	10	10	10	5.75	73.75	1,	Routine Maintenance
Alaska	1292.0	1300.0	3	18	7	7	8	10	4	8	7	6	8	6	10	10	10	5	63.05	1,3,	Routine Maintenance-Correct Depressions and Long Patching; Long patch, depressions and hold for another 2 years or R&R in 2002 for program reasons.
Alaska	1300.0	1308.0	3	3	9	8	8	10	9	8	8	9	10	8	10	10	10	5.5	71.25	1,	Routine Maintenance
Alaska	1308.0	1322.0	3	2	9	7	8	10	9	9	8	9	10	8	10	10	10	6	73.90	1,	Routine Maintenance
Alaska	1322.0	1330.0	3	2	8	8	8	10	9	9	9	9	9	8	9	10	10	5.5	71.45	1,	Routine Maintenance
Alaska	1330.0	1340.0	3	4	9	8	9	10	9	9	8	8	9	9	9	10	10	5.75	73.55	1,	Routine Maintenance
Alaska	1340.0	1346.0	3	3	9	8	9	10	8	8	7	8	10	8	10	10	10	5.75	72.00	1,	Routine Maintenance
Alaska	1346.0	1352.0	3	5	6	8	8	10	7	8	7	8	9	9	10	10	10	6	71.60	1,	Routine Maintenance; Possible overlay within 2 years. Look at producing 1/2" aggregate.
Alaska	1352.0	1365.0	3	0	10	9	10	10	10	10	10	10	10	10	10	10	10	6.5	82.00	1,	Routine Maintenance
Alaska	1365.0	1380.0	3	7	6	9	8	9	7	8	7	8	10	9	10	10	10	5.75	70.10	1,	Routine Maintenance; Possible overlay less than 2 years. Need to produce BST at Seaforth, 1/2"?
Alaska	1380.0	1390.0	3	15	7	8	5	8	8	8	6	7	8	8	9	9	10	5.5	65.15	1,	Routine Maintenance
Alaska	1420.0	1429.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,14	Routine Maintenance-Under Reconstruction/Rehabilitation
Alaska	1506.0	1510.0	3	5	9	7	8	10	9	7	8	3	5	3	9	9	9	4.5	58.60	1,3,	Routine Maintenance-Correct Depressions and Long Patching; Ravelling not recorded. Input an arbitrary value of 8.
Alaska	1510.0	1516.0	3	4	9	7	8	10	9	7	8	4	7	5	9	9	9	5	62.80	1,	Routine Maintenance
Alaska	1516.0	1518.0	3	8	9	8	7	10	8	9	7	4	10	8	9	9	9	5.5	67.90	1,	Routine Maintenance
Alaska	1518.0	1520.0	3	16	9	9	7	10	9	7	8	7	9	7	9	9	9	5.25	67.25	1,	Routine Maintenance

Table B
BST Ratings
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska	1520.0	1522.5	3	4	8	7	8	10	7	8	9	3	6	7	9	9	9	5.25	64.65	1,	Routine Maintenance
Alaska	1522.5	1530.0	3	4	9	9	8	10	8	8	8	7	7	8	10	10	10	5.75	71.75	1,	Routine Maintenance
Alaska	1530.0	1538.0	3	2	9	8	7	10	9	8	8	9	10	8	10	10	10	5.5	70.75	1,	Routine Maintenance
Alaska	1538.0	1544.0	3	2	9	7	6	10	9	8	8	8	10	8	9	9	9	5.75	70.00	1,	Routine Maintenance
Alaska	1544.0	1558.0	3	5	7	7	7	10	9	8	8	6	9	4	9	9	9	5	62.35	1,	Routine Maintenance; Correct depressions, rip-reshape distorted areas and reapply BST.
Alaska	1558.0	1570.0	1	19	7	5	4	6	8	4	5	2	8	5	9	9	9	4.75	50.60	1,	Routine Maintenance
Alaska	1570.0	1574.0	1	9	9	6	5	9	9	7	6	5	8	7	9	9	9	5	61.25	1,	Routine Maintenance
Alaska	1574.0	1580.0	1	7	7	7	4	9	6	6	6	6	7	6	9	9	10	4.75	57.65	9,13,	Rip Up and ReBST < 2 Years-Reconstruct; Candidate for R&R in 2002 depending upon capital program.
Alaska	1580.0	1585.0	1	7	10	5	8	8	9	8	9	8	8	8	10	10	9	5.25	67.10	1,	Routine Maintenance
Alaska	1585.0	1588.0	1	0	9	6	8	10	10	8	9	9	9	9	10	10	10	5.25	70.10	1,	Routine Maintenance; R&R in 2001
Alaska	1588.0	1599.5	3	4	9	8	8	10	10	8	8	8	9	8	10	10	9	5.5	70.85	1,	Routine Maintenance
Alaska	1599.5	1604.0	3	16	7	7	8	10	9	8	6	8	9	9	8	9	9	5.25	67.40	1,	Routine Maintenance
Alaska	1604.0	1615.0	1	5	4	7	7	9	8	6	6	7	8	8	9	10	6	5.25	61.90	9,11,	Rip Up and ReBST < 2 Years-Hot Mix Overlay; Possible overlay, recheck ride, either overlay or R&R in 2002.
Alaska	1615.0	1620.0	1	0	10	6	8	10	10	10	10	10	10	9	10	10	10	5.5	73.90	1,	Routine Maintenance; R&R in 2001
Alaska	1620.0	1628.0	1	6	3	7	8	9	9	5	8	6	8	8	10	10	10	5.25	62.30	7,	ReBST < 2 Years; Possible overlay candidate for 2002 depending upon capital program.
Alaska	1628.0	1630.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.5	82.50	1,	Routine Maintenance; New construction and BST 2001
Alaska	1630.0	1635.0	1	5	9	7	7	7	9	9	8	8	10	8	10	10	9	5.5	68.00	1,	Routine Maintenance
Alaska	1635.0	1650.0	3	1	9	6	8	10	10	9	9	9	10	10	7	10	10	6	74.50	1,	Routine Maintenance; Bleeding 1635-1639, corrugations, overlay 2000.
Alaska	1650.0	1664.0	3	2	9	7	8	10	9	9	8	9	10	10	10	10	10	6.5	77.60	1,	Routine Maintenance
Alaska	1664.0	1675.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,14	Routine Maintenance-Under Reconstruction/Rehabilitation; Not rated, under reconstruction
Alaska	1675.0	1680.0	1	16	7	7	4	7	7	6	3	3	3	6	9	9	9	4.5	52.75	13,	Reconstruct; Scheduled for reconstuction 2002.
Alaska	1680.0	1684.0	1	7	8	6	7	8	8	6	7	6	8	7	9	8	9	4.75	59.45	13,	Reconstruct; Scheduled for reconstruction 2002.
Alaska	1684.0	1693.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,14	Routine Maintenance-Under Reconstruction/Rehabilitation; Not rated, under reconstruction.

Table B
BST Ratings
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska	1693.5	1698.0	3	20	9	8	9	10	6	9	7	8	9	9	10	10	10	5.75	72.75	1,	Routine Maintenance; Recheck BST Class. Track damage on shoulders.
Alaska	1698.0	1704.4	1	7	8	5	7	8	7	8	7	6	10	8	9	9	10	5.5	64.65	1,13,	Routine Maintenance-Reconstruct
Alaska	1704.4	1706.7	1	20	9	4	7	9	6	9	6	8	10	10	10	10	10	5.25	66.85	1,13,	Routine Maintenance-Reconstruct
Alaska	1706.7	1708.0	1	13	7	7	8	10	7	7	7	7	9	9	10	10	10	5.25	66.70	1,13,	Routine Maintenance-Reconstruct
Alaska	1708.0	1713.7	1	4	8	7	8	9	8	7	8	8	10	9	10	10	10	5.25	67.45	1,13,	Routine Maintenance-Reconstruct
Alaska	1713.7	1718.0	1	5	9	6	7	9	8	7	7	7	10	8	6	9	9	5.25	64.50	1,13,	Routine Maintenance-Reconstruct
Alaska	1718.0	1726.0	1	4	9	6	7	9	8	7	7	6	8	8	5	9	9	5	62.55	1,13,	Routine Maintenance-Reconstruct
Alaska	1726.0	1734.0	1	7	7	5	6	4	5	5	5	2	3	6	5	9	9	4.25	47.30	9,13,	Rip Up and ReBST < 2 Years-Reconstruct; If reconstruction imminent, regular maintenance.
Alaska	1734.0	1743.0	1	6	9	7	6	7	7	7	8	6	7	6	8	9	9	5	60.45	1,13,	Routine Maintenance-Reconstruct
Alaska	1743.0	1754.0	1	6	8	8	7	8	8	7	8	6	7	5	9	9	9	4.75	60.30	1,13,	Routine Maintenance-Reconstruct; Scheduled for reconstruction 2002
Alaska	1754.0	1758.0	1	6	6	7	7	8	7	7	6	5	6	7	9	7	9	5	59.70	1,13,	Routine Maintenance-Reconstruct; Scheduled for reconstruction 2002.
Alaska	1758.0	1768.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,14	Routine Maintenance-Under Reconstruction/Rehabilitation; Not rated, under reconstruction.
Alaska	1768.0	1773.0	1	7	7	7	8	9	7	6	7	6	9	6	7	9	9	4.75	59.60	1,13,	Routine Maintenance-Reconstruct; Scheduled for reconstruction 2003.
Alaska	1773.0	1780.0	1	5	5	7	7	8	8	7	7	6	8	5	9	9	9	4.5	56.80	1,13,	Routine Maintenance-Reconstruct; Scheduled for reconstruction 2002/2003.
Alaska	1780.0	1787.5	1	5	6	7	8	8	7	7	6	5	7	5	8	9	9	4.5	56.60	1,13,	Routine Maintenance-Reconstruct; Scheduled for reconstruction 2002.
Alaska	1787.5	1804.0	3	0	10	9	9	10	10	5	9	8	8	7	8	10	6	6	71.70	1,2,	Routine Maintenance-Spot Patching; BST in 2001.
Alaska	1804.0	1821.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	1,14	Routine Maintenance-Under Reconstruction/Rehabilitation; Not rated, under reconstruction.
Alaska	1821.0	1831.0	3	2	8	9	10	10	10	7	9	8	8	8	10	10	10	6.5	76.60	1,	Routine Maintenance; Patching required on potholes.
Alaska	1831.0	1845.0	3	4	6	9	8	10	8	9	5	5	7	4	9	8	9	4.75	61.10	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years; Ravelling worse 1831-1838, R&R south end.
Alaska	1845.0	1852.0	3	4	8	8	8	10	8	9	7	8	10	7	10	10	10	5.75	71.05	1,	Routine Maintenance
Alaska	1852.0	1862.0	3	4	8	8	8	10	7	7	5	5	5	4	9	9	9	4.75	60.20	1,3,	Routine Maintenance-Correct Depressions and Long Patching
Alaska	1862.0	1867.8	3	2	9	9	8	10	8	6	8	7	8	7	10	7	10	5.75	69.40	1,	Routine Maintenance
Alaska	1867.8	1871.4	3	3	4	9	8	10	7	6	7	7	8	8	9	5	8	5.75	66.20	1,	Routine Maintenance; Potential overlay.
Alaska	1871.4	1873.0	3	6	8	7	8	9	9	8	6	4	4	3	10	10	10	4.25	57.25	3,	Correct Depressions and Long Patching

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BST Ratings
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska	1873.0	1879.3	3	6	8	7	8	9	7	7	8	8	9	8	10	10	10	6.25	71.60	1,	Routine Maintenance
Alaska	1879.3	1881.0	3	3	7	8	8	10	9	8	8	7	7	8	10	7	10	5.5	68.80	1,	Routine Maintenance
Alaska	1881.0	1886.8	3	4	7	7	8	10	6	5	5	4	5	5	9	8	10	4.5	56.50	3,	Correct Depressions and Long Patching
Alaska	1886.8	1893.0	3	5	7	9	8	10	8	7	7	7	8	7	10	8	10	5.75	68.95	3,	Correct Depressions and Long Patching
Alaska	1893.0	1905.0	3	5	8	8	8	10	8	4	4	2	5	4	8	8	8	4.5	55.00	3,	Correct Depressions and Long Patching
Alaska	1905.0	1914.0	3	5	8	8	8	10	7	6	7	3	4	4	9	10	10	4.75	59.35	3,	Correct Depressions and Long Patching
Alaska	1914.0	1921.0	3	6	8	8	9	10	7	5	5	5	7	5	9	10	9	5	61.40	3,	Correct Depressions and Long Patching; No rehab strategy recorded, arbitrarily chose (3).
Alaska	1921.0	1932.0	3	6	8	8	8	10	7	6	5	6	0	5	9	9	9	5.25	63.15	3,	Correct Depressions and Long Patching; Current yr patching not recroded, arbitrarily chose (8).
Alaska	1932.0	1933.0	3	7	9	7	8	10	9	7	7	9	10	9	10	10	10	5.75	71.70	1,	Routine Maintenance
Alaska	1933.0	1938.0	3	6	8	7	8	10	7	7	7	9	9	9	7	9	10	5.5	68.70	1,	Routine Maintenance
Alaska	1938.0	1942.5	3	7	8	7	8	10	7	7	6	9	10	9	8	8	8	5.75	69.45	1,	Routine Maintenance; Many pothole and drainage improvements required at Canada Customs.
Alaska	1942.5	1949.0	3	7	6	7	8	10	6	6	7	2	5	3	9	7	10	4.25	53.55	9,	Rip Up and ReBST < 2 Years
Alaska	1949.0	1960.0	3	5	7	8	8	10	6	5	4	4	4	3	8	8	9	4.25	53.95	9,	Rip Up and ReBST < 2 Years
Alaska	1960.0	1966.0	3	5	8	8	7	10	6	5	5	5	6	5	9	9	9	4.75	58.75	3,9,	Correct Depressions and Long Patching-Rip Up and ReBST < 2 Years
Klondike	25.0	36.0	3	9	10	9	8	10	10	10	10	10	10	10	10	10	10	6	78.50	1,	Routine Maintenance
Klondike	37.0	44.0	3	7	8	7	7	10	7	9	7	6	8	8	9	9	9	5.5	67.65	1,	Routine Maintenance
Klondike	44.0	50.0	3	7	8	7	7	10	7	9	8	5	6	8	10	10	10	5.5	67.90	1,8,	Routine Maintenance-ReBST < 3 Years; Sealing has saved this section.
Klondike	50.0	58.2	3	1	9	9	8	10	10	10	9	10	10	10	10	10	10	6	77.75	1,	Routine Maintenance
Klondike	58.2	64.0	3	2	8	7	9	10	9	9	8	9	10	8	10	9	10	5.5	71.25	1,	Routine Maintenance
Klondike	64.0	65.0	3	10	7	8	8	10	6	9	7	7	8	8	9	9	9	5.25	67.15	1,	Routine Maintenance; Produce material for 79-65.
Klondike	65.0	72.0	3	8	8	7	7	10	6	9	7	8	9	8	9	9	9	5.25	67.15	1,	Routine Maintenance
Klondike	72.0	75.0	3	8	6	9	4	10	6	9	7	7	9	7	9	7	9	5.25	64.25	1,8,	Routine Maintenance-ReBST < 3 Years; Rutting severe at km 72.5.
Klondike	75.0	79.0	3	8	6	9	9	10	6	9	7	7	9	7	9	7	9	5.25	66.75	1,8,	Routine Maintenance-ReBST < 3 Years
Klondike	79.0	80.3	3	7	8	8	8	9	7	9	7	9	10	9	10	10	10	5.5	70.50	1,	Routine Maintenance
Klondike	80.3	90.0	3	2	9	9	8	10	8	9	9	9	10	8	10	10	10	5.75	73.65	1,	Routine Maintenance
Klondike	90.0	99.0	3	2	8	8	8	10	10	9	9	8	9	10	10	10	10	5.75	73.85	1,	Routine Maintenance

Table B
BST Ratings
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Klondike	99.0	101.5	3	5	8	8	8	9	8	9	6	8	9	8	9	9	9	5.5	68.90	1,	Routine Maintenance
Klondike	101.5	105.0	3	2	9	9	9	10	8	9	8	9	10	9	10	9	9	5.75	74.20	1,	Routine Maintenance
Klondike	105.0	107.0	3	6	9	6	8	9	8	9	7	8	9	9	9	9	9	5.5	69.25	1,	Routine Maintenance; Rutting not recorded. Put in arbitrary rating of 8.
Klondike	107.0	113.6	3	0	10	9	10	10	10	10	10	10	10	10	10	10	8	5.75	77.95	1,	Routine Maintenance
Klondike	113.6	119.0	3	7	7	8	8	10	7	9	7	9	10	9	9	7	10	5.75	71.35	1,	Routine Maintenance; Watch ravelling - potential overlay 2003.
Klondike	119.0	133.0	3	4	9	9	7	10	9	9	7	9	10	8	9	9	10	5.5	71.30	1,	Routine Maintenance
Klondike	133.0	145.0	3	6	8	7	8	9	8	9	6	8	9	8	9	9	9	5.5	68.40	1,	Routine Maintenance
Klondike	145.0	149.0	3	1	9	9	7	10	10	10	8	10	10	9	9	10	10	5.75	74.95	1,	Routine Maintenance
Klondike	149.0	157.0	3	9	9	9	8	9	7	9	6	7	9	8	8	9	9	5	66.45	1,	Routine Maintenance; Subgrade failure not recorded. Put in arbitrary rating of 9.
Klondike	157.0	157.8	3	1	9	7	9	10	9	9	9	9	10	9	8	9	10	5.25	70.95	1,	Routine Maintenance
Klondike	227.5	228.6	3	0	9	9	9	10	10	9	9	10	10	9	10	10	10	5.75	75.75	1,	Routine Maintenance
Klondike	228.6	230.2	3	2	9	9	9	10	10	9	9	10	10	9	10	10	10	5.75	75.75	1,	Routine Maintenance
Klondike	231.1	232.1	3	7	8	8	9	9	8	9	6	8	10	9	9	9	9	5.5	70.00	1,	Routine Maintenance
Klondike	232.1	233.0	3	10	5	7	9	10	8	8	6	7	10	8	9	9	9	5.25	65.75	7,	ReBST < 2 Years; 300m pavement included in this section.
Klondike	233.0	234.8	3	0	9	8	9	10	10	10	10	10	10	10	10	10	10	5.75	76.75	1,	Routine Maintenance
Klondike	248.0	251.0	3	3	6	6	7	8	7	8	7	5	7	5	6	9	9	5	58.60	2,	Spot Patching
Klondike	251.0	260.0	2	3	7	5	8	9	9	8	9	7	8	6	8	9	9	5.5	65.35	1,	Routine Maintenance; No strategy recorded, request input from Maintenance.
Klondike	260.0	276.0	2	7	8	7	9	9	9	8	8	7	8	7	9	7	9	5.75	68.85	1,	Routine Maintenance
Klondike	292.0	299.0	2	4	9	6	8	10	10	9	9	9	10	8	9	9	8	6	73.25	1,	Routine Maintenance
Klondike	299.0	309.0	2	9	8	8	9	10	8	9	8	8	10	9	9	9	8	6	73.60	1,	Routine Maintenance
Klondike	309.0	315.4	2	10	8	7	8	10	7	8	6	8	10	9	10	10	10	5.75	70.60	1,	Routine Maintenance
Klondike	315.4	315.5	3	10	8	8	8	10	10	10	7	10	10	10	10	10	10	5.25	72.50	1,	Routine Maintenance; 4 transverse cracks.
Klondike	315.5	315.6	3	10	8	7	8	10	10	10	7	10	10	10	10	10	10	5.375	72.63	1,	Routine Maintenance; 5 transverse cracks.
Klondike	315.6	315.7	3	10	8	7	6	10	7	10	6	10	10	10	10	10	10	5.125	69.38	1,	Routine Maintenance; 6 transverse, 1 long crack.
Klondike	315.7	315.8	3	10	8	7	4	10	8	10	5	10	10	10	10	10	10	5.125	68.38	1,	Routine Maintenance; 10 transverse, 1 long cracks.
Klondike	315.8	315.9	3	10	7	7	5	10	9	10	5	10	10	10	10	10	10	5.25	69.25	1,	Routine Maintenance; 10 transverse, 13 long cracks.
Klondike	315.9	319.0	2	10	8	9	6	10	7	9	6	9	10	9	9	10	10	5.5	70.30	1,	Routine Maintenance
Klondike	319.0	328.0	2	2	9	7	8	10	10	9	9	9	10	9	9	10	10	6	74.80	1,	Routine Maintenance
Klondike	328.0	330.0	3	5	6	8	8	5	5	6	8	7	9	7	10	10	10	5.5	62.10	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years

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BST Ratings
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Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Klondike	330.0	340.0	3	8	7	7	7	6	7	7	6	6	7	8	7	9	9	5.5	62.20	1,2,	Routine Maintenance-Spot Patching
Klondike	340.0	346.0	3	1	9	6	8	9	10	9	8	8	10	9	10	10	10	5.5	70.50	1,	Routine Maintenance
Klondike	360.0	363.0	3	2	9	8	10	10	9	10	9	9	9	9	9	9	9	6	76.40	1,	Routine Maintenance
Klondike	363.0	370.0	3	2	9	8	10	10	9	10	9	9	9	9	9	9	9	6	76.40	1,	Routine Maintenance
Klondike	370.0	380.0	3	4	10	10	10	10	10	10	8	8	9	8	10	10	10	6	77.30	1,	Routine Maintenance
Klondike	380.0	382.4	3	2	9	9	9	10	10	9	9	8	10	10	10	10	10	6	76.60	1,	Routine Maintenance
Klondike	382.4	383.5	3	4	8	8	8	9	9	9	8	8	9	9	9	9	9	5.75	71.50	1,	Routine Maintenance
Klondike	383.5	388.0	3	3	9	8	9	10	9	9	9	9	10	9	10	10	10	6	75.75	1,	Routine Maintenance
Klondike	388.0	398.0	2	3	8	8	8	6	9	8	8	6	7	9	9	9	9	5.5	66.35	1,2,5,	Routine Maintenance-Spot Patching-Deep Patch; Excavate and patch failed areas 2002.
Klondike	398.0	408.0	2	8	7	8	7	5	8	6	7	6	8	8	8	8	8	5.25	60.45	5,9,	Deep Patch-Rip Up and ReBST < 2 Years
Klondike	408.0	418.0	2	8	8	8	4	6	8	7	5	6	7	7	9	9	9	5.25	60.25	5,9,	Deep Patch-Rip Up and ReBST < 2 Years
Klondike	418.0	423.0	2	6	6	8	8	9	6	8	7	7	8	8	9	9	9	5.5	66.50	1,	Routine Maintenance; Monitor ravelling in spring.
Klondike	423.0	431.0	2	7	7	8	7	8	8	8	8	7	9	8	9	9	9	5.5	66.50	1,	Routine Maintenance
Klondike	431.0	438.0	2	7	8	8	8	9	7	9	8	8	9	7	9	9	9	5.25	67.30	1,	Routine Maintenance
Klondike	438.0	444.0	2	5	7	8	6	9	8	9	8	8	9	9	9	9	9	5.5	68.50	1,	Routine Maintenance; Check BST class.
Klondike	444.0	448.0	2	5	8	8	4	10	9	9	8	8	10	9	9	9	9	5.5	69.00	1,	Routine Maintenance; Check BST class.
Klondike	448.0	463.0	2	6	8	7	5	8	8	8	6	7	9	5	9	9	9	5	60.70	1,3,	Routine Maintenance-Correct Depressions and Long Patching; Pelly Bridge = km 463.
Klondike	463.0	476.0	2	6	7	8	6	9	8	8	7	6	9	7	9	9	9	5.5	65.40	1,	Routine Maintenance; Pelly Bridge = km 463.
Klondike	476.0	486.0	2	4	9	9	8	9	9	9	8	9	10	7	10	10	10	5.5	71.05	1,	Routine Maintenance
Klondike	486.0	497.5	2	4	8	9	9	9	9	9	8	8	10	7	10	10	10	5.5	70.55	1,	Routine Maintenance
Klondike	497.5	507.5	3	3	8	9	9	9	9	9	8	8	10	9	9	9	9	5.5	71.25	1,	Routine Maintenance
Klondike	507.5	510.5	3	6	8	9	9	9	9	9	7	7	10	6	9	9	9	5.5	68.70	1,	Routine Maintenance
Klondike	510.5	518.0	3	3	9	9	9	9	8	9	6	7	9	5	9	9	9	5.5	68.10	1,3,	Routine Maintenance-Correct Depressions and Long Patching
Klondike	518.0	530.0	3	2	9	9	8	10	9	9	9	9	10	9	9	9	9	6	75.25	1,	Routine Maintenance
Klondike	530.0	535.5	3	6	9	8	8	10	5	9	7	9	10	10	7	9	9	6	73.45	1,	Routine Maintenance
Klondike	535.5	540.0	2	7	9	9	8	7	8	7	7	5	7	5	9	9	9	5	61.55	2,3,	Spot Patching-Correct Depressions and Long Patching; North end of Stewart Bridge = km 535.5.
Klondike	540.0	546.0	2	5	9	9	9	8	8	8	8	7	8	6	9	9	9	5.5	67.80	1,	Routine Maintenance
Klondike	546.0	558.0	2	7	7	9	9	8	6	8	7	5	7	5	9	9	9	5.25	63.20	1,3,	Routine Maintenance-Correct Depressions and Long Patching

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Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Klondike	558.0	568.0	2	5	6	8	8	8	7	7	7	7	8	8	9	9	9	5.5	65.35	1,	Routine Maintenance; Monitor ravels at Km 560-562.
Klondike	568.0	576.0	2	5	8	8	6	8	9	8	7	6	8	7	9	9	9	5.75	66.65	1,	Routine Maintenance
Klondike	576.0	586.0	2	5	8	8	7	9	9	8	7	8	9	8	9	9	9	5.75	69.50	1,	Routine Maintenance
Klondike	586.0	596.0	2	7	8	9	7	8	8	8	7	7	9	7	9	9	9	5.5	66.65	1,	Routine Maintenance
Klondike	596.0	603.0	2	3	8	8	7	8	7	7	6	5	6	6	9	7	9	5	60.60	9,10,	Rip Up and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Klondike	603.0	616.0	2	8	6	7	6	8	7	7	6	4	6	6	9	7	9	5.25	59.35	9,10,	Rip Up and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Klondike	616.0	622.0	2	7	8	8	8	8	7	7	5	5	7	7	9	9	9	5.5	64.25	1,	Routine Maintenance
Klondike	622.0	626.0	2	7	7	8	7	7	6	7	6	5	6	7	9	8	9	5.25	61.10	8,10,	ReBST < 3 Years-Add 100-150 Gravel, ReBST < 2 Years; New gravel stockpile sources required for R&R < 3 years.
Klondike	626.0	636.0	2	6	8	9	9	8	8	8	6	7	8	7	9	8	9	5.5	67.25	1,	Routine Maintenance
Klondike	636.0	646.0	2	6	9	8	8	8	7	8	7	6	8	8	8	8	10	5.5	66.80	1,	Routine Maintenance
Klondike	646.0	657.0	2	6	8	9	8	7	7	8	6	5	8	8	9	9	10	5.5	65.65	1,	Routine Maintenance
Klondike	657.0	659.7	2	4	5	8	8	8	8	7	7	6	7	5	9	9	9	5	60.30	9,	Rip Up and ReBST < 2 Years
Klondike	659.7	663.2	3	8	6	7	9	8	8	7	6	6	6	7	9	9	9	5.5	64.25	1,	Routine Maintenance
Klondike	663.2	677.2	2	8	8	9	8	7	7	8	6	6	9	6	9	6	9	5.25	63.10	1,	Routine Maintenance
Klondike	677.2	687.2	2	8	8	7	8	7	7	8	5	6	8	6	9	7	9	5	60.75	1,	Routine Maintenance
Klondike	687.2	696.6	2	4	8	8	9	6	8	8	6	6	8	8	9	9	9	5.25	64.25	1,	Routine Maintenance
Klondike	696.6	706.6	2	4	9	8	7	8	9	8	8	8	8	7	9	9	9	5.5	67.65	1,	Routine Maintenance
Klondike	706.6	714.0	2	9	7	8	5	6	7	7	4	5	8	8	8	9	9	5.25	59.65	1,13,	Routine Maintenance-Reconstruct
Klondike	714.0	715.0	2	9	6	8	7	8	2	6	6	2	0	7	9	9	9	5	57.10	9,	Rip Up and ReBST < 2 Years; Front Street.
Klondike	715.0	716.0	2	8	8	8	6	8	2	6	6	5	8	6	9	9	9	4.75	57.25	9,	Rip Up and ReBST < 2 Years; To Ferry landing.
Haines	116.0	124.0	3	9	7	8	7	10	6	7	7	6	9	7	9	9	9	5.5	65.50	1,	Routine Maintenance
Haines	124.0	136.0	3	9	4	9	6	10	4	6	7	4	8	6	9	9	9	5	58.75	7,	ReBST < 2 Years; R&R 2002. Start R&R at km 122.
Haines	136.0	145.0	3	8	7	7	8	10	8	9	7	8	9	7	9	10	10	5.25	67.35	1,	Routine Maintenance
Haines	145.0	159.0	3	1	9	9	9	10	9	10	9	9	10	10	10	10	10	6.5	80.00	1,	Routine Maintenance
Haines	159.0	174.0	3	11	6	9	7	9	7	7	6	7	9	8	10	10	10	5.75	67.60	9,	Rip Up and ReBST < 2 Years; No rehab strategy recorded. Put in arbitrary (9). Ravelling from Takhanni to Dalton Post. R&R 3-5 in 2002. Check in spring for extent of ravelling. Have 7,000 BST at Motherall.
Haines	174.0	188.0	3	12	5	7	7	10	6	6	6	7	9	8	9	10	9	5.5	64.35	1,8,	Routine Maintenance-ReBST < 3 Years; Monitor and seal ravels. Review in spring.

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Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Haines	188.0	199.0	3	13	6	7	8	9	7	7	5	5	9	6	9	9	9	5	60.40	1,8,	Routine Maintenance-ReBST < 3 Years
Haines	199.0	211.0	3	14	8	5	6	10	4	7	5	7	9	7	9	9	9	5.25	62.25	1,	Routine Maintenance
Haines	211.0	221.0	3	14	8	7	7	8	6	8	5	6	9	6	9	9	9	5	61.05	1,	Routine Maintenance
Haines	221.0	230.0	3	15	8	6	6	10	5	7	5	7	9	7	9	10	10	5	62.05	1,	Routine Maintenance
Haines	230.0	240.0	3	15	8	6	6	10	5	8	6	7	9	6	10	10	10	5	62.55	1,	Routine Maintenance
Haines	240.0	246.0	3	15	7	6	7	9	6	8	5	4	8	5	9	9	9	4.75	57.95	10,	Add 100-150 Gravel, ReBST < 2 Years; Both 9 and 5 recorded for distortions, chose 5. Possible R&R 2001.
Campbell	28.0	31.0	3	5	9	10	9	10	6	8	6	8	8	9	10	10	10	5.75	72.85	1,	Routine Maintenance
Campbell	42.0	48.0	3	5	10	10	9	10	7	8	7	7	9	9	10	10	10	6	74.60	1,	Routine Maintenance
Campbell	169.0	174.0	3	3	10	10	9	10	10	9	10	7	8	5	10	10	10	5.5	71.85	1,	Routine Maintenance; Check BST class rating.
Campbell	380.1	381.1	3	1	10	10	10	10	10	10	10	9	9	9	10	10	10	6	78.90	1,	Routine Maintenance
Campbell	415.0	425.2	3	0	10	10	10	10	10	8	10	10	10	9	10	10	6	6.5	80.00	1,	Routine Maintenance
Campbell	425.2	430.0	3	10	8	9	9	9	8	8	5	5	5	5	10	10	10	5	63.70	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years; Extensive long patches 2001.
Campbell	430.0	441.0	3	9	8	10	7	10	7	9	5	7	9	9	10	10	10	5.75	71.50	1,	Routine Maintenance; Shoulder patch required.
Campbell	441.0	448.0	3	8	9	9	9	10	8	8	7	8	10	9	10	10	10	6	74.35	1,	Routine Maintenance; Majority of distresses at km 447-448.
Campbell	448.0	451.0	2	5	8	8	7	8	7	7	5	6	6	5	10	10	10	5.25	62.30	1,	Routine Maintenance
Campbell	451.0	456.4	2	1	9	10	9	10	9	8	9	9	9	9	10	10	10	5.75	74.85	1,	Routine Maintenance
Campbell	463.6	468.0	1	2	9	9	7	7	9	8	7	7	8	7	10	10	10	5.5	67.15	1,	Routine Maintenance
Campbell	468.0	469.0	1	6	5	9	8	9	7	8	5	7	9	9	10	10	10	5.25	66.10	7,9,	ReBST < 2 Years-Rip Up and ReBST < 2 Years; At Drury Creek. Ravelling starting to appear serious.
Campbell	469.0	479.0	1	5	4	9	7	8	8	7	5	6	7	8	9	9	8	5.5	63.45	7,	ReBST < 2 Years; Possible overlay 2002.
Campbell	505.0	508.5	2	1	9	10	8	10	9	9	7	9	9	9	10	10	10	5.75	74.50	1,	Routine Maintenance
Campbell	508.5	514.0	1	9	7	7	7	8	7	7	6	3	6	6	10	10	8	5	59.10	1,	Routine Maintenance
Campbell	514.0	519.0	2	9	6	9	6	6	6	6	6	4	4	7	9	9	9	5	57.60	10,	Add 100-150 Gravel, ReBST < 2 Years; Either rip-up or long patch. Poor section, not sure rip-up will solve much. Look at past history of section. Add gravel seems best or patch.
Campbell	519.0	529.0	2	10	7	9	6	4	5	6	4	3	4	7	9	9	9	4.75	54.10	10,	Add 100-150 Gravel, ReBST < 2 Years; Either long patch or add gravel.

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BST Ratings
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Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Campbell	565.6	567.7	2	2	7	10	8	10	6	9	9	9	9	10	10	10	10	5.75	73.85	1,	Routine Maintenance; Check age. Looks like overlay 2001.
Campbell	567.7	583.0	2	3	8	9	7	8	7	8	9	7	8	8	9	9	9	5.75	68.75	1,	Routine Maintenance
Dempster	0.0	1.0	1	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.5	82.50	1,	Routine Maintenance
Dempster	1.0	8.0	2	3	8	9	8	8	8	8	6	7	8	7	9	9	9	5.75	68.15	1,	Routine Maintenance
Canol	227.0	228.0	1	4	6	9	9	9	7	7	7	8	9	9	10	10	10	5.5	68.70	1,	Routine Maintenance; Starting to ravel - monitor in spring. Should be good for another year. Some ice blade damage.
Atlin	0.0	1.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6	80.00	1,	Routine Maintenance; New BST Construction 2001.
Tagish	0.0	2.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6	80.00	1,	Routine Maintenance; New BST construction 2001.
Tagish	16.5	17.8	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6	80.00	1,	Routine Maintenance; New BST construction 2001.
Tagish	20.0	24.0	2	14	7	7	6	8	5	6	6	6	8	7	8	9	9	4.75	57.90	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years
Tagish	24.0	35.0	2	14	7	8	7	8	5	6	6	4	6	7	7	9	9	5	58.95	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years
Tagish	35.0	37.5	2	14	6	7	7	8	8	6	7	5	7	8	9	9	9	5	60.45	1,9,	Routine Maintenance-Rip Up and ReBST < 2 Years
Tagish	37.5	44.0	2	8	8	9	7	9	9	8	6	6	8	9	8	9	9	5.25	66.65	1,	Routine Maintenance
Tagish	44.0	46.0	2	10	8	8	6	8	9	8	7	6	9	9	9	9	9	5.5	66.60	1,	Routine Maintenance
Tagish	46.0	54.0	2	1	9	8	8	8	9	8	9	7	8	10	10	10	10	5.5	70.20	1,	Routine Maintenance
Top of the Worl	0.0	4.0	2	3	8	9	9	9	9	9	8	8	8	9	9	9	9	5.75	72.50	1,	Routine Maintenance
Top of the Worl	4.0	14.2	2	3	8	8	8	6	7	8	8	5	5	9	9	9	9	5.25	64.10	1,5,	Routine Maintenance-Deep Patch
Top of the Worl	14.2	20.6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		Revert to Gravel; Not rated. Reverted to gravel
Top of the Worl	20.6	27.7	2	3	9	9	9	7	9	8	8	7	8	8	9	9	9	5.5	68.50	1,	Routine Maintenance
Top of the Worl	27.7	36.0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		Revert to Gravel; Not rated. Reverted to gravel.
Top of the Worl	36.0	38.0	2	4	9	9	9	8	7	7	8	7	10	9	9	9	9	5.5	68.70	1,	Routine Maintenance
Top of the Worl	38.0	50.0	2	4	8	9	9	4	5	6	9	4	5	9	9	9	9	5	60.30	5,	Deep Patch; Dig outs and spot strengthening required.
Top of the Worl	50.0	58.0	2	4	8	8	9	3	6	7	9	3	4	9	9	9	9	5	59.45	5,	Deep Patch; Dig outs and spot strengthening required.
Top of the Worl	58.0	68.0	2	4	8	7	8	7	7	7	8	5	6	8	9	9	9	5	61.85	1,	Routine Maintenance
Top of the Worl	68.0	75.0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		Revert to Gravel; Not rated. Reverted to gravel.
Top of the Worl	75.0	78.0	2	0	10	8	10	10	10	8	10	7	7	10	10	10	7	5.75	74.50	1,	Routine Maintenance; Drainage improvements, 75-225mm gravel added and packed prior to new BST 2001.

Table B
BST Ratings
Based on 2001 Evaluations - YTG Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoulders	Pot holes	Cracking	L.Tm Patch	CYr Patch	Distortion	Corrugation	Streak	Joint	Ride Score	BCI	Action	Comments
Top of the Worl	78.0	84.0	2	1	10	8	10	10	10	8	10	7	7	10	10	10	7	5.75	74.50	1,	Routine Maintenance
Top of the Worl	84.0	86.5	2	5	8	9	9	6	7	6	8	6	6	9	9	9	9	5	63.05	5,	Deep Patch; Digouts and spot strengthening required.
Top of the Worl	86.5	88.0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		Revert to Gravel; Not rated. Reverted to gravel.
Top of the Worl	88.0	93.0	2	5	6	8	8	3	8	4	8	4	5	9	9	9	9	4.25	53.00	5,	Deep Patch; No rehab strategy recorded. Arbitrarily chose (5).
Top of the Worl	93.0	94.0	2	6	7	9	9	4	6	5	9	3	5	9	9	10	10	4.5	56.70	5,	Deep Patch; Assess for drainage requirements.
Top of the Worl	94.0	96.0	2	3	6	9	9	5	6	6	8	3	5	8	10	10	10	5	59.45	5,6,	Deep Patch-Drainage Improvements
Top of the Worl	96.0	105.0	2	1	7	9	9	7	8	8	9	5	5	10	10	10	10	5.75	69.45	1,	Routine Maintenance
Silver Trail	0.0	10.0	2	6	8	9	8	8	7	8	7	6	8	7	9	9	9	5.5	66.40	1,	Routine Maintenance
Silver Trail	10.0	14.0	2	5	7	9	7	6	7	8	6	6	7	6	9	9	9	5.25	61.80	8,	ReBST < 3 Years
Silver Trail	14.0	20.0	2	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6	80.00	1,	Routine Maintenance; R&R 2001.
Silver Trail	20.0	28.0	2	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6	80.00	1,	Routine Maintenance
Silver Trail	28.0	32.0	2	5	8	9	8	8	8	9	8	7	8	5	9	9	9	5.25	65.60	2,3,	Spot Patching-Correct Depressions and Long Patching
Silver Trail	32.0	40.0	2	7	8	8	9	7	8	8	7	7	8	8	9	9	9	5.5	67.00	1,	Routine Maintenance
Silver Trail	40.0	50.0	2	7	8	8	9	7	8	8	7	7	8	7	9	9	9	5.5	66.40	1,	Routine Maintenance
Silver Trail	50.0	50.5	2	2	9	9	8	9	8	8	8	8	10	4	9	9	9	4.75	63.60	3,	Correct Depressions and Long Patching
Silver Trail	50.5	52.0	3	9	8	9	8	8	8	7	7	6	8	5	9	9	9	4.75	61.05	1,2,	Routine Maintenance-Spot Patching
Silver Trail	52.0	57.0	1	9	4	8	4	7	6	6	4	6	8	8	9	9	9	5.25	58.20	9,	Rip Up and ReBST < 2 Years
Takhini Hot Spri	0.0	5.2	2	4	6	8	7	9	7	7	6	6	8	8	9	9	9	5	62.35	9,	Rip Up and ReBST < 2 Years
Takhini Hot Spri	5.2	9.2	2	1	7	4	8	9	7	5	8	6	6	8	7	9	9	5.25	61.40	1,	Routine Maintenance; Poor cold mix patching work at km 8.2-9.2; patches at 5.9-6.6 & 7.2 bleeding badly.
Mitchell Road	0.0	11.0	2	5	7	8	8	8	8	7	6	3	4	4	10	10	10	4.75	58.20	3,	Correct Depressions and Long Patching
Stewart-Cassiar	0.0	3.3	2	2	9	7	8	8	9	8	8	8	8	8	9	9	9	5.25	67.00	2,	Spot Patching
Annie Lake	0.0	1.2	2	3	9	9	9	10	9	8	9	8	9	10	9	9	10	5.75	74.10	1,	Routine Maintenance
Judas Creek	0.0	8.0	1	3	8	10	9	9	8	7	8	7	8	8	10	10	10	5.5	69.60	1,	Routine Maintenance
Bonanza	0.0	2.8	2	1	9	9	9	8	9	8	10	8	8	9	10	9	10	6	73.70	1,	Routine Maintenance
Dome Road	0.0	3.0	2	7	6	8	4	4	5	6	4	4	4	6	9	9	9	4.5	50.75	9,	Rip Up and ReBST < 2 Years
Dome Road	3.0	7.0	2	1	7	9	8	5	7	7	8	8	8	9	9	9	9	5.25	64.20	1,	Routine Maintenance

Table E1 Proposed 7 Year MYOP – PWGSC Sections

ROAD	FROM	TO	CLASS	RIDE	2001	ATION(S)	LENGTH
PROGRAM 2002							
Alaska (97)	265.0	279.0	3	5.00	60.45	9,	14.0
Alaska (97)	279.0	284.0	3	5.25	64.75	1,	5.0
Alaska (97)	284.0	290.0	3	5.25	62.90	1,9,	6.0
Alaska (97)	290.0	295.5	3	5.25	65.30	1,	5.5
Alaska (97)	295.5	301.0	3	5.25	65.45	1,	5.5
Alaska (97)	458.0	468.0	3	5.25	61.85	1,9,	10.0
Deep Patching Recommended							
Alaska (97)	533.0	540.0	3	5.00	59.00	5,	7.0
Alaska (97)	540.0	548.0	3	4.50	53.75	5,	8.0
Not included since sections will be reconstructed before due date							
Alaska (97)	825.0	830.0	2	4.50	50.70	13,	5.0
Alaska (97)	830.0	839.5	2	4.50	49.45	13,	9.5
PROGRAM 2003							
Alaska (97)	256.0	258.0	3	5.25	61.80	1,	2.0
Alaska (97)	328.0	335.0	3	5.00	61.00	9,	7.0
Alaska (97)	520.0	528.0	3	5.25	62.60	1,	8.0
Alaska (97)	679.0	690.0	3	5.25	61.20	1,	11.0
Alaska (97)	823.0	825.0	3	5.30	61.60	1,	2.0
Alaska (97)	962.4	968.0	3	5.00	61.75	1,9,	5.6
Not included since sections will be reconstructed before due date							
Alaska (97)	556.0	571.5	3	5.00	55.20	13,	15.5
PROGRAM 2004							
Alaska (97)	495.0	501.2	3	5.00	62.10	9,	6.2
Alaska (97)	690.0	698.0	2	5.25	61.80	1,	8.0
Alaska (97)	698.0	711.7	2	5.25	61.45	1,	13.7
Alaska (97)	762.0	770.0	2	4.75	60.75	1,13,	8.0
Alaska (97)	770.0	774.0	2	4.75	61.25	1,	4.0
Not included since sections will be reconstructed before due date							
Alaska (97)	737.5	750.0	2	4.75	61.85	1,13,	12.5
PROGRAM 2005							
Alaska (97)	206.0	208.0	3	5.25	64.50	1,	2.0
Alaska (97)	210.0	215.0	3	5.25	64.50	1,	5.0
Alaska (97)	249.5	251.5	3	5.25	63.65	1,	2.0
Alaska (97)	251.5	254.0	3	5.25	64.75	1,	2.5
Alaska (97)	475.0	480.0	3	5.25	64.75	1,	5.0
Alaska (97)	480.0	482.7	3	5.25	63.90	1,	2.7
Alaska (97)	641.0	654.0	1	5.00	60.75	9,13,	13.0
Alaska (97)	654.0	665.0	1	4.75	60.90	1,9,13,	11.0
Alaska (97)	665.0	679.0	1	4.75	60.00	1,9,13,	14.0
PROGRAM 2006							
Alaska (97)	241.0	245.0	3	5.25	65.30	1,	4.0
Alaska (97)	468.0	475.0	3	5.25	65.00	1,	7.0
Alaska (97)	509.0	516.2	2	5.75	75.45	1,	7.2
Alaska (97)	516.2	520.0	2	4.75	69.40	1,	3.8
Alaska (97)	750.0	762.0	2	7.00	83.50	1,	12.0
Not included since sections will be reconstructed before due date							
Alaska (97)	950.0	957.0	3	5.50	66.00	1,	7.0
PROGRAM 2007							
Alaska (97)	232.0	238.5	3	5.00	65.00	9,	6.5
Alaska (97)	245.0	249.5	3	5.25	66.00	1,	4.5
Alaska (97)	357.0	359.0	3	5.00	66.50	1,	2.0
Alaska (97)	528.0	530.0	3	5.25	65.45	1,	2.0
Alaska (97)	530.0	533.0	3	5.25	65.70	5,	3.0

Table E2 Proposed 7 Year MYOP – YTG Sections

ROAD	FROM	TO	CLASS	RIDE	BCI 2001	ORIG YEAR PROGRAM	RECOMMEND-ATION(S)	LENGTH
PROGRAM 2002								
Alaska	1163.0	1170.0	3	5.75	68.50	> 2008	1,	7.0
Alaska	1170.0	1175.0	3	5.50	65.25	> 2008	1,	5.0
Alaska	1190.0	1192.0	3	5.00	59.80	2002	1,9,	2.0
Alaska	1192.0	1193.0	3	6.00	66.85	2008	1,	1.0
Alaska	1201.0	1209.0	3	6.00	66.10	2007	1,	8.0
Alaska	1209.0	1218.0	3	5.50	67.00	> 2008	1,	9.0
Alaska	1218.0	1222.0	3	5.00	63.15	2002	1,8,	4.0
Alaska	1553.0	1554.8	3	5.00	62.35	2002	1,	1.8
Alaska	1604.0	1615.0	1	5.00	60.65	2003	9,11,	11.0
Alaska	1620.0	1628.0	1	5.00	61.05	2004	7,	8.0
Klondike	398.9	408.0	2	5.00	59.20	2002	5,9,	9.1
Klondike	408.0	411.1	2	5.00	59.00	2002	5,9,	3.1
Haines	122.0	124.0	3	6.00	68.00	2005	1,	2.0
Haines	124.0	136.0	3	5.00	58.75	2002	7,	12.0
Haines	136.0	137.0	3	5.00	66.10	2003	1,	1.0
Haines	159.0	165.0	3	6.00	68.85	2006	9,	6.0
Haines	240.0	246.0	3	5.00	59.20	2002	10,	6.0
Campbell	425.2	430.0	3	5.00	63.70	2002	1,9,	4.8
Campbell	430.0	431.1	3	5.75	71.50	> 2008	1,	1.1
Campbell	468.0	469.0	1	5.00	64.85	2007	7,9,	1.0
Campbell	469.0	479.0	1	6.00	65.95	2008	7,	10.0
Silver Trail	52.0	57.0	1	5.00	56.95	2002	9,	5.0
Handled by patching crews								
Alaska	1831.0	1845.0	3	5.00	62.35	2002	1,9,	14.0
Alaska	1852.0	1862.0	3	5.00	61.45	2002	1,3,	10.0
Alaska	1871.4	1873.0	3	4.00	56.00	2002	3,	1.6
Alaska	1881.0	1886.8	3	4.00	54.00	2002	3,	5.8
Alaska	1893.0	1905.0	3	4.00	52.50	2002	3,	12.0
Alaska	1905.0	1914.0	3	5.00	60.60	2002	3,	9.0
Alaska	1914.0	1921.0	3	5.00	61.40	2002	3,	7.0
Alaska	1921.0	1932.0	3	5.00	61.90	2002	3,	11.0
Alaska	1942.5	1949.0	3	4.00	52.30	2002	9,	6.5
Alaska	1949.0	1960.0	3	4.00	52.70	2002	9,	11.0
Alaska	1960.0	1966.0	3	5.00	60.00	2002	3,9,	6.0
Not included as sections will be reconstructed								
Alaska	1558.0	1570.0	1	5.00	51.85	2002	1,	12.0
Alaska	1570.0	1573.0	1	5.00	61.25	2004	1,	3.0
Alaska	1574.0	1580.0	1	5.00	58.90	2002	9,13,	6.0
Alaska	1675.0	1680.0	1	4.00	50.25	2002	13,	5.0
Alaska	1680.0	1684.0	1	5.00	60.70	2002	13,	4.0
Alaska	1726.0	1734.0	1	4.00	46.05	2002	9,13,	8.0
Alaska	1734.0	1743.0	1	5.00	60.45	2002	1,13,	9.0
Alaska	1743.0	1754.0	1	5.00	61.55	2002	1,13,	11.0
Alaska	1754.0	1758.0	1	5.00	59.70	2002	1,13,	4.0
Alaska	1768.0	1773.0	1	5.00	60.85	2002	1,13,	5.0
Alaska	1773.0	1780.0	1	4.00	54.30	2002	1,13,	7.0
Alaska	1780.0	1787.5	1	4.00	54.10	2002	1,13,	7.5

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ROAD	FROM	TO	CLASS	RIDE	BCI 2001	ORIG YEAR PROGRAM	RECOMMEND-ATION(S)	LENGTH
PROGRAM 2003								
Alaska	1292.0	1300.0	3	5.00	63.05	2002	1,3,	8.0
Klondike	72.0	75.0	3	5.00	63.00	2002	1,8,	3.0
Klondike	248.0	251.0	3	5.00	58.60	2002	2,	3.0
Klondike	398.0	398.9	2	5.00	59.20	2002	5,9,	0.9
Klondike	411.1	418.0	2	5.00	59.00	2002	5,9,	6.9
Klondike	603.0	616.0	2	5.00	58.10	2002	9,10,	13.0
Klondike	622.0	626.0	2	5.00	59.85	2003	8,10,	4.0
Klondike	657.0	659.7	2	5.00	60.30	2003	9,	2.7
Klondike	706.6	714.0	2	5.00	58.40	2002	1,13,	7.4
Klondike	714.0	715.0	2	5.00	57.10	2002	9,	1.0
Klondike	715.0	716.0	2	5.00	58.50	2002	9,	1.0
Haines	137.0	145.0	3	5.00	66.10	2003	1,	8.0
Haines	188.0	199.0	3	5.00	60.40	2002	1,8,	11.0
Haines	199.0	211.0	3	5.00	61.00	2002	1,	12.0
Haines	211.0	221.0	3	5.00	61.05	2002	1,	10.0
Haines	221.0	230.0	3	5.00	62.05	2002	1,	9.0
Haines	230.0	240.0	3	5.00	62.55	2002	1,	10.0
Campbell	508.5	514.0	1	5.00	59.10	2002	1,	5.5
Campbell	514.0	519.0	2	5.00	57.60	2002	10,	5.0
Campbell	519.0	529.0	2	5.00	55.35	2002	10,	10.0
Tagish	20.0	24.0	2	5.00	59.15	2002	1,9,	4.0
Tagish	24.0	35.0	2	5.00	58.95	2002	1,9,	11.0
Tagish	35.0	37.5	2	5.00	60.45	2003	1,9,	2.5
Top of the World	38.0	50.0	2	5.00	60.30	2003	5,	12.0
Top of the World	50.0	58.0	2	5.00	59.45	2002	5,	8.0
Top of the World	88.0	93.0	2	4.00	51.75	2002	5,	5.0
Top of the World	93.0	94.0	2	4.00	54.20	2002	5,	1.0
Top of the World	94.0	96.0	2	5.00	59.45	2002	5,6,	2.0
Silver Trail	50.5	52.0	3	5.00	62.30	2002	1,2,	1.5
Takhini Hot	5.2	9.2	2	5.00	60.15	2003	1,	4.0
Mitchell Road	0.0	11.0	2	5.00	59.45	2002	3,	11.0
Dome Road	0.0	3.0	2	4.00	48.25	2002	9,	3.0
Handled by patching crews								
Alaska	1506.0	1510.0	3	4.00	56.10	2002	1,3,	4.0
Alaska	1510.0	1516.0	3	5.00	62.80	2002	1,	6.0
Alaska	1520.0	1522.5	3	5.00	63.40	2002	1,	2.5
Alaska	1544.0	1553.0	3	5.00	62.35	2002	1,	9.0
Alaska	1554.8	1556.8	3	5.00	62.35	2002	1,	2.0
Alaska	1556.8	1558.0	3	5.00	62.35	2002	1,	1.2
Not included as sections will be reconstructed								
Alaska	1698.0	1704.4	1	6.00	67.15	2003	1,13,	6.4
Alaska	1704.4	1706.7	1	5.00	65.60	2003	1,13,	2.3
Alaska	1706.7	1708.0	1	5.00	65.45	2003	1,13,	1.3
Alaska	1708.0	1713.7	1	5.00	66.20	2003	1,13,	5.7
Alaska	1713.7	1718.0	1	5.00	63.25	2003	1,13,	4.3
Alaska	1718.0	1726.0	1	5.00	62.55	2003	1,13,	8.0
PROGRAM 2004								
Klondike	448.0	463.0	2	5.00	60.70	2004	1,3,	15.0
Klondike	596.0	603.0	2	5.00	60.60	2004	9,10,	7.0
Klondike	677.2	687.2	2	5.00	60.75	2004	1,	10.0
Haines	174.0	188.0	3	6.00	66.85	2004	1,8,	14.0
Campbell	448.0	451.0	2	5.00	61.05	2004	1,	3.0
Silver Trail	10.0	14.0	2	5.00	60.55	2004	8,	4.0
Not included as sections will be reconstructed								
Alaska	1573.0	1574.0	1	5.00	61.25	2004	1,	1.0

ROAD	FROM	TO	CLASS	RIDE	BCI 2001	ORIG YEAR PROGRAM	RECOMMEND-ATION(S)	LENGTH
PROGRAM 2005								
Klondike	535.5	540.0	2	5.00	61.55	2005	2,3,	4.5
Klondike	546.0	558.0	2	5.00	61.95	2005	1,3,	12.0
Klondike	663.2	677.2	2	5.00	61.85	2005	1,	14.0
Haines	116.0	122.0	3	6.00	68.00	2005	1,	6.0
Top of the World	58.0	68.0	2	5.00	61.85	2005	1,	10.0
Takhini Hot	0.0	5.2	2	5.00	62.35	2005	9,	5.2
PROGRAM 2006								
Klondike	232.1	233.0	3	5.00	64.50	2006	7,	0.9
Klondike	328.0	330.0	3	6.00	64.60	2006	1,9,	2.0
Klondike	330.0	340.0	3	6.00	64.70	2006	1,2,	10.0
Klondike	687.2	696.6	2	5.00	63.00	2006	1,	9.4
Haines	165.0	174.0	3	6.00	68.85	2006	9,	9.0
Top of the World	4.0	14.2	2	5.00	62.85	2006	1,5,	10.2
Top of the World	84.0	86.5	2	5.00	63.05	2006	5,	2.5
Dome Road	3.0	7.0	2	5.00	62.95	2006	1,	4.0
PROGRAM 2007								
Klondike	75.0	79.0	3	5.00	65.50	2007	1,8,	4.0
Tagish	37.5	44.0	2	5.00	65.40	2007	1,	6.5
Silver Trail	28.0	32.0	2	5.00	64.35	2007	2,3,	4.0
Silver Trail	50.0	50.5	2	5.00	64.85	2007	3,	0.5
PROGRAM 2008								
Alaska	1193.0	1201.0	3	6.00	66.85	2008	1,	8.0
Alaska	1518.0	1520.0	3	5.00	66.00	2008	1,	2.0
Alaska	1599.5	1604.0	3	5.00	66.15	2008	1,	4.5
Klondike	64.0	65.0	3	5.00	65.90	2008	1,	1.0
Klondike	65.0	72.0	3	5.00	65.90	2008	1,	7.0
Klondike	149.0	157.0	3	5.00	66.45	2008	1,	8.0
Klondike	431.0	438.0	2	5.00	66.05	2008	1,	7.0
Klondike	616.0	622.0	2	6.00	66.75	2008	1,	6.0
Stewart-Cassiar	0.0	3.3	2	5.00	65.75	2008	2,	3.3
Not included as sections will be reconstructed								
Alaska	1580.0	1585.0	1	5.00	65.85	2008	1,	5.0

APPENDIX C PERFORMANCE EQUATIONS DEVELOPED FOR BST STUDY

CLASS 1:

1989: BCI = 69.0 x (@EXP(-0.1 x AGE) + 2.35 x AGE
1990: BCI = 67.7 x (@EXP(-0.1 x AGE) + 2.05 x AGE
1991: BCI = 65.5 x (@EXP(-0.1 x AGE) + 2.05 x AGE
1993 – except Alaska Highway 1635-1966:
BCI = 71.0 x (@EXP(-0.1 x AGE) + 2.35 x AGE
1993 – Alaska Highway 1635-1966:
BCI = 67.0 x (@EXP(-0.12 x AGE) + 2.35 x AGE
1994 – except Alaska Highway 1635-1966:
BCI = $73.700 – 6.4487 \times AGE + 0.6282 \times AGE^2 – 0.0245 \times AGE^3$
R^2 = 1.0
1994 – Alaska Highway 1635-1966:
BCI = $69.335 – 6.3297 \times AGE + 0.5326 \times AGE^2 – 0.0208 \times AGE^3$
R^2 = 1.0
1996 – except Alaska Highway 1635-1966:
BCI = $73.700 – 6.4487 \times AGE + 0.6282 \times AGE^2 – 0.0245 \times AGE^3$
1996 – Alaska Highway 1635-1966:
BCI = $69.0 – 6.3291 \times AGE + 0.5326 \times AGE^2 – 0.0208 \times AGE^3$
1997 – except Alaska Highway 1635-1966:
BCI = $73.700 – 6.4487 \times AGE + 0.6282 \times AGE^2 – 0.0245 \times AGE^3$
1997 – Alaska Highway 1635-1966:
BCI = $69.355 – 6.3291 \times AGE + 0.5326 \times AGE^2 – 0.0208 \times AGE^3$
1998 & 1999 – except Alaska Highway 1635-1966:
BCI = $70.614 – 5.235 \times AGE + 0.9352 \times AGE^2 – 0.0635 \times AGE^3$
1998 & 1999 – Alaska Highway 1635-1966:
BCI = $71.01 – 7.789 \times AGE + 1.1996 \times AGE^2 – 0.0649 \times AGE^3$
2000 – except Alaska Highway 1635-1966:
BCI = $71.115 – 5.3076 \times AGE + 1.0219 \times AGE^2 – 0.0719 \times AGE^3$
2000 – Alaska Highway 1635-1966:
BCI = $71.04 – 7.789 \times AGE + 1.1996 \times AGE^2 – 0.0649 \times AGE^3$
2001 – except Alaska Highway 1635-1966:
BCI = $71.653 – 5.6336 \times AGE + 1.0543 \times AGE^2 – 0.0704 \times AGE^3$
R^2 = 0.9833
2001 – Alaska Highway 1635-1966:
BCI = $70.653 – 7.0622 \times AGE + 1.0466 \times AGE^2 – 0.0531 \times AGE^3$
R^2 = 0.9731

CLASS 2:

1989: BCI = $80.0 \times (@EXP(-0.1155 \times AGE) + 1.3 \times AGE^{1.00}$
1990: BCI = $79.3 \times (@EXP(-0.1090 \times AGE) + 1.5 \times AGE^{1.10}$
1991: BCI = $73.8 \times (@EXP(-0.1060 \times AGE) + 1.5 \times AGE^{1.15}$
1993 – except Alaska Highway 450-1008:

BCI = 73.8 x (@EXP(-0.1060 x AGE) + 1.5 x $AGE^{1.15}$

1993 – Alaska Highway 1635-1966:

BCI = 67.0 x (@EXP(-0.1060 x AGE) + 2.35 x AGE

1994 – except Alaska Highway 450-1008:

BCI = 71.9831 – 3.9727 x AGE + 0.4477 x AGE^2 – 0.0231 x AGE^3

R^2 = 1.0 Cubic fit

1994 – except Alaska Highway 450-1008:

BCI = 74.3197 – 7.5189 x AGE + 0.9241 x AGE^2 – 0.0412 x AGE^3

R^2 = 0.969 Markov fit

1994 – Alaska Highway 450-1008:

BCI = 69.2711 – 7.0826 x AGE + 1.0627 x AGE^2 – 0.0532 x AGE^3

1996 – except Alaska Highway 450-1008 & Silver Trail:

BCI = 73.2114 – 4.111 x AGE + 0.3215 x AGE^2 – 0.009 x AGE^3

1996 – Alaska Highway 450-1008:

BCI = 68.4952 – 4.884 x AGE + 0.3635 x AGE^2 – 0.009 x AGE^3

1996 – Silver Trail:

BCI = 73.588 – 3.9144 x AGE + 2.1 x AGE^2 – 0.09233 x AGE^3

1997 – except Alaska Highway 450-1008 & Silver Trail:

BCI = 74.35 – 4.111 x AGE + 0.3215 x AGE^2 – 0.009 x AGE^3

1997 – Alaska Highway 450-1008:

BCI = 68.4952 – 4.884 x AGE + 0.3635 x AGE^2 – 0.009 x AGE^3

1997 – Silver Trail:

BCI = 75.883 – 2.3497 x AGE – 0.1444 x AGE^2

1998 & 1999 – except Alaska Highway 450-1008 & Silver Trail:

BCI = 74.35 – 4.111 x AGE + 0.3215 x AGE^2 – 0.009 x AGE^3

1998 & 1999 – Alaska Highway 450-1008:

BCI = 68.4952 – 4.884 x AGE + 0.3635 x AGE^2 – 0.009 x AGE^3

1998 & 1999 – Silver Trail:

BCI = 75.883 – 2.3497 x AGE – 0.1444 x AGE^2

2000 – except Alaska Highway 450-1008:

BCI = 73.141 – 3.4797 x AGE + 0.3543 x AGE^2 – 0.01644 x AGE^3

2000 – Alaska Highway 450-1008:

BCI = 69.888 – 7.3756 x AGE + 1.6267 x AGE^2 – 0.1237 x AGE^3

2001 – except Alaska Highway 450-1008:

BCI = 74.148 – 4.4534 x AGE + 0.6052 x AGE^2 – 0.0342 x AGE^3

R^2 = 0.988

2001 – Alaska Highway 450-1008:

BCI = 69.849 – 7.98 x AGE + 1.8256 x AGE^2 – 0.1541 x AGE^3

R^2 = 0.9954

CLASS 3:

1989: BCI = 80.3 x (@EXP(-0.097 x AGE) + 2.45 x AGE

1990: BCI = 79.0 x (@EXP(-0.069 x AGE) + 2.1 x AGE

1991: BCI = 76.0 x (@EXP(-0.075 x AGE) + 2.3 x AGE

1993 – except Haines Road:

BCI = EXP(4.2986-0.1802 x AGE)

1993 – Haines Road:

BCI = EXP(4.4269-0.2947 x AGE)

1994 – except Haines Road:

BCI = 74.0909 – 1.2634 x AGE R^2 = 0.230

1994 – Haines Road:

BCI = 82.9416 – 2.1407 x AGE R^2 = 0.483

1995 – except Haines Road:

BCI = 73.7324 – 1.05155 x AGE R^2 = 0.230

1995 – Haines Road:

BCI = 82.4568 – 1.8983 x AGE R^2 = 0.483

1996 – except Haines Road & Alaska Highway 1008-1470:

BCI = 72.559 – 1.0468 x AGE R^2 = 0.93

1996 – Alaska Highway 1008-1470:

BCI = 76.073 – 1.8983 x AGE

1996 – Haines Road:

BCI = 82.4568 – 1.8983 x AGE R^2 = 0.9757

1997 – except Haines Road & Alaska Highway 1008-1470:

BCI = 72.559 – 1.0468 x AGE R^2 = 0.93

1997 – Alaska Highway 1008-1470:

BCI = 76.442 – 1.2812 x AGE

1997 – Haines Road:

BCI = 82.084 – 1.723 x AGE R^2 = 0.9757

1998 – except Haines Road & Alaska Highway 1470-1635:

BCI = 73.149 – 0.8749 x AGE R^2 = 0.93

1998 – Alaska Highway 1470-1635:

BCI = $73.211 – 4.3302 \times AGE + 0.5731 \times AGE^2 – 0.025 \times AGE^3$

1998 – Haines Road:

BCI = 81.577 – 1.534 x AGE R^2 = 0.9757

1999 – except Haines Rd, Campbell Hwy, Alaska Hwy 0-550, 1470-1635 & 1800-1966:

BCI = $76.445 – 2.3445 \times AGE + 0.1944 \times AGE^2 – 0.0066 \times AGE^3$

1999 – Campbell Highway & Alaska Highway 0-550, 1470-1635 & 1800-1966:

BCI = $73.361 – 3.3087 \times AGE + 0.418 \times AGE^2 – 0.0188 \times AGE^3$

1999 – Haines Road:

BCI = $83.975 – 3.8839 \times AGE + 0.3899 \times AGE^2 – 0.0151 \times AGE^3$

2000 – except Haines Rd, Campbell Hwy, Alaska Hwy 0-550, 1470-1635 & 1800-1966:

BCI = $76.445 – 2.3445 \times AGE + 0.1944 \times AGE^2 – 0.0066 \times AGE^3$

2000 – Campbell Highway & Alaska Highway 0-550, 1470-1635 & 1800-1966:

BCI = $73.361 – 3.3087 \times AGE + 0.418 \times AGE^2 – 0.0188 \times AGE^3$

2000 – Haines Road:

BCI = $83.641 – 3.6317 \times AGE + 0.3574 \times AGE^2 – 0.0141 \times AGE^3$

2001 – except Haines Rd, Campbell Hwy, Alaska Hwy 0-550, 1470-1635 & 1800-1966:

BCI = $76.553 – 1.9027 \times AGE + 0.1138 \times AGE^2 – 0.0029 \times AGE^3$

R^2 = 0.9899

2001 – Campbell Highway & Alaska Highway 0-550, 1470-1635 & 1800-1966:

BCI = $74.043 – 4.0155 \times AGE + 0.5688 \times AGE^2 – 0.0265 \times AGE^3$

R^2 = 0.9779

2001 – Haines Road:

BCI = $83.608 – 3.6957 \times AGE + 0.3741 \times AGE^2 – 0.0153 \times AGE^3$

R^2 = 0.9715

MAINTENANCE COSTS:

CLASS 1:

Maintenance costs per km annually: 17,350 – 175 x BCI

CLASS 2 & 3:

Maintenance costs per km annually: 12,500 – 110 x BCI

USER COSTS:

User costs = $((0.632 – 0.105 \times (-0.7865+0.09363 \times BCI)^{0.36} + 0.000009 \times (-0.7865 + 0.09323 \times BCI)^{3.15}) \times 1.04^4)$

RCI – BCI RELATIONSHIP:

CLASS 1:

RCI = 0.10766 + 0.0796 x BCI

CLASS 2:

RCI = 0.2464 + 0.0724 x BCI

CLASS 3:

RCI = -0.028 + 0.08216 x BCI

PAVEMENTS:

RCI = -0.7865 + 0.09363 x PCI