YUKON BST MANAGEMENT SYSTEM

2002 CONDITION REPORT

2002 UPDATE OF BST

MANAGEMENT SYSTEMS

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EXECUTIVE SUMMARY

The purpose of this report is to update *"A BST Management System for Yukon Highways"* based on field data collected in the summer of 2002. 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 are summarized as follows:

ROAD SURFACE INVENTORY

	Data 2002	
	Sections	Kilometres
Class 1	45	339.8
Class 2	98	658.1
Class 3	238	1,548.2
Pavement	56	420.0
TOTALS	437	2,966.1

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, ravelling, distortions, bleeding or ride score are rated as poor or very poor. These are all candidates for rehabilitation in 2003. It is anticipated that all 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 2002 data.

SECTION ANALYSIS – Potential Projects Year 2003

HIGHWAY – BSTs					Potential Rehabilitation Projects (kms)
Alaska Highway	km	133	-	458	48.5
Alaska Highway	km	458	-	571	59.2
Alaska Highway	km	571	-	968	133.9
Alaska Highway	km	1008	-	1506	20.5
Alaska Highway	km	1506	-	1665	18.5
Alaska Highway	km	1665	-	1966	139.7

HIGHWAY – BSTs	Potential Rehabilitation Projects (kms)
Klondike Highway km 24 - 159	4.0
Klondike Highway km 248 - 716	152.0
Haines Road	12.0
Campbell Highway	20.5
Top of the World Highway	47.2
Other YTG Highways	49.7

All sections have fewer potential rehabilitation projects at the section level of analysis than were observed in the 2001 report, except the northern part of the PWGSC Alaska Highway and the Top of the World Highway.

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 2003 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 2003

HIGHWAY – BSTs	Potential Rehabilitation Projects (kms)
Alaska Highway km 133 - 458	0.0
Alaska Highway km 458 - 571	18.5
Alaska Highway km 571 - 968	0.0
Alaska Highway km 1008 - 1506	18.0
Alaska Highway km 1506 - 1665	0.0
Alaska Highway km 1665 - 1966	34.5
Klondike Highway km 24 - 159	0.0
Klondike Highway km 248 - 716	52.9
Haines Road	0.0

HIGHWAY – BSTs	Potential Rehabilitation Projects (kms)
Campbell Highway	1.1
Top of the World Highway	0.0
Other YTG Highways	2.4

The section of the Alaska Highway north of km 1750 and the Top of the World Highway will require a significant of BST patching. The requirements for this work are not included in the above table as patching crews perform this work rather than the BST program.

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)	7 years
CLASS 1:	(north of Haines Junction)	2 years
CLASS 2:	(except between Watson Lake and Fort Nelson)	8 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)	12 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 556 to 571 in 2007
Km 763 to 775 in 2006
Km 825 to 839.5 in 2003

The following sections will be upgraded to pavement in the following years:

Km 319 to 359 in 2007
Km 458 to 482 in 2005

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

Alaska Highway: Km 1556.4 to 1588
Km 1604 to 1628
Km 1630 to 1635
Km 1674 to 1684
Km 1698 to 1758
Km 1768 to 1787.5

The first year of the analysis was based on the preliminary 2003 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

	2003	2004	2005	2006	2007
CLASS 1	$89	$0	$37	$147	$116
CLASS 2	$0	$265	$134	$0	$0
CLASS 3	$280	$1,187	$927	$0	$336
TOTAL	$369	$1,452	$1,098	$147	$452

BST REHABILITATION MYOP BUDGET (,000) – YTG

	2003	2004	2005	2006	2007
CLASS 1	$0	$0	$0	$0	$0
CLASS 2	$1,307	$1,297	$1,214	$645	$745
CLASS 3	$1,188	$1,156	$2,321	$0	$383
TOTAL	$2,495	$2,453	$3,535	$645	$1,128

Previous years' analyses indicated a significant reduction in PWGSC's requirements starting in 2002. However, the relatively rigid five-year budget allocation did not allow for flexibility to allocate resources where new problems may have arisen, and consequently, there is a large budget requirement in 2004, largely due to problem areas due for rehabilitation in 2003, but deferred to 2004 and 2005 due to the budget constraints of the preliminary program.

For the Yukon sections, care must be taken not to reduce the funding for years after 2005. The budget levels for 2006 and later are based on the assumption that $2.4 million and $3.5 million in rehabilitation would be carried out in 2004 and 2005, respectively.

Previous models had predicted decreases in funding from the $4 million requirements of the early to mid 1990s for 1999 and beyond and these predictions have in fact occurred as average rehabilitation budgets are now in the $3.0 million range.

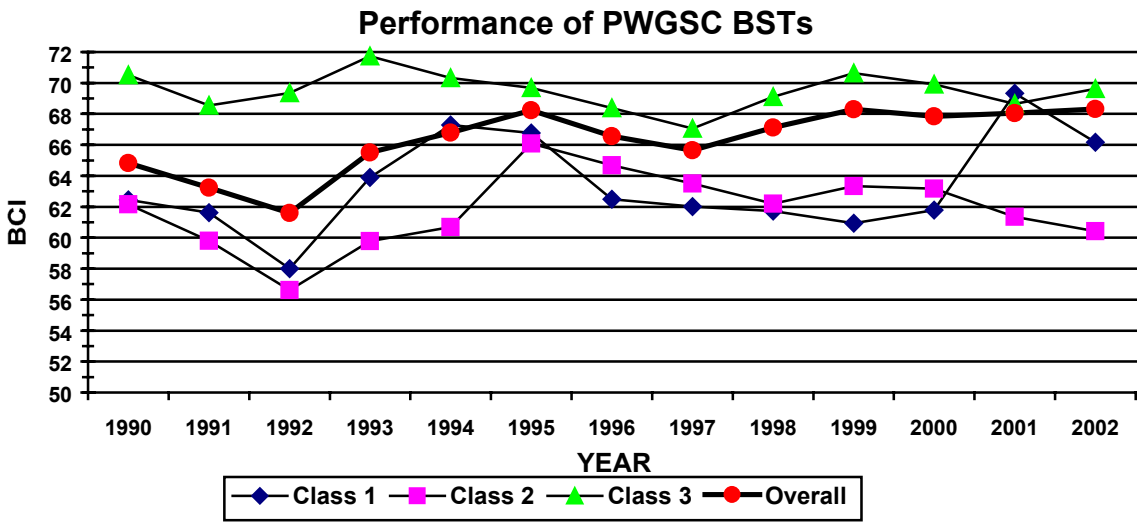
OBSERVATIONS

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:

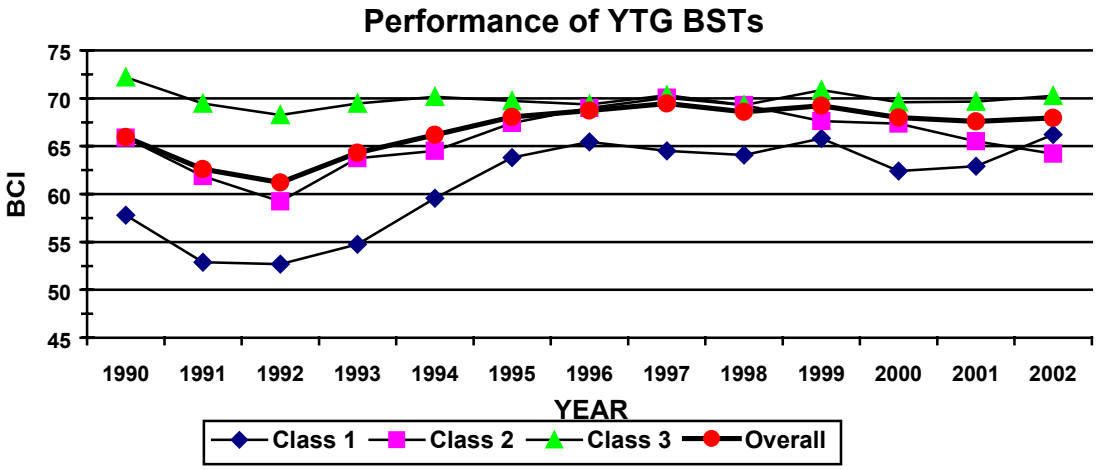
		Age	Rating
Alaska Highway	Km 279.0 to 284.0	0	5
Alaska Highway	Km 354.5 to 357.0	1	5
Alaska Highway	Km 516.2 to 520.0	1	5
Alaska Highway	Km 625.0 to 635.0	1	6
Alaska Highway	Km 1163.0 to 1175.5	0	5
Alaska Highway	Km 1615.0 to 1620.0	1	5
Klondike Highway	Km 107.0 to 113.6	1	6

2. The level of service on PWGSC sections of the Alaska Highway has remained relatively constant since 1999. The performance of the YTG system has decreased only slightly from the 1999 and 2000 ratings.

PERFORMANCE OF PWGSC BSTs



PERFORMANCE OF YTG BSTs



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

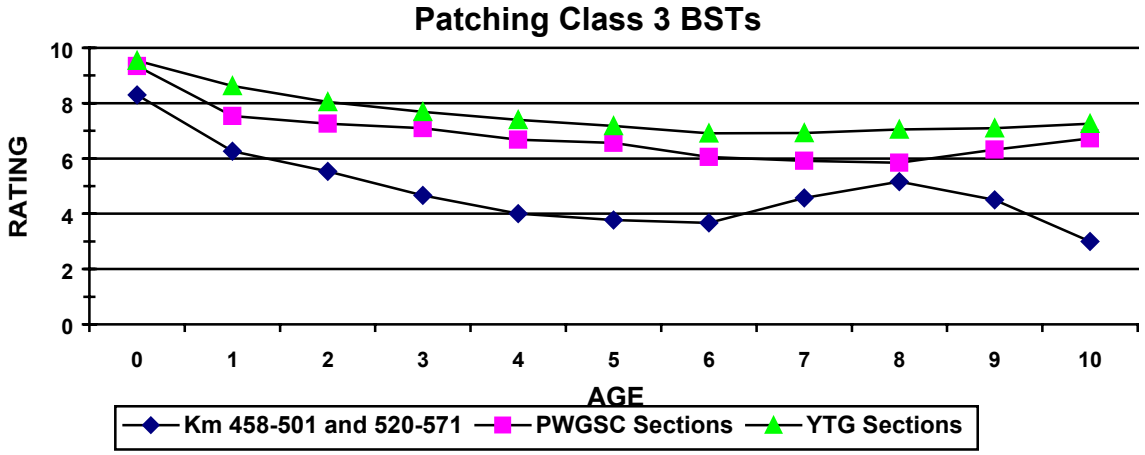
i. The replacement of Class 1 by Class 3 BSTs.

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

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

3. Kilometres 458 to 571 show significant patching distresses. The following figure 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.

PATCHING CLASS 3 BSTs

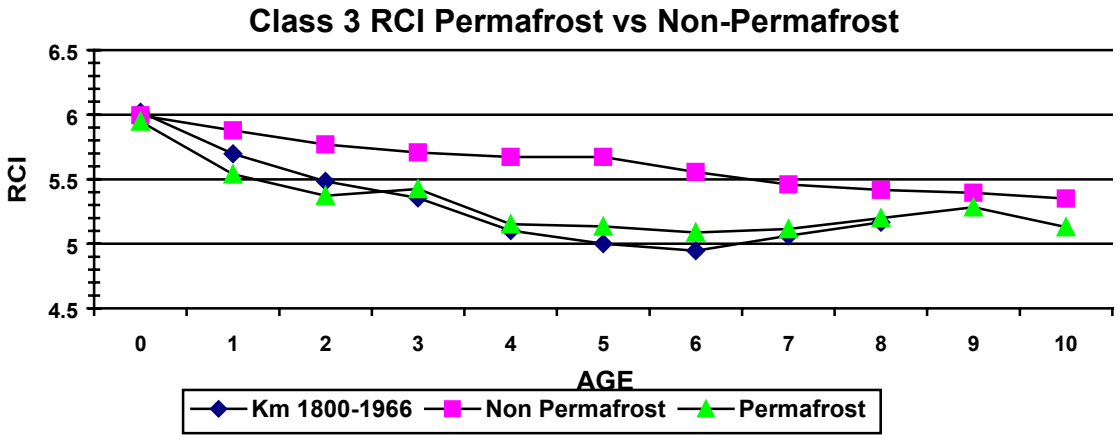


4. There is a significant amount of reconstruction to Class 3 standards on permafrost terrain. The performance of these Class 3 BSTs is disappointing given the additional funds expended in an attempt to limit distortions and loss of ride score due to permafrost degradation.

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. The Alaska Highway data between Km 1800 and 1968 are treated separately as they have shown signs of more severe distress.

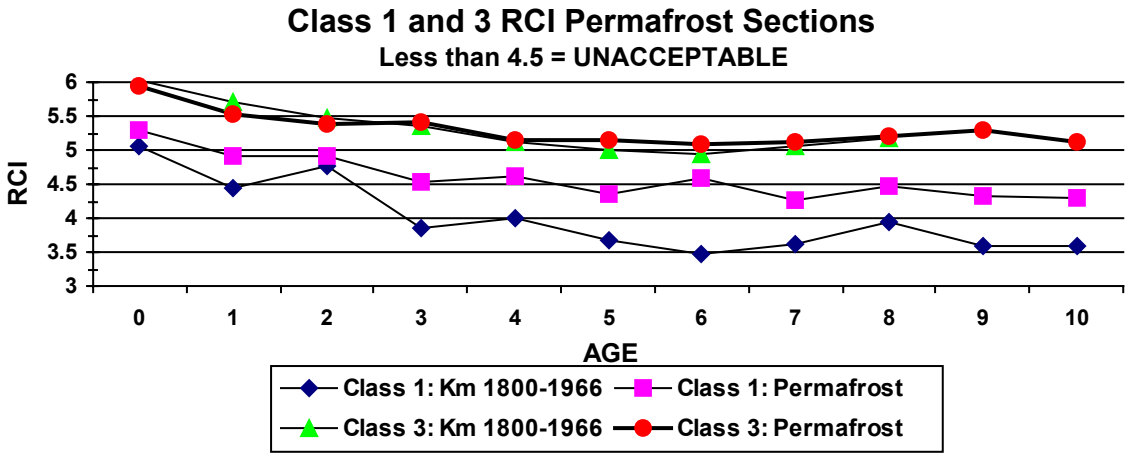
The following figure shows the differences in the ride score of Class 3 BSTs on permafrost and non-permafrost terrain. Although the ride score on the permafrost sections deteriorates more rapidly than on the non-permafrost sections, the ride score is still above 5 (acceptable limit) after 10 years even 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.

CLASS 1 AND 3 RCI 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 alternative for northern highways. Their dust free surfaces provide an improvement over gravel surfaces but without the costly capital outlays of 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 surface 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 2001 in a series of "Update Reports". The purpose of this report is to update the reports based on data collected in the fall of 2002.

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 a HF-250S (a high float emulsion) with a typical application rate of 2.8 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. Staged 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 2002 inventory and total inventory to date is summarized as follows:

ROAD SURFACE INVENTORY

	Data 2002		Data 1984-2002	
	Sections	Kilometres	Sections	Kilometres
Class 1	45	339.8	1,062	9,426.2
Class 2	98	658.1	1,487	11,794.7
Class 3	238	1,548.2	2,504	18,047.4
Pavement	56	420.0	823	6,340.6
TOTALS	437	2,966.1	5,876	45,608.9

Listings of the 2002 data for all BST sections are found in Tables A and B.

2. BST MANAGEMENT SYSTEM

The key to the BST Management System is the collection and analysis of BST distress information. A sample copy of the form used to record the examination of each section is included in Appendix C.

BST sections (usually 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 descriptions of the distress severities and extents used for rating BSTs appears 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 the following year's program after the current year BST patching has been completed, the surfaces have stabilized after the spring thaw, and as well, this time frame 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 DESCRIPTIONS

Ravelling the loss of cover aggregate from the BST surface through the action of traffic.

Bleeding an excess of asphalt that has accumulated on the BST surface. When severe, this presents a safety concern as vehicles have a tendency to hydroplane on wet bleeding surfaces.

Rutting the formation of depressions in the wheel path. When severe, water ponds in the ruts and steering is affected creating safety problems.

Subgrade Failure bearing capacity failures in the layers underlying the BST and base.

Shoulder Disintegration the disintegration of the BST surface starting at the shoulder edge and progressively working inwards.

Potholes shallow failures in BST or base course as opposed to the subgrade failures mentioned above which are more deeply seated.

Cracking transverse, longitudinal or alligator cracking in the BST.

Patching the amount of patching already carried out on the section of road over the previous years. A rating of 10 indicates that no patching has been done.

Current Year Patching the amount of patching that has been performed on the section of road in the current year only.

Distortions bumps caused by differential settlements of the subgrade. These are most common on muskegs or in permafrost areas.

Corrugations uneven aggregate embedding leading to a washboard surface.

Streaking longitudinal streaks in the BST where there is uneven embedding of the aggregate in the longitudinal direction.

Joints the transverse and longitudinal construction edges where each application of BST has been laid.

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 1000 sq. cm	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 sections with free asphalt on surface, has wet 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, minor narrowing	Lane width reduced
POTHOLES	Few minor potholes	Few deep potholes	Intermittent potholes	Frequent potholes	Extensive potholes
CRACKING	Few transverse or longitudinal cracks	Intermittent transverse or longitudinal cracks	Frequent transverse and longitudinal cracks	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 2003

The 2002 field evaluation has identified sections that should be studied in greater depth for potential rehabilitation in 2003. 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 that 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
Long Term 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 2002 data resulted in minor changes in the performance models.

As a general rule, the addition of the 2002 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 1 BSTs on the Alaska Highway between km 1635 and 1966, Class 2 BSTs on the Alaska Highway between km 450 and 1008; and Class 3 sections on the Haines Road 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.

Table 3 confirms that Class 1 BST between 1635 and 1966 performed more poorly than other Class 1 BSTs. Table 4 indicates that the performance of Class 2 BSTs on the Alaska Highway between km 450 and 1008 is poorer than all other Class 2 BSTs. Table 5 indicates that there are three different performance characteristics for Class 3 BSTs. Class 3 BSTs on the Haines road perform better than all other Class 3 BSTs. Class 3 BSTs between km 0 to 550, 1470 to 1635 and 1800 to 1966 on the Alaska Highway are similar in performance and inferior to other Class 3 BSTs.

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, and from Destruction Bay to Beaver Creek; 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 database program.

BST performance equations are as follows:

- Class 1 except Alaska Highway 1635-1966:
  $BCI = 71.867 – 5.6565 \times AGE + 1.046 \times AGE^2 – 0.0688 \times AGE^3$
  $R^2 = 0.9836$

- Class 1 Alaska Highway 1635-1966:
  $BCI = 70.735 – 7.3381 \times AGE + 1.1575 \times AGE^2 – 0.062 \times AGE^3$
  $R^2 = 0.9764$

- Class 2 except Alaska Highway 450-1008:
  $BCI = 74.159 – 4.4359 \times AGE + 0.5948 \times AGE^2 – 0.0326 \times AGE^3$
  $R^2 = 0.987$

- Class 2 Alaska Highway 450-1008:
  $BCI = 69.851 – 7.9046 \times AGE + 1.7756 \times AGE^2 – 0.1463 \times AGE^3$
  $R^2 = 0.9957$

- Class 3 except Haines Rd, Campbell Hwy, Alaska Hwy 0-550, 1470-1635 & 1800-1966:
  $BCI = 76.82 – 2.08 \times AGE + 0.1477 \times AGE^2 – 0.0045 \times AGE^3$
  $R^2 = 0.9924$

- Class 3 Campbell Highway & Alaska Highway 0-550, 1470-1635 & 1800-1966:
  $BCI = 74.448 – 4.2435 \times AGE + 0.5893 \times AGE^2 – 0.0266 \times AGE^3$
  $R^2 = 0.9735$

- Class 3 Haines Road:
  $BCI = 83.177 – 3.3487 \times AGE + 0.3103 \times AGE^2 – 0.0122 \times AGE^3$
  $R^2 = 0.9719$

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 primed 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 summarizes the findings after 11 years in service.

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

5.1. Comparison of Primed/Unprimed Sections of Klondike Hwy 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 were 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
2002	950,000

Table 6 contains the results of the evaluations of the sections for the past 11 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 Tables 6 and 7, 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 generally showed equivalent or superior performance.

- After 11 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, potholes, distortions, streaking, corrugations, joint failures or patches after 11 years in any of the five sections.

- Ravelling started to appear as a significant distress in year 11 for the single treatment on 75 mm base and subbase, while there continues to be no significant distress for the other four sections.

- 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 seven 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 11 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 12 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 was roughly equal.

A review of Table 7 indicates that:

- There is little difference in performance between the single and double BSTs on 300 mm of granular base and subbase, with the single treatment performing better for bleeding and cracking.

- 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 that 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 11 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 at least another six 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.

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 556 to 571 in 2007
Km 763 to 775 in 2006
Km 825 to 839.5 in 2003

The following sections will be upgraded to pavement in the following years:

Km 319 to 359 in 2007
Km 458 to 482 in 2005

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 1556.4 to 1588
Km 1604 to 1628
Km 1630 to 1635
Km 1674 to 1684
Km 1698 to 1758
Km 1768 to 1787.5

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 2002) and rehabilitation (summer 2003) 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 recommendations 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 PWGSC BSTs there were a number of sections where there was more than one panel recommended option for the section under consideration (Table 8). 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 8 indicates that the panel recommended 143.2 kilometres for resurfacing, but when the sections that were identified for routine maintenance/reconstruction are considered, only 59.7 kilometres were directly identified for reconstruction. However, only 18.5 kilometres are scheduled for rehabilitation in the preliminary 2003 program because the sections for rehabilitation were identified from the three and four year program ratings from the 2000 report and were included in a long term maintenance contract which is relatively inflexible at this stage.

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 BCI 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 9 indicates a difference of 79.9 kilometres between the rehabilitation needs based on BCI and those based on the panel recommendations. This difference is mainly due to the poorly-performing, permafrost sections of the Alaska Highway between the Koidern River and Beaver Creek and sections of the north Klondike Highway.

In most cases for both PWGSC and YTG BSTs where the panel recommended rehabilitation in 2003 (except reconstruction), the BCI method also recommended rehabilitation within three 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 PWGSC and YTG preliminary programs are used for 2003, as they are believed to be the most accurate. Projects selected by the panel or by the BCI methods for 2003 but not included in the preliminary programs have been assigned to the 2004 program. All years other than 2003 and 2004 are based on the BCI method.

Figures 11 and 12 indicate the predictive model's accuracy over previous years.

PWGSC SECTIONS:

This year's analysis indicates a significant increase in 2004 and 2005 funding requirements over the 2001 estimates. This is due in large part to the relatively rigid five-year budget allocation, ending in the 2003 year. This allocation only provided for rehabilitation of 18.5 kilometres – the sections between Kilometres 458 – 468 and 563 – 571.5, in 2003. However, the rating panel recommended rehabilitation (not including reconstruction), for a total of 59.7 kilometres during the 2002 inspection tour (Table 8). Thus, problem areas that have arisen since the rehabilitation budget was determined that are should have been rehabilitated during the 2003 year will need to be postponed to 2004 and 2005.

Table 10 and Figure 11 contain 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	

YTG SECTIONS:

Table 11 and Figure 12 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 11 indicates an increase in the 2005 program. This is due to the high requirements of the 2003 program, which will not be funded to amount of rehabilitation required. Thus, rehabilitation work that is due in 2003 and not funded, has been transferred to 2004 and 2005. There is a major reduction of funding requirements in 2006, but this is based on the assumptions that the work identified for the 2004 and 2005 years will actually be funded.

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 will only rehabilitate 18.5 kms in 2003 due to budget requirements. This will have 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 279.0 to 284.0	0	5
Alaska Highway	Km 354.5 to 357.0	1	5
Alaska Highway	Km 516.2 to 520.0	1	5
Alaska Highway	Km 625.0 to 635.0	1	6
Alaska Highway	Km 1163.0 to 1175.5	0	5
Alaska Highway	Km 1615.0 to 1620.0	1	5
Klondike Highway	Km 107.0 to 113.6	1	6

The total of 45.4 kilometres for significant bleeding in 2002 compares favourably to a total of 69 kilometres observed in 2001.

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 2002 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 1999 to 2002. 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 609 to 641 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 641 to 711.7, and Km 737.5 to 774 are older BSTs (particularly the Class 1 sections) that are performing poorly. Of greater concern is the Class 3 section between Km 458 and 468 that has required significant patching over the last three years

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 2002, approximately 16% (106.2 kms) of the PWGSC system is showing significant patching distress, an improvement over 2001 when 36% was showing significant patching distress. In comparison, 7% (134.7 kms) of the YTG system showed major patching distress, an improvement over the 9% observed in 2001.

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 through 2002 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. YTG does not have any hydro-drums in its 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 relatively steady increase in the level of service on PWGSC sections of the Alaska Highway since 1997.

Table 14 and Figure 15 indicate that overall, the level of service provided by the YTG system has decreased slightly since the 1999 ratings.

The overall performance of BST surfaces 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. The apparent improvement in year 8 for the section between km 1800 and 1966 is due to the good performance of the 8 year old BST between km 1932 and 1944 (Beaver Creek section) which may have been permafrost free at the time of construction.

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. This is due to the relatively expensive and inefficient patching effort that is required. The sections between Km 1800 and 1966 had reached a ride score of less than 5 within six years of construction. However, performance has improved in the last two years, again, due to significant patching effort.

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 25 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. Reconstruction was also undertaken to limit the amount of edge cracking that was encroaching upon travelled lanes, and to provide a base for rehabilitation that would be needed when differential settlements occurred. The construction of roads over permafrost areas is a difficult endeavour, and all research indicates that melting will occur (causing distortions), and rehabilitation efforts will only affect the timing of this melting. Thus, regardless of the measures taken to improve roads over permafrost areas, they will not remain stable forever, and rehabilitation will be required on a more frequent basis than for roads constructed over non-permafrost areas.

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 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. The proposed 2003 BST program is the commencement of this strategy as the section between 1942 and 1966 has been slated for rehabilitation. Sufficient budgets for bringing these sections up to new or nearly new condition are required.
4. Shimming programs should be established for other sections where the subgrade has not stabilized. The use of survey crews and quality assurance of the gravel patches should be included with this program.
5. An exploration of surfacing material alternatives to BST and cold mix patching should be undertaken. The limitations posed by BST application (specialized equipment – chipper) and cold mix (high cost) compel a search for a spot surfacing alternative that could be applied using available maintenance crews on a flexible basis in these relatively remote areas.

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 thorough 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.

Vern Janz
December 2002

Reviewed by
Dr. D.R. MacLeod

APPENDIX A BST REPORT FIGURES

Figure 1 BCI by Highway Class 1 BST

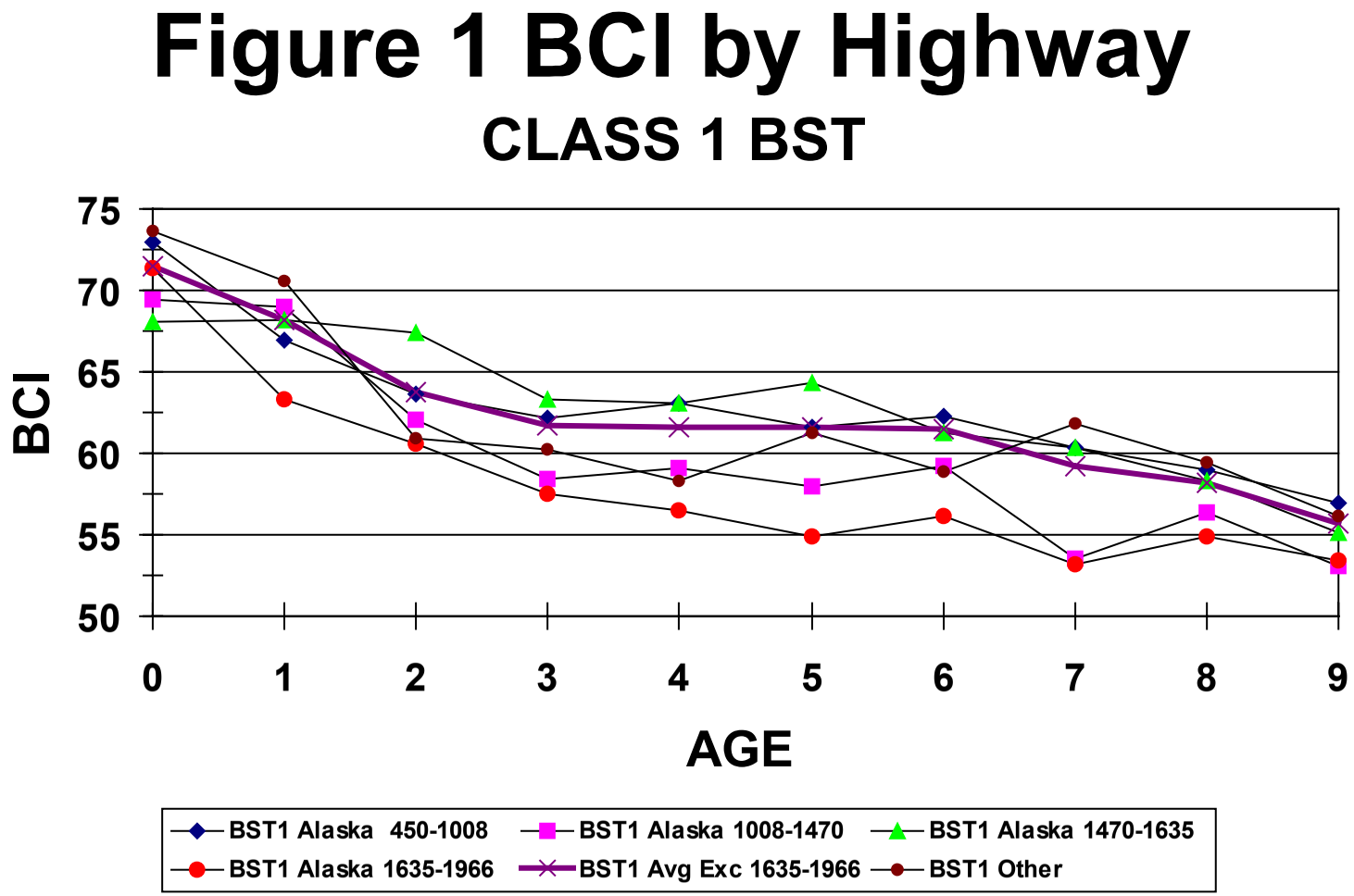


Figure 2 BCI by Highway Class 2 BST

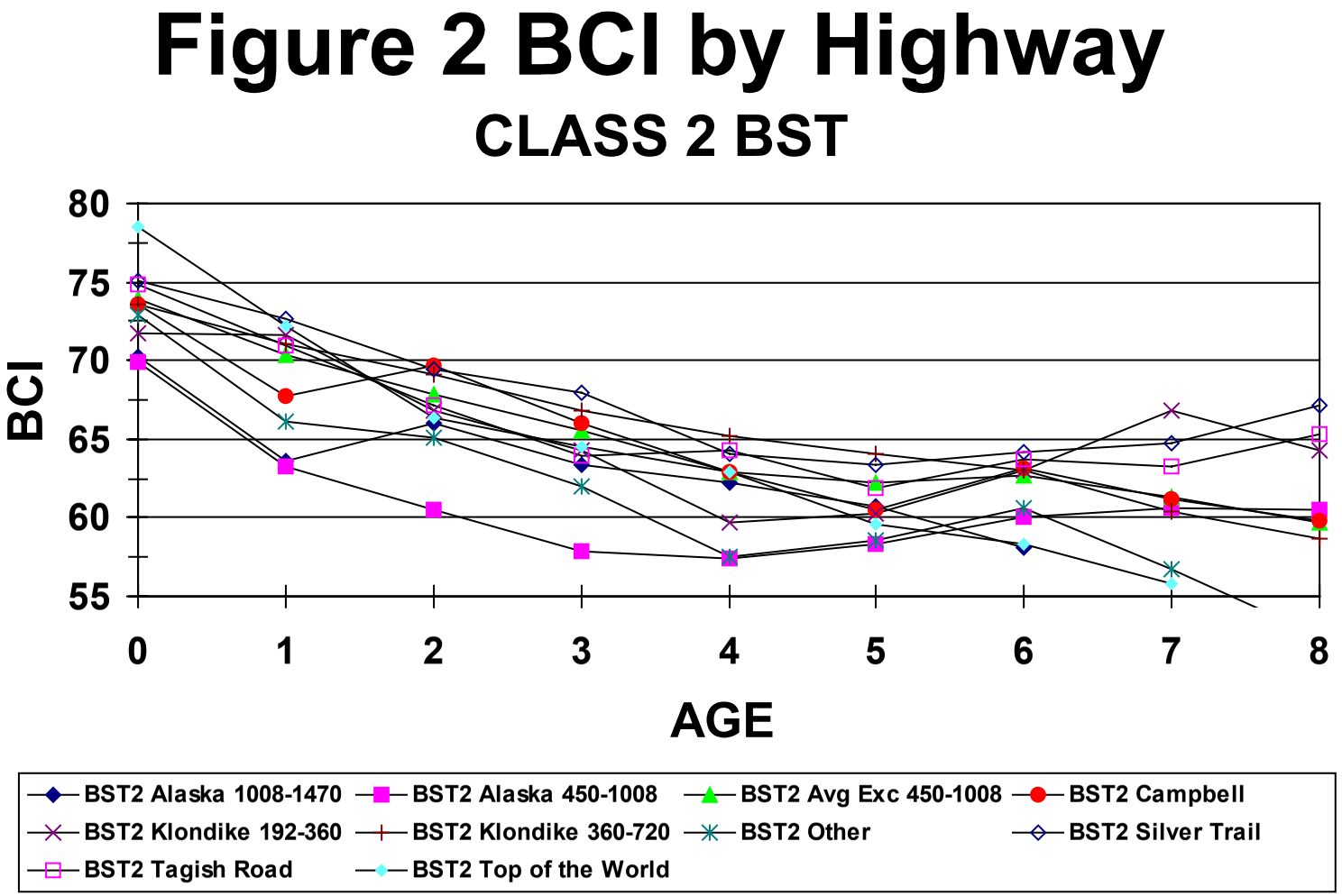


Figure 3 BCI by Highway Class 3 BST

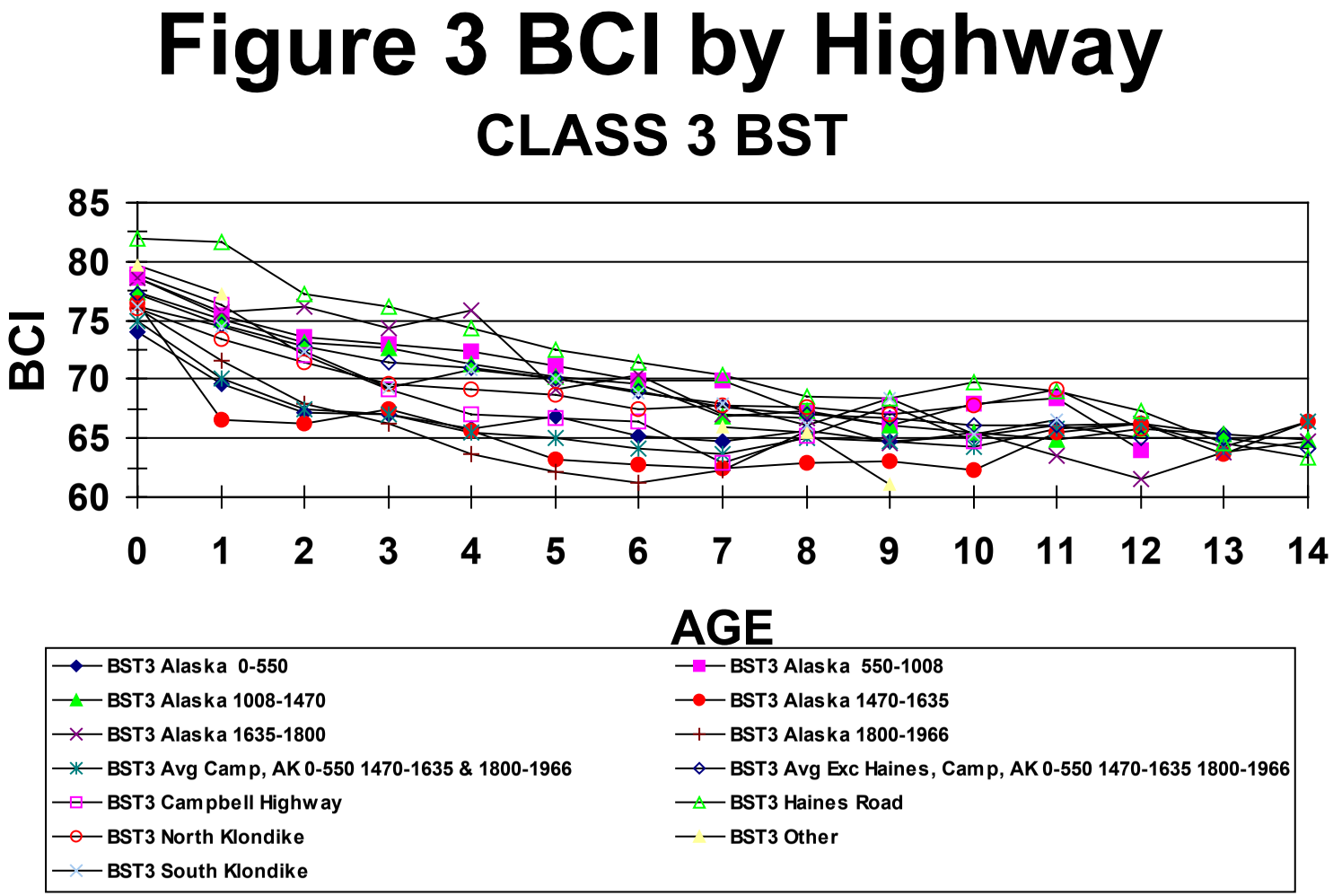


Figure 4 Class 1 BST Performance

Figure 4

CLASS 1 BST PERFORMANCE

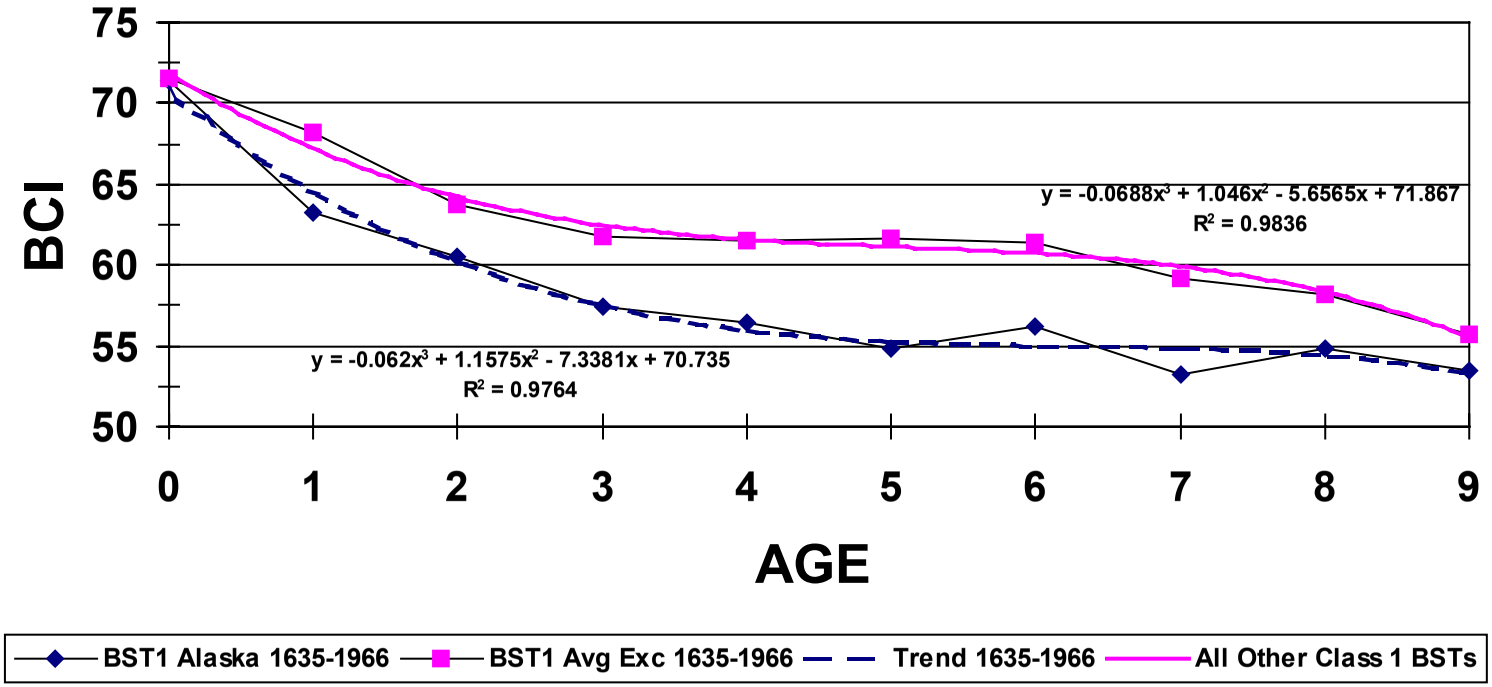


Figure 5 Class 2 BST Performance

Figure 5

CLASS 2 BST PERFORMANCE

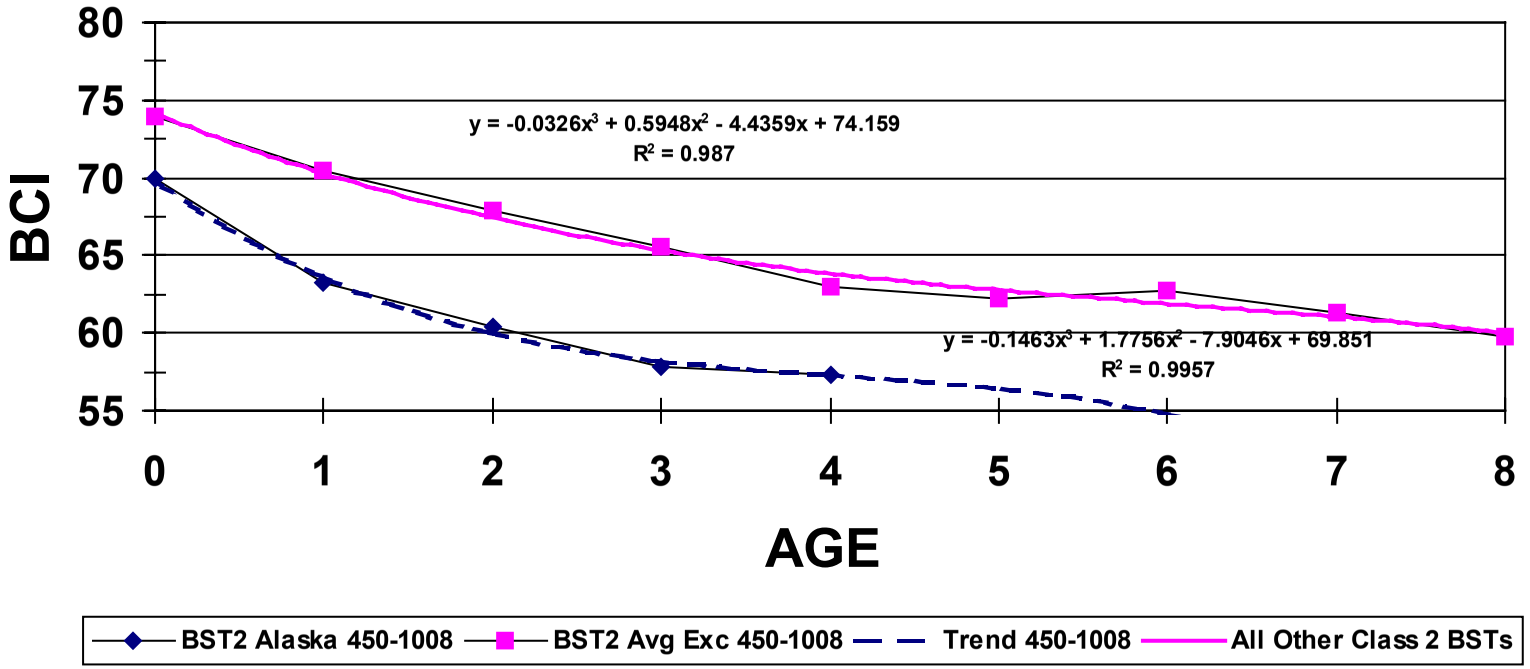


Figure 6 Class 3 BST Performance

Figure 6

CLASS 3 BST PERFORMANCE

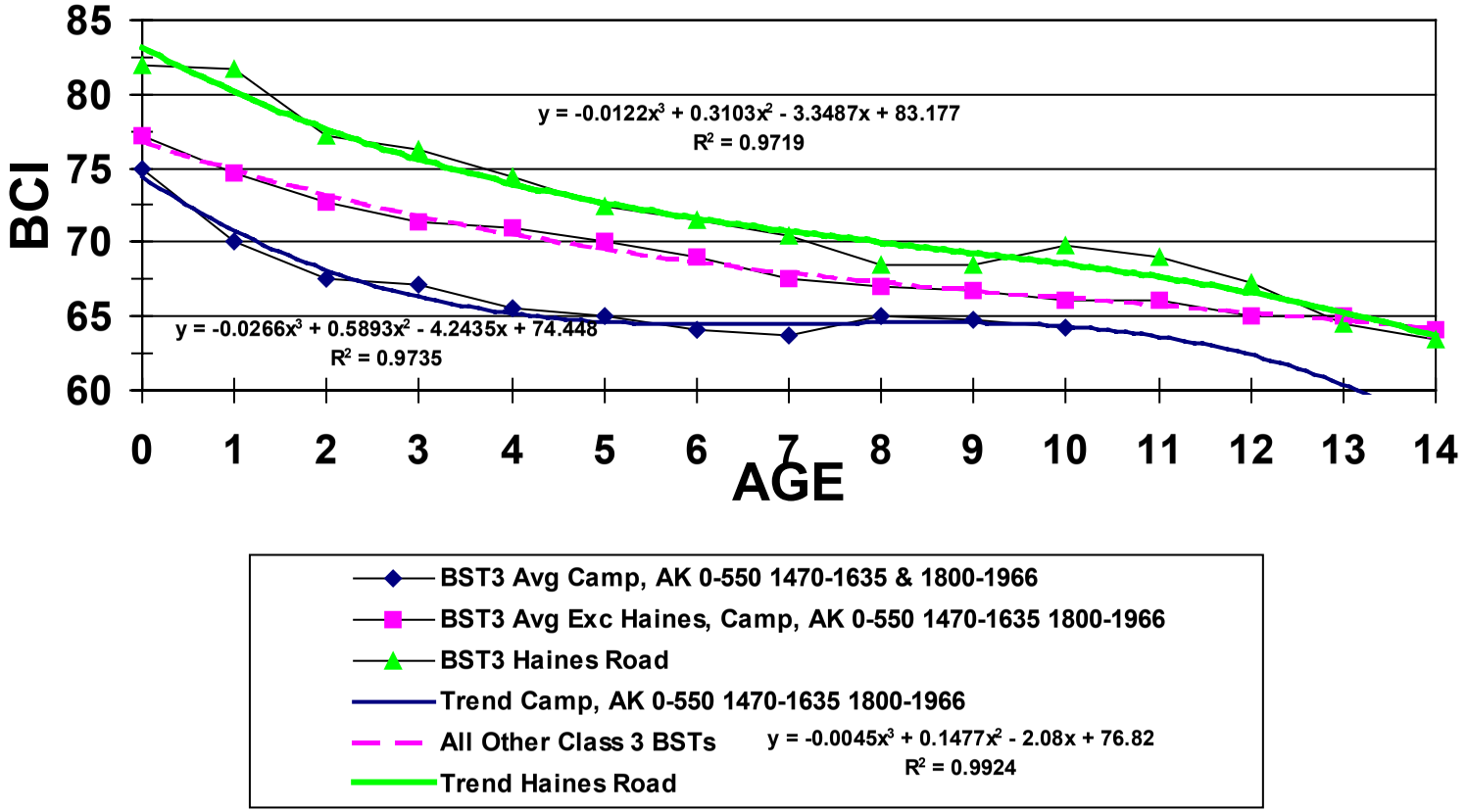


Figure 7 Comparison of BCI C-SHRP Test Sections

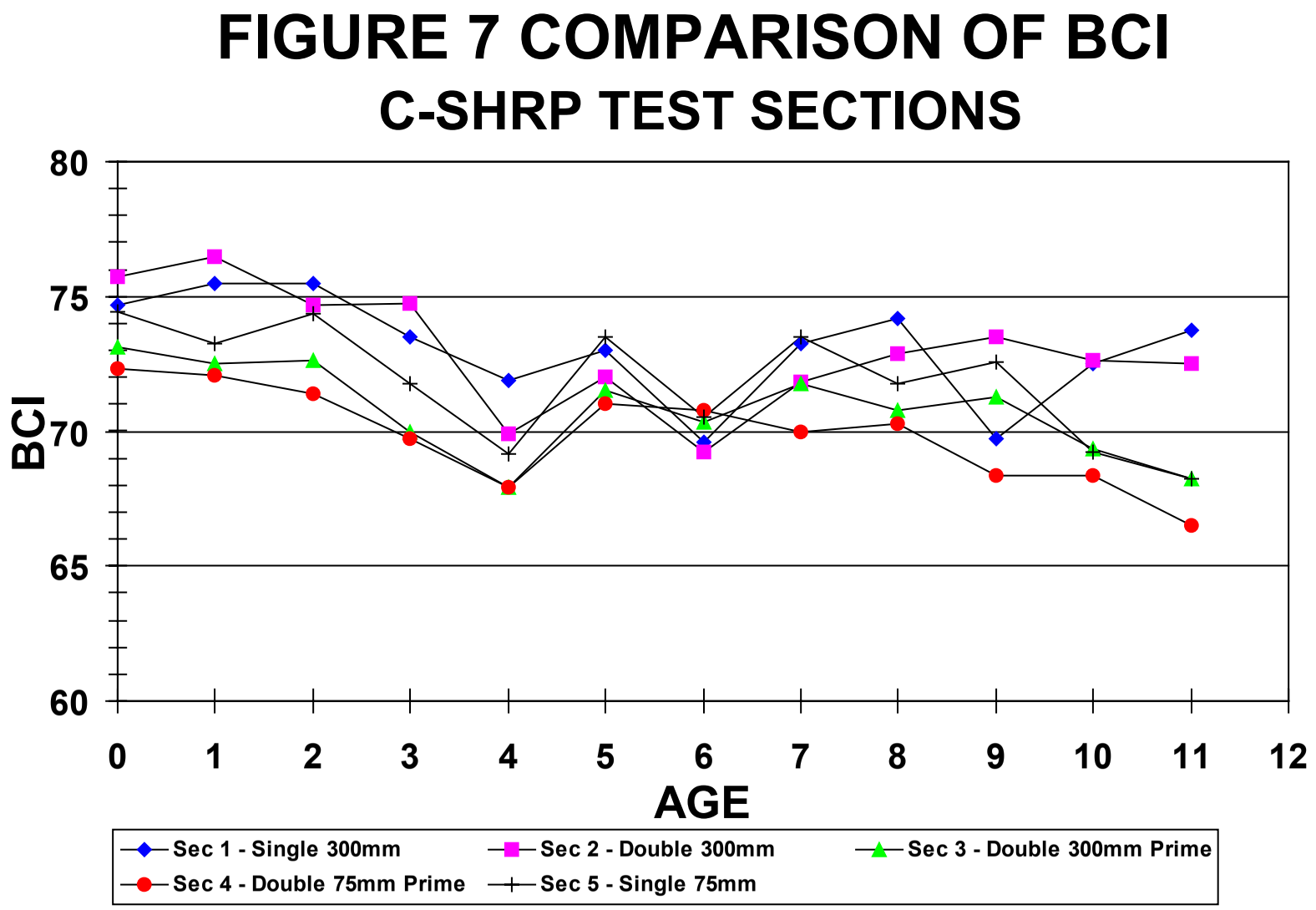


Figure 8 Cracks/100m C-SHRP Test Sections

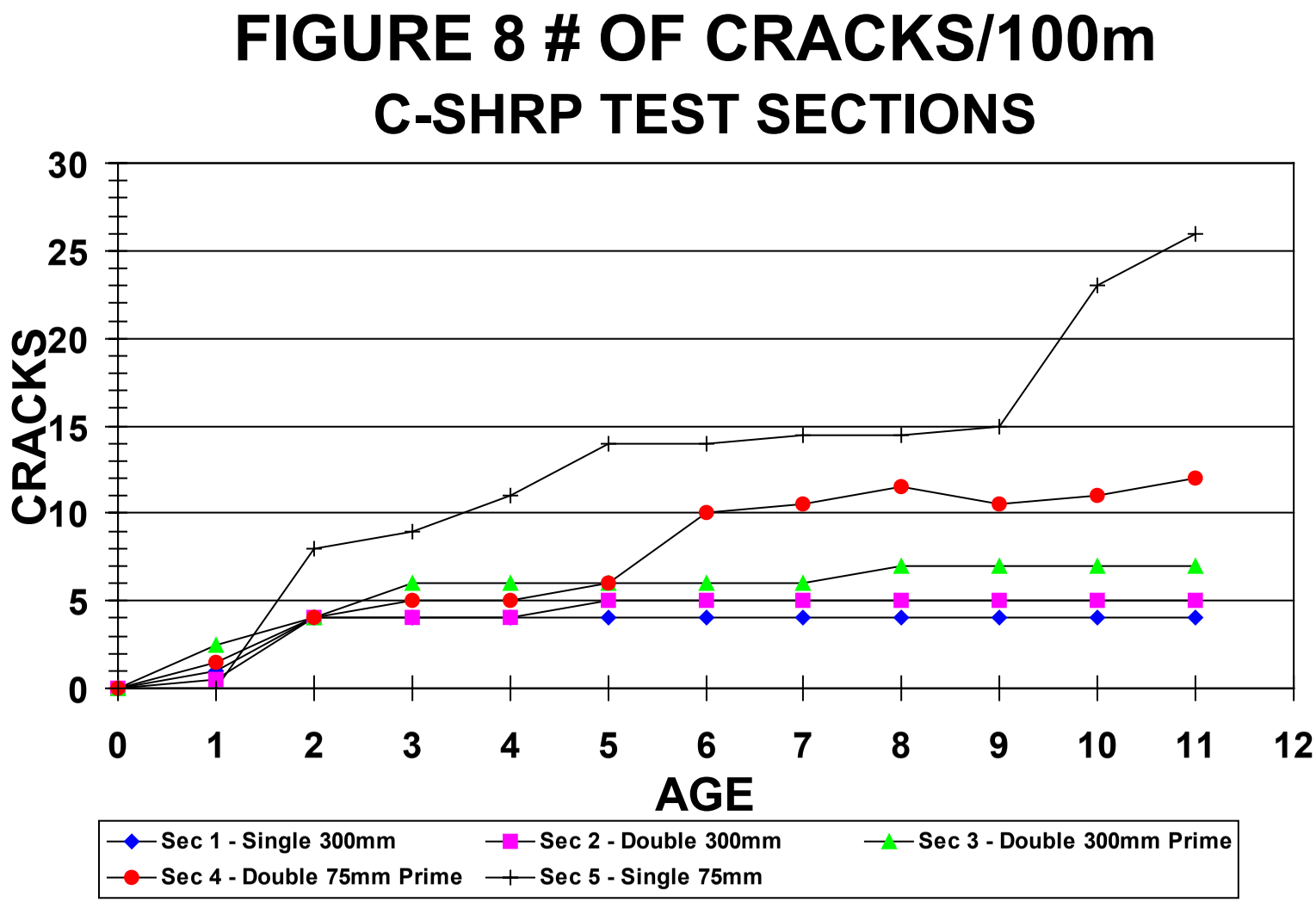


Figure 9 Rutting Performance C-SHRP Test Sections

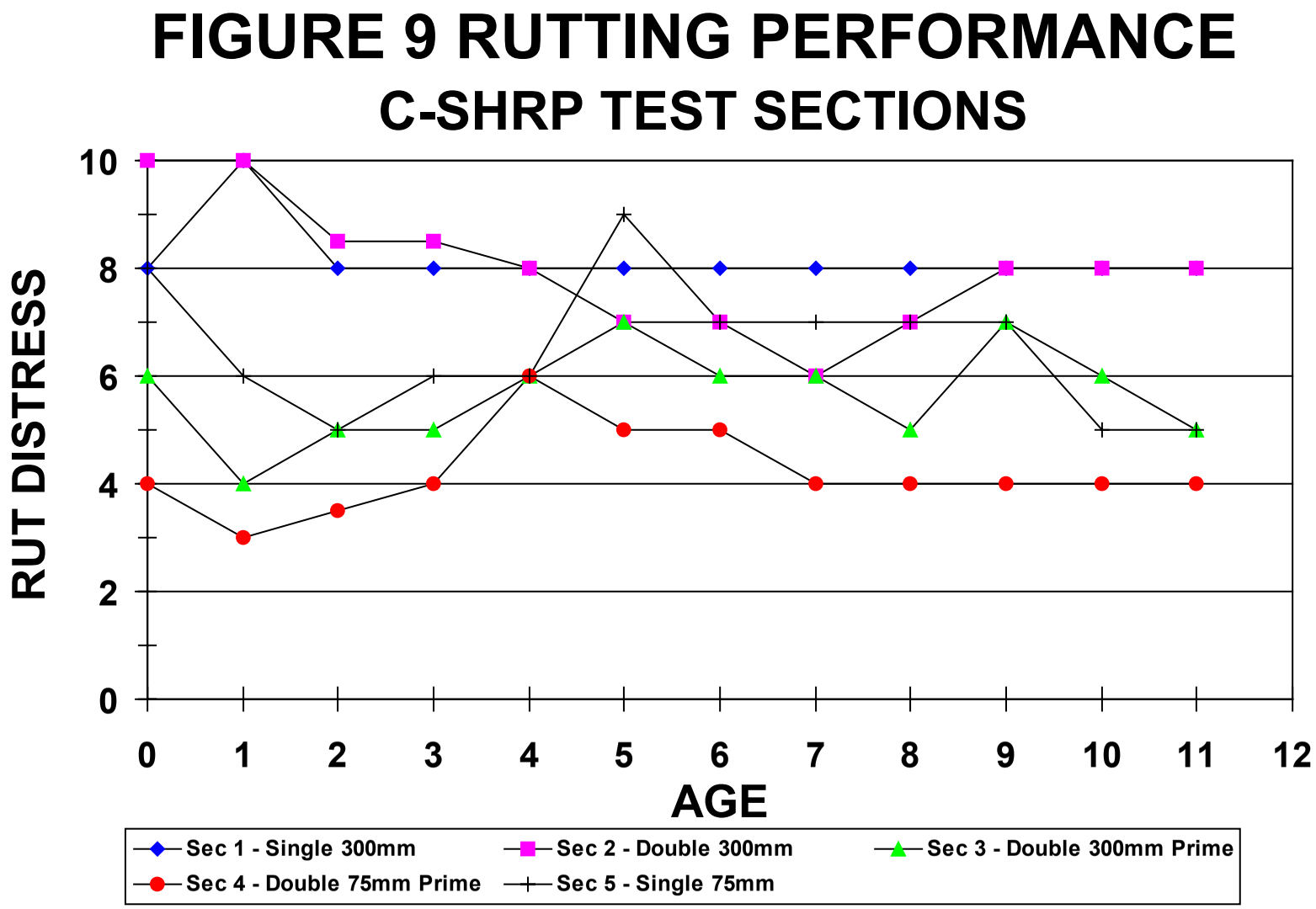


Figure 10 Bleeding Distress C-SHRP Test Sections

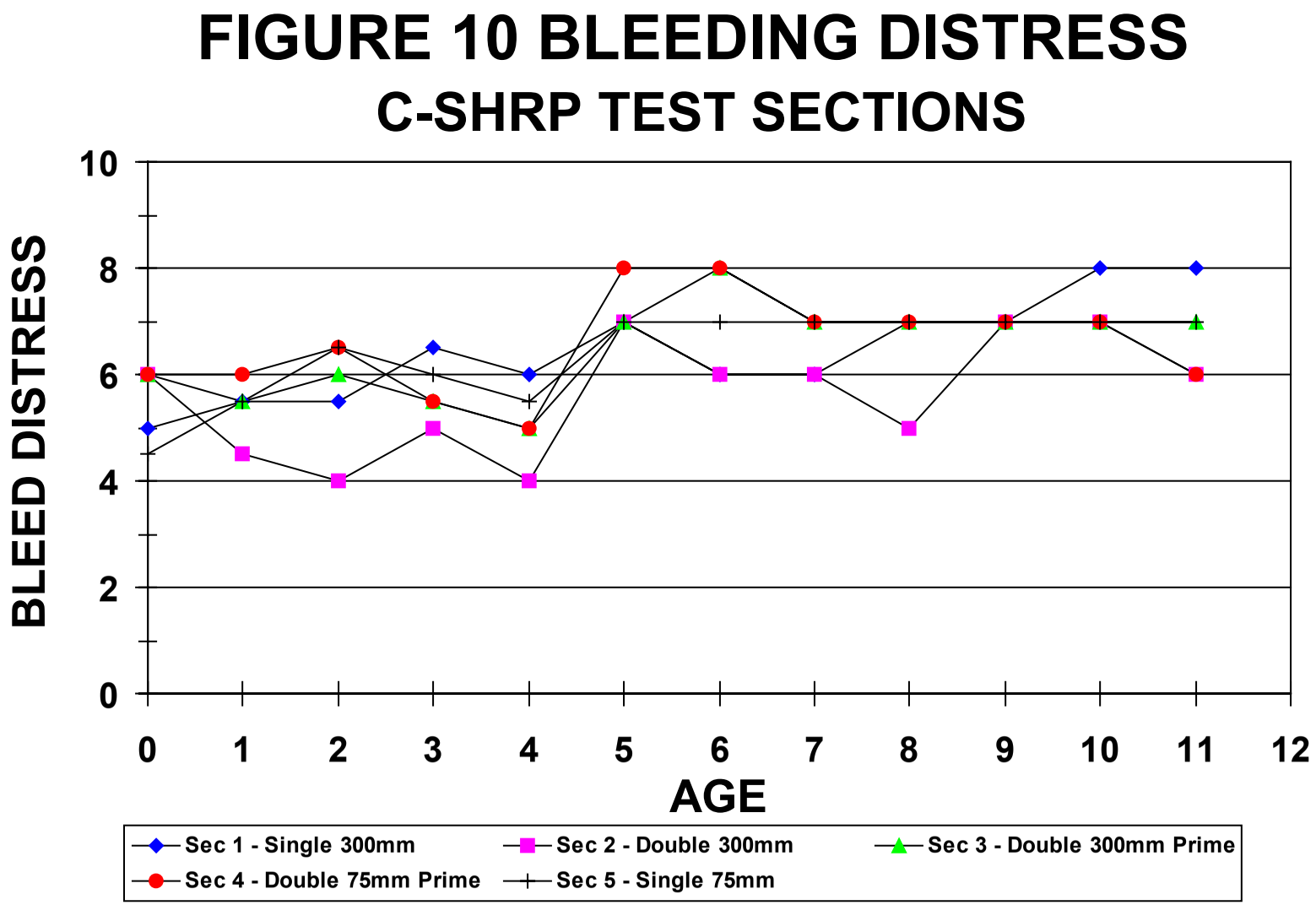


Figure 11 PWGSC MYOP

FIGURE 11 PWGSC MYOP

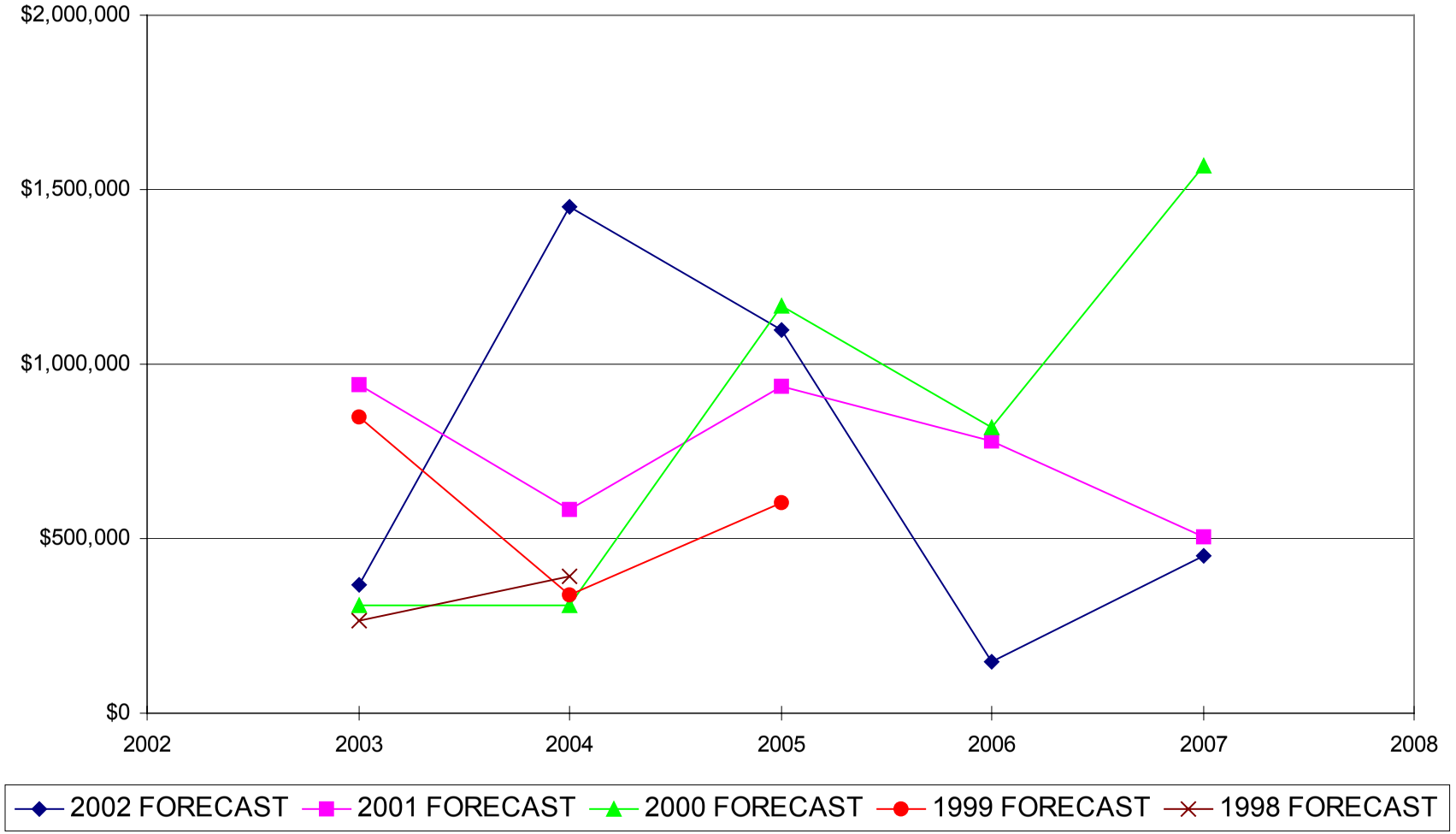


Figure 12 YTG MYOP

FIGURE 12 YTG MYOP

Excludes reconstruction and patch crew sections

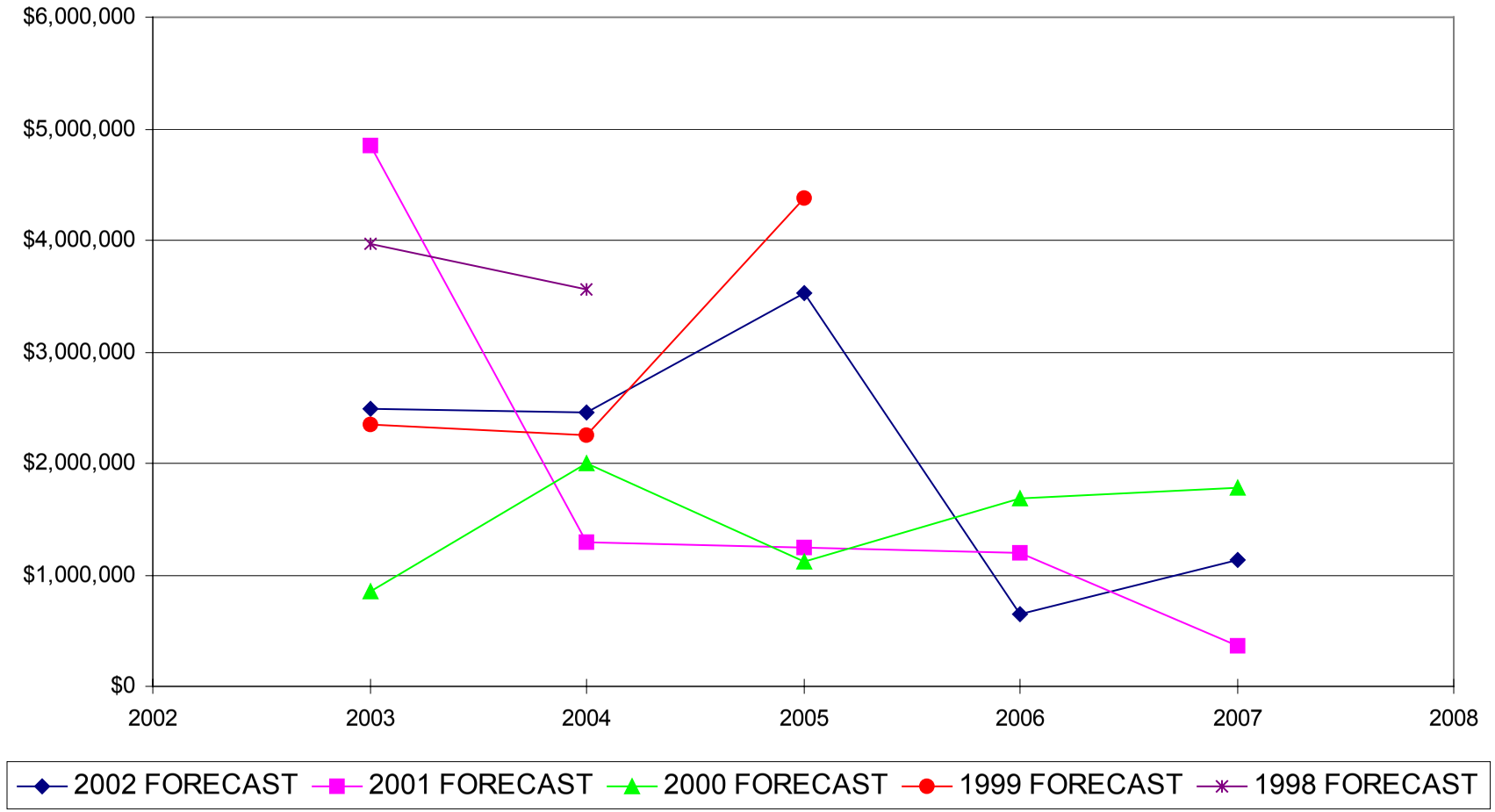


Figure 13 Patching Class 3 BSTs

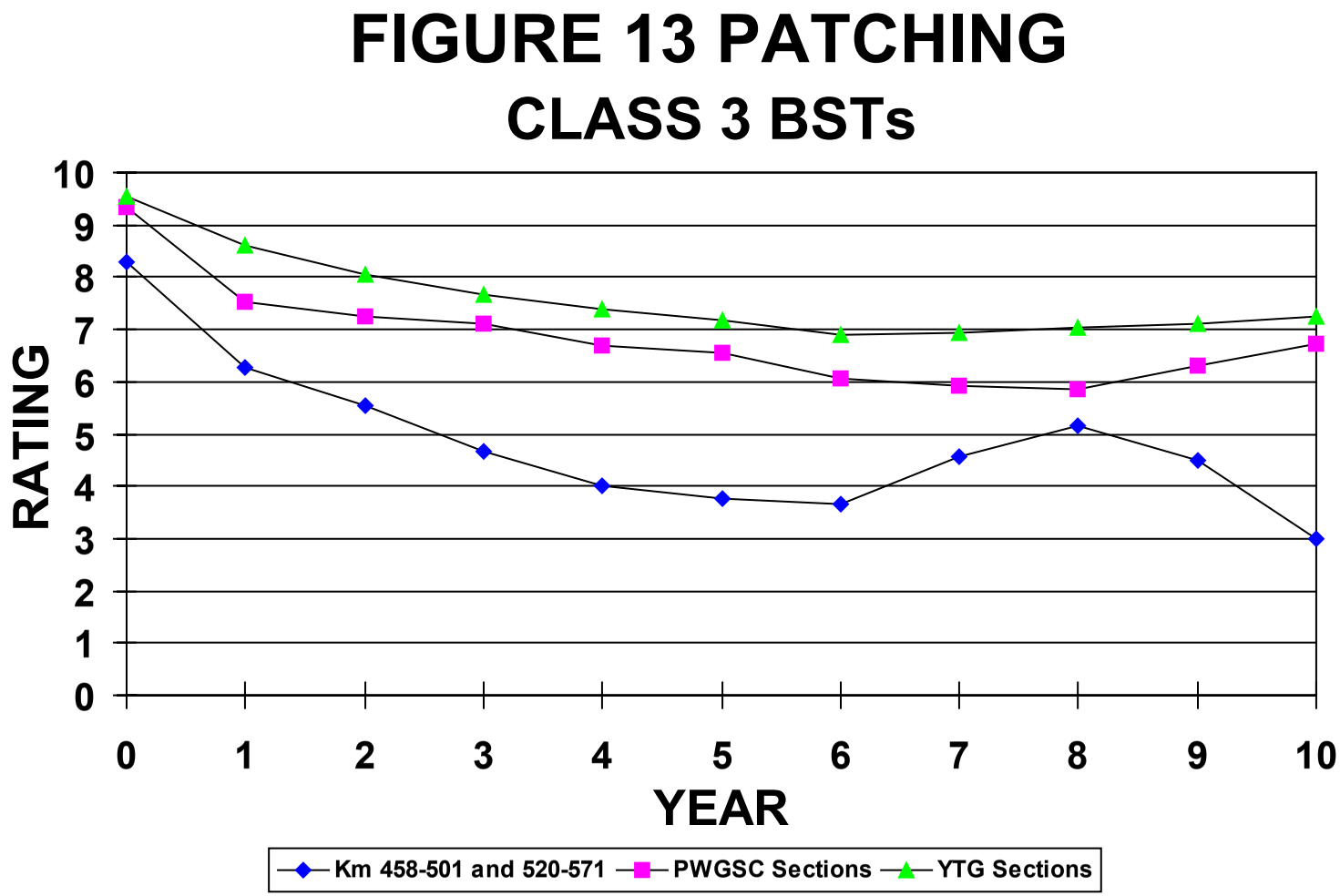


Figure 14 Performance of PWGSC BSTs

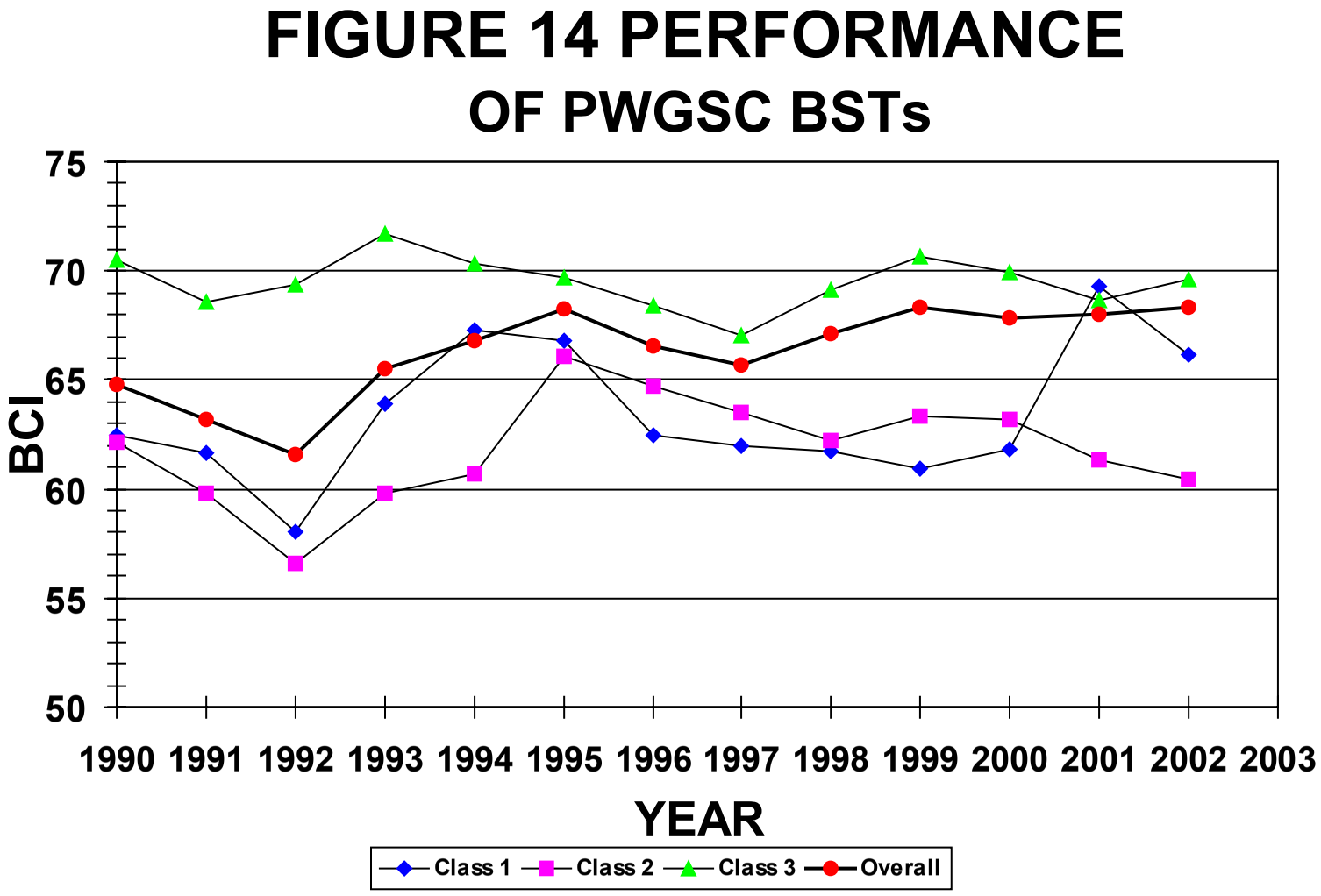


Figure 15 Performance of YTG BSTs

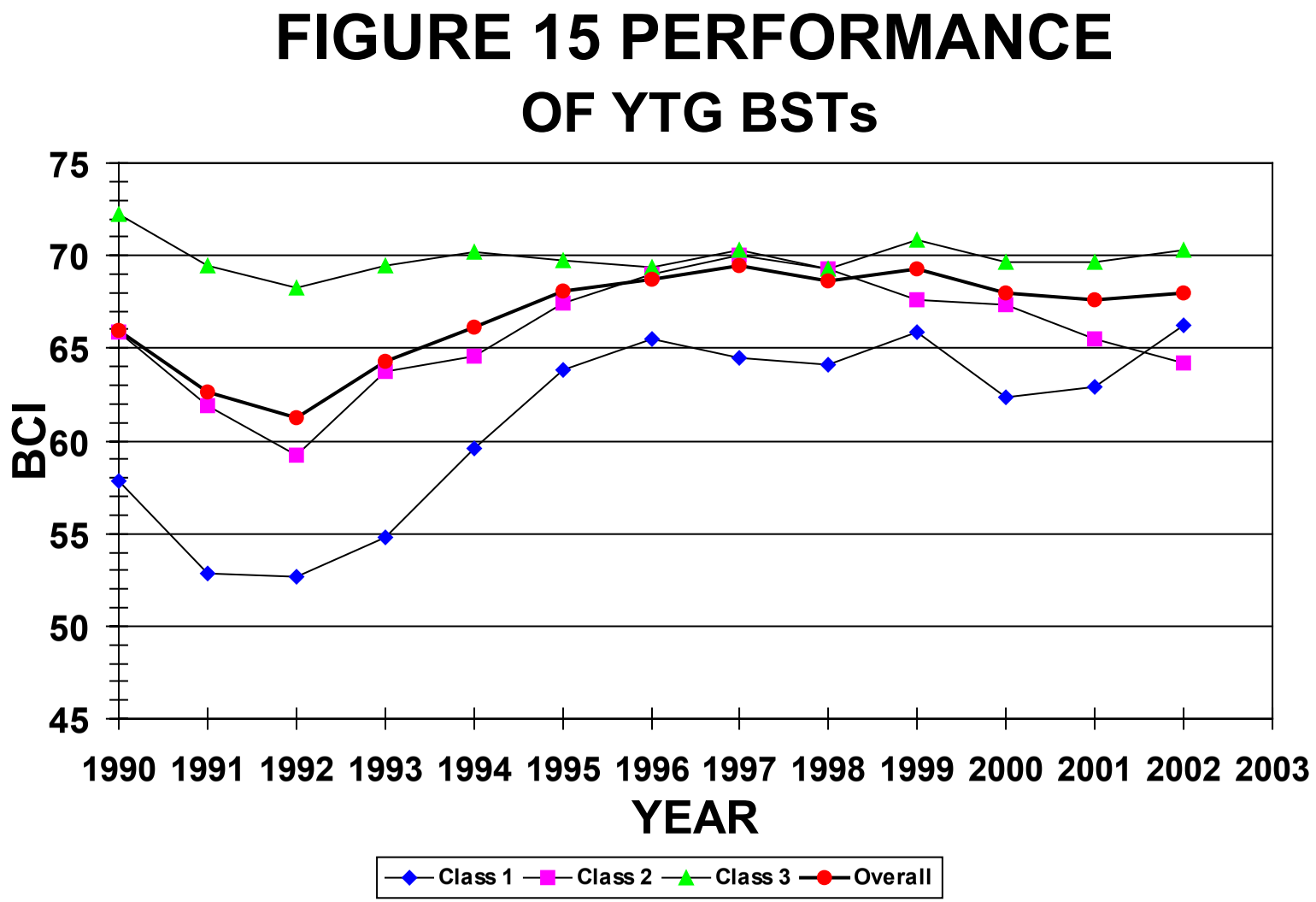


Figure 16 Class 3 Distortions Permafrost vs Non-Permafrost

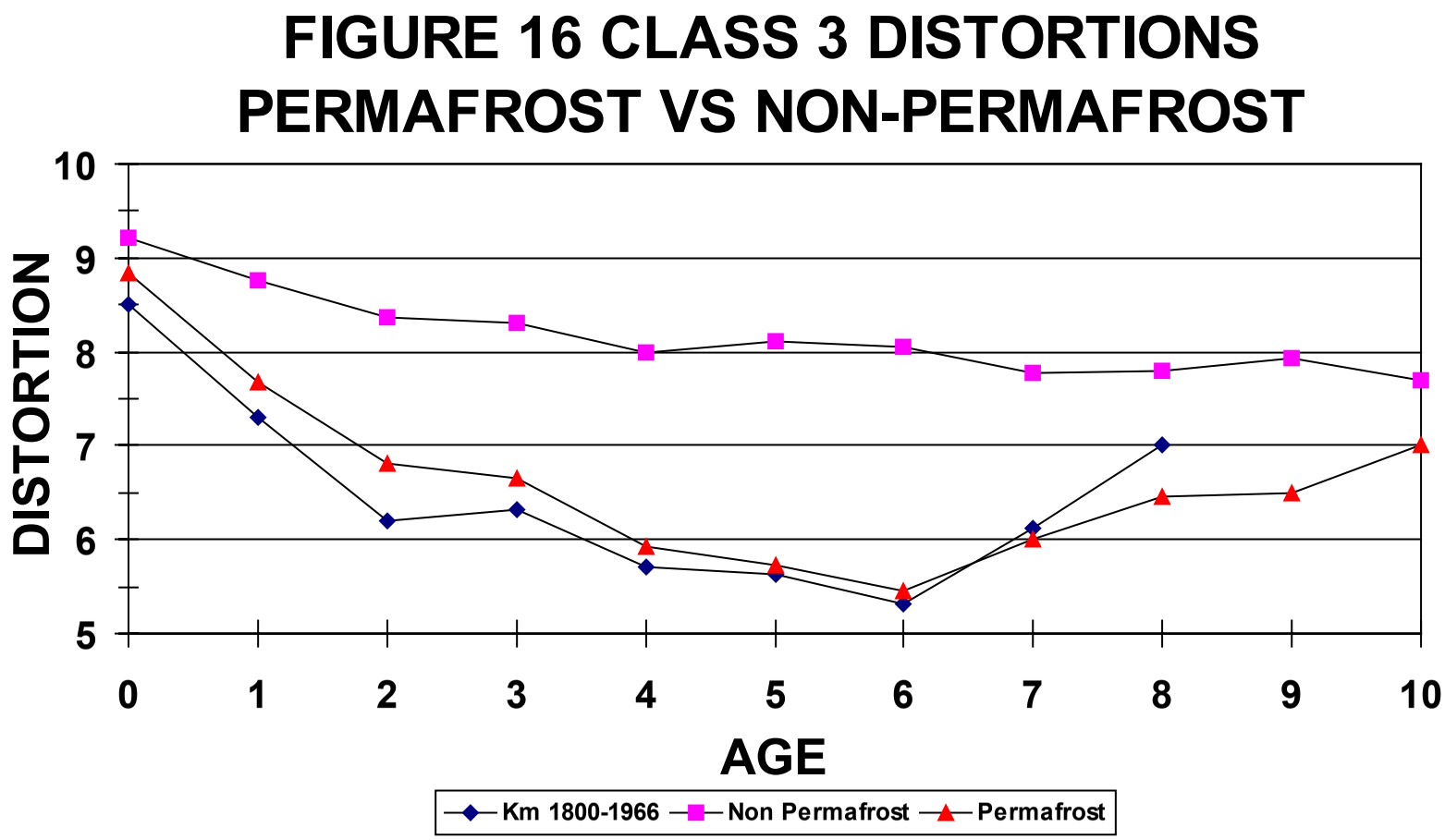


Figure 17 Class 3 RCI Permafrost vs Non-Permafrost

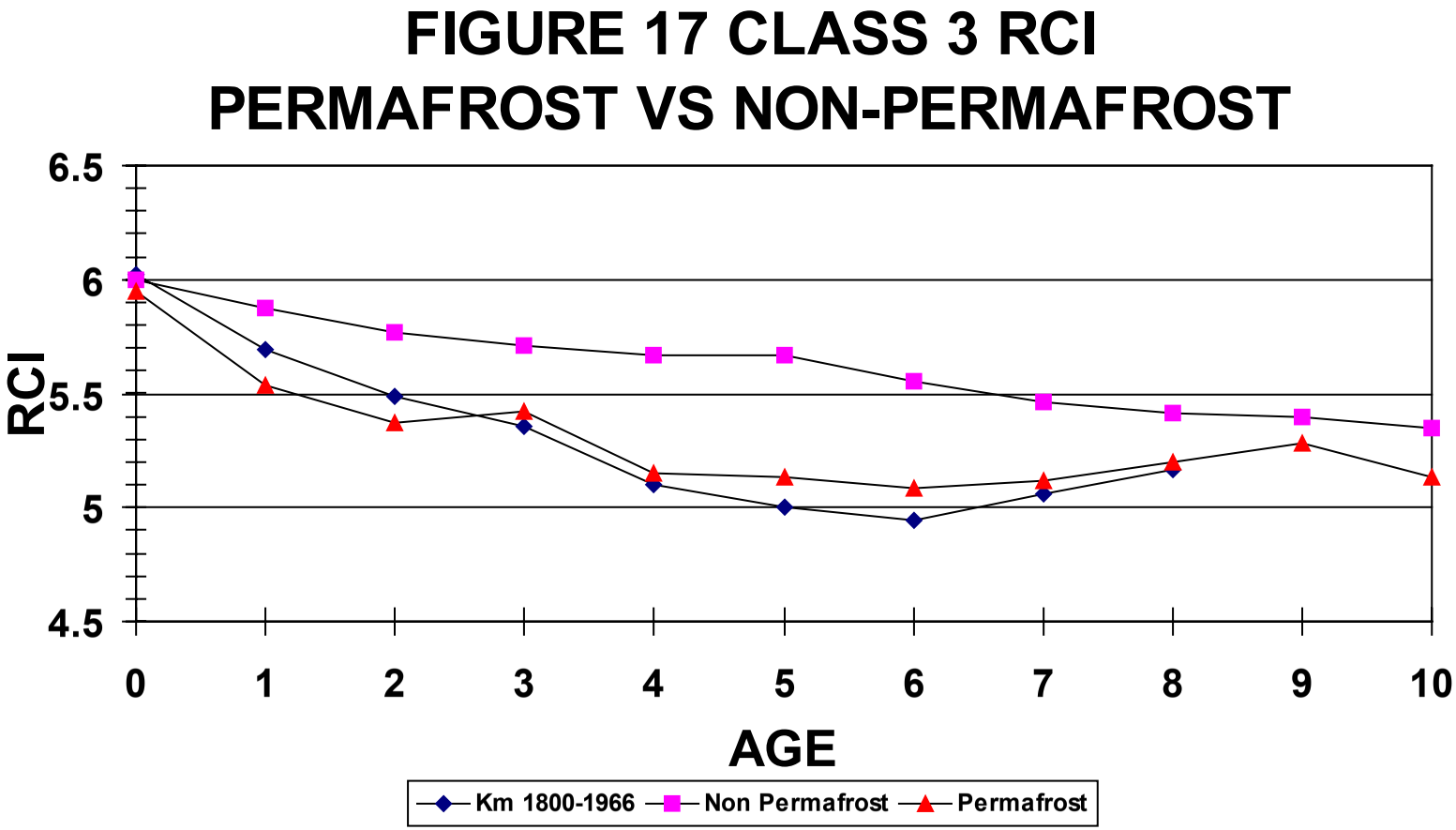


Figure 18 Class 3 BCI Permafrost vs Non-Permafrost

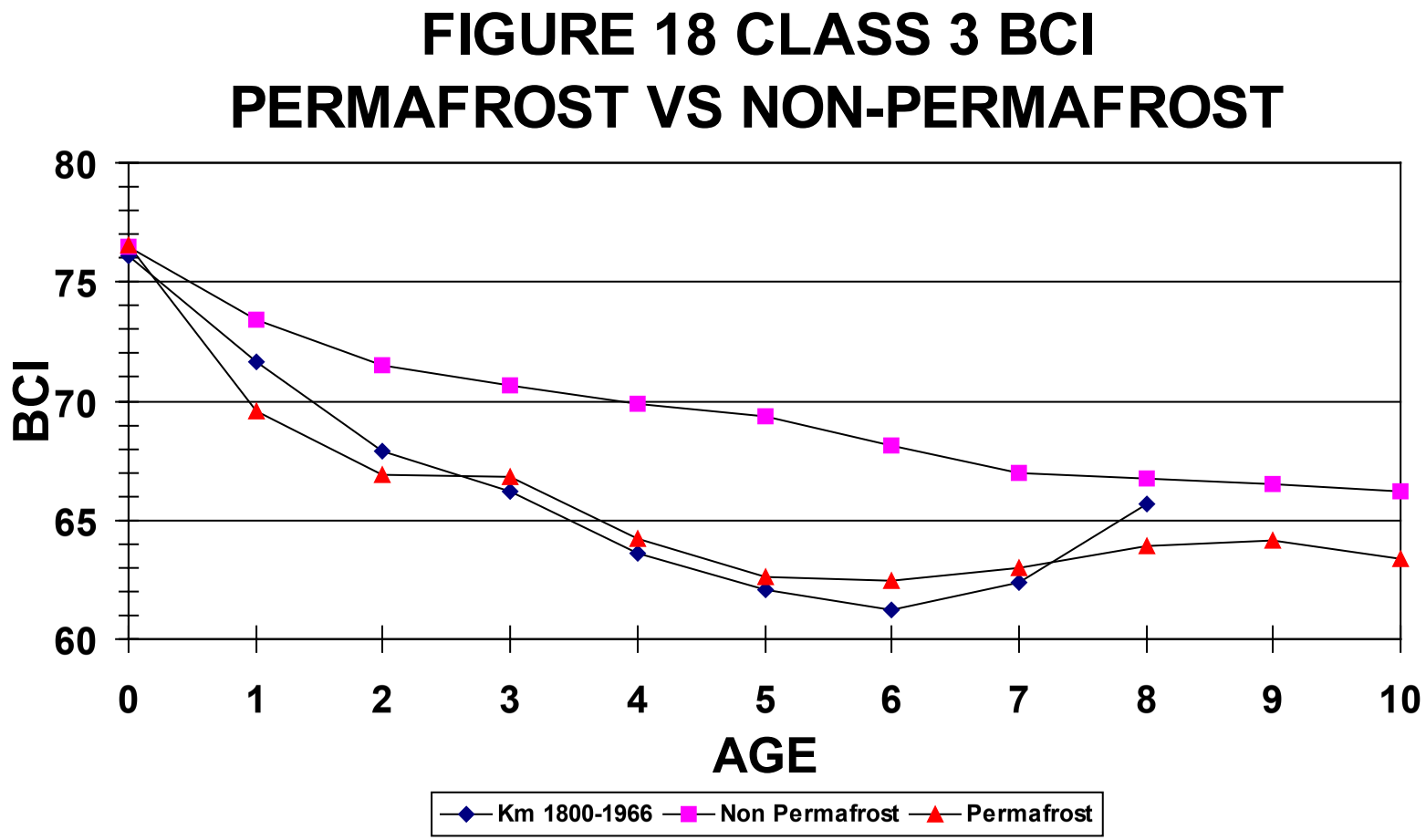


Figure 19 Patching Class 1 and 3 Permafrost Sections

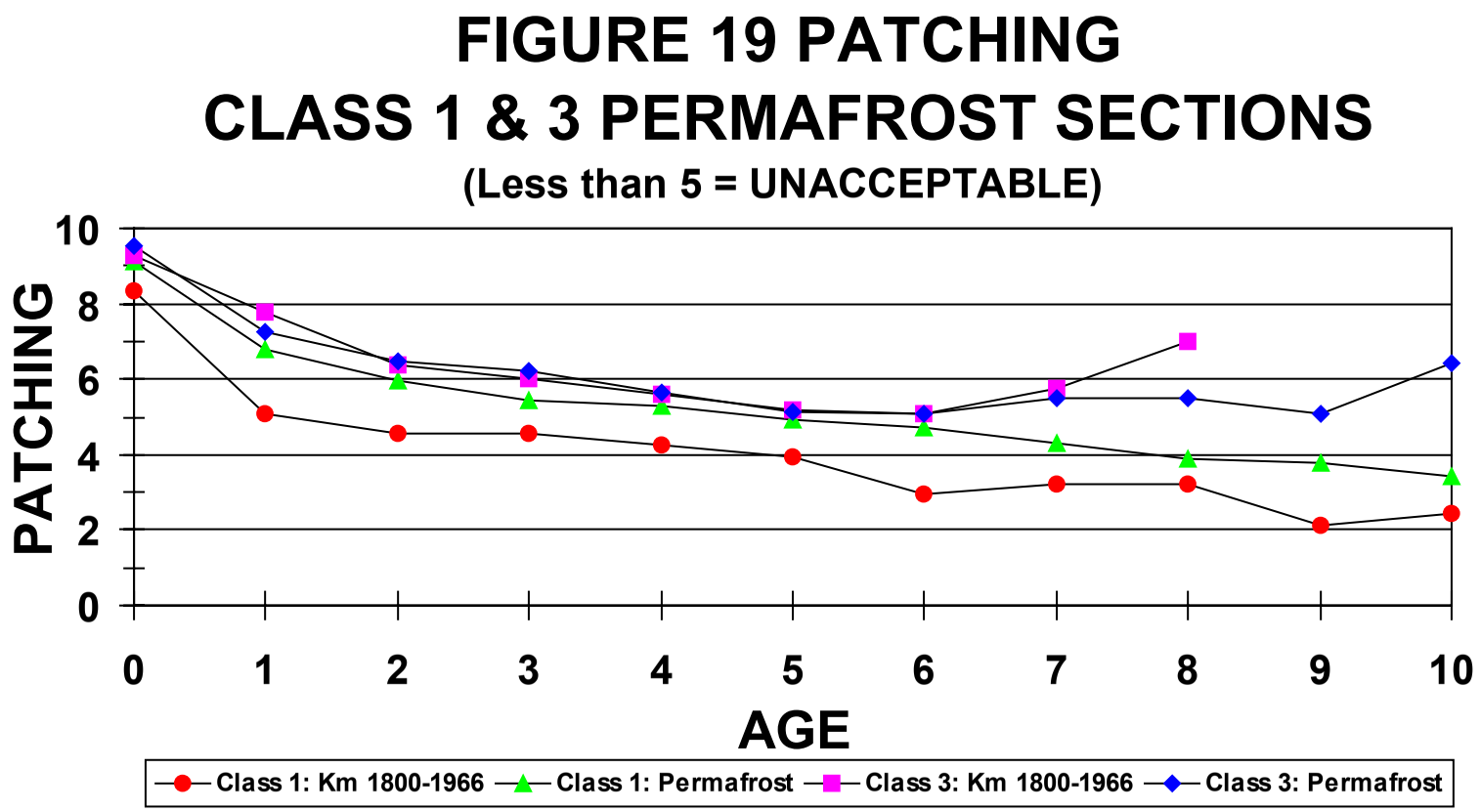


Figure 20 Distortions Class 1 and 3 Permafrost Sections

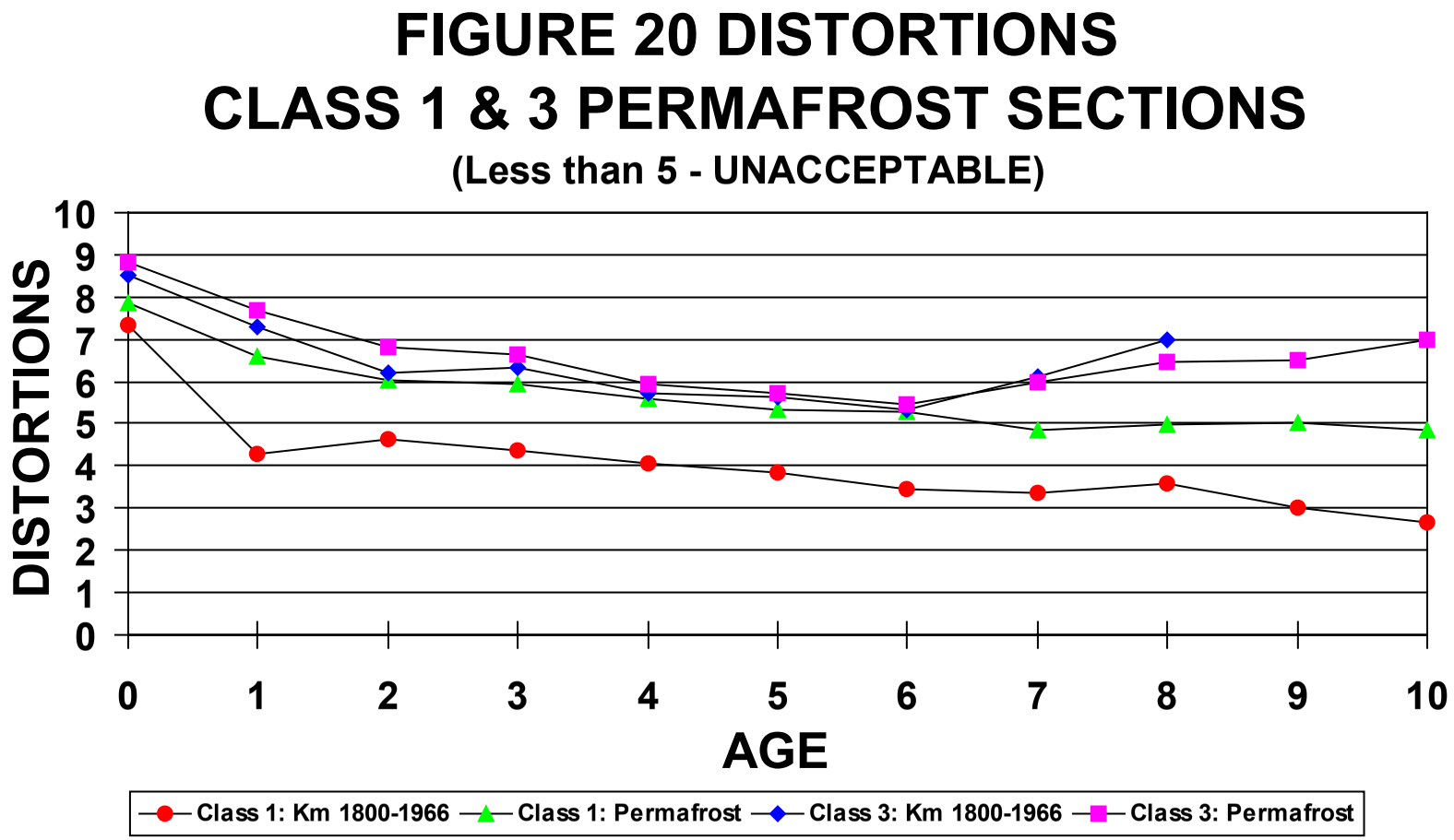


Figure 21 Patching and Distortions Class 1 and 3 Permafrost Sections

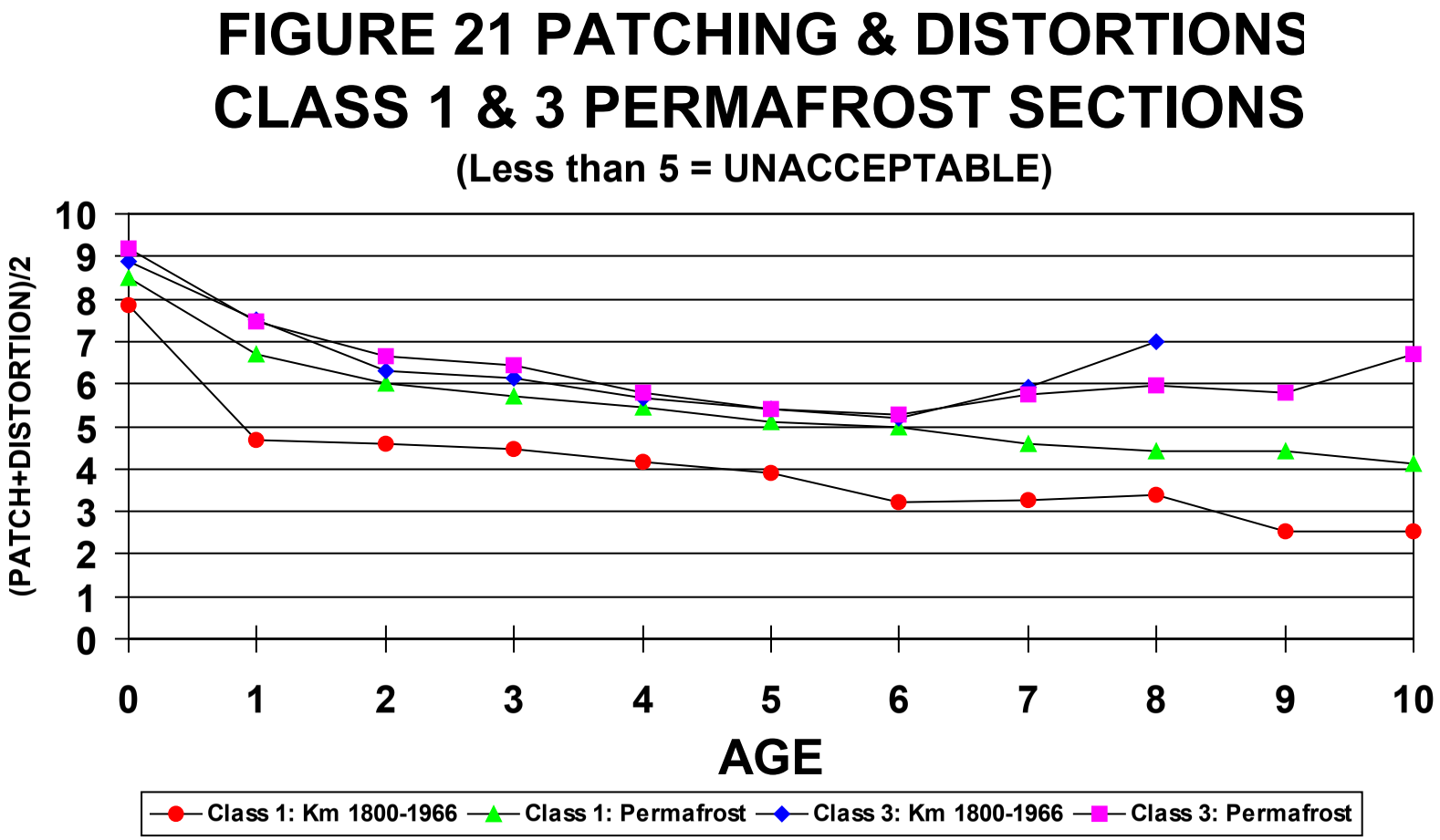


Figure 22 RCI Class 1 and 3 Permafrost Sections

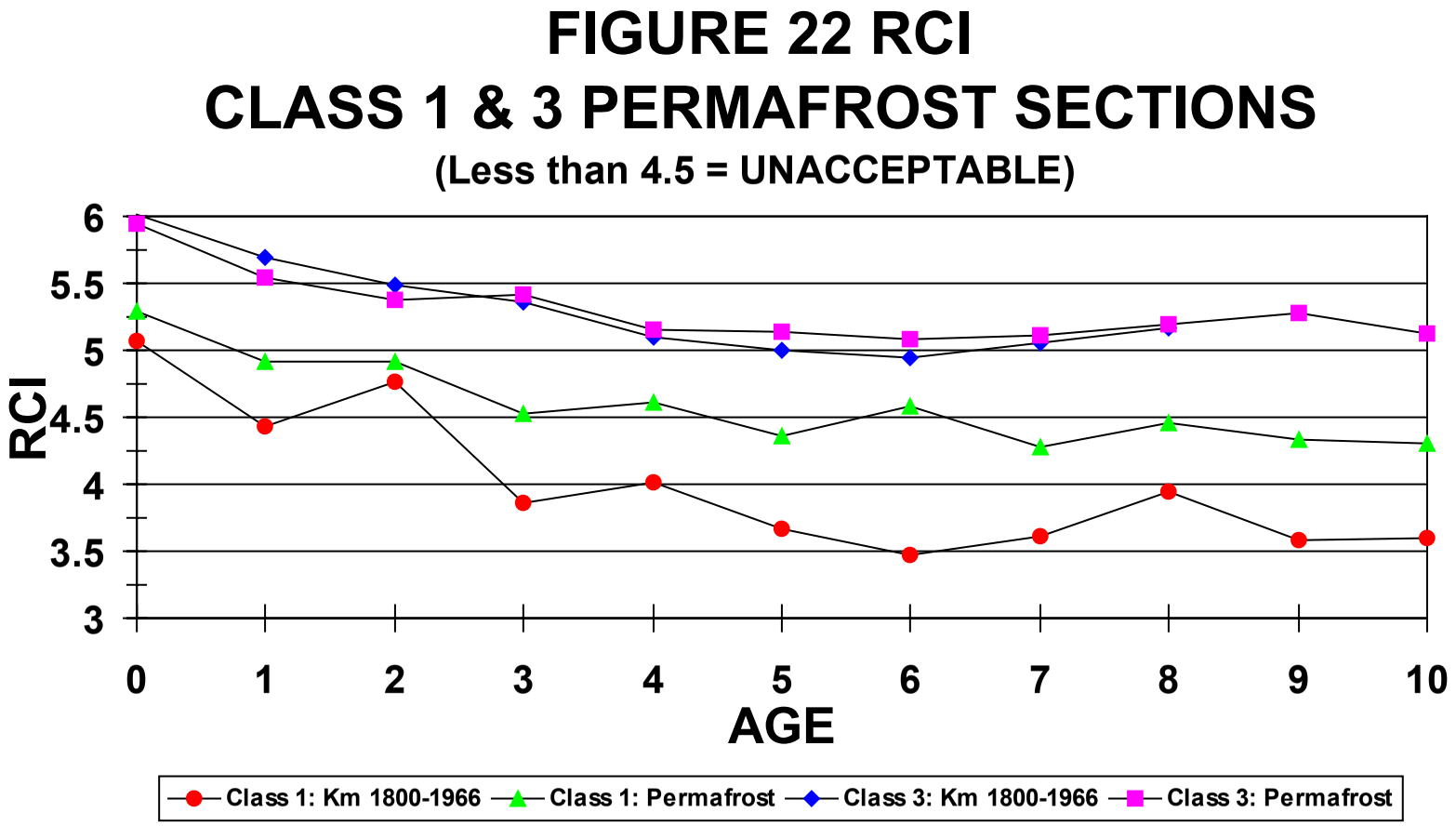


Figure 23 BCI Class 1 and 3 Permafrost Sections

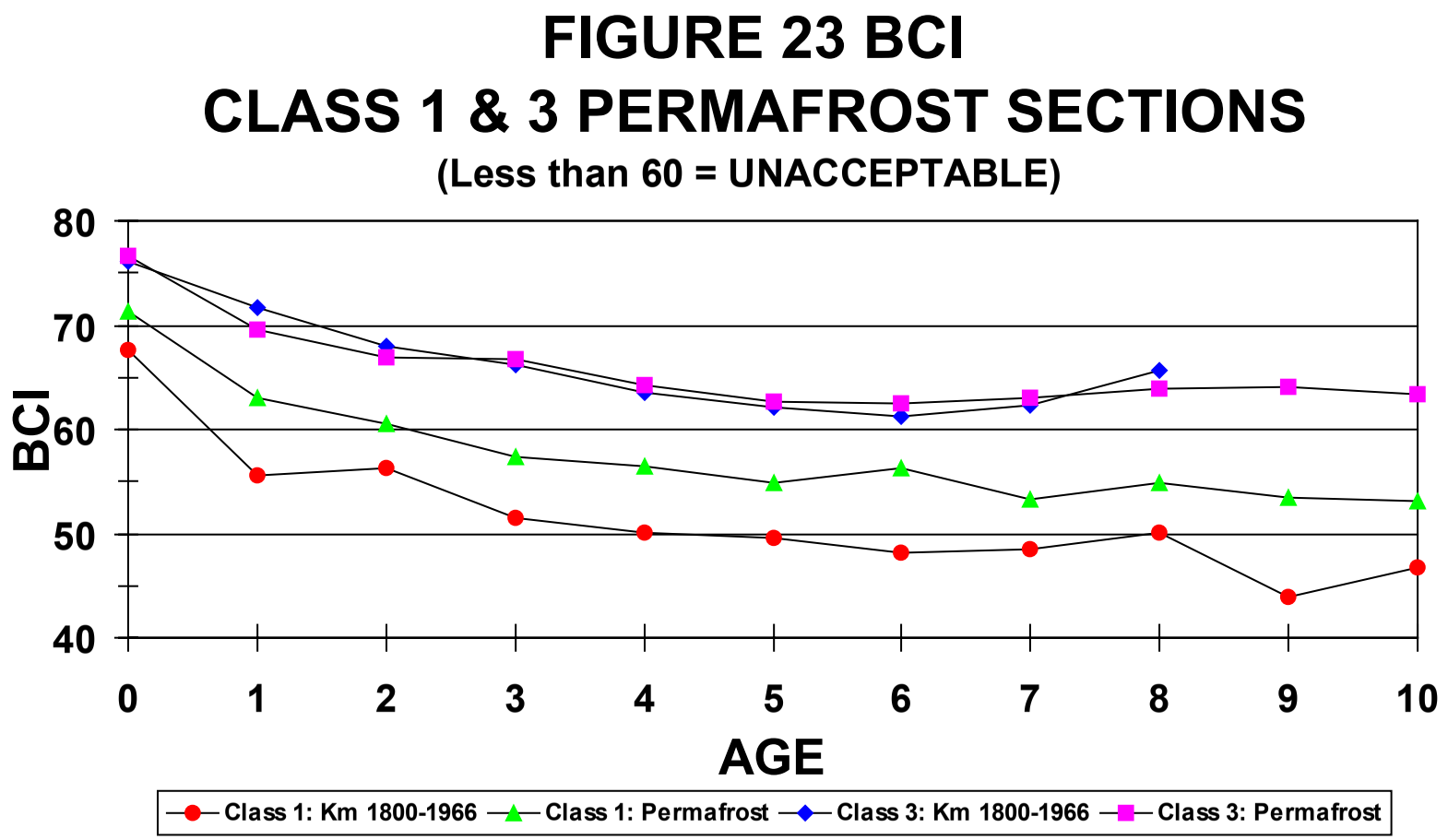


Figure 24 BCI Double Seal Sections

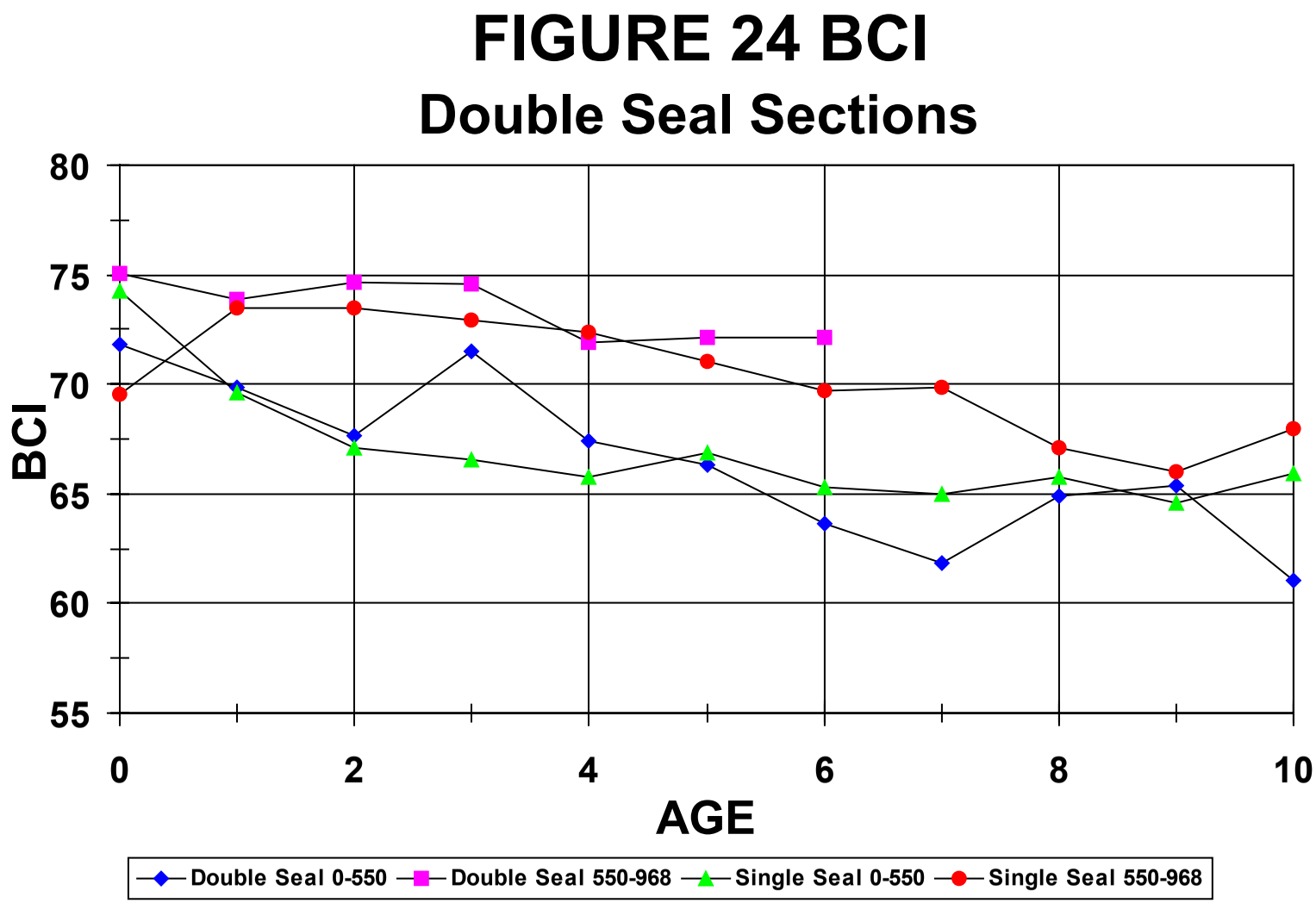
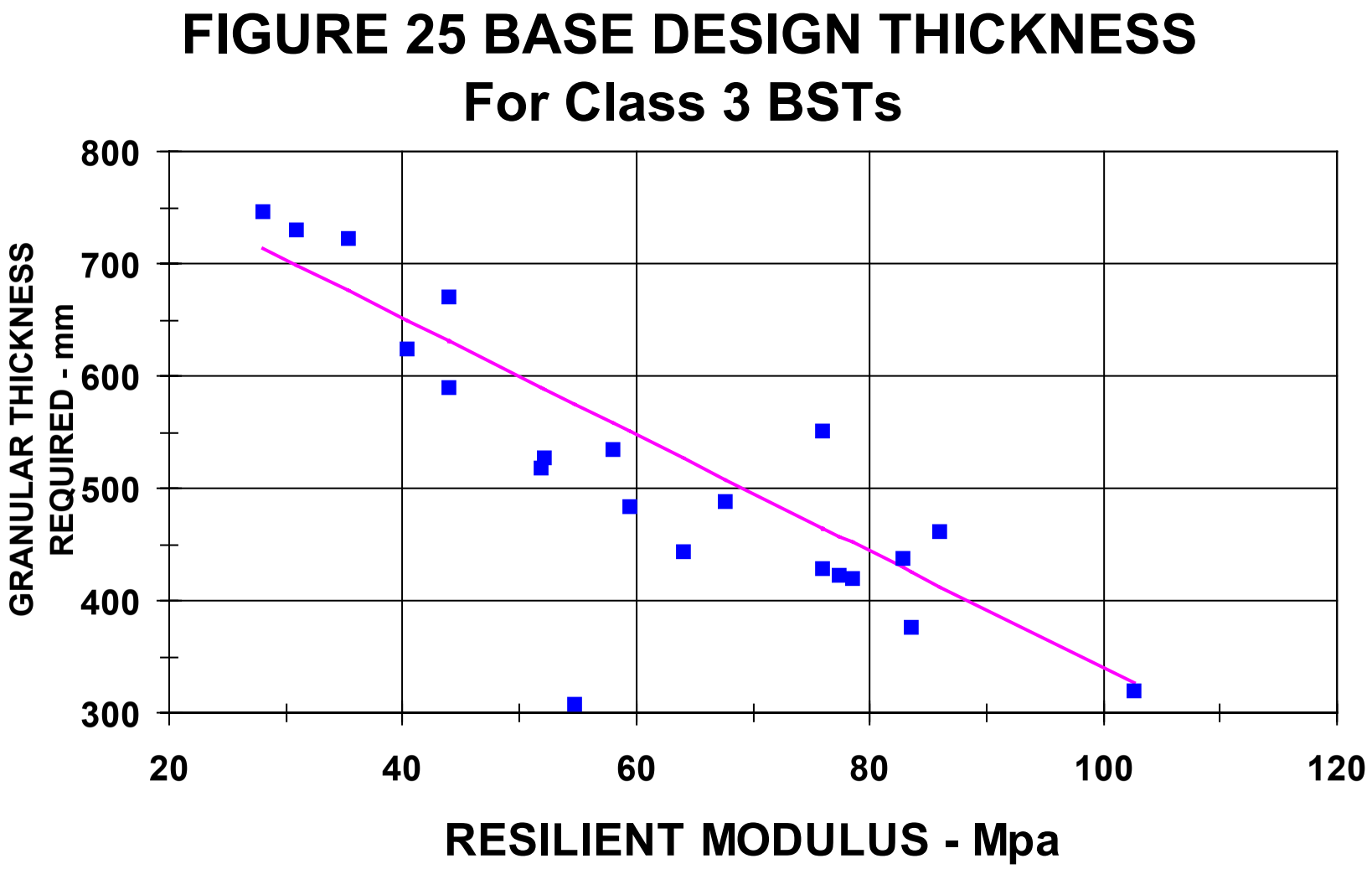


Figure 25 Base Design Thickness for Class 3 BSTs



APPENDIX B BST REPORT TABLES

Table 1
Potential BST Rehabilitation Projects
Based on 2002 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)	226.0	232.0	6.0	3	8	2002	8	7	8	10	8	7	8	4	6	6	5.25	63.90	1	Routine Maintenance-
Alaska (97)	232.0	238.5	6.5	3	8	2002	9	7	7	10	5	9	9	5	7	5	5.00	63.35	8	Rip Up, Reshape and ReBST < 3 Years-
Alaska (97)	241.0	245.0	4.0	3	8	2002	9	9	9	10	8	9	6	4	8	7	5.00	66.05	1	Routine Maintenance-
Alaska (97)	245.0	249.5	4.5	3	8	2002	9	7	4	9	7	7	6	6	8	6	5.00	60.65	8	Rip Up, Reshape and ReBST < 3 Years-
Alaska (97)	249.5	251.5	2.0	3	11	2002	9	8	8	9	8	8	6	4	6	7	5.25	64.90	1	Routine Maintenance-
Alaska (97)	256.0	258.0	2.0	3	6	2002	7	6	7	6	7	7	5	6	4	6	4.75	56.90	8	Rip Up, Reshape and ReBST < 3 Years-
Alaska (97)	328.0	335.0	7.0	3	5	2002	9	7	7	9	9	9	6	4	8	7	5.00	64.05	8	Rip Up, Reshape and ReBST < 3 Years-
Alaska (97)	335.0	347.0	12.0	3	5	2002	8	8	8	9	10	7	5	4	8	7	5.25	64.50	1	Routine Maintenance-
Alaska (97)	354.5	357.0	2.5	3	1	2002	9	5	6	9	10	5	6	5	6	5	4.75	58.25	3	Correct Depressions and Long Patching-
Alaska (97)	357.0	359.0	2.0	3	4	2002	9	5	6	7	10	5	6	5	6	5	4.75	56.75	3	Correct Depressions and Long Patching-
Alaska (97)	458.0	468.0	10.0	3	10	2002	6	5	7	6	8	5	6	3	5	6	5.25	56.10	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-
Alaska (97)	468.0	475.0	7.0	3	8	2002	8	8	7	9	9	7	8	3	7	7	5.25	63.35	1	Routine Maintenance-
Alaska (97)	475.0	480.0	5.0	3	10	2002	9	8	6	7	9	8	8	3	7	7	5.25	62.65	1	Routine Maintenance-
Alaska (97)	480.0	482.7	2.7	3	9	2002	9	6	8	7	10	8	8	3	9	8	5.25	63.80	1	Routine Maintenance-
Alaska (97)	495.0	501.2	6.2	3	7	2002	9	7	7	8	7	6	7	3	8	7	5.00	60.40	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-
Alaska (97)	516.2	520.0	3.8	2	1	2002	4	5	7	8	10	4	10	6	6	9	5.25	59.85	1	Routine Maintenance-
Alaska (97)	530.0	533.0	3.0	3	2	2002	9	7	8	9	4	8	9	5	6	8	5.00	64.00	1	Routine Maintenance-
Alaska (97)	540.0	548.0	8.0	3	3	2002	9	5	5	4	8	8	8	4	4	5	4.50	53.70	3	Correct Depressions and Long Patching-
Alaska (97)	556.0	561.0	5.0	1	8	2002	9	7	5	8	8	7	6	2	6	7	4.75	57.70	13	Reconstruct-
Alaska (97)	563.0	571.5	8.5	1	8	2002	9	7	6	9	8	6	7	2	8	7	5.00	60.10	1,13	Routine Maintenance-Reconstruct-
Alaska (97)	571.5	575.0	3.5	1	1	2002	8	7	7	6	6	7	8	4	7	8	5.25	61.10	1	Routine Maintenance-
Alaska (97)	607.0	609.0	2.0	3	5	2002	9	9	9	9	9	8	9	4	4	9	5.50	69.35	1	Routine Maintenance-
Alaska (97)	641.0	654.0	13.0	1	8	2002	8	7	6	8	6	7	6	3	3	7	4.75	58.00	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct-
Alaska (97)	654.0	665.0	11.0	1	8	2002	9	7	7	9	7	8	5	4	4	7	5.00	62.15	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct-
Alaska (97)	665.0	679.0	14.0	1	7	2002	9	8	7	9	5	8	6	2	4	7	5.00	61.40	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct-
Alaska (97)	679.0	690.0	11.0	3	7	2002	9	8	7	9	7	8	7	3	5	9	5.00	63.85	1	Routine Maintenance-
Alaska (97)	690.0	698.0	8.0	2	7	2002	9	8	7	9	9	8	8	2	4	6	5.00	62.10	1	Routine Maintenance-
Alaska (97)	698.0	711.7	13.7	2	7	2002	7	7	8	9	7	8	7	3	5	9	5.00	62.85	1	Routine Maintenance-
Alaska (97)	737.5	750.0	12.5	2	7	2002	9	8	7	9	7	8	6	3	4	7	4.75	61.15	1,13	Routine Maintenance-Reconstruct-
Alaska (97)	762.0	770.0	8.0	2	10	2002	8	7	5	8	7	8	7	2	2	6	4.75	57.55	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct-
Alaska (97)	770.0	774.0	4.0	2	10	2002	8	7	5	8	7	8	7	3	2	7	4.75	58.65	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct-
Alaska (97)	774.0	782.3	8.3	3	3	2002	7	8	8	10	10	9	9	6	6	8	6.50	74.45	1,7	Routine Maintenance-ReBST < 2 Years-
Alaska (97)	804.2	805.0	0.8	3	5	2002	7	8	8	10	9	8	8	4	5	10	5.75	70.20	1	Routine Maintenance-

Table 1
Potential BST Rehabilitation Projects
Based on 2002 Evaluations - PWGSC 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
Alaska (97)	832.0	839.5	7.5	2	8	2002	8	5	5	6	6	7	6	3	3	5	4.50	52.50	1,13	Routine Maintenance-Reconstruct-
Alaska (97)	855.0	865.0	10.0	3	7	2002	9	8	6	10	10	6	6	4	7	7	5.25	63.85	1,8	Routine Maintenance-Rip Up, Reshape and ReBST < 3 Years-
Alaska (97)	962.4	967.6	5.2	3	5	2002	9	7	7	9	8	8	8	5	5	7	5.00	64.15	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-

Table 2
Potential BST Rehabilitation Projects
Based on 2002 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	1128.2	1134.0	5.8	3	7	2002	6	8	8	10	6	7	7	6	8	8	5.75	67.85	1,11	Routine Maintenance-Hot Mix Overlay-
Alaska	1134.0	1142.0	8.0	3	7	2002	6	8	8	10	7	6	7	6	9	8	5.75	67.25	1,11	Routine Maintenance-Hot Mix Overlay-
Alaska	1152.0	1161.0	9.0	3	6	2002	6	9	9	10	7	6	6	6	8	9	6.00	70.05	1,11	Routine Maintenance-Hot Mix Overlay-
Alaska	1273.0	1279.5	6.5	3	10	2002	8	8	8	10	4	8	7	8	10	8	5.50	68.75	1	Routine Maintenance-
Alaska	1292.0	1300.0	8.0	3	19	2002	6	8	8	10	4	8	6	6	8	7	5.25	64.25	9	Rip Up, Reshape and ReBST < 2 Years-
Alaska	1346.0	1352.0	6.0	3	6	2002	6	9	8	10	7	9	7	9	10	9	5.75	72.00	1,7	Routine Maintenance-ReBST < 2 Years-
Alaska	1506.0	1510.0	4.0	3	6	2002	8	7	8	10	7	8	8	3	5	4	4.75	60.60	3	Correct Depressions and Long Patching-
Alaska	1510.0	1516.0	6.0	3	5	2002	6	6	7	10	9	6	7	3	8	5	5.00	59.40	3	Correct Depressions and Long Patching-
Alaska	1520.0	1522.5	2.5	3	5	2002	5	7	8	10	8	7	7	3	5	7	5.25	62.75	1	Routine Maintenance-
Alaska	1574.0	1580.0	6.0	1	8	2002	9	8	7	10	6	7	7	5	8	4	4.50	59.70	13	Reconstruct-
Alaska	1698.0	1704.4	6.4	1	8	2002	8	5	7	8	7	8	7	7	10	9	5.50	66.10	1,13	Routine Maintenance-Reconstruct-
Alaska	1704.4	1706.7	2.3	1	21	2002	9	4	7	9	6	9	5	6	6	10	5.25	65.60	1,13	Routine Maintenance-Reconstruct-
Alaska	1706.7	1708.0	1.3	1	14	2002	7	7	7	9	5	6	3	4	5	9	5.00	60.55	13	Reconstruct-
Alaska	1708.0	1713.7	5.7	1	5	2002	7	7	7	8	6	7	7	7	8	9	5.25	64.45	13	Reconstruct-
Alaska	1726.0	1734.0	8.0	1	8	2002	7	5	6	4	5	7	5	2	3	5	5.00	51.75	13	Reconstruct-
Alaska	1734.0	1738.0	4.0	1	7	2002	9	7	7	8	8	8	8	6	6	7	5.25	64.65	13	Reconstruct-
Alaska	1750.0	1754.0	4.0	1	7	2002	7	7	7	8	7	8	8	8	10	7	5.00	63.15	13	Reconstruct-
Alaska	1754.0	1758.0	4.0	1	7	2002	6	6	7	8	7	8	7	5	6	5	5.00	59.20	13	Reconstruct-
Alaska	1768.0	1773.0	5.0	1	8	2002	7	7	7	9	7	7	7	6	9	7	5.00	62.00	13	Reconstruct-
Alaska	1773.0	1776.0	3.0	1	6	2002	9	8	7	8	8	7	7	5	5	6	5.00	61.90	13	Reconstruct-
Alaska	1831.0	1845.0	14.0	3	5	2002	6	8	8	10	6	5	4	4	7	4	4.50	56.15	3	Correct Depressions and Long Patching-
Alaska	1852.0	1862.0	10.0	3	5	2002	8	8	8	10	7	6	6	4	7	4	4.50	58.05	3	Correct Depressions and Long Patching-
Alaska	1867.8	1871.4	3.6	3	4	2002	5	9	8	9	7	4	6	6	8	7	5.25	61.55	2	Spot Patching-
Alaska	1871.4	1873.0	1.6	3	7	2002	7	7	6	8	8	7	6	4	5	3	4.50	55.35	3	Correct Depressions and Long Patching-
Alaska	1881.0	1886.8	5.8	3	5	2002	7	7	8	10	6	4	4	3	4	4	4.75	55.75	3	Correct Depressions and Long Patching-
Alaska	1893.0	1905.0	12.0	3	6	2002	7	8	8	10	8	4	3	2	4	4	4.75	56.00	3	Correct Depressions and Long Patching-
Alaska	1905.0	1914.0	9.0	3	6	2002	8	8	8	10	7	6	7	3	4	5	4.50	58.70	9,10	Rip Up, Reshape and ReBST < 2 Years- Add 100-150 Gravel, ReBST < 2 Years-
Alaska	1914.0	1921.0	7.0	3	7	2002	8	8	8	10	7	5	4	5	7	5	4.75	59.25	9,10	Rip Up, Reshape and ReBST < 2 Years- Add 100-150 Gravel, ReBST < 2 Years-
Alaska	1921.0	1932.0	11.0	3	7	2002	8	8	7	10	5	6	3	2	4	3	4.00	52.20	9,10	Rip Up, Reshape and ReBST < 2 Years- Add 100-150 Gravel, ReBST < 2 Years-
Alaska	1944.0	1949.0	5.0	3	8	2002	8	8	7	10	7	7	7	4	5	3	4.00	55.35	9,10	Rip Up, Reshape and ReBST < 2 Years- Add 100-150 Gravel, ReBST < 2 Years-
Alaska	1949.0	1960.0	11.0	3	6	2002	9	9	9	9	6	6	3	3	5	3	4.00	54.20	9,10	Rip Up, Reshape and ReBST < 2 Years- Add 100-150 Gravel, ReBST < 2 Years-
Alaska	1960.0	1965.7	5.7	3	6	2002	8	9	7	10	7	7	5	4	6	3	4.50	57.25	9,10	Rip Up, Reshape and ReBST < 2 Years- Add 100-150 Gravel, ReBST < 2 Years-
Klondike	75.0	79.0	4.0	3	9	2002	6	8	8	10	6	9	6	7	9	8	5.50	67.65	1,8	Routine Maintenance-Rip Up, Reshape and ReBST < 3 Years-

Table 2
Potential BST Rehabilitation Projects
Based on 2002 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
Klondike	315.7	315.8	0.1	3	11	2002	8	6	4	10	5	10	5	10	10	10	5.00	66.50	1	Routine Maintenance-
Klondike	315.8	315.9	0.1	3	11	2002	6	7	5	10	8	10	4	10	10	10	5.25	68.25	1	Routine Maintenance-
Klondike	328.0	330.0	2.0	3	6	2002	8	8	9	7	7	9	8	7	9	7	5.50	67.55	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-
Klondike	330.0	340.0	10.0	3	9	2002	7	7	8	8	8	8	7	6	7	7	5.25	63.90	9	Rip Up, Reshape and ReBST < 2 Years-
Klondike	411.1	418.0	6.9	2	9	2002	8	8	4	5	5	7	7	5	6	7	4.75	56.25	9	Rip Up, Reshape and ReBST < 2 Years-
Klondike	418.0	423.0	5.0	2	7	2002	7	8	8	9	6	9	7	8	9	8	5.25	66.90	9	Rip Up, Reshape and ReBST < 2 Years-
Klondike	423.0	431.0	8.0	2	8	2002	7	8	6	6	6	7	7	5	6	8	5.25	60.85	8	Rip Up, Reshape and ReBST < 3 Years-
Klondike	448.0	463.0	15.0	2	7	2002	8	7	4	7	6	7	6	5	7	5	4.75	56.05	2,9	Spot Patching-Rip Up, Reshape and ReBST < 2 Years-
Klondike	507.5	510.5	3.0	3	7	2002	8	9	8	9	7	9	7	5	8	5	4.75	62.35	8	Rip Up, Reshape and ReBST < 3 Years-
Klondike	510.5	518.0	7.5	3	4	2002	9	9	9	9	8	9	6	6	8	4	5.50	67.00	2,3	Spot Patching-Correct Depressions and Long Patching-
Klondike	530.0	535.5	5.5	3	7	2002	9	8	8	10	5	9	6	9	10	9	5.25	68.65	8	Rip Up, Reshape and ReBST < 3 Years-
Klondike	546.0	558.0	12.0	2	8	2002	7	9	8	7	5	4	5	3	4	6	4.75	55.70	9	Rip Up, Reshape and ReBST < 2 Years-
Klondike	586.0	596.0	10.0	2	8	2002	8	8	8	8	7	7	7	6	7	8	5.50	65.85	1,10	Routine Maintenance-Add 100-150 Gravel, ReBST < 2 Years-
Klondike	596.0	603.0	7.0	2	4	2002	7	8	6	8	7	4	5	5	7	6	5.00	57.70	3	Correct Depressions and Long Patching-
Klondike	603.0	616.0	13.0	2	9	2002	8	8	6	8	7	5	6	6	7	7	5.25	61.45	3,8,10	Correct Depressions and Long Patching-Rip Up, Reshape and ReBST < 3 Years-Add 100-150 Gravel, ReBST < 2 Years-
Klondike	616.0	622.0	6.0	2	8	2002	8	8	8	8	7	6	5	5	7	7	5.25	62.35	1,10	Routine Maintenance-Add 100-150 Gravel, ReBST < 2 Years-
Klondike	622.0	626.0	4.0	2	8	2002	8	8	7	8	5	7	6	4	7	7	5.25	61.75	10	Add 100-150 Gravel, ReBST < 2 Years-
Klondike	659.7	663.2	3.5	3	9	2002	8	8	8	8	7	8	8	4	6	4	4.75	59.60	10	Add 100-150 Gravel, ReBST < 2 Years-
Klondike	663.2	677.2	14.0	2	9	2002	8	7	8	7	7	7	6	4	6	6	5.25	60.90	1	Routine Maintenance-
Klondike	677.2	687.2	10.0	2	9	2002	8	8	8	8	7	7	6	5	6	4	4.75	58.95	10	Add 100-150 Gravel, ReBST < 2 Years-
Klondike	706.6	712.5	5.9	2	10	2002	8	8	7	6	7	6	6	5	6	4	4.75	56.10	10	Add 100-150 Gravel, ReBST < 2 Years-
Klondike	712.5	714.0	1.5	2	10	2002	8	8	6	9	7	5	6	5	6	7	4.50	57.15	1,13	Routine Maintenance-Reconstruct-
Klondike	714.0	715.0	1.0	2	10	2002	8	8	6	8	4	3	6	2	7	5	4.25	51.00	1	Routine Maintenance-
Klondike	715.0	716.0	1.0	2	9	2002	8	8	7	7	6	3	5	4	7	4	4.50	52.65	13	Reconstruct-
Haines	199.0	211.0	12.0	3	15	2002	7	6	7	10	4	8	6	6	8	7	5.25	63.15	1	Routine Maintenance-
Campbell	169.0	174.0	5.0	3	4	2002	8	10	10	10	8	8	8	7	8	2	5.25	66.50	1,12	Routine Maintenance-Revert to Gravel-
Campbell	508.5	514.0	5.5	1	10	2002	7	8	7	9	8	9	8	4	8	8	5.50	66.60	1,8	Routine Maintenance-Rip Up, Reshape and ReBST < 3 Years-
Campbell	519.0	529.0	10.0	2	11	2002	8	8	8	9	8	8	7	4	8	8	5.50	66.85	1	Routine Maintenance-
Dempster	1.0	8.0	7.0	2	4	2002	9	9	8	9	6	9	6	8	9	4	5.00	64.50	2,3	Spot Patching-Correct Depressions and Long Patching-
Tagish	20.0	24.0	4.0	2	15	2002	6	8	6	8	7	6	4	6	8	7	5.00	59.35	1	Routine Maintenance-
Tagish	24.0	35.0	11.0	2	15	2002	6	7	5	8	6	7	4	5	8	7	5.25	59.50	3	Correct Depressions and Long Patching-

Table 2
Potential BST Rehabilitation Projects
Based on 2002 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
Tagish	35.0	37.5	2.5	2	15	2002	7	7	5	9	8	8	4	4	10	8	5.25	62.00	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-
Top of the Worl	4.0	14.2	10.2	2	4	2002	8	8	8	5	7	6	4	4	7	8	4.75	57.45	5	Deep Patch-
Top of the Worl	19.7	23.6	3.9	2	4	2002	9	9	8	4	8	6	8	3	5	8	4.50	57.20	13	Reconstruct-
Top of the Worl	25.1	27.7	2.6	2	4	2002	9	9	8	4	8	6	8	3	5	8	4.50	57.20	13	Reconstruct-
Top of the Worl	36.0	38.0	2.0	2	5	2002	9	9	9	7	7	7	8	5	5	8	5.00	63.85	1,13	Routine Maintenance-Reconstruct-
Top of the Worl	38.0	43.2	5.2	2	5	2002	8	9	9	4	7	4	8	6	6	8	4.75	58.40	13	Reconstruct-
Top of the Worl	44.1	45.4	1.3	2	5	2002	8	9	9	4	7	4	8	6	6	8	4.75	58.40	13	Reconstruct-
Top of the Worl	46.5	47.5	1.0	2	5	2002	8	9	9	4	7	4	8	6	6	8	4.75	58.40	13	Reconstruct-
Top of the Worl	50.0	51.8	1.8	2	5	2002	8	8	8	5	6	4	8	5	5	9	4.75	58.00	5	Deep Patch-
Top of the Worl	54.3	57.2	2.9	2	5	2002	8	8	8	5	6	4	8	5	5	9	4.75	58.00	5	Deep Patch-
Top of the Worl	88.0	93.0	5.0	2	6	2002	6	8	8	5	7	4	8	4	6	8	4.75	56.15	5	Deep Patch-
Top of the Worl	93.0	94.3	1.3	2	7	2002	7	9	9	4	6	4	9	3	8	9	4.50	55.75	5	Deep Patch-
Top of the Worl	96.0	106.0	10.0	2	2	2002	6	9	9	9	7	7	8	4	5	10	5.00	65.05	2	Spot Patching-
Silver Trail	50.0	50.5	0.5	2	3	2002	9	9	8	8	7	7	6	8	10	4	4.75	61.05	9	Rip Up, Reshape and ReBST < 2 Years-
Silver Trail	50.5	52.0	1.5	2	10	2002	9	8	8	9	8	9	7	6	9	5	4.75	63.10	9	Rip Up, Reshape and ReBST < 2 Years-
Takhini Hot Spri	0.0	5.2	5.2	2	5	2002	6	8	8	9	6	7	5	8	9	8	5.25	64.60	8	Rip Up, Reshape and ReBST < 3 Years-
Mitchell Road	0.0	11.0	11.0	2	6	2002	7	8	9	9	9	8	5	4	7	7	5.00	63.65	9	Rip Up, Reshape and ReBST < 2 Years-
Dome Road	0.0	3.0	3.0	2	8	2002	4	7	5	4	5	2	4	2	7	5	3.00	37.65	9	Rip Up, Reshape and ReBST < 2 Years-
Dome Road	3.0	7.0	4.0	2	2	2002	8	8	4	4	6	5	4	4	5	9	4.50	53.15	9	Rip Up, Reshape 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	71.50	7.99	72.91 Same	69.49 Same	68.06 Same	71.35 Same
1	68.21	6.42	66.95 Same	68.93 Same	68.15 Same	63.26 Not Same
2	63.80	7.36	63.67 Same	62.09 Same	67.35 Same	60.54 Not Same
3	61.71	6.79	62.18 Same	58.37 Same	63.28 Same	57.47 Not Same
4	61.56	6.82	63.09 Same	59.13 Same	63.03 Same	56.47 Not Same
5	61.59	5.73	61.61 Same	57.95 Not Same	64.32 Same	54.87 Not Same
6	61.44	6.35	62.31 Same	59.16 Same	61.26 Same	56.16 Not Same
7	59.19	5.65	60.30 Same	53.49 Not Same	60.37 Same	53.21 Not Same
8	58.19	6.18	58.95 Same	56.32 Same	58.31 Same	54.84 Not Same
9	55.69	6.94	56.91 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	6.62	69.93 Not Same	70.29 Same	71.80 Same	73.59 Same	73.57 Same	74.83 Same	78.53 Not Same	75.07 Same
1	70.18	7.18	63.25 Not Same	63.65 Same	71.61 Same	71.06 Same	67.67 Same	70.99 Same	72.23 Same	72.70 Same
2	67.72	6.97	60.46 Not Same	65.99 Same	66.84 Same	69.05 Same	69.64 Same	67.12 Same	66.39 Same	69.45 Same
3	65.32	6.82	57.84 Not Same	63.41 Same	64.27 Same	66.84 Same	66.06 Same	63.93 Same	64.50 Same	67.94 Same
4	62.82	7.71	57.36 Not Same	62.27 Same	59.65 Same	65.25 Not Same	62.91 Same	64.24 Same	62.91 Same	64.09 Same
5	62.11	6.36	58.34 Not Same	60.70 Same	60.28 Same	64.04 Not Same	60.49 Same	61.90 Same	59.57 Same	63.37 Same
6	62.53	4.90	59.99 Same	58.05 Same	63.00 Same	63.03 Same	63.14 Same	63.66 Same	58.35 Same	64.17 Same
7	61.01	5.26	60.67 Same		66.79 Not Same	60.42 Same	61.22 Same	63.25 Same	55.75 Same	64.79 Same
8	59.29	6.26	60.49 Same		64.27 Same	58.67 Same	59.82 Same	65.37 Not Same		67.17 Not Same

	Overall Avg Exc TOW, Ak 450-1008		Alaska 450-1008	Top of the World
Age	Average	Std. Dev	Average	Average
0	73.40	6.69	69.93 Not Same	78.53 Not Same
1	70.23	7.15	63.25 Not Same	72.23 Same
2	68.03	6.87	60.46 Not Same	66.39 Same
3	65.69	6.88	57.84 Not Same	64.50 Same
4	62.95	7.76	57.36 Not Same	62.91 Same
5	62.55	6.63	58.34 Not Same	59.57 Same
6	62.88	5.34	59.99 Same	58.35 Same
7	61.41	5.28	60.67 Same	55.75 Same
8	59.71	6.36	60.49 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	73.94	6.54	69.93 Not Same	70.29 Same	71.80 Same	73.59 Same	73.57 Same	74.83 Same	78.53 Not Same	75.07 Same
1	70.42	6.94	63.25 Not Same	63.65 Same	71.61 Same	71.06 Same	67.67 Same	70.99 Same	72.23 Same	72.70 Same
2	67.88	6.79	60.46 Not Same	65.99 Same	66.84 Same	69.05 Same	69.64 Same	67.12 Same	66.39 Same	69.45 Same
3	65.58	6.69	57.84 Not Same	63.41 Same	64.27 Same	66.84 Same	66.06 Same	63.93 Same	64.50 Same	67.94 Same
4	62.94	7.55	57.36 Not Same	62.27 Same	59.65 Same	65.25 Not Same	62.91 Same	64.24 Same	62.91 Same	64.09 Same
5	62.25	6.45	58.34 Not Same	60.70 Same	60.28 Same	64.04 Not Same	60.49 Same	61.90 Same	59.57 Same	63.37 Same
6	62.73	5.33	59.99 Same	58.05 Same	63.00 Same	63.03 Same	63.14 Same	63.66 Same	58.35 Same	64.17 Same
7	61.33	5.29	60.67 Same		66.79 Not Same	60.42 Same	61.22 Same	63.25 Same	55.75 Same	64.79 Same
8	59.71	6.36	60.49 Same		64.27 Same	58.67 Same	59.82 Same	65.37 Not Same		67.17 Not 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	77.17	4.07	74.06 Not Same	78.67 Not Same	77.34 Same	76.39 Same	78.65 Same	76.06 Same	76.13 Same	75.97 Same	81.95 Not Same	78.85 Same
1	74.67	4.63	69.61 Not Same	75.41 Same	75.06 Same	66.62 Not Same	75.64 Same	71.65 Not Same	74.44 Same	73.35 Same	81.72 Not Same	76.36 Same
2	72.75	4.44	67.10 Not Same	73.57 Same	73.11 Same	66.18 Not Same	76.22 Same	67.88 Not Same	72.41 Same	71.46 Same	77.20 Not Same	72.04 Same
3	71.39	5.02	66.97 Not Same	73.00 Same	72.63 Same	67.43 Not Same	74.28 Same	66.20 Not Same	69.29 Not Same	69.61 Not Same	76.23 Not Same	69.16 Same
4	71.03	4.55	65.87 Not Same	72.38 Same	71.23 Same	65.64 Not Same	75.85 Not Same	63.61 Not Same	70.84 Same	69.17 Not Same	74.37 Not Same	67.06 Not Same
5	70.03	4.51	66.87 Not Same	71.12 Same	70.27 Same	63.16 Not Same	69.10 Same	62.10 Not Same	70.09 Same	68.69 Same	72.47 Not Same	66.69 Same
6	69.04	3.88	65.23 Not Same	69.87 Same	69.59 Same	62.70 Not Same	70.39 Same	61.23 Not Same	68.88 Same	67.47 Not Same	71.50 Not Same	66.46 Same
7	67.60	4.23	64.76 Not Same	69.90 Same	66.86 Same	62.37 Not Same	66.99 Same	62.34 Not Same	67.95 Same	67.76 Same	70.41 Not Same	62.83 Not Same
8	66.99	4.33	65.67 Same	67.12 Same	67.25 Same	62.92 Not Same	66.76 Same	65.65 Same	66.08 Same	67.63 Same	68.50 Same	65.21 Same
9	66.74	4.70	64.76 Same	66.03 Same	66.17 Same	63.01 Not Same	64.51 Same		68.44 Same	67.02 Same	68.40 Same	67.73 Same
10	66.11	3.91	65.12 Same	67.95 Same	65.45 Same	62.27 Not Same	65.48 Same		65.32 Same	67.73 Same	69.73 Not Same	64.75 Same
11	66.03	4.17	66.03 Same	68.45 Same	64.95 Same	65.42 Same	63.48 Same		66.50 Same	69.11 Same	68.97 Not Same	
12	64.99	3.75	66.18 Same	63.90 Same	65.80 Same	66.32 Same	61.55 Same			65.78 Same	67.28 Same	
13	65.03	2.97	65.30 Same		65.28 Same	63.65 Same	63.80 Same				64.50 Same	
14	64.08	2.93		58.60 Same	64.88 Same	66.45 Same	64.75 Same				63.38 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	74.96	5.77	74.06 Same		76.39 Same	78.65 Same	76.06 Same			81.95 Not Same	78.85 Not Same
1	70.04	5.70	69.61 Same		66.62 Not Same	75.64 Not Same	71.65 Same			81.72 Not Same	76.36 Not Same
2	67.48	6.12	67.10 Same		66.18 Same	76.22 Not Same	67.88 Same			77.20 Not Same	72.04 Not Same
3	67.08	5.34	66.97 Same		67.43 Same	74.28 Not Same	66.20 Same			76.23 Not Same	69.16 Same
4	65.51	5.07	65.87 Same		65.64 Same	75.85 Not Same	63.61 Same			74.37 Not Same	67.06 Same
5	65.05	5.15	66.87 Not Same		63.16 Same	69.10 Same	62.10 Not Same			72.47 Not Same	66.69 Same
6	64.06	5.23	65.23 Same		62.70 Same	70.39 Not Same	61.23 Not Same			71.50 Not Same	66.46 Same
7	63.73	5.12	64.76 Same		62.37 Same	66.99 Same	62.34 Same			70.41 Not Same	62.83 Same
8	64.99	4.19	65.67 Same		62.92 Same	66.76 Same	65.65 Same			68.50 Not Same	65.21 Same
9	64.74	3.10	64.76 Same		63.01 Same	64.51 Same				68.40 Not Same	67.73 Same
10	64.25	4.59	65.12 Same		62.27 Same	65.48 Same				69.73 Not Same	64.75 Same
11	65.79	2.50	66.03 Same		65.42 Same	63.48 Same				68.97 Not Same	
12	66.26	1.10	66.18 Same		66.32 Same	61.55 Not Same				67.28 Not Same	
13	64.20	2.80	65.30 Same		63.65 Same	63.80 Same				64.50 Same	
14	66.45	0.20			66.45 Same	64.75 Not Same				63.38 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	5.25	72.50
11	8.0	8.0	8.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	5.50	73.75
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	5.38	72.63
11	8.0	6.0	8.0	10.0	9.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.50	72.50

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 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	5.13	69.38
11	8.0	7.0	5.0	10.0	7.0	10.0	7.0	10.0	10.0	10.0	10.0	10.0	5.00	68.25
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	5.13	68.38
11	8.0	6.0	4.0	10.0	5.0	10.0	12.0	10.0	10.0	10.0	10.0	10.0	5.00	66.50

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 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	5.25	69.25
11	6.0	7.0	5.0	10.0	8.0	10.0	26.0	10.0	10.0	10.0	10.0	10.0	5.25	68.25

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	Single vs Double Prime
Ravelling	same	same	same	DOUBLE PRIME
Bleeding	SINGLE	same	DOUBLE PRIME	same
Rutting	same	SINGLE	DOUBLE	SINGLE
Potholes	same	same	same	same
Cracks	SINGLE	SINGLE	DOUBLE	DOUBLE PRIME
Patching	same	same	same	same
Ride Score	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 2002 BST Program
Based on BCI, Panel Recommendations and PWGSC Preliminary Program

Highway	Start	End	Class	Age	Ride Score	BCI 2002	Action	Kilometres to be Rehabilitated		
								Based on BCI	Based on Panel Recommendations	Based on Prelim Program
Alaska (97)	232.0	238.5	3	8	5	63.35	8		6.5	
Alaska (97)	245.0	249.5	3	8	5	60.65	8	4.5	4.5	
Alaska (97)	256.0	258.0	3	6	4.75	56.90	8	2.0	2.0	
Alaska (97)	328.0	335.0	3	5	5	64.05	8		7.0	
Alaska (97)	354.5	357.0	3	1	4.75	58.25	3	2.5		
Alaska (97)	357.0	359.0	3	4	4.75	56.75	3	2.0		
Alaska (97)	458.0	468.0	3	10	5.25	56.10	1,9	10.0	10.0	10.0
Alaska (97)	475.0	480.0	3	10	5.25	62.65	1	5.0		
Alaska (97)	495.0	501.2	3	7	5	60.40	1,9	6.2	6.2	
Alaska (97)	533.0	540.0	3	4	5	59.10	1,5	7.0		
Alaska (97)	540.0	548.0	3	3	4.5	53.70	3	8.0		
Alaska (97)	556.0	561.0	1	8	4.75	57.70	13	5.0	5.0	
Alaska (97)	563.0	571.5	1	8	5	60.10	1,13		8.5	8.5
Alaska (97)	641.0	654.0	1	8	4.75	58.00	1,9,13		13.0	
Alaska (97)	654.0	665.0	1	8	5	62.15	1,9,13		11.0	
Alaska (97)	665.0	679.0	1	7	5	61.40	1,9,13		14.0	
Alaska (97)	737.5	750.0	2	7	4.75	61.15	1,13		12.5	
Alaska (97)	762.0	770.0	2	10	4.75	57.55	1,9,13	8.0	8.0	
Alaska (97)	770.0	774.0	2	10	4.75	58.65	1,9,13		4.0	
Alaska (97)	774.0	782.3	3	3	6.5	74.45	1,7		8.3	
Alaska (97)	832.0	839.5	2	8	4.5	52.50	1,13	7.5	7.5	
Alaska (97)	855.0	865.0	3	7	5.25	63.85	1,8		10.0	
Alaska (97)	962.4	967.6	3	5	5	64.15	1,9		5.2	
								67.7	143.2	18.5

Table 9 Comparison of 2002 BST Program
Based on BCI, Panel Recommendations and YTG Preliminary Program

Highway	Start	End	Class	Age	Ride Score	BCI 2002	Action	Kilometres to be Rehabilitated		
								Based on BCI	Based on Panel Recommendations	Based on Prelim Program
Alaska	1128.0	1128.2	3	1	6	74.70	1			0.2
Alaska	1128.2	1134.0	3	7	5.75	67.85	1,11		5.8	5.8
Alaska	1134.0	1142.0	3	7	5.75	67.25	1,11		8.0	8.0
Alaska	1152.0	1161.0	3	6	6	70.05	1,11		9.0	
Alaska	1157.0	1161.0	3	6	6	70.05	1,11			4.0
Alaska	1292.0	1300.0	3	19	5.25	64.25	9		8.0	
Alaska	1346.0	1352.0	3	6	5.75	72.00	1,7		6.0	
Alaska	1506.0	1510.0	3	6	4.75	60.60	3	4.0		
Alaska	1510.0	1516.0	3	5	5	59.40	3	6.0		
Alaska	1520.0	1522.5	3	5	5.25	62.75	1	2.5		
Alaska	1574.0	1580.0	1	8	4.5	59.70	13		6.0	
Alaska	1698.0	1704.4	1	8	5.5	66.10	1,13		6.4	
Alaska	1704.4	1706.7	1	21	5.25	65.60	1,13		2.3	
Alaska	1706.7	1708.0	1	14	5	60.55	13		1.3	
Alaska	1708.0	1713.7	1	5	5.25	64.45	13		5.7	
Alaska	1726.0	1734.0	1	8	5	51.75	13	8.0	8.0	
Alaska	1734.0	1738.0	1	7	5.25	64.65	13		4.0	
Alaska	1750.0	1754.0	1	7	5	63.15	13		4.0	
Alaska	1754.0	1758.0	1	7	5	59.20	13		4.0	
Alaska	1768.0	1773.0	1	8	5	62.00	13		5.0	
Alaska	1773.0	1776.0	1	6	5	61.90	13		3.0	
Alaska	1831.0	1845.0	3	5	4.5	56.15	3	14.0		
Alaska	1852.0	1862.0	3	5	4.5	58.05	3	10.0		
Alaska	1867.8	1871.4	3	4	5.25	61.55	2	3.6		
Alaska	1871.4	1873.0	3	7	4.5	55.35	3	1.6		
Alaska	1881.0	1886.8	3	5	4.75	55.75	3	5.8		
Alaska	1893.0	1905.0	3	6	4.75	56.00	3	12.0		
Alaska	1905.0	1914.0	3	6	4.5	58.70	9,10	9.0	9.0	
Alaska	1914.0	1921.0	3	7	4.75	59.25	9,10	7.0	7.0	
Alaska	1921.0	1932.0	3	7	4	52.20	9,10	11.0	11.0	
Alaska	1944.0	1949.0	3	8	4	55.35	9,10	5.0	5.0	
Alaska	1944.2	1949.0	3	8	4	55.35	9,10			4.8
Alaska	1949.0	1960.0	3	6	4	54.20	9,10	11.0	11.0	11.0
Alaska	1960.0	1965.7	3	6	4.5	57.25	9,10	5.7	5.7	5.7
Klondike	75.0	79.0	3	9	5.5	67.65	1,8		4.0	
Klondike	328.0	330.0	3	6	5.5	67.55	1,9		2.0	
Klondike	330.0	340.0	3	9	5.25	63.90	9		10.0	
Klondike	388.4	389.8	2	4	5.25	64.25	1,5			1.4
Klondike	411.1	418.0	2	9	4.75	56.25	9	6.9	6.9	6.9
Klondike	418.0	423.0	2	7	5.25	66.90	9		5.0	5.0
Klondike	423.0	431.0	2	8	5.25	60.85	8		8.0	
Klondike	448.0	463.0	2	7	4.75	56.05	2,9	15.0	15.0	
Klondike	456.0	463.0	2	7	4.75	56.05	2,9			7.0
Klondike	463.0	463.6	2	7	5.25	62.60	1			0.6
Klondike	507.5	510.5	3	7	4.75	62.35	8	3.0	3.0	
Klondike	508.5	510.5	3	7	4.75	62.35	8			2.0
Klondike	510.5	512.5	3	4	5.5	67.00	2,3			2.0

Table 9 Comparison of 2002 BST Program
Based on BCI, Panel Recommendations and YTG Preliminary Program

Highway	Start	End	Class	Age	Ride Score	BCI 2002	Action	Kilometres to be Rehabilitated		
								Based on BCI	Based on Panel Recommendations	Based on Prelim Program
Klondike	513.2	514.7	3	4	5.5	67.00	2,3			1.5
Klondike	530.0	535.5	3	7	5.25	68.65	8		5.5	
Klondike	546.0	557.0	2	8	4.75	55.70	9			11.0
Klondike	546.0	558.0	2	8	4.75	55.70	9	12.0	12.0	
Klondike	586.0	596.0	2	8	5.5	65.85	1,10		10.0	
Klondike	596.0	603.0	2	4	5	57.70	3	7.0		
Klondike	603.0	616.0	2	9	5.25	61.45	3,8,10		13.0	
Klondike	616.0	622.0	2	8	5.25	62.35	1,10		6.0	
Klondike	622.0	626.0	2	8	5.25	61.75	10		4.0	
Klondike	659.7	663.2	3	9	4.75	59.60	10	3.5	3.5	
Klondike	663.2	677.2	2	9	5.25	60.90	1			14.0
Klondike	677.2	687.2	2	9	4.75	58.95	10		10.0	
Klondike	706.0	706.6	2	5	5.5	67.65	1			0.6
Klondike	706.6	712.5	2	10	4.75	56.10	10	5.9	5.9	5.9
Klondike	712.5	714.0	2	10	4.5	57.15	1,13	1.5	1.5	
Klondike	714.0	715.0	2	10	4.25	51.00	1	1.0		
Klondike	715.0	716.0	2	9	4.5	52.65	13	1.0	1.0	
Haines	230.0	240.0	3	16	5	62.80	1	10.0		
Campbell	169.0	174.0	3	4	5.25	66.50	1,12		5.0	
Campbell	508.5	514.0	1	10	5.5	66.60	1,8		5.5	
Campbell	575.1	576.2	2	3	6	77.00	1			1.1
Tagish	35.0	37.5	2	15	5.25	62.00	1,9		2.5	
Top of the Worl	4.0	14.2	2	4	4.75	57.45	5	10.2		
Top of the Worl	19.7	23.6	2	4	4.5	57.20	13	3.9	3.9	
Top of the Worl	25.1	27.7	2	4	4.5	57.20	13	2.6	2.6	
Top of the Worl	36.0	38.0	2	5	5	63.85	1,13		2.0	
Top of the Worl	38.0	43.2	2	5	4.75	58.40	13		5.2	
Top of the Worl	44.1	45.4	2	5	4.75	58.40	13		1.3	
Top of the Worl	46.5	47.5	2	5	4.75	58.40	13		1.0	
Top of the Worl	50.0	51.8	2	5	4.75	58.00	5			
Top of the Worl	54.3	57.2	2	5	4.75	58.00	5			
Top of the Worl	88.0	93.0	2	6	4.75	56.15	5	5.0		
Top of the Worl	93.0	94.3	2	7	4.5	55.75	5	1.3		
Silver Trail	50.0	50.5	2	3	4.75	61.05	9		0.5	
Silver Trail	50.5	52.0	2	10	4.75	63.10	9		1.5	
Takhini Hot Spri	0.0	5.2	2	5	5.25	64.60	8		5.2	
Mitchell Road	0.0	11.0	2	6	5	63.65	9		11.0	
Bonanza	1.0	1.4	2	2	6	73.60	1			0.4
Dome Road	0.0	3.0	2	8	3	37.65	9	3.0	3.0	
Dome Road	3.0	7.0	2	2	4.5	53.15	9	4.0	4.0	
								213.0	315.7	98.9

TABLE 10: MYOP BUDGETS FOR PWGSC BSTs

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

YEAR	2003	2004	2005	2006	2007
CLASS 1	8.5	0.0	3.5	14.0	11.0
CLASS 2	0.0	21.7	11.0	0.0	0.0
CLASS 3	10.0	42.4	33.1	0.0	12.0
CLASS 1	$89,250	$0	$36,750	$147,000	$115,500
CLASS 2	$0	$264,740	$134,200	$0	$0
CLASS 3	$280,000	$1,187,200	$926,800	$0	$336,000
2002 FORECAST	$369,250	$1,451,940	$1,097,750	$147,000	$451,500
2001 FORECAST	$940,800	$584,740	$936,600	$778,200	$504,000
2000 FORECAST	$308,000	$308,000	$1,168,900	$818,400	$1,568,150
1999 FORECAST	$848,400	$336,000	$602,000		
1998 FORECAST	$262,500	$392,000			

TABLE 11: MYOP BUDGETS FOR YTG BSTs

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

YEAR	2003	2004	2005	2006	2007
CLASS 1	0.0	0.0	0.0	0.0	0.0
CLASS 2	54.9	54.5	51.0	27.1	31.3
CLASS 3	45.0	43.8	87.9	0.0	14.5
CLASS 1	$0	$0	$0	$0	$0
CLASS 2	$1,306,620	$1,297,100	$1,213,800	$644,980	$744,940
CLASS 3	$1,188,000	$1,156,320	$2,320,560	$0	$382,800
2002 FORECAST	$2,494,620	$2,453,420	$3,534,360	$644,980	$1,127,740
2001 FORECAST	$4,857,420	$1,297,800	$1,246,060	$1,199,340	$367,400
2000 FORECAST	$844,800	$1,995,000	$1,117,340	$1,692,400	$1,785,980
1999 FORECAST	$2,345,080	$2,244,400	$4,378,100		
1998 FORECAST	$3,971,800	$3,553,600			

TABLE 12: SECTIONS REQUIRING SIGNIFICANT PATCHING IN 1999-2002 PWGSC SECTIONS

					CURRENT YEAR PATCHING:			
HIGHWAY	FROM	TO	CLASS	AGE	1999	2000	2001	2002
Alaska (97)	206.0	208.0	3	6	5	5	8	9
Alaska (97)	215.0	226.0	3	6	7	5	7	10
Alaska (97)	226.0	230.0	3	6		4		
Alaska (97)	226.0	232.0	3	8	4		8	6
Alaska (97)	241.0	245.0	3	8	8	5	7	8
Alaska (97)	245.0	249.5	3	8	8	5	7	8
Alaska (97)	251.5	254.0	3	6	6	5	6	8
Alaska (97)	254.0	256.0	3	12	5	5	8	7
Alaska (97)	256.0	258.0	3	6	6	6	7	4
Alaska (97)	258.0	265.0	3	6		5	9	10
Alaska (97)	262.0	265.0	3	9	5			
Alaska (97)	265.0	279.0	3	10	5	4	7	10
Alaska (97)	290.0	295.5	3	13	6	5	7	10
Alaska (97)	295.5	301.0	3	5	8	5	7	10
Alaska (97)	329.2	335.0	3	3		5		
Alaska (97)	335.0	347.0	3	5	6	4	5	8
Alaska (97)	357.0	359.0	3	4	4	4	10	6
Alaska (97)	458.0	468.0	3	10	10	4	6	5
Alaska (97)	482.7	490.5	3	8	5	3	10	8
Alaska (97)	490.5	495.0	3	9	6	4	10	8
Alaska (97)	495.0	501.2	3	7	6	5	5	8
Alaska (97)	501.2	509.0	3	10	7	4	10	7
Alaska (97)	516.2	520.0	2	7	5	3	8	6
Alaska (97)	520.0	528.0	3	4	5	10	7	7
Alaska (97)	528.0	530.0	3	7	3	10	7	7
Alaska (97)	530.0	533.0	3	3	3	10	7	6
Alaska (97)	533.0	540.0	3	4		9	5	7
Alaska (97)	533.0	540.5	3	1	5			
Alaska (97)	540.0	548.0	3	3		9	3	4
Alaska (97)	554.0	561.0	3	6		4		
Alaska (97)	556.0	571.5	1	7	5		5	
Alaska (97)	556.0	571.5	3	5	5		5	
Alaska (97)	571.5	575.0	1	10	5	5	7	7
Alaska (97)	575.0	590.0	1	7	4	4	7	7
Alaska (97)	590.0	607.0	1	11	4	10	7	8
Alaska (97)	607.0	609.0	3	5	9	6	5	4
Alaska (97)	609.0	625.0	1	16	4	2	9	9
Alaska (97)	625.0	635.0	1	16	3	2	9	9
Alaska (97)	635.0	641.0	1	16	3	2	8	7
Alaska (97)	641.0	654.0	1	8	5	4	3	3
Alaska (97)	654.0	665.0	1	12	5	3	3	4
Alaska (97)	665.0	679.0	1	12	4	4	3	4
Alaska (97)	679.0	690.0	3	14	5	3	5	5
Alaska (97)	690.0	698.0	2	13	5	3	3	4
Alaska (97)	698.0	711.7	2	11	4	3	5	5
Alaska (97)	711.7	720.0	1	7	7	5	10	8
Alaska (97)	720.0	729.0	1	9	6	5	10	7
Alaska (97)	729.0	737.5	1	7	7	2	10	7
Alaska (97)	737.5	750.0	2	8	8	5	4	4
Alaska (97)	762.0	770.0	2	10	9	7	2	2
Alaska (97)	770.0	774.0	2	10	9	7	2	2
Alaska (97)	804.2	805.0	3	5	8	8	7	5
Alaska (97)	823.0	825.0	3	5	10	7	4	6
Alaska (97)	825.0	830.0	2	7	7	3	4	

TABLE 12: SECTIONS REQUIRING SIGNIFICANT PATCHING IN 1999-2002 PWGSC SECTIONS

					CURRENT YEAR PATCHING:			
HIGHWAY	FROM	TO	CLASS	AGE	1999	2000	2001	2002
Alaska (97)	830.0	839.5	2	7	6	3	3	
Alaska (97)	832.0	839.5	2	8				3
Alaska (97)	845.0	855.0	3	7	9	8	5	6
Alaska (97)	855.0	865.0	3	7	9	8	4	7
Alaska (97)	962.4	967.6	3	5				5

TABLE 13: SECTIONS REQUIRING SIGNIFICANT PATCHING IN 1999-2002 YTG SECTIONS

					CURRENT YEAR PATCHING:			
HIGHWAY	FROM	TO	CLASS	AGE	1999	2000	2001	2002
Alaska	1170.0	1180.0	3	5			5	
Alaska	1506.0	1510.0	3	6			5	5
Alaska	1518.0	1520.0	3	17	5		9	8
Alaska	1520.0	1522.5	3	5			6	5
Alaska	1675.0	1680.0	1	16			3	
Alaska	1706.7	1708.0	1	14	9	9	9	5
Alaska	1726.0	1734.0	1	8	7	6	3	3
Alaska	1773.0	1776.0	1	6				5
Alaska	1787.5	1798.2	3	1				5
Alaska	1852.0	1862.0	3	5	8	6	5	7
Alaska	1871.4	1873.0	3	7			4	5
Alaska	1871.4	1879.3	3	5	5	8		
Alaska	1881.0	1886.8	3	5	5	7	5	4
Alaska	1893.0	1905.0	3	6	7	7	5	4
Alaska	1905.0	1914.0	3	6	4	4	4	4
Alaska	1921.0	1932.0	3	7	5	6		4
Alaska	1942.5	1949.0	3	7	6	6	5	
Alaska	1944.0	1949.0	3	8				5
Alaska	1949.0	1960.0	3	6	5	6	4	5
Klondike	444.0	448.0	2	6			10	5
Klondike	546.0	558.0	2	8			7	4
Campbell	425.2	430.0	3	10			5	
Campbell	514.0	519.0	2	10	7	7	4	9
Campbell	519.0	529.0	2	11	7	6	4	8
Top of the World	4.0	14.2	2	4			5	7
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	19.7	23.6	2	4				5
Top of the World	25.1	27.7	2	4				5
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	36.0	38.0	2	5			10	5
Top of the World	38.0	50.0	2	4	5	4	5	
Top of the World	50.0	51.8	2	5				5
Top of the World	50.0	58.0	2	4	6	5	4	
Top of the World	54.3	57.2	2	5				5
Top of the World	58.0	63.4	2	5				5
Top of the World	58.0	67.0	2	3	8	4		
Top of the World	63.9	68.0	2	5				5
Top of the World	67.0	75.5	2	5	7	4		
Top of the World	88.0	93.0	2	6			5	6
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	
Top of the World	96.0	106.0	2	2				5
Silver Trail	20.0	28.0	2	12	9	5	10	9
Mitchell Road	0.0	11.0	2	6	8	7	4	7
Stewart-Cassiar	0.0	2.0	2	5	5			
Dome Road	0.0	3.0	2	8	8	6	4	7
Dome Road	3.0	7.0	2	6	5	9	8	5

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	5.47	67.39
2002	5.49	68.45
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
2002	5.52	68.41

Table A
BST Ratings
Based on 2002 Evaluations - PWGSC Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoul ders	Pot holes	Crack ing	L.Tm Patch	CYr Patch	Distor tion	Corru gation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska Hwy (BC	206.0	208.0	3	6	9	8	8	9	8	9	8	9	9	8	10	10	9	5.50	70.75	1	Routine Maintenance
Alaska Hwy (BC	208.0	210.0	3	3	9	8	8	10	7	8	7	9	7	9	8	10	8	5.25	69.15	1	Routine Maintenance
Alaska Hwy (BC	210.0	215.0	3	3	9	9	8	9	9	8	8	8	8	8	10	10	9	5.50	70.35	1	Routine Maintenance
Alaska Hwy (BC	215.0	226.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	5.75	78.75	1	Routine Maintenance; Double seal in 2001. Failed on joints, used 12.7 bottom lift.
Alaska Hwy (BC	226.0	232.0	3	8	8	7	8	10	8	7	8	4	6	6	9	9	9	5.25	63.90	1	Routine Maintenance
Alaska Hwy (BC	232.0	238.5	3	8	9	7	7	10	5	9	9	5	7	5	9	9	9	5.00	63.35	8	Rip Up, Reshape and ReBST < 3 Years
Alaska Hwy (BC	238.5	241.0	3	4	10	8	9	10	7	9	9	7	9	7	9	9	9	5.25	69.30	1	Routine Maintenance
Alaska Hwy (BC	241.0	245.0	3	8	9	9	9	10	8	9	6	4	8	7	9	9	9	5.00	66.05	1	Routine Maintenance
Alaska Hwy (BC	245.0	249.5	3	8	9	7	4	9	7	7	6	6	8	6	9	9	9	5.00	60.65	8	Rip Up, Reshape and ReBST < 3 Years
Alaska Hwy (BC	249.5	251.5	3	11	9	8	8	9	8	8	6	4	6	7	9	9	9	5.25	64.90	1	Routine Maintenance
Alaska Hwy (BC	251.5	254.0	3	6	9	6	7	10	7	8	8	5	8	7	9	9	9	5.25	64.90	1	Routine Maintenance
Alaska Hwy (BC	254.0	256.0	3	12	9	8	7	10	7	6	8	6	7	7	9	9	9	5.25	65.10	1	Routine Maintenance
Alaska Hwy (BC	256.0	258.0	3	6	7	6	7	6	7	7	5	6	4	6	9	9	9	4.75	56.90	8	Rip Up, Reshape and ReBST < 3 Years
Alaska Hwy (BC	258.0	265.0	3	2	10	7	7	10	9	9	8	10	10	10	10	10	10	5.75	74.35	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	265.0	279.0	3	0	10	10	10	10	10	10	10	9	10	8	10	10	10	5.75	77.05	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	279.0	284.0	3	0	10	5	10	10	10	10	10	10	10	10	10	10	10	6.25	78.75	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	284.0	290.0	3	0	10	7	9	10	10	10	10	10	10	10	10	10	10	6.25	79.25	1	Routine Maintenance; Double seal. No bleeding rating recorded, chose arbitrary rating of 7.
Alaska Hwy (BC	290.0	295.5	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.25	81.25	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	295.5	301.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.00	80.00	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	301.0	309.0	3	3	10	8	8	10	10	10	10	8	9	8	10	10	10	6.00	75.80	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	309.0	319.0	3	3	9	7	8	9	9	9	9	6	7	8	10	10	10	5.75	70.65	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	319.0	328.0	3	3	9	7	8	7	9	7	9	6	7	8	10	10	10	5.50	66.60	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	328.0	335.0	3	5	9	7	7	9	9	9	6	4	8	7	10	10	10	5.00	64.05	8	Rip Up, Reshape and ReBST < 3 Years; Double seal.
Alaska Hwy (BC	335.0	347.0	3	5	8	8	8	9	10	7	5	4	8	7	10	10	10	5.25	64.50	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	347.0	354.5	3	4	9	7	8	9	10	7	8	7	7	8	10	10	10	5.25	67.35	1	Routine Maintenance; Double seal.
Alaska Hwy (BC	354.5	357.0	3	1	9	5	6	9	10	5	6	5	6	5	10	10	10	4.75	58.25	3	Correct Depressions and Long Patching; Double seal.
Alaska Hwy (BC	357.0	359.0	3	4	9	5	6	7	10	5	6	5	6	5	10	10	10	4.75	56.75	3	Correct Depressions and Long Patching; Double seal.
Alaska Hwy (BC	458.0	468.0	3	10	6	5	7	6	8	5	6	3	5	6	9	9	9	5.25	56.10	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years
Alaska Hwy (BC	468.0	475.0	3	8	8	8	7	9	9	7	8	3	7	7	9	9	8	5.25	63.35	1	Routine Maintenance

Table A
BST Ratings
Based on 2002 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 Hwy (BC	475.0	480.0	3	10	9	8	6	7	9	8	8	3	7	7	9	9	9	5.25	62.65	1	Routine Maintenance
Alaska Hwy (BC	480.0	482.7	3	9	9	6	8	7	10	8	8	3	9	8	9	10	10	5.25	63.80	1	Routine Maintenance
Alaska Hwy (BC	482.7	490.5	3	8	9	6	6	9	9	8	8	7	8	7	9	10	9	5.25	65.30	1	Routine Maintenance
Alaska Hwy (BC	490.5	495.0	3	9	8	7	7	9	6	7	7	9	8	8	10	10	10	5.25	66.10	1	Routine Maintenance
Alaska Hwy (BC	495.0	501.2	3	7	9	7	7	8	7	6	7	3	8	7	9	10	10	5.00	60.40	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years
Alaska Hwy (BC	501.2	509.0	3	1	7	8	9	10	10	5	8	7	7	10	10	10	7	5.75	70.05	1	Routine Maintenance; Ripped and BST'd 2001, single seal.
Alaska Hwy (BC	509.0	516.2	2	1	8	7	7	10	10	7	10	6	7	10	10	10	5	5.50	68.80	1	Routine Maintenance; Reclaimed and BST'd 2001 single lift.
Alaska Hwy (BC	516.2	520.0	2	1	4	5	7	8	10	4	10	6	6	9	9	9	3	5.25	59.85	1	Routine Maintenance; Reclaimed and BST'd 2001 single lift.
Alaska Hwy (BC	520.0	528.0	3	2	8	8	8	7	8	8	8	6	7	8	9	9	9	5.25	65.00	1,2	Routine Maintenance-Spot Patching
Alaska Hwy (BC	528.0	530.0	3	2	9	7	8	8	5	8	9	6	7	8	9	9	9	5.25	65.25	1	Routine Maintenance
Alaska Hwy (BC	530.0	533.0	3	2	9	7	8	9	4	8	9	5	6	8	9	9	9	5.00	64.00	1	Routine Maintenance
Alaska Hwy (BC	533.0	540.0	3	4	8	7	8	5	7	6	8	5	7	7	9	9	9	5.00	59.10	1,5	Routine Maintenance-Deep Patch
Alaska Hwy (BC	540.0	548.0	3	3	9	5	5	4	8	8	8	4	4	5	9	9	9	4.50	53.70	3	Correct Depressions and Long Patching
Alaska Hwy (BC	548.0	556.0	3	3	9	6	8	7	9	8	9	6	7	7	9	9	9	5.25	64.40	1	Routine Maintenance
Alaska Hwy (BC	556.0	561.0	1	8	9	7	5	8	8	7	6	2	6	7	9	9	7	4.75	57.70	13	Reconstruct
Alaska Hwy (BC	561.0	563.0	3	1	8	8	8	9	9	8	9	6	7	7	9	9	9	5.25	66.40	1	Routine Maintenance
Alaska Hwy (BC	563.0	571.5	1	8	9	7	6	9	8	6	7	2	8	7	9	9	9	5.00	60.10	1,13	Routine Maintenance-Reconstruct
Alaska Hwy (BC	571.5	575.0	1	1	8	7	7	6	6	7	8	4	7	8	9	9	9	5.25	61.10	1	Routine Maintenance
Alaska Hwy (BC	575.0	590.0	1	1	9	8	8	6	7	8	8	8	7	8	9	9	9	5.25	65.50	1	Routine Maintenance
Alaska Hwy (BC	590.0	607.0	1	1	9	9	9	9	7	9	9	8	8	9	9	9	9	5.50	71.50	1	Routine Maintenance
Alaska Hwy (BC	607.0	609.0	3	5	9	9	9	9	9	8	9	4	4	9	9	9	9	5.50	69.35	1	Routine Maintenance
Alaska Hwy (BC	609.0	625.0	1	1	9	9	9	9	9	8	9	9	9	9	9	10	9	5.50	72.00	1	Routine Maintenance
Alaska Hwy (BC	625.0	635.0	1	1	9	6	9	9	7	8	9	8	9	9	9	9	9	5.50	69.35	1	Routine Maintenance
Alaska Hwy (BC	635.0	641.0	1	1	9	7	7	9	8	8	8	7	7	9	9	7	9	5.50	68.05	1	Routine Maintenance
Alaska Hwy (BC	641.0	654.0	1	8	8	7	6	8	6	7	6	3	3	7	9	9	9	4.75	58.00	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct
Alaska Hwy (BC	654.0	665.0	1	8	9	7	7	9	7	8	5	4	4	7	9	9	9	5.00	62.15	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct
Alaska Hwy (BC	665.0	679.0	1	7	9	8	7	9	5	8	6	2	4	7	9	9	9	5.00	61.40	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct
Alaska Hwy (BC	679.0	690.0	3	7	9	8	7	9	7	8	7	3	5	9	9	9	9	5.00	63.85	1	Routine Maintenance
Alaska Hwy (BC	690.0	698.0	2	7	9	8	7	9	9	8	8	2	4	6	8	9	9	5.00	62.10	1	Routine Maintenance

Table A
BST Ratings
Based on 2002 Evaluations - PWGSC Sections

Highway	Start	End	Class	Age	Ravel	Bleed	Ruts	Sub grade	Shoul ders	Pot holes	Crack ing	L.Tm Patch	CYr Patch	Distor tion	Corru gation	Streak	Joint	Ride Score	BCI	Action	Comments
Alaska Hwy (BC	698.0	711.7	2	7	7	7	8	9	7	8	7	3	5	9	9	9	9	5.00	62.85	1	Routine Maintenance
Alaska Hwy (BC	711.7	720.0	1	1	10	9	8	9	8	9	9	7	8	9	10	10	10	5.25	70.50	1	Routine Maintenance
Alaska Hwy (BC	720.0	729.0	1	9	9	9	9	9	9	9	9	7	7	8	9	9	9	5.25	69.65	1	Routine Maintenance
Alaska Hwy (BC	729.0	737.5	1	7	9	8	8	9	8	8	9	7	7	8	9	9	9	5.25	67.75	1	Routine Maintenance
Alaska Hwy (BC	737.5	750.0	2	7	9	8	7	9	7	8	6	3	4	7	9	9	9	4.75	61.15	1,13	Routine Maintenance-Reconstruct
Alaska Hwy (BC	750.0	762.0	3	2	9	9	9	9	9	8	9	7	7	9	9	9	9	6.00	73.35	1	Routine Maintenance
Alaska Hwy (BC	762.0	770.0	2	10	8	7	5	8	7	8	7	2	2	6	9	9	9	4.75	57.55	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct; Routine maintenance - pending construction.
Alaska Hwy (BC	770.0	774.0	2	10	8	7	5	8	7	8	7	3	2	7	9	9	9	4.75	58.65	1,9,13	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years-Reconstruct; Routine maintenance - pending construction.
Alaska Hwy (BC	774.0	782.3	3	3	7	8	8	10	10	9	9	6	6	8	10	10	7	6.50	74.45	1,7	Routine Maintenance-ReBST < 2 Years
Alaska Hwy (BC	782.3	787.4	3	12	8	7	6	9	7	8	7	5	6	7	10	10	10	5.25	63.90	1	Routine Maintenance
Alaska Hwy (BC	787.4	792.0	3	3	8	7	8	9	8	9	7	8	8	9	9	9	9	6.00	71.75	1	Routine Maintenance
Alaska Hwy (BC	792.0	793.2	3	6	8	8	7	10	10	8	7	6	6	10	10	10	10	5.50	69.95	1	Routine Maintenance
Alaska Hwy (BC	793.2	795.4	3	4	8	8	8	10	10	9	8	7	8	10	10	10	7	6.00	73.90	1	Routine Maintenance
Alaska Hwy (BC	795.4	803.4	3	6	9	9	8	10	8	9	8	6	6	10	10	10	10	6.25	75.60	1	Routine Maintenance
Alaska Hwy (BC	803.4	804.2	3	4	7	9	9	10	10	8	8	8	8	10	9	9	9	6.00	74.20	1	Routine Maintenance
Alaska Hwy (BC	804.2	805.0	3	5	7	8	8	10	9	8	8	4	5	10	10	10	10	5.75	70.20	1	Routine Maintenance
Alaska Hwy (BC	805.0	811.5	3	5	9	9	8	10	10	8	7	8	8	10	10	10	8	6.25	75.90	1	Routine Maintenance
Alaska Hwy (BC	811.5	813.1	3	4	8	7	8	10	10	10	7	8	8	10	9	10	10	6.25	75.80	1	Routine Maintenance
Alaska Hwy (BC	813.1	823.0	3	5	9	8	8	10	10	9	7	8	8	10	10	10	10	6.50	77.60	1	Routine Maintenance
Alaska Hwy (BC	823.0	825.0	3	2	7	7	7	9	8	9	6	6	6	8	9	10	9	5.50	66.55	1	Routine Maintenance
Alaska Hwy (BC	825.0	832.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation
Alaska Hwy (BC	832.0	839.5	2	8	8	5	5	6	6	7	6	3	3	5	8	9	10	4.50	52.50	1,13	Routine Maintenance-Reconstruct
Alaska Hwy (BC	839.5	842.8	3	5	9	7	8	10	10	8	8	8	9	10	10	10	10	6.25	75.45	1	Routine Maintenance
Alaska Hwy (BC	842.8	845.0	3	4	9	7	8	10	10	9	6	7	8	9	10	10	10	5.50	70.75	1	Routine Maintenance
Alaska Hwy (BC	845.0	855.0	3	7	9	7	9	8	9	8	6	5	6	8	10	10	10	5.50	67.25	1	Routine Maintenance
Alaska Hwy (BC	855.0	865.0	3	7	9	8	6	10	10	6	6	4	7	7	9	9	9	5.25	63.85	1,8	Routine Maintenance-Rip Up, Reshape and ReBST < 3 Years
Alaska Hwy (BC	865.0	878.0	3	6	10	7	8	10	10	7	7	8	8	8	10	10	10	5.75	71.35	1	Routine Maintenance
Alaska Hwy (BC	878.0	884.0	3	7	9	8	8	10	10	8	7	6	8	9	9	9	9	5.75	71.10	1	Routine Maintenance
Alaska Hwy (BC	884.0	889.5	3	1	10	7	10	10	10	10	10	9	9	10	10	10	10	7.00	83.00	1	Routine Maintenance; Double-sealed.
Alaska Hwy (BC	889.5	895.0	3	7	9	9	9	10	10	8	9	8	8	9	10	10	10	6.00	75.35	1	Routine Maintenance
Alaska Hwy (BC	895.0	900.0	3	1	10	8	9	10	10	10	10	10	10	10	10	10	10	7.00	83.50	1	Routine Maintenance

Table A
BST Ratings
Based on 2002 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 Hwy (BC	900.0	906.0	3	1	10	10	10	10	10	10	10	10	10	8	10	10	10	6.75	82.55	1	Routine Maintenance; Resurfaced 2001.
Alaska Hwy (BC	906.0	915.0	1	2	10	6	9	10	10	9	10	8	9	9	10	10	10	6.50	77.75	1	Routine Maintenance; Resurfaced 2000.
Alaska Hwy (BC	915.0	922.0	3	3	9	5	9	10	8	9	9	8	8	9	10	10	10	6.00	73.50	1	Routine Maintenance
Alaska Hwy (BC	922.0	931.2	3	5	9	8	9	10	9	9	7	7	7	9	10	10	10	6.00	74.25	1	Routine Maintenance
Alaska Hwy (BC	931.2	942.0	3	6	9	7	8	10	7	8	7	7	8	9	10	10	10	6.00	72.10	1	Routine Maintenance
Alaska Hwy (BC	942.0	950.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	9	7.50	87.35	1	Routine Maintenance
Alaska Hwy (BC	950.0	957.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	9	7.50	87.35	1	Routine Maintenance
Alaska Hwy (BC	957.0	962.4	3	8	9	6	7	10	9	8	7	6	7	8	10	10	10	5.50	68.00	1	Routine Maintenance
Alaska Hwy (BC	962.4	967.6	3	5	9	7	7	9	8	8	8	5	5	7	10	10	10	5.00	64.15	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years

Table B
BST Ratings
Based on 2002 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 Hwy (1)	1008.0	1014.0	3	5	9	8	7	10	9	9	6	9	10	9	10	10	10	5.75	72.75	1	Routine Maintenance
Alaska Hwy (1)	1024.9	1033.0	3	3	7	8	8	10	7	7	6	7	10	7	10	10	10	5.50	67.00	1	Routine Maintenance; Seal ravels on Liard Hill.
Alaska Hwy (1)	1033.0	1038.0	3	3	7	7	8	10	7	9	8	9	10	7	10	10	10	5.50	69.30	1	Routine Maintenance
Alaska Hwy (1)	1038.0	1040.0	3	2	9	6	8	10	9	9	8	9	10	9	10	10	9	5.75	72.60	1	Routine Maintenance
Alaska Hwy (1)	1040.0	1043.0	3	7	7	8	8	10	6	8	5	7	10	6	9	10	10	5.25	65.10	1	Routine Maintenance
Alaska Hwy (1)	1043.0	1056.0	3	2	9	7	8	10	8	9	7	8	10	8	10	10	10	5.75	71.65	1	Routine Maintenance
Alaska Hwy (1)	1056.0	1062.0	3	4	8	9	8	10	9	8	8	8	9	8	10	10	10	5.75	72.00	1	Routine Maintenance
Alaska Hwy (1)	1062.0	1076.0	3	5	8	8	8	10	9	9	8	8	10	9	7	10	10	5.75	72.15	1	Routine Maintenance
Alaska Hwy (1)	1076.0	1079.0	3	7	8	7	8	10	8	9	8	8	10	8	10	10	10	5.75	71.40	1	Routine Maintenance
Alaska Hwy (1)	1079.0	1085.0	3	5	8	7	8	10	8	9	8	8	10	8	10	10	10	5.75	71.40	1	Routine Maintenance
Alaska Hwy (1)	1085.0	1087.0	3	3	8	7	8	10	9	9	8	8	10	9	10	10	10	5.75	72.25	1	Routine Maintenance
Alaska Hwy (1)	1087.0	1089.0	3	5	8	8	8	10	9	8	6	8	8	9	10	10	10	5.75	71.60	1	Routine Maintenance
Alaska Hwy (1)	1089.0	1102.0	3	3	9	7	9	10	7	9	8	7	10	8	10	10	10	5.75	71.65	1	Routine Maintenance
Alaska Hwy (1)	1102.0	1106.0	3	3	7	8	8	10	9	9	7	7	8	9	10	10	10	5.75	71.50	1	Routine Maintenance
Alaska Hwy (1)	1106.0	1120.0	3	1	9	8	9	10	10	9	9	9	9	10	10	10	10	6.00	76.60	1	Routine Maintenance
Alaska Hwy (1)	1120.0	1128.2	3	1	8	9	9	10	9	8	7	8	9	10	10	10	10	6.00	74.70	1	Routine Maintenance
Alaska Hwy (1)	1128.2	1134.0	3	7	6	8	8	10	6	7	7	6	8	8	10	10	10	5.75	67.85	1,11	Routine Maintenance-Hot Mix Overlay; Possible O/L 2003 program option. Seal and monitor ravels.
Alaska Hwy (1)	1134.0	1142.0	3	7	6	8	8	10	7	6	7	6	9	8	9	10	10	5.75	67.25	1,11	Routine Maintenance-Hot Mix Overlay; Possible O/L 2003 program option.
Alaska Hwy (1)	1142.0	1152.0	3	6	6	8	8	10	7	7	7	7	9	9	10	10	10	6.00	70.45	1	Routine Maintenance; Continue to seal ravels.
Alaska Hwy (1)	1152.0	1161.0	3	6	6	9	9	10	7	6	6	6	8	9	10	10	10	6.00	70.05	1,11	Routine Maintenance-Hot Mix Overlay; Seal ravels. Worse on Km 1159-1161. Possible O/L 2003 program option for Km 1159-1161.
Alaska Hwy (1)	1161.0	1163.0	3	1	9	9	9	10	9	9	9	10	10	9	10	10	10	6.25	78.00	1	Routine Maintenance
Alaska Hwy (1)	1163.0	1175.5	3	0	10	5	10	10	10	10	10	10	10	9	10	10	10	6.00	76.90	1	Routine Maintenance; Overlay 2002.
Alaska Hwy (1)	1175.5	1180.0	3	6	5	7	8	10	7	8	7	6	10	7	10	10	10	5.50	65.90	1	Routine Maintenance; Seal ravels 2003.
Alaska Hwy (1)	1180.0	1190.0	3	8	7	7	8	10	6	7	6	7	8	7	9	9	9	5.50	65.75	1	Routine Maintenance
Alaska Hwy (1)	1190.0	1193.0	3	0	10	5	10	10	10	10	10	10	10	8	10	10	10	5.75	75.05	1	Routine Maintenance; R&R 2002.
Alaska Hwy (1)	1193.0	1201.0	3	8	7	7	8	9	7	8	7	8	10	8	9	9	9	5.50	67.25	1	Routine Maintenance
Alaska Hwy (1)	1201.0	1209.0	3	0	10	10	10	10	10	10	10	10	10	8	10	10	10	5.50	76.30	1	Routine Maintenance; Overlay 2002. Noisy ride
Alaska Hwy (1)	1209.0	1218.0	3	0	10	10	10	10	10	10	10	10	10	8	10	10	10	6.00	78.80	1	Routine Maintenance; O/L 2002. Noisy ride.
Alaska Hwy (1)	1218.0	1222.0	3	0	10	10	10	10	10	10	10	10	10	8	10	10	10	6.25	80.05	1	Routine Maintenance; R&R 2002.

Table B
BST Ratings
Based on 2002 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 Hwy (1)	1222.0	1234.0	3	2	10	9	9	10	10	10	9	10	10	10	10	10	10	6.00	78.75	1	Routine Maintenance
Alaska Hwy (1)	1234.0	1240.0	3	16	6	8	8	10	8	8	6	8	10	8	10	10	10	5.50	68.50	1	Routine Maintenance; Monitor ravels in the spring.
Alaska Hwy (1)	1240.0	1251.0	3	7	9	9	8	10	9	8	8	9	10	9	10	10	10	5.50	72.35	1	Routine Maintenance
Alaska Hwy (1)	1251.0	1265.0	3	7	8	9	6	8	8	9	8	9	10	9	10	10	10	5.50	69.75	1	Routine Maintenance
Alaska Hwy (1)	1265.0	1273.0	3	5	9	8	8	6	8	8	8	8	10	9	10	10	10	5.75	69.35	1	Routine Maintenance; Subgrade failure at Strawberry Creek hill.
Alaska Hwy (1)	1273.0	1279.5	3	10	8	8	8	10	4	8	7	8	10	8	10	10	10	5.50	68.75	1	Routine Maintenance; Monitor shoulders.
Alaska Hwy (1)	1279.5	1289.5	3	1	9	8	9	10	9	10	9	9	9	9	10	10	10	6.00	76.40	1	Routine Maintenance
Alaska Hwy (1)	1289.5	1292.0	3	2	8	8	8	8	10	9	9	8	10	9	10	10	10	5.75	71.75	1	Routine Maintenance
Alaska Hwy (1)	1292.0	1300.0	3	19	6	8	8	10	4	8	6	6	8	7	8	10	10	5.25	64.25	9	Rip Up, Reshape and ReBST < 2 Years; Km 1292-1296 rated worse than rest of section.
Alaska Hwy (1)	1300.0	1308.0	3	4	8	8	8	10	9	9	7	9	9	8	8	10	10	5.75	72.00	1	Routine Maintenance
Alaska Hwy (1)	1308.0	1322.0	3	3	8	9	8	10	9	10	8	10	10	9	10	10	10	6.00	76.15	1	Routine Maintenance
Alaska Hwy (1)	1322.0	1330.0	3	3	7	9	8	10	9	9	8	9	10	9	9	10	10	5.75	73.05	1	Routine Maintenance; Monitor ravelling.
Alaska Hwy (1)	1330.0	1340.0	3	5	8	9	8	10	9	9	7	9	10	8	9	10	10	5.75	72.70	1	Routine Maintenance
Alaska Hwy (1)	1340.0	1346.0	3	4	8	8	7	10	7	9	6	9	10	8	10	10	10	5.75	71.15	1	Routine Maintenance
Alaska Hwy (1)	1346.0	1352.0	3	6	6	9	8	10	7	9	7	9	10	9	10	10	10	5.75	72.00	1,7	Routine Maintenance-ReBST < 2 Years; Monitor ravelling.
Alaska Hwy (1)	1352.0	1365.0	3	1	9	9	9	10	10	9	8	10	10	9	10	10	10	5.75	75.50	1	Routine Maintenance
Alaska Hwy (1)	1365.0	1380.0	3	8	8	9	8	10	9	8	7	8	10	9	10	10	10	6.00	73.60	1	Routine Maintenance
Alaska Hwy (1)	1380.0	1390.0	3	16	6	9	5	9	5	9	5	8	9	9	7	10	10	5.50	66.40	1	Routine Maintenance
Alaska Hwy (1)	1420.0	1429.0	3	1	8	7	9	10	10	8	10	8	8	9	8	10	10	5.75	72.45	1	Routine Maintenance
Alaska Hwy (1)	1506.0	1510.0	3	6	8	7	8	10	7	8	8	3	5	4	10	10	10	4.75	60.60	3	Correct Depressions and Long Patching
Alaska Hwy (1)	1510.0	1516.0	3	5	6	6	7	10	9	6	7	3	8	5	10	10	10	5.00	59.40	3	Correct Depressions and Long Patching
Alaska Hwy (1)	1516.0	1518.0	3	9	7	7	7	10	7	7	6	5	8	7	10	10	10	5.50	65.00	1	Routine Maintenance
Alaska Hwy (1)	1518.0	1520.0	3	17	7	8	7	10	8	7	7	5	8	7	9	9	9	5.25	64.25	1	Routine Maintenance
Alaska Hwy (1)	1520.0	1522.5	3	5	5	7	8	10	8	7	7	3	5	7	10	10	10	5.25	62.75	1	Routine Maintenance
Alaska Hwy (1)	1522.5	1530.0	3	5	9	9	8	10	7	9	7	8	8	8	10	10	10	5.75	72.40	1	Routine Maintenance
Alaska Hwy (1)	1530.0	1538.0	3	3	9	8	8	10	9	9	8	9	10	8	10	10	10	5.75	73.15	1	Routine Maintenance
Alaska Hwy (1)	1538.0	1544.0	3	3	8	8	7	10	9	8	7	8	10	9	10	10	10	5.75	71.35	1	Routine Maintenance
Alaska Hwy (1)	1544.0	1556.4	3	6	7	7	7	10	9	8	8	5	6	5	9	9	9	5.25	63.70	1	Routine Maintenance
Alaska Hwy (1)	1556.4	1574.0	1	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation
Alaska Hwy (1)	1574.0	1580.0	1	8	9	8	7	10	6	7	7	5	8	4	10	10	10	4.50	59.70	13	Reconstruct
Alaska Hwy (1)	1580.0	1585.0	1	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation
Alaska Hwy (1)	1585.0	1588.0	1	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation

Table B
BST Ratings
Based on 2002 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 Hwy (1)	1588.0	1599.5	3	5	9	8	8	9	9	8	7	6	8	7	10	10	10	5.50	68.15	1	Routine Maintenance
Alaska Hwy (1)	1599.5	1604.0	3	17	7	8	8	10	8	8	6	7	8	6	10	10	10	5.25	66.05	1	Routine Maintenance
Alaska Hwy (1)	1604.0	1615.0	1	0	10	7	8	10	10	10	10	10	10	10	10	10	10	5.50	75.00	1	Routine Maintenance
Alaska Hwy (1)	1615.0	1620.0	1	1	6	5	8	10	10	10	9	9	10	9	10	10	10	5.50	70.65	1	Routine Maintenance
Alaska Hwy (1)	1620.0	1628.0	1	0	10	7	7	10	10	10	10	10	10	10	10	10	10	5.75	75.75	1	Routine Maintenance
Alaska Hwy (1)	1628.0	1630.0	3	1	9	7	9	10	10	10	10	8	8	6	10	10	10	5.50	71.60	1	Routine Maintenance
Alaska Hwy (1)	1630.0	1635.0	1	6	9	6	5	10	8	9	7	7	8	9	10	10	10	5.50	68.50	1	Routine Maintenance
Alaska Hwy (1)	1635.0	1650.0	3	2	9	6	8	10	10	10	9	9	10	10	10	10	10	6.50	78.25	1	Routine Maintenance
Alaska Hwy (1)	1650.0	1665.0	3	3	9	6	8	10	10	10	9	9	10	10	10	10	10	6.50	78.25	1	Routine Maintenance
Alaska Hwy (1)	1665.0	1674.0	3	0	10	10	10	10	10	10	10	10	10	9	10	10	10	6.25	80.65	1	Routine Maintenance
Alaska Hwy (1)	1674.0	1684.0	1	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation; LNR job.
Alaska Hwy (1)	1684.0	1691.8	3	0	8	9	10	10	10	10	10	10	10	10	10	10	10	6.50	81.00	1	Routine Maintenance; North American job.
Alaska Hwy (1)	1691.8	1698.0	3	21	8	8	8	10	5	9	6	8	10	10	10	10	10	5.75	71.85	1	Routine Maintenance
Alaska Hwy (1)	1698.0	1704.4	1	8	8	5	7	8	7	8	7	7	10	9	10	10	10	5.50	66.10	1,13	Routine Maintenance-Reconstruct
Alaska Hwy (1)	1704.4	1706.7	1	21	9	4	7	9	6	9	5	6	6	10	10	10	10	5.25	65.60	1,13	Routine Maintenance-Reconstruct
Alaska Hwy (1)	1706.7	1708.0	1	14	7	7	7	9	5	6	3	4	5	9	10	10	10	5.00	60.55	13	Reconstruct; Possible 2003 program option.
Alaska Hwy (1)	1708.0	1713.7	1	5	7	7	7	8	6	7	7	7	8	9	10	10	10	5.25	64.45	13	Reconstruct
Alaska Hwy (1)	1713.7	1718.0	1	6	8	7	7	9	8	8	7	7	8	8	7	9	9	5.25	65.35	1	Routine Maintenance
Alaska Hwy (1)	1718.0	1726.0	1	5	6	7	7	9	8	7	7	6	7	8	7	9	9	5.25	63.20	1	Routine Maintenance
Alaska Hwy (1)	1726.0	1734.0	1	8	7	5	6	4	5	7	5	2	3	5	5	9	9	5.00	51.75	13	Reconstruct
Alaska Hwy (1)	1734.0	1738.0	1	7	9	7	7	8	8	8	8	6	6	7	9	9	9	5.25	64.65	13	Reconstruct
Alaska Hwy (1)	1738.0	1750.0	1	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation
Alaska Hwy (1)	1750.0	1754.0	1	7	7	7	7	8	7	8	8	8	10	7	9	9	9	5.00	63.15	13	Reconstruct
Alaska Hwy (1)	1754.0	1758.0	1	7	6	6	7	8	7	8	7	5	6	5	9	9	9	5.00	59.20	13	Reconstruct
Alaska Hwy (1)	1758.0	1768.0	3	0	10	10	10	10	10	9	10	9	10	10	10	10	7	6.50	80.90	1	Routine Maintenance
Alaska Hwy (1)	1768.0	1773.0	1	8	7	7	7	9	7	7	7	6	9	7	9	9	9	5.00	62.00	13	Reconstruct
Alaska Hwy (1)	1773.0	1776.0	1	6	9	8	7	8	8	7	7	5	5	6	9	9	9	5.00	61.90	13	Reconstruct
Alaska Hwy (1)	1776.0	1787.5	1	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation
Alaska Hwy (1)	1787.5	1798.2	3	1	8	9	9	10	10	9	9	5	5	8	10	10	10	5.75	72.15	1	Routine Maintenance
Alaska Hwy (1)	1798.2	1804.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.25	81.25	1	Routine Maintenance
Alaska Hwy (1)	1804.0	1821.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.25	81.25	1	Routine Maintenance
Alaska Hwy (1)	1821.0	1831.0	3	3	9	9	9	10	10	8	8	8	10	6	10	10	10	5.25	69.55	1,3	Routine Maintenance-Correct Depressions and Long Patching
Alaska Hwy (1)	1831.0	1845.0	3	5	6	8	8	10	6	5	4	4	7	4	10	10	10	4.50	56.15	3	Correct Depressions and Long Patching; Possible 2003 program option.

Table B
BST Ratings
Based on 2002 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 Hwy (1)	1845.0	1852.0	3	5	8	9	8	10	7	7	7	7	10	7	10	10	10	5.75	69.50	1	Routine Maintenance
Alaska Hwy (1)	1852.0	1862.0	3	5	8	8	8	10	7	6	6	4	7	4	9	9	9	4.50	58.05	3	Correct Depressions and Long Patching
Alaska Hwy (1)	1862.0	1867.8	3	3	9	9	9	10	8	7	8	7	9	7	10	10	10	5.75	71.00	1	Routine Maintenance
Alaska Hwy (1)	1867.8	1871.4	3	4	5	9	8	9	7	4	6	6	8	7	9	9	9	5.25	61.55	2	Spot Patching; Possible 2003 program option.
Alaska Hwy (1)	1871.4	1873.0	3	7	7	7	6	8	8	7	6	4	5	3	10	10	10	4.50	55.35	3	Correct Depressions and Long Patching
Alaska Hwy (1)	1873.0	1879.3	3	7	8	7	8	10	8	5	7	7	8	8	10	10	10	5.75	68.05	1,2	Routine Maintenance-Spot Patching
Alaska Hwy (1)	1879.3	1881.0	3	4	5	8	8	10	9	6	7	7	8	7	10	10	10	5.50	66.10	3	Correct Depressions and Long Patching
Alaska Hwy (1)	1881.0	1886.8	3	5	7	7	8	10	6	4	4	3	4	4	9	9	9	4.75	55.75	3	Correct Depressions and Long Patching; New patch at Km 1484.0 to 1485.5
Alaska Hwy (1)	1886.8	1893.0	3	6	7	9	9	10	8	6	6	6	8	6	9	9	9	5.50	66.00	1	Routine Maintenance
Alaska Hwy (1)	1893.0	1905.0	3	6	7	8	8	10	8	4	3	2	4	4	9	9	9	4.75	56.00	3	Correct Depressions and Long Patching; Gravel patch at Km 1902-1905.
Alaska Hwy (1)	1905.0	1914.0	3	6	8	8	8	10	7	6	7	3	4	5	9	10	10	4.50	58.70	9,10	Rip Up, Reshape and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Alaska Hwy (1)	1914.0	1921.0	3	7	8	8	8	10	7	5	4	5	7	5	9	9	9	4.75	59.25	9,10	Rip Up, Reshape and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Alaska Hwy (1)	1921.0	1932.0	3	7	8	8	7	10	5	6	3	2	4	3	9	9	9	4.00	52.20	9,10	Rip Up, Reshape and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Alaska Hwy (1)	1932.0	1933.0	3	8	9	7	8	10	9	7	7	9	10	9	10	10	10	5.75	71.70	1	Routine Maintenance
Alaska Hwy (1)	1933.0	1938.0	3	7	8	7	7	10	6	8	7	8	10	9	6	9	10	5.75	69.15	1	Routine Maintenance
Alaska Hwy (1)	1938.0	1944.0	3	8	8	8	7	10	6	8	7	8	10	9	8	9	9	5.75	69.90	1	Routine Maintenance; Drainage improvements required at Canada Customs.
Alaska Hwy (1)	1944.0	1949.0	3	8	8	8	7	10	7	7	7	4	5	3	9	9	9	4.00	55.35	9,10	Rip Up, Reshape and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Alaska Hwy (1)	1949.0	1960.0	3	6	9	9	9	9	6	6	3	3	5	3	9	9	9	4.00	54.20	9,10	Rip Up, Reshape and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Alaska Hwy (1)	1960.0	1965.7	3	6	8	9	7	10	7	7	5	4	6	3	6	9	9	4.50	57.25	9,10	Rip Up, Reshape and ReBST < 2 Years-Add 100-150 Gravel, ReBST < 2 Years
Klondike Hwy (2	25.0	36.0	3	2	9	9	9	10	8	9	9	9	9	10	10	10	10	6.00	76.60	1	Routine Maintenance
Klondike Hwy (2	37.0	44.0	3	8	8	8	8	10	7	9	7	6	10	8	9	9	9	5.50	68.65	1	Routine Maintenance
Klondike Hwy (2	44.0	50.0	3	8	9	8	8	10	9	9	7	8	9	7	10	10	10	5.75	71.80	1	Routine Maintenance

Table B
BST Ratings
Based on 2002 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 Hwy (2	50.0	58.2	3	2	9	8	10	10	10	10	9	10	10	10	10	10	10	6.00	78.25	1	Routine Maintenance
Klondike Hwy (2	58.2	64.0	3	3	9	8	8	10	9	9	8	9	10	9	10	10	10	5.75	73.75	1	Routine Maintenance
Klondike Hwy (2	64.0	65.0	3	11	8	6	6	10	6	9	7	8	9	9	9	9	9	5.50	68.00	1	Routine Maintenance
Klondike Hwy (2	65.0	72.0	3	9	8	7	7	10	6	9	7	8	10	8	9	9	9	5.50	68.40	1	Routine Maintenance
Klondike Hwy (2	72.0	75.0	3	9	8	6	6	10	7	9	8	7	8	9	9	9	9	5.50	68.00	1	Routine Maintenance
Klondike Hwy (2	75.0	79.0	3	9	6	8	8	10	6	9	6	7	9	8	9	9	9	5.50	67.65	1,8	Routine Maintenance-Rip Up, Reshape and ReBST < 3 Years
Klondike Hwy (2	79.0	80.3	3	8	8	6	8	10	6	9	8	8	9	7	10	10	10	5.25	67.30	1	Routine Maintenance
Klondike Hwy (2	80.3	90.0	3	3	8	9	8	10	9	9	9	8	9	8	10	10	10	5.75	72.90	1	Routine Maintenance
Klondike Hwy (2	90.0	99.0	3	3	8	8	8	10	10	9	9	9	10	9	10	10	10	5.75	73.75	1	Routine Maintenance
Klondike Hwy (2	99.0	101.5	3	6	9	8	9	10	9	9	6	9	10	9	9	9	9	5.75	73.25	1	Routine Maintenance
Klondike Hwy (2	101.5	105.0	3	3	8	8	9	10	9	10	7	8	10	8	10	8	9	5.75	72.60	1	Routine Maintenance
Klondike Hwy (2	105.0	107.0	3	7	6	7	8	10	9	9	8	8	10	9	9	9	9	5.50	69.50	1	Routine Maintenance; Monitor ravels. Seal ravels.
Klondike Hwy (2	107.0	113.6	3	1	10	6	8	10	10	10	7	9	9	10	10	9	10	5.75	74.35	1	Routine Maintenance
Klondike Hwy (2	113.6	119.0	3	8	7	8	8	10	8	8	7	9	9	9	9	9	10	5.75	71.25	1	Routine Maintenance
Klondike Hwy (2	119.0	133.0	3	5	8	9	6	10	8	9	6	8	9	8	9	9	10	5.50	69.30	1	Routine Maintenance
Klondike Hwy (2	133.0	145.0	3	7	9	9	9	9	7	9	7	8	9	8	9	9	9	5.50	70.40	1	Routine Maintenance
Klondike Hwy (2	145.0	149.0	3	2	9	9	9	10	10	10	8	9	10	9	9	10	10	5.75	75.45	1	Routine Maintenance
Klondike Hwy (2	149.0	157.0	3	10	7	7	7	10	5	8	6	7	10	8	8	10	10	5.00	63.85	1	Routine Maintenance
Klondike Hwy (2	157.0	157.8	3	2	9	8	8	10	9	9	8	9	10	9	8	10	10	5.75	73.35	1	Routine Maintenance
Klondike Hwy (2	227.5	228.6	3	1	9	8	9	10	8	9	8	8	10	9	10	10	10	5.50	72.25	1	Routine Maintenance
Klondike Hwy (2	228.6	230.2	3	3	9	8	9	10	8	9	8	8	10	9	10	10	10	5.50	72.25	1	Routine Maintenance
Klondike Hwy (2	231.1	232.1	3	8	9	8	8	9	6	9	8	9	10	9	9	9	9	5.50	70.50	1	Routine Maintenance
Klondike Hwy (2	232.1	233.0	3	11	8	8	8	9	8	9	8	8	10	9	9	9	9	5.50	70.00	1	Routine Maintenance; 300 m pavement included in this section.
Klondike Hwy (2	233.0	234.8	3	1	9	8	8	9	9	9	8	9	9	9	10	10	10	5.50	71.75	1	Routine Maintenance
Klondike Hwy (2	247.7	251.0	3	4	9	7	9	9	9	9	8	7	8	8	9	9	9	5.25	68.40	1	Routine Maintenance
Klondike Hwy (2	251.0	260.0	2	4	9	7	8	9	8	8	8	8	9	8	9	9	9	5.25	67.50	1	Routine Maintenance
Klondike Hwy (2	260.0	276.0	2	8	9	8	9	8	9	9	8	8	8	6	9	9	9	5.25	67.45	3	Correct Depressions and Long Patching; A few larger distortions affected ride score.
Klondike Hwy (2	291.1	299.0	2	5	9	7	8	9	9	9	9	9	10	10	10	10	9	5.75	73.20	1	Routine Maintenance
Klondike Hwy (2	299.0	308.0	2	10	10	8	9	10	9	9	9	9	9	9	9	9	9	6.00	75.75	1	Routine Maintenance
Klondike Hwy (2	308.0	315.4	2	11	8	8	9	10	7	9	8	9	10	9	10	10	10	5.75	73.25	1	Routine Maintenance
Klondike Hwy (2	315.4	315.5	3	11	8	8	8	10	10	10	7	10	10	10	10	10	10	5.50	73.75	1	Routine Maintenance; 4 transverse cracks. Spalling in cracks.
Klondike Hwy (2	315.5	315.6	3	11	8	6	8	10	9	10	7	10	10	10	10	10	10	5.50	72.50	1	Routine Maintenance; 5 transverse cracks. Spalling in cracks.

Table B
BST Ratings
Based on 2002 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 Hwy (2	315.6	315.7	3	11	8	7	5	10	7	10	6	10	10	10	10	10	10	5.00	68.25	1	Routine Maintenance; 6 transverse cracks, 1 longitudinal crack. Spalling in cracks.
Klondike Hwy (2	315.7	315.8	3	11	8	6	4	10	5	10	5	10	10	10	10	10	10	5.00	66.50	1	Routine Maintenance; 9 transverse cracks, 3 longitudinal cracks.
Klondike Hwy (2	315.8	315.9	3	11	6	7	5	10	8	10	4	10	10	10	10	10	10	5.25	68.25	1	Routine Maintenance; 10 transverse cracks, 16 longitudinal cracks.
Klondike Hwy (2	315.9	319.0	2	11	9	8	8	10	7	9	8	8	10	9	9	9	9	5.75	72.25	1	Routine Maintenance
Klondike Hwy (2	319.0	328.0	2	3	9	9	8	10	10	10	9	9	10	9	10	10	10	6.00	76.65	1	Routine Maintenance
Klondike Hwy (2	328.0	330.0	3	6	8	8	9	7	7	9	8	7	9	7	10	10	10	5.50	67.55	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years
Klondike Hwy (2	330.0	340.0	3	9	7	7	8	8	8	8	7	6	7	7	9	9	9	5.25	63.90	9	Rip Up, Reshape and ReBST < 2 Years
Klondike Hwy (2	340.0	345.3	3	2	9	6	8	9	10	9	8	8	10	7	10	10	7	5.25	67.60	1	Routine Maintenance
Klondike Hwy (2	360.0	363.0	3	3	9	9	9	10	10	10	9	9	10	9	9	9	9	5.75	75.40	1	Routine Maintenance
Klondike Hwy (2	363.0	370.0	3	3	9	9	9	10	9	9	8	9	10	8	9	9	7	5.75	73.35	1	Routine Maintenance
Klondike Hwy (2	370.0	380.0	3	5	8	9	9	10	8	9	8	8	10	9	10	10	10	6.00	74.75	1	Routine Maintenance
Klondike Hwy (2	380.0	382.4	3	3	9	7	9	10	9	9	9	7	9	7	10	10	10	5.25	69.30	3	Correct Depressions and Long Patching
Klondike Hwy (2	382.4	383.5	3	5	9	9	9	10	10	9	8	9	10	9	9	9	9	5.75	74.50	1	Routine Maintenance
Klondike Hwy (2	383.5	388.0	3	4	9	9	9	10	10	10	8	10	10	10	10	10	10	6.00	78.00	1	Routine Maintenance
Klondike Hwy (2	388.0	399.0	2	4	9	8	8	5	7	8	8	7	8	8	9	9	9	5.25	64.25	1,5	Routine Maintenance-Deep Patch; Excavate soft spots, backfill and raise grade 150mm Granular A at Km 389.0-391.5.
Klondike Hwy (2	399.0	411.1	2	0	10	7	9	10	10	9	10	10	10	10	10	10	10	5.75	76.10	1	Routine Maintenance; R&R + 75 mm gravel added in 2002.
Klondike Hwy (2	411.1	418.0	2	9	8	8	4	5	5	7	7	5	6	7	9	9	9	4.75	56.25	9	Rip Up, Reshape and ReBST < 2 Years; R&R, add gravel at soft spots.
Klondike Hwy (2	418.0	423.0	2	7	7	8	8	9	6	9	7	8	9	8	9	9	9	5.25	66.90	9	Rip Up, Reshape and ReBST < 2 Years; Possible OL program option.
Klondike Hwy (2	423.0	431.0	2	8	7	8	6	6	6	7	7	5	6	8	9	9	9	5.25	60.85	8	Rip Up, Reshape and ReBST < 3 Years
Klondike Hwy (2	431.0	438.0	2	8	8	8	7	8	7	8	7	7	8	8	9	9	9	5.25	65.25	1	Routine Maintenance
Klondike Hwy (2	438.0	444.0	2	6	8	8	7	9	7	8	7	8	9	9	8	9	9	5.50	68.15	1	Routine Maintenance
Klondike Hwy (2	444.0	448.0	2	6	8	8	8	10	7	7	7	5	5	9	9	9	9	5.50	67.45	1	Routine Maintenance
Klondike Hwy (2	448.0	463.0	2	7	8	7	4	7	6	7	6	5	7	5	9	9	9	4.75	56.05	2,9	Spot Patching-Rip Up, Reshape and ReBST < 2 Years
Klondike Hwy (2	463.0	476.0	2	7	8	8	7	6	7	7	7	6	6	8	9	9	9	5.25	62.60	1	Routine Maintenance
Klondike Hwy (2	476.0	486.0	2	5	8	9	8	7	8	7	8	6	6	7	10	10	10	5.50	66.00	1	Routine Maintenance
Klondike Hwy (2	486.0	497.5	2	5	9	9	8	8	8	8	8	8	9	9	10	10	10	5.50	70.10	1	Routine Maintenance
Klondike Hwy (2	497.5	507.5	3	4	9	9	8	8	9	9	8	8	9	9	9	9	9	5.50	70.50	1	Routine Maintenance

Table B
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 Hwy (2	507.5	510.5	3	7	8	9	8	9	7	9	7	5	8	5	9	9	9	4.75	62.35	8	Rip Up, Reshape and ReBST < 3 Years; Shimming needed before surface application.
Klondike Hwy (2	510.5	518.0	3	4	9	9	9	9	8	9	6	6	8	4	9	9	9	5.50	67.00	2,3	Spot Patching-Correct Depressions and Long Patching
Klondike Hwy (2	518.0	530.0	3	3	9	9	9	9	8	9	8	9	10	9	10	10	10	5.75	73.75	1	Routine Maintenance
Klondike Hwy (2	530.0	535.5	3	7	9	8	8	10	5	9	6	9	10	9	6	9	9	5.25	68.65	8	Rip Up, Reshape and ReBST < 3 Years
Klondike Hwy (2	535.5	540.0	2	8	8	8	7	6	7	7	5	5	6	5	9	9	9	5.00	58.55	1,2	Routine Maintenance-Spot Patching
Klondike Hwy (2	540.0	546.0	2	6	9	8	7	8	7	6	6	6	7	7	9	9	9	5.25	63.10	1	Routine Maintenance
Klondike Hwy (2	546.0	558.0	2	8	7	9	8	7	5	4	5	3	4	6	9	9	9	4.75	55.70	9	Rip Up, Reshape and ReBST < 2 Years; New patch at Km 557.0-558.0 in 2002. Possible 2003 program option.
Klondike Hwy (2	558.0	568.0	2	6	6	8	7	7	6	6	6	7	8	6	9	9	9	5.25	60.50	1	Routine Maintenance; Ravelling is worse at Km 558.0-560.0.
Klondike Hwy (2	568.0	576.0	2	6	8	8	6	9	8	6	7	7	7	8	9	9	9	5.75	66.95	1	Routine Maintenance
Klondike Hwy (2	576.0	586.0	2	6	8	8	8	8	8	6	7	7	9	8	9	9	9	5.75	67.20	1	Routine Maintenance
Klondike Hwy (2	586.0	596.0	2	8	8	8	8	8	7	7	7	6	7	8	9	9	9	5.50	65.85	1,10	Routine Maintenance-Add 100-150 Gravel, ReBST < 2 Years
Klondike Hwy (2	596.0	603.0	2	4	7	8	6	8	7	4	5	5	7	6	9	9	9	5.00	57.70	3	Correct Depressions and Long Patching
Klondike Hwy (2	603.0	616.0	2	9	8	8	6	8	7	5	6	6	7	7	9	9	9	5.25	61.45	3,8,10	Correct Depressions and Long Patching-Rip Up, Reshape and ReBST < 3 Years-Add 100-150 Gravel, ReBST < 2 Years
Klondike Hwy (2	616.0	622.0	2	8	8	8	8	8	7	6	5	5	7	7	9	9	9	5.25	62.35	1,10	Routine Maintenance-Add 100-150 Gravel, ReBST < 2 Years
Klondike Hwy (2	622.0	626.0	2	8	8	8	7	8	5	7	6	4	7	7	9	9	9	5.25	61.75	10	Add 100-150 Gravel, ReBST < 2 Years
Klondike Hwy (2	626.0	636.0	2	7	8	8	9	8	7	8	7	6	7	6	9	9	9	5.25	64.55	1,3	Routine Maintenance-Correct Depressions and Long Patching
Klondike Hwy (2	636.0	646.0	2	7	9	8	8	8	7	7	7	7	8	7	9	9	9	5.50	66.25	1	Routine Maintenance
Klondike Hwy (2	646.0	657.0	2	7	8	8	8	7	6	8	7	5	6	7	9	9	9	5.50	64.40	1	Routine Maintenance
Klondike Hwy (2	657.0	659.7	2	5	8	8	8	8	8	8	7	5	6	5	9	9	9	5.00	61.95	1	Routine Maintenance
Klondike Hwy (2	659.7	663.2	3	9	8	8	8	8	7	8	8	4	6	4	9	9	9	4.75	59.60	10	Add 100-150 Gravel, ReBST < 2 Years; Possible 2003 program option.
Klondike Hwy (2	663.2	677.2	2	9	8	7	8	7	7	7	6	4	6	6	9	9	9	5.25	60.90	1	Routine Maintenance; 95% of distortions appear in Km Km 675.2-677.2. Ride score of 5.75 applies to remainder of section.

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Klondike Hwy (2	677.2	687.2	2	9	8	8	8	8	7	7	6	5	6	4	9	9	9	4.75	58.95	10	Add 100-150 Gravel, ReBST < 2 Years; Possible 2003 program project.
Klondike Hwy (2	687.2	696.6	2	5	9	8	8	8	8	8	7	6	7	7	9	9	9	5.00	64.15	1	Routine Maintenance
Klondike Hwy (2	696.6	706.6	2	5	9	8	8	8	7	8	8	8	8	7	9	9	9	5.50	67.65	1	Routine Maintenance
Klondike Hwy (2	706.6	712.5	2	10	8	8	7	6	7	6	6	5	6	4	8	9	9	4.75	56.10	10	Add 100-150 Gravel, ReBST < 2 Years; Possible 2003 program option.
Klondike Hwy (2	712.5	714.0	2	10	8	8	6	9	7	5	6	5	6	7	5	9	9	4.50	57.15	1,13	Routine Maintenance-Reconstruct
Klondike Hwy (2	714.0	715.0	2	10	8	8	6	8	4	3	6	2	7	5	8	9	9	4.25	51.00	1	Routine Maintenance
Klondike Hwy (2	715.0	716.0	2	9	8	8	7	7	6	3	5	4	7	4	8	9	9	4.50	52.65	13	Reconstruct; Reconstruct to pavement.
Haines Rd (3)	116.0	121.3	3	10	7	8	7	10	5	7	6	6	9	8	9	10	10	5.50	65.90	1	Routine Maintenance
Haines Rd (3)	121.3	136.0	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.50	82.50	1	Routine Maintenance
Haines Rd (3)	136.0	145.0	3	9	8	7	7	10	6	8	6	9	10	8	9	10	10	5.75	69.55	1	Routine Maintenance
Haines Rd (3)	145.0	159.0	3	2	9	9	9	10	9	10	10	9	10	9	10	10	10	6.25	78.40	1	Routine Maintenance
Haines Rd (3)	159.0	165.7	3	0	10	10	7	10	10	10	10	10	10	10	10	10	10	6.00	78.50	1	Routine Maintenance
Haines Rd (3)	165.7	174.0	3	12	8	8	7	10	6	8	7	7	9	8	9	10	10	5.75	69.30	1	Routine Maintenance
Haines Rd (3)	174.0	188.0	3	13	5	7	7	10	6	8	7	7	9	8	9	10	10	5.50	66.05	1	Routine Maintenance; Monitor ravelling. Seems to be worse on joints of three-wide.
Haines Rd (3)	188.0	199.0	3	14	7	8	7	10	5	8	6	6	8	7	9	9	9	5.25	64.40	1	Routine Maintenance
Haines Rd (3)	199.0	211.0	3	15	7	6	7	10	4	8	6	6	8	7	9	9	9	5.25	63.15	1	Routine Maintenance
Haines Rd (3)	211.0	221.0	3	15	8	7	7	10	5	8	6	7	8	7	9	9	9	5.25	64.90	1	Routine Maintenance
Haines Rd (3)	221.0	230.0	3	16	8	6	7	10	7	8	6	7	10	7	9	10	10	5.00	63.95	1	Routine Maintenance
Haines Rd (3)	230.0	240.0	3	16	8	7	7	10	5	8	5	7	9	6	9	9	9	5.00	62.80	1	Routine Maintenance
Haines Rd (3)	240.0	246.0	3	0	10	8	10	10	10	10	10	10	10	10	10	10	10	6.00	79.00	1	Routine Maintenance; Last km (245.0-246.0) 16 years old.
Campbell Hwy (	28.0	31.0	3	6	9	10	9	10	6	8	6	8	9	9	10	10	10	5.75	72.85	1	Routine Maintenance
Campbell Hwy (	42.0	48.0	3	6	10	10	9	10	6	8	7	7	9	9	10	10	10	5.75	73.10	1	Routine Maintenance
Campbell Hwy (	169.0	174.0	3	4	8	10	10	10	8	8	8	7	8	2	10	10	9	5.25	66.50	1,12	Routine Maintenance-Revert to Gravel; Revert north end to gravel at severe depressions only. Potholes/ponding at both ends of Money Creek bridge.
Campbell Hwy (	373.6	376.2	3	0	10	10	10	10	10	10	10	10	10	10	10	10	9	5.75	78.60	1	Routine Maintenance
Campbell Hwy (	380.1	381.1	3	2	9	10	10	10	10	10	9	9	10	9	10	10	10	5.75	76.90	1	Routine Maintenance
Campbell Hwy (	415.0	425.0	3	1	10	9	9	10	10	9	9	9	9	8	10	10	8	5.75	74.85	1	Routine Maintenance; Severe patching @ Mitchell Road junction.
Campbell Hwy (	425.0	431.2	3	0	10	10	10	10	10	10	10	10	10	10	10	10	10	6.00	80.00	1	Routine Maintenance
Campbell Hwy (	431.2	441.0	3	10	8	9	8	10	7	9	7	7	8	8	10	10	9	5.75	71.25	1	Routine Maintenance

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BST Ratings
Based on 2002 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
Campbell Hwy (	441.0	448.0	3	9	9	9	9	10	8	9	7	8	9	9	10	10	9	5.75	73.60	1	Routine Maintenance
Campbell Hwy (	448.0	451.0	2	6	9	9	8	10	9	9	8	8	9	9	10	10	10	5.75	73.75	1	Routine Maintenance
Campbell Hwy (	451.0	456.5	2	2	9	9	9	10	9	9	9	8	9	9	10	10	10	5.75	74.50	1	Routine Maintenance
Campbell Hwy (	463.6	468.0	1	3	8	9	9	10	9	9	8	7	8	9	10	10	10	5.50	72.00	1	Routine Maintenance
Campbell Hwy (	468.0	479.0	1	0	10	10	9	10	10	10	10	10	10	9	10	10	10	5.50	76.40	1	Routine Maintenance
Campbell Hwy (	505.0	508.5	2	2	10	10	9	10	10	10	9	10	10	10	10	10	10	6.00	79.25	1	Routine Maintenance
Campbell Hwy (	508.5	514.0	1	10	7	8	7	9	8	9	8	4	8	8	10	9	9	5.50	66.60	1,8	Routine Maintenance-Rip Up, Reshape and ReBST < 3 Years
Campbell Hwy (	514.0	519.0	2	10	9	8	9	9	9	9	8	7	9	9	10	10	9	5.50	71.10	1	Routine Maintenance
Campbell Hwy (	519.0	529.0	2	11	8	8	8	9	8	8	7	4	8	8	10	10	9	5.50	66.85	1	Routine Maintenance
Campbell Hwy (	564.5	582.9	2	3	9	10	9	10	8	10	9	9	10	9	10	10	9	6.00	77.00	1	Routine Maintenance
Dempster Hwy (	0.0	1.0	1	1	9	9	9	9	8	9	9	8	9	9	9	9	9	5.75	73.00	1	Routine Maintenance
Dempster Hwy (	1.0	8.0	2	4	9	9	8	9	6	9	6	8	9	4	9	9	9	5.00	64.50	2,3	Spot Patching-Correct Depressions and Long Patching; Fix distortions.
Canol Rd (6)	227.0	228.0	1	5	7	9	10	10	9	8	7	7	10	10	10	10	10	5.50	71.70	1,2	Routine Maintenance-Spot Patching; Patch ravels at centre line.
Atlin Rd (7)	0.0	1.0	3	1	10	10	10	10	10	10	10	10	10	10	10	10	10	6.00	80.00	1	Routine Maintenance
Tagish Rd (8)	0.0	2.0	3	1	10	10	10	10	10	10	10	10	10	10	10	10	10	6.00	80.00	1	Routine Maintenance
Tagish Rd (8)	16.5	17.8	3	1	9	9	10	10	10	10	9	10	10	8	10	10	8	5.50	74.75	1	Routine Maintenance
Tagish Rd (8)	20.0	24.0	2	15	6	8	6	8	7	6	4	6	8	7	9	9	9	5.00	59.35	1	Routine Maintenance; Monitor in spring.
Tagish Rd (8)	24.0	35.0	2	15	6	7	5	8	6	7	4	5	8	7	9	9	9	5.25	59.50	3	Correct Depressions and Long Patching; Monitor entire section in spring. Long patches where alligator cracking.
Tagish Rd (8)	35.0	37.5	2	15	7	7	5	9	8	8	4	4	10	8	9	9	9	5.25	62.00	1,9	Routine Maintenance-Rip Up, Reshape and ReBST < 2 Years; Monitor ravels.
Tagish Rd (8)	37.5	44.0	2	9	6	7	7	8	8	7	5	5	9	8	8	9	9	5.25	61.65	3	Correct Depressions and Long Patching; Monitor ravels.
Tagish Rd (8)	44.0	46.0	2	11	7	8	6	10	9	8	6	6	10	9	8	9	9	5.25	65.90	1	Routine Maintenance; Monitor ravels.
Tagish Rd (8)	46.0	54.0	2	2	6	8	8	8	8	8	8	6	9	10	10	10	10	5.50	67.70	1	Routine Maintenance; Monitor ravelling.
Top of the Worl	0.0	4.0	2	4	9	8	9	9	8	9	8	8	9	8	9	9	9	5.75	71.65	1	Routine Maintenance
Top of the Worl	4.0	14.2	2	4	8	8	8	5	7	6	4	4	7	8	9	9	9	4.75	57.45	5	Deep Patch
Top of the Worl	19.7	23.6	2	4	9	9	8	4	8	6	8	3	5	8	9	9	9	4.50	57.20	13	Reconstruct
Top of the Worl	25.1	27.7	2	4	9	9	8	4	8	6	8	3	5	8	9	9	9	4.50	57.20	13	Reconstruct
Top of the Worl	36.0	38.0	2	5	9	9	9	7	7	7	8	5	5	8	9	9	9	5.00	63.85	1,13	Routine Maintenance-Reconstruct
Top of the Worl	38.0	43.2	2	5	8	9	9	4	7	4	8	6	6	8	9	9	9	4.75	58.40	13	Reconstruct
Top of the Worl	44.1	45.4	2	5	8	9	9	4	7	4	8	6	6	8	9	9	9	4.75	58.40	13	Reconstruct
Top of the Worl	46.5	47.5	2	5	8	9	9	4	7	4	8	6	6	8	9	9	9	4.75	58.40	13	Reconstruct

Table B
BST Ratings
Based on 2002 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	50.0	51.8	2	5	8	8	8	5	6	4	8	5	5	9	9	9	9	4.75	58.00	5	Deep Patch; Excavate and backfill soft spots.
Top of the Worl	54.3	57.2	2	5	8	8	8	5	6	4	8	5	5	9	9	9	9	4.75	58.00	5	Deep Patch; Excavate and backfill soft spots.
Top of the Worl	58.0	63.4	2	5	8	9	9	7	6	5	8	5	5	9	9	9	9	5.25	63.65	1,3	Routine Maintenance-Correct Depressions and Long Patching
Top of the Worl	63.9	68.0	2	5	8	9	9	7	6	5	8	5	5	9	9	9	9	5.25	63.65	1,3	Routine Maintenance-Correct Depressions and Long Patching
Top of the Worl	75.0	78.0	2	1	10	10	10	7	9	6	10	7	8	9	9	9	9	5.25	68.55	1,6	Routine Maintenance-Drainage Improvements; 75-225 mm gravel added and packed prior to new BST 2001.
Top of the Worl	78.0	84.0	2	2	8	9	9	8	8	8	10	8	8	10	10	10	9	5.75	72.30	1	Routine Maintenance
Top of the Worl	84.0	87.5	2	6	7	8	8	6	7	6	8	6	7	8	9	9	9	5.25	62.20	5	Deep Patch
Top of the Worl	88.0	93.0	2	6	6	8	8	5	7	4	8	4	6	8	9	9	9	4.75	56.15	5	Deep Patch
Top of the Worl	93.0	94.3	2	7	7	9	9	4	6	4	9	3	8	9	9	9	9	4.50	55.75	5	Deep Patch
Top of the Worl	96.0	106.0	2	2	6	9	9	9	7	7	8	4	5	10	10	10	10	5.00	65.05	2	Spot Patching; 10 gravel patches totalling 1.2 kms - apply BST patches over gravel patches.
Silver Tr (11)	0.0	10.0	2	7	8	9	8	7	7	6	5	5	6	7	9	9	9	5.00	60.85	1	Routine Maintenance
Silver Tr (11)	10.0	14.0	2	0	10	10	10	10	10	7	10	10	10	10	10	10	10	5.75	76.80	1	Routine Maintenance
Silver Tr (11)	14.0	20.0	2	1	9	8	9	10	9	8	8	9	9	9	10	10	10	5.75	73.60	1	Routine Maintenance
Silver Tr (11)	20.0	28.0	2	1	8	9	9	9	8	8	7	8	9	9	9	8	9	5.75	71.20	1	Routine Maintenance
Silver Tr (11)	28.0	32.0	2	6	9	9	8	9	8	8	7	6	6	8	9	9	9	5.50	68.50	1	Routine Maintenance
Silver Tr (11)	32.0	40.0	2	8	9	8	8	7	7	8	8	6	7	8	9	9	9	5.50	66.50	1	Routine Maintenance
Silver Tr (11)	40.0	50.0	2	8	9	8	8	7	7	7	7	7	7	6	9	7	9	5.50	64.60	1	Routine Maintenance; Most distresses appear between Km 48.0-50.0.
Silver Tr (11)	50.0	50.5	2	3	9	9	8	8	7	7	6	8	10	4	7	9	9	4.75	61.05	9	Rip Up, Reshape and ReBST < 2 Years; Shimming required before surface application. Possible 2003 program option.
Silver Tr (11)	50.5	52.0	2	10	9	8	8	9	8	9	7	6	9	5	9	9	9	4.75	63.10	9	Rip Up, Reshape and ReBST < 2 Years; Shimming required before surface application. Possible 2003 program option.
Silver Tr (11)	52.0	57.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	Under Reconstruction/Rehabilitation
Takhini Hot Spri	0.0	5.2	2	5	6	8	8	9	6	7	5	8	9	8	9	9	9	5.25	64.60	8	Rip Up, Reshape and ReBST < 3 Years; Main intersections potholing badly. Ravels developing at cracks and along centre line.
Takhini Hot Spri	5.2	9.2	2	2	8	5	7	9	7	8	8	5	9	9	8	9	8	5.50	65.25	1	Routine Maintenance; Corrugations appear in eastbound lane only.

Table B
BST Ratings
Based on 2002 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
Mitchell Rd (15)	0.0	11.0	2	6	7	8	9	9	9	8	5	4	7	7	10	10	10	5.00	63.65	9	Rip Up, Reshape and ReBST < 2 Years; Many long patches.
Stewart-Cassiar	0.0	3.3	2	3	8	7	8	8	8	7	7	6	8	6	10	10	10	5.25	63.65	1,3	Routine Maintenance-Correct Depressions and Long Patching
Annie Lake Rd (	0.0	1.2	2	4	9	9	9	7	7	8	7	8	9	9	9	9	10	5.50	69.00	1	Routine Maintenance
Judas Cr (120)	0.0	8.0	1	4	8	10	8	8	8	7	8	7	8	8	6	8	8	5.25	65.70	1	Routine Maintenance
Bonanza Rd (30	0.0	2.8	2	2	10	9	10	9	8	8	9	6	6	9	9	9	9	6.00	73.60	1	Routine Maintenance; 400m gravel included in this section.
Dome Rd (701)	0.0	3.0	2	8	4	7	5	4	5	2	4	2	7	5	7	9	9	3.00	37.65	9	Rip Up, Reshape and ReBST < 2 Years
Dome Rd (701)	3.0	7.0	2	2	8	8	4	4	6	5	4	4	5	9	9	9	9	4.50	53.15	9	Rip Up, Reshape and ReBST < 2 Years; Excavate soft spots and backfill.

Table E1 Proposed 5 Year MYOP – PWGSC Sections

ROAD	FROM	TO	CLASS	RIDE SCORE	BCI 2002	ORIG YEAR PROGRAM	RECOMMEND-ATION(S)	LENGTH
PROGRAM 2003								
Alaska (97)	458.0	468.0	3	5.25	56.10	2003	1,9	10.0
Alaska (97)	563.0	571.5	1	5.00	60.10	2003	1,13	8.5
Deep patching recommended								
Alaska (97)	533.0	540.0	3	5.00	59.10	2003	1,5	7.0
Not included as section(s) will be reconstructed								
Alaska (97)	328.0	335.0	3	5.00	64.05	2003	8	7.0
Alaska (97)	354.5	357.0	3	4.75	58.25	2003	3	2.5
Alaska (97)	357.0	359.0	3	4.75	56.75	2003	3	2.0
Alaska (97)	468.0	475.0	3	5.25	63.35	2003	1	7.0
Alaska (97)	475.0	480.0	3	5.25	62.65	2003	1	5.0
Alaska (97)	480.0	482.7	3	5.25	63.80	2003	1	2.7
Alaska (97)	762.0	770.0	2	4.75	57.55	2003	1,9,13	8.0
Alaska (97)	770.0	774.0	2	4.75	58.65	2003	1,9,13	4.0
Alaska (97)	832.0	839.5	2	4.50	52.50	2003	1,13	7.5
Alaska (97)	556.0	561.0	1	4.75	57.70	2003	13	5.0
Alaska (97)	641.0	654.0	1	4.75	58.00	2003	1,9,13	13.0
PROGRAM 2004								
Alaska (97)	232.0	238.5	3	5.00	63.35	2003	8	6.5
Alaska (97)	245.0	249.5	3	5.00	60.65	2003	8	4.5
Alaska (97)	256.0	258.0	3	4.75	56.90	2003	8	2.0
Alaska (97)	495.0	501.2	3	5.00	60.40	2003	1,9	6.2
Alaska (97)	548.0	556.0	3	5.25	64.40	2004	1	8.0
Alaska (97)	690.0	698.0	2	5.00	62.10	2004	1	8.0
Alaska (97)	698.0	711.7	2	5.00	62.85	2004	1	13.7
Alaska (97)	855.0	865.0	3	5.25	63.85	2003	1,8	10.0
Alaska (97)	962.4	967.6	3	5.00	64.15	2004	1,9	5.2
Not included as section(s) will be reconstructed								
Alaska (97)	737.5	750.0	2	4.75	61.15	2004	1,13	12.5
PROGRAM 2005								
Alaska (97)	226.0	232.0	3	5.25	63.90	2003	1	6.0
Alaska (97)	509.0	516.2	2	5.50	68.80	2005	1	7.2
Alaska (97)	516.2	520.0	2	5.25	59.85	2003	1	3.8
Alaska (97)	530.0	533.0	3	5.00	64.00	2003	1	3.0
Alaska (97)	540.0	548.0	3	4.50	53.70	2003	3	8.0
Alaska (97)	571.5	575.0	1	5.25	61.10	2005	1	3.5
Alaska (97)	679.0	690.0	3	5.00	63.85	2003	1	11.0
Alaska (97)	782.3	787.4	3	5.25	63.90	2003	1	5.1
PROGRAM 2006								
Alaska (97)	665.0	679.0	1	5.00	61.40	2006	1,9,13	14.0
PROGRAM 2007								
Alaska (97)	335.0	347.0	3	5.25	64.50	2007	1	12.0
Alaska (97)	654.0	665.0	1	5.00	62.15	2007	1,9,13	11.0

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Table E2 Proposed 5 Year MYOP – YTG Sections

ROAD	FROM	TO	CLASS	RIDE SCORE	BCI 2002	ORIG YEAR PROGRAM	RECOMMEND-ATION(S)	LENGTH
PROGRAM 2003								
Alaska	1128.0	1128.2	3	6.00	74.70	2007+	1	0.2
Alaska	1128.2	1134.0	3	5.75	67.85	2007+	1	5.8
Alaska	1134.0	1142.0	3	5.75	67.25	2007+	1	8.0
Alaska	1157.0	1161.0	3	6.00	70.05	2007+	1	4.0
Alaska	1944.2	1949.0	3	4.00	55.35	2003	9,10	4.8
Alaska	1949.0	1960.0	3	4.00	54.20	2003	9,10	11.0
Alaska	1960.0	1965.7	3	4.50	57.25	2003	9,10	5.7
Klondike	388.4	389.8	2	5.25	64.25	2007+	1,5	1.4
Klondike	411.1	418.0	2	4.75	56.25	2003	9	6.9
Klondike	418.0	423.0	2	5.25	66.90	2007+	9	5.0
Klondike	456.0	463.0	2	4.75	56.05	2003	2,9	7.0
Klondike	463.0	463.6	2	5.25	62.60	2006	1	0.6
Klondike	508.5	510.5	3	4.75	62.35	2003	8	2.0
Klondike	510.5	512.5	3	5.50	67.00	2007+	2,3	2.0
Klondike	513.2	514.7	3	5.50	67.00	2007+	2,3	1.5
Klondike	546.0	557.0	2	4.75	55.70	2003	9	11.0
Klondike	663.2	677.2	2	5.25	60.90	2004	1	14.0
Klondike	706.0	706.6	2	5.50	67.65	2007+	1	0.6
Klondike	706.6	712.5	2	4.75	56.10	2003	10	5.9
Campbell	575.1	576.2	2	6.00	77.00	2007+	1	1.1
Bonanza	1.0	1.4	2	6.00	73.60	2007+	1	1.4
Handled by patching crews								
Alaska	1831.0	1845.0	3	4.50	56.15	2003	3	14.0
Alaska	1852.0	1862.0	3	4.50	58.05	2003	3	10.0
Alaska	1867.8	1871.4	3	5.25	61.55	2003	2	3.6
Alaska	1871.4	1873.0	3	4.50	55.35	2003	3	1.6
Alaska	1881.0	1886.8	3	4.75	55.75	2003	3	5.8
Alaska	1893.0	1905.0	3	4.75	56.00	2003	3	12.0
Alaska	1905.0	1914.0	3	4.50	58.70	2003	9,10	9.0
Alaska	1914.0	1921.0	3	4.75	59.25	2003	9,10	7.0
Alaska	1921.0	1932.0	3	4.00	52.20	2003	9,10	11.0
Alaska	1944.0	1944.2	3	4.00	55.35	2003	9,10	0.2
Top of the World	4.0	14.2	2	4.75	57.45	2003	5	10.2
Top of the World	50.0	51.8	2	4.75	58.00	2003	5	1.8
Top of the World	54.3	57.2	2	4.75	58.00	2003	5	2.9
Top of the World	88.0	93.0	2	4.75	56.15	2003	5	5.0
Top of the World	93.0	94.3	2	4.50	55.75	2003	5	1.3
Not included as section(s) will be reconstructed								
Alaska	1574.0	1580.0	1	4.50	59.70	2003	13	6.0
Alaska	1706.7	1708.0	1	5.00	60.55	2003	13	1.3
Alaska	1726.0	1734.0	1	5.00	51.75	2003	13	8.0
Alaska	1754.0	1758.0	1	5.00	59.20	2003	13	4.0
Alaska	1768.0	1773.0	1	5.00	62.00	2003	13	5.0
Alaska	1773.0	1776.0	1	5.00	61.90	2003	13	3.0
Klondike	712.5	714.0	2	4.50	57.15	2003	1,13	1.5
Klondike	715.0	716.0	2	4.50	52.65	2003	13	1.0
Top of the World	19.7	23.6	2	4.50	57.20	2003	13	3.9
Top of the World	25.1	27.7	2	4.50	57.20	2003	13	2.6
Top of the World	38.0	43.2	2	4.75	58.40	2003	13	5.2
Top of the World	44.1	45.4	2	4.75	58.40	2003	13	1.3
Top of the World	46.5	47.5	2	4.75	58.40	2003	13	1.0

ROAD	FROM	TO	CLASS	RIDE SCORE	BCI 2002	ORIG YEAR PROGRAM	RECOMMEND-ATION(S)	LENGTH
PROGRAM 2004								
Alaska	1292.0	1300.0	3	5.25	64.25	2004	9	8.0
Alaska	1518.0	1520.0	3	5.25	64.25	2004	1	2.0
Alaska	1713.7	1718.0	1	5.25	65.35	2004	1	4.3
Alaska	1718.0	1726.0	1	5.25	63.20	2004	1	8.0
Klondike	330.0	340.0	3	5.25	63.90	2003	9	10.0
Klondike	423.0	431.0	2	5.25	60.85	2004	8	8.0
Klondike	448.0	456.0	2	4.75	56.05	2003	2,9	8.0
Klondike	507.5	508.5	3	4.75	62.35	2003	8	1.0
Klondike	557.0	558.0	2	4.75	55.70	2003	9	1.0
Klondike	558.0	568.0	2	5.25	60.50	2004	1	10.0
Klondike	659.7	663.2	3	4.75	59.60	2003	10	3.5
Klondike	677.2	687.2	2	4.75	58.95	2003	10	10.0
Haines	116.0	121.3	3	5.50	65.90	2004	1	5.3
Haines	174.0	188.0	3	5.50	66.05	2004	1	14.0
Silver Trail	0.0	10.0	2	5.00	60.85	2004	1	10.0
Silver Trail	50.0	50.5	2	4.75	61.05	2004	9	0.5
Dome Road	0.0	3.0	2	3.00	37.65	2003	9	3.0
Dome Road	3.0	7.0	2	4.50	53.15	2003	9	4.0
Not included as section(s) will be reconstructed								
Alaska	1698.0	1704.4	1	5.50	66.10	2004	1,13	6.4
Alaska	1704.4	1706.7	1	5.25	65.60	2004	1,13	2.3
Alaska	1708.0	1713.7	1	5.25	64.45	2004	13	5.7
Alaska	1734.0	1738.0	1	5.25	64.65	2004	13	4.0
Alaska	1750.0	1754.0	1	5.00	63.15	2004	13	4.0
PROGRAM 2005								
Alaska	1040.0	1043.0	3	5.25	65.10	2005	1	3.0
Alaska	1506.0	1510.0	3	4.75	60.60	2003	3	4.0
Alaska	1510.0	1516.0	3	5.00	59.40	2003	3	6.0
Alaska	1520.0	1522.5	3	5.25	62.75	2003	1	2.5
Alaska	1544.0	1556.4	3	5.25	63.70	2003	1	12.4
Klondike	149.0	157.0	3	5.00	63.85	2003	1	8.0
Klondike	535.5	540.0	2	5.00	58.55	2003	1,2	4.5
Klondike	596.0	603.0	2	5.00	57.70	2003	3	7.0
Klondike	603.0	616.0	2	5.25	61.45	2005	3,8,10	13.0
Klondike	622.0	626.0	2	5.25	61.75	2005	10	4.0
Klondike	714.0	715.0	2	4.25	51.00	2003	1	1.0
Haines	188.0	199.0	3	5.25	64.40	2003	1	11.0
Haines	199.0	211.0	3	5.25	63.15	2003	1	12.0
Haines	211.0	221.0	3	5.25	64.90	2003	1	10.0
Haines	221.0	230.0	3	5.00	63.95	2003	1	9.0
Haines	230.0	240.0	3	5.00	62.80	2003	1	10.0
Tagish	20.0	24.0	2	5.00	59.35	2003	1	4.0
Tagish	24.0	35.0	2	5.25	59.50	2003	3	11.0
Tagish	37.5	44.0	2	5.25	61.65	2005	3	6.5
PROGRAM 2006								
Klondike	463.6	476.0	2	5.25	62.60	2006	1	12.4
Klondike	616.0	622.0	2	5.25	62.35	2006	1,10	6.0
Klondike	657.0	659.7	2	5.00	61.95	2006	1	2.7
Tagish	35.0	37.5	2	5.25	62.00	2006	1,9	2.5
Top of the World	84.0	87.5	2	5.25	62.20	2006	5	3.5
PROGRAM 2007								
Alaska	1175.5	1180.0	3	5.50	65.90	2007	1	4.5
Alaska	1180.0	1190.0	3	5.50	65.75	2007	1	10.0
Klondike	540.0	546.0	2	5.25	63.10	2007	1	6.0
Top of the World	58.0	63.4	2	5.25	63.65	2007	1,3	5.4
Top of the World	63.9	68.0	2	5.25	63.65	2007	1,3	4.1
Silver Trail	50.5	52.0	2	4.75	63.10	2007	9	1.5
Mitchell Road	0.0	11.0	2	5.00	63.65	2007	9	11.0
Stewart-Cassiar	0.0	3.3	2	5.25	63.65	2007	1,3	3.3

APPENDIX C SAMPLE BST EVALUATION FORM

Year: 2003 Date: YTG/PWGSC Section: YTG

Highway: Alaska Hwy (1) Section Start: 1008.0 Section End: 1014.0 Class: ☐ 1 ☐ 2 ☑ 3

BST Width: Shoulder Width: Weather: Year Resurfaced: 1997 Age in 2003: 6

	V. Good			Good			Fair			Poor		V. Poor	Last Year:
	10	9	8	7	6	5	4	3	2	1	0		
Ravelling													9
Bleeding													8
Rutting													7
Subgrade Failure													10
Shoulder Disintegratio													9
Potholes													9
Cracking													6
Patching													9
Current Year Patching													10
Distortions													9
Corrugations													10
Streaking													10
Joints													10

Rehabilitation Strategies

	Last Year:
	1,

- ◯ (1) Routine Maintenance
- ◯ (2) Spot Patching
- ◯ (3) Correct Depressions and Long Patchin
- ◯ (4) Seal Cracks
- ◯ (5) Deep Patch
- ◯ (6) Drainage Improvement
- ◯ (7) ReBST < 2 Years
- ◯ (8) Rip Up, Reshape and ReBST < 3 Years
- ◯ (9) Rip Up, Reshape and ReBST < 2 Years
- ◯ (10) Add 100-150 Gravel, ReBST < 2 Year
- ◯ (11) Hot Mix Overlay
- ◯ (12) Revert to Gravel
- ◯ (13) Reconstruct
- ◯ (14) Under Reconstruction/Rehabilitation

Remarks:

Ride Score: DMI: BCI: Last Year's Ride Score: 5.75 Last Year's BCI: 72.75

Year: 2003 Date: YTG/PWGSC Section: YTG

Highway: Alaska Hwy (1) Section Start: 1024.9 Section End: 1033.0 Class: ☐ 1 ☐ 2 ☑ 3

BST Width: Shoulder Width: Weather: Year Resurfaced: 1999 Age in 2003: 4

	V. Good			Good			Fair			Poor		V. Poor	Last Year:
	10	9	8	7	6	5	4	3	2	1	0		
Ravelling													7
Bleeding													8
Rutting													8
Subgrade Failure													10
Shoulder Disintegratio													7
Potholes													7
Cracking													6
Patching													7
Current Year Patching													10
Distortions													7
Corrugations													10
Streaking													10
Joints													10

Rehabilitation Strategies

	Last Year:
	1,

- ◯ (1) Routine Maintenance
- ◯ (2) Spot Patching
- ◯ (3) Correct Depressions and Long Patchin
- ◯ (4) Seal Cracks
- ◯ (5) Deep Patch
- ◯ (6) Drainage Improvement
- ◯ (7) ReBST < 2 Years
- ◯ (8) Rip Up, Reshape and ReBST < 3 Years
- ◯ (9) Rip Up, Reshape and ReBST < 2 Years
- ◯ (10) Add 100-150 Gravel, ReBST < 2 Year
- ◯ (11) Hot Mix Overlay
- ◯ (12) Revert to Gravel
- ◯ (13) Reconstruct
- ◯ (14) Under Reconstruction/Rehabilitation

Remarks:

Ride Score: DMI: BCI: Last Year's Ride Score: 5.50 Last Year's BCI: 67.00

APPENDIX D 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:
$BCI = 70.653 – 7.0622 \times AGE + 1.0466 \times AGE^2 – 0.0531 \times AGE^3$
$R^2 = 0.9731$
2002 – except Alaska Highway 1635-1966:
$BCI = 71.867 – 5.6565 \times AGE + 1.046 \times AGE^2 – 0.0688 \times AGE^3$
$R^2 = 0.9836$
2002 – Alaska Highway 1635-1966:
$BCI = 70.735 – 7.3381 \times AGE + 1.1575 \times AGE^2 – 0.062 \times AGE^3$
$R^2 = 0.9764$

CLASS 2:

1989: BCI = 80.0 x (@EXP(-0.1155 x AGE) + 1.3 x $AGE^{1.00}$
1990: BCI = 79.3 x (@EXP(-0.1090 x AGE) + 1.5 x $AGE^{1.10}$
1991: BCI = 73.8 x (@EXP(-0.1060 x AGE) + 1.5 x $AGE^{1.15}$
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
2002 – except Alaska Highway 450-1008:

BCI = 74.159 – 4.4359 x AGE + 0.5948 x AGE^2 – 0.0326 x AGE^3
R^2 = 0.987

2002 – Alaska Highway 450-1008:
BCI = 69.851 – 7.9046 x AGE + 1.7756 x AGE^2 – 0.1463 x AGE^3
R^2 = 0.9957

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 x AGE + 0.5731 x AGE^2 – 0.025 x 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 x AGE + 0.1944 x AGE^2 – 0.0066 x AGE^3

1999 – Campbell Highway & Alaska Highway 0-550, 1470-1635 & 1800-1966:
BCI = 73.361 – 3.3087 x AGE + 0.418 x AGE^2 – 0.0188 x AGE^3

1999 – Haines Road:

BCI = 83.975 – 3.8839 x AGE + 0.3899 x AGE^2 – 0.0151 x AGE^3

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

BCI = 76.445 – 2.3445 x AGE + 0.1944 x AGE^2 – 0.0066 x AGE^3

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

BCI = 73.361 – 3.3087 x AGE + 0.418 x AGE^2 – 0.0188 x AGE^3

2000 – Haines Road:

BCI = 83.641 – 3.6317 x AGE + 0.3574 x AGE^2 – 0.0141 x AGE^3

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

BCI = 76.553 – 1.9027 x AGE + 0.1138 x AGE^2 – 0.0029 x AGE^3

R^2 = 0.9899

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

BCI = 74.043 – 4.0155 x AGE + 0.5688 x AGE^2 – 0.0265 x AGE^3

R^2 = 0.9779

2001 – Haines Road:

BCI = 83.608 – 3.6957 x AGE + 0.3741 x AGE^2 – 0.0153 x AGE^3

R^2 = 0.9715

2002 – except Haines Rd, Campbell Hwy, Alaska Hwy 0-550, 1470-1635 & 1800-1966:

BCI = 76.82 –2.08 x AGE + 0.1477 x AGE^2 – 0.0045 x AGE^3

R^2 = 0.9924

2002 – Campbell Highway & Alaska Highway 0-550, 1470-1635 & 1800-1966:

BCI = 74.448 – 4.2435 x AGE + 0.5893 x AGE^2 – 0.0266 x AGE^3

R^2 = 0.9735

2002 – Haines Road:

BCI = 83.177 – 3.3487 x AGE + 0.3103 x AGE^2 – 0.0122 x AGE^3

R^2 = 0.9719

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