

ITEM 6
MANAGER'S REPORT NO. 42
COUNCIL MEETING 1978 05 29

RE: TENDERS FOR CONTRACT #7802
STORM SEWER AND LOCAL IMPROVEMENT WORK
NORLAND AVENUE - DOUGLAS ROAD TO LAUREL STREET

The following is a report from the Purchasing Agent re tenders for Contract #7802.

RECOMMENDATION

1. THAT the lowest tender in the amount of \$945,594.56 submitted by Jack Cewe Limited be accepted with final payment to be based on the actual quantities and unit prices tendered.

* * * * *

TO: MUNICIPAL MANAGER

DATE: 1978 May 23

FROM: PURCHASING AGENT

RE: TENDERS CONTRACT #7802, STORM SEWERS AND LOCAL IMPROVEMENT WORK, NORLAND AVENUE - DOUGLAS ROAD TO LAUREL STREET

Tenders for this project were received up to 15:00 h local time on Tuesday, 1978 May 23rd.

The work of this contract consists of the supply and installation of materials, including all labour, equipment, plant and tools related to the construction of pile foundations for storm sewers, installation of storm sewers, ancillary sewer work and road works.

Approximate Quantities Involved Are:

Storm Sewer, 600 mm dia. to 900 mm dia.	750 metres
Pile Caps	210 each
Timber Piling	4,500 metres
Granular Materials	23,000 tonnes
Asphaltic Concrete for Roads	4,800 tonnes

Funds for this project are included in the 1978 Capital Budget.

The Corporation will make an equitable adjustment to contract unit prices where the asphalt work is affected by the following defined energy related material changes in price.

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AVENUE - DOUGLAS ROAD TO LAUREL STREET

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During the contract term, the Contractor shall advise the Engineer in writing of any changes in the manufacturer's posted published prices, including Federal Excise Tax. The unit prices of asphaltic concrete mix shall be adjusted for payment purposes using the following proportions as a basis of calculation:

Liquid Asphalt	- 6% liquid asphalt by weight
Heating Oil	- 3 Imperial gallons per ton of asphaltic mix supplied.
Natural Gas	- Five Therms per ton of asphaltic concrete mix supplied.
Propane, Butane	- Six Imperial gallons per ton of asphaltic concrete mix supplied.

The Contractor shall list with his tender the posted prices, rates or tariffs of each of the above materials together with a list showing his plants to be used and the materials used at each plant.

Changes in costs of other energy sources such as electricity, gasoline, lube oil, diesel fuel for trucks shall be allowed for in the Contractor's unit prices and shall not be paid for by the Corporation.

The Engineer's estimate of the total work bid under this contract is \$991,000.

All work included in this contract shall be completed within one hundred (100) consecutive working days after commencement of construction.

Five tenders were received and opened in the presence of Messrs. Hagen, Nuttall and representatives of the firms bidding.


A tabulation of the tenders received is attached.

A copy of the schedule of approximate quantities coupled with the unit prices submitted by the lowest bidder, Jack Cewe Limited, is also attached.

The Municipal Engineer and the Purchasing Agent submit the following recommendations:

RECOMMENDATION:

That the lowest tender in the amount of \$945,594.56 submitted by Jack Cewe Limited be accepted with final payment to be based on the actual quantities and unit prices tendered.


K.F. Williams,
PURCHASING AGENT

KFW/gbw
Attachment

c.c. Municipal Clerk
Municipal Engineer

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THE CORPORATION OF THE DISTRICT OF BURNABY
TABULATION OF TENDERS FOR
CONTRACT #7802 STORM SEWERS AND LOCAL IMPROVEMENT WORK,
NORLAND AVENUE - DOUGLAS ROAD TO LAUREL STREET

PURCHASING DEPARTMENT
1978 May 23

NO.	COMPANY	TOTAL
1	Unger Construction Co. Ltd.	\$1,067,964.00
2	H.B. Contracting Ltd.	1,101,109.16
3	Winvan Paving Ltd.	961,286.46
4	Jack Cewe Ltd.	945,594.56
5	Gosal Bros. Contracting Ltd.	1,208,664.80

THE CORPORATION OF THE DISTRICT OF BURNABY
SCHEDULE OF APPROXIMATE QUANTITIES AND UNIT PRICES

CONTRACT #7802

STORM SEWERS AND LOCAL IMPROVEMENT WORK
NORLAND AVENUE - DOUGLAS ROAD - LAUREL STREET

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Quantities in this Schedule are approximate and for tender purposes only. Payment will be made on actual measured quantities of completed work units. Unit prices shall govern and extensions may be corrected if in error. Unit prices tendered shall be used for the purpose of comparison of tenders, for calculating progress payments or for authorized additional works or reductions and shall include the supply of all materials, labour, equipment and plan for complete installation or construction of the items specified below.

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ALL QUOTATIONS MUST BE TYPEWRITTEN

DIVISION I - SEWERS

Item	Description	Approx. Quantity	Unit Price	Extended Total
	Supply and install sewer pipes - depths are given to invert of pipe.			
A.	Main Line Sewer in trench as shown st'd. Drawing L423.			
1.	300mm dia PVC Cl. SDR 35			
	(a) over 0m - 2m	15m	144.38	2,165.70 ✓
	(b) over 2m - 3m	5m	144.75	723.75 ✓
2.	675mm dia. CL III RC			
	(a) over 0m - 2m	25m	198.14	4,953.50 ✓
	(b) over 2m - 3m	10m	198.87	1,988.70 ✓
B.	Main Line Sewer supported on 610mm wide by 19mm thick fir plywood, complete including supply and installation of all materials including plywood.			
1.	300mm dia. CL. SDR 35 PVC			
	(a) over 0m - 2m	25m	141.54	3,538.50 ✓
	(b) over 2m - 3m	10m	141.97	1,419.70 ✓
C.	Main Line Sewers on Piles			
1.	Class III specially reinforced beam pipe complete			
	(a) 600mm dia.			
	over 0m - 2m	355m	257.74	91,497.70 ✓
	over 2m - 3m	10m	258.47	2,584.70 ✓
	(b) 675mm dia.			
	over 0m - 2m	55m	274.88	15,118.40 ✓
	over 2m - 3m	10m	275.61	2,756.10 ✓
	(c) 750mm dia.			
	over 0m - 2m	4m	282.93	1,131.72 ✓
SUB-TOTAL THIS PAGE				127,878.47

Item	Description	Approximate Quantity	Unit Price	Extended Total						
<table border="1" style="float: right; margin-right: 20px;"> <tr> <td>ITEM</td> <td style="text-align: right;">6</td> </tr> <tr> <td>MANAGER'S REPORT NO.</td> <td style="text-align: right;">42</td> </tr> <tr> <td>COUNCIL MEETING</td> <td style="text-align: right;">1978 05 29</td> </tr> </table>					ITEM	6	MANAGER'S REPORT NO.	42	COUNCIL MEETING	1978 05 29
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C.	Main Line Sewers on Piles - cont'd ...									
1.	Class III, specially reinforced beam pipe complete. (d) 900mm dia. over 0m - 2m	235m	393.56	92,486.60 ✓						
	over 2m - 3m	12m	393.93	4,727.16 ✓						
2.	Class III, ASTM C76 R.C. pipe supported on Grade Beams and Piles. (a) 675 mm at transition between std. Dwg. L-423 trench and beam pipe on piles.	7.1m	220.94	1,568.67 ✓						
	(b) 900mm, 90 degree mitred bends at approximately sta. 8 + 25 and 9 + 55. Unit price to include pipe, mitres and assembly as detailed on Drawings, sheet 7. Price to include Tee for MH 7.1	19.5m	563.68	10,991.76 ✓						
	(c) 900 mm 90 mitred bend complete as detailed on sheet 7. Approx. sta. 9 + 20. Unit price to include Tee for M.H. 6.	1 each	888.00	888.00 ✓						
	(d) 900 mm complete with 600mm, Tee for MH 7.	1 each	214.15	214.15 ✓						
D.	Concrete pile caps and grade beams on piles. Supply and install complete.									
1.	Pile caps complete for 600mm, 675mm, 750mm and 900mm beam pipe including those caps incorporated in Grade Beams.	200 each	321.83	64,366.00 ✓						
2.	Grade beams complete as detailed on sheets 6 and 7, unit price not to include pile caps.									
	(a) 675 mm at transition at approx. sta. 15+40	7.5m	207.16	1,553.70 ✓						
	(b) 900mm at mitred bands measured along centre line of grade beam from centre to centre of end pile caps.	19.3m	381.82	7,369.13 ✓						
	(c) 900mm at 90 degree mitred bend approx. sta. 9 + 20 at MH 6.	1 each	379.88	379.88 ✓						
SUB-TOTAL, THIS PAGE				184,545.05 ✓						

Item	Description	Approximate Quantitay	Unit Price	Extended Total
D.	Concrete pile caps and grade beams on piles. Supply and install complete-contd..			
2.	Grade beams complete as detailed on sheets 6 and 7, unit price not to include pile caps. (d) 900mm at M.H.'7	1 each	563.96	563.96
E.	Manholes and Cleanouts.			
1.	Manholes 1.1 and 1 not supported on piles. (a) 1050mm complete (b) 1200mm complete	1.3m 2.2m	729.12 512.00	947.86 1,126.40
2.	Manholes supported on piles complete including concrete slab, benching, and constructed to top of cast iron cover as detailed on sheets 8 and 9. (a) M.H. No. 2 (b) M.H. No. 3 (c) M.H. No. 4 (d) M.H. No. 4.1 (e) M.H. No. 5 (f) M.H. No. 6.1 (g) M.H. No. 8	1 each 1 each 1 each 1 each 1 each 1 each 1 each	1750.00 1409.00 3624.00 1409.00 1523.00 2067.00 3798.00	1,750.00 1,409.00 3,624.00 1,409.00 1,523.00 2,067.00 3,798.00
3.	Barrels and castings for M.H. 6, 7 and 7.1 complete. Measured vertically from inside of Bell on Tee to top of cast iron lid.	3 each	428.00	1,284.00
4.	Cleanouts - Complete including concrete raft all as detailed on sheets 7.	2 each	590.00	1,180.00
F.	Timber Piling, Supply and Install.			
1.	Size 14 piles untreated. CSA spec. 056 for round timber piles. Fir or Cedar only, approx. 430 piles.	4355m	8.98	39,107.90
2.	Redrive unseated piles	20 each	44.38	887.60
3.	Withdraw and redrive piles if required as directed by the Engineer.	5 each	342.00	1,710.00
G.	Catch Basins			
1.	Type V - complete per std. Dwg.L-4288	2 each	603.00	1,206.00
2.	Type V R complete including timber raft as detailed on sheet 9 and Sk.1	35 each	813.33	28,466.55
				92,060.27

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Item	Description	Approximate Quantity	Unit Price	Extended Total
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G.	Catch Basin - cont'd ..			
3.	Type IR complete. C.B. to be in accordance with std. Dwg. L-416 including support on timber raft as detailed on Sheet 9.	3 each	546.00	1,638.00 ✓
4.	Type VI complete in accordance with std. Dwg. L-1027.	8 each	146.00	1,168.00 ✓
H.	Catch Basin Leads. PVC. CL. SDR. 35 pipe. Supply and install complete with 610mm by 19mm. Fir plywood support. Wyes, elbows, Tees, and couplings are paid under Item J, Division I.			
1.	150mm dia. over 0m - 2m over 2m - 3m	220m 50m	95.02 95.38	20,904.40 ✓ 4,769.00 ✓
2.	200mm dia. over 0m - 2m over 2m - 3m	45m 15m	100.30 100.72	4,513.50 ✓ 1,510.80 ✓
3.	250mm dia. over 0m - 2m over 2m - 3m	30m 8m	110.56 110.93	3,316.80 ✓ 887.44
I.	Service Connections. PVC. CL. SDR. 35 pipe. Supply and install complete with 610mm by 19mm. Fir plywood support. Wyes, bends, Tees, and couplings are paid under Item J. Division I.			
1.	250mm dia. over 0m - 2m over 2m - 3m	320m 40m	105.06 105.42	33,619.20 ✓ 4,216.80 ✓
2.	300mm dia. over 0m - 2m over 2m - 3m	4m 2m	110.53 110.93	442.12 ✓ 221.86 ✓
3.	Vertical risers at Property Line. (i) 100mm dia. (ii) 150mm dia. (iii) 200mm dia. (iv) 250mm dia.	5m 5m 5m 5m	133.15 146.00 164.00 200.00	665.75 ✓ 730.00 ✓ 820.00 ✓ 1,000.00 ✓
4.	Type A Connections Std. Dwg. L-944 (i) 100mm dia. (ii) 150mm dia. (iii) 200mm dia.	10m 50m 100m	94.14 95.13 100.47	941.40 ✓ 4,756.50 ✓ 10,047.00 ✓
J.	PVC, CL. SDR 35. Fittings. Supply and install for service connections and catch basin leads.			
1.	Wyes - all diameters ranging from 100mm to 300mm.	20 each	79.06	1,581.20 ✓
2.	Tees - all diameters ranging from 100mm to 300mm	5 each	31.07	155.35 ✓
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SUB-TOTAL THIS PAGE				97,905.12 *

Item	Description	Approximate Quantity	Unit Price	Extended Total						
J.	PVC, CL. SDR 35. Fittings. Supply and install for service connections and catch basin leads - cont.									
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3.	Bends - 11 $\frac{1}{2}$ ^o , 22 $\frac{1}{2}$ ^o , 45 ^o , and 90 ^o .									
	(a) 100 mm dia.	2 each	11.10	22.20 ✓						
	(b) 150 mm dia.	90 each	21.10	1,899.00 ✓						
	(c) 200 mm dia.	10 each	28.85	288.50						
	(d) 250 mm dia.	5 each	43.27	216.35						
4.	Reducers - all diameters ranging from 100 mm to 250 mm.	5 each	40.10	200.50 ✓						
5.	Calder Couplings or Equivalent.									
	(a) 150 mm	20 each	13.14	262.80 ✓						
	(b) 200 mm	3 each	26.21	78.63						
	(c) 250 mm	35 each	33.63	1,177.05 ✓						
	(d) 300 mm	2 each	42.66	85.32						
TOTAL				506,619.26 ✓						

K.	Service Connections and catch basin lead tie in to main line storm sewer.			
1.	Core main line storm sewer and supply and install ductile.			
	Iron Stubs			
	(a) 150 mm dia.	20 each	98.00	1,960.00 ✓
	(b) 200 mm dia.	3 each	104.00	312.00 ✓
	(c) 250 mm dia.	35 each	112.00	3,920.00
	(d) 300 mm dia	2 each	119.00	238.00 ✓
TOTAL				6,430.00 ✓

L.	Imported Backfill for trenches.			
1.	Hog Fuel	6,000 cub. m	2.80	16,800.00 ✓
2.	Granular Pit Run	5,000 tonnes	3.55	17,750.00 ✓
TOTAL				34,550.00 ✓

Item	Description	Approximate Quantity	Unit Price	Extended Total
M.	Open ditching and related work.			
1.	Excavate new open ditch or swale - Laurel Street	90 m	6.26	563.40
2.	Regrade existing ditches as shown on drawings	150 m	4.98	747.00
3.	Temporary timber inlet structure as detailed on Sheet 7 complete.	1 each	1830.00	1,830.00
4.	Temporary Sand-Cement bag outlets. Supply and install Sand-Cement bags (approximately .01 cu. m)	500 each	4.87	2,435.00
5.	Remove and dispose of existing headwall north of proposed M.H. 1	1 each	71.00	71.00
6.	Remove and dispose of existing manhole at approximately station 15+05	1 each	129.00	129.00
TOTAL				5,775.40

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N.	Miscellaneous			
1.	Regrade and relay existing sewer connections.	10 m	108.60	1,086.00
2.	Concrete jacketting around sewer pipe where directed by the Engineer	5 cu. m	73.00	365.00
3.	Overexcavation in transition area at approximately station 15 + 40. Volume to be calculated from invert of pipe to solid ground as directed by Engineer. Maximum width to be paid will be 3 times diameter of pipe (I.D.)			
	(a) from 0 m to 2 m	120 cu. m	10.96	1,315.20
	(b) from 0 m to 3 m	100 cu. m	12.37	1,237.00
	(c) from 0 m to 4 m	60 cu. m	16.49	989.40
4.	Solid rock excavation - ledge rock requiring blasting or boulders in excess of 0.5 cubic metres	5 cu. m	0.10	0.50
TOTAL				4,993.10
TOTAL DIVISION I				558,367.76

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SCHEDULE OF APPROXIMATE QUANTITIES AND UNIT PRICES

CONTRACT # 7802

DIVISION II - LOCAL IMPROVEMENT WORK

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Section I Site Preparation

This section covers all excavation for surface works. Materials must be excavated, loaded and transported to on site fill areas or disposed of to qualify for payment under this section. Unit prices for common excavation are to include cutting or filling subgrades to approximate design grades.

Item	Description	Approximate Quantity	Unit Price	Extended Total
1.	Clearing and grubbing - payment to be made per Clause 40 - General Conditions	Provisional Sum		\$12,000.00
2.	Common excavation for roadways, sidewalks, curb and gutters, and boulevards	6,000 cu. m	5.71	34,260.00
3.	Rubble excavation to include cutting and removal of asphalt or concrete pavements, curbs, sidewalks, curbs and gutters, masonry works and retaining walls.	400 cu. m	5.71	2,284.00
4.	Rock excavation	5 cu. m	0.10	0.50
5.	Handexcavation - payment to be made per Section 40 General Conditions	Provisional Sum		4,000.00
6.	Removal of existing drains including disposal or salvage as directed. See Clause 6, Special Provisions, Part III-B	650 m	10.21	6,636.50
TOTAL				59,181.00

Section II Grading

This section includes all grading of street and boulevard areas. Unit prices are to include grading of existing materials that can be used for base construction as well as the grading of new imported material.

7.	Boulevard grading † 25 mm in preparation to receive topsoil. See Clause 7, Special Provisions, Part III A.	5,500 sq. m	0.45	2,475.00
8.	Subgrade grading, shaping and compaction for roadways and driveways. See Clause 8, Special Provisions, Part III B.	15,500 sq. m	0.49	7,595.00
SUB-TOTAL TH. PAGE				10,070.00

Item	Description	Approximate Quantity	Unit Price	Extended Total
9.	Grading and compaction of gravel base materials for roadways in preparation for paving \pm 6 mm of design grade. See Clause 9, Special Provisions, Part III B.	15,000 sq. m	0.30	4,500.00
10 (a)	Grading and compaction of gravel base materials for driveways in preparation for paving \pm 6 mm of design grade. See Clause 10, Special Provisions, Part III B	3,100 sq. m	1.25	3,875.00
10 (b)	Fine grading temp gravel sidewalks	3,400 sq. m	0.62	2,108.00
TOTAL				20,553.00

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Section III Surface Drainage

This section includes drain tile as outlined in Part III-B Paragraph 12.

11.	Supply and Install drain tile including drain rock and filter bed.			
	(a) 150 mm dia.	300 m	16.79	5,037.00
	(b) 200 mm dia.	200 m	18.28	3,656.00
TOTAL				8,693.00

Section IV Adjustment of Existing Appurtenances

The unit prices given for the items in this section shall include all labour and materials required to adjust the various fixtures to finished design grades and/or alignment. These unit prices do not apply to new installations as the price in Division I for new installations includes final adjustment to grade.

12.	Vertical extension of Manholes.			
	(a) 300 mm section	2 each	244.00	488.00
	(b) 450 mm section	1 each	272.00	272.00
	(c) 600 mm section	1 each	297.00	297.00
13.	Manhole covers	8 each	171.00	1,368.00
14.	Valve box covers	40 each	37.00	1,480.00
15.	Catch basin grates	15 each	78.00	1,170.00
TOTAL				5,075.00

Section V Supply of Gravel, Sand and Aggregates

Unit prices for the following items are to include the supply, transportation and placing costs of the various aggregates and topsoil.

Item	Description	Approximate Quantity	Unit Price	Extended Total
16.	Pit run gravel for road and sidewalk construction.	10,000 tonne	4.21	42,100.00
17.	75 mm minus crushed gravel	1,000 tonne	5.46	5,460.00
18.	20 mm minus crushed gravel	9,500 tonne	5.85	55,575.00
19.	Pit run gravel behind retaining walls or other confined fill areas.	200 tonne	6.41	1,282.00
20.	40 mm x 20 mm crushed stone.	100 tonne	8.24	824.00
21.	Topsoil to a compacted depth of 100 mm on boulevards or as ordered	1,000 cu. m	15.97	15,970.00
22	Hog fuel, see Clause 7, Special Provisions Part III A.	1,000 cu. m	1.76	1,760.00
TOTAL				122,971.00

Section VI Asphaltic Concrete

This section covers all the various types and methods of placement of asphaltic concrete. Unit prices shall include the supply, transportation and placing of the asphaltic concrete types specified.

23.	Clean existing pavement and fill cracks	200 sq. m	0.55	110.00
24.	Tack coat	200 sq. m	0.13	26.00
25.	Asphaltic concrete Type IV.			
	(a) 0 - 2 m strip width	100 tonne	27.57	2,757.00
	(b) over 2 m strip width	6,000 tonne	15.51	93,060.00
26.	Asphaltic concrete Type V machine laid	300 tonne	17.35	5,205.00
27.	Asphaltic concrete Type V hand laid	100 tonne	31.86	3,186.00
28.	Asphaltic concrete extruded curb, per dwg. L-348	2,000 m	2.69	5,380.00
TOTAL				109,724.00

Section VII Street Lighting Appurtenances

The following items include various street lighting work necessary to complete the project streets for paving. Unit prices are to include all necessary excavation, bedding, supply of materials, installation and backfilling for the items listed.

Item	Description	Approximate Quantity	Unit Price	Extended Total
<u>Pre-Ducting Only</u>				
29.	Supply and install P.V.C. Conduit 30 mm diameter	20 m	51.49	1,029.80
TOTAL				1,029.80
TOTAL DIVISION II				327,226.80

DIVISION III CONTINGENCY WORK

The allowance in this section is to cover unforeseen work which may be required on the projects for which unit prices have not been provided.

30.	Contingency work - payment to be made per Section 40, General Conditions.	Provisional Sum		\$60,000.00
TENDER TOTAL				945,594.56