

SPECIFICATION AND SCHEDULE OF PRICES FOR:-

Construction of an artificial lake and
hard surface surround, Glen Lynn
subdivision. Hamilton.

Contract No.....

Tenders close noon.....

Deposit with Tender.....

Submitted in partial
fulfilment of the
requirements for the
Diploma of Landscape
Architecture in the
University of Canterbury

by

W.H. McLeary NDH (N.Z.)

Lincoln College
1972

CONTENTS

- Part (A) Conditions of tender
- (B) Special conditions of Contract
- (C) Technical specifications: Excavator
- (D) " " Concretor
- (E) " " Bricklayer
- (F) " " Landscape Contractor
- (G) Sheet No. 6 of the folio of plans entitled
Construction Layout Plan.

Costing - Schedule of quantities

Excavator

Concretor

Bricklayer

Landscape Contractor

Summary of schedule of Quantities.

PART (A)CONDITIONS OF TENDER1. Standard Conditions of Tender.

The Conditions of Tender for this Contract shall be Part 2 of the Conditions of Contract NZSS 623. 1964 (printed) together with the following amendments and additional clauses.

2. Amendments to Part 2 - Tender.

Clause 2.1.1. The word "Engineer" shall be amended to read "Landscape Architect"

3. Additional Clauses.(i) Interpretation of Specification

Should there be any doubt or obscurity as to the meaning of any of the documents comprising the Contract, or as to anything to be done or supplied, or as to any other matter or thing, the persons tendering must set forth such doubt or obscurity in writing and submit the same with the tender, together with a clear indication as to what is provided for in the tender.

(ii) Variations to Specification

Unless otherwise stated in the tender, the tenderer will be assumed to have accepted without reservation or amendment the whole of the specification. If the tender is conditional upon any amendments to the specification, such amendments must be clearly stated in a separate document to be submitted with the tender. Any amendments or additions so submitted will not be binding on the client unless incorporated in any contract which may be made between the client and the Tenderer.

(iii) Accuracy of Tender.

The client accepts no responsibility for the arithmetical or other accuracy of any tender. Should it transpire after the contract has been let that there are arithmetical mistakes in the accepted tender which would have increased the total amount of the tender had such mistakes not been made, the contractor shall not be entitled to any payment in respect of such mistakes.

4. Withdrawal of Tender

Should any tenderer withdraw his tender after tenders close, then the amount of deposit accompanying the tender may without prejudice to any other rights or remedies of the client be forfeited absolutely to the client as for liquidated damages.

5. Tenders to be on the Official Forms

Tenders shall be submitted on the Official Form of Tender and shall be accompanied by the Official Schedule of Bill of Costs, both duly completed by the Tenderer, signed and sealed and delivered to the Landscape Architect no later than noon of the day, 1972.

6. Informality in Tenders

The Landscape Architect reserves the right to waive any informality in any tender.

7. Validity of Tender

Tenders shall remain valid for a period of 90 days immediately following the date of the closing of tenders.

8. Bill of Costs

Tenderers shall submit with their Tender a copy of the Bill of Costs duly priced and completed in all respects.

PART (B)SPECIAL CONDITIONS OF CONTRACT

(Modifying or Extending the General Conditions of Contract as published in New Zealand Standard Specification No. 623, 1964 and subsequent amendments)

1. Nature location and extent of work:

This is a lump sum contract for the development of an artificial lake over an existing stream bed and trench. The lake will have a surface area of approximately one acre on completion. The volume of soil to be excavated is approximately 7,758 cubic yards.

Excavation and backfill with sandmix is necessary to provide and lay approx. 30,600 square foot of brickwork paving, drains, catchpits and outdoor furniture is also to be provided and erected.

The work is to be carried out in accordance with the provisions of the Contract Documents which include-

- (a) These conditions of contract
- (b) The conditions of Tenders, and General Conditions of Contract for Civil Engineering Work being NZSS 623 (incorporating amendments Nos 1 and 2) a copy of which is available for inspection at the Landscape Architects Office.
- (c) The Specifications
- (d) The drawings
- (e) The Schedule of Quantities.

2. Schedule of Quantities

The Contractor shall submit a complete schedule of quantities and prices showing how the lump sum has been calculated. Any alterations and additions will be based upon these prices. The Contractor is required to verify for himself the accuracy of the schedule, and any items not schedule or wrongly scheduled but required for the completion of the job must be inserted. Documented evidence of actual earthwork and/or material quantities must be provided with any claims for extra payment.

3. The Site

Tenderers shall inspect the site and make themselves conversant with it and verify the conditions regarding the contract, and shall also verify the ground levels, Site B.M. level and dimensions before submitting a tender.

The Contractor shall use only such means of access to the site as the Landscape Architect shall approve and shall confine stockpiling of soil to those areas shown on the site by the Landscape Architect.

4. Completion

At the completion of the job, the site shall be left free of rubbish, and generally clean and smoothed over

ready for commencement by the Landscape Contractor, and shall be to the satisfaction of the Landscape Architect, before the Contractor removes his equipment from the site.

5. Drawings

The drawing, being those indicated on sheet No.6 of the folio of plans, and this specification shall be read in conjunction, and anything shown on the drawings and not specified and vice versa, shall be equally binding as though included in both. The drawings shall be held to illustrate the general character of the works, and parts not particularly detailed shall be constructed in accordance with the best trade practise for the class of work concerned.

6. Dimensions

Figures dimensions on drawings shall take preference to scaled dimensions, and large scale drawings shall be given preference to smaller scale.

7. Permits, Licences, Fees.

All permits, licences, and fees necessary for all portions of the work shall be obtained and paid for by the Contractor. The Contractor shall comply with the requirements of the Hamilton City Council.

8. Insurances

In addition to the policies required under the General Conditions, the Contractor shall effect a "Public Rish" policy of \$60,000 indemnifying himself in respect to accidents to persons other than his employees or members of his family, so that the client is fully protected from any claims arising from operations under his contract.

9. Temporary Services

The Contractor shall make arrangements for, provide and pay all fees for all temporary services, necessary for carrying out the work.

Water from the stream will not be allowed for concrete mixing work. Arrangements for a site for a temporary toilet must be discussed with the Landscape Architect.

10. Damage

The Contractor shall be responsible for, and shall make good at his own cost, any damage to existing properties, stream embankments outside the boundary of the contract area, services and existing trees that are to remain.

Those trees to be retained within the area of contract works shall be protected by erecting a wire barricade at least four feet out from the trunk perimeter.

Should, due to the type of excavation necessary, any tree require limbing to allow movement of equipment, the contractor shall immediately notify the landscape Architect and shall carry out his instructions in accordance.

11. Variations

No extra charge will be payable unless ordered in writing by the Landscape Architect, any verbal instructions are deemed to be instructions for the proper execution of the work, not involving extra charges.

12. Materials and workmanship

All materials and workmanship shall comply with the N.Z. Standard Specifications, the various specifications being relevant to each part of the work.

All workmanship shall be carried out in accordance with best trade practice.

13. Progress Payments

The Contractor shall submit a monthly claim in accordance with the Schedule of Quantities for the work done during the month.

Progress payments shall be made monthly on the certificate of the Landscape Architect and retention monies will be withheld in accordance with the Wages Protection and Contractors Liens Act, 1939 and subsequent amendments.

50 per cent of the value of all materials on the site intended and required for inclusion in the works, may be included in each payment.

14. Alterations and Additions

Any alterations or additions shall be carried out at the schedule rate for such work.

15. Engineer

The word "engineer" as defined in the NZSS 623 shall be interpreted, for the purpose of this contract to mean the Landscape Architect.

16. Commencement

Work shall be commenced not later than.....
1972.

17. Pumping

As excavation is not below normal creek level pumping should not be necessary. However, tenderers must inspect the site and determine for themselves if pumping or creek diversion is necessary according to the practise of operation they intend to adopt and a lump sum figure included in the schedule to cover this

contingency. Ignorance of these conditions will not allow grounds for later claims.

PART (C)

TECHNICAL SPECIFICATIONS

EXCAVATOR

Note; General Conditions and Conditions of Tender shall be read as they apply to this trade.

1. Nature, location and extent of work

This contract comprises the work of which a brief general description is given in Clause 1 of the Special Conditions of Contract. The works are specified more particularly hereunder.

1.1 Extent of Development. Excavate main lake area, excavate and surface plane area for hardsurfacing. Provide, lay and compact a clay liner over lake area floor.

1.2 Nature of development as shown on Sheet No.6 "Grading and staking plan" and "Design details and Drainage plan".

2. Formation

This shall consist of the development of the area to the grades and levels as shown on the plan. It shall include the clearing and removal or disposal of all willows existing within the limit of the contract. The compaction of the clay liner fill is to be to the standard specified and the surface is to be graded to within the tolerances permitted.

3. Clearing

All trees along with stumps and other obstacles encountered within the proposed lake area shall be removed, and burned in suitable places adjacent to the work as directed by the landscape Architect.

4. Removal of turf and topsoil

All topsoil or its equivalent together with grass sods shall be removed from the surface of the ground within the area of the cutting or other sections of the formation where practical before earthworks commence. The turf and topsoil suitable for re-use shall be stockpiled close to the site as instructed by the Landscape Architect for re-use by the Landscape Contractor.

Subsoil and material not considered by the Landscape Architect to be suitable for re-use shall be transported to the proposed childrens playground approximately 500 yards south of the site.

5. Batters

These will be at a grade of 1 vertical to 3 over the lake site except where shown on plan in the case of existing creek bed batters and shore line approach.

6. Earthworks

Earthworks shall consist of excavation of all cuttings, trimming of all batters to the grade as specified in clause 5 of the Technical Specifications and as set out on sheet No. 6 on a 50 ft staking grid, to the desired finished grade as shown.

A clay liner of 30 per cent clay content, and to the approval of the Landscape Architect shall be provided and spread over the lake site to compact to a final thickness of four inches.

Sandmix of an approved grade and capable of a compaction factor of 80 per cent shall be provided and spread over the hardsurface area. The sand shall be thoroughly compacted and surfaced planed to a final level four inches below the design level and left ready for the bricklayer to commence.

7. Standards of Compaction required

The following minimum standards of compaction shall be obtained throughout the full depth of every layer.

| Material | Percentage of B.S. Compaction Test B.S. 1377;1948 Test No. 9 |
|-----------|--|
| Sandmix | 80% |
| Clayliner | 85% |

8. Tidying up of Works

The Contractor shall leave the site of the works in a neat and tidy manner and piles of vegetation refuse or other materials shall be dealt with to the satisfaction of the Landscape Architect.

9. Maintenance of Work

The Contractor shall maintain all parts of the formation to the entire satisfaction of the Landscape Architect until the end of the maintenance period.

PART (D)CONCRETOR

Note; General Conditions and Conditions of Tender shall be read as they apply to this trade.

1. Scope of Work

All work as indicated in the drawings comprising of seat and picnic table anchor blocks, bridge footings, shore protection surrounds, gutterings and catchpits, and a reinforced concrete wier as detailed or specified.

2. Materials

(a) Cement; shall comply in every respect with the requirements of NZSS 43. Quick setting cements shall not be used.

(b) Aggregate;

1. General; Concrete aggregates shall consist of natural sands and gravels, crushed rock or stone, having hard, strong, durable particles and shall be entirely free from harmful amounts of alkali, organic matter, clay or any other deleterious substances. Aggregate shall not contain excessive quantities of thin, flakey or laminated fragments. The grading between the limits specified below shall be such as to produce a dense concrete of the specified strength and consistency which may be worked readily into position.

2. Fine Aggregates; Fine aggregate is to be sharp and gritty and of such size that 95% will pass through a 3/16" B.S. sieve.

Coarse grains must constitute the greater proportion of sand, and sand used must not contain excessive quantities of pumice.

3. Coarse Aggregate; The maximum size of coarse aggregate shall be $\frac{3}{4}$ " nominal, and not 5% of such aggregate shall be retained on a $\frac{3}{4}$ " B.S. sieve.

4. Water; Water used for mixing concrete shall be from the City supply, and not from the stream.

3. Concrete Strength;

All concrete used in the work, is to attain a strength of 2,500 lbs per sq. inch at 28 days. The cement content per cubic yard of finished concrete in place shall not be less than 470lbs in accordance with

High Grade Concrete in Amendments No. 3 of NZSS
1900 Chapter 9.3.

4. Site mixed concrete

Should the contractor desire to mix small quantities of concrete on the site it shall be carried out only with the approval of the Landscape Architect, to the materials used and the quantity of cement used in the mix.

5. Placing

No concrete shall be placed under unfavourable weather conditions or into forms or trenches in which water is lying. Immediately before placing concrete all form work shall be examined and all dirt, shavings, sawdust and other refuse completely removed. The inside face of all forms shall be wetted with clean water immediately before concrete is placed. Concrete shall be poured so that the aggregates do not segregate and it shall be thoroughly worked and consolidated around the reinforcing and into all parts of the form work taking care that no voids or cavities are left. Concrete will be poured in layers of such thickness and from such height as will enable this to be done. Care shall be taken that no shock or vibration reaches concrete until it is completely set and that reinforcing rods projecting is poured against any that has already hardened, the hardened surface shall be thoroughly cleared of all laitence and shall be washed free of dirt and allowed to dry. It shall be grouted with freshly mixed cement and water immediately before fresh concrete is placed. New concrete shall not be exposed to severe elements. All holding down bolts provided by the contractor shall be positioned in the concrete whilst pouring and secured in place by templates. Confer with the landscape contractor for exact location of holding down bolts for tables and seats. Confer with the steel worker for bolt sizes and positions of bolts for anchoring bridge trusses.

6. Boxing

All boxing shall be well fitted together and firmly secured into position for execution of works shown on the Drawings. Brace, support and fix in such a manner to prevent warp, twist, deformation or leakage of grout during the pouring and curing. All boxing shall be thoroughly wetted and cleared out immediately before concrete is placed.

7. Reinforcing steel

Reinforcing fabric of mild steel shall be positional in construction of the weir and the shore protection surround slab. All steel must comply with NZSS 197, 1949 and subsequent ammendments.

8 Exposed aggregate finish

This finish shall apply to the surface of the shore protection slab and to the spillways of the weir.

The concrete mix shall be poured to within $\frac{1}{4}$ " of the finished level and single size 2" clean river pebble spread uniformly, one stone thick over the surface. The selected aggregate shall then be forced into the mix by means of a bean tamper until the new surface is level with the tops of the forms and sufficient mortar has worked up to hold the stone in position. The surface should then be brushed with a soft broom to remove any surface laitence, care being taken not to dislodge any aggregate. A second brushing before the concrete has hardened shall be done with a stiff bush and plenty of water applied to the surface in a fine spray. Brushing and watering shall continue until the surface of the aggregate is fully exposed but not deeper than half the depth of the stone. The final brushing shall be followed with a light hosing to remove any further laitence. The whole of the concrete surface shall then be covered to prevent it from drying too rapidly.

9. Cleaning

All concrete crusting around pours and all boxing shall be removed from the site. Any tippings of aggregates shall be raked up, and site left in a clean condition for other trades to commence work.

PART (E)BRICKLAYER

Note; General Clauses and Conditions of Tender shall be read as they apply to this trade.

1. Scope of Work

The work comprises the supply and laying of approximately 30,600 square feet of brick paving. This includes the cutting of all bricks, the mortaring of bricks to gutter edges and sweeping in a fine sand filler.

2. Preliminary

Confer with the landscape Contractor as to the completion and inspection of all stormwater drains, anchor block finished levels and post piling along lake edge. Until approval has been given by the Landscape Contractor that the above work has been completed and approval given by the Landscape Architect no bricklaying shall commence.

The bricklayer shall satisfy himself that the sandbed levels are correct and true to grade before commencing, if he is not satisfied he must immediately notify the contractor who in turn shall authorise the excavator to make good any such work.

3. Bricks

All bricks shall be golden buff shade, nominal size 8" x 3 13/16 x 2 5/8", coverage 6 per sq ft. All bricks shall be sound and square made with sharp arrises. All bricks shall conform to NZSS No. 366.

4. Workmanship

Accurately set out all work and construct to the respective dimensions as shown on the drawings. Any bricks broken whilst laying shall be removed and replaced with new ones. The method of laying shall be "Jack on Jack" with the longest edge parallel to the lake edge. All surfacing must be layed true to level with a tolerance rating no greater than 1/8" in ten foot when measured in either direction with a ten foot straight edge.

On completion, bricks shall be thoroughly rammed and a fine sand filler swept over the surface and hosed in to all joints. All gaps greater than 1/2" and no wider than the brick width shall be filled with bricks cut to size, sand filling of these cavities shall not be tolerated.

All bricks comprising of the outer edge to the hard surface area, those adjacent to guttering and to tree wells shall be bedded to the concrete footings provided by a clean mortar.

5. Cleaning

At completion of work, clean down all exposed brickwork and scrub with clean water. No trace of dirt, or other stain shall be left on any surface. Remove all surplus bricks, broken bricks, mortar and surplus sand from site.

PART (F)

LANDSCAPE CONTRACTOR

Note; General Clauses and Conditions of Tender shall read as they apply to this trade.

1. Scope of Work

The work comprises the laying of stormwater drains, erection of a post retaining wall, provision and securing on of seating and tables, planting of trees and general reinstatement of the area including sowing down.

2. Materials

All materials are to be the best of their respective kinds. The landscape contractor shall provide documented evidence that the grass seedmix is of the quality and type specified. Plant material shall be of quality and size to the satisfaction of the Landscape Architect.

3. Stormwater piping

Piping of stormwater from catchpits to the lake shall be constructed to the alignment indicated on the plans. Four inch diameter field tile pipes shall be used, and shall be of unglazed earthenware first quality, free from chips and blemishes.

Drains shall be laid to 1 in 80 fall from the catch-pit outlet invert. Trenches shall be boned level to grade and tamped firm. If 12" of backfill is not possible over piping, pipes shall be haunched in 3" of concrete. Where pipe outlet pass through the post retaining wall they shall pass at a point midway between two posts to allow the minimum amount of mortising in each post. Pipes shall protrude $\frac{1}{2}$ " beyond the post wall into the lake.

4. Retaining wall

Approximately 685ft of piling is required around the lake edge. All posts shall be ground treated spun peeled logs of a nominal diameter of 6". Post tops shall be chamfered and three feet in length, each post being pointed for driving.

A polythene liner of .005 thickness shall be placed against the post piling prior to back filling. The Landscape Contractor shall confer with the Excavator on the best method and compaction required for backfilling. All posts shall be driven in in a vertical position and to fit snugly against the next one, posts cracked or broken in driving shall be immediately removed. The level of all post tops shall correspond with the levels indicated on the plan.

5. Seats and tables

The Landscape Contractor will be responsible for

the provision of all seating and tables. He shall instruct the steelworker on the number and dimensions of all steel supports and to the method of treating the steel work as indicated on the plan.. He shall instruct the carpenter as to the type and quality of timber slatting the type and number of preservative coatings required and to the method of fastening all slatting to steel form work. He shall confer with the concreter as to H.D. bolt sizes and position of same in all anchor blocks. After the completion of bricklaying he shall fastened the said works to the holding down bolts and be responsible for them during the period of maintenance.

6. Planting of Trees

The schedule of trees is as follows;-

| | | |
|-------|-----------------------------------|--------|
| Trees | Fraxinus raywoodii | No. 10 |
| | Acer hookeri | No. 8 |
| | Sophora tetraptera grandiflora | No. 4 |

Refer to clause 2 for quality of above.

Immediately on receiving trees the Landscape Contractor shall take all necessary steps to ensure they are adequately protected from excessive sun and wind and are kept adequately moist. All tree holes shall be dug to a depth of not less than two feet and three ft square, the base of all holes shall be adequately forked over. Select from the soil stockpiled by the excavator material for backfilling holes. Adequately firm the fill and stake the tree with an approved staking method and tie. Any pruning necessary to improve the shape of the tree must be discussed with the Landscape Architect before work is commenced.

7. Sowing down and reinstatement

Once all other trades have finished on the site, scarify all surrounding compacted areas and till ground into a workable state for seedsowing. All levels shall be as indicated on the plan and brought up flush to all hard-surface edging. Firm all cultivated areas and ensure all contouring and levels are true to the eye. Erect protection fencing around cultivated areas. Sow down grass seed at the rate of 1/3 rd ounce per square yard with an approved fertilixer. Lightly rake over area.

Schedule of grass mix is as follows.

| | |
|------------------------------|-----|
| Brown top, cert. mother | 30% |
| Chewings fescue cert. mother | 70% |
| Timothy " " | 10% |

Schedule of fertilizer

| | |
|---------------------|---------|
| Sulphate of ammonia | 2 parts |
| Super phosphate | 4 parts |
| Sulphate of potash | 1 part |

The Landscape Contractor shall ensure adequate steps are taken to ensure an optimum soil moisture content is reached over all sown down areas and around tree plantings. The period of maintenance shall be three months, in which time the contractor is to be responsible for the germination, rolling and cutting of grass as well as control of weeds within the newly established sward.

8. Cleaning

Once the landscape contractor is satisfied that the newly established sward is tough enough for limited use, he shall remove the protection fencing. Lake water may be used during the maintenance period for irrigation purposes. The landscape Contractor must ensure the site is thoroughly cleaned of all materials and in a satisfactory state to hand over to the Landscape Architect.

End of Technical Specification.

SCHEDULE OF QUANTITIESConstruction of Artificial Lake and Hard Surface Surrounds

It should be noted that the following quantities are the estimated quantities of the work and are not to be taken as the actual and correct quantities of the work to be executed by the Contractor in fulfilment of his obligations under the contract.

PART (C) EXCAVATOR

| Item | Description | Qty | Unit | Rate | ₹ |
|-------|---|--------|-----------|-------|-----------|
| 1 | Allow for complying with all conditions of Contract | | l. s. | | 100.00 |
| 2 | Allow for all setting out and survey work | | l. s. | | 200.00 |
| 3 | Excavate and deposit topsoil where indicated | 1,060 | cub. yds. | 1.20 | 1,372.00 |
| 4 | Excavate subsoil and transport off site | 40,180 | cub. yds. | .28 | 11,250.40 |
| 5 | Surface plane formation of hard surface area | 3,400 | sq. yds. | .65 | 2,210.00 |
| 6 | Provide, spread and compact clay liner | 2,640 | cub. yds. | 3.04 | 8,025.60 |
| 7 | Provide, spread and compact sandmix fill over hard surface area | 1,920 | cub. yds. | 2.72 | 5,152.40 |
| 8 | Cut down, stump and burn willows along creek edge | 27 | No. | 30.00 | 810.00 |
| 9 | Contingency figure 10% | | | | 2,912.00 |
| 10 | Allow for any other item | | | | |
| Total | | | | | 32,032.40 |

Carry to summary.

PART (D) CONCRETOR

| Item | Description | Qty | Unit | rate | ₹ ₹ |
|-------|---|------|-----------|-------|----------|
| 1 | Allow for complying with all Conditions of Contract | | L.S. | | 100.00 |
| 2 | Allow for all setting out | | L.S. | | 100.00 |
| 3 | Box, pour to required levels all anchor blocks | 6½ | cub. yds. | 21.70 | 141.05 |
| 4 | Provide all holding down bolts and fix in position | 7 | Doz. | 1.80 | 12.60 |
| 5 | Erect boxing to shore protection slab | | L.S. | | 80.00 |
| 6 | Pour scree and tamp concrete for above item | 7.1 | cub. yds. | | 154.07 |
| 7 | Allow for exposed aggregate finish on above | 10 | hrs | 4.50 | 45.00 |
| 8 | Erect boxing for weir | | L.S. | | 200.00 |
| 9 | Provide reinforcing steel and cut and bend as specified | | L.S. | | 30.00 |
| 10 | Pour concrete for above item | 11 | cub. yds. | 21.70 | 238.70 |
| 11 | Allow for exposed aggregate finish on above | 4 | hrs | 4.50 | 18.00 |
| 12 | Construct catchpits as indicated on plans, plus grates | 7 | No. | 31.50 | 220.00 |
| 13 | Pour guttering and brick edge footing blocks | 2.75 | cub. yds. | 21.70 | 59.67 |
| 14 | Allow for any other item | | | | |
| 15 | Contingency figure 10% | | | | 139.90 |
| Total | | | | | 1,538.99 |

Carry to summary

PART (E) BRICKLAYER

| Item | Description | Qty | Unit | rate | \$ \$ |
|-------|--|-----|-----------|------|----------|
| 1 | Allow for complying with Condition of Contract | | L.S. | | 100.00 |
| 2 | Provide and lay approx 3,400 sq yds of brick paving allow for cutting and ramming. | 183 | per 1,000 | 2140 | 3,916.20 |
| 3 | Supply and spread over silver sand | 6 | yds. | 4.20 | 25.20 |
| 4 | Allow for any other item | | | | |
| 5 | Contingency figure 10% | | | | 404.14 |
| Total | | | | | 4,445.54 |

Carry to summary

PART (F) LANDSCAPE CONTRACTOR

| Item | Description | Qty | Unit | Rate | \$ \$ |
|-------|---|------|------|-------|----------|
| 1 | Allow for complying with all Conditions of Contract | | L.S. | | 100.00 |
| 2 | Allow for setting out piling alignment and tree planting location etc | | L.S. | | 150.00 |
| 3 | Dig, grade to level and backfill storm water trenches | 8 | hrs | 4.50 | 36.00 |
| 4 | Provide 4" Ø field tiles for above | 308 | ft | .22 | 67.76 |
| 5 | Erect 3ft post piling, retaining wall as per plan and specifications | 1370 | No. | 1.15 | 1,575.50 |
| 6 | Provide and lay polythene liner to above item | | L.S. | | 30.00 |
| 7 | Obtain from carpenters seats and tables, deliver to site and secure in position | 26 | No. | 15.00 | 390.00 |
| 8 | Plant trees as specified | 22 | No. | 12.00 | 264.00 |
| 9 | Sow down and reinstate area | | L.S. | (say) | 500.00 |
| 10 | Allow for maintenance work over period specified | | L.S. | (say) | 500.00 |
| 11 | Provide and spread river pebbles in wier troughs | 8 | yds | 12.50 | |
| 12 | Allow for any other item | | | | |
| 13 | Contingency figure 15% | | | | 361.32 |
| Total | | | | | 3,974.58 |

Carry to summary

SUMMARY OF SCHEDULE OF QUANTITIES

| | | | | |
|---------------------------|-----|----------------------|---|--------------------|
| PART | (C) | Excavator | ₪ | 32,032.40 |
| " | (D) | Concretor | | 1,538.99 |
| " | (E) | Bricklayer | | 4,445.54 |
| " | (F) | Landscape Contractor | | 3,974.58 |
| <u>Total tender price</u> | | | | <u>₪ 41,991.51</u> |

Note. This estimate does not include the actual structural pricing for both the tables and seats or the two pedestrian bridges.

DESIGN PHILOSOPHY

Real pleasure is experienced within the gully system through the sum of natural components providing complete unity and harmony, for they constitute the unique landscape character. This strong and distinctive emotional response evoked in the viewer, is subject to predictable change on introduction of an increase number of users. User impact may change forms of influence engendered by each component to produce displeasing results or even complete destruction, unless identified, analysed and counter-acted..

The evolution of the design proposal has been based on first analysing all site factors inventoried from the site survey and research data, then applying the human factor - "the user", by identifying various landscape identity areas within the site and evaluating emotional responses engendered against the use capability of that area. Where to the viewer, a particular area engenders a strong lineal pull, or movement, yet site conditions are not such to incorporate such physical enticement, a deliberate modification to the initial response has been applied through manipulation of design detailing.

Three basic site elements have been manipulated to function as physical design controls. Firstly, the existing tree framework has been extended and moulded to delineate and focus upon open spaces within the system capable of supporting relatively intensive use, further it defines and encloses spaces of relative intimacy and provides stability to vulnerable areas of

slope. The total vegetational design provides a strong framework identifying and integrating gully landform with the surrounding residential environment.

Secondly, the existing stream has been exploited to create a physical barrier and visual absorbant between areas in close proximity, but of totally different use capabilities. At this crucial point the stream has been manipulated to form an artificial lake with the greatest area of lake edge orientated towards areas capable of intensive use. The formation of the lake serves a further function, it overcomes the design problem of the handling of the deep trench by simply rendering it invisible beneath the lake surface. Possibly the greatest asset achieved, design wise from the presence of the stream is its simplicity in creating a soft edge definer to differing use areas simply by emphasizing its course at selected points through tree groupings.

Thirdly, the swampland is an essential natural resource and must be preserved within the urban environment as a dissipator of abnormamly high peak stormwater flows. The user aspect to this resource is provided for in the form of a strictly controlled circulation pattern - an elevated walkway. This enables the introduction of further values, education and on a more leisurely scale - spiritual wisdom. To strengthen this value encouragement of a great variety of wildlife back to the swampland is required. The provision of small dredged lakes located so as not to accelerate natural stream flow or increase ground seepage and the

planting of vegetation to provide food, nesting and hiding material has been considered. To inhibit informal pedestrian movement over the swampland floor, thick peripheral indigenous plantings and the alignment of dredged ponds to the natural course of the stream have all been planned towards this end.

The overall design provides a pedestrian linkage system that orientates one towards shopping, community and recreation facilities within an aesthetically pleasing environment that preserves and emphasises the natural landform characteristics. To the motorist it offers vista forming views in scale with his speed providing him with maximum visual relief yet providing a noise absorbant barrier for the user within the gully.