

# NORTHERN SUNRISE COUNTY

TENDER TND7109-001

for

Asphalt Concrete Pavement Overlay, Line Painting and Other Work  
Reno Road (TWP 810)



**NORTHERN SUNRISE  
COUNTY**

**Tender Closing Date  
and Time:**

**March 24<sup>th</sup>, 2026, at 2:01:00 p.m.**

**Tender Submission  
Email Address:**

[kevin.riewe@helixeng.ca](mailto:kevin.riewe@helixeng.ca)

**Inquiries Contact:**

[kevin.riewe@helixeng.ca](mailto:kevin.riewe@helixeng.ca)  
(include Tender Number in subject line)

**Inquiry Deadline:**

**3 Business Days prior to the Tender Closing Date**

## TABLE OF CONTENTS

<b>1. INSTRUCTIONS TO BIDDERS</b>	<b>- 1 -</b>
1.1 CONDITIONS FOR TENDER SUBMISSION	- 1 -
1.2 PROJECT INQUIRIES	- 1 -
1.3 AVAILABILITY OF TENDER DOCUMENTS	- 2 -
1.4 PLANS AND DRAWINGS	- 2 -
1.5 TENDER SUBMISSION REQUIREMENTS	- 2 -
1.6 REJECTION OF TENDERS	- 5 -
1.7 TENDER DATE CHANGES AND CANCELLING OF TENDERS	- 6 -
1.8 DISQUALIFICATION OF BIDDERS	- 6 -
1.9 BIDDER'S INVESTIGATION AND REPRESENTATION	- 6 -
1.10 INTERPRETATION AND REVISION OF TENDER DOCUMENTS	- 7 -
1.11 ADDENDA	- 7 -
1.12 WITHDRAWAL OR CHANGE OF TENDER	- 8 -
1.13 TENDER VALIDATION	- 10 -
1.14 CONTRACT AWARD	- 10 -
1.15 SIGNED CONTRACT PACKAGE	- 10 -
1.16 SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARDS, HIERARCHY OF DOCUMENTS	- 10 -
<b>2. TENDER FORMS</b>	<b>- 12 -</b>
2.1 TENDER FOR CONSTRUCTION	- 12 -
2.2 UNIT PRICE SCHEDULE	- 13 -
2.3 TENDER AGREEMENT	- 15 -
2.4 CONTRACT	- 15 -
2.5 CONTRACTOR SCHEDULE	- 16 -
2.6 CONTRACTOR CHECKLIST	- 16 -
2.7 TENDER SIGNING	- 17 -
2.8 TENDER AMENDMENT FORM	- 18 -
<b>3. SPECIAL PROVISIONS</b>	<b>- 20 -</b>
3.1 CONTRACT OWNERSHIP	- 20 -
3.2 STANDARD SPECIFICATIONS, SPECIFICATION AMENDMENTS AND TYPICAL DRAWINGS	- 20 -
3.3 AVAILABLE INFORMATION DOCUMENTS	- 22 -
3.4 NORTHERN SUNRISE COUNTY CONTACT	- 23 -
3.5 CONSULTANT	- 23 -
3.6 SCOPE OF WORK	- 24 -
3.7 ENVIRONMENTAL CONTROL	- 24 -
3.8 WORK IN THE VICINITY OF UTILITIES	- 26 -
3.9 BI-WEEKLY CONSTRUCTION MEETINGS	- 27 -
3.10 TRAFFIC ACCOMMODATION	- 28 -
3.11 SUBGRADE EXCAVATION	- 28 -
3.12 COLD MILLING OF ASPHALT PAVEMENT	- 29 -
3.13 MILLED RUMBLE STRIPS FOR STOP CONDITIONS	- 30 -

## TABLE OF CONTENTS

<b>3.14 ROADWAY SURFACING</b>	<b>- 30 -</b>
<b>3.15 GRAVEL SURFACING</b>	<b>- 31 -</b>
<b>3.16 ROADWAY PAINTING</b>	<b>- 31 -</b>
<b><u>4. SPECIFICATION AMENDMENTS</u></b>	<b><u>- 33 -</u></b>
<b>4.1 AMENDMENTS TO SPECIFICATION 1.1, DEFINITIONS AND INTERPRETATION, RE: WORK AND SPECIFICATIONS 1.2, GENERAL, RE: ALL OF THE WORK</b>	<b>- 33 -</b>
<b>4.2 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: FORCE MAJEURE</b>	<b>- 33 -</b>
<b>4.3 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: DISPUTE RESOLUTION</b>	<b>- 34 -</b>
<b>4.4 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: CONTRACTOR MOBILIZING TO SITE</b>	<b>- 35 -</b>
<b>4.5 AMENDMENT TO SPECIFICATION 1.2, GENERAL, RE: 1.2.16.3 ENVIRONMENTAL CONSTRUCTION OPERATIONS PLAN - 35 -</b>	
<b>4.6 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: 1.2.16 ENVIRONMENTAL MANAGEMENT, PRODUCED SAND AND CONTAMINATED SOILS</b>	<b>- 36 -</b>
<b>4.7 AMENDMENT TO SPECIFICATION 1.2, GENERAL, RE: CONSTRUCTION STAKING AND SURVEY - MAJORITY BY CONSULTANT</b>	<b>- 36 -</b>
<b>4.8 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: 1.2.18 DAMAGE TO PROJECT</b>	<b>- 37 -</b>
<b>4.9 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: 1.2.55 CONTRACTOR'S WARRANTY PERIOD AND FINAL ACCEPTANCE</b>	<b>- 37 -</b>
<b>4.10 AMENDMENTS TO SPECIFICATION 3.50, ASPHALT CONCRETE PAVEMENT (EPS):</b>	<b>- 38 -</b>
<b><u>5. SUPPLEMENTAL SPECIFICATIONS</u></b>	<b><u>- 48 -</u></b>
<b>5.1 SUPPLEMENTAL SPECIFICATIONS 5.7, SUPPLY OF ASPHALT</b>	<b>- 48 -</b>
<b>5.7 SUPPLY OF ASPHALT</b>	<b>- 49 -</b>
<b><u>6. PLANS, DRAWINGS AND PERMITS</u></b>	<b><u>- 72 -</u></b>
<b>6.1 SEPARATE DRAWINGS</b>	<b>- 72 -</b>
<b>6.2 STANDARD DRAWINGS</b>	<b>- 72 -</b>
<b>6.3 CONTRACT DRAWINGS</b>	<b>- 72 -</b>
<b><u>7. ADDENDA</u></b>	<b><u>- 76 -</u></b>

## INSTRUCTIONS TO BIDDERS

**1. INSTRUCTIONS TO BIDDERS****1.1 CONDITIONS FOR TENDER SUBMISSION**

Bidders may submit Tenders by e-mail to Northern Sunrise County at the e-mail address identified on the cover page of the Tender ("Tender Submission E-mail Address") only.

Tenders must be received before the bid closing date and time identified on the cover page of the Tender ("Closing Date and Time").

The official time of receipt shall be determined by the time and date stamp of the Helix Transportation E-mail system.

The Bidder is solely responsible for ensuring that its Tender submission is received in its entirety before the Tender Closing Date and Time at the Tender Submission E-mail Address. The County assumes no responsibility for server availability, incompatibility of programs or files or any other technical problem, issue or delay that prevents the Tender submission from being received by, or opened after, the Tender Closing Date and Time.

The Bidder acknowledges, agrees and assumes all risks, responsibility, and liability associated with using electronic communications and submitting bids electronically, including, without limitation:

- a) any lack of security;
- b) any unreliability of delivery;
- c) the possible loss of confidentiality;
- d) the receipt of a garbled, corrupted or incomplete bid;
- e) the inability of the bidder to access or the unavailability of the Northern Sunrise County e-mail system or Alberta Purchasing Connection website;
- f) the incompatibility between the sending and receiving equipment;
- g) any delay in transmission or receipt of the bid; or
- h) the potential illegibility of the bid.

Bidders can acquire copies of the tender documents as set out in Instructions to Bidders Section 1.3, Availability of Tender Documents.

**1.2 PROJECT INQUIRIES**

For information regarding this project, you may contact:

Kevin Riewe, Manager, Operations  
Helix Transportation Ltd.  
#202, 10514 – 67 Avenue  
Grande Prairie, AB  
T8W 0K8  
**780-296-3999**

Inquires shall be submitted via email to [kevin.riewe@helixeng.ca](mailto:kevin.riewe@helixeng.ca) on or before March 19, 2026.

## INSTRUCTIONS TO BIDDERS

### 1.2.1 Pretender Meeting

There will not be a pre-Tender meeting for this project.

## 1.3 AVAILABILITY OF TENDER DOCUMENTS

### 1.3.1 Northern Sunrise County Distribution Source

Electronic (.PDF) copies of the tender documents are available for free download from the Alberta Purchasing Connection website at the following link: [www.purchasingconnection.ca](http://www.purchasingconnection.ca).

The County will assume no responsibility or liability for the completeness of any tender documents obtained from any other source.

### 1.3.2 Tender Document Discrepancies

In the event of a discrepancy between tender documents downloaded from the Alberta Purchasing Connection website and documents obtained from any other source, the tender documents downloaded from the Alberta Purchasing Connection website shall be deemed to be correct.

Bidders shall promptly notify the contact identified on the cover page of the tender upon discovery of any such discrepancies.

## 1.4 PLANS AND DRAWINGS

### 1.4.1 General

All drawings for this project are included within the Tender documents or can be found at the Alberta Transportation website:

<https://www.alberta.ca/transportation-and-economic-corridors>

## 1.5 TENDER SUBMISSION REQUIREMENTS

### 1.5.1 Bidder Information

The tender must be submitted by a single individual, partnership, corporation, or company. Joint Ventures are not permitted to bid unless expressly authorized in the tender documents. For all Bidders, the legal name, address, and e-mail address to which all notices or letters are to be mailed and e-mailed must be given in addition to the signature of the individual or one of the officers of the partnership, corporation or company with authority to bind the Bidder.

### 1.5.2 Format of Tender Submission

A tender submitted by the Bidder shall comply with the following requirements:

The tender shall include all pages entitled "Tender Forms" included in Section 2, Tender Forms and any attachments thereto in **one** single e-mail with a maximum email size of 20MB.

## INSTRUCTIONS TO BIDDERS

The e-mail shall include the Tender Number and Bidder Name in the subject title of the email submission.

The tender shall be signed and sent in an unprotected portable document format (PDF).

The tender shall be accompanied by a bid bond in a digital format as outlined in Section 1.5.5, Security.

All files included in the Tender submission shall be in file formats that can be opened by Adobe Acrobat Reader, unless otherwise instructed in the Tender documents. If files are compressed, only .zip compressed files will be accepted.

All Tender Forms submitted shall be as issued by Northern Sunrise County without any additions, alterations, or changes, other than the addition of information requested. Any required information that is missing, omitted or illegible, any alterations to the text, or any conditions added on or submitted with the Tender Forms, may cause the Tender to be declared invalid and rejected.

### 1.5.3 Completing Unit Price Schedule

The "Unit Price Schedule" must be completed by:

- Filling in all blank spaces under the headings "Unit Price", and "Estimated Quantity" where applicable, and the "Total Bid"; and
- Filling out the schedule as follows:

a) Unit Price

For bid items where the estimated quantity is fixed and the Bidder is required to provide a unit price, insert the unit price in the "Unit Price" column and insert the total for each item in the "Total Bid" column; (in case of discrepancy, the unit price figure will take precedence over the total in the "Total Bid" column);

b) Lump Sum

For bid items where the Bidder is required to provide a lump sum, insert the lump sum amount in the "Total Bid" column. Only the amount in the "Total Bid" column will be used in calculating the Total Tender;

c) Estimated Quantity

For bid items where the unit price is fixed and the Bidder is required to provide an estimated quantity (for example site occupancy), insert the estimated quantity in the "Estimated Quantity" column, and insert the total for each item in the "Total Bid" column; (in case of discrepancy, the estimated quantity figure in the "Estimated Quantity" column will take precedence over the total in the "Total Bid" column). The "Estimated Quantity" must be a whole number. If the number includes decimals, the County will round to the nearest whole number with .5 being rounded upwards; and

d) Total Tender

## INSTRUCTIONS TO BIDDERS

Insert the sum of all amounts in the "Total Bid" column in the space marked "Total Tender in Canadian dollars excluding GST".

Prices must not exceed two decimal places. If a submitted unit price schedule contains prices exceeding two decimal places, the County will round to the nearest two decimal places with .005 being rounded upwards. Bidders will be bound to such rounded amounts.

### 1.5.4 Acknowledging Addenda

Each Bidder shall ascertain before Tender submission that it has obtained all addenda issued by the County and by signing the Tender Form or submitting a Tender Amendment Form, each Bidder acknowledges that all issued addenda have been examined, read, and considered in their Tender.

### 1.5.5 Security

Each Tender must be accompanied by a bid bond in its original digital format made out to Northern Sunrise County equal to 10% of the Tender amount. Tenders not accompanied by an immediately verifiable digital bid bond using the bid bond's electronic content verification process will be rejected as non-compliant.

Bid bonds shall be issued by a duly incorporated surety company authorized to transact business of suretyship in the Province of Alberta in a form acceptable to the County.

The bid bond shall be submitted as its own PDF document, separate from the other Tender submission documents in its original electronic format. Scanned or altered PDF copies of the original bid bond in either paper or digital format will be deemed invalid and will cause the Bid to be rejected.

Verification of the bid bond may be conducted by the County at any time immediately after Closing Date and Time, or at any time during the life of the bid bond and at the discretion of the County with no requirement for additional electronic copies of the bid bond, passwords or fees.

#### 1.5.5.1 Electronic Bonding Requirements

The bid bond submitted by the Bidder must be verifiable with respect to the totality and wholeness of the bond form and the security which it represents, including but not limited to:

- a) the content of the bid bond;
- b) any details required for accessing and authenticating the bid bond, either via a verification tag or link that provides immediate access to the bond;
- c) all signatures and seals affixed thereto;
- d) encrypted digital signatures creating a secure electronic document; or
- e) anything that may prevent the enforcement and/or realization of the bid bond by the County in accordance with Section 1.5.6.2, Electronic Bonding Enforceability;

by the County with the Surety Company, or an approved verification service provider of the Surety Company.

#### 1.5.5.2 Electronic Bonding Enforceability

The bid bond shall be enforceable for the earlier of the Tender acceptance period as specified in the Instructions to Bidders or until the bond's principal enters into the Contract and provides the required

## INSTRUCTIONS TO BIDDERS

security and evidence of insurance coverage in accordance with General Specifications.

### 1.5.6 Safety Prequalification

As a precondition to contract award, the Bidder must have a valid Certificate of Recognition (COR) or a valid Temporary Letter of Certification (TLC), or a Certificate of Recognition Equivalency Letter (COREL) for out of province Bidders, as issued by the Alberta Construction Safety Association (ACSA) or another certifying partner authorized by the Alberta Ministry of Labour to issue CORs, TLCs or CORELs. The COR, TLC or COREL must be relevant to the Work. Possession of a Certificate of Recognition other than a COR, TLC or COREL, such as a Small Employer Certificate of Recognition (SECOR) is not acceptable.

Bidders may be required to submit evidence of safety qualifications by the earlier of:

- i) The date that the County may request in writing, or
- ii) Seven days before expiry of the tender acceptance period.

Prospective Bidders who do not possess a COR, TLC or a COREL and wish to obtain information about obtaining one, are advised to contact:

The Alberta Construction Safety Association  
225 Parsons Rd. S.W.  
Edmonton, AB, T6X 0W6  
Web Site: [www.acsa-safety.org](http://www.acsa-safety.org)  
E-mail: [Edmonton@acsa-safety.org](mailto:Edmonton@acsa-safety.org)

Telephone: (780) 453-3311 or  
(Toll Free) 1-800-661-2272  
Fax: (780) 455-1120 or  
1-877-441-0440

or another certifying partner authorized by Alberta Ministry of Labour.

It is the Bidder's responsibility to ensure its registration in the program is properly documented with the issuing certifying partner. The County will assume no liability for errors or omissions in this regard.

The Bidder must maintain a valid registration throughout the course of the Contract.

## 1.6 REJECTION OF TENDERS

The Owner reserves the right to accept or reject any or all Tenders and to waive irregularities and informalities at its discretion. The Owner reserves the right to accept a Tender other than the lowest Tender without stating reasons. The Owner has the right to award the work to whomever it chooses, in its sole and unfettered discretion, and for whatever reasons the owner deems appropriate. By the act of submitting its bid, the Bidder agrees that any claim the Bidder may have in relation to the award of the work by the Owner is limited to damages for the reasonable costs of preparing the bid and that the Bidder has no right to seek loss of anticipated profit.

Without limiting the generality of the foregoing, the Owner may consider any other factor besides price and capability to perform the work that it deems in its sole discretion to be relevant to its decision but not limited to the following:

- Any past experience with the Bidder, or lack thereof;
- The results of any reference check done by the Owner;
- Information relating to the financial state of the Bidder, however obtained;

## INSTRUCTIONS TO BIDDERS

- Show any alteration of form;
- Omit any required information or are illegible;
- Contain qualifications to the bid, or additions not called for;
- Are conditional or alternative bids.
- Are incomplete bids;
- Contain prices, which are unbalanced; or
- Is accompanied by an insufficient certified cheque, irrevocable letter of credit or by a Bid Bond in an unsatisfactory form.

Northern Sunrise County reserves the right to waive an irregularity or non-compliance where the County deems the irregularity or non-compliance to be minor or inconsequential. The determination of what is or is not a minor or inconsequential irregularity or non-compliance, and the determination of whether to waive or not waive the irregularity or non-compliance, is at the County's sole discretion.

The lowest priced compliant Bidder may be required to supply evidence of experience, qualifications, equipment, ability, and financial capability for completing the project(s) before the Contract is executed. Lack of any of these will be considered sufficient cause for rejecting the Tender.

In addition, failure to satisfactorily complete previous construction contracts with the County, or avoidable delays in completing such contracts, will be considered sufficient cause for rejecting any Tender.

### **1.7 TENDER DATE CHANGES AND CANCELLING OF TENDERS**

The County may extend the Closing date and time for receiving Tenders, or the County may amend, suspend, postpone or cancel this Tender at any time.

### **1.8 DISQUALIFICATION OF BIDDERS**

Only one Tender per Bidder will be considered. Reasonable grounds for believing that any Bidder is interested in more than one Tender for the Work, in the capacity of the Contractor, may cause the rejection of all Tenders in which such Bidder is interested.

Any or all Tenders will be rejected if there is reason to believe that collusion exists among the Bidders, and none of the participants in such collusion will be considered in future Tenders.

Contracts will not be awarded to any government agency including but not limited to the Government of Canada, the government of a province or territory of Canada, any agency thereof, or any municipality or other unit of local government within any province or territory of Canada.

"Government Agency" means a branch, unit, subsidiary or other form of entity, owned or controlled by a government agency and includes any subsidiaries or entities owned or controlled by that agency.

### **1.9 BIDDER'S INVESTIGATION AND REPRESENTATION**

The Bidder must examine the contract forms and Tender documents, including plans, drawings, Alberta Transportation specifications, and special provisions, to clearly understand the requirements of the project(s) and to carefully investigate and satisfy themselves of every condition affecting the project(s), including the site conditions and the labour and material to be provided. The contract forms and Alberta Transportation specifications are available on the Department's web site at <https://www.alberta.ca/construction-contract-templates.aspx>. The Bidder agrees that submission

## INSTRUCTIONS TO BIDDERS

of a Tender is conclusive evidence that the Bidder has made such investigation; and that, whether or not he has so investigated, he is willing to assume and does assume all risk regarding conditions affecting the project.

The submission of a tender also constitutes a representation by the Bidder that:

- (i) the Bidder has complied with all bidding requirements;
- (ii) the Bidder is qualified and experienced to perform the Work in accordance with the tender documents;
- (iii) the bid is based upon performing the Work in accordance with the tender documents, without exception; and
- (iv) the price or prices stated in the tender cover all the Bidder's obligations under the Contract and all matters and things necessary for the performance of the Work in accordance with the tender documents.

### **1.10 INTERPRETATION AND REVISION OF TENDER DOCUMENTS**

The Bidder must submit all questions about the meaning and intent of the Tender documents directly to the contact identified on the cover page of the Tender. Interpretations and revisions considered necessary in response to such questions will be issued by the County in writing in the form of addenda.

Addenda may also be issued by the County to revise the Tender documents as deemed necessary.

It is the Bidder's responsibility to notify the County, in writing, of any ambiguity, divergence, error, or omission, oversight, contradiction, or item subject to more than one interpretation in these Tender documents, as it is discovered, and to request any instruction, decision, or direction required for the Bidder to bid.

If an inquiry requires an interpretation or revision of the Tender documents, the response to that inquiry will be issued in the form of a written addendum, to ensure that all bidders base their bids on the same information.

Replies to questions, interpretations and revisions made in a manner other than by written addendum are not binding.

### **1.11 ADDENDA**

Further to Instructions to Bidders Section 1.5.5, Acknowledging Addenda, addenda, when issued, form part of the Tender and Contract documents.

During the Tendering period, all addenda issued by the County will be posted and available for free download from the Alberta Purchasing Connection Website ([www.purchasingconnection.ca](http://www.purchasingconnection.ca)).

Each Bidder is solely responsible for ascertaining that, prior to the time fixed for receiving Tenders, it has obtained all addenda issued by the County.

## INSTRUCTIONS TO BIDDERS

**1.12 WITHDRAWAL OR CHANGE OF TENDER****1.12.1 Withdrawal of Tender Submission**

A Bidder may withdraw its tender by submitting a request in writing signed by an authorized officer of the Bidder. Such request may be in the form of an e-mail. The request must be received in accordance with Instructions to Bidders Section 1.1, Conditions for Tender Submission, prior to the tender Closing Date and Time.

**1.12.2 No Withdrawal**

No Bidder may withdraw a tender at or after the time fixed for receiving tenders until:

- (i) some other Bidder has entered into a Contract with the County for the performance of the project specified in these tender documents and provided the required security and evidence of insurance coverage in accordance with General Specifications 1.2.3, Security and 1.2.4, Insurance, which must be satisfactory to the County and in compliance with Instructions to Bidders Section 2.3.2, Tender Security, or
- (ii) thirty-five (35) calendar days after the time fixed for receiving tenders unless the County has notified the bidder that they are the successful bidder;

whichever occurs first.

The 35 day acceptance period referred to above will commence at 11:59:00 p.m. of the Closing Date and will terminate at 11:59:00 p.m. of the 35th day thereafter. If the 35th day falls on a weekend or statutory holiday, such day(s) will be omitted from the computation.

**1.12.3 Changes to Tender Submissions**

A Bidder wishing to make changes to its Tender before the Tender Closing Date and Time may withdraw the Tender submission and the modified Tender may then be resubmitted in compliance with Instructions to Bidders Section 1.1, Conditions for Tender Submission, up to the Tender Closing Date and Time. Bidders are advised that requests for withdrawal of Tender submissions must comply with Instructions to Bidders Section 1.15.1, Withdrawal of Tender Submission.

If the changes to its Tender are only an amendment to the unit price schedule, the Bidder may send a completed copy of the "TENDER AMENDMENT FORM" included in the Tender document to the e-mail address as shown on the Tender Amendment Form. The e-mail subject title shall contain the following:

**Tender No.7109-001 – Tender Amendment – Name of Bidder**

To be acceptable, the form must be completed in full including the legal name of the Bidder and the changes to be made, and it must be signed by an authorized officer of the Bidder and received before the tender Closing Date and Time in accordance with the Instructions to Bidders Section 1.1, Conditions for Tender Submission. The form must also be submitted in an unprotected portable document format (PDF).

The Bidder is responsible for ensuring its modifications are received before the tender Closing Date and Time and are legible, clear as to the intent, unambiguous, and comply with the terms of the tender document. Failure of the Bidder to do the foregoing will render these modifications null and void. The County assumes no responsibility or liability for the content of modifications, or for modifications that are,

## INSTRUCTIONS TO BIDDERS

for any reason, delayed, illegible, unclear as to intent, ambiguous, contrary to these instructions, or otherwise improperly received. The County, at its sole discretion, may reject modifications in accordance with the terms of the Tender Amendment Form or may reject the Tender in accordance with Instructions to Bidders Section 1.6, Rejection of Tenders, or both.

Prices must not exceed two decimal places. If a submitted unit price schedule change contains prices exceeding two decimal places, the County will round to the nearest two decimal places with .005 being rounded upwards. Bidders will be bound to such rounded amounts.

The "Tender Amendment Form", if applicable, must be completed by identifying only the changes required:

a) Estimated Quantity Changes

For bid items where the unit price is fixed and the Bidder is required to provide an estimated quantity (for example site occupancy), show the amount of the increase or decrease of the quantity in the "Estimated Quantity Changes + or -" column and the total value of the change in the "Net Change to Total Bid + or -" column. Use the unit price as it appears in the unit price schedule as the unit price in the Tender Amendment Form.

In case of discrepancy, the estimated quantity figure in the "Estimated Quantity Changes + or -" column will take precedence over the amount in "Net Change to Total Bid + or -" column, and the unit price in the unit price schedule will take precedence over the unit price in the Tender Amendment Form;

b) Unit Price Changes

For bid items where the Bidder is required to provide a unit price, show the amount of the change to the unit price in the "Unit Price Changes + or -" column, and the total for each change in the "Net Change to Total Bid + or -" column. Use the estimated quantity as it appears in the unit price schedule as the estimated quantity in the Tender Amendment Form.

In case of discrepancy, the change to the unit price figure in the "Unit Price Changes + or -" column will take precedence over the total change in the "Net Change to Total Bid" column;

c) Lump Sum Changes

For bid items where the Bidder is required to provide a lump sum, leave a blank space in the "Unit Price Changes + or -" column, and enter the amount of the lump sum change in the "Net Change to Total Bid + or -" column; and

d) Net Change to Total Bid

Show the sum of all items in the "Net Change to Total Bid + or -" column in the space after "Increase (+) or Reduce (-) Total Tender By".

If arithmetical errors are discovered, the changed estimated quantities or unit prices, as applicable, will be considered as representing the Bidder's intentions; and the net change to total bid price extensions and the change to total tender amount entered in the Tender Amendment Form will be corrected accordingly by the County. The Bidder will be bound to such corrected amounts.

## INSTRUCTIONS TO BIDDERS

### 1.13 TENDER VALIDATION

The County will check the completeness and accuracy of all Bidders' tender submissions in order to determine the lowest compliant bid.

Extensions to unit price items and estimated quantity items entered in the unit price schedule will be verified by the County. If arithmetical errors are discovered:

- for unit price items, then the unit prices will be considered as representing the Bidder's intentions;
- for estimated quantity items, then the estimated quantity will be considered as representing the Bidder's intentions

and the unit price or estimated quantity extensions and the Total Tender amount in the unit price schedule will be corrected accordingly by the County. The Bidder will be bound to such corrected amounts.

If an estimated quantity or unit price is not filled in by the Bidder for an item, but an amount is stated in the Total Bid column, then the County will determine:

- the unit price by dividing the extended amount by the estimated quantity and this unit price value will be considered as representing the Bidder's intentions; or
- the estimated quantity by dividing the extended amount by the unit price and this estimated quantity will be considered as representing the Bidder's intentions.

The Total Tender will be the arithmetically correct sum of the arithmetically correct total bid extensions and lump sums in the unit price schedule.

### 1.14 CONTRACT AWARD

Bidders may be a single individual, partnership, corporation, or company. However, if the Bidder is a partnership, corporation, or company it must be registered with the Alberta Corporate Registry prior to Contract award.

The Owner reserves the right to not award the Contract. The Contractor shall have no claim against the Owner should the Owner exercise its right to not award the Contract.

### 1.15 SIGNED CONTRACT PACKAGE

The contract forms and any other applicable forms will be completed by the successful Bidder and included in the signed Contract. Prior to commencement of any activities and at any other time requested by the County, the successful Bidder must provide its security and proof of insurance, satisfactory to the County. Sample copies of these forms are available on-line on the Alberta Transportation's web site at: <https://www.alberta.ca/construction-contract-templates.aspx>

### 1.16 SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARDS, HIERARCHY OF DOCUMENTS

The following documents apply to this Instructions to Bidders. These documents can be found either in the tender documents or on the Department website. General Specifications are found in General Specifications and Specification Amendments for Highway and Bridge Construction. Specification Amendments are included both in sections 4 and 5 of the tender documents and in the General

## INSTRUCTIONS TO BIDDERS

Specifications and Specification Amendments for Highway and Bridge Construction. In the event of discrepancies, the hierarchy of documents is as follows, in descending order:

- Instructions to Bidders
- Special Provisions
- Project specific construction plans
- Standard construction plans
- Specification Amendments
- Supplemental Specifications
- General Specifications
- Standard Construction Specifications

In the event of a difference between scaled dimensions on Plans and the figures written thereon, the figures govern. In the event that two or more plans show conflicting information, the information on the most recently dated plan govern.

Any technical and manufacturer's standard, Government Act, Regulation, or Code of Practice referred to in the Contract documents will be a reference to the version current at the time the Contract is awarded.

TENDER FORMS

**2. TENDER FORMS**

**2.1 TENDER FOR CONSTRUCTION**

To Mike Konowalyk, Director of Operations & Infrastructure, for Northern Sunrise County:

---

(Legal Name of Bidder)

the undersigned, hereby Tenders and agrees to execute and construct all the Work of every description required in the construction and final completion of the following project(s):

Cold Milling, Asphalt Concrete Pavement, and Other Work

**Reno Road (TWP 810)**

Hwy 2 to 800m east of RR195 Km 0.000 to km 12.200

NORTHERN SUNRISE COUNTY

I, the undersigned, having examined and read the Tender documents for the above noted project, including all issued addenda (if any), and having visited the site and examined all conditions affecting the Work, am satisfied I understand the Tender documents and site conditions and declare myself competent to undertake and complete the Work and to be the prime contractor as set out in the Occupational Health and Safety Act and do hereby irrevocably bid and agree to carry out the Work in strict accordance with the plans and specifications, for the unit prices in the unit price schedule enclosed.

Each Bidder shall ascertain before bid submission that it has obtained all addenda issued by the County and by signing the Tender Form acknowledges that all issued addenda have been examined, read, and considered in their bid.

## TENDER FORMS

**2.2 UNIT PRICE SCHEDULE**

ITEM No.	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE	TOTAL BID
1	Mobilization (GCS 1.2.9)	1 Lump Sum	lump sum	\$ _____
2	Supply of Aggregate - No Option (HCS 5.2.5)	21 353 t	_____ per tonne	\$ _____
3	Subgrade Excavation (HCS 3.1.3) (Special Provisions)	453 m3	_____ per cubic metre	\$ _____
4	Geotextile for Stabilization - Supply and Install (Class 1A) (Special Provisions)	790 m2	_____ per square metre	\$ _____
5	Cold Milling Asphalt Pavement (HCS 3.16.6)	114 346 m2	_____ per square metre	\$ _____
6	Milled Rumble Strips for Stop Conditions (HCS 3.52.4)	1 sets	_____ per set	\$ _____
7	Asphalt Concrete Pavement - EPS Mix Type M1 (PG 52-34) (HCS 5.2.5) (HCS 3.50.7)	20 265 t	_____ per tonne	\$ _____
8	Granular Fill Des. 2 Class 25 (HCS 3.8.5) (HCS 5.2.5)	1 299 t	_____ per tonne	\$ _____
9	Gravel Surfacing Des. 4 Class 25 (HCS 3.3.4) (HCS 5.2.5)	600 t	_____ per tonne	\$ _____
10	Roadway Lines - Supplying Paint and Painting (Directional Dividing and 2 Edge Lines) (HCS 5.20.5) (HCS 7.2.6)	12.35 km	_____ per kilometre	\$ _____
11	Durable Pavement Message - Stop Bar (HCS 5.20.5) (HCS 7.3.5)	3 messages	_____ per message	\$ _____
12	Durable Pavement Message - Stop Ahead (HCS 5.20.5) (HCS 7.3.5)	1 messages	_____ per message	\$ _____

TENDER FORMS

ITEM No.	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE	TOTAL BID
13	Durable Pavement Message - STOP (HCS 5.20.5) (HCS 7.3.5)	1 messages	_____ per message	\$ _____
14	Durable Pavement Message – Railway Crossing (HCS 5.20.5) (HCS 7.3.5)	2 messages	_____ per message	\$ _____
<b>Total Tender in Canadian dollars excluding GST</b>				\$ _____

## TENDER FORMS

**2.3 TENDER AGREEMENT****2.3.1 Rejection/Acceptance**

The County reserves the right to reject any or all Tenders. The County may choose to accept or reject any offer which it may consider the best interest of the County.

**2.3.2 Tender Security**

The undersigned encloses herewith as tender security a verifiable bid bond in a digital format made out to Northern Sunrise County, for \_\_\_\_\_ (total Security amount) and the undersigned hereby agrees that should he refuse or fail after the Contract is received, and the Contract is received when opened if delivered by e-mail, or when delivered if using any other means:

- (a) within seven (7) calendar days, to sign and return the Contract to the County for the performance of the Work and/or the supplying of material covered by this tender, and
- (b) within fourteen (14) calendar days, to provide the required security and evidence of insurance coverage in accordance with General Specifications 1.2.3, Security and 1.2.4, Insurance, satisfactory to the County.

the Tender security is subject to forfeiture to the County, and if a Contract for the project(s) is then entered into with some other party for a greater amount, the Bidder is liable to the County in the amount equal to the difference between the amount of its Tender and the amount of the Contract actually entered into, the maximum liability not exceeding the amount of the Tender security required under Instructions to Bidders Section 1.5.5, Security.

**2.3.3 Tender Withdrawal**

The undersigned hereby acknowledges and agrees that he cannot withdraw this tender at or after the tender Closing Date and Time until:

- (i) some other party has entered into a Contract with the County for the performance of the project specified in the tender documents and provided the required security and evidence of insurance coverage in accordance with General Specifications 1.2.3, Security and 1.2.4, Insurance, which must be satisfactory to the County per Instructions to Bidders Section 2.3.2, Tender Security, or
- (ii) thirty-five (35) calendar days after the time fixed for receiving this tender unless the County has notified them that they are the successful Bidder, whichever first occurs.

The 35 day acceptance period referred to above will commence at 11:59:00 p.m. of the Closing Date and will terminate at 11:59:00 p.m. of the 35th day thereafter. If the 35th day falls on a weekend or statutory holiday, such day(s) will be omitted from the computation.

**2.4 CONTRACT**

Should this Tender be accepted, the undersigned agrees to enter into a written Contract with Northern Sunrise County for the faithful performance of the Work covered by this Tender, in accordance with the said plans and specifications and complete the said project on or before **September 15, 2026**.

TENDER FORMS

**2.5 CONTRACTOR SCHEDULE**

Contractors are required to submit, along with their Tender, this schedule sheet showing their proposed starting date and completion date of this project.

Project	Starting Date	Completion Date
Reno Road (TWP 810)		

\* Completion dates that exceed the Contract Completion Date will be considered a conditional or alternative bid and may be rejected.

**2.6 CONTRACTOR CHECKLIST**

The following items have been included in the Tender package submission:

- 1) Bid Bond or Certified Cheque (Bid Security – All Bidders) initial\_\_\_\_
- 2) Consent of Surety initial\_\_\_\_
- 3) All pages headed “Tender Forms” initial\_\_\_\_
- 4) Tender Amendments (if applicable) initial\_\_\_\_
- 5) Contractor Schedule initial\_\_\_\_
- 6) Signed and Sealed Tender initial\_\_\_\_
- 7) Addenda (if applicable) initial\_\_\_\_
- 8) COR, TLC or COREL initial\_\_\_\_

TENDER FORMS

**2.7 TENDER SIGNING**

A representative(s) with the authority to bind the Bidder must sign this tender.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

NAME AND ADDRESS  
OF BIDDER:  
(Print or Type)

---

---

TELEPHONE:

---

---

E-MAIL ADDRESS:

---

SIGNATURE OF AUTHORIZED  
REPRESENTATIVE(S):

NAME AND TITLE OF AUTHORIZED  
REPRESENTATIVE(S):  
(Print or Type)

---

---

---

---

TENDER FORMS

**2.8 TENDER AMENDMENT FORM**

I, \_\_\_\_\_, the undersigned, modify the unit price schedule for  
(Legal Name of Bidder)

our tender as shown in the following table:

<b>UNIT PRICE SCHEDULE CHANGES</b> Replaces previous Unit Price Schedule Changes				
ITEM NO.	Description [List bid items that require change to estimated quantity]	Estimated Quantity Changes + or -	Unit Price <sup>(a)</sup>	Net Change to Total Bid + or -
		_____ day		
		_____ day		
ITEM NO.	Description [List bid items that require change to unit price or lump sum]	Estimated Quantity <sup>(b)</sup>	Unit Price Changes <sup>(c)</sup> + or -	Net Change to Total Bid <sup>(d)</sup> + or -
<b>INCREASE (+) OR REDUCE (-) TOTAL TENDER BY:</b>				

- (a) For estimated quantity items state the unit price as it appears in the unit price schedule.
- (b) For unit price or lump sum items state the estimated quantity as it appears in the unit price schedule.
- (c) For lump sum items leave "Unit Price Changes + or -" column blank.
- (d) For lump sum items enter + or - the change amount in the "Net Change to Total Bid + or -".
- (e) If required, additional amendment items may be added or attached to this form.

### TENDER FORMS

Each Bidder shall ascertain before Tender submission that it has obtained all addenda issued by the County and by signing the Tender Amendment Form acknowledges that all issued addenda have been examined, read, and considered in their bid.

We also acknowledge and agree that:

1. This change supersedes all previous changes including those to other bid items. Previously submitted changes are null and void.
2. We accept full responsibility for any lack of confidentiality arising from the use of this process.
3. Failure of these modifications to be received, on time, legibly, clear as to intent, unambiguously, accurately or completely for any reason will render these modifications null and void.

I am authorized to bind the Bidder:

---

Authorized Signature

---

Date

Send by email to [kevin.riewe@helixeng.ca](mailto:kevin.riewe@helixeng.ca)

(Include in email subject line: "Tender No.TND7109-001 – Tender Amendment – Name of Bidder")

**SPECIAL PROVISIONS****3. SPECIAL PROVISIONS****3.1 CONTRACT OWNERSHIP**

The contractor is advised that all references to the “County, Department or Owner” as found in all specifications, Manuals and Standard Drawings as identified within this document shall be taken to mean Northern Sunrise County.

All references to the word “Minister” shall be taken to mean the person holding the position or acting in the capacity of Director of Operations & Infrastructure for Northern Sunrise County or any duly appointed representative.

**3.2 STANDARD SPECIFICATIONS, SPECIFICATION AMENDMENTS AND TYPICAL DRAWINGS****3.2.1 Department Name Change**

Due to government reorganization, the Department’s name has changed. As a result, some specifications, drawings, plans and other documents in this Contract may continue to reference Alberta Transportation, Alberta Infrastructure, Alberta Infrastructure and Transportation or Alberta Transportation and Utilities. Please be advised that any references to Alberta Transportation, Alberta Infrastructure, Alberta Infrastructure and Transportation or Alberta Transportation and Utilities shall mean Alberta Transportation and Economic Corridors.

**3.2.2 Transition of the Crown**

All instances of Her Majesty the Queen are deleted and replaced with His Majesty the King.

**3.2.3 Standard Specifications for Highway and Bridge Construction Work****3.2.3.1 General**

The standard specifications for highway and bridge construction work, which shall form part of the Contract, are published in the following Department manuals:

- General Specifications and Specification Amendments for Highway and Bridge Construction – Edition 16, 2019;
- Standard Specifications for Highway Construction – Edition 16, 2019;
- Standard Specifications for Bridge Construction – Edition 17, 2020;

which are available for viewing and/or download from the Department’s website at the link shown below:

<https://www.alberta.ca/construction-contract-templates.aspx>.

**3.2.3.2 Contract Type**

In accordance with the General Specifications Sections 1.2.39, ADJUSTMENT OF COMPLETION DATES, 1.2.40, FAILURE TO COMPLETE ON TIME, and 1.2.43, SEASONAL OR PROLONGED SHUTDOWN, this Contract will be considered a:

## SPECIAL PROVISIONS

- **Roadway Contract**

**3.2.4 Additional Specifications and Typical Drawings**

The following additional Specifications and typical drawings, which form part of the Contract, are available for viewing and/or download from the Department's web site at the links shown below:

- Typical minimum requirements for traffic accommodation and construction zone temporary signing are included in the manual entitled "Traffic Accommodation in Work Zones Manual, 2nd Edition, 2018". <https://www.alberta.ca/traffic-accommodation-in-work-zones.aspx>

It may be necessary for the Contractor to modify these drawings and/or develop new drawings to address non-typical situations when developing the Traffic Accommodation Strategy in accordance with Standard Specifications for Highway Construction Section 7.1, Traffic Accommodation and Temporary Signing.

- Typical minimum requirements for pavement markings are included in the Department manual entitled "Alberta Highway Pavement Marking Guide, 2<sup>nd</sup> Edition".  
<https://open.alberta.ca/dataset/highway-pavement-marking-guide-2nd-edition>
- Drawings showing the typical minimum requirements for permanent highway signage.  
<https://www.alberta.ca/traffic-control-manuals-and-guidelines.aspx>
- Drawings showing the typical minimum requirements for barriers.  
<https://www.alberta.ca/standard-drawings-listing-active-individual-files.aspx>
- Typical minimum requirements for erosion and sediment control devices.  
<https://www.alberta.ca/geotechnical-and-erosion-control.aspx>
- Typical minimum requirements for highway street lighting devices are included in the Department manual entitled "Highway Lighting Guide – 2003".  
<https://www.alberta.ca/traffic-control-manuals-and-guidelines.aspx>
- All other typical plans and drawings are available at the following link:  
<https://www.alberta.ca/cb-6-highway-standard-plates-active.aspx>

Hard copy versions of select manuals are available for purchase from:

Alberta Transportation and Economic Corridors  
Strategic Procurement and Grant Branch  
Suite 303, 3<sup>rd</sup> Floor, Twin Atria Building  
4999 – 98 Ave.  
Edmonton, AB, T6B 2X3

Telephone: (780) 415-1068

Bidders are advised that, from time to time, the Department may issue revisions to existing drawings, and/or may insert drawings into the above mentioned manuals without re-printing hard-copy editions of the manual. These new and/or revised drawings will be available on the Department's web site.

Bidders are further advised that any drawing revisions and/or new drawings that are posted on the Department's web site as of five (5) calendar days prior to the date set for receiving tenders, will apply to this project.

**SPECIAL PROVISIONS**

Any standard drawings that are not available on the Department's web site will be included in the Contract documents.

**3.2.5 Specification Amendments**

The Specification Amendments listed in the following table are contained in the "General Specifications and Specification Amendments for Highway and Bridge Construction - Edition 16, 2019". Items that are marked with an "X" apply to the Tender documents and the Contract, and items that are not so marked do not apply. The Contractor is advised that the applicable Specification Amendments amend the Tender documents and Contract and some contain revisions to the payment clauses for the Specifications amended.

<b>X</b>	<b>AMENDMENTS TO SPECIFICATIONS</b>	
	<b>DESIGNATION</b>	<b>GENERAL DESCRIPTION</b>
<b>SECTION 1 – GENERAL SPECIFICATIONS</b>		
	AMC_C125.2	Priority Line Painting for Site Occupancy
<b>X</b>	AMC_C125.3	Non-Priority Line Painting for Site Occupancy
	AMC_S53.1	Construction Staking and Survey Majority by Contractor
<b>X</b>	AMC_S53.2	Construction Staking and Survey Majority by Consultant(rev Sept 2022)
	AMC_S53.3	Construction Staking and Survey for Bridge Construction
	AMC_C230	Diesel Fuel Cost Adjustment
<b>SECTION 3 – SURFACING</b>		
<b>X</b>	AMC_S116	Tolerances for Surface Finish
	AMC_S201	Acceptance Testing for Contracts with Small Quantities (less than 1000 tonnes) of Asphalt Concrete Pavement (ACP)
<b>SECTION 5 - MATERIALS</b>		
	AMC_S9.4	Supply of Aggregate – Contractor's Supply with Option
<b>X</b>	AMC_S9.5	Supply of Aggregate – Contractor's Supply with No Option
	AMC_S9.6	Supply of Aggregate – Designated Source
	AMC_C218	Interim Payment for Supply of Materials
<b>BRIDGE CONSTRUCTION SPECIFICATIONS</b>		
	AMC_B020	Site Offices for Bridge Structure Construction Not Required
	AMC_B219	Course of Construction Insurance is Optional

**3.3 AVAILABLE INFORMATION DOCUMENTS****3.3.1 Information Documents**

"Information Documents" means those documents, including the information contained therein, of any type and in any form, related to the Project that are made available to the Bidder by the County for the purpose of providing the Bidder with access to information available to the Province, including but not limited to documents made available through those websites listed in Section 1.3, Tender Information Documents.

In the Information Documents, "Contractor" is synonymous with "Bidder".

## SPECIAL PROVISIONS

### 3.3.2 Status of Information Documents

Information Documents or any part thereof, are not incorporated into or form any part of the Contract unless specifically incorporated into Contract documents as set out in Section 3.2.4, Information Documents incorporated into Contract documents.

### 3.3.3 Use of and Reliance upon Information Documents

Information Documents, including the information contained therein, are only being made available to the Bidder by the County for the purpose of providing the Bidder with access to information available to the County.

The County makes no representations or warranties with respect to the accuracy, completeness or appropriateness of the Information Documents or any information contained therein.

The Bidder shall interpret and draw its own conclusions from the Information Documents at its own risk and is encouraged to obtain specialist advice with respect thereto. The County assumes no responsibility for such interpretations and conclusions.

Information contained in Information Documents may be time sensitive and dates shall be considered when interpreting Information Documents.

The Bidder may only rely upon the data contained in the Information Documents, or parts thereof, which are specifically incorporated into Contract documents in Section 3.2.4 below, if any, but shall draw their own conclusions from such data and shall not rely on the opinions or interpretations contained therein.

### 3.3.4 Information Documents Incorporated into Contract Documents

There are no additional information documents with this project.

### 3.3.5 Other Information Documents

There are no additional information documents with this project.

## 3.4 NORTHERN SUNRISE COUNTY CONTACT

Mike Konowalyk,  
Director of Operations & Infrastructure  
Northern Sunrise County  
135 Sunrise Road, Bag 1300  
Peace River, Alberta T8S 1Y9

E-mail: [mkonowalyk@northernsunrise.net](mailto:mkonowalyk@northernsunrise.net)

## 3.5 CONSULTANT

The Consultant, as defined in Section 1.1.7, Consultant, of the “General Specifications and Specification Amendments for Highway and Bridge Construction - Edition 16, 2019”; and as referenced in the specifications, will be:

**Kevin Riewe**  
**Helix Transportation Ltd.**

E-mail: [kevin.riewe@helixeng.ca](mailto:kevin.riewe@helixeng.ca)

## SPECIAL PROVISIONS

**#202, 10514 – 67 Avenue  
Grande Prairie, AB  
T8W 0K8**

### **3.6 SCOPE OF WORK**

The scope of work for this project includes, but is not limited to, the following:

- Cold Milling Asphalt Pavement – 114,346 m<sup>2</sup>;
- Asphalt Concrete Pavement – 20,265 t;
- Roadway Pavement Marking – 12.35 km.

Unless otherwise specified, the Contractor must supply all materials necessary to complete the Work. A complete job is called for, therefore any labour, material, equipment, tool or incidental item not specifically mentioned, but necessary for completeness will be considered incidental to the Work, and no separate or additional payment will be made.

### **3.7 ENVIRONMENTAL CONTROL**

#### **3.7.1 General**

The Contractor shall ensure effective implementation of their Environmental Construction Operations (ECO) Plan by meeting the requirements of General Specification 1.2.16, Environmental Management, by training staff and sub-contractors, assigning responsibilities, incorporating procedures and by regular reporting at project meetings. Daily, the Contractor shall inspect, and record condition of environmental measures proposed in their ECO Plan and these records shall be forwarded to the Consultant on a weekly basis. Any deficiencies shall be rectified as they are discovered.

Should site conditions change and the Contractor foresees difficulties in meeting the Tender special provisions and conditions of their ECO Plan or an event occurs that breaches these it is the Contractor's responsibility to inform the Consultant as soon as possible and to react to be in compliance.

The Contractor is advised that no deleterious substances (including but not limited to sediment, debris, petroleum products) shall be allowed to enter any waterbodies or any other body of water whether flowing or static. Refueling and hazardous material storage areas shall be at minimum 100m away from any water body. Construction equipment shall not travel outside the highway right of way until the Contractor has written permission from the registered landowner and/or Public Lands and specifically authorized by the Consultant.

Following construction any disturbed areas shall be re-contoured, top-soiled and seeded. Erosion and sediment control (ESC) devices shall maintain in place until the vegetation has been fully established. The inclusion of permanent erosion control measures in this Tender does not in any way relieve the Contractor of their responsibilities under General Specification 1.2.16.

All costs associated with adhering to the requirements of the applicable environmental regulations including, but not limited to, sediment monitoring programs and control measures, scheduling constraints and re-planting and re-seeding of disturbed areas, will be considered incidental to the Work, and no separate or additional payment will be made.

## SPECIAL PROVISIONS

### 3.7.2 Campsites

Prior to the establishment of a campsite and roads providing access thereto or for other camp uses, the Contractor shall obtain the approval of the Consultant and contact the following local Officials:

Jeff Poeckens  
Peace River Land Management Specialist  
Alberta Forestry and Parks  
9621-96 Ave, Provincial Building, 2<sup>nd</sup> Floor  
Bag 900-4, Peace River, AB, T8S 1T4  
Telephone: (780) 624-6331

Debris resulting from the clearing undertaken in such areas shall be disposed of in an approved manner and areas left in a tidy condition in accordance with the Forest and Prairie Protection Act and regulations. All campsites shall be kept in a neat and sanitary condition at all times.

Garbage and other debris from the Contractor's campsite operations shall be disposed of at an approved location. Prior to the abandonment of a campsite, the Contractor shall obtain a "Reclamation Clearance" from the above local Official(s).

### 3.7.3 Control of Equipment

The Contractor shall carefully control all equipment and work operations so that his operations do not extend beyond the designated working limits unless otherwise specifically authorized by the Consultant.

### 3.7.4 Burning

Burning will not be permitted under this Contract.

### 3.7.5 Historical Resources

Pursuant to Section 31 of the Historical Resources Act, the Contractor shall notify the Consultant immediately in the event that any paleontological or historical resources are discovered during the course of construction. Pursuant to information from the appropriate governing body, it may be necessary for the Consultant to issue further instructions regarding the documentation of these resources.

### 3.7.6 Control of Weeds and Pests

The Contractor shall ensure all equipment, vehicles, tools and other items are clean of soil prior to entering and leaving the site.

The Contractor shall submit a proposed procedure for weed and pest control to the Consultant a minimum of two weeks prior to the pre-construction meeting for review and acceptance. The Contractor's equipment, vehicles, materials or personnel will not be permitted to enter the site prior to acceptance of the Contractor's procedure for weed and pest control.

All cost associated with weed and pest control will be considered incidental to the Work, and no separate or additional payment will be made.

## SPECIAL PROVISIONS

**3.7.7 Control of Clubroot**

## 3.7.7.1 General

Clubroot, caused by *Plasmodiophora brassicae*, is a serious disease of cruciferous crops (i.e., mustards, canola, etc.) which can result in reduced to severe yield losses. Clubroot was declared a pest under Alberta's Agricultural Pests Act in April 2007. Enforcement of the Act is the responsibility of the Agricultural Service Board located in each municipality.

The Contractor shall carry out their operations in accordance with the following Provisions and the Best Management Practices outlined in the Alberta Clubroot Management Plan which is available online at the following location:

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/agdex11519](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex11519)

## 3.7.7.2 Eco Plan Requirements

As part of the ECO Plan, the Contractor shall detail their proposed Clubroot control measures for soil disturbance at location involving Clubroot infected soils.

Details shall include proposed equipment cleaning procedures as well as any other control measures recommended by the Municipality's Agricultural Fieldman.

Soil disturbance work shall not commence until the Contractor's ECO Plan has been reviewed and accepted by the Consultant.

All costs associated with the implementation of Clubroot control measures, including those required by the applicable Agricultural Service Board, will be considered incidental to the Work and no separate or additional payment will be made.

**3.8 WORK IN THE VICINITY OF UTILITIES****3.8.1 General**

The Contractor's attention is drawn to Section 1.2.15, Safeguarding Utility and Railway Installations of the General Specifications.

Additional specific requirements for work in the vicinity of utilities and coordination with the owners and/or operators are listed under the particular utility.

The known utility companies, owners and operators and their representatives are as follows:

East Peace Gas Co-op 448 Main Street SE Falher, AB, T0H 1M0 Telephone: 780-837-8888 E-mail: eastpgc@iwantwireless.ca	Emergency Service 780-837-8888
East Peace Water Co-op Bag 1300, 135 Sunrise Rd	780-624-0013

## SPECIAL PROVISIONS

Peace River, AB, T8S 1Y9	
Telus Communications 685 Centre St S, Calgary, AB T2G 2C7 E-mail: roadmoves@telus.com	Emergency Service *611 1-888-811-2323
ATCO Electric Ltd. ATCO Centre 10035 – 105 Street Edmonton, AB, T5J 1C8 Telephone: 780-420-3770	Emergency Service 1-800-668-5506
CN Headquarters  Montreal (Headquarters) 935 de La Gauchetière Street West Montreal, Quebec, Canada H3B 2M9	<a href="http://www.cn.ca">Contact Us   cn.ca</a>  CN Emergencies 1-800-465-9239

Coordination with Utilities where needed shall be considered incidental to all bid items.

### 3.8.2 Coordination of Forces

The Contractor is advised that the County is undertaking repairs and maintenance on the bridge (BF73270-01) located at Km 4.965 and is scheduled to take place this spring. Other work may be in progress by other forces simultaneously with the work under this Contract. If it is necessary for work to proceed in areas common to both the Contractor and the forces of others, the Contractor shall coordinate their operations with those of the other forces in accordance with Section 1.2.11.2, Work by Others, of the General Specifications.

### 3.8.3 CN Rail

The contractor shall be aware that a Permit is required for any work on CN property or areas within 10 meters of CN's Right-of-way. The Contractor shall be responsible for obtaining permits from CN Rail and coordinating schedule of any work in the vicinity of the Rail crossing. The contractor shall submit copies of the obtained permits to the consultant at least one (1) week prior to commencing any work in the vicinity of the railway crossing.

Any additional costs related to obtaining and adhering to the requirement of the work permit, including costs incurred from any delays, will be the contractor's responsibility and the contractor shall have no claim to the County.

### 3.9 BI-WEEKLY CONSTRUCTION MEETINGS

The consultant will coordinate and host bi-weekly construction meetings with the County and the Contractor. The meetings shall be held at a suitable on-site location. All costs associated with the bi-weekly meetings will be considered incidental to the Work, and no separate or additional payment will be made.

## SPECIAL PROVISIONS

### **3.10 TRAFFIC ACCOMMODATION**

The Contractor shall submit a plan of how the work will proceed (including the associated traffic accommodation plan, traffic control, drawings, signing), for the Consultant's review 14 days prior to the pre-construction meeting. All traffic accommodation shall be completed in accordance to Section 7.1, Traffic Accommodation and Temporary Signing, of the Standard Specifications for Highway Construction, as Directed below and as determined by the Consultant.

The Contractor shall not commence any work which may interfere with public traffic until their proposed plans and methods for implementing the traffic control have been reviewed and inspected on site by the Consultant. The Contractor shall be responsible to make such modifications or updates to the roadway and/or traffic control measures to ensure safe speed and convenient accommodation of traffic at a reasonable continuous operating speed. The Contractor shall provide on-site monitoring of traffic accommodation on a 24-hour basis, or as directed by the Consultant. The Contractor shall promptly correct any safety or performance defect identified by the Consultant; otherwise, the Consultant will arrange for the correction at the Contractor's expense.

The contractor shall be responsible for controlling all dust resulting from their operations. All costs associated with dust abatement will be considered incidental to the Work, and no separate or additional payment will be made.

Travel lanes, shoulders and adjacent areas shall be kept clear of windrows, piled or loose material so the roadway surfaces are clean and drainage from the roadway can be maintained. Areas of ponding water on or adjacent to the roadway due to construction operations shall be corrected immediately.

Work required for the accommodation for traffic shall be considered incidental to the work required and no sperate or additional payment shall be made.

#### **3.10.1 Laydowns and Parking**

The Contractor shall be responsible for all arrangements for storage and parking of vehicles or Equipment. The contractor shall obtain and provide to the Consultant, in writing, approval from Northern Sunrise County for the use of any local roads and or any landowners an agreement is entered into.

### **3.11 SUBGRADE EXCAVATION**

The Contractor is advised that subgrade excavation may be required for areas. This work shall be carried out in accordance with Specification 3.1, Subgrade Preparation, of the Standard Specifications for Highway Construction, the Special Provisions contained herein, and as directed by the Consultant.

The exact locations and quantities of the subgrade excavation will be determined by the Consultant at the time of construction. The Contractor shall have sufficient equipment to ensure all roadway excavations are backfilled and traveling surface restored within the same day. The Contractor shall cut the pavement by a method which does not disturb or damage the adjoining pavement.

The Contractor shall assume ownership of the excavated material and shall remove it from the roadway to their own storage or approved disposal site; or otherwise dispose of the material to the satisfaction of the Consultant.

## SPECIAL PROVISIONS

## 3.11.1 Estimated Quantities

Location(s)	Subgrade Excavation (m3)	Geotextile for Stabilization (m2)	Granular Fill (Des 2-25) (t)
8+120 to 8+180	331	552	772
Locations to be determined during construction	100	200	466
<b>Contingency:</b>	22	38	61
<b>Total Quantities:</b>	<b>453</b>	<b>790</b>	<b>1299</b>

## 3.11.2 Measurement and Payment

Cutting of pavement will be considered incidental to the work and no additional payment will be made.

Payment for subgrade excavation shall be paid for at the applicable unit prices for all work completed in accordance with the applicable sections of the Standard Specifications for Highway Construction, and to the satisfaction of the Consultant.

Payment for the supply and installation of Granular Fill (Des. 2 Class 25) materials shall be paid for at the applicable unit prices for all work completed in accordance with the applicable sections of the Standard Specifications for Highway Construction, and to the satisfaction of the Consultant.

## 3.12 COLD MILLING OF ASPHALT PAVEMENT

## 3.12.1 General

The Contractor shall complete cold milling operations on as shown on the typical cross sections; in accordance with Specification 3.16, Cold Milling Asphalt Pavement, of the Standard Specifications of Highway Construction; and as directed by the Consultant.

The Owner shall assume ownership of all milled material and the contractor is required to deliver all milled material to the County Yard located at 135 Sunrise Road.

The Contractor is advised that the quantities and locations shown in the following tables are approximate and are provided for information purposes only.

Location	Length (m)	Existing Width (m)	Milling Depth (mm)	Cold Milling Asphalt Pavement (m2)
<b>Km 0.025 - 8.150</b> <i>(Bridge Excluded)</i>	8,105	8.6	50	72,945
<b>Km 8.150 - 12.200</b> <i>(Railway Excluded)</i>	4,050	9.0	50	38,070
<b>Contingency:</b>				3,331
<b>Total Cold Milling Asphalt pavement (m<sup>2</sup>):</b>				<b>114,346</b>

## SPECIAL PROVISIONS

**3.12.2 Reclaimed Asphalt Pavement (RAP)**

Per Standard Specification for Highway Construction (SSHC) Specification 3.16.2 Cold Reclaimed Asphalt Pavement (RAP), the County will retain ownership of the RAP material. The Contractor shall haul the RAP to the County of Northern Sunrise's maintenance yard and stockpile at a location specified by the consultant. The maintenance yard is located at:

Northern Sunrise County Office  
135 Sunrise Rd, Peace River, AB T8S 1Y9

If the contractor wishes to elect to use RAP in their asphalt mix design, in accordance with specification 3.50.2.4 Reclaimed Asphalt Pavement (SSHC), they must submit a request in writing to the consultant prior to submitting their proposed asphalt mix design. If the use of RAP in the contractor's asphalt mix design is approved, the excess RAP material not incorporated into the asphalt mix for placement shall be hauled and stockpiled at the specified location above.

**3.12.2.1 Measurement and Payment**

Measurement of cold milling asphalt pavement will be made in square metres of roadway milled, or tonnes or cubic metres (truck box measurement), whichever is specified, of RAP produced.

Payment will be made at the unit price bid per square metre, tonne, or cubic metre, whichever is specified, for "Cold Milling Asphalt Pavement". This payment will be full compensation for cold milling the asphalt pavement, sweeping the milled surface, loading the RAP into trucks, stockpiling or disposing of the RAP at the designated location and quality control testing as required.

**3.13 MILLED RUMBLE STRIPS FOR STOP CONDITIONS**

The Contractor shall establish milled rumble strips in accordance with Specification 3.52, Milled Rumble Strips, of the Standard Specifications for Highway Construction, and as directed by the Consultant.

The Contractor shall establish milled rumble strips for stop conditions at the following location(s):

- Intersection of Township Road 810 & Highway 2

**3.14 ROADWAY SURFACING****3.14.1 Asphalt Concrete Pavement**

The Contractor is advised that the Asphalt Concrete Pavement quantities and locations shown in the following table are approximate and are provided for information purposes only.

Location	Asphalt Concrete Pavement M1 (PG52-34) (t)
<b>Reno Road (Twp Rd 810) Km 0.025 - 8.150</b> <i>(Bridge Excluded)</i>	12,811
<b>Reno Road (Twp Rd 810) Km 8.150 – 12.200</b>	6,704

## SPECIAL PROVISIONS

<i>(Railway Excluded)</i>	
<b>Approaches</b>	159
<b>Contingency:</b>	591
<b>Project Totals (t):</b>	<b>20,265</b>

**3.15 GRAVEL SURFACING**

The Contractor shall supply and place surfacing gravel to tie newly placed ACP materials to existing municipal roads and accesses as directed by the Consultant. Gravel surfacing shall be measured as per the Standard Specifications. Payment for the supply, processing, loading, hauling, placing, spreading, watering and compacting of the surface gravel, including all labour, equipment, materials and incidentals required, will be made at the unit price bid per tonne for "Gravel Surfacing (Des 4-25)".

Location	t / Approach (t)	Approaches	Gravel Surfacing (Des 4-25) (t)
<b>Approaches</b>	15	38	570
<b>Contingency:</b>			30
<b>Project Total (t):</b>			<b>600</b>

**3.16 ROADWAY PAINTING****3.16.1 General**

The Contractor shall perform roadway painting operations as identified in the following tables showing the intersection lines and pavement message markings required for this project, and in accordance with Specification 5.20, Supply of Line Painting Materials, Specification 7.2, Painted Roadway Lines, and Specification 7.3, Painted Pavement Messages, of the Standard Specifications for Highway Construction.

Roadway lines and markings shall be painted in accordance with present Alberta Transportation standards and requirements, regardless of whether the lines and markings were existing or non-existing before the commencement of the work.

**3.16.2 Roadway Lines**

For all roadway lines within this project, the Contractor shall supply and apply premium paint product from the Alberta Transportation list of approved products. The Work shall be performed in accordance with Section 7.2, "Painted Roadway Lines", of the Standard Specifications for Highway Construction. The paint shall be stored and applied as per the manufacturer's recommendations and specifications. All painted lines shall be uniformly applied at a minimum rate of not less than 38 L/km of solid 100 mm wide line. Glass beads shall be applied in accordance with Section 7.2 of the Standard Specifications for Highway Construction.

**3.16.3 Lane Widths**

The Contractor is advised that the following lane widths shall be painted at the completion of pavement operations unless otherwise indicated by the Consultant. Lane widths indicated shall be applied regardless of previously existing lane widths.

## SPECIAL PROVISIONS

Road	From km	To km	Lane Width (m)
Reno Road	0.000	12.200	3.7

**3.16.4 Roadway Line Painting Requirements**

The following table identifies the roadway lines required for this project.

Road	From km	To km	Directional Dividing and 2 Edge Lines
Reno Road	0.000	12.200	12.20
<b>Contingency:</b>			0.15
<b>Total Roadway Lines – Supplying Paint and Painting:</b>			<b>12.35</b>

**3.16.5 Additional Markings**

Additional taper lane markings or radius markings at the Hwy 2 intersection shall be considered incidental to the work. Any paint markings or pavement messages damaged outside of the project limits shall be replaced by the Contractor at their expense.

**3.16.6 Pavement Message Requirements**

The following table identifies the pavement messages required for this project. The Contractor shall apply pavement messages for the type specified at the locations shown below.

Location	km	Stop	Stop Ahead	Stop Bar	Railway Crossing
Twp Rd 810 & Highway 2 Intersection	0.250	1	1	1	
Railway Crossing	9.335			2	2
<b>Message(s) Totals:</b>		<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>

## SPECIFICATION AMENDMENTS

**4. SPECIFICATION AMENDMENTS****4.1 AMENDMENTS TO SPECIFICATION 1.1, DEFINITIONS AND INTERPRETATION, RE: WORK AND SPECIFICATIONS 1.2, GENERAL, RE: ALL OF THE WORK**

- i) The contents of Section 1.1.27 Work are replaced with “ ‘Work’ means all or any part of the labour, materials, equipment, tools and incidentals required to be provided by the Contractor to complete and perform its obligations in accordance with the Contract.”
- ii) In the first paragraph of Section 1.2.8.3 COMPLIANCE WITH SCHEDULE, the reference to “complete the Work” is revised to “complete all the Work”.
- iii) In the first paragraph of Section 1.2.17 CONSTRUCTION COMPLETION CERTIFICATE AND ACCEPTANCE, references to “completion of the Work”, “inspection of the Work”, “find the Work” and “acceptance of the Work” are revised to “completion of all the Work”, “inspection of all the Work”, “find all the Work” and “acceptance of all the Work” respectively.
- iv) In the second, third and fourth paragraphs of Section 1.2.41.9 PAYMENT, references to “completes the Work” are revised to “completes all the Work”.
- v) In the first paragraph of Section 1.2.55 CONTRACTOR’S WARRANTY PERIOD AND FINAL ACCEPTANCE, the reference to “warrant the Work” is revised to “warrant all the Work”.

**4.2 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: FORCE MAJEURE**

- i) The definition of Section 1.1.13, FORCE MAJEURE EVENT, is replaced in its entirety with the following:

“Force Majeure Event” means any war, invasion, insurrection, armed conflict, act of foreign enemy, revolution, terrorist act, interference by military authorities, nuclear explosion, contamination by ionizing radiation, epidemic, pandemic including Covid-19, or quarantine restriction that prevents, delays or interrupts the performance of any obligation under this Contract, other than any obligation to pay any money, and provided such event does not occur by reason of:

  - i.* The negligence of the party relying on the Force Majeure Event (or those for whom it is in law responsible); or
  - ii.* Any act or omission of the party relying on the Force Majeure Event (or those for whom it is in law responsible) that is in breach of the Contract.”
- ii) Section 1.2.39.2, **Force Majeure Delay**, is deleted.
- iii) The following is inserted in Section 1.2, GENERAL SPECIFICATIONS:

**“1.2.58        FORCE MAJEURE EVENT**

If a Force Majeure Event occurs then notwithstanding any other provision of the Contract:

## SPECIFICATION AMENDMENTS

- i.* To the extent that and for so long as either party is prevented by the Force Majeure Event from performing any obligation under the Contract, that party is relieved from liability due to its inability to perform or delay in performing that obligation; and
- ii.* If the Force Majeure Event wholly or substantially prevents the Contractor from proceeding with the Work then the specified or adjusted interim completion date or Construction Completion date as applicable shall be adjusted for the period of the Force Majeure Event.

Upon either party becoming aware of the occurrence of a Force Majeure Event that prevents that party from performing any obligation under the Contract, that party shall in a timely manner give the other party notice of the Force Majeure Event, including reasonable details of the anticipated effects on performance of the Contract, and thereafter the Contractor shall, on an ongoing basis, notify the Department of its plans for remedying or mitigating the effects of the Force Majeure Event.

If the Contractor anticipates that the Force Majeure Event will delay completion of the applicable Work by the specified interim completion date or Construction Completion date as applicable, but is of the opinion the delay can be avoided or mitigated through extraordinary measures, the Contractor may propose to the Department that such extraordinary measures be taken by the Contractor at the Department's expense."

**4.3 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: DISPUTE RESOLUTION**

Delete the contents of Section 1.2.57.1.2 Resolution of Claims and 1.2.57.2, Dispute Resolution Process and replace with:

**1.2.57.1.2 Resolution of Claims**

Where the Owner (or their Representative) or the Contractor considers that a Claim has arisen under the Contract, the Owner (or their Representative) or the Contractor shall issue a Notice of Claim to the other party.

A Notice of Claim shall be in writing and shall state the details of the claim. A Notice of Claim issued by the Contractor to the Owner pursuant to this Contract shall be served to the Consultant.

A Notice of Claim shall be served as soon as possible after the occurrence of the circumstance giving rise to the Claim and not later than seven (7) days after the occurrence of the circumstance, or the claimant becoming aware of the circumstance. Failure to serve a Notice of Claim within the prescribed time period will preclude the claimant from proceeding with the Claim.

The Parties shall make bona fide efforts to resolve a claim and the Work shall proceed without delay during the claims resolution process. This shall include both parties actively participating in the resolution of the claim, neither of whom may delegate the resolution of the claim to another party. Attempts to resolve claims shall sequentially follow the administrative review structure as follows:

1. Consultant – Project Manager

## SPECIFICATION AMENDMENTS

## 2. Mike Konowalyk – Director of Operations and Infrastructure for Northern Sunrise County

If there is failure to reach agreement through this administrative review, either party may proceed to litigation either with or without the agreement of the other party.

**4.4 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: CONTRACTOR MOBILIZING TO SITE**

**Section 1.2.8.1, PRE-CONSTRUCTION MEETING, the last paragraph is replaced with the following:**

The Contractor must provide a list of all planned sub-contractors for the Project and identify which ones he believes should attend the meeting. The Consultant may review the list and may require the Contractor to ensure certain key sub-contractors attend. In addition to the sub-contractors, the Contractor must ensure that its project supervisor and its designated safety and traffic representatives are in attendance. In addition, the Contractor cannot mobilize to Site until after the Contract is executed and the Department has indicated it has received and is satisfied with all requested documents. The Contractor is responsible for ensuring requested documents are provided and understands that the Department will not authorize mobilization to the Site if all requested documents have not been received by the Department. The Contractor acknowledges and agrees that it cannot make a claim for any costs, delays, additional time or completion date adjustments, or damages associated with its delay or failure to submit all requested documents and not being authorized to mobilize to Site.

**4.5 AMENDMENT TO SPECIFICATION 1.2, GENERAL, RE: 1.2.16.3 ENVIRONMENTAL CONSTRUCTION OPERATIONS PLAN**

The following paragraph is added to the beginning of Section 1.2.16.3, Environmental Construction Operations Plan:

*If the Environmental Risk Assessment identifies that this Project is on the ECO Plan Exemption List, the Contractor will not be required to prepare an ECO Plan. If the Project is exempt from ECO Plan requirements, the Contractor must still comply with conditions found within the current version of the Department's ECO Plan Exemption List and all applicable legislation, regulations and Environmental Permits. The ECO Plan Exemption List can be found here:*

<https://www.alberta.ca/transportation-and-water-project-environmental-requirements.aspx>

- ii) The first paragraph starting with "The Contractor must prepare and implement..." of Section 1.2.16.3, Environmental Construction Operations Plan, is replaced in its entirety with the following:

*If the Project is not exempt, the Contractor must prepare and implement an Environmental Construction Operations Plan (ECO Plan) for the Contractor's work related to the Project in accordance with the current version of the Department manual entitled "Environmental Construction Operations (ECO) Plan Framework", and in compliance with applicable legislation, regulation and Environmental Permits. The ECO Plan must address all environmental conditions and sensitivities including, but not limited to: erosion control measures under the Contractor's control during the Project, statutory and regulatory requirements and appropriate mitigations measures to address risks identified in the Environmental Risk Assessment and the Tender document.*

## SPECIFICATION AMENDMENTS

- iii) The paragraph starting with “The costs of correcting an infraction of the ECO Plan ...” of Section 1.2.16.3, Environmental Construction Operations Plan, is replaced in its entirety with the following:

*The costs of correcting an infraction of the ECO Plan or regulatory requirement as well as any costs associated with a Work suspension are the responsibility of the Contractor; and the Contractor will not have any claim for standby costs or a completion date extension resulting from such cases.*

**4.6 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: 1.2.16 ENVIRONMENTAL MANAGEMENT, PRODUCED SAND AND CONTAMINATED SOILS**

- i) Section 1.2.16.4.4, Produced Sand and Contaminated Soils, is replaced in its entirety with the following:

Produced Sand and Contaminated Soils Produced Sand (oilfield waste sand) or any other contaminated soils as defined in Provincial Legislation are prohibited from use as a stand-alone or component material in any or all phases of construction on Alberta Transportation projects including grading, base course, paving and bridge work.

**4.7 AMENDMENT TO SPECIFICATION 1.2, GENERAL, RE: CONSTRUCTION STAKING AND SURVEY - MAJORITY BY CONSULTANT**

The following is added before the first paragraph of Section 1.2.50, STAKES, MARKS AND ENGINEERING TESTS:

Stakes or marks will be set by the Consultant to define the location, alignment, elevation, and grade required for the Work. The Contractor shall give the Consultant a minimum of 24 hours notice of the time and place where the stakes or marks will be needed. The Contractor shall protect, and shall not remove or destroy or permit to be removed or destroyed, the stakes or marks placed on or about the Work by the Consultant.

The Contractor shall satisfy himself before commencing the Work as to the correctness and meaning of all stakes and marks.

Initially, the Consultant will provide complete baseline survey stakes at 30 m intervals which show offsets and metric station numbers or kilometre chainages that correspond to the control section. Additional baselines may be warranted depending on the complexity and terrain of the project. At least one baseline will note elevations above or below the shoulder grade. Work stakes will indicate the design backslope and/or sideslope cut and fills offset left and right of centerline.

The Consultant will stake offset hubs to mark curb and gutter at a maximum 10 m interval with noted elevations above or below the lip of gutter.

Culvert locations will be staked by the Consultant by placing stakes at the location of culvert ends, placing offset hubs referencing alignment and invert elevations, and noting the sizes, lengths and design slopes.

Bridge fills will be staked by the Consultant in accordance with the applicable standard drawing(s).

## SPECIFICATION AMENDMENTS

The Contractor shall perform any further required survey to complete and prepare the roadway for final grade stakes.

When the Contractor determines that the roadway is sufficiently completed and prepared for final grading, he shall request that the Consultant provide final grade stakes. The Consultant will provide a maximum of two sets of final grade stakes.

For granular base course construction, the Consultant shall provide subgrade shoulder stakes, gravel spread stakes for each lift of construction and superelevation stakes for horizontal curves. For paving construction, the Consultant shall provide centerline nails for each lift of pavement, edge of pavement markings for non-standard cross-sections, tapers and intersection radii for each lift of pavement and superelevation stakes for horizontal curves.

Notwithstanding these provisions the Contractor shall perform at his own cost, any survey related activities as required and including, but not limited to, the following:

- Layout for interim lane markings, including those for intersection treatments.
- String line or other markings for the alignment or grade control of construction equipment.

### **4.8 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: 1.2.18 DAMAGE TO PROJECT**

The reference to "Queen's enemies" in Clause 1.2.18, DAMAGE TO PROJECT, is revised to read "King's enemies".

### **4.9 AMENDMENTS TO SPECIFICATION 1.2, GENERAL, RE: 1.2.55 CONTRACTOR'S WARRANTY PERIOD AND FINAL ACCEPTANCE**

The paragraph of General Specifications Section 1.2.55 CONTRACTOR'S WARRANTY PERIOD AND FINAL ACCEPTANCE, which reads:

"Unless otherwise specified, the warranty period:

- is two years for Bridge Structures and Bridge Culverts;
- one year for other Work;

Commences on the date of Construction Completion as determined by the Department."

has been replaced by following:

"Unless otherwise specified, the warranty period:

- one year for a Roadway Contract;
  - two years for a Bridge Only Contract;
- for a Combined Contract, one year for bid items contained in the portion of the unit price schedule under the Roadway heading and two years for bid items contained in the portion(s) of the unit price schedule under the Bridge heading(s); and
- For all other contracts, warranty period is one year.

## SPECIFICATION AMENDMENTS

The warranty period commences on the date of the acceptance in the Construction Completion Certificate, in accordance with the General Specifications Section 1.2.17 CONSTRUCTION COMPLETION CERTIFICATE AND ACCEPTANCE.”

**4.10 AMENDMENTS TO SPECIFICATION 3.50, ASPHALT CONCRETE PAVEMENT (EPS):**

- i) The first bullet of Subsection 3.50.1.2.1, **Acceptance Limits** is replaced in its entirety with the following:
- (i) Density, Actual Asphalt Content, and Marshall Air Voids - Acceptance Limits for density, Actual Asphalt Content, and Marshall Air Voids are the limiting values of the Lot Mean within which the Lot will be accepted at full, increased, or reduced payment for density, as shown in Table 3.50 A, or full or reduced payment for Actual Asphalt Content as shown in Table 3.50 B, or full or reduced payment for Marshall Air Voids, as shown in Table 3.50 G
- ii) Subsection 3.50.1.2.4 **Job Mix Formula** is replaced in its entirety with the following:
- The Job Mix Formula (JMF) establishes the aggregate proportioning, target aggregate gradation, approved asphalt content and approved Marshall air voids to be used for production of asphalt mix and requires the approval of the Consultant on the basis of a mix design.
- iii) The first bullet of Subsection 3.50.1.2.6, **Rejection Limit** is replaced in its entirety with the following:
- (i) Density, Actual Asphalt Content, and Marshall Air Voids - Rejection Limit for Density, Actual Asphalt Content, and Marshall Air Voids is the limiting value of the Lot Mean beyond which a Lot is rejected and not paid for as shown in Tables 3.50 A, 3.50 B, and 3.50 G.
- iv) Subsection 3.50.1.2.13, **QA Acceptance Lot** is replaced in its entirety with the following:
- A Lot in which all acceptance testing is conducted by the Consultant using quality assurance test procedures as outlined in these specifications. The number and selection of QA Acceptance Lots shall be determined as follows:
- (i) First two Lots of production for each Mix Type used, except for Mix Type S1 in which case the first Lot shall be used, and;
  - (ii) One additional random lot for the bottom lift, if two or more lifts are specified, and;
  - (iii) Minimum of one additional random Lot per 30 000 tonnes, or portion thereof, of total ACP contract tender tonnage and;
  - (iv) Three additional random Lots of top lift production, for each Mix type, if two or more lifts are specified and;
  - (v) Any additional Lot(s) chosen by the Consultant.
- v) Subsection 3.50.2.4, **Reclaimed Asphalt Pavement**, replace the last paragraph in its entirety with the following:
- For RAP/virgin aggregate blends greater than 10/90, the Contractor shall adjust the virgin asphalt grade and/or undertake rheology testing of the RAP and virgin asphalt cements according to the requirements listed in Table 3.50.2.4 Asphalt Grade Adjustment and Rheology Testing for RAP Usage. Rheology testing of the blended RAP and virgin asphalt cements shall meet the requirements of the specified grade according to section 5.7.2.1.

## SPECIFICATION AMENDMENTS

- vi) The second paragraph in Subsection 3.50.3.4, **Variation from the Job Mix Formula**, is deleted in its entirety.
- vii) Table 3.50.4.2 in Subsection 3.50.4.2, **Methods of Testing For Acceptance and Appeal Testing** is replaced in its entirety the following.

**TABLE 3.50.4.2**  
**TEST METHODS ON MANAGED QA PROJECTS**

	TEST DESCRIPTION	TEST METHOD
1	Sampling Mixes	ATT-37
2	Coring	ATT-5
3	Extraction	ATT-12
4	Correction Factor, Extracted Asphalt Content	ATT-12 Part III
5	Percent Fracture	ATT-50
6	Sieve Analysis	ATT-26
7	Density, Immersion Method, Waxed Asphalt Concrete Specimens	ATT-6
8	Density, Immersion Method, Saturated Surface Dry Asphalt Concrete Specimens	ATT-7
9	Density, Using Automated Vacuum Sealing Method	AASHTO T331
10	Air Voids Calculation, Asphalt Concrete Specimens (Part II, by Gmm)	ATT- 36
11	Percent Compaction, Asphalt Concrete Pavement (%Gmm)	ATT- 67
12	Forming Marshall Specimens, Field Method	ATT-13
13	Moisture Content, Oven Method Asphalt Concrete Mixes	ATT-15
14	Smoothness of Pavements using IRI Criteria	Standard Specification 3.54
15	Stratified Random Test Sites for A.C.P. Projects	ATT- 56
16	Appeal Testing ACP	ATT- 68
17	Asphalt Content, Ignition Method	ATT-74
18	Correction Factor, Ignition Asphalt Content	ATT-74 Part II
19	Theoretical Maximum Specific Gravity of Bituminous Mixes	ATT-77
<b>ADDITIONAL TEST METHODS FOR ALL QC OR QA ACCEPTANCE LOTS</b>		
20	Asphalt Content	AASHTO T164, T287 or ATT-12 or ATT-74

## NOTES:

- In all test methods used as reference in this specification, metric sieves as specified in Canadian General Standards Board Specification 8-GP-2M shall be substituted for any other specified wire cloth sieves in accordance with Specification 3.2, Aggregate Production and Stockpiling.
- In all cases the latest amendment or revision current at the closing date of the Tender is implied when reference is made to one of the above standards in the Specification.

## SPECIFICATION AMENDMENTS

- viii) Table 3.50.4.3 in Subsection 3.50.4.3, **Quality Control Testing** is replaced in its entirety with the following table.

**TABLE 3.50.4.3**  
**QUALITY CONTROL TESTING REQUIREMENTS – MANAGED QA TESTING PROJECTS**

TEST	STANDARD	MINIMUM FREQUENCY
<b>AGGREGATE PRODUCTION</b>		See Specification 3.2
<b>ASPHALT MIX PLANT</b>		
Calibration	ATT-17	Once per project or as required
Inspection	ATT-16	(2)
<b>SAMPLES</b>		
Asphalt Cement	ATT-42	See Specification 5.7
Tack, Prime and Fog Materials	ATT-42	See Specification 5.7
Cold Feed Aggregate	ATT-38	(2)
Mix	ATT-37	(2)
QA Cores - Stratified Random Test Sites Chosen by The Consultant	ATT-56	One per segment for each Lot. One per segment for selected Lots as directed by the Consultant.
i) QA Cores for Pavement Density	ATT-5	
ii) QA Cores for Asphalt Content and Gradation	ATT-5	
<b>TESTS WITH SPECIFIED MINIMUM FREQUENCIES</b>		
Mix Asphalt Content	AASHTO T164, T287 or ATT-12 or AT-74	(2)
Correction Factors	ATT-12, Part III or ATT-74, Part II	As Required
Mix Moisture Content	ATT-15	(2)
Aggregate Sieve Analysis	ATT-26	(2)
Pavement Segregation	Segregation Rating Manual	Each Lot
Field Formed Marshall Briquettes	ATT-13	(2)
Density Immersion Method, Saturated Surface Dry	ATT-7	(2)
Theoretical Maximum Specific Gravity of Bituminous Mixes ( $G_{mm}$ )	ATT-77	(2),(3)
Void Calculations, Cores or Formed Specimens	ATT-36	(2),(3)
Pavement Smoothness using IRI Criteria	Standard Specification 3.54	Travel lanes of all top lift paving
<b>TESTS WITH NO SPECIFIED MINIMUM FREQUENCIES</b>		
Temperatures	ATT-30	(1)
Percent Compaction, Cores or Nuclear Density	ATT-67, ATT-5 or ATT-11	(1),(3)
Random Test Site Locations	ATT-56	(1)
Correction Factors, Nuclear Moisture-Density Measurement	ATT-48	(1)

## SPECIFICATION AMENDMENTS

- (1) Minimum Frequency not Specified.
- (2) When a Lot has eight hours of plant production or more, a minimum of four checks and tests are required. When a Lot has less than eight hours of plant production, these tests shall be performed once for every two full hours of plant production.
- (3) Marshall air voids and pavement percent of compaction calculated using  $G_{mm}$ .
- ix) Subsection 3.50.4.4.2.1 title **Pavement Sampling for Density, Asphalt Content, and Gradation** is replaced to the following: **Pavement Sampling for Density, Asphalt Content, Air Voids, and Gradation**
- x) Subsection 3.50.4.4.2.3 **Asphalt Mix Sampling** is replaced in its entirety with the following: Sampling of representative asphalt mixtures for determining asphalt mix characteristics will be carried out by the Consultant using the procedure identified in ATT-37. For each sampling instance, the Consultant will retain a split sample of a minimum 5,000 g. This split sample will be identified and retained by the Consultant for possible Marshall Air Void appeal testing.
- xi) Subsection 3.50.4.8.1 title **Density, Asphalt Content and Gradation** is changed to the following: **Density, Asphalt Content, Air Voids, and Gradation** is replaced in its entirety with the following.

Appeal testing will be done using ATT-68. The Contractor may appeal the results of acceptance testing of Density, Asphalt Content, Gradation or Marshall Air Voids for any rejected or penalized Lot only once. Appeals will only be considered if cause can be shown. Quality Control test results for density that are provided to the Consultant subsequent to the Contractor's receipt of the quality assurance test results for that Lot will not be considered when evaluating cause for an appeal. The appeal shall be for all tests within the Lot, and there will be no appeal allowed for single tests within a Lot.

Any attempt to improve density on the appealed Lot after the Consultant has tested the Lot for acceptance shall void the appeal and the original test results will apply.

The following procedures will apply for an appeal:

- (i) For Gradation, Marshall Air Voids and Asphalt Content appeals, the Contractor shall serve notice of appeal to the Consultant, in writing, within 48 hours of receipt of the test results.
- For all other appeals notice shall be served to the Consultant, in writing, within 24 hours of receipt of the test results.
- (ii) The Consultant will arrange and pay for an independent testing laboratory certified to operate in the Province of Alberta, to perform the appeal testing. The personnel employed or testing laboratory retained by the Contractor for quality control testing on the project will not be used for appeal testing.
- (iii) The Consultant will determine the number and location of the new tests for each segment in accordance with Subsection 3.50.4.4.2. The Contractor shall sample the pavement at such locations and provide the samples to the Consultant.

## SPECIFICATION AMENDMENTS

- (iv) For appeals other than gradation appeals, the single high and single low test results from the old Lot will be rejected and the remaining test results will be added to the results of the new tests. A new Lot Mean for the test results will be determined and used for acceptance and unit price adjustment.

For gradation appeals, all tests from the old Lot will be retained and averaged with the new appeal tests. A new Lot Mean and Range for all tests will be determined and used for acceptance and unit price adjustment.

The new values, thus determined, in all cases, will be binding on the Contractor and the Department.

- (v) For Marshall Air Voids appeals, the Consultant will provide the appeal testing laboratory with split samples of loose mix from the appropriate lot (sampled in accordance with 3.50.4.4.2.3 Asphalt Mix Sampling).

- xii) The title of Subsection 3.50.4.8.4, **Payment of Appeal Testing Costs for Asphalt Content or Gradation** is changed to **Payment of Appeal Testing Costs for Asphalt Content, Air Voids, or Gradation**. The following paragraph is added:

Marshall Air Voids appeals:           \$ 2,000 per appeal

- xiii) Replace the following sentence in Subsection 3.50.5.4.1 **General**,

*“If required by the Consultant the contact edge of any mat placed by the Contractor shall be coated with a thin film of liquid asphalt before placing the adjacent mat.”*

In its entirety, with the following:

The contact edge of any mat placed by the Contractor shall be coated with a thin film of liquid asphalt before placing the adjacent mat.

- xiv) Add the following paragraph to Subsection 3.50.6.2.1 **Acceptance at Full or Increased Payment**:

- (vi) The Lot Mean Marshall Air Voids are not in penalty or reject according to the criteria in Table 3.50 G.

- xv) The first paragraph of Subsection 3.50.6.3 **End Product Rejection** is replaced in its entirety with the following:

If the Lot Mean for Density, Actual Asphalt Content, Gradation, or Marshall Air Voids are outside the applicable acceptance limits, then the Lot is rejected automatically, regardless of the values of the other control characteristics.

- xvi) Subsection 3.50.7.2.1 **Payment for Acceptable Work** is replaced in its entirety with the following:

The following end product properties of "Asphalt Concrete Pavement - EPS" will be measured for acceptance in accordance with Subsection 3.50.4.4, Acceptance Sampling and Testing.

- (i) Density

## SPECIFICATION AMENDMENTS

- (ii) Actual Asphalt Content
- (iii) Smoothness
- (iv) Aggregate Gradation
- (v) Marshall Air Voids

For the Density, Actual Asphalt Content, Gradation, and Marshall Air Voids of a Lot to be acceptable, the Lot Means must be within the acceptance limits shown in Tables 3.50 A, 3.50 B, 3.50 E, and 3.50 G, respectively.

For each Lot, the unit price adjustments for Density, Actual Asphalt Content, and Marshall Air Voids, will be the amounts shown in Tables 3.50 A, 3.50 B, and 3.50 G for the Sample Mean of the test results for that Lot.

For each Lot, the unit price adjustment for Gradation will be as defined in Subsection 3.50.4.6, Aggregate Gradation Requirements.

The Unit Price applicable to each Lot quantity of "Asphalt Concrete Pavement - EPS" will be calculated as follows:

$$\boxed{\begin{array}{c} \text{Lot Unit} \\ \text{Price} \\ \text{Per Tonne} \end{array}} = \boxed{\begin{array}{c} \text{Contract Unit} \\ \text{Price Bid Per} \\ \text{Tonne} \end{array}} + \boxed{\begin{array}{c} \text{the sum of the unit} \\ \text{price adjustment} \\ \text{for PAd and PAa} \\ \text{and PAg and PAv} \end{array}}$$

where:

- PAd = Unit Price Adjustment for Density (bonus or penalty)
- PAa = Unit Price Adjustment for Asphalt Content (penalty only; QA Acceptance Lots only)
- PAg = Unit Price Adjustment for Gradation (bonus or penalty; QA Acceptance Lots only)
- PAv = Unit Price Adjustment for Marshall Air Voids (penalty only)

If the Lot Mean for Density, Actual Asphalt Content, Gradation, or Marshall Air Voids for any Lot is outside the acceptance limit, the Lot is rejected, and no payment will be made for the quantity of asphalt concrete pavement in that Lot, until the defect has been remedied.

For the Ride Quality of any Sublot in the top lift of ACP to be acceptable, the MIRI must be within the limits shown in Table 3.50 C1, subject to the payment assessments outlined in that Table. The Consultant may accept individual sites of ALR, subject to the penalty assessment outlined in Table 3.50 C2. Sublots that are outside the acceptance limits for Ride Quality and/or individual sites of ALR deemed not acceptable by the Consultant will be rejected, and payment will not be made for the quantity of asphalt concrete pavement in these Sublots until they have been made acceptable.

Payment assessments for smoothness and segregation expressed as a bonus or a positive value will be added to payments made for Asphalt Concrete Pavement – EPS. Payment assessments expressed as a penalty or a negative value shall be deducted from payment for Asphalt Concrete Pavement – EPS.

No payment will be made for any material, equipment or manpower used to improve acceptable work that is or was subject to unit price adjustment or penalty assessment.

SPECIFICATION AMENDMENTS

xvii) Replace **Table 3.50A Unit Price Adjustment for Density** with the following table.

TABLE 3.50 A					
UNIT PRICE ADJUSTMENT FOR DENSITY					
% OF G <sub>MM</sub>	UNIT PRICE ADJUSTMENT - DOLLARS PER TONNE				
	DESIGN LIFT THICKNESS				
Lot Mean	35 MM OR GREATER LOWER LIFTS	LESS THAN 35 MM AND GREATER THAN 20 MM LOWER LIFTS	20 MM LOWER LIFTS	35 MM OR GREATER TOP LIFT ONLY	LESS THAN 35 MM AND GREATER THAN 20 MM TOP LIFT ONLY
≥ 94.5	+ 1.00	+1.00	+ 1.00	+ 1.00	+ 1.00
94.4	+ 0.90	+ 0.90	+ 0.90	+ 0.90	+ 0.90
94.3	+ 0.80	+ 0.80	+ 0.80	+ 0.80	+ 0.80
94.2	+ 0.70	+ 0.70	+ 0.70	+ 0.70	+ 0.70
94.1	+ 0.60	+ 0.60	+ 0.60	+ 0.60	+ 0.60
94.0	+ 0.50	+ 0.50	+ 0.50	+ 0.50	+ 0.50
93.9	+ 0.40	+ 0.40	+ 0.40	+ 0.40	+ 0.40
93.8	+ 0.30	+ 0.30	+ 0.30	+ 0.30	+ 0.30
93.7	+ 0.20	+ 0.20	+ 0.20	+ 0.20	+ 0.20
93.6	+ 0.10	+ 0.10	+ 0.10	+ 0.10	+ 0.10
93.5	0.00	0.00	0.00	0.00	0.00
93.4	-0.20	0.00	0.00	-0.20	0.00
93.3	-0.40	0.00	0.00	-0.40	0.00
93.2	-0.60	0.00	0.00	-0.60	0.00
93.1	-0.80	0.00	0.00	-0.80	0.00
93.0	-1.00	0.00	0.00	-1.00	0.00
92.9	-1.20	0.00	0.00	-1.20	0.00
92.8	-1.40	0.00	0.00	-1.40	0.00
92.7	-1.60	0.00	0.00	-1.60	0.00
92.6	-1.80	0.00	0.00	-1.80	0.00
92.5	-2.00	0.00	0.00	-2.00	0.00
92.4	-2.20	0.00	0.00	-2.20	-0.20
92.3	-2.40	0.00	0.00	-2.40	-0.40
92.2	-2.60	0.00	0.00	-2.60	-0.60
92.1	-2.80	0.00	0.00	-2.80	-0.80
92.0	-3.00	0.00	0.00	-3.00	-1.00
91.9	-3.20	0.00	0.00	-3.20	-1.20
91.8	-3.40	0.00	0.00	-3.40	-1.40
91.7	-3.60	0.00	0.00	-3.60	-1.60
91.6	-3.80	0.00	0.00	-3.80	-1.80
91.5	-4.00	0.00	0.00	-4.00	-2.00
91.4	-4.40	0.00	0.00	-4.40	-2.20
91.3	-4.80	0.00	0.00	-4.80	-2.40
91.2	-5.20	0.00	0.00	-5.20	-2.60
91.1	-5.60	0.00	0.00	-5.60	-2.80
91.0	-6.00	0.00	0.00	-6.00	-3.00
90.9	-6.40	0.00	0.00	-6.40	-3.20
90.8	-6.80	0.00	0.00	-6.80	-3.40
90.7	-7.20	0.00	0.00	-7.20	-3.60
90.6	-7.60	0.00	0.00	-7.60	-3.80
90.5	-8.00	0.00	0.00	-8.00	-4.00
90.4	50% OF UNIT PRICE	-0.20	0.00	OVERLAY OR RM.&RP.	-4.40
90.3	50% OF UNIT PRICE	-0.40	0.00	OVERLAY OR RM.&RP.	-4.80

SPECIFICATION AMENDMENTS

TABLE 3.50 A UNIT PRICE ADJUSTMENT FOR DENSITY					
% OF G <sub>MM</sub>	UNIT PRICE ADJUSTMENT - DOLLARS PER TONNE				
	DESIGN LIFT THICKNESS				
Lot Mean	35 MM OR GREATER LOWER LIFTS	LESS THAN 35 MM AND GREATER THAN 20 MM LOWER LIFTS	20 MM LOWER LIFTS	35 MM OR GREATER TOP LIFT ONLY	LESS THAN 35 MM AND GREATER THAN 20 MM TOP LIFT ONLY
90.2	50% OF UNIT PRICE	-0.60	0.00	OVERLAY OR RM.&RP.	-5.20
90.1	50% OF UNIT PRICE	-0.80	0.00	OVERLAY OR RM.&RP.	-5.60
90.0	50% OF UNIT PRICE	-1.00	0.00	OVERLAY OR RM.&RP.	-6.00
89.9	50% OF UNIT PRICE	-1.20	0.00	OVERLAY OR RM.&RP.	-6.40
89.8	50% OF UNIT PRICE	-1.40	0.00	OVERLAY OR RM.&RP.	-6.80
89.7	50% OF UNIT PRICE	-1.60	0.00	OVERLAY OR RM.&RP.	-7.20
89.6	50% OF UNIT PRICE	-1.80	0.00	OVERLAY OR RM.&RP.	-7.60
89.5	50% OF UNIT PRICE	-2.00	0.00	OVERLAY OR RM.&RP.	-8.00
89.4	50% OF UNIT PRICE	-2.20	-0.20	OVERLAY OR RM.&RP.	-8.40
89.3	50% OF UNIT PRICE	-2.40	-0.40	OVERLAY OR RM.&RP.	-8.80
89.2	50% OF UNIT PRICE	-2.60	-0.60	OVERLAY OR RM.&RP.	-9.20
89.1	50% OF UNIT PRICE	-2.80	-0.80	OVERLAY OR RM.&RP.	-9.60
89.0	50% OF UNIT PRICE	-3.00	-1.00	OVERLAY OR RM.&RP.	-10.00
88.9	50% OF UNIT PRICE	-3.20	-1.20	OVERLAY OR RM.&RP.	-10.40
88.8	50% OF UNIT PRICE	-3.40	-1.40	OVERLAY OR RM.&RP.	-10.80
88.7	50% OF UNIT PRICE	-3.60	-1.60	OVERLAY OR RM.&RP.	-11.20
88.6	50% OF UNIT PRICE	-3.80	-1.80	OVERLAY OR RM.&RP.	-11.60
88.5	50% OF UNIT PRICE	-4.00	-2.00	OVERLAY OR RM.&RP.	-12.00
88.4	50% OF UNIT PRICE	-4.40	-2.20	REMOVE & REPLACE	-12.40
88.3	50% OF UNIT PRICE	-4.80	-2.40	REMOVE & REPLACE	-12.80
88.2	50% OF UNIT PRICE	-5.20	-2.60	REMOVE & REPLACE	-13.20
88.1	50% OF UNIT PRICE	-5.60	-2.80	REMOVE & REPLACE	-13.60
88.0	50% OF UNIT PRICE	-6.00	-3.00	REMOVE & REPLACE	-14.00
87.9	50% OF UNIT PRICE	-6.40	-3.20	REMOVE & REPLACE	-14.40
87.8	50% OF UNIT PRICE	-6.80	-3.40	REMOVE & REPLACE	-14.80
87.7	50% OF UNIT PRICE	-7.20	-3.60	REMOVE & REPLACE	-15.20
87.6	50% OF UNIT PRICE	-7.60	-3.80	REMOVE & REPLACE	-15.60
87.5	50% OF UNIT PRICE	-8.00	-4.00	REMOVE & REPLACE	-16.00
87.4	REMOVE & REPLACE	50% OF UNIT PRICE	-4.40	REMOVE & REPLACE	50% OF UNIT PRICE
87.3	REMOVE & REPLACE	50% OF UNIT PRICE	-4.80	REMOVE & REPLACE	50% OF UNIT PRICE
87.2	REMOVE & REPLACE	50% OF UNIT PRICE	-5.20	REMOVE & REPLACE	50% OF UNIT PRICE
87.1	REMOVE & REPLACE	50% OF UNIT PRICE	-5.60	REMOVE & REPLACE	50% OF UNIT PRICE
87.0	REMOVE & REPLACE	50% OF UNIT PRICE	-6.00	REMOVE & REPLACE	50% OF UNIT PRICE
86.9	REMOVE & REPLACE	50% OF UNIT PRICE	-6.40	REMOVE & REPLACE	50% OF UNIT PRICE
86.8	REMOVE & REPLACE	50% OF UNIT PRICE	-6.80	REMOVE & REPLACE	50% OF UNIT PRICE
86.7	REMOVE & REPLACE	50% OF UNIT PRICE	-7.20	REMOVE & REPLACE	50% OF UNIT PRICE
86.6	REMOVE & REPLACE	50% OF UNIT PRICE	-7.60	REMOVE & REPLACE	50% OF UNIT PRICE
86.5	REMOVE & REPLACE	50% OF UNIT PRICE	-8.00	REMOVE & REPLACE	50% OF UNIT PRICE
86.4	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
86.3	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
86.2	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
86.1	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
86.0	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.9	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.8	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.

SPECIFICATION AMENDMENTS

TABLE 3.50 A UNIT PRICE ADJUSTMENT FOR DENSITY					
% OF G <sub>mm</sub>	UNIT PRICE ADJUSTMENT - DOLLARS PER TONNE				
	DESIGN LIFT THICKNESS				
Lot Mean	35 MM OR GREATER LOWER LIFTS	LESS THAN 35 MM AND GREATER THAN 20 MM LOWER LIFTS	20 MM LOWER LIFTS	35 MM OR GREATER TOP LIFT ONLY	LESS THAN 35 MM AND GREATER THAN 20 MM TOP LIFT ONLY
85.7	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.6	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.5	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.4	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.3	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.2	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.1	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
85.0	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
84.9	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
84.8	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
84.7	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
84.6	REMOVE & REPLACE	REMOVE & REPLACE	50% OF UNIT PRICE	REMOVE & REPLACE	OVERLAY OR RM.&RP.
≤84.5	REMOVE & REPLACE	REMOVE & REPLACE	REMOVE & REPLACE	REMOVE & REPLACE	OVERLAY OR RM.&RP.

- Notes: - Single lifts only are considered "Top Lifts".  
 - Preliminary leveling is not considered a "Lift".

$$Compaction (\% \text{ of } G_{mm}) = \left( \frac{Lot \text{ Mean Core Dry Density}/1000}{Lot \text{ Mean } G_{mm}} \right) \times 100$$

## SPECIFICATION AMENDMENTS

- xviii) Replace **Table 3.50 C1 LUMP SUM SUBLLOT ASSESSMENT FOR SMOOTHNESS – RIDE QUALITY** with the following table.

**TABLE 3.50 C1  
LUMP SUM SUBLLOT ASSESSMENT FOR SMOOTHNESS – RIDE QUALITY**

MIRI (m/km)	ASSESSMENT FOR RIDE QUALITY OF TOP LIFT (\$ PER SUBLLOT) BASED UPON TYPE OF CONSTRUCTION (TABLE 3.54 A)		
	S I	S II	S III
<0.55	250	250	250
0.55 - 0.70	150	150	150
0.71 - 0.80	0	150	150
0.81 - 1.00	0	0	0
1.01 - 1.15	800 - (900x MIRI)	0	0
1.16 - 1.50	800 - (900 x MIRI)	1380 - (1230 x MIRI)	0
1.51 - 1.80	Reject <sup>(1)</sup>	Reject <sup>(1)</sup>	730 - (540 x MIRI)
>1.80	Reject <sup>(1)</sup>	Reject <sup>(1)</sup>	Reject <sup>(1)</sup>

<sup>(1)</sup> Sublot may be accepted without corrective work, subject to the approval of the Consultant, with an assessment of -\$600.

- xix) **Table 3.50 G Unit Price Adjustment for Marshall Air Voids** is added.

**TABLE 3.50 G  
UNIT PRICE ADJUSTMENT FOR MARSHALL AIR VOIDS**

Deviation of Lot Mean Marshall Air Voids from the Approved Job Mix Formula (%)	Unit Price Adjustment (\$ per tonne) <sup>(2)</sup>	
	Below JMF	Above JMF
0.00 to 0.50	0.00	0.00
0.51 to 1.00	0.00	-3.00
1.01 to 1.30	-3.00	-4.00
1.31 to 1.50	-5.00	-6.00
> 1.50	-7.00 <sup>(1)</sup>	-8.00 <sup>(1)</sup>

<sup>(1)</sup> Subject to evaluation by the Department, to determine if removal and replacement at the Contractor's expense is necessary.

<sup>(2)</sup> Until December 31, 2025, no unit price adjustment for Marshall Air Voids will be applied to the first two lots of each mix type. While no price adjustments will be applied for the first two lots during this time, lots with Mean Marshall air voids that differ more than  $\pm 1.50\%$  from the approved Job Mix Formula may be subject to Department evaluation according to Note 1 above.

## SUPPLEMENTAL SPECIFICATIONS

**5. SUPPLEMENTAL SPECIFICATIONS****5.1 SUPPLEMENTAL SPECIFICATIONS 5.7, SUPPLY OF ASPHALT**

The following Supplemental Specification supersedes, in its entirety, the version contained the Standard Specifications for Highway Construction, Edition 16, 2019:

**TABLE OF CONTENTS**

5.7	SUPPLY OF ASPHALT .....	- 100 -
5.7.1	GENERAL .....	- 49 -
5.7.2	MATERIALS .....	- 100 -
5.7.2.1	General .....	- 49 -
5.7.2.2	Percent Recovery Requirements for Selected PGAC Grades .....	- 50 -
5.7.2.3	Code of Practice – Cutback and Emulsified Asphalts .....	- 51 -
5.7.2.4	Delivery, Handling and Storage .....	- 51 -
5.7.3	SAMPLING AND TESTING .....	- 102 -
5.7.3.1	General .....	- 51 -
5.7.3.2	Quality Control .....	- 52 -
5.7.3.3	Quality Assurance .....	- 52 -
5.7.4	ACCEPTANCE .....	- 103 -
5.7.5	APPEAL OF PGAC ACCEPTANCE TEST RESULTS AND APPEAL TESTING ..	- 104 -
5.7.6	MEASUREMENT AND PAYMENT .....	- 54 -

**TABLES AND CHARTS**

ASPH-1	Asphalt Cements - Deleted
ASPH-2	Asphalt Cements - Deleted
ASPH-3	Asphalt Cements - Deleted
ASPH-4	Liquid Asphalts - Slow Curing
ASPH-5	Liquid Asphalts - Medium Curing
ASPH-6	Liquid Asphalts - Rapid Curing
ASPH-7	Emulsified Asphalts - Anionic
ASPH-8a	Emulsified Asphalts – Cationic
ASPH-8b	Emulsified Asphalts – Polymer Modified Cationic Rapid Setting
Figure 1	CRS-2
ASPH-9	Emulsified Asphalts - High Float
ASPH-9	Emulsified Asphalts - High Float (Cont.)
ASPH-10	Emulsified Asphalt - Primer
ASPH-11	Emulsified Dust Suppressants
ASPH-12	Cold Pour Rubber Filled Emulsified Bituminous Crack Sealant
ASPH-13	Hot Pour Bituminous Crack Sealant

## SUPPLEMENTAL SPECIFICATIONS

### 5.7 SUPPLY OF ASPHALT

#### 5.7.1 GENERAL

The Work consists of supplying asphalt materials including ordering, scheduling, delivering, supplying storage facilities, handling, storing, sampling, testing and other related work.

For purposes of this specification, the term "Asphalt Supplier" shall mean the party awarded an order by the Contractor for the supply of asphalt.

#### 5.7.2 MATERIALS

##### 5.7.2.1 General

The Contractor shall supply the types and grades of asphalt specified in the Contract. Asphalt suppliers' materials, including proprietary products, must be pre-qualified by the Department. Pre-qualified suppliers are listed in the Alberta Transportation Products List.

All asphalt binders shall be prepared from petroleum oils. They shall be free from impurities. Solvents used in the manufacture of cut-back asphalts shall be derived from petroleum oils. Emulsifiers used to stabilize asphalt emulsions shall not be harmful to the performance of the asphalt in service.

Re-refined Engine Oil Bottoms (REOB), also known as Vacuum Tower Asphalt Extenders (VTAE), shall not be added in any proportion to PGAC. The Department may perform a chemical composition analysis to determine if REOB has been used.

The Contractor shall ensure that the asphalt supplied meets all requirements for the types and grades specified. The Contractor may be required to use more than one type or grade of asphalt for a particular purpose. Any change in asphalt type or grade must be approved by the Consultant. The Contractor shall notify the Consultant of any changes in asphalt material suppliers.

Performance grade asphalt cements (PGAC) shall meet the requirements of AASHTO M320 Standard Specification for Performance Graded Asphalt Binder (Table 1) with modifications for certain grades as outlined within the specification.

Suppliers of the following PG asphalts will be required to meet the following additional "quality stipulations" prior to receiving approval for listing on the Products list.

- For the PG 58-28 designation the Department will not pre-qualify an asphalt product which grades to a low temperature warmer than  $-30^{\circ}\text{C}$  when tested according to AASHTO T313 Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR).
- For the PG 46-34 designation the Department will not pre-qualify an asphalt product which grades to a low temperature warmer than  $-37^{\circ}\text{C}$  when tested according to AASHTO T313.

For asphalts designated as a PG 58-37, Table 1, Performance Graded Asphalt Binder Specification contained in AASHTO M320 shall be modified in accordance with the following criteria:

## SUPPLEMENTAL SPECIFICATIONS

- The test temperature for creep stiffness and direct tension shall be -27°C;
- Dynamic Shear criteria on the PAV residue shall be met at a temperature of 14.5°C or lower.

For asphalts designated as a PG 64-37, Table 1, Performance Graded Asphalt Binder Specification contained in AASHTO M320 are modified in accordance with the following criteria:

- The test temperature for creep stiffness and direct tension shall be -27°C.
- Dynamic Shear criteria on the PAV residue shall be met at a temperature of 17.5°C or lower.

Liquid anti-strip additives listed on the Alberta Transportation Products List may be added to the asphalt product at a rate not to exceed 1% by weight of liquid asphalt. The anti-strip additive shall be heat stable and shall have no injurious effect on the asphalt product. The anti-strip additive/asphalt combination shall meet the AASHTO M320 requirements with modifications as outlined within this specification. The type and percentage of anti-strip additive used shall be listed on the delivery weigh-bills by the asphalt supplier.

The Department reserves the right to discontinue the use of any asphalt product that fails to perform to the expectation or satisfaction of the Consultant or Department, regardless of its compliance with the Specifications.

The Department no longer specifies Penetration-Viscosity grades for Asphalt Cement and the associated tables (ASPH-1, 2 and 3) have been removed from this specification. Those tables can be referenced in Edition 15 of the Standards Specification for Highway Construction.

#### 5.7.2.2 Percent Recovery Requirements for Selected PGAC Grades

Selected grades of PGAC will be tested at a temperature of 58<sup>0</sup>C to determine the average percent recovery at 3.2 kPa ( $R_{3.2}$ ) according to the requirements of AASHTO T 350 Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer. The minimum  $R_{3.2@58^0C}$  value for selected grades shall be as outlined in Table 5.7.2.2

**Table 5.7.2.2  
PERCENT RECOVERY REQUIREMENTS**

<b>PGAC GRADE</b>	<b><math>R_{3.2@58^0C}</math></b>
58-34, 64-28	25%
58-37, 58-40, 64-34, 70-28	40%
64-37, 76-28	55%

In cases where the supplied asphalt grade is different from the specified grade of asphalt, in order to meet the Asphalt Grade Adjustment requirements listed in specification 3.50.2.4 Reclaimed Asphalt Pavement, the elastic recovery requirements listed in Table 5.7.2.2 for the supplied grade shall apply.

Asphalt cements which have been enhanced to meet AASHTO M320 specifications through the use of polymer additives or other chemical means shall be referred to as modified asphalts.

## SUPPLEMENTAL SPECIFICATIONS

### 5.7.2.3 Code of Practice – Cutback and Emulsified Asphalts

Suppliers and users of cutback and emulsified asphalts shall be familiar with the recommendations contained in the Environment and Climate Change Canada document titled Code of Practice for the Reduction of Volatile Organic Compound (VOC) Emissions from Cutback and Emulsified Asphalt. The Code defines the ozone season as the period between May 1 and September 30.

Volatile organic compounds (VOC) referred in the Code and this specification means the Item 65 components on the List of Toxic Substances in Schedule 1 of the Canadian Environmental Protection Act, 1999.

During the ozone season, the Contractor shall use only emulsified asphalts, or low-emitting VOC alternative products, with a VOC content equal to or less than 3% as determined by the oil portion of distillate collected when analyzed in accordance with ASTM D6997.

### 5.7.2.4 Delivery, Handling and Storage

When requested by the Consultant, the Contractor shall supply the Consultant with the asphalt suppliers' weigh-bills and records of all asphalt received and/or returned on a daily basis. The Contractor shall provide, maintain and reclaim asphalt storage facilities.

Storage facilities for asphalt cement shall be capable of heating the material under effective and positive control at all times and shall contain provision for measuring and sampling.

The Contractor shall follow the Suppliers' specified handling and storage requirements for each grade of PGAC.

No asphalt type or grade shall be diluted or mixed with a different type or grade, or with any other material, without the specific approval of the Consultant. Modified asphalts from different suppliers shall not be mixed, regardless of grade.

The Contractor shall prevent contamination of the asphalt, by asphalt of another type or grade, by solvent, or by any other material. Asphalt storage tanks shall be emptied of one type or grade of asphalt, and cleaned as necessary to prevent detrimental contamination of the asphalt, before placing another type or grade of asphalt therein. Asphalt emulsions shall be protected from freezing.

## 5.7.3 SAMPLING AND TESTING

### 5.7.3.1 General

The Contractor shall obtain representative, uncontaminated samples of all asphalt materials delivered to the project for quality assurance testing in accordance with ATT-42, Sampling Asphalt and Table 5.7.3. The Consultant may require increases in the minimum frequencies specified for quality assurance sampling. In addition, all asphalt shall be subject to inspection, sampling and testing by the Department or its designated agents. The Contractor shall provide safe, convenient access, acceptable to the Consultant, for inspection and sampling of the asphalt, and shall cooperate in the inspection and sampling process when requested to do so.

## SUPPLEMENTAL SPECIFICATIONS

The Contractor shall ensure that all asphalt delivery tanks are equipped with sampling valves maintained in good operating condition which are designed and located to enable safe, representative sampling into the appropriate one or two litre containers.

If the Contractor adds a liquid anti-strip additive to the asphalt product, asphalt samples shall be taken after the addition of the additive. The Contractor shall have the necessary procedures in-place to safely sample the treated asphalt including, where applicable, an in-line valve and sampling system.

### 5.7.3.2 Quality Control

Quality control and quality control testing is the responsibility of the Contractor. Quality control testing shall be carried out by a qualified Supplier's laboratory, or a qualified testing laboratory licensed to practice in the Province of Alberta.

### 5.7.3.3 Quality Assurance

The Contractor shall deliver all quality assurance samples to the Consultant on the day they were sampled. The Consultant will forward the samples to the Department's designated quality assurance laboratory for testing and will accept or reject asphalt material based on the test results. Quality assurance testing for PGAC will be in accordance with AASHTO R29 Grading or Verifying the Performance Grade of an Asphalt Binder, and determination of  $R_{3.2@58^{\circ}\text{C}}$  according to AASHTO T350.

**TABLE 5.7.3  
SAMPLING FREQUENCY FOR QUALITY ASSURANCE**

MATERIAL	MINIMUM FREQUENCY <sup>(1)</sup> (FOR EACH ASPHALT TYPE)
Asphalt Cement - all grades	One <sup>(2)</sup> per five Lots
Liquid Asphalt (ASBC)	One per day
Prime, Tack, Curing Seal, and Fog Coat	One for each 100 tonnes
Seal Coats, Slurry Seals	One per day

(1) Minimum of one sample for each asphalt type or as listed above, whichever is greater.

(2) One sample of asphalt cement consists of 2 - one litre cans, as per ATT-42

## 5.7.4 ACCEPTANCE

Asphalt materials supplied and incorporated into the Work will be considered for acceptance provided the specified quality assurance samples have been provided to the Consultant within the time frame specified and where both the Work and the asphalt material meet specifications.

In the event quality assurance test results are not available to the Consultant at the time he prepares the monthly progress payment estimates, the Consultant may request payment for asphalt material which has not been accepted. However, should the Contractor fail to supply the required samples, or the asphalt material fails to meet the specification requirements, the Consultant may deduct payments from the subsequent monthly progress payment estimates.—Payment adjustments will be as follows:

- For Work where the anti-strip additive or lime has not been incorporated into the mix, there is a payment reduction of 15% of the unit bid price of the affected asphalt concrete mix.

## SUPPLEMENTAL SPECIFICATIONS

- For Work where the PGAC does not meet the specified grade, the payment adjustment to the affected mix will be:

**Table 5.7.4**

Temperature Deviation <sup>(1)(2)</sup>	Payment Adjustment (% Reduction of unit bid price of mix)
Within 3 degrees of specified grade	N/A
From >3 degrees to <6 degrees of specified grade	5%
From ≥6 degrees to ≤ 9 degrees of specified grade	15%
Greater than 9 degrees of specified grade	Reject <sup>(3)</sup>

<sup>(1)</sup> Temperature Deviation – cumulative deviation of high and low temperature

<sup>(2)</sup> The above payment adjustments would apply to a performance graded asphalt binder with lower than the specified high temperature or higher than the specified low temperature, with a cumulative temperature deviation of greater than 3 degrees. A performance graded binder better than specified is excluded from the calculations.

<sup>(3)</sup> The Department will determine whether removal and replacement is necessary. Removal and replacement of rejected asphalt concrete pavement shall be at the Contractor's expense, and no separate or additional payment will be made. For material allowed to stay in-place, payment adjustment will be at a reduction of 50% of unit bid price.

- For asphalt materials, other than those identified above, that fail to meet the specifications; the deducted payment will be determined by the Consultant and will be equal to the estimated value of the asphalt material that fails to meet the requirements.

If, in the opinion of the Department, the failure to meet specification is significant enough to result in the probable unsatisfactory performance of the asphalt concrete pavement, the Contractor shall remove and replace all asphalt concrete pavement containing the rejected asphalt material. Removal and replacement of rejected asphalt concrete pavement shall be at the Contractor's expense, and no separate or additional payment will be made.

Asphalt materials which pass AASHTO M320 specifications and minimum average percent recovery from Table 5.7.2.2, yet fail to meet the low temperature quality stipulations outlined in Subsection 5.7.2.1 General, will be accepted; however, products from approved suppliers with a history of frequent test results indicating non-compliance to these quality stipulations, as determined by the Department, will be removed from the Products list.

**5.7.5 APPEAL OF PGAC ACCEPTANCE TEST RESULTS AND APPEAL TESTING**

The following procedures will apply for an appeal:

- (i) Appeals will only be considered if the Contractor can demonstrate to the satisfaction of the Consultant that there is sufficient cause to support the appeal.
- (ii) Acceptance test results for any rejected or penalized PGAC may be appealed only once.
- (iii) The Contractor shall serve notice of appeal to the Consultant, in writing, within 24 hours of receipt of the test results.

### SUPPLEMENTAL SPECIFICATIONS

- (iv) The Consultant will request a retest on the un-opened can sample from the original material sample.
- (v) The Contractor may have a representative present, virtually, during testing at the Department's QA facility. During the period of the appeal testing, the Contractor's representative shall comment, in writing, on anything concerning the testing which he/she does not consider to be valid, within 24 hours of the appeal testing. The Project Engineer and/or QA Consultant shall respond, in writing, to all comments to resolve them.
- (vi) The cost of the appeal testing shall be borne by the Contractor unless the new values result in a reduced payment adjustment or not in reject, then the appeal testing costs will be the responsibility of the Department.

The new values, thus determined, in all cases, will be binding on the Contractor and the Department.

#### **5.7.6 MEASUREMENT AND PAYMENT**

Where the Contract contains bid items for the supply of asphalt, measurement will be based on the Suppliers' weigh bills however, the Consultant may check quantities delivered by weighing the delivery vehicles before and after unloading. Where the Contract does not otherwise require the installation of a weigh scale for weighing materials, the Consultant will determine quantities by measuring the liquid level in the tank truck or storage tank, at his discretion. When asphalt quantities are determined by this method, the Contractor shall calibrate the distributor trucks and storage tanks.

If there is a variance between quantities measured by the Consultant and the Suppliers' weigh-bills, the Consultant will determine the quantity on which payment will be based.

Where the Contract contains bid items for the supply of asphalt, payment for accepted asphalt material will be made at the applicable unit price bid per tonne.

Where the Contract does not contain bid items for the supply of asphalt, accepted asphalt material will not be paid for separately. Payment will be considered included in the unit price bid for the Contract item for which the asphalt material is used.

Payment will be full compensation for supplying asphalt material to the project; storing the material; sampling and quality control.

#### **ASPH-1, ASPH-2 and ASPH-3**

The Department no longer uses Penetration-Viscosity paving grades for Asphalt Cement. Tables ASPH-1, ASPH-2 and ASPH-3 can be found in Edition 15 of the Standard Specifications for Highway Construction.

## SUPPLEMENTAL SPECIFICATIONS

**ASPH-4**

**SPECIFICATIONS FOR SLOW CURING LIQUID ASPHALTS:** Slow curing liquid asphalts shall conform to the requirements specified in the following table, for the grade designated by the Consultant:

ASPHALT GRADE	SC-70		SC-250		SC-800		SC-3000		A.S.T.M. TEST METHOD
	min.	max.	min.	max.	min.	max.	min.	max.	
Flash Point, Cleveland Open Cup, °C	65	-	80	-	90	-	105	-	D92
Kinematic Viscosity at 60°C, mm <sup>2</sup> /s	70	180	250	500	800	1 600	3 000	6 000	D2170
Distillation Test: Total distillate to 360°C; % by volume	10	30	4	20	2	12	-	5	(2) TLT-214
Distillation Residue; Kinematic Viscosity at 60°C, mm <sup>2</sup> /s	400	7 000	800	10 000	2 000	16 000	4 000	35 000	D2170
<b>Asphalt Residue;</b> Residue of 100 penetration, % by mass	50	-	60	-	70	-	80	-	D243
Ductility of 100 penetration residue at 25°C, cm <sup>(1)</sup>	100	-	100	-	100	-	100	-	D113
Solubility of Distillation Residue to 360°C, in Trichloroethylene, % by mass	99.0	-	99.0	-	99.0	-	99.0	-	D2042
Water, % by mass or volume	-	0.5	-	0.5	-	0.5	-	0.5	D95
Delivery Temperature, °C	55	75	75	95	90	110	110	130	

(1) If the ductility at 25°C is less than 100, the material will be acceptable if its ductility at 15°C is more than 100.

(2) Alberta Transportation Laboratory Test.

**General Requirements:**

- The asphalt shall not foam when heated to the application temperature range recommended by the Asphalt Institute.
- The asphalt shall be uniform in character.

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-5

**SPECIFICATIONS FOR MEDIUM-CURING LIQUID ASPHALTS:** Medium curing liquid asphalts shall conform to the requirements specified in the following table, for the grade designated by the Consultant:

ASPHALT GRADE	MC-30		MC-70		MC-250		MC-800		A.S.T.M. TEST METHOD
	min.	max.	min.	max.	min.	max.	min.	max.	
Flash Point, Open Tag, °C	38	-	38	-	65	-	65	-	D1310
Kinematic Viscosity at 60°C, mm <sup>2</sup> /s	30	60	70	140	250	500	800	1 600	D2170
Distillation Test: % by volume of total distillate to 360°C, -to 225°C	-	25	-	20	-	10	-	-	(2) TLT-214
-to 260°C	40	70	20	60	15	55	-	35	
-to 315°C	75	93	65	90	60	87	45	80	
Residue from distillation to 360°C, Volume % by difference	50	-	55	-	67	-	75	-	
Test on Residue from Distillation: a) Penetration at 25°C, 100 g, 5 s, dmm	120	250	120	250	120	250	120	250	D5
b) Ductility at 25°C, cm <sup>(1)</sup>	100	-	100	-	100	-	100	-	D113
c) Solubility in Trichloroethylene, % by mass	99.5	-	99.5	-	99.5	-	99.5	-	D2042
Water, % by mass or volume	-	0.2	-	0.2	-	0.2	-	0.2	D95
Delivery Temperature, °C	35	55	55	75	75	95	90	110	

(1) If the ductility at 25°C is less than 100, the material will be acceptable if its ductility at 15°C is more than 100.

(2) Alberta Transportation Laboratory Test.

**General Requirements:** -The asphalt shall not foam when heated to the application temperature range recommended by the Asphalt Institute.  
-The asphalt shall be produced by the refining of petroleum and shall be uniform in character.

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-6

**SPECIFICATIONS FOR RAPID-CURING LIQUID ASPHALTS:** Rapid curing liquid asphalts shall conform to the requirements specified in the following table, for the grade designated by Consultant:

ASPHALT GRADE	RC-30		RC-70		RC-250		A.S.T.M. TEST METHOD
	min.	max.	min.	max.	min.	max.	
Flash Point, Open Tag, °C	-	-	-	-	27	-	D1310
Kinematic Viscosity at 60°C, mm <sup>2</sup> /s	30	60	70	140	250	500	D2170
Distillation Test: % by volume of total distillate to 360°C, -to 190°C -to 225°C -to 260°C -to 315°C Residue from distillation to 360°C, Volume % by difference	15 55 75 90 50	- - - - -	10 50 70 85 55	- - - - -	- 35 60 80 65	- - - - -	(2) TLT-214
Tests on Residue from Distillation: a) Penetration at 25°C, 100 g, 5 s, dmm b) Ductility at 25°C, cm <sup>(1)</sup> c) Solubility in Trichloroethylene, % by mass	80 100 99.5	120 - -	80 100 99.5	120 - -	80 100 99.5	120 - -	D5 D113 D2042
Water, % by mass or volume	-	0.2	-	0.2	-	0.2	D95
Delivery Temperature, °C	35	55	55	75	75	95	

(1) If the ductility at 25°C is less than 100, the material will be acceptable if its ductility at 15°C is more than 100.

(2) Alberta Transportation Laboratory Test.

**General Requirements:** -The asphalt shall not foam when heated to the application temperature range recommended by the Asphalt Institute.  
-The asphalt shall be produced by the refining of petroleum and shall be uniform in character.

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-7

**SPECIFICATIONS FOR ANIONIC EMULSIFIED ASPHALTS:** Anionic emulsified asphalts shall conform to the requirements specified in the following table, for the grade designated by the Consultant:

ASPHALT TYPE	RAPID SETTING (RS)				MEDIUM SETTING (MS)		SLOW SETTING (SS)				A.S.T.M. TEST METHOD
	RS-1		RS-2		MS-1		SS-1		SS-1H		
REQUIREMENTS	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	
Viscosity at 25°C, SF s	20	100	-	-	20	100	20	60	20	60	D244
Viscosity at 50°C, SF s	-	-	50	300	-	-	-	-	-	-	
Residue by Distillation, % by mass	55	(1)	60	(1)	55	(1)	55	(1)	55	(1)	D6997
Settlement in 5 d, % difference by mass <sup>(2)</sup>	-	3	-	3	-	5	-	5	-	5	D6930
Storage Stability Test, 24 h, % by mass <sup>(3)</sup>	-	1	-	1	-	1	-	1	-	1	D6930
Sieve Test, % retained on a No. 1000 Sieve, % by mass <sup>(4)</sup>	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	D6933
Demulsibility, 35 ml of 1.11 g/l CaCl <sub>2</sub> , % by mass	60	-	60	-	-	-	-	-	-	-	D6936
Cement Mixing Test, % by mass	-	-	-	-	-	-	-	2.0	-	2.0	D6935
Particle Charge <sup>(5)</sup>	Negative		Negative		Negative		-		-		D244
Tests on Residue from Distillation:											
a) Penetration at 25°C, 100 g, 5 s, dmm	100	200	100	200	100	200	100	200	40	100	D5
b) Ductility at 25°C, and 5 cm/min., cm	60	-	60	-	60	-	60	-	60	-	D113
c) Solubility in Trichloroethylene, % by mass	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	D2042
Delivery Temperature, °C	35	65	45	70	40	70	40	70	40	70	

(1) Upper limit on % residue is governed by the consistency limits.

(2) The test requirement for settlement may be waived when the emulsified asphalt is used in less than 5 days time.

(3) The 24 hour storage stability test may be used instead of the 5 day settlement test. In case of dispute the 5 day storage settlement test shall govern.

(4) CGSB 8-GP-2M, Sieves, Testing, Woven Wire, Metric

(5) Particle Charge Test (Qualitative) - The rapid setting grades will be tested for particle charge according to the procedure described in ASTM D 244, with the modification that the asphalt deposit will, for anionic emulsions, be found on the anode (positive electrode), and shall be continuous and opaque. In the event of dispute, the test will be repeated using freshly distilled water as the wash water for the electrodes, before evaluating the asphalt deposit.

SUPPLEMENTAL SPECIFICATIONS

**General Requirements:**

- All tests shall be performed within 15 days of date of delivery.
- The asphalt shall be uniform in character, and shall have a refined petroleum base.

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-8a

**SPECIFICATIONS FOR CATIONIC EMULSIFIED ASPHALTS:** Cationic emulsified asphalts shall conform to the requirements specified in the following table, for the grade designated by the Consultant:

ASPHALT TYPE AND GRADE REQUIREMENTS	CRS-1		CRS-2		CQS-1h		A.S.T.M. TEST METHOD
	min.	max.	min.	max.	min.	max.	
Viscosity at 25°C, SF s	-	-	-	-	20	100	D244
Viscosity at 50°C, SF s	75	200	100	400	-	-	
Residue by Distillation, % by mass	65	(1)	65	-	57	(1)	D6997
Settlement in 5 d, % difference by mass (2)	-	5			-	5	D6930
Storage Stability Test, 24 h, % by mass (3)	-	1	-	1.5 (8)	-	1	D6930
Demulsibility. 35 ml of 0.8 % by weight solution of sodium dioctyl sulphosuccinate, % by mass			40				D6936
Oil Portion of Distillate, % by volume of emulsion	-	3	-	3	-	-	D6997
Sieve Test, % retained on No. 1 000 Sieve (4)(5), by mass	-	0.10	-	0.10 (8)	-	0.10	D6933
Particle Charge (6)	Positive		Positive		Positive		D244
Tests on Residue from Distillation:							
a) Penetration at 25°C, 100 g, 5 s, dmm	100	250	100	250	40	125	D5
b) Apparent Viscosity at 60°C, Pa.s			See Figure 1				
c) Ductility at 25°C,(4) and 5 cm/min., cm (7)	60	-	60	-	60	-	D113
d) Solubility in Trichloroethylene, % by mass	97.5	-	97.5	-	97.5	-	D2042
Delivery Temperature, °C	60	80			-		

(1) Upper limit on % residue is governed by the consistency limits.

(2) The test requirement for settlement may be waived when the emulsified asphalt is used in less than 5 days time.

(3) The 24 hour storage stability test may be used instead of the 5 day settlement test, however in case of dispute the 5 day storage settlement test shall govern.

(4) CGSB 8-GP-2M, Sieves, Testing, Woven Wire, Metric

(5) Replace sodium oleate solution (2%) with distilled water, use distilled water in all operations including wetting and subsequent washing of wire cloth sieves.

(6) Particle Charge Test (Qualitative)- The emulsion will be tested for particle charge according to the procedure described in ASTM D 244, and it is required that the layer of asphalt deposited be continuous and opaque. In the event of dispute, the test will be repeated using freshly distilled water as the wash water for the electrodes, before evaluating the asphalt deposit.

(7) Ductility - Ductility will be measured at 25°C for 100-200 penetration asphalts, and at 15°C for 200-250 penetration asphalts.

(8) Requirements for Storage Stability and Sieve Test are waived if emulsion performs satisfactorily during application.

SUPPLEMENTAL SPECIFICATIONS

- General Requirements:**
- All tests shall be performed within 15 days of date of delivery;
  - The asphalt shall be uniform in character, and shall have a refined petroleum base.

## SUPPLEMENTAL SPECIFICATIONS

**ASPH-8b**  
**SPECIFICATIONS FOR POLYMER-MODIFIED CATIONIC RAPID-SETTING EMULSIFIED ASPHALT**

ASPHALT TYPE AND GRADE	CRS-2P		A.S.T.M. TEST METHOD
	min.	max.	
Requirements			
Viscosity at 50°C, SFs	100	400	D244
Residue by Distillation, % by mass <sup>(1)</sup>	65	---	D6997
Oil Portion of Distillate, % by volume of emulsion	---	3.0	D6997
Storage Stability Test, 24 h, % by mass <sup>(2)</sup>	---	1.5	D6930
Demulsibility, 35 ml of 0.8% by weight solution of sodium dioctyl sulphosuccinate, % by mass	40	---	D6936
Sieve Test, % retained on a 1 000 µm sieve, % by mass	---	0.1	D6933
Particle Charge Test			D244
<b>Test on Residue from Distillation</b>			
Penetration at 25°C, 100 g, 5 s, dmm	100	250	D5
Elastic Recovery at 10°C by Durometer, %	55	---	D6084 Test B
Solubility in Trichloroethylene, % by mass <sup>(3)</sup>	97.5	---	D2042
Ash Content, % by mass of residue <sup>(3)</sup>	---	1.0	TLT-229

## Notes:

- (1) Follow ASTM D 6997 except that the final temperature shall be 204°C and shall be maintained for 20 minutes. The ring burner shall be dropped when the temperature reaches 170°C. After distillation and weighing, the still shall be placed on a hot plate and uncovered. The contents shall be stirred with a preheated spatula for 10 seconds (approx. 30 times).
- (2) Requirements for Storage Stability and Sieve Test are waived if emulsion performs satisfactorily during application.
- (3) The ash content shall be determined when the manufacturer indicates that the polymer additive is not soluble in trichloroethylene.

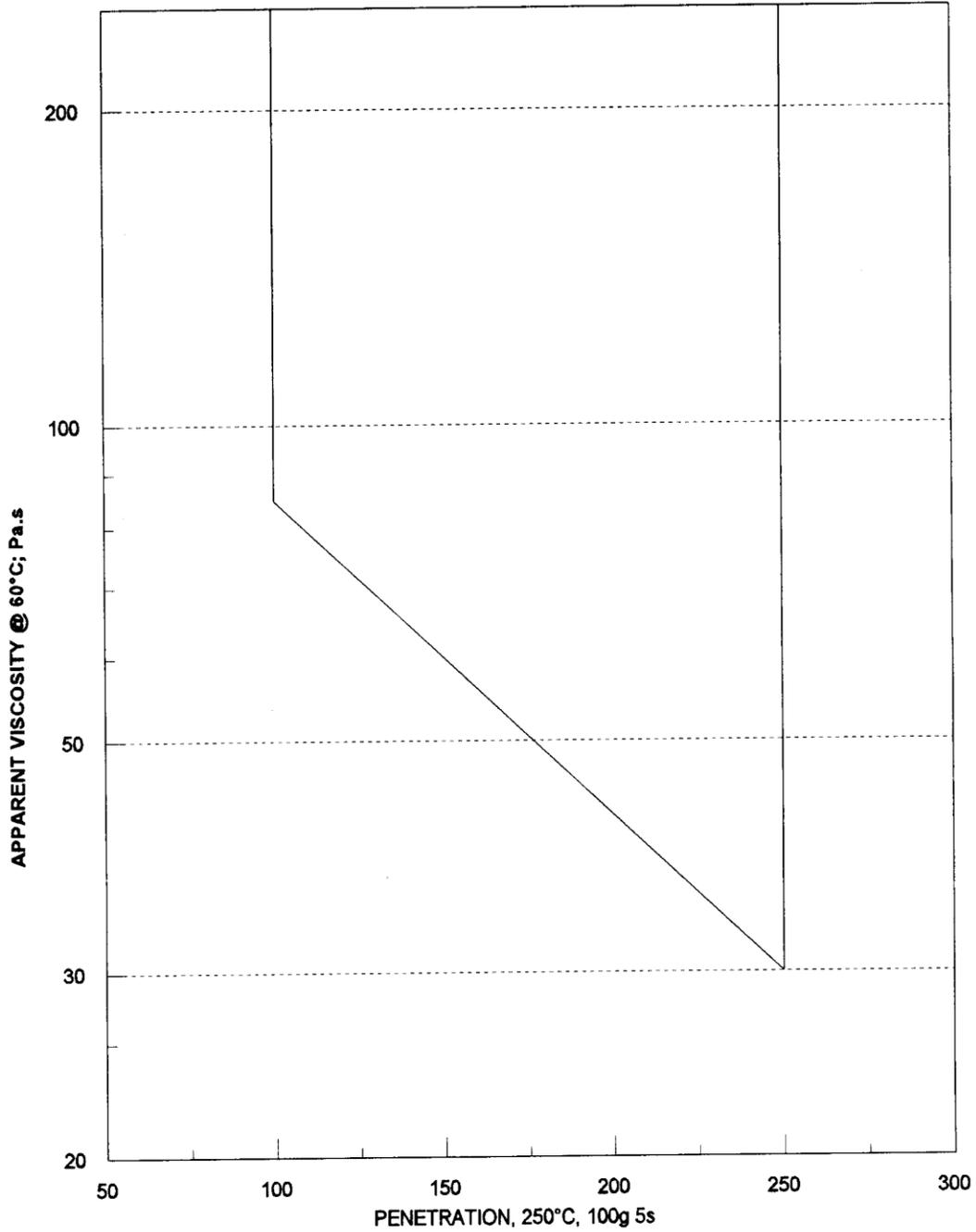
**General Requirements:**

- All tests shall be performed within 15 days of date of delivery;
- The asphalt shall be uniform in character, and shall have a refined petroleum base.

SUPPLEMENTAL SPECIFICATIONS

**FIGURE 1**

MINIMUM VISCOSITY FOR CRS-2 DISTILLATION RESIDUE





## SUPPLEMENTAL SPECIFICATIONS

## ASPH-9

**SPECIFICATIONS FOR HIGH FLOAT EMULSIFIED ASPHALTS:** High Float emulsified asphalt shall conform to the requirements specified in the following table, for the grade designated by the Consultant:

GRADE	HF-100S		HF-150S		HF-250S		HF-350S		HF-300M		HF-500M		HF-1000M		TEST <sup>(1)</sup> METHODS	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.		
Residue by Distillation, % by mass	62	(2)	62	(2)	62	(2)	65	(2)	65	(2)	65	(2)	65	(2)	Par. 6.2.1	
Oil Portion of Distillate, % by volume of emulsion	1	3	1	3	1	3	1.5	3	1	3	1	3	1	3	A.S.T.M. D6997 & Par. 6.2.2	
Viscosity at 50°C, SF s	30	150	30	150	35	150	75	400	50	---	50	---	50	---	ASTM D244	
Sieve Test, % retained on No. 1000 sieve % by mass <sup>(3)</sup>	---	0.10	---	0.10	---	0.10	---	0.10	---	0.10	---	0.10	---	0.10	Par. 6.2.2	
Coating Test (see Notes 4 & 5)	(4)		(4)		(4)		(5)		(5)		(5)		(5)		ASTM D6998	
Workability at -10°C	---	---	---	---	---	---	---	---	---	---	---	---	---	Pass	Par. 6.2.3	
Storage Stability Test, 24h, % by mass	---	1.5	---	1.5	---	1.5	---	1.5	---	1.5	---	1.5	---	1.5	ASTM D6930	
Demulsibility, 50 ml, 5.55 g/l CaCl <sub>2</sub> , % by mass	60	---	60	---	---	---	---	---	---	---	---	---	---	---	ASTM D6936	
<b>Tests on Residue from Distillation:</b>																
a) Penetration at 25°C, 100 g, 5 s, dmm	90	150	150	250	250	500	350	750	300	---	500	---	---	---	Par. 6.2.4	
b) Apparent Viscosity at 60°C, Pa·s	Requirements outlined on the chart beneath Figure 1									10	40	8	20	2	8	Par. 6.2.5/ A
c) Float Test at 60°C, s	1200	---	1200	---	1200	---	1200	---	1200	---	1200	---	1200	---	Par./A1.6.2.6	
d) Solubility in Trichloroethylene, % by mass	97.5	---	97.5	---	97.5	---	97.5	---	97.5	---	97.5	---	97.5	---	ASTM D2042	
Delivery Temperature, °C	40	70	40	70	40	70	40	70	40	70	40	70	40	70		

(1) Test methods are as outlined in CGSB CAN2-16.5-M84.

(2) Upper limit on % residue is governed by the viscosity limits.

(3) CGSB 8-GP-2M, Sieves, Testing, Woven Wire, Metric

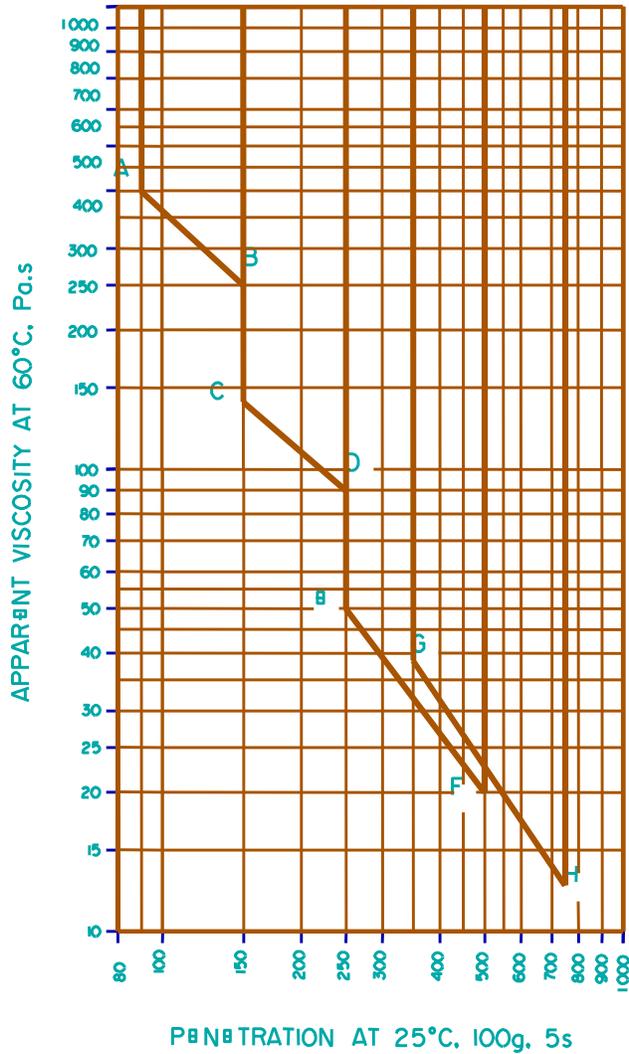
(4) Follow ASTM D244, except that the mixture of limestone and emulsified asphalt shall be capable of being mixed vigorously for 5 min., at the end of which period the stone shall be thoroughly and uniformly coated. The mixture shall then be completely immersed in tap water and the water poured off. The stone shall then not be less than 90% coated.

(5) Follow ASTM D244, except that the mixture of limestone and emulsified asphalt shall be mixed vigorously for 5 min., then allowed to stand for 3h, after which the mixture shall be capable of being mixed an additional 5 min. The mixture shall then be rinsed twice with approximately its own volume of tap water, without showing appreciable loss of bituminous film. After the second mixing the aggregate shall be at least 90% coated.



SUPPLEMENTAL SPECIFICATIONS

ASPH-9 (cont.)



Viscosity shall be within the graphic regions above the line designated by specific letters, and between penetration limits contained in vertical lines extending upwards from these points.

Viscosity value shall be reported at  $0.5s^{-1}$  for grades HF-100S and HF-150S and at  $1.0s^{-1}$  for grades HF-250S and HF-350S.

Grade of HF Emulsified Asphalt	HF-100S	HF-150S	HF-250S	HF-350S
	A, B	C, D	E, F	G, H

FIGURE 1

Viscosity Requirements for Distillation Residues from High-Float Emulsified Asphalts

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-10

**SPECIFICATIONS FOR EMULSIFIED ASPHALT PRIMER:** Emulsified asphalt primers shall conform to the requirements specified in the following table, for the grade designated by the Consultant:

ASPHALT GRADE REQUIREMENTS	SEP-1		SEP-2		A.S.T.M. TEST METHOD
	min.	max.	min.	max.	
Viscosity at 25°C, SF s	-	-	15	100	D88
Viscosity at 50°C, SF s	35	200	-	-	D244
Flash point, open Tag, °C	45	-	90	-	D3143
Residue by Distillation, % by mass	40	(1)	40	(1)	D6997
Oil Portion of Distillate, % by volume of emulsion	1	29 <sup>(2)</sup>	1	29 <sup>(2)</sup>	D6997
Settlement in 5 d	no visible separation		-	2	D6930
Miscibility with Water <sup>(3)</sup>	is not miscible with water		pass		D6999
Tests on Residue from Distillation:					
a) Penetration at 25°C, 100 g, 5 s, dmm	100	300	100	300	D5
b) Solubility in Trichloroethylene, % by mass	97.5	-	97.5	-	D2042

(1) Upper limit on % residue is governed by the consistency limits.

(2) During the ozone season a maximum limit of 3%

(3) Follow ASTM D6999 except add the emulsified primer to the water. After two hours the water should be clear.

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-11

**SPECIFICATION FOR EMULSIFIED DUST SUPPRESSANTS:**

Emulsified Dust Suppressants shall conform to the requirements specified in the following table:

GRADE	EDS-1		EDS-2		ASTM Test Method
	Minimum	Maximum	Minimum	Maximum	
Viscosity 25°C, SFs 50°C, SFs	10	35	35	100	D244
Residue by distillation to 260°C, % by mass	40	-	40	-	D6997
Oil portion of distillate, % by volume of emulsion	-	5 <sup>(1)</sup>	-	10 <sup>(1)</sup>	D6997
Settlement, 5 days	-		No visible separation		D6930
Storage Stability, 24 hours	No visible separation <sup>(2)</sup>		-		D6930
Workability <sup>(3)</sup>	Pass		Pass		-
Flash Point, Open Tag, °C	-	-	45	-	D3143
Miscibility with water	Pass		Pass <sup>(4)</sup>		D6999
Kinematic viscosity of residue from distillation, 60°C, mm <sup>2</sup> /s	25	100	25	300	D2170

(1) Maximum limit of 3% during the ozone season.

(2) If EDS-1 is retained in storage for an extended period of time, it should be circulated prior to use.

(3) When 500 grams of sand and 50 g of emulsion are mixed for 5 minutes at ambient temperature, the sand shall be 100% coated. The mixture shall be oven dried at 120°C to remove all the moisture. After cooling to room temperature, the mix shall be easily workable for the next 24 hours.

(4) Follow ASTM D6999 except add the EDS-2 to water. After 2 hours the water should be clear.

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-12

**SPECIFICATION FOR COLD POUR RUBBER FILLED EMULSIFIED BITUMINOUS CRACK SEALANT:**

Cold Pout Rubber Filled Emulsified Bituminous Crack Sealants shall conform to the requirements specified in the following table:

TYPE	EC-101		Test Method*
	Minimum	Maximum	
REQUIREMENTS			
Uniformity, 24 hours	Pass		TLT-226
Stormer viscosity at 25°C, Krebs	70	90	TLT-227
Solids content, %	59	-	ASTM D244 (Residue by Evaporation Procedure A)
Ash content, %	-	2.0	TLT-229
Rate of curing, % loss	50% 24 hrs.	80% 6 days	- TLT-230
Low temperature flexibility, -4°C, 30s	Pass (no cracks)		TLT-231
Elastic recovery, % recovered	40	-	TLT-232

\* TLT Refers to: Alberta Transportation Laboratory Test

## SUPPLEMENTAL SPECIFICATIONS

## ASPH-13

## SPECIFICATION FOR HOT POUR BITUMINOUS CRACK SEALANT:

Hot Pour Bituminous Crack Sealants shall conform to the requirements specified in the following table:

TYPE	HC-200		Test Method
	Minimum	Maximum	
Softening Point, °C	80	95	ASTM D36
Flash Point, Cleveland Open Cup, °C	230	-	ASTM D92
Penetration 0°C, 200g, 60s, dmm 25°C, 100g, 5s, dmm 46°C, 50g, 5s, dmm	30 55	65 150	ASTM D5
Ductility, 25°C, cm	45	-	ASTM D113
Solubility in Trichloroethylene, %	98	-	ASTM D2042
Kinematic viscosity at 177°C, mm <sup>2</sup> /s	-	1500	ASTM D2170

PLANS, DRAWINGS AND PERMITS

**6. PLANS, DRAWINGS AND PERMITS**

**6.1 SEPARATE DRAWINGS**

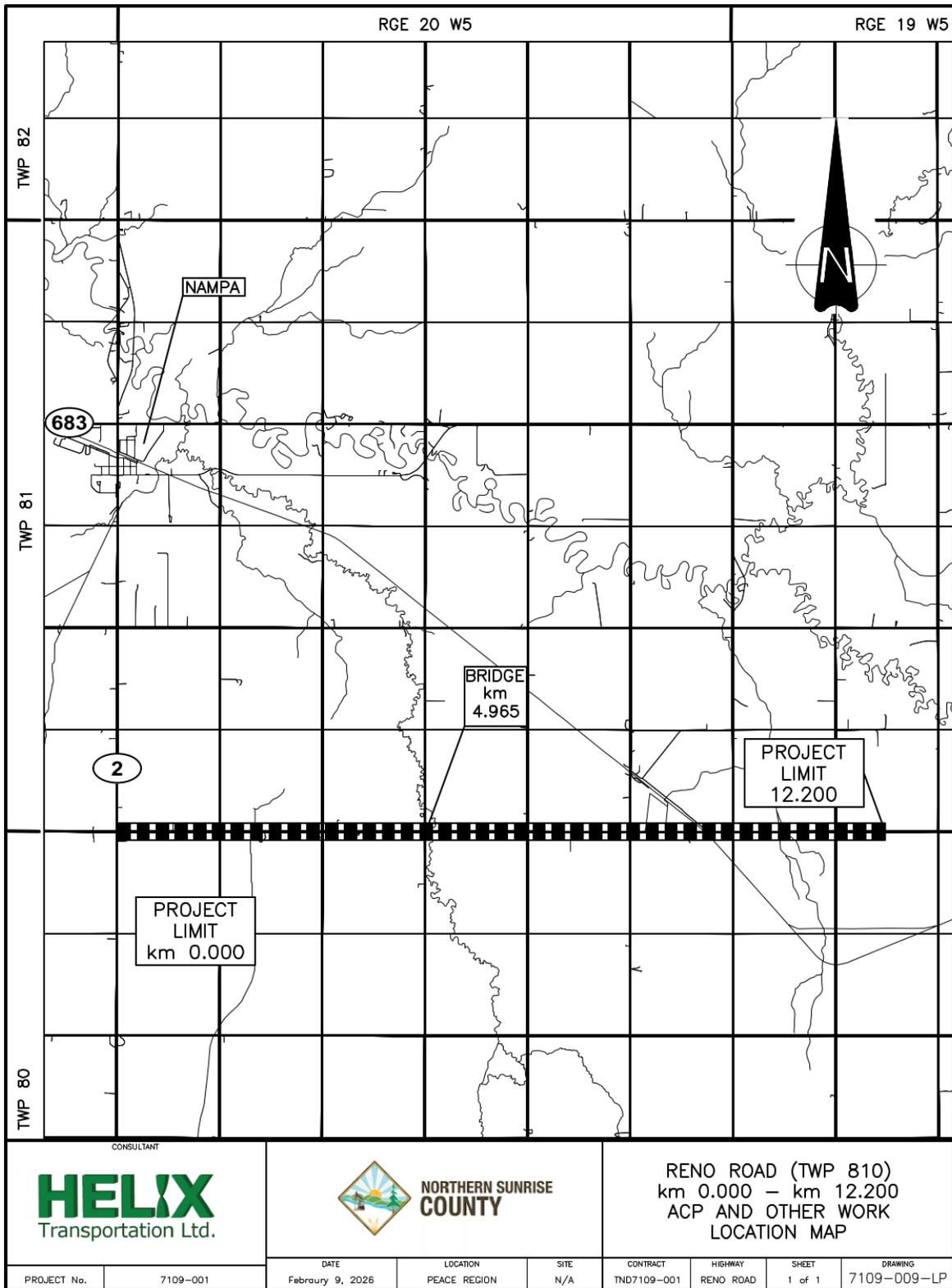
There are no separate drawings for this project.  
Location Plans and Cross Sections are included within the Tender document.

**6.2 STANDARD DRAWINGS**

All drawings referenced in the Standard Specifications are available on the Alberta Transportation and Economic Corridors (TEC) website: <https://www.alberta.ca/roadside-design-guide>

**6.3 CONTRACT DRAWINGS**

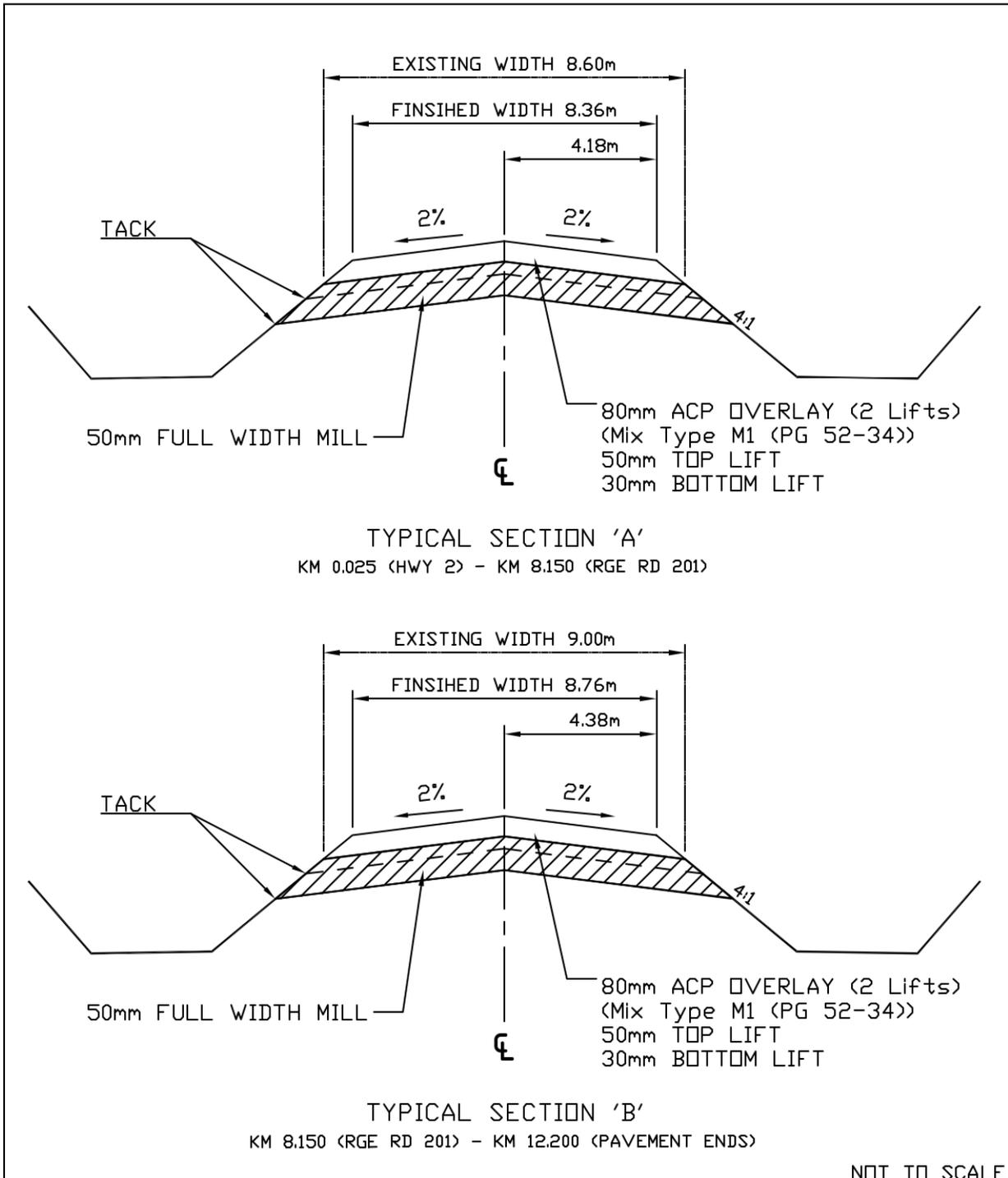
PLANS, DRAWINGS AND PERMITS



7109-001 LP.DWG Feb. 11, 2026 3:43 PM



PLANS, DRAWINGS AND PERMITS



NOT TO SCALE

<p>CONSULTANT</p>						NORTHERN SUNRISE COUNTY TWP RD 810 (RENO ROAD)						
						TYPICAL SECTIONS						
						DATE 2025-02-05	LOCATION NORTHERN SUNRISE COUNTY	SITE -	CONTRACT 7109-001	ROAD TWP RD 810	SHEET 1 OF 1	DRAWING 7109-001-TYP

V1.0 22.07.25 7109-001 TYPICALS.DWG Feb. 6, 2025 9:29 AM

ADDENDA

**7. ADDENDA**