

2022-02-07

**REQUEST FOR QUOTATION
SPLASH PAD HOSE REPLACEMENTS
RFQ 09 (2022-02)**

The Toronto Zoo invites you to submit a quotation of unit/labour rates for the labour, tools, equipment, removal of, supply of and install of Splash Pad feature supply hoses/piping. All work is to be completed in accordance with the specifications in the Request for Quotation (RFQ).

Work shall commence as soon as possible, once the project is awarded and a Purchase Order has been issued. All work shall be completed by **Friday, May 13th**.

The Quotation package includes Instructions, Terms & Conditions, Requirements, Drawings, and Forms. Quoted prices shall remain in effect for a period of ninety (90) days from the Quotation due date.

Site Meeting: A site meeting has not been scheduled for this request. If you would like to review the site, please contact Kyle Rekker, krekker@torontozoo.ca

Due Date: Your quotation must be completed, and received by the Supervisor, Purchasing & Supply, Toronto Zoo, Administrative-Support Centre, 361A Old Finch Ave., Toronto, Ontario, M1B 5K7 by:

Tuesday, 2022-02-22, 1200 hours (noon, local time)

The Board of Management of the Toronto Zoo reserves the right to reject any or all quotes or to accept any quote, should it deem such an action to be in its interests.

Yours truly,

Alia Lee
Director, Finance & Technology

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1.0 INSTRUCTIONS

- 1.1 Ensure that you have received all eighteen (18) pages of the RFQ package, Attachment 1 and the site plan drawing.
- 1.2 A site meeting can be available upon request.
- 1.1 Your quotation must be completed, and received by the Supervisor, Purchasing & Supply, by:

Tuesday, 2022-02-22, 1200 hours (noon, local time)

Submission – Temporary process - In view of the current situation with COVID 19 and to limit personal interaction, on a temporary basis submissions for this Request for Proposal can be submitted electronically by email in a PDF file, prior to the submission deadline to the following email address

bids@torontozoo.ca

and note the following:

- a. Subject of the file to be: RFQ# - Title of RFQ – Vendor name.
- b. Amendments to a Proposal may be submitted via the same methods, at any time prior to the Closing Time.
- c. It is the Supplier's sole responsibility to ensure its Bid is received by the Submission Deadline in accordance with the requirements of this RFP. The receipt of Bids can be delayed due to a number of factors including "internet traffic", file transfer size and transmission speed. The Supplier should allow sufficient time to download, complete and upload, as applicable, the submission forms comprising its Bid and any attachments.

A Bid will only be considered to be submitted once it has been received by the Toronto Zoo. The time of such receipt is reflected by the time received stamped by the Toronto Zoo's email application

- 1.3 Quotations must not be submitted by facsimile.
- 1.4 Show itemized cost of HST if applicable.
- 1.5 Toronto Zoo reserves the right to award in whole or in part on the basis of the bids received, Lump Sum Price or Breakdown Price.
- 1.6 All Prices submitted shall be quoted in Canadian currency.
- 1.7 Use the attached submission label, when you submit your response in a sealed envelope or package and deliver to the Toronto Zoo.
- 1.8 Include product information, samples, and pictures, as necessary.

- 1.9 Provide references of at least three (3) clients for whom your company has performed similar work. References must include photos of three (3) different installations, client company name, contact name, address and e-mail address.
- 1.10 It is the responsibility of the Bidder to understand all aspects of the RFQ and to obtain clarification if necessary before submitting their quotation.
- 1.11 For any questions concerning this RFQ, please contact:

Peter Vasilopoulos, Supervisor,
Purchasing & Supply, Tel: 416-392-5916, Fax: 416-392-6711,
E-mail: pvasilopoulos@torontozoo.ca

2.0 TERMS AND CONDITIONS

- 2.1 **Definitions:** Wherever used in the Request for Quotation the word “Board” means the Board of Management of the Toronto Zoo and the word “Vendor” or “Contractor” means the person or persons or Corporation to whom the purchase order is issued.
- 2.2 **Vendor Assurance:** Unless otherwise stated, the goods, material, articles, equipment, work or services, specified or called for in or under this Quotation, shall be delivered or completely performed, as the case may be, by the Vendor as soon as possible and in any event within the period set out herein as the guaranteed period of delivery or completion.
- 2.3 **Country of Origin:** Wherever possible, the goods, services, materials, articles or equipment, specified or called for in or under this Quotation, shall be of Canadian origin and manufacture.
- 2.4 **Delivery:** The prices stated in this Quotation cover the services, material, articles or equipment referred to herein, being delivered F.O.B. destination, freight, express, duty and all other charges prepaid, unless otherwise indicated herein. A detailed delivery ticket or piece tally, showing the exact quantity of goods, material, articles or equipment shall accompany each delivery. A receiver’s receipt shall not bind the Board to accept the goods, material, articles or equipment covered thereby, or the particulars of the delivery ticket or piece tally therefore. The Vendor shall not be entitled to any interest upon any bill due to delay in its approval by the CEO of the Toronto Zoo or his designate.
- 2.5 **Invoicing:** Unless otherwise indicated herein, the prices stated are payable in Canadian Funds at the head office of the Board. Any Harmonized Sales Tax (HST) applicable shall be shown as a separate item. The Vendor’s HST/Business registration number must be indicated on the invoice.

The Vendor shall clearly show any special charges such as packaging and freight, where applicable, as separate items on the invoice.

Payments to non-resident Vendors may be subject to withholding taxes under the Income Tax Act (Canada). Unless a non-resident Vendor provides the Board with a letter from Revenue Canada, Taxation waiving the withholding requirements, the Board will withhold the taxes it determines are required under the Income Tax Act (Canada).

- 2.6 **Notice of Delivery:** The Vendor shall notify the Purchasing Agent of the Board at the address given for the mailing of invoices, in writing as soon as possible of the details of the shipment of the goods, materials, articles or equipment.
- 2.7 **Right to Cancel:** The Board shall have the right to cancel at any time this Quotation or any contract or any part of any contract resulting from this Quotation in respect of the goods, material, articles, equipment, work or services set out in this Quotation or any such contract or part of such contract, not delivered or performed at the time of such cancellation, and the Board will not be responsible to make any payments in respect of any such goods, materials, articles, equipment, work or services and shall not incur any liability whatsoever in respect thereto.

In the event that the Vendor fails or neglects by any act or omission to comply with any of the conditions set out herein, this Quotation or any contract resulting from this Quotation may be unconditionally cancelled by the Board without notice to the Vendor.

- 2.8 Official Agreement: No verbal arrangement or agreement, relating to the goods, material, articles, equipment, work or services, specified or called for under this Quotation, will be considered binding, and every notice advice or other communication pertaining thereto, must be in writing and signed by a duly authorized person.
- 2.9 Worker's Rights: The Vendor shall comply with the conditions of the Board relating to Worker's Rights, a copy of which is available on application to the Manager, Fair Wage and Labour Trades Office, City of Toronto, 18th Floor, West Tower, City Hall, Toronto, Ontario, M5H 2N2 or by phone at 416-392-7300.
- 2.10 Insurance: The Contractor shall, at his/her own expense obtain and, until the work is fully complete maintain, broad-scope insurance coverages, hereof, satisfactory to the Chief Executive Officer as to form and substance, with the indicated policy form of the Canadian Construction Documents Committee (CCDC), its equivalent or better subject to such modifications therein to cover unusual aspects of the work, working conditions or other circumstances as may be specified elsewhere in the Contract.
- 2.10.1 The Contractor shall effect, maintain and keep in force, at its sole cost and expense and satisfactory to the Chief Executive Officer as to form and substance the insurance described below:
- 2.10.2 All risks property insurance on property of every description and kind owned by the contractor or for which the Contractor is responsible while on the premises of the Board in an amount not less than full replacement value. The policy shall be endorsed to provide a waiver of subrogation against the Board for any loss or damage to insured property, however caused.
- 2.10.3 Commercial general liability insurance, including owners' and contractors' protective, products, completed operations, personal injury, employer's liability, contractual liability, occurrence basis property damage, liability arising from the sale of serving of alcoholic beverages and provisions for cross liability and severability of interests with a limit of not less than Two Million Dollars (\$2,000,000.00) per occurrence. The policy shall be endorsed to name the Board as an additional insured with respect to the operations of the Contractor under this agreement.
- 2.10.4 Standard automobile liability insurance for all owned vehicles with limits of not less than Two Million Dollars (\$2,000,000.00) per occurrence.
- 2.10.4.1 All policies of insurance required to be taken out by the Contractor shall be placed with insurers licensed to conduct business in the Province of Ontario and shall be subject to the approval of the Chief Executive Officer, acting reasonably.
- 2.10.4.2 The Contractor shall deliver to the Board evidence of the insurance required prior to the commencement of the agreement, in form and detail satisfactory to the Chief Executive Officer acting reasonably.
- 2.10.4.3 The provisions of this section 2.11 shall no way limit the requirements and obligations imposed on the Contractor elsewhere in the Contract, nor relieve the Contractor from compliance therewith and fulfillment thereof.

- 2.10.4.4 The parties agree that insurance policies may be subject to deductible amounts, which deductible amounts shall be borne by the Contractor.
- 2.10.4.5 The provisions of this article shall in no way limit the requirements and obligations imposed on the Contractor elsewhere in the Contract, nor relieve the Contractor from compliance therewith and fulfillment thereof.
- 2.11 Indemnity: The Vendor shall at all times well and truly save, defend, keep harmless and fully indemnify the Board, the City of Toronto, Toronto Region and Conservation Authority and their servants, employees, officers or agents, hereinafter called the “Indemnities”, from and against all actions, suits, claims, demands, losses, costs, charges, damages, and expenses, brought or made against or incurred by the Indemnities, its or their servants, officers, employees, agents or invitees in any way relating, directly or indirectly, to goods, material, articles or equipment supplied or to be supplied, or to the supplying of goods or services, pursuant to this Quotation, or any other claim, action, suit, demand, loss, cost, charge, damage or expense relating to copyright, trademark or patent with regard directly or indirectly with any such goods, services, material, articles or equipment or the supply or performance thereof.
- 2.12 Liability for Acts of Vendor Employees, Contractors or Agents: The Vendor acknowledges responsibility and accepts liability for the acts of any of its employees, contractors and agents while on Toronto Zoo property. The Toronto Zoo reserves the right to request background checks for any individual providing the services requested on behalf of the Vendor.
- 2.13 Guaranty of Quotation: All goods, material, articles, equipment, work or services, specified or called for in or under this Quotation, shall be supplied or performed at the price or process and on the basis set forth or referred to in and in accordance with the Offer and this Quotation. The basis on which this Quotation is given shall include any specifications, plans, price schedules, samples, addenda or other details pertaining thereto, or provided in connection therewith.
- 2.14 Right of Notice: Any notice that the Board may be required or desire to give to the Vendor shall for all purposes to be deemed to have been sufficiently and properly given and afforded by registered mail addressed to the Vendor at the address shown for the Vendor on this form and shall therefore be presumed to have been received by the Vendor on the third day following such registration.
- 2.15 Formal Contract: The Vendor may be required and shall, if requested by the solicitor for the Board so to do, to execute and enter into a formal contract that is satisfactory to the solicitor for the Board, in order to document the contract resulting from this Quotation and to embody indemnity and related provisions that in the opinion of such solicitor are required to protect the Board.
- 2.16 Charity Status: The Toronto Zoo is a registered charitable organization (registration #BN 119216398RR0001) and accordingly may be eligible for preferred pricing which should be reflected in the Quotation as submitted.
- 2.17 Performance Evaluation: The Contractor’s performance will be evaluated by the Chief Executive Officer and/or Chief Executive Officer’s Representative during the Contract and at the end of the Contract. In the event that the Contractor’s performance is considered unsatisfactory by the Chief Executive Officer and/or Chief Executive Officer’s

Representative, the Contractor and/or its affiliates may become ineligible from bidding on future contracts issued by the Board.

3.0 PROJECT REQUIREMENTS AND SPECIFICATIONS

Work shall commence as soon as possible, once the project is awarded and a Purchase Order has been issued. The scope of work includes the labour, tools & equipment required for the removal, replacement and installation of the Splash Pad supply hoses/pipes listed within Attachment A. This includes, but is not limited to, the items listed below. All work is to be completed in accordance with associated codes and specifications in addition to the requirements listed within the Request for Quotation (RFQ). The contractor is responsible for all pricing and all other arrangements with all subcontractors as required.

3.1 SCOPE OF WORK

- 3.1.1 All work to be completed in accordance with applicable codes, regulations and specifications.
- 3.1.2 Remove all existing hoses listed within Attachment A.
 - 3.1.2.1 Contractor to confirm sizing and quantity on site. Existing hose type is listed as 'Thermoid Valuflex/GS 200PSI'
- 3.1.3 Contractor is to provide all necessary, contractor owned, equipment for hose removal at no extra cost to Toronto Zoo. If rental equipment is required, provide unit rate as detailed in section 4.1.
- 3.1.4 If removal of any hoses listed within Attachment A is deemed 'not possible', Toronto Zoo approval will be required prior to commencing concrete cutting. Provide unit rate for cutting and restoration as detailed in section 4.1.
- 3.1.5 Install replacement hoses, based on sizes and quantities verified on site, and all associated connections.
 - 3.1.5.1 Any proposed replacement deviations, from the sizes and quantities verified on site, are subject to Toronto Zoo approval.
- 3.1.6 Replacement hose manufacturer and type is not specified, but is subject to Toronto Zoo approval. Provide unit rate as detailed in section 4.1.
 - 3.1.6.1 Provide specifications of proposed hose type and fittings. Ensure proposed product is suitable for the application.
- 3.1.7 System verification to be completed after install to confirm function of all replaced hoses.

3.2 CONTRACTOR RESPONSIBILITIES

- 3.2.1 Regular meetings/communication with the Toronto Zoo Project Team to review project status and to discuss issues that may arise during the project.
- 3.2.2 Provide samples, mock ups, etc. as required to the Project Team.
- 3.2.3 Provide product information, SDS sheets and colour samples to the Project Team

prior to start of the work where applicable.

- 3.2.4 Provide the Zoo with a minimum two (2) year warranty upon completion of the project.
- 3.2.5 Protect adjacent areas not included in the project. Any damage caused will be the responsibility of the contractor to rectify at no additional cost to the Zoo.
- 3.2.6 Clean-up the work area daily and make good any damage caused as a result of the work.
- 3.2.7 Secure the work site and provide construction signs and barriers to prevent injury to Zoo personnel and the public who will require access to the space during the work.
- 3.2.8 Upon award of contract, Contractor is to finish all work, including clean up and demobilization by the completion date specified.
- 3.2.9 Submit all shop drawings for review and approval prior to start of fabrication. Review of shop drawings shall not mean that the Toronto Zoo approves detail design inherent in shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in shop drawings or of his responsibility for meeting all requirements of the subcontract documents.
- 3.2.10 Submit close out documents as requested. Include warranties and “As built” drawings.

3.3 SAFETY SPECIFICATIONS

- 3.3.1 It is the responsibility of the Contractor to protect the site as required during construction.
- 3.3.2 Ensure that awareness of public safety is considered and protect visitors in the vicinity during the construction period.
- 3.3.3 All necessary personal protective equipment must be worn at all times and MSDS sheets must be available on site as required.
- 3.3.4 The contractor is to abide by applicable Toronto Zoo Health & Safety Policies
 - 3.3.4.1 SAFE-002 Health & Safety Hazard Reporting
 - 3.3.4.2 SAFE-017 Contractors Safety
 - 3.3.4.3 SAFE-018 Vehicles on Site
 - 3.3.4.4 SAFE-007 Working in Confined Space
 - 3.3.4.5 SAFE-025 Hot Work
 - 3.3.4.6 SAFE-013 Equipment Lockout/Tagout
- 3.3.5 The Ontario Health and Safety Acts, the Ontario Building Code and all other applicable codes including the Fire Codes.

Toronto Zoo’s Commitment to the City of Toronto’s Corporate Smog Alert Response Plan

- 3.3.6 It is the responsibility of the Contractor to ensure that the work site is properly protected at all times. All work sites must be marked and barriered adequately with

construction signs posted to secure and isolate the work site from the public or other personnel that have access to the area.

3.4 **OTHER INFORMATION**

The successful bidder must demonstrate the ability to complete the work to standards acceptable to the Zoo and prove past performance in the completion of similar types of work for other clients by providing relevant examples of work and references. The successful bidder must also demonstrate and guarantee that they can produce the work in the allotted time.

4.0 SUBMISSION FORMS:

- a. I/We, hereby, submit the Quotation and will comply with all terms, conditions, specifications and drawings (when provided) as set out within the Board's Quotation.
- b. I/We, hereby, have received, allowed for and included as part of our submission all issued Addendum numbered _____.
- c. This form must be completed, properly signed and received on or before the date and time specified or your Quotation will not be considered. Quotation prices shall remain in effect for a period of ninety (90) days from the Quotation due date.
- d. The Board of Management of the Toronto Zoo reserves the right to reject any or all Quotations or to accept any Quotation, should it deem such action to be in its interests.
- e. By signing and submitting this FORM, you are agreeing to the release of your quotation information, as deemed necessary by the Board, in order to conduct business associated with this quotation or project.

COMPANY INFORMATION	
Company Name:	
Name of authorized Signing Officer	Title:
Signature of authorized Signing Officer:	Date:
I have the authority to bind the organization	
Contact Name:	Title:
Address:	
Telephone #:	Fax #:
Email:	Web Site:
HST #:	

4.1 UNIT/LABOUR RATE PRICING

1. Provide unit and labour rates for the following items. If any particular item has a minimum required quantity/time, specify as such.

Item	Size	Supply/Install	Variable (per value or minimum)	Cost, excluding HST
Labour Rates				7am to 5pm
Foreman	n/a	Supply	Hour	\$
Labourer	n/a	Supply	Hour	\$
Equipment Rates – Rental (if req'd)				7am to 5pm
Hose Removal Assistance	n/a	Supply	Hour	\$
Concrete Cutting Equipment	n/a	Supply	Hour	\$
Land Excavation - (Backhoe w/operator)	n/a	Supply	Hour	\$
Material Rates				Each
Water Supply Hose/Pipe	3/8"	Supply	Foot	\$
	3/4"	Supply	Foot	\$
	1"	Supply	Foot	\$
	1 1/2"	Supply	Foot	\$
	2"	Supply	Foot	\$
Water Supply Hose/Pipe Fittings	3/8"	Supply	Each	\$
	3/4"	Supply	Each	\$
	1"	Supply	Each	\$
	1 1/2"	Supply	Each	\$
	2"	Supply	Each	\$
Concrete Removal	n/a	Supply	Yard	\$
Concrete Restoration	n/a	Supply & Install	Yard	\$
Backfill Material	n/a	Supply & Install	Yard	\$

COMMITMENT TO DELIVER	YES / NO
Please confirm that you are able to complete the work described herein by Friday, 2022-05-13	

WARRANTY	Specify
Please confirm minimum two (2) year warranty upon completion.	

DISCOUNT	Discount	Days
Discount allowed for prompt payment and period within which invoice must be paid to qualify.	%	
Discount/Donation		
Charity Status: The Toronto Zoo is a registered charitable organization (registration #BN 119216398RR0001) and accordingly may be eligible for preferred pricing which should be reflected in the Quotation as submitted.		

SUBMISSION LABEL (N/A)**INTENTIONALLY LEFT BLANK**

NOTICE OF NO BID
INSTRUCTIONS:

It is important to the Toronto Zoo to receive a reply from all invited bidders. If you are unable, or do not wish to submit a bid, please complete the following portions of this form. State your reason for not bidding by checking the applicable box(es) or by explaining briefly in the space provided. It is not necessary to return any other Request for Proposal/Quotation/Tender documents or forms. Please just return this completed form by fax or by mail prior to the official closing date. **Purchasing and Supply Fax Number: (416) 392-6711.**

A Proposal/Quotation/Tender is not submitted for the following reason(s):	
<input type="checkbox"/>	Project/quantity too large.
<input type="checkbox"/>	Project/quantity too small.
<input type="checkbox"/>	We do not offer services or commodities to these requirements
<input type="checkbox"/>	Cannot meet delivery or completion requirement
<input type="checkbox"/>	We do not offer this service or commodity.
<input type="checkbox"/>	Agreements with other company do not permit us to sell directly.
<input type="checkbox"/>	Cannot handle due to present commitments.
<input type="checkbox"/>	Licensing restrictions
<input type="checkbox"/>	Unable to bid competitively.
<input type="checkbox"/>	We do not wish to bid on this service or commodity in the future.
<input type="checkbox"/>	Insufficient information to prepare quote/proposal/tender
<input type="checkbox"/>	Specifications are not sufficiently defined
<input type="checkbox"/>	We are unable to meet bonding or insurance requirements.

<u>Other reasons or additional comments (please explain):</u>

Company Name:	
Address	
Contact Person:	
Signature of Company Representative:	
Date:	
Phone Number:	
Email address	
Fax Number:	

APPENDIX A – LIST OF SUB-CONTRACTOR

<p>The Bidder proposes to sublet the following portions of the Work to the persons, firms or corporations indicated. The Bidder (Contractor) is responsible for all pricing with all subcontractors.</p> <p>The Bidder submits that in proposing the under mentioned subcontractors, the Bidder has consulted each and have ascertained to our completed satisfaction that those names are fully acquainted with the extent and nature of the work and that they will execute their work with the requirements of the contract documents.</p>		
Work or services to be provided	Name and address of sub-contractor or person	Telephone

Name of Bidder:	
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APPENDIX B - COVID-19 Proof of Vaccination Requirements

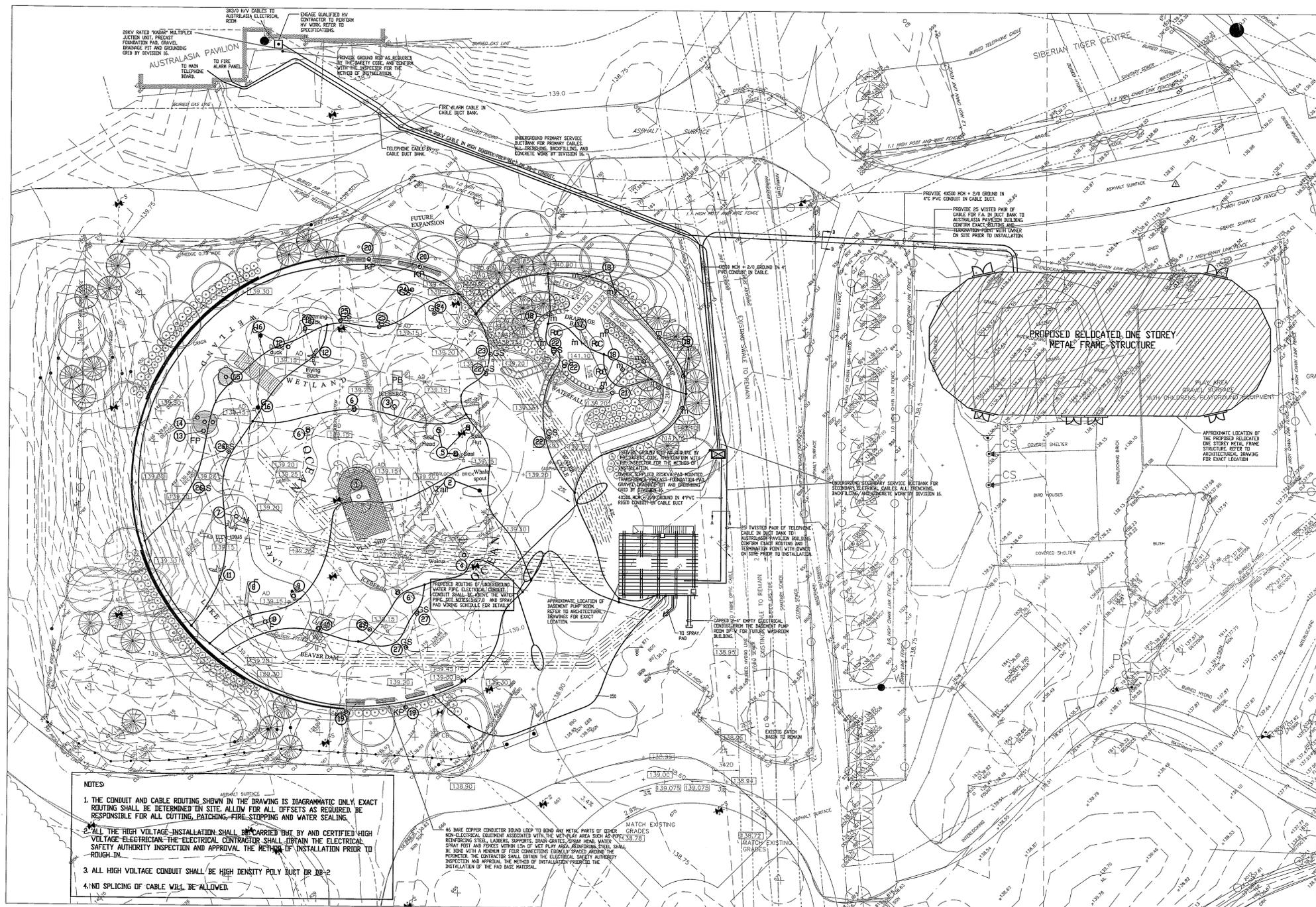
All business visitors, contractors, sub-contractors, service providers, consultants, deliverers and vendors, any of whom may require access to our Zoo property, must be fully vaccinated with a COVID-19 vaccine. This requirement shall be in addition to any other division-specific policies regarding COVID-19 vaccination or under regulations, legislation or guidelines applicable to them.

I acknowledge and confirm that I shall comply with the above direction, including providing proof of vaccine status as required by the Toronto Zoo.

Name:

Title:

I have authority to bind the Business Partner.



ELECTRICAL SYMBOL LIST

	EXISTING ITEM TO REMAIN AS INSTALLED.
	EXISTING ITEM TO BE DELETED. REMOVE ALL EXISTING WIRING, CONDUIT, ETC. BACK TO SOURCE. WIRING OR CONDUIT CONTAINING COMBUSTIBLES TO BE REMOVED OVER TO THE OWNERS.
	EXISTING ITEM TO BE RELOCATED. EXISTING WIRING IN CONDUIT TO NEW LOCATION AND CONNECT COMPLETE.
	EXISTING ITEMS IN RELOCATED POSITION.
	FLUORESCENT LIGHTING FIXTURE. INSCRIBED LETTER "F" INDICATES FIXTURE TYPE AS PER FUTURE SCHEDULE. SC-1 INDICATES ALL FIXTURES CONNECTED TO PANEL 45, CIRCUIT 1.
	UNSWITCHED NIGHT LIGHT.
	INCANDESCENT OR H.I.D. DOWNLIGHT. INSCRIBED LETTER "A" INDICATES FIXTURE TYPE AS PER FUTURE SCHEDULE.
	120V, 15A PHOTOCELL.
	SELF-POWERED COMBINATION EXIT AND EMERGENCY LIGHTING UNIT. DENOTE EXISTING TO BE REMOVED AND REINSTALLED.
	LINE VOLTAGE CONTROL CONNECTION BETWEEN SWITCH AND FIXTURE THROUGHOUT AND PHOTO, ETC.
	RECESSED OR SURFACE MOUNTED PANEL BOARD RP = DENOTES POWER PANEL SP = DENOTES SERVICE PANEL
	ONE, TWO, THREE GANG, ETC. LINE VOLTAGE TOGGLE SWITCH MOUNTED APPROXIMATELY 3'-6" (1.07M) ABOVE FINISHED FLOOR LEVEL. "K" DENOTES KEY SWITCH. THE COVER PLATE SHALL BE STAINLESS STEEL.
	DUPLEX IN-GROUND 15A, 125 VOLT, 2 POLES W/EE GROUNDING RECEPTACLE MOUNTED 20" (500mm) ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
	SIMILAR TO ABOVE, BUT MOUNTED APPROXIMATELY 3'-6" (1.07M) ABOVE FINISHED FLOOR LEVEL OR ABOVE COUNTER, OR DENOTE GROUND FAULT CIRCUIT INTERRUPTER.
	OUTLET FOR ELECTRIC MOTOR. INSCRIBED NUMBER, IF SHOWN, INDICATES HORSHPWR. OTHERWISE REFER TO SCHEDULE DRAWINGS.
	DISCONNECT SWITCH WHERE SHOWN ON DRAWINGS OR REQUIRED BY CODE. "WP" INDICATES WEATHERPROOF TYPE.
	TELEPHONE MOUNTED 3'-6" (1.07M) ABOVE FINISHED FLOOR.
	FLUSH OR SURFACE MOUNTED OUTLET BOX COMPLETE WITH CONNECTION TO EQUIPMENT.
	AUTOMATIC FIRE DETECTION 1ST (0.3M) RATE OF RISE AND FRIED TEMPERATURE TYPE. 120V (0.7A) W/EE AT 250V FL. SW. (22A, 1A, 5A).
	FIRE ALARM PULL STATION - R DENOTES EXISTING DEVICES TO BE REMOVED AND REINSTALLED.
	FIRE ALARM BELL - R DENOTES EXISTING DEVICES TO BE REMOVED AND REINSTALLED.
	EXISTING FIRE ALARM PANEL TO BE REMOVED AND REINSTALLED.
	UNIT HEATER PROVIDED BY DIVISION 15, CONNECTED BY DIVISION 16.
	15A, 120V, 1PH, 2W/4G POWER CONNECTION.

SCHEDULE OF LUMINAIRES

TYPE	SPECIFIED MANUFACTURER AND CATALOGUE NO.	PRODUCT DESCRIPTION	VOLTS	WATTS AND LAMPS	MOUNTING	R	S	W	NS	SL	SCALE
F	COOPER LIGHTING MATELUX CFL-100-120-ED	4' LONG INDUSTRIAL STRIP LUMINAIRE C/W APFURCHED REFLECTOR AND WIRE GUARD INSTALLED UPSIDE DOWN OVERHUNG DUCT WORK.	120V	1832T8							CALYTE LUMINAIRE PRECISCOPE THOMAS STAFF
A	COOPER LIGHTING LUMINAIRE MATELUX-100-TL	12" DIAMETER SUSPENDED MOUNTED HO DOWN LIGHT C/W PRISMATIC REFLECTOR MOUNTED ON UNDERSIDE OF STRUCTURAL FRAME.	120V	10175W MH							CALYTE MATELUX LUMINAIRE THOMAS
C	COOPER LIGHTING LUMINAIRE MATELUX-50-120	8 5/8" HIGH X 14" WIDE H.I.D. WALL PACK COMPLETE WITH ONE PIECE DIE CAST ALUMINUM HOUSING AND A DIRECTED ONE-PIECE CLEAR IMPACT RESISTANT POLYCARBONATE LENS. CONFORM WITH ARCHITECT.	120V	1800W HPS							CALYTE LUMINAIRE MATELUX THOMAS DEVINE
B	EXISTING FIXTURES REMOVED AND RELOCATED	EXISTING TRACK LIGHTING MOUNTED TO UNDERSIDE OF STRUCTURAL FRAME.	120V								

NOTES:

1. THE CONDUIT AND CABLE ROUTING SHOWN IN THE DRAWING IS DIAGNOSTIC ONLY. EXACT ROUTING SHALL BE DETERMINED ON SITE. ALLOW FOR ALL OFFSETS AS REQUIRED. BE RESPONSIBLE FOR ALL CUTTING, PATCHING, FIRE-STOPPING AND WATER SEALING.
2. ALL THE HIGH VOLTAGE INSTALLATION SHALL BE CARRIED OUT BY A CERTIFIED HIGH VOLTAGE ELECTRICIAN. THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE ELECTRICAL SAFETY AUTHORITY INSPECTION AND APPROVAL THE METHOD OF INSTALLATION PRIOR TO ROUGH-IN.
3. ALL HIGH VOLTAGE CONDUIT SHALL BE HIGH DENSITY POLY DUCT OR DB-2
4. NO SPLICING OF CABLE WILL BE ALLOWED.

DRAWING LIST

DRAWING #	DESCRIPTION	SCALE
E-1	SITE PLAN, SYMBOL LIST, SPRAY PAD, WIRE SCHEDULE, DUCT BANK DETAILS	AS NOTED
E-2	WASHROOM FLOOR PLAN, PANEL SCHEDULE, ELECTRICAL DISTRIBUTION DIAGRAM	1:50
E-3	TENT FLOOR PLAN, FIRE ALARM PANEL SCHEDULE	AS NOTED
E-4	ELECTRICAL WORK SPECIFICATION	N.T.S.

WATERPLAY AND MISTING SYSTEMS ELECTRICAL NOTES

1. THE ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL STAKE-OUTS TO LOCATE ALL EXISTING UNDERGROUND BURIED SERVICES. MAKO 50 WITHIN 100 METERS OF ALL SERVICES. ANY DAMAGE TO THE SITE, INCLUDING THE EXISTING SOIL AND PLANT MATERIALS, WILL BE REMOVED OR REPLACED TO THE SATISFACTION OF THE CONTRACTOR AT THE EXPENSE OF HIS CONTRACTORS.
2. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL TWO 400A, 3P BREAKER TO THE OWNERS SUPPLY TIE PANEL IN THE TRANSFORMER UNIT SUBSTATION.
3. SUPPLY AND INSTALL TWO (2) BUNDLES OF 4 x 50MM² + 2/0 GROUND CONDUCTOR IN 4" PVC RIGID CONDUIT IN CABLE TRAY FROM METERS OF THE MET PLAY AREA. IN ADDITION WITH SECTION 16 OF THE OWNERS ELECTRICAL SAFETY CODE 2010.
4. SUPPLY A #6 BARE COPPER GROUND CABLE LOOP AROUND THE ENTIRE SPRAY PAD AND BOND ALL METAL COMPONENTS WITHIN 1.5 METERS OF THE MET PLAY AREA. IN ADDITION WITH SECTION 16 OF THE OWNERS ELECTRICAL SAFETY CODE 2010.
5. THE PLAN FEATURES AND THE RESPONSIBILITY FOR THE WATER PLAY FEATURES, ALL BENCH GRATES, ALL BRACKETS FOR AUTHORITY INSPECTION PRIOR TO THE INSTALLATION OF THE PLAY BASE MATERIAL.
6. SUPPLY AND INSTALL 1" RIBBON PVC CONDUIT FROM MET PLAY CONTROL PANEL TO EACH OF THE FEATURES AS PER SPRAY PAD WIRING SCHEDULE.
7. SUPPLY AND INSTALL CABLE FROM THE MET PLAY CONTROL PANEL IN THE BASEMENT PUMP ROOM TO EACH OF FEATURE IN THE MET PLAY AREA AS PER SPRAY PAD WIRING SCHEDULE.
8. DIVISION 15 IS RESPONSIBLE TO SUPPLY, INSTALL PUSH BUTTON AND PROXIMITY IN THE FEATURE AND TERMINATE THE CABLE TO THE DEVICES.
9. DIVISION 15 IS RESPONSIBLE FOR CONNECTING FIFTY-ONE (51) SOLIDROD VALVES FOR THE WATER PLAY CONTROL SYSTEM. TERMINATE THE CONDUIT IN A SERVICE PIVOT CABLE BOX IN THE BASEMENT PUMP ROOM AND THE SOLIDROD VALVES WITH 2-PH 30 AMP STRANDED COPPER WIRE WITH A GROUND WIRE INSIDE 1/2" SEALTITE FLEXIBLE CONDUIT. MOUNT A PVC GUYLET BOX ON THE SOLIDROD VALVE. TERMINATE THE SEALTITE AND CONDUCT BRCS LEADS ON THE SOLIDROD VALVES.
10. DIVISION 15 IS RESPONSIBLE FOR SUPPLYING PUMPS, PUMP MOTORS, SOLIDROD, MOTOR STARTERS, MISTING CONTROL PANEL, WATER PLAY CONTROL PANEL. DIVISION 15 IS RESPONSIBLE FOR INSTALLATION AND TERMINATION.
11. ALL ELECTRICAL WORK SHALL BE COMPLY WITH THE LATEST EDITION OF CANADIAN ELECTRICAL SAFETY CODE.
12. ALL EQUIPMENT AND MATERIAL SHALL BE CSA AND UL APPROVED AND SO LABELED.
13. OBTAIN PERMIT, PAY ALL FEES AND PRESENT FINAL UNCONDITIONAL APPROVAL CERTIFICATE FROM HYDRO INSPECTION.
14. REFER TO COMPLY WITH THE GENERAL CONDITION IN THE OWNERS SPECIFICATIONS.

APR 12/02 5 ISSUED FOR CONSTRUCTION
 APR 12/02 4 RE-ISSUED FOR BUILDING PERMIT
 APR 2/02 3 POST TENDER ADDENDUM
 APR 21/02 2 ISSUED FOR BUILDING PERMIT
 MAR 7/02 1 ISSUED TO SET ADDENDUM #1
 FEB 27/02 0 ISSUED FOR TENDER

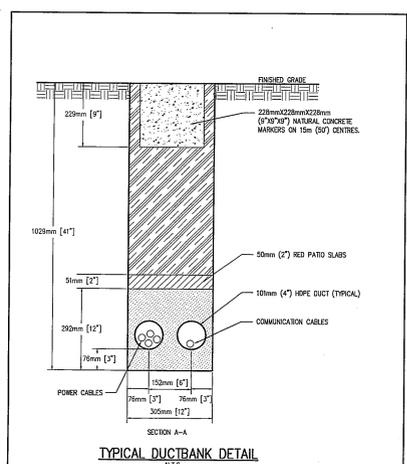
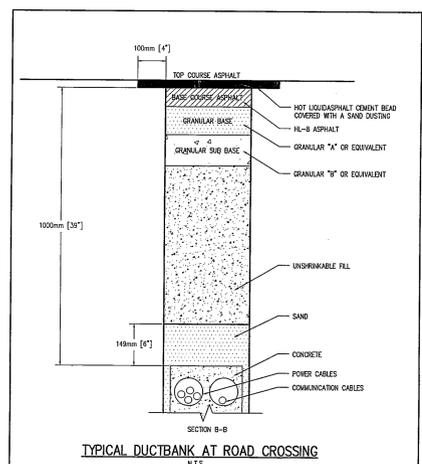
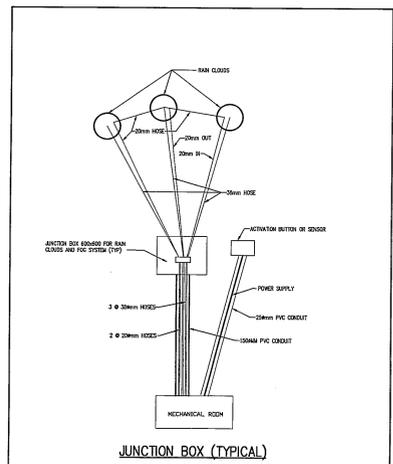
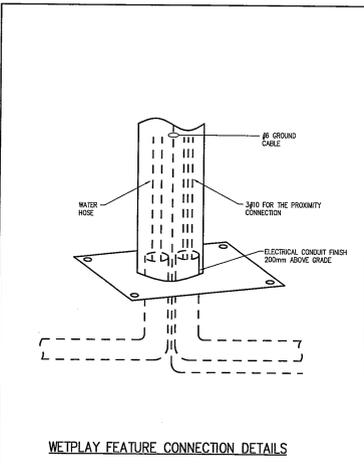
Date: January 30, 2002 1:35 p.m.
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RYBKA
 Rybka, Smith & Glatzer Limited
 Consulting Engineers
 10 Chalmers Boulevard
 Toronto, Ontario, M5H 2E1
 Telephone: 416-258-0202

SPRAY PAD WIRING SCHEDULE

NO.	FEATURE NAME	(VPC ACTIVATION DEVICES)	NUMBER OF ACTIVATOR	CONTROL WIRE REQUIRE	CONDUIT SIZE (IN)
1	PLAY SHIP	PI	1	3P/0/0	1
2	WHALE	BI	1	3P/0/0	1
3	POLAR BEAR AND XEBRAS	PI	1	3P/0/0	1
4	MOOSE	PI	1	3P/0/0	1
5	SEAL FAMILY	BI	1	3P/0/0	1
6	SEAL HEAD CANNON	BI	3	3P/0/0/0	1 1/2
7	MOOSE	BI	1	3P/0/0	1
8	MISTING PILE	BI	1	3P/0/0	1
9	BEAVER DAM	BI	1	3P/0/0	1
10	BEAVER DAM	BI	1	3P/0/0	1
11	LION	BI	1	3P/0/0	1
12	DUCK	BI	1	3P/0/0	1
13	FROG	BI	1	3P/0/0	1
14	LION PADS	BI	1	3P/0/0	1
15	MOOSE	BI	1	3P/0/0	1
16	CATFISH	BI	1	3P/0/0	1
17	RAIN CLOUDS	BI	1	3P/0/0	1
18	FOG	BI	1	3P/0/0	1
19	COOL PUP #1	PI	1	3P/0/0	1
20	COOL PUP #2	PI	1	3P/0/0	1
21	WATER FALL	PI	1	3P/0/0	1
22	ISLAND (GRAND SPRAY)	PI	1	3P/0/0	1
23	ISLAND #1	PI	1	3P/0/0	1
24	ISLAND #2	PI	1	3P/0/0	1
25	ISLAND #3	PI	1	3P/0/0	1
26	ISLAND #4	PI	1	3P/0/0	1
27	ISLAND #5	PI	1	3P/0/0	1



Contractor must verify all dimensions on the job and report any discrepancy to the engineer before proceeding.
 All drawings and specifications are deemed to be correct and the property of the engineer which must be returned at the completion of the work.
 All drawings to be used for construction only when signed by the engineer.

Project: **Toronto Zoo**
 361A Old Finch Ave
 Toronto (Scarborough)
 M1B 5K7
 Canadian Waterways Children's Wet Play Area
 Children's Discovery Zoo

Drawn by: D.B. Reviewed by: E.L.
 Date:

E-1