



Infrastructure Services

Invitation to Tender

No. 2022-IS-15

Asphalt & Paving

For further information:
Len Thew
lthew@ladysmith.ca
250.245.6447

Tender Issue Date:	Wednesday, November 30 th , 2022
Tender Closing:	1:00 p.m., Wednesday, December 7 th , 2022
Tender Opening:	1:15 p.m., Wednesday, December 7 th , 2022 Ladysmith City Hall



TOWN OF LADYSMITH
INVITATION TO TENDER

1. Introduction

The Town of Ladysmith (the "Town") invites Tenders from qualified and experienced contractors for the supply of Asphalt and Paving in accordance with the Tender Specifications attached as Schedule "A".

2. Tender Submission

Tenders delivered by courier, mail, or in person to the following location:

Attention: Matt O'Halloran, Manager of Corporate Services
Town of Ladysmith
410 Esplanade
PO Box 220
Ladysmith, BC
V9G 1A2

will be accepted until **1:00 p.m. PST, Wednesday, December 7th, 2022.**

3. Form of Tender

Tenders must be completed using the Form of Tender, Tender Specifications and any applicable schedules and addenda as supplied.

4. Tender Opening

Tenders received by the Tender Closing Date and Time noted above at the Tender closing location will be opened in public at the City Hall, at 410 Esplanade, Ladysmith at 1:15 p.m. PST on Wednesday, December 7th, 2022.

5. Late Submissions

Tenders received after the Closing Date and Time will be returned unopened to the Tenderer.

6. The lowest or any tender will not necessarily be accepted

Please review the Instructions and Conditions to Tenderers.

FORM OF TENDER

Date:

We the undersigned have received and carefully reviewed all of the Tender Documents, including the Addenda listed below, have full knowledge of the location of the Work and certify that we have complied with the Instructions to Tenderers.

Provided that this Tender is accepted within 60 calendar days from the Closing Date and Time, the undersigned offers and agrees to provide all labour and material to perform and complete the Work as specified in and in strict compliance with the Tender Documents, at the prices quoted in the Tender Documents, within the time specified, and in accordance with the terms and conditions set forth in the Tender Documents.

The undersigned undertakes to achieve substantial completion of the Work that is the subject of the Tender within _____ calendar days from award of the contract under this Tender.

The Tenderer is an Individual Partnership Corporation (check where applicable) incorporated under the laws of

Name and Address of Individual, Partnership, or Corporation Tendering:

Signature and Title of person authorized to sign Tender:

(Print or type name under signature)

.....
.....
.....
.....

Telephone:

Facsimile:

Email:

Addenda

Acknowledgment is hereby made of receipt and inclusion of the following addenda to the Tender Documents:

Addendum

No. _____ dated _____; _____ pages

No. _____ dated _____; _____ pages

INSTRUCTIONS AND CONDITIONS OF TENDERING

(1) DEFINITIONS

In the Tender Documents the following words have the following meanings, unless the context otherwise requires:

"Contract" means an agreement for the performance of the Work to be executed by the Town and the Tenderer to whom the Work is awarded as applicable;

The Town of Ladysmith is referred to as **"the Town"**;

The successful tenderer is referred to as **"the Supplier"**;

The Director of Infrastructure Services is referred to as **"the Director"**;

"Tender Closing Date and Time" means the date and time stipulated in section 2 for the receipt of Tenders;

"Tender Documents" means the Invitation to Tender, the Form of Tender, the Instructions and Conditions of Tendering, the Tender Specifications (Schedule "A"), and all addenda; and

"Work" means all work to be done, performed and completed by the Tenderer under the Contract if awarded the Tender by the Town.

(2) TENDER CLOSING DATE AND TIME

Sealed Tenders, made on the Tender Form provided, together with all other Tender Documents required will be received by the receptionist at the main reception desk addressed to:

**Manager of Corporate Services
Town of Ladysmith
410 Esplanade
PO Box 220
Ladysmith, BC
V9G 1A2**

Tenders will be received up to **1:00 p.m. PST, on Wednesday, December 7th, 2022**. Tenders received after the closing time will be returned unopened.

The Tender Form being submitted must be signed by an authorized representative of the tenderer.

An award from this tender may require the approval of Town Council which, at its sole and unfettered discretion, can accept or reject any tender offered.

No tenderer may withdraw their tender within 60 days after the actual date of opening.

Tenderers are responsible for all costs relating to the preparation and submission of tenders.

This tender and any subsequent contracts resulting from this tender shall be governed by and interpreted in accordance with the laws of the Province of British Columbia.

It is the Tenderer's responsibility to allow sufficient time for their agent to deliver their Tender by the time and date specified above. The Tenderer should instruct their delivery agent to have the receptionist at the main reception desk at the City Hall time and date stamp the Tender. The Town will apply its date stamp upon receipt of Tenders delivered by Canada Post or courier.

(3) TENDER OPENING

Tenders will be opened publicly at 1:15 p.m. PST on Wednesday, December 7th, 2022 at Ladysmith City Hall, 410 Esplanade, Ladysmith (corner of Roberts Street and Trans Canada Highway).

(4) TENDER SUBMISSION

Late Tenders will not be accepted, opened or considered and will be returned unopened to the Tenderer upon the Town determining that the Tender was submitted after the Closing Date and Time.

(5) FORM OF TENDER

Tenders must be submitted on the form of the Tender Documents provided.

(6) AMENDMENT OR WITHDRAWAL

Tenders may be amended or withdrawn, provided written notice is received by the receptionist at the main reception desk at the City Hall prior to the stipulated closing time on the Closing Date.

Revisions to bid prices should state changes to unit prices only.

No revisions or withdrawals will be accepted after the Closing Date and Time.

(7) APPENDICES TO BE COMPLETED

Tenderers must complete and submit as part of the Tender all Appendices that form part of the Tender Documents other than the Contract General Conditions attached as Schedule “D”.

Any deviations from the specifications shall be separately noted in the space provided on the specification sheets, with separate information required attached.

(8) PRICES AND GST

Prices quoted are to be in Canadian dollars. Goods and Services Tax (GST) is to be shown as a separate item on the Form of Tender.

The prices shown as UNIT COSTS/HOURLY RATES on the Tender Form shall include all material costs, labour costs, and any other charges so as to be the final cost to the Town.

(9) ORAL, EMAIL AND FACSIMILE TENDERS NOT ACCEPTED

Oral, electronic mail or facsimile Tenders or amendments to Tenders will **not** be accepted.

10.0 COMPLETION OF TENDER AND ERRORS

All prices and notations must be typewritten or written in ink. No erasures or additions to the Tender Documents are permitted. In the case of mistake in extension of price, unit price will govern.

In case of mistake by the Tenderer, the mistake must not be erased but crossed out with the correction typewritten or written in ink adjacent thereto and such corrections must be initialed by the Tenderer's authorized signing officer or employee referred to in the Instructions and Conditions of Tendering.

11.0 SIGNATURE REQUIRED

All tenders must be signed in the place provided on the Form of Tender by an officer or employee having authority to bind the Tenderer by his or her signature.

12.0 BID IRREVOCABLE

The Tenderer agrees that in submitting a Tender, the Tender will be irrevocable and remain open for acceptance by the Town for 60 (sixty) calendar days from the day following the Closing Date and Time.

No tender may be withdrawn after the Closing Date and Time without the written consent of the Town, which may be withheld in its sole discretion.

13.0 MISTAKE IN TENDER DOCUMENTS

If the Tenderer discovers or suspects any ambiguity between the Tender Specifications (Schedule "A"), the Schedule of Subcontractors (Schedule "B"), Asphaltic Concrete Paving Specifications and Installation (Schedule "C") or any addenda, the Tenderer shall seek clarification from the Town, in writing, before submitting a Tender.

If deemed necessary by the Town, and in its sole discretion, an addendum will be issued to all parties that have indicated an interest in submitting a Tender. The Town reserves the right to revise, expand or delete any portion of the Tender Documents as part of the addendum.

Requests for clarifications must be submitted to the Town in writing and received not less than five (5) working days before the Tender Closing Date.

An addendum issued under this section will be considered to form part of the Tender Documents.

14.0 TENDER AWARD

The Town reserves the right to reject any or all Tenders and the lowest or any Tender will not necessarily be accepted.

Without limiting the generality of Section 8, the Town reserves the right to:

- waive any informality or irregularity in a Tender;
- reject a Tender which contains qualifying conditions or otherwise fails to conform to these Tender Documents;
- reject any single Tender if only one Tender is received;
- make decisions regarding Tender acceptance with regard to:
 - compliance with specifications, warranties, lead times, price and any other such factors as may be relevant factors in determining which Tender will provide the Town with the best value based on quality, service and price;
 - the overall cost impact of the Tender on the operations of the Town including, where applicable, factors such as acquisition cost, disposal cost, residual value, training cost, maintenance cost, product performance and environmental impact;
 - the reputation and experience of the Tenderer and of the Tenderer's staff to be allocated to the Work, the supply of the goods and services or the supply of any equipment required by this Tender;

- the technical experience, financial resources, and environmental responsibility of the Tenderer;
- the Town's assessment of the capability of the Tenderer to perform the Work within the time frame required by the Town; and
- demonstration that the Work undertaken will meet or exceed requirements of environmental standards; and
- award the Work based on the best value to the Town based on quality, service, and price, and any criteria set out herein based solely on the Town's assessment of the tender.

15. NO DUTY OF CARE

It is the responsibility of the Tenderer to thoroughly examine the Tender Documents including any attachments and appendices to satisfy itself regarding the full requirements of the Tender and the Work.

While the Town has made reasonable efforts in good faith to ensure an accurate representation of information in this Tender, the information contained herein is supplied solely as a guideline for Tenderers, and the Town does not warrant or represent such information to be accurate, or complete.

The Tenderer acknowledges and agrees that in the preparation of the Tender, supply of oral or written information to Tenderers, review of Tenders or the carrying out of the Town's responsibilities under this Tender, the Town does not owe a duty of care to the Tenderers, and waives for itself, its successors and assigns, the right to sue the Town in tort for any loss, including economic loss, costs, expenses, losses, damages, or liability incurred by the Tenderer as a result of or arising out of any error, omission or misrepresentation occurring in the preparation of the Tender Documents, supply of oral or written information to Tenderers, review of Tenders or any document submitted in response to the Invitation to Tender.

Tenderers are solely responsible for their own expenses in preparing a Tender and for subsequent negotiations, if any. If the Town elects to reject any or all Tenders, or to cancel the Tender for any reason, the Tenderer acknowledges and agrees that the Town will not be liable to any Tenderer for any claims, including, without limitation, costs or damages incurred by the Tenderer in preparing the Tender, or loss of any anticipated profit in connection with the Work contemplated by this Tender, or any other matter whatsoever.

16. QUERIES

All enquiries regarding the tender submission process may be directed to Matt O'Halloran, Manager of Corporate Services by phone: (250) 245-6417 or email: bid@ladysmith.ca.

All queries regarding the technical specifications forming part of this Tender may be made by contacting Len Thew by phone: (250) 245-6447 or email: lthew@ladysmith.ca.

Schedule "A" - Tender Specifications

Tender No. 2022-IS-15 – Asphalt and Paving (2023 – 2024)

I/We hereby certify that I/we have read and fully understand the Instructions and Conditions of Tendering, Specification Sheet (where applicable) and Tender Form, below, and make the following offer:

To supply the following materials and/or services at the stated prices for the period of January 1st, 2023 to December 31st, 2024:

Table 1: PAVING RATES

Item	Description	Unit	Rate	GST
1 ¹	Hot-mix paving in place (over 250 tonnes)	tonnes		
2 ¹	Hot-mix paving in place (75 – 250 tonnes)	tonnes		
3 ¹	Hot-mix paving in place (0 – 75 tonnes)	tonnes		
4	Hot-mix leveling course			
5 ²	Hot Mix Patching (i.e. potholes, cross ditching, separate drainage curbs, pavement failures, trench patches, roadside and curb edges and driveways)			
5a ³	0 – 5 tonnes	tonnes		
5b ³	5 – 15 tonnes	tonnes		
5c ³	Over 15 tonnes	tonnes		
6	Hot-mix three bin 3/8" mix FOB plant	tonnes		
7	Hot-mix four bin 5/8" mix FOB plant	tonnes		
8	Cold-mix FOB plant	tonnes		
9	Tack Coat	litre		
10	Placing and supply of geotextile	m ²		
11 ³	Crackfilling ⁴	lin. m		
12	Chip Sealing	m ²		
12a	Extra for pick up	m ²		
13	Supply and install dust palliative	litre		

¹ A premium in addition to the rates of items 1, 2, and 3, will be paid for paving parking lots, tennis courts and pathways.

² Tonnage for patches in groups within 50 linear metres from another will be added together to determine the payment category of 5a, 5b or 5c. Otherwise the unit rate for each patch will be determined by the tonnage required for that patch.

Table 2: PAVING PREP RATES

Item	Description	Unit	Rate	GST
1	Excavating and disposal of existing pavement materials in cut/infill areas			
1a	0 – 25 m ²	m ²		
1b	25 – 250 m ²	m ²		
1c	Over 250 m ²	m ²		
2	Pitrun gravel fill including compaction in place (over 250 tonnes)	tonne		
3	25mm crushed gravel including compaction in place (over 250 tonnes)	tonne		
3a	25mm crushed gravel with recycle including Compaction in place (over 250 tonnes)	tonne		
4	Over-excavation and disposal (below design grade)	m ³		

Notes to Excavating and Disposal Rates

- 1) **Excavating and Disposal Rates Items 1a, 1b and 1c above.**
 Excavate and disposal items do not have to have an existing asphalt surface.

Table 3: CONCRETE RATES ^{4,5}

Item	Description	Unit	Rate	GST	
1	CONCRETE CURB				
	0 to 50 linear metres				
		Preparation	Hourly	Table 5	
		Form and Pour	Hourly	Table 5	
	50 - 120 linear metres				
		Preparation	Hourly	Table 5	
		Form and Pour	Lin.m		
	Over 120 linear metres				
		Preparation	Hourly	Table 5	
		Form and Pour	Lin.m		
	2	SIDEWALK			
		0 to 50 linear metres			
		Preparation	Hourly	Table 5	
		Form and Pour	Hourly	Table 5	
50 - 120 linear metres					
		Preparation	Houly	Table 5	
		Form and Pour	Lin.m		
Over 120 linear metres					
		Preparation	Houly	Table 5	
		Form and Pour	Lin.m		

⁴ Per lineal metre will be added to 1.5 metre wide concrete sidewalk rate for 150mm thick sidewalk versus 100mm thick sidewalk. This rate is subject to the annual escalation clause as noted in Schedule 1.

⁵ Curb and sidewalk preparation will be decided on a project-by-project basis. It may be completed in one of three ways at the sole discretion of the Municipality:

- (1) Preparation may be carried out by Municipal forces;
- (2) Preparation may be carried out by Paving Company using Table 5 rates or subcontractors (subject to the general conditions of the contract) in order to meet resource commitments; or,
- (3) Preparation may be tendered by Municipal forces.

The Paving Company reserves the right to decline curb and sidewalk preparation.

Table 4: GRINDING RATES⁶

Item	Description	Unit	Rate	GST
1	Grinding at curb 1-2m wide including clean-up, flagging	lin.m		
2	Grinding 0 to 250sq.m including clean-up, flagging	sq.m.		
	50mm depth			
	75mm depth			
	100mm depth			
3	Grinding over 250sq.m including clean-up, flagging	sq.m.		
	50mm depth			
	75mm depth			
	100mm depth			
4	Grinding over 7,000sq.m including clean-up, flagging	sq.m.		
	50mm depth			
	75mm depth		By quote	
	100mm depth		By quote	

⁶ A minimum charge per day will be levied for the skid steer, for the Wirtgen model grinder (1.0 metre width) and for the grinders over 1.0 metre width. A levy does not apply for other grinding methods.

Table 5: Other Rates (4 hour minimum charge including standby)

Item	Description	Unit	Rate	Standby Rates ^{7,9}	GST
1	Intentionally left blank				
2a	Supply 25mm crush gravel – FOB pit	tonne			
2b	Supply 25mm crush gravel with recycle –	tonne			
3	Supply pit run gravel – FOB pit	tonne			
4	Crew Truck (bare rate)	hour			
5 ⁷	Grader	hour			
6 ⁷	Grader (snowplowing)	hour			
7 ⁷	Vibratory roller	hour			
8	Vibratory roller (Bare) 10 tonne	hour			
9 ⁷	R/T backhoe	hour			
10 ⁷	Tandem truck (owned)	hour			
11 ⁷	Tandem truck c/w transfer trailer (owned)	hour			
12 ⁷	Water truck	hour			
13 ⁷	Sweeper (self-propelled, non-vacuum)	hour			
14	Plate compactor / jumping jack (bare)	hour			
15	Jackhammer complete with compressor	hour			
16	Wirtgen 1000 size milling machine (2 operators)	hour			
17	Cat PM200 size milling machine (3 operators)	hour			
18 ⁷	Mob and/or demob milling machines	hour			
19	Tilt trailer (bare)	hour			
20	18" Diamond wet saw including blades	Per day or any part of			
21 ⁸	Foreman c/w crew truck and small tools	hour			
22	Operator, concrete finisher, grade man	hour			
23	Labourer	hour			
24	Third party materials				
25	Third party contract flagmen	hour			
26	Third party contract trucking (any type)	hour			
27	Third party hired excavator (any size)	hour			
28	Dump fee – gravel, sand, soil	Per tonne			
29	Administrative fee – line items 2(a)-23				

⁷ Standby rates are applicable when equipment retained on an hourly basis is not required for a period of greater than one hour (excluding lunch breaks).

⁸ Hourly rates are applicable to straight time hours only. Overtime rates will be charged when applicable and with prior approval from the Municipality.

ALL PRICES PROVISIONAL, SUBJECT TO ARTICLE 4.2, AND TO INCLUDE ENVIRONMENTAL FEES.

- Availability Within 30 Days of receiving work order.
- Invoicing must be received within 30 days.

For a contractor or a service company to do business with Town of Ladysmith they require the following:

- A current Town of Ladysmith business license.
- Federal, provincial and municipal permits when and where applicable.

The Town may, in its sole discretion, extend the term by up to two further years by negotiation.

Early Payment Discount: _____% _____ Days (Minimum 10 Days)

Signature: _____

Date: _____

Schedule "B"
Subcontractors

1. List of Subcontractors, if any:

(1)

(2)

(3)

Schedule "C"
ASPHALTIC CONCRETE PAVING

SPECIFICATIONS

- 11.1 Scope
- 11.2 Special Mixes
- 11.3 Aggregate
- 11.4 Asphalt Cement
- 11.5 Asphaltic Concrete Mix Design Criteria
- 11.6 Job Mix and Plant Calibration
- 11.7 Tack Coat

INSTALLATION

- 11.8 Responsibility for Base
- 11.9 Traffic Control
- 11.10 Cutting and Removal of Existing Pavement
- 11.11 Adjustment of Services
- 11.12 Tack Coat
- 11.13 Transportation of Hot Plant Mix
- 11.14 Placement
- 11.15 Compaction
- 11.16 Joints
- 11.17 Cleaning
- 11.18 Testing
- 11.19 Acceptance Requirements

**Schedule “C”
ASPHALTIC CONCRETE PAVING
SPECIFICATIONS**

11.1 SCOPE

This specification governs the production, placing and compaction of hot mix, hot laid asphalt concrete for pavement construction and other uses.

11.2 SPECIAL MIXES

For special purposes, such as patching, the paving of shoulders, boulevards, walkways and sidewalks, and the construction of curb, gutter or combination curb and gutter, the requirements of this specification, particularly in respect to the mix design aggregate requirements and the level of testing, shall be subject to amendment by the Engineer.

11.3 AGGREGATE

11.3.1 Aggregate for asphaltic concrete shall be composed of hard, angular, durable, crushed gravel free from silt or clay lumps, cementation, organic material, frozen material and other deleterious materials.

11.3.2 The aggregate gradation shall fall within the following limits when tested in accordance with ASTM C136 and ASTM C117.

Gradation Limits (% Passing by Weight)

Size mm	19mm	12mm	10mm
25	100	100	100
19	100	100	100
12.5	70 - 100	90 - 100	100
9.5	55 - 90	75 - 95	90 - 100
4.75	35 - 70	45 - 75	55 - 85
2.35	25 - 57	30 - 60	35 - 70
1.18	18 - 45	20 - 45	25 - 55
0.60	13 - 34	15 - 35	15 - 40
0.30	8 - 26	6 - 20	8 - 25
0.15	5 - 17	4 - 15	5 - 18
0.075	2 - 8	2 - 10	2 - 10

11.3.3 All sample gradations shall fall within the limits, and any deviations between the samples and the project gradation curve, based on the mix design, shall not exceed the following limits:

Sieve Size mm	Maximum Permissible Tolerance % by Weight Passing
4.75 - 19	± 4.5
1.18 - 2.35	± 4.0
0.60	± 3.5
0.30	± 2.5
0.15	± 1.5
0.075	± 1.0

11.3.4 A minimum 70% of the material retained on a 4.75 sieve shall have at least 2 fractured faces. Percentages shall be determined by particle count.

11.3.5 Shale content by weight shall not exceed 3% in the lower course or 1 - 1/2% in the surface course.

11.3.6 Aggregate short of material passing the 0.075 mm sieve shall have approved mineral filler added. Mineral filler shall be only material passing the 0.075 mm sieve and shall be finely ground particles of limestone, hydrated lime, Portland cement or other approved non-plastic materials when tested in accordance with ASTM D423 and D424.

11.3.7 The moisture content of the aggregate after leaving the drier and before mixing shall not be more than 0.05% by weight.

11.3.8 The following tests may be required to conform the gravel source is suitable for use in the production of aggregate for asphaltic concrete:

- (a) Soundness of Aggregates to ASTM C88
- (b) Maximum loss by mass after 5 cycles with Mg SO4:
- (c) Coarse aggregate = 15%
Fine aggregate = 18%
- (d) Los Angeles Abrasion to ASTM C131
Maximum loss by mass = 25%
- (e) Sand Equivalent to ASTM D2419
Minimum = 40
- (f) Absorption of Aggregate to ASTM C127
Maximum absorption by mass = 2%
- (g) Petrographic Examination to ASTM C295

11.4 ASPHALT CEMENT

11.4.1 Asphalt cement shall be prepared from the refining of petroleum oils and be homogenous, free from water and shall not foam when heated to 175 deg. C.

11.4.2 Asphalt cement shall be AC-8 grade and conform to the following specifications:

Test Designation	Characteristics	Min	Max	Units
ASTM D5	Penetration @ 25 degrees C, (100 gm for 5 seconds)	80	100	0.1 mm
ASTM D2171	Absolute Viscosity @ 60 degrees C	550	750	Poise
	Kinematic Viscosity @ 135 degrees C	170	-	Centi-stokes
ASTM D113	Ductility @ 25 degrees C	100	-	cm
ASTM D2042	Solubility in Trichloroethylene min. %	99.0	-	%
ASTM D92	Flash point, by Cleveland Open Cup	232	-	Degree C
DI754	Loss on heating	1.0	-	%
ASTM D5	Penetration @ 25 degrees C after loss on heating 100 gms for 5 seconds	55	-	% of original

11.4.3 The Contractor shall inform the Engineer of the name of his asphalt supplier and shall ensure that each load of asphalt is accompanied with a flow sheet showing compliance with the preceding requirements. Such flow sheets shall be submitted to the Engineer.

11.5 ASPHALTIC CONCRETE MIX DESIGN CRITERIA

11.5.1 If requested by the Engineer, the Contractor shall supply an asphaltic concrete mix design conforming to the following specifications as based on the Marshall method of design (ASTM DI559) for approval:

- (a) Number of blows each face of test specimen - 75
- (b) Minimum % voids in mineral VMA aggregate, based on Bulk SG
 - 19 mm Aggregate - 14
 - 12 mm Aggregate - 15
 - 10 mm Aggregate - 16
- (c) % air voids in compacted mixture, surface and lower course 3-5
- (d) Minimum modified Marshall load, N @ 60 deg. C 4500
- (e) Flow index, units of 0.25 mm - 8-18
- (f) Minimum index of retained stability after immersion in water @ 60 deg. C for 24 hours - 80%
- (g) Asphalt content in the mix shall be as specified in the mix design $\pm 0.25\%$.

11.6 **JOB MIX AND PLANT CALIBRATION**

11.6.1 If requested by the Engineer, a job mix formula shall be provided by the Contractor and shall contain the following information:

- (a) Sieve analysis of combined aggregate in mix.
- (b) Aggregate size range in each bin separation to be used.
- (c) Weight of aggregate to be used from each bin for one batch of mix.
- (d) Weight of asphalt cement to be used for one batch of mix.
- (e) Optimum mixing and compacting temperatures.

11.6.2 If requested by the Engineer, a plant calibration for continuous mix plants shall be provided by the Contractor.

11.7 **TACK COAT**

Bituminous tack coat shall be Grade SS-I or SS-Ih asphalt emulsion, or as approved. Manufacturer's laboratory analysis of each tack coat shipment shall be submitted to the Engineer for approval.

INSTALLATION

11.8 **RESPONSIBILITY FOR BASE**

11.8.1 The base, existing surface, or tack coat shall be approved by the Engineer prior to commencement of the paving operation.

11.8.2 When base prep provided by owner, the Contractor shall examine the approved base, existing surface or tack coat prior to commencing paving operations and satisfy himself that it is properly prepared for the placement of asphaltic concrete and shall notify the Engineer of any observed deficiencies prior to paving. His responsibility for pavement failures shall include those caused by base failure.

11.8.3 Prior to delivery of the asphaltic concrete to the job site, the prepared base shall be cleaned of all loose or foreign material.

11.9 **TRAFFIC CONTROL**

11.9.1 The Contractor shall be responsible for traffic control during all operations and shall not unduly disrupt normal traffic movement.

11.9.2 Traffic shall not be permitted on the finished pavement until it has cooled to atmospheric temperature.

11.10 CUTTING AND REMOVAL OF EXISTING PAVEMENT

The Contractor shall cut, remove and dispose of existing pavement as directed. Pavement cutting shall be in accordance with Section 3.8.1 of the Town of Ladysmith Engineering Specifications.

11.11 ADJUSTMENT OF SERVICES

The Contractor shall adjust manholes, catch basins, valves, etc., to the proper finished grade at the time of paving. Covers shall be recessed 0 - 6 mm below finished pavement grade. Covers shall not protrude above the finished pavement. Unless approved by the Engineer, the use of the steel riser rings shall not be allowed within the travelled portion of the road. Raised iron should be grouted and any damage to the road structure resulting from raising of the iron shall be repaired to the Engineer's satisfaction.

11.12 TACK COAT

11.12.1 The existing asphaltic concrete surface shall be thoroughly cleaned by a power-driven sweeper immediately prior to applying the tack coat.

11.12.2 Tack coat shall be applied to all existing asphaltic concrete that is to be overlaid and to the edge of existing asphaltic concrete, curbs and structures where these surfaces will be in contact with the new asphaltic concrete pavement.

11.12.3 Tack coat shall be applied only when the surface is dry and clean, and the air temperature is over 10 deg. C.

11.12.4 Tack coat shall be uniformly applied with an approved pressure distributor at a rate of 0.25 litres per square metre. The temperature of the material shall be maintained between 32 deg. C and 38 deg. C.

11.12.5 Traffic shall, where possible, be kept off tack coat areas. Where traffic has been allowed on the tack coat, these areas shall be thoroughly cleaned by a power-driven sweeper immediately prior to laying asphaltic concrete.

11.12.6 No hot mix shall be placed upon the tack coat until it has dried to a proper condition of tackiness, as determined by the Engineer.

11.12.7 Work shall be planned so that no more tack coat than is necessary for the days operation is placed on the surface.

11.13 TRANSPORTATION OF HOT PLANT MIX

11.13.1 Trucks used for the transport of hot mix shall be equipped with tarpaulins and with insulated boxes where required. Trucks shall not leak fuel or lubrication oils.

11.13.2 Inside surfaces of truck boxes shall be free of all deleterious materials and lubricated with suitable thin oil or soap, but excessive use of lubricant will not be permitted.

11.13.3 Loads shall be delivered continuously in covered trucks to provide a uniform, non-stop paving operation.

11.13.4 Delivery of the mix shall be scheduled to permit completion of the paving operation in daylight hours unless otherwise approved by the Engineer.

11.14 **PLACEMENT**

11.14.1 Surfaces onto which asphaltic concrete pavement is placed shall be dry, above 5 deg. C, and cleaned of all loose and foreign materials. Mixtures shall normally not be laid when the atmospheric temperature is less than 5 deg. C and falling.

11.14.2 The mixture temperature at time of placing shall be not less than 120 deg. C or greater than 150-160 deg. C or as required by the mix design.

11.14.3 An approved, self-propelled mechanical paver shall be used to spread the mixture to the specified thickness. The paver speed shall be adjusted to correspond to the rate of delivery to provide a uniform, non-stop paving operation.

11.14.4 The Contractor may use such methods as approved by the Engineer in narrow areas, irregular sections, intersections, turnouts or driveways, where it is impractical to spread with a paver.

11.14.5 Minor inequalities in spreading and shaping the paved surface adjacent to existing structures such as manholes, catch basins or valves shall be performed to a condition satisfactory to the Engineer.

11.15 **COMPACTION**

11.15.1 **Equipment**

(a) Unless otherwise directed by the Engineer, the Contractor shall furnish a minimum of two (2) self-propelled rollers to roll and compact the asphaltic concrete mixture. All rollers shall be in good condition and capable of reversing without backlash.

(b) One roller shall be an approved self-propelled smooth steel wheeled type capable of exerting a compression on the main roll of at least 4000 kg per metre of width.

(c) The other roller shall be an approved self-propelled pneumatic tired type weighing not less than 10 tonnes. The wheels of the pneumatic tired roller shall be so constructed that the contact pressure can be made uniform for all wheels and the tire pressure of the several tires shall not vary by more than 20 kPa.

11.15.2 General

- (a) Compaction shall commence immediately after the bearing capacity of the course is adequate to support compaction equipment without undesirable displacement or cracking.
- (b) Maximum speed for initial rolling shall not exceed 5 km/h, and subsequent rolling, 8 km/h. Speeds shall be maintained at all times such that displacement of asphaltic concrete does not occur.
- (c) During the rolling operation, roller wheels shall be kept moist with only enough water to avoid picking up material. Fuel oil, lubricating oil, or kerosene shall not be permitted as lubricants for the surface of the roller wheels.
- (d) The line of rolling shall not be suddenly changed nor the direction of rolling suddenly reversed. Pronounced changes in direction shall be made on stable material.
- (e) Heavy equipment including rollers shall not be permitted to stand on the finished surface before it has been compacted and thoroughly cooled.
- (f) Where rolling causes displacement of material, loosen affected areas immediately with lutes or shovels and restore to original grade of loose material before re-rolling.
- (g) Should the testing results or the Contractor's quality control indicate compaction requirements are not being met, the Contractor shall immediately modify his compaction procedure to satisfy the compaction requirements.

11.15.3 Breakdown Rolling

Breakdown rolling shall immediately follow the rolling of transverse and longitudinal joint and edges. Rollers shall be operated as close to the paver as necessary to obtain adequate density without causing undue displacement. Initial rolling shall be performed by steel wheel rollers with the drive roll or wheel forward in the direction of paving. Rolling shall commence on the low side of the mat and progress to the high side.

11.15.4 Secondary Rolling

Secondary rolling shall be performed by pneumatic tired rollers, shall follow the initial rolling as closely as possible, and shall be continuous until the mix has been thoroughly compacted.

11.15.5 Finish Rolling

Finish rolling shall be by steel wheel roller to remove all marks left by pneumatic rolling.

Finish rolling shall be accomplished with the minimum number of passes required to produce a satisfactory surface.

11.16 JOINTS

11.16.1 General

- (a) All transverse and longitudinal joints shall be painted with a thin tack coat immediately prior to paving. Application of tack coat to longitudinal joints may be omitted if the previously laid pavement has not cooled to less than 50 deg. C.
- (b) Transverse joints in succeeding courses shall be offset a minimum of 600 mm. In adjacent lanes they shall be offset a minimum of 3 m.
- (c) Longitudinal joints in succeeding courses shall be offset 150 - 200 mm.
- (d) Wherever possible, longitudinal joints shall be located under future traffic markings (paint lines).

11.16.2 Transverse Joints

Transverse joints shall have a vertical face and shall be carefully constructed and thoroughly compacted to provide a smooth riding surface over the joint. Horizontal alignment of joints shall be straight-edged to ensure smoothness. Rolling of transverse joints shall be performed immediately after raking is completed.

11.16.3 Longitudinal Joints

Longitudinal joints shall have a vertical face and shall be rolled directly behind the paving operation. Joints shall be rolled by passing the roller on the previously compacted lane letting one wheel project 100 mm to 150 mm on the new lane. A minimum of 2 passes shall be required to thoroughly compact this narrow strip down to and even with the existing lane.

11.16.4 Edges

Pavement edges shall be rolled concurrently with the longitudinal joints and shall not be exposed more than 15 minutes before rolling. After longitudinal joints and edges have been compacted, longitudinal rolling shall start at the edge and progress to the centre of the pavement, overlapping at least one-half the width of the roller with each successive pass. On super-elevated curves, rolling shall begin on the low side and progress to the high side.

11.17 CLEANING

The Contractor shall thoroughly remove from all culverts, catch basins, curbs, gutters and other structures such contamination by asphaltic or other materials as may have occurred during the performance of the work.

11.18 TESTING

11.18.1 The Consulting Engineer will arrange for a testing firm to carry out tests to determine whether the applicable standards and specifications have been met. Where initial testing indicates non-compliance with the specifications, additional testing shall be required at the Contractor's expense.

11.18.2 The Contractor as directed by the Engineer shall supply specimens or samples for testing.

11.18.3 The test programs listed below are the minimum testing requirements. The Engineer shall determine if additional testing is required.

(a) Aggregates

(i) One aggregate gradation test shall be carried out either for each 300 tonnes of production or a minimum of once per day (ASTM C136).

(ii) Additional testing as outlined in Section I1.3 as required by the Engineer.

(b) Asphaltic Concrete

One Marshall test consisting of three briquettes for every 300 tonnes of production, or a minimum of one test per day shall be performed to determine the following: (ASTM D1559)

- I. Marshall stability
- II. Specific gravity
- III. Air voids and voids in mineral aggregate (VMA)
- IV. Flow index
- V. Asphalt content extraction

(c) Compaction

- I. Upon completion of the asphalt paving operation, one core from each 300 tonnes of pavement shall be obtained at allocations determined by the Engineer for the purpose of determining the asphaltic concrete density in accordance with ASTM D1559, and the asphaltic concrete thickness.

- II. Final compaction results shall be expressed as a percentage compacted density that is defined as follows: $\frac{\text{Percentage compacted density}}{\text{Density of sample} \times 100}$ Laboratory design density
 - III. Test result data will be subjected to statistical analysis and the final compaction shall not be considered satisfactory unless the mean and the standard deviation of the test result data is in accordance with Section II.31
- (d) Other testing may be required to confirm conformance of materials and workmanship to the specifications.
- 11.18.4 The test programs outlined above are minimum requirements and may be modified by the Engineer. Full testing may be required during the first few days of paving to determine quality control and construction procedures. As paving progresses sufficient tests to maintain uniformity will be required.
- 11.18.5 Inspection and testing by the Engineer and Consulting Engineer shall not relieve the Contractor of his responsibility for quality control.
- 11.18.6 Asphaltic concrete found to be in non-compliance with the specifications shall be repaired or replaced by the Contractor at no additional cost to the Owner. The Contractor shall submit to the Engineer for approval his proposed method to correct the noted deficiencies, prior to commencing the work.

11.19 ACCEPTANCE REQUIREMENTS

- 11.19.1 The finished grade surface shall be free from bumps, depressions or other irregularities and shall be within 6 mm of the design grade and cross-section, but not uniformly high or low, when measured with a three (3) metre straight edge in any direction.
- 11.19.2 The finished elevation of the compacted asphaltic concrete shall be 0 - 6 mm above the finish elevation of structures, including but not limited to curbs, gutters, manhole lids, catch basins, valve boxes and survey monuments.
- 11.19.3 The finished surface of the asphaltic concrete shall be homogenous, free from segregation and consistently uniform in surface texture.
- 11.19.4 Asphaltic concrete shall be compacted to 97% mean compacted density when tested in accordance with Section 11.30. Maximum acceptable standard deviation of test data shall be 1.5% with no individual test results less than 95% compacted density.
- 11.19.5 Asphaltic concrete thickness, as measured on all test cores, shall not be less than the specified thickness.

Schedule "D"
Contract General Conditions

1. Payment

Payment by the Town, subject to any holdbacks under the *Builder's Lien Act (British Columbia)* or any amounts held back under the Contract for deficiencies or other reason will be made within thirty (30) days after completion of the Work and/or delivery of tendered equipment, receipt of invoice, and acceptance by the Town. The Work will not be accepted for payment until all conditions and tendered specifications have been met.

2. Notices

Any notice required to be given in this contract shall be deemed to be duly given to the Town if sent by registered mail addressed to the Town of Ladysmith, PO Box 220, Ladysmith, BC V9G 1A2 and to the contractor if sent by registered mail at the address set forth in the Tender.

3. Ownership of Tender & Freedom of Information and Confidentiality

All documents submitted in response to this Tender shall become the property of the Town and as such will be subject to the disclosure provisions of the *Freedom of Information and Protection of Privacy Act*.

The Tenderer should advise the Town in writing if any information is supplied as part of the Tender processing confidence and to which Section 21 of the *Freedom of Information and Protection of Privacy Act* applies.

4. Queries

All queries regarding the technical specifications forming part of this Tender may be made by contacting Len Thew by phone: (250) 245-6447 or email: lthew@ladysmith.ca.

5. Indemnification

In carrying out these works, the Supplier will act as an independent contractor and must agree to keep the Town indemnified against any and all claims, actions or demands that may be brought, made or arise in respect of anything done or omitted to be done by its employees who shall be and remain at all times and for all purposes, the servants or employees of the Supplier.

6. Insurance

The Supplier shall submit to the Town, upon acceptance of the tender, a Certificate of Insurance containing the following:

- a provision naming Town of Ladysmith as an additional insured to the Liability Policy;
- a Cross Liability Clause;
- Comprehensive General Liability in an amount not less than **\$5,000,000.00**;
- A provision requiring the Insurer to give the Town 30 days' notice of cancellation or lapsing or any material change in the insurance policy;
- Liability insurance in an amount not less than **\$5,000,000.00** with the Insurance Corporation of British Columbia on any licensed motor vehicles of any kind.

7. Safety

In tendering for this work, the Supplier, when called upon to enter into contract with the Town, will be bound to comply with and be subject to the provisions, rules and regulations of the Workers' Compensation Act, and with all other Statutes and Municipal by-laws pertaining to the work.

All materials delivered and services provided must be in accordance with all laws, regulations and requirements of B.C. Workers' Compensation Board and Occupational Health and Safety Legislation.

Proof of WorkSafe registration must be submitted, along with proof of up-to-date assessment payment, prior to commencement of work.

8. Sub-Contracting

Sub-contracting of work is not permitted without prior approval, in writing, from the Director of Infrastructure Services.

9. Quantities

Anticipated quantities listed in the tender forms are estimated annual requirements based on historical and anticipated usage. The Town will not be responsible for any variations in usage.

10. Cancellation

The Town reserves the right to cancel this Tender at any time and for any reason, and will not be responsible for any loss, damage, cost or expense incurred or suffered by any Tenderer as a result of that cancellation.

The Town reserves the right to cancel the Contract, at its sole and absolute discretion, with 30 days' written notice to the Contractor, and the Contractor will have no rights or claims against the Town. Cancellation would not, in any manner whatsoever, limit the Town's right to bring action against the Contractor for damages for breach of contract.

11. Tenderers' Expenses

Tenderers are solely responsible for all their own costs/expenses relating to the preparation and submission of tenders. If the Town elects to reject all tenders, the Town will not be liable to any tenderer for any claims, whether for costs or damages incurred by the tenderer in preparing the tender, loss of anticipated profit in connection with any final Contract, or any other matter whatsoever.

12. Limitation of Damages

Without limiting the provision of the previous clause, the Tenderer, by submitting a Tender, agrees that it will not claim damages, for whatever reason, relating to the Contract or in respect of the competitive process, including any costs incurred by the Tenderer in preparing its Tender and the Tenderer, by submitting a Tender, waives any claim for loss of profits if no Contract is made with the Tenderer.

13. Responsibility of Tenderers

Each tenderer is responsible for informing themselves as to the contents and requirement of this tender including the Town's Purchasing Policy, which governs the award of this tender. The Purchasing Policy may be requested from City Hall. Each tenderer is solely responsible to ensure that they have obtained and considered all information necessary to understand the requirements of the tender and to prepare and submit their tender. The Town will not be responsible for any loss, damage or expense incurred by a tenderer as a result of any inaccuracy or incompleteness in this tender, or as a result of any misunderstanding or misinterpretation of the terms of the tender on the part of any tenderer.

If a Tenderer is in doubt as to the true meaning of any part of this Tender, or finds omissions, discrepancies or ambiguities, a request for interpretation or correction may be submitted to the office of Manager of Corporate Services and, if deemed necessary by the Town, an addendum will be issued to all firms registered as having received this Tender. This procedure also applies should the Town, of its own accord, wish to expand or delete any part of this Tender.

14. Accuracy of Information

The Town makes no representation or warranty, either expressed or implied, with respect to the accuracy or completeness of any information contained in or referred to in the Tender.

15. Dispute Resolution

In the event of a dispute between the Town and the Supplier, both parties agree to appoint representatives who, in good faith, will use their best efforts to resolve the dispute.

Should the representatives be unable to promptly resolve the dispute, both parties shall agree to continue the work as required, being understood that neither party will jeopardize any claim that they may have.

Both parties agree to resolve the dispute using a single arbitrator as provided for under the Commercial Arbitration Act of British Columbia with the costs being split equally between the parties.

Any verbal representations, promises, statements or advice made by any employees of the Town, other than that offered through the Manager of Corporate Services, should not be relied upon.