



# Sunshine Coast Regional District

# Request for Proposal

**Number: 2461301**

**for**

## **Engineered Air Roof Top Unit Replacement**

**Issue Date:**

**January 25, 2024**

**Closing Date of**

**February 26, 2024 at 3:00 PM local time**

**OPTIONAL SITE MEETING:** An optional site meeting will be held on Thursday February 8, 2024 at 11:00 am local time at 953 Gibsons Way, Gibsons BC V0N 1V0. Proponents need to RSVP to [purchasing@scrd.ca](mailto:purchasing@scrd.ca) by noon on February 7, 2024, if no RSVP's are received the site meeting will be cancelled.

**CONTACT:** All enquiries related to this Request for Proposal, including any requests for information and clarification, are to be submitted by February 9, 2024 and directed, in writing, to [purchasing@scrd.ca](mailto:purchasing@scrd.ca), who will respond if time permits with a Q&A on BCBid by February 16, 2024. Information obtained from any other source is not official and should not be relied upon. Enquiries and any responses providing new information will be recorded and posted to BC Bid or otherwise distributed to prospective Proponents.

**DELIVERY OF PROPOSALS:** Proposals must be in English and must be submitted using one of the submission methods below, and must either **(1)** include a copy of this cover page that is signed by an authorized representative of the Proponent or **(2)** be submitted by using the e-bidding key on BC Bid (if applicable), in accordance with the requirements set out in the RFP.

**BC Bid Electronic Submission:** Proponents may submit an electronic proposal using BC Bid. Proposals must be submitted in accordance with the BC Bid requirements and e-bidding key requirements (found at <https://www.bcbid.gov.bc.ca/>). Only pre-authorized electronic bidders registered on the BC Bid system can submit an electronic proposal using the BC Bid system. Use of an e-bidding key is effective as a signature.

**OR**

**Hard Copy Submission:** Proponents must submit **ONE (1)** hard-copies and **ONE (1)** electronic copy on a USB Drive of the proposal. Proposals submitted by hard copy must be submitted by hand or courier to:

**Sunshine Coast Regional District  
1975 Field Road  
Sechelt, BC V7Z 0A8**

Regardless of submission method, proposals must be received before Closing Time to be considered.

### **CONFIRMATION OF PROPONENT'S INTENT TO BE BOUND:**

The enclosed proposal is submitted in response to the referenced Request for Proposal, including any Addenda. By submitting a proposal the Proponent agrees to all of the terms and conditions of the RFP including the following:

- a) The Proponent has carefully read and examined the entire Request for Proposal;
- b) The Proponent has conducted such other investigations as were prudent and reasonable in preparing the proposal; and
- c) The Proponent agrees to be bound by the statements and representations made in its proposal.

**PROONENT NAME (please print):** \_\_\_\_\_

**NAME OF AUTHORIZED REPRESENTATIVE (please print):** \_\_\_\_\_

**SIGNATURE OF AUTHORIZED REPRESENTATIVE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

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## 1. GENERAL TERMS & CONDITIONS

### 1.1 DEFINITIONS

Throughout this Request for Proposal, the following definitions apply:

**"Addenda"** means all additional information regarding this RFP, including amendments to the RFP;

**"BC Bid"** means the BC Bid website located at <https://www.bcbid.gov.bc.ca/>;

**"Closing Location"** includes the location or email address for submissions indicated on the cover page of this RFP, or BC Bid, as applicable;

**"Closing Time"** means the closing time and date for this RFP as set out on the cover page of this RFP;

**"Contract"** means the written agreement resulting from the RFP executed by the Regional District and the successful Proponent;

**"Contractor"** means the successful Proponent to the RFP who enters into a Contract with the Regional District;

**"Must"**, or **"mandatory"** means a requirement that must be met in order for a proposal to receive consideration;

**"Proponent"** means a person or entity (excluding its parent, subsidiaries or other affiliates) with the legal capacity to contract, that submits a proposal in response to the RFP;

**"Proposal"** means a written response to the RFP that is submitted by a Proponent;

**"Request for Proposals"** or **"RFP"** means the solicitation described in this document, including any attached or referenced appendices, schedules or exhibits and as may be modified in writing from time to time by the Regional District by Addenda; and

**"Should"**, **"may"** or **"weighted"** means a requirement having a significant degree of importance to the objectives of the Request for Proposals.

**"SCRD"**, **"Regional District"**, **"Organization"**, **"we"**, **"us"**, and **"our"** mean Sunshine Coast Regional District.

### 1.2 FORM OF PROPOSAL

This Proposal must be completed in its entirety. Failure to properly complete this Proposal form may cause your Proposal to be rejected. The signing officer must initial all corrections. The Sunshine Coast Regional District (Regional District) reserves the right to permit a correction, clarification or amendment to the Proposal or to correct minor errors and irregularities.

### 1.3 SUBMISSION OF PROPOSAL

- a) Proposals must be submitted before Closing Time to the Closing Location using one of the submission methods set out on the cover page of this RFP. Proposals must not be sent by fax. The Proponent is solely responsible for ensuring that, regardless of submission method selected, the Regional District receives a complete Proposal, including all attachments or enclosures, before the Closing Time.
- b) For electronic submissions (BC Bid or email), the following applies:

- (i) The Proponent is solely responsible for ensuring that the complete electronic Proposal, including all attachments, is received before Closing Time;
  - (ii) The Regional District limits the maximum size of any single email message to 20MB or less.
  - (iii) Proponents should endeavour to submit emailed proposal submissions in a single message and avoid sending multiple email submissions for the same opportunity. If an electronic submission exceeds the applicable maximum single message size, the Proponent may make multiple submissions (BC Bid upload or multiple emails for the same opportunity). Proponents should identify the order and number of emails making up the email proposal submission (e.g. "email 1 of 3, email 2 of 3...");
  - (iv) For email proposal submissions sent through multiple emails, the Regional District reserves the right to seek clarification or reject the proposal if the Regional District is unable to determine what documents constitute the complete proposal;
  - (v) Attachments must not be compressed or encrypted, must not contain viruses or malware, must not be corrupted, and must be able to be opened using commonly available software (e.g. Adobe Acrobat). Proponents submitting by electronic submission are solely responsible for ensuring that any emails or attachments are not corrupted. The Regional District has no obligation to attempt to remedy any message or attachment that is received corrupted or cannot be viewed. The Regional District may reject proposals that are compressed encrypted, cannot be opened or that contain viruses or malware or corrupted attachments.
- c) For BC Bid e-submissions only pre-authorized e-bidders registered on BC Bid can submit electronic bids on BC Bid. BC Bid is a subscription service (\$150 per year) and the registration process may take two business days to complete. If using this submission method, Proponents should refer to the BC Bid website or contact BC Bid Helpdesk at 250-387-7301 for more information. An electronic proposal submitted on BC Bid must be submitted using the e-bidding key of an authorized representative of the Proponent. Using the e-bidding key of a subcontractor is not acceptable.
  - d) For email proposal submissions, including any notices of amendment or withdrawal referred to in Section 1.6, the subject line of the email and any attachment should be clearly marked with the name of the Proponent, the RFP number and the project or program title.

- e) The Regional District strongly encourages Proponents using electronic submissions to submit proposals with sufficient time to complete the upload and transmission of the complete proposal and any attachments before Closing Time.
- f) The Proponent bears all risk associated with delivering its Proposal by electronic submission, including but not limited to delays in transmission between the Proponent's computer and the Regional District Electronic Mail System or BC Bid.
- g) While the Regional District may allow for email proposal submissions, the Proponent acknowledges that email transmissions are inherently unreliable. The Proponent is solely responsible for ensuring that its complete email proposal submission and all attachments have been received before Closing Time. If the Regional District Electronic Mail System rejects an email proposal submission for any reason, and the Proponent does not successfully resubmit its proposal by the same or other permitted submission method before Closing Time, the Proponent will not be permitted to resubmit its proposal after Closing Time. The Proponent is strongly advised to contact the Regional District Contact immediately to arrange for an alternative submission method if:
  - (i) the Proponent's email proposal submission is rejected by the Regional District Electronic Mail System; or
  - (ii) the Proponent does not receive an automated response email from the Regional District confirming receipt of each and every message transmitted, within a half hour of transmission by the Proponent.

An alternate submission method may be made available, at the Regional District's discretion, immediately to arrange for an alternative submission method, and it is the Proponent's sole responsibility for ensuring that a complete proposal (and all attachments) submitted using an approved alternate submission method is received by the Regional District before the Closing Time. The Regional District makes no guarantee that an alternative submission method will be available or that the method available will ensure that a Proponent's proposal is received before Closing Time.

#### **1.4 SIGNATURE REQUIRED**

Proposals must be properly signed by an officer, employee or agent having authority to bind the Proponent by that signature.

#### **1.5 CLARIFICATIONS, ADDENDA & MINOR IRREGULARITIES**

If any Proponent finds any inconsistencies, errors or omissions in the proposal documents or requires information, clarification of any provision contained therein, they shall submit their query in writing or email, addressed as follows:

Purchasing Division  
Sunshine Coast Regional District  
1975 Field Road, Sechelt, BC V7Z 0A8

[purchasing@scrd.ca](mailto:purchasing@scrd.ca)

Any interpretation of, addition to, deletions from or any corrections to the proposal documents will be issued as written addendum by the Regional District.

All Addenda will be posted on BC Bid. It is the sole responsibility of the Proponent to check for Addenda on BC Bid. Proponents are strongly encouraged to subscribe to BC Bid's email notification service to receive notices of Addenda.

#### **1.6 WITHDRAWAL OR REVISIONS**

Proposals or revisions may be withdrawn by written notice provided such a notice of withdrawal is received prior to the closing date and time. Proposals withdrawn will be returned to the Proponent unopened. Revisions to the proposals already received shall be submitted only by electronic mail, or signed letter. The revision must state only the amount by which a figure is to be increased or decreased, or specific directions as to the exclusions or inclusion of particular words.

#### **1.7 CONDUCT OF THE CONTRACT**

Unless otherwise specified within this document, any queries regarding this Request for Proposal are to be directed to [purchasing@scrd.ca](mailto:purchasing@scrd.ca). No other verbal or written instruction or information shall be relied upon by the Bidder, nor will they be binding upon the Regional District.

#### **1.8 CONFLICT OF INTEREST/NO LOBBYING**

- (a) A Proponent may be disqualified if the Proponent's current or past corporate or other interests, or those of a proposed subcontractor, may, in the Regional District's opinion, give rise to an actual or potential conflict of interest in connection with the services described in the RFP. This includes, but is not limited to, involvement by a Proponent in the preparation of the RFP or a relationship with any employee, contractor or representative of the Regional District involved in preparation of the RFP, participating on the evaluation committee or in the administration of the Contract. If a Proponent is in doubt as to whether there might be a conflict of interest, the Proponent should consult with the Regional District Contact prior to submitting a proposal. By submitting a proposal, the Proponent represents that it is not aware of any circumstances that would give rise to a conflict of interest that is actual or potential, in respect of the RFP.
- (b) A Proponent must not attempt to influence the outcome of the RFP process by engaging in lobbying activities. Any attempt by the Proponent to communicate, for this purpose directly or indirectly with any employee, contractor or representative of the Regional District, including members of the evaluation committee and any elected officials of the

Regional District, or with the media, may result in disqualification of the Proponent.

#### **1.9 CONTRACT**

By submitting a proposal, the Proponent agrees that should its proposal be successful the Proponent will enter into a Contract with the Regional District on substantially the same terms and Conditions set out in [www.scrd.ca/bid](http://www.scrd.ca/bid) and such other terms and conditions to be finalized to the satisfaction of the Regional District, if applicable.

#### **1.10 SUSTAINABLE PROCUREMENT**

The Regional District adheres to its sustainable consideration factors. Proposals will be considered not only on the total cost of services, but Proposals that addresses the environment and social factors.

#### **1.11 INVOICING AND PAYMENT**

Unless otherwise agreed, the Regional District payment terms are Net 30 days following receipt of services or approved invoices, whichever is later. Original invoices are to be forwarded to the accounts payable department of the Regional District. The purchase order number assigned by the Regional District must be stated on the invoice otherwise payment may be delayed.

#### **1.12 PRICING, CURRENCY AND TAXES**

Offered prices are to be attached as a price schedule in Canadian dollars with taxes stated separately when applicable.

#### **1.13 IRREVOCABLE OFFER**

This Proposal must be irrevocable for 90 days from the Proposal closing date and time.

#### **1.14 TIME IS OF THE ESSENCE**

Time shall be of the essence in this contract.

#### **1.15 ASSIGNMENT**

The Proponent will not, without written consent of the Regional District, assign or transfer this contract or any part thereof.

#### **1.16 OWNERSHIP OF DOCUMENTS & FREEDOM OF INFORMATION**

All documents submitted in response to this Request for Proposal shall become the property of the Regional District and as such will be subject to the disclosure provisions of the *Freedom of Information and Protection of Privacy Act* and any requirement for disclosure of all or a part of a Proposal under that Act.

The requirement for confidentiality shall not apply to any Proposal that is incorporated into a Contract for the Work. Further, the Regional District may disclose the top scoring proponent's aggregate pricing to the Regional District Board at a public meeting, when making a recommendation for the award of the Contract.

For more information on the application of the Act, go to [http://www.cio.gov.bc.ca/cio/priv\\_leg/index.page](http://www.cio.gov.bc.ca/cio/priv_leg/index.page).

#### **1.17 AWARD OF CONTRACT**

The Purchasing Policy at the Regional District offers contracts to businesses through an open, fair and

consistent competitive bidding process. This ensures that the Regional District will receive the best overall value for the goods and services it requires. The Regional District reserves the right to cancel, award all or part of the scope of work described in this document to a single Proponent or may split the award with multiple Proponents.

All awards are subject to Board approval that meets the needs as determined by the Board. The Regional District, in receipt of a submission from a Proponent, may in its sole discretion consider the Proponent to have accepted the terms and conditions herein, except those expressly excluded or changed by the Proponent in writing.

The RFP shall not be construed as an agreement to purchase goods or services. The lowest priced or any proposal will not necessarily be accepted. The RFP does not commit the Regional District in any way to award a contract and that no legal relationship or obligation regarding the procurement of any good or service will be created between Regional District and the proponent unless and until Regional District and the proponent execute a written agreement for the Deliverables

#### **1.18 COST OF PROPOSAL**

The Proponent acknowledges and agrees that the Regional District will not be responsible for any costs, expenses, losses, damage or liability incurred by the Proponent as a result of or arising out submitting a Proposal for the proposed contract or the Regional District's acceptance or non-acceptance of their proposal. Further, except as expressly and specifically permitted herein, no Proponent shall have any claim for any compensation of any kind whatsoever, as a result of participating in this RFP, and by submitting a proposal each Proponent shall be deemed to have agreed that it has no claim.

#### **1.19 PROPONENT'S RESPONSIBILITY**

It is the Proponent's responsibility to ensure that the terms of reference contained herein are fully understood and to obtain any further information required for this proposal call on its own initiative. The Regional District reserves the right to share, with all proponents, all questions and answers related to this bid call.

#### **1.20 EVALUATIONS**

Proposals will be evaluated in private, including proposals that were opened and read in public, if applicable. Proposals will be assessed in accordance with the evaluation criteria.

If only one Proposal is received, the Regional District reserves the right to open the Proposal in private or if the total bid price exceeds the estimated budget for the Contract, the Regional District may cancel and re-tender, accept, not accept and cancel or re-scope the Work seeking a better response, with or without any substantive changes being made to the solicitation documents. If more than one Proposal is received from the same Proponent, the last Proposal received, as determined by the Regional District, will be the only Proposal considered.

### **1.21 ACCEPTANCE OF TERMS**

The submission of the Proposal constitutes the agreement of the Proponent that all of the terms and conditions of the RFP are accepted by the Proponent and incorporated in its Proposal, except those conditions and provisions which are expressly excluded and clearly stated as excluded by the Proponent's proposal.

### **1.22 MANDATORY REQUIREMENTS**

Proposals not clearly demonstrating that they meet the mandatory requirements will receive no further consideration during the evaluation process.

### **1.23 INSURANCE & WCB**

The Proponent shall obtain and continuously hold for the term of the contract, insurance coverage with the Regional District Listed as "Additional Insured" the minimum limits of not less than those stated below:

- (a) Commercial General Liability – not less than \$2,000,000 per occurrence
- (b) Motor Vehicle Insurance, including Bodily Injury and Property Damage in an amount no less than \$2,000,000 per accident from the Insurance Corporation of British Columbia on any licensed motor vehicles of any kind used to carry out the Work.
- (c) A provision requiring the Insurer to give the Owners a minimum of 30 days' notice of cancellation or lapsing or any material change in the insurance policy;

The Proponent must comply with all applicable laws and bylaws within the jurisdiction of the work. The Proponent must further comply with all conditions and safety regulations of the Workers' Compensation Act of British Columbia and must be in good standing during the term of any contract entered into from this process.

### **1.24 COLLUSION**

Except otherwise specified or as arising by reason of the provisions of these documents, no person, or corporation, other than the Proponent has or will have any interest or share in this proposal or in the proposal contract which may be completed in respect thereof. There is no collusion or arrangement between the Proponent and any other actual or prospective Proponent in connection with proposals submitted for this project and the Proponent has no knowledge of the context of other proposals and has no comparison of figures or agreement or arrangement, express or implied, with any other party in connection with the making of the proposal.

### **1.25 CONFLICT OF INTEREST**

Proponents shall disclose in its Proposal any actual or potential conflict of interest and existing business relationship it may have with the Regional District, its elected or appointed officials or employees.

### **1.26 LIABILITY FOR ERRORS**

While the Regional District has used considerable efforts to ensure an accurate representation of information in these bid documents, the information contained is supplied solely as a guideline for

Proponents. The information is not guaranteed or warranted to be accurate by the Regional District nor is it necessarily comprehensive or exhaustive.

### **1.27 TRADE AGREEMENTS**

This RFP is covered by trade agreements between the Regional District and other jurisdictions, including the following:

- a) Canadian Free Trade Agreement; and
- b) New West Partnership Trade Agreement.

### **1.28 LAW**

This contract and any resultant award shall be governed by and construed in accordance with the laws of the Province of British Columbia, which shall be deemed the proper law thereof.

### **1.29 REPRISAL CLAUSE**

Tenders will not be accepted by the Regional District from any person, corporation, or other legal entity (the "Party") if the Party, or any officer or director of a corporate Party, is, or has been within a period of two years prior to the tender closing date, engaged either directly or indirectly through another corporation or legal entity in a legal proceeding initiated in any court against the Regional District in relation to any contract with, or works or services provided to, the Regional District; and any such Party is not eligible to submit a tender.

### **1.30 FORCE MAJEURE (ACT OF GOD)**

Neither party shall be liable for any failure of or delay in the performance of this Agreement for the period that such failure or delay is due to causes beyond its reasonable control including but not limited to acts of God, war, strikes or labour disputes, embargoes, government orders or any other force majeure event. The Regional District may terminate the Contract by notice if the event lasts for longer than 30 days.

### **1.31 CONFIDENTIAL INFORMATION OF PROPONENT**

A proponent should identify any information in its proposal or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by Regional District. The confidentiality of such information will be maintained by Regional District, except the total proposed value, which must be publicly released for all proposals, or otherwise required by the Freedom of Information and Protection of Privacy Act ("FOIPPA"), law or by order of a court or tribunal. Proponents are advised that their proposals will, as necessary, be disclosed, on a confidential basis, to advisers retained by Regional District to advise or assist with the RFP process, including the evaluation of proposals. If a proponent has any questions about the collection and use of personal information pursuant to this RFP, questions are to be submitted to the RFP Contact.

### **1.32 DISPUTE RESOLUTION**

All unresolved disputes arising out of or in connection with this Proposal or in respect of any contractual relationship associated therewith or derived therewith shall be referred to and finally resolved by arbitration as prescribed by Mediate BC services pursuant to its

rules, unless otherwise mutually agreed between the parties.

### **1.33 DEBRIEFING**

At the conclusion of the RFP process, all Proponents will be notified. Proponents may request a debriefing meeting with the Regional District.



## **2. INTRODUCTION**

### **2.1 Purpose**

The SCRD is seeking proposals from qualified Contractors to replace the Engineered Air Roof Top Unit (RTU) at Gibsons and District Aquatic Facility (GDAF). The work includes but is not limited to removal and safe disposal of the existing unit, supply and installation of the new unit. All work to commence under the supervision of the SCRD and project consultant.

The SCRD desires a project approach that will minimize facility downtime and impact on facility users and staff. The project should be scheduled to occur during the 2024 facility annual maintenance closure which typically occurs in July and is tentatively scheduled for July 2<sup>nd</sup> through July 25, 2024. If the project cannot be scheduled to occur during the 2024 annual maintenance closure, Proponents are encouraged to look for creative solutions to deliver a cost-effective quality installation while minimizing complete facility downtime through project phasing, after hours work or other methods. Budget for this project is \$143,976.00.

## **3. SITUATION/OVERVIEW**

### **3.1 Background**

The Gibsons and District Aquatic Facility is located at 953 Gibson's Way, Gibson's, BC, was originally constructed in 1977. This 7,300 square foot building is constructed of concrete block walls on a reinforced concrete slab. Some seismic upgrades were done in 1992, which included reinforcing of the concrete block walls. The roofing membrane was replaced in 2012. The RTU is original and is due for replacement.

### **3.2 Project Objectives**

1. Replace the current RTU with a new unit.
2. Minimize project impact on facility users and staff.

### **3.3 Scope**

Please see Appendix A for Specifications

## **4. CONTRACT**

### **4.1 General Contract Terms and Conditions**

Proponents should review carefully the terms and conditions set out in the General Service Contract, including the Schedules. The General Contract terms can be found at: Information about our General Service Terms and Conditions can be found at [www.scrd.ca/bid](http://www.scrd.ca/bid).

### **4.2 Service Requirements**

The Contractor will:

- a) Work closely with the SCRD staff throughout the term of the project:
- b) Provide all the deliverables as outlined in Appendix A including but not limited to:
  - a. The installation of as like RTU Unit.
  - b. Integration of new unit with current Delta Controls DDC.
  - c. Safe disposal of old components.



- c) Conform to all applicable codes, guidelines regulations and all laws as required by the authorities having jurisdiction.
- d) Employ skilled and qualified people to complete the work.
- e) Be aware of and comply with all by-laws or relations regarding noise for each respective jurisdiction.
- f) Notify the SCRD when the work has reached substantial performance and shall review all completed work with the SCRD for the purposes of final inspection, deficiencies and commissioning. Any deficiencies identified the successful Proponent is required to provide the SCRD with a reasonable time period for the correction. The SCRD will provide acknowledgment of those corrections and time frame. The SCRD will conduct further inspections.
- g) Warrant that the work will be completed in a good and skilful manner and provide a minimum of one (1) year warranty on their work.  
If within warranty period any part of the work is found by the SCRD to be defective or faulty due to imperfect or bad construction or material, the successful Contractor will replace such defective items without expense to the Regional District.
- h) Obtain all permits, licenses, approvals and certificate which are generally required for the performance of the work.
- i) Provide three (3) hard copies and one (1) electronic copy in PDF format of as-built drawings, commissioning report and operation and maintenance manuals.
- j) Provide operation and basic preventative maintenance training to SCRD staff.

### **4.3 Environmental Requirements**

All removed existing system components and waste installation materials will be disposed of in a manner that meets all regulatory and environmental requirements. Upcycling or recycling should be considered as the preferred method of disposal whenever possible.

## **5. REQUIREMENTS**

In order for a proposal to be considered, a Proponent must clearly demonstrate that they meet the mandatory requirements set out in Section 7.1 (Mandatory Criteria) of the RFP.

This section includes “Response Guidelines” which are intended to assist Proponents in the development of their proposals in respect of the weighted criteria set out in Section 7.2 of the RFP. The Response Guidelines are not intended to be comprehensive. Proponents should use their own judgement in determining what information to provide to demonstrate that the Proponent meets or exceeds the Regional District’s expectations.

Please address each of the following items in your proposal in the order presented. **Proponents may find it helpful to use the individual Response Guidelines as headings for proposal responses.**

### **5.1 Capabilities**

#### **5.1.1 Relevant Experience**

The Proponent and any subcontractors of the Proponent included in its proposal should have a minimum of **5** years within the past **7** years providing services of a similar scope and complexity.

Similar scope and complexity is defined as:

- a) RTU replacement
- b) Integration of HVAC units with existing DDC controls.
- c) Previous experience working in an aquatic or similar type facility.

### 5.1.2 Qualifications

The Proponents project team **should** include the following qualifications:

- a) Red sealed Certified plumber
- b) Apprentices or helpers **should** have a minimum of one-year domestic plumbing installation or equivalent experience.

Proponents **need to** provide a list of all relevant qualifications for key project team personnel.

### 5.1.3 Subcontractors

Proponents **need to** provide a list of all subcontractors they will utilize to perform the services. The list should include the legal company name, sub trade and any qualifications.

### 5.1.4 Site safety plan

Proponents should include a site safety plan. The plan **should** include but is not limited to:

- a) Fall protection
- b) Hot works
- c) Craning and hoisting

### 5.1.5 References

Proponents **need to** provide a minimum of 3 references (i.e. names and contact information) of individuals who can verify the quality of work provided specific to the relevant experience of the Proponent and of any subcontractors named in the proposal. References from the Proponent's own organization or from named subcontractors are not acceptable.

The Regional District reserves the right to seek additional references independent of those supplied by the Proponent, including internal references in relation to the Proponent's and any subcontractor's performance under any past or current contracts with the Regional District or other verifications as are deemed necessary by it to verify the information contained in the proposal and to confirm the suitability of the Proponent.

## 5.2 Sustainable Social Procurement

A factor in the Regional District evaluation process is sustainable social procurement and the evaluation of proposals will take this into consideration.

As part of any submission the Proponent is encouraged to identify how they may contribute to the following key social, employment and economical goals, but not limited to the following:

- a) Contribute to a stronger local economy by:
  - promoting a Living Wage

- Using fair employment practices;
- Increase training and apprenticeship opportunities;
- b) Local expertise knowledge by:
  - a. Being locally owned;
  - b. Utilization of local subcontractors;
- c) Environmental Cost of Ownership;
- d) Energy efficient products;
- e) Minimal or environmental friendly use of packing materials; and
- f) Reducing hazardous materials (toxics and ozone depleting substances).

### 5.3 Approach

#### 1. Methodology and Objectives

Proponents **should** describe its methodology, approach and outline the process to complete the services. Proponents project approach should focus on ways to reduce overall project time, facility downtime, impact on patrons and staff. Consideration should also be given to coordination of work with other projects occurring during the annual maintenance closure. Proponents should include features of their services that give them a competitive advantage.

#### 2. Workplan

Proponents **should** provide a detailed work plan including start date, key project milestones and project completion date. Proponents **should** indicate if the project can be completed during the 2024 facility annual maintenance closure.

### 5.4 Price

Proponents need to submit a fee proposal that sets out an all-inclusive cost for this project.

Prices quoted will be deemed to be:

- in Canadian dollars ;
- inclusive of duty, FOB destination, and delivery charges where applicable; and
- exclusive of any applicable taxes.

## 6. PROPOSAL FORMAT

Proponents should ensure that they fully respond to all requirements in the RFP in order to receive full consideration during evaluation.

The following format, sequence, and instructions should be followed in order to provide consistency in Proponent response and ensure each proposal receives full consideration. All pages should be consecutively numbered.

- a) Signed cover page (see section 7.1 Mandatory Criteria).
- b) Table of contents including page numbers.
- c) A short (one or two page) summary of the key features of the proposal.
- d) The body of the proposal, including pricing, i.e. the "Proponent Response".
- e) Appendices, appropriately tabbed and referenced.
- f) Identification of Proponent (legal name)
- g) Identification of Proponent contact (if different from the authorized representative) and contact information.

## 7. EVALUATION

Evaluation of proposals will be by a committee formed by the Regional District and may include other employees and contractors.

The Regional District's intent is to enter into a Contract with the Proponent who has met all mandatory criteria and minimum scores (if any) and who has the highest overall ranking.

Proposals will be assessed in accordance with the entire requirement of the RFP, including mandatory and weighted criteria.

The Regional District reserves the right to be the sole judge of a qualified proponent.

The Evaluation Committee may, at its discretion, request clarifications or additional information from a Proponent with respect to any Proposal, and the Evaluation Committee may make such requests to only selected Proponents. The Evaluation Committee may consider such clarification or additional information in evaluating a Proposal.

### 7.1 Mandatory Criteria

Proposals not clearly demonstrating that they meet the following mandatory criteria will be excluded from further consideration during the evaluation process.

<b>Mandatory Criteria</b>
The proposal must be received at the Closing Location before the Closing Time.
The proposal must be in English.
The proposal must be submitted using one of the submission methods set out on the cover page of the RFP
The proposal must either (1) include a copy of the Confirmation of Proponent's Intent to be Bound that is signed by an authorized representative of the Proponent, this is also required for email submissions or (2) be submitted by using the e-bidding key on BC Bid (if applicable), in accordance with the requirements set out in the RFP

### 7.2 Weighted Criteria

Proposals meeting all of the mandatory criteria will be further assessed against the following weighted criteria.

<b>Weighted Criteria</b>	<b>Weight (%)</b>
Qualifications	15
Experience	25
Project Approach and Workplan	25
Sustainable Social Procurement	5
Price	30
<b>TOTAL</b>	<b>100</b>

### **7.3 Price Evaluation**

The lowest priced Proposal will receive full points for pricing. All other prices will be scored using the following formula: lowest priced proposal/price of this proposal\* total points available for price.

## **Appendix A Specifications**



# GIBSONS & DISTRICT AQUATIC FACILITY ROOFTOP UNIT UPGRADE

953 GIBSONS WAY, GIBSONS, BC V0N 1V0



## SCOPE OF WORKS

- THE INTENT OF THIS PROJECT IS TO TO REPLACE THE EXISTING ROOFTOP UNIT AT GIBSONS & DISTRICT AQUATIC FACILITY, 953 GIBSONS WAY, GIBSONS, BC. THE EXISTING AIR HANDLING UNIT HAS COME TO THE END OF IT'S LIFE CYCLE. THE UNIT SHALL BE REPLACED WITH A NEW ROOFTOP UNIT AS DETAILED WITHIN THE SPECIFICATION AND SHOWN ON THE DRAWINGS.
- THE FOLLOWING SCOPE OF WORKS IS RECOMMENDED AS A MINIMUM AND IS NOT LIMITED TO:
- ALL LABOUR, EQUIPMENT AND RESOURCES FOR THE SAFE REMOVAL AND DISPOSAL OF THE EXISTING ROOFTOP UNIT AND ASSOCIATED ANCILLARIES, AS SHOWN ON THE DRAWINGS AND SPECIFICATION. CONSIDERATION SHOULD BE GIVEN TO THE PROPOSED SEQUENCE OF WORKS FORMING PART OF THIS SPECIFICATION.
    - THE EXISTING BUILDING WILL BE OCCUPIED DURING CONSTRUCTION WORKS SO LIMITED SHUTDOWNS OF THE VENTILATION AND UTILITY SERVICES WILL BE REQUIRED
    - THE EXISTING AIR HANDLING UNIT AND CONDENSING UNIT ARE LOCATED ON THE ROOF OF THE BUILDING. A CRANE WILL BE REQUIRED TO FACILITATE THE REMOVAL AND INSTALL OF THE REDUNDANT EQUIPMENT AND NEW EQUIPMENT, RESPECTIVELY.
  - ALL LABOUR, EQUIPMENT AND RESOURCES REQUIRED TO COMPLETE ENERGY EFFICIENCY RETROFITS INCLUDING:
    - ISOLATION AND DISCONNECTION OF THE EXISTING ROOFTOP UNIT, REMOVAL AND DISPOSAL.
    - SUPPLY AND INSTALL THE NEW ROOFTOP UNIT AND ASSOCIATED ANCILLARIES.
    - RECONNECTION OF EXISTING ELECTRICAL COMPONENTS.
    - PROPOSED STRUCTURAL WORKS AS INDICATED IN STRUCTURAL DRAWINGS.
    - COMMISSIONING OF NEW AND EXISTING SYSTEMS.
    - PERMITS (GAS, ELECTRICAL, ETC).
    - OPERATION AND MAINTENANCE MANUALS.
    - STANDARD OPERATING PROCEDURES.
    - DISCONNECT & RECONNECT TO EXISTING DDC SYSTEM.
    - LIAISON WITH DDC CONTRACTOR.
  - UNDER THIS CONTRACT, IT IS PROPOSED TO REPLACE THE EXISTING ROOFTOP UNIT AS PER THE SPECIFICATION AND DESIGN INTENT DRAWINGS. THE EXISTING SERVICES SHALL BE DRAINED DOWN WHERE APPLICABLE TO ALLOW FOR THEIR SAFE REMOVAL. THE CONTRACTOR SHALL PROVIDE DETAILS OF WASTE DISPOSAL FOR ALL EQUIPMENT AND MATERIALS. CONTRACTOR RESPONSIBLE FOR ALL DISPOSAL.
  - PRIOR TO COMMENCEMENT OF THE REMOVAL WORKS, THE CONTRACTOR IS TO CARRY OUT AN INSPECTION OF THE SYSTEM AND LOCALISED AREA TO ENSURE THAT NO ASBESTOS OR LEAD BASED MATERIAL IS PRESENT IN THE REDUNDANT SERVICES. IF ASBESTOS OR LEAD BASED MATERIAL IS FOUND, THE CLIENT AND CONSULTANT MUST BE IMMEDIATELY INFORMED AND THE APPROPRIATE ACTION WILL BE INSTRUCTED TO THE CONTRACTOR.
  - THE CONTRACTOR IS REMINDED THAT THE BUILDING WILL BE OCCUPIED DURING THE RENOVATIONS AND THAT PHASED SHUTDOWNS OF THE EXISTING SERVICES MUST BE CLOSELY COORDINATED WITH THE SITE MANAGER.
  - THE CONTRACTOR SHALL MAKE ALLOWANCE TO MAKE GOOD THE EXISTING (OR NEW) PENETRATIONS THROUGH THE STRUCTURE TO THE CLIENT'S SATISFACTION.
  - PROPOSENTS WILL BE REQUIRED TO MAKE ALLOWANCES FOR ALL BUILDERS WORK AND PERMITS.
  - ALL NEW AND EXISTING PIPE-WORK SHALL BE THERMALLY INSULATED AS PART THIS CONTRACT TO THE SATISFACTION OF THE CLIENT.
  - CONTRACTOR MUST GET SEISMIC ENGINEER TO POSITION AND SEISMICALLY RESTRAIN ALL EQUIPMENT AND PIPING AS REQUIRED BY CODE AND LOCAL JURISDICTION REQUIREMENTS AND AS PER THE DETAILED DESIGN DRAWINGS.
  - VERIFY THAT ALL EXISTING LOCAL POWER SUPPLIES, PIPING AND CONDENSATE DRAINS ARE INSTALLED CORRECTLY AND ARE OPERATIONAL.
  - FIRE-STOPPING AND SMOKE SEALS ON ALL MECHANICAL SERVICES WHICH PARTIALLY OF COMPLETELY PENETRATE FIRE RATED BUILDING COMPONENTS TO BC BUILDING BYLAW.
  - PROVIDE ONE YEAR WARRANTY ON NEW SYSTEM AND EQUIPMENT.
  - PROVIDE OPERATION AND MAINTENANCE MANUALS, TAB REPORTS AND SYSTEM DEMONSTRATION AND TRAINING AS REQUIRED BY THE SPECIFICATION.
  - MANUFACTURER'S START-UP SERVICE ON NEW EQUIPMENT.
  - CONTRACTOR MUST SUBMIT CX PLAN FOR REVIEW BY CONSULTANT AND OWNER.
  - CONTRACTOR MUST INCLUDE FULL CX REPORT WITH MANUAL.

## PROJECT NOTES

### GENERAL NOTES:

- THE MECHANICAL SYSTEM SHALL CONSIST OF ALL WORK SHOWN ON DRAWINGS, DIAGRAMS, AND AS DESCRIBED IN SPECIFICATIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INTENDED TO INDICATE THE SCOPE AND GENERAL ARRANGEMENT OF WORK AND ARE NOT DETAILED INSTALLATION INSTRUCTIONS.
- ITEMS NOTED "TYPICAL" OR "TYP" ON ANY SHEET APPLY TO THAT PARTICULAR SHEET
- COORDINATE WITH SPECIFICATIONS. IN CASE OF CONFLICT BETWEEN SPECIFICATIONS AND DRAWINGS THE MORE STRINGENT SHALL APPLY.
- VERIFY EXISTING CONDITIONS BEFORE COMMENCING ANY WORK ON A PREVIOUSLY INSTALLED EXISTING MECHANICAL SYSTEM.
- THE MECHANICAL CONTRACTOR SHALL ACT AS THE GENERAL CONTRACTOR AND SHALL INCLUDE ALL SUB TRADES AND WORK TO FACILITATE THE INSTALLATION OF THE SYSTEM INCLUDING BUT NOT LIMITED TO ELECTRICAL CONTRACTOR, PLUMBING CONTRACTOR AND SEISMIC CONTRACTOR. REFER TO RFP FOR DETAILS.
- NO CORING ON EXISTING STRUCTURES SHALL COMMENCE UNTIL THE AREA IS SCANNED AND THE PROJECT MANAGER HAS APPROVED SCAN REPORT.
- THE USE OF PLASTIC ANCHORS IS PROHIBITED
- DO NOT SCALE THE DRAWINGS. OBTAIN ACCURATE MEASUREMENTS FROM SITE.
- THE CONTRACTOR SHALL ALLOW FOR ALL AND ANY PIPING, VENTING OFFSETS REQUIRED TO AVOID THE EXISTING STRUCTURE, MECHANICAL OR ELECTRICAL INSTALLATIONS.
- VISIT AND INSPECT THE SITE AND REVIEW ALL CORRESPONDING DRAWINGS. NO ALLOWANCE WILL BE MADE FOR FAILURE TO DO SO.
- BE RESPONSIBLE FOR CARE OF THE BUILDING. PERFORM ALL CUTTING, PATCHING, PAINTING AND REPAIRING REQUIRED FOR THE WORK OF THIS TRADE. WORKS TO BE PERFORMED BY THE GENERAL CONTRACTOR'S FORCES AT THE MECHANICAL CONTRACTOR'S EXPENSE.
- CLEAN ALL DEBRIS DAILY AND UPON COMPLETION OF CONTRACT.
- COORDINATE WORK WITH ALL OTHER TRADES. PATCH AND SEAL ALL FLOOR AND WALL PENETRATIONS WITH FIRE RESISTANT INSULATION AND MASTIC.
- ONE SET OF OWNER'S APPROVED DRAWINGS AND PERMIT DRAWINGS SHALL BE KEPT ON THE SITE AND AVAILABLE FOR CHECKING AT ALL TIMES DURING CONSTRUCTION.
- ALL MATERIALS TO MEET FLAME SPREAD RATING REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- OBTAIN ALL PERMITS REQUIRED. ARRANGE FOR INSPECTION OF THE WORK BY THE INSPECTION AUTHORITY AND PAY FULL FEES. PROVIDE FINAL CERTIFICATE TO THE OWNER.
- MECHANICAL CONTRACTOR SHALL COMPLY WITH ALL THE RULES AND REGULATIONS SET FORTH BY THE OWNER.
- PROVIDE CERTIFICATE OF GUARANTEE OF WORKMANSHIP AND MATERIAL FOR ONE YEAR FROM DATE OF ACCEPTANCE.
- IDENTIFY ALL EQUIPMENT WITH LAMICOID PLATES.
- ANY WORK NOT SHOWN ON THE DRAWINGS OR SPECIFICALLY MENTIONED IN THE SPECIFICATIONS AND CONSIDERED NECESSARY FOR THE COMPLETION

- OF THE WORK IN PROPER MANNER SHALL BE PROVIDED BY THIS CONTRACTOR WITHOUT ADDITIONAL CHARGE.
- NOTHING CONTAINED HEREIN SHALL BE CONSTRUED TO RELIEVE THIS CONTRACTOR FROM MAKING GOOD AND PERFECT IN ALL USUAL DETAILS OF CONSTRUCTION AND HE WILL BE HELD RESPONSIBLE TO PROVIDE AND FURNISH MATERIAL TO DO ALL THE WORK AND LABOR AND BEAR EXPENSES INCIDENTAL TO THE SATISFACTORY COMPLETION OF THE WORK EMBRACED IN THESE SPECIFICATIONS.
  - MECHANICAL CONTRACTOR SHALL VERIFY AND CONFIRM EXACT LOCATION OF ALL THE EXISTING SERVICES AND EQUIPMENT ON SITE.
  - COMPLETE MECHANICAL INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, BY-LAWS, AND AUTHORITIES HAVING JURISDICTION.
  - ALL WORK SHALL CONFORM TO ASHRAE 90.1 LATEST EDITION.
  - SEISMIC RESTRAINTS FOR ALL EQUIPMENT AND PIPING COVERED UNDER DIVISION 15. SEISMIC ENGINEER SHALL BE RETAINED UNDER THE CONTRACTOR'S SCOPE OF WORK TO ENSURE SEISMIC INSTALLATIONS ARE APPROVED BY A CERTIFIED SEISMIC ENGINEER.
  - WHERE PIPES PENETRATE HORIZONTAL OR VERTICAL FIRE PARTITIONS, FIRE WALLS, RATED FLOOR ASSEMBLIES OR SMOKE PARTITIONS, INSTALL A ULC LISTED FIRE STOP SYSTEMS MUST PROVIDE AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FIRE, SMOKE AND GASES. THEY MUST BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS AND DETAILS.
  - FIRE STOP SYSTEMS ARE TO MEET THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
  - SHOP DRAWINGS TO BE SUBMITTED 7 DAYS AFTER AWARD OF CONTRACT.
  - PURCHASE ORDER SHALL BE EXECUTED NO MORE THAN 2 DAYS AFTER RECEIPT OF ENGINEERS APPROVAL.
  - ALTERNATIVE EQUIPMENT MAY BE SUBMITTED IN ACCORDANCE WITH THE RFP DOCUMENTS, A MINIMUM OF 5 BUSINESS DAYS BEFORE SUBMISSION OF ENQUIRES DEADLINE.

### MECHANICAL/PLUMBING NOTES:


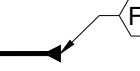







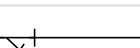


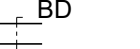
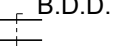
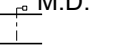

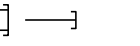
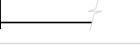
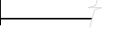

- INSTALL ALL MECHANICAL WORK AS HIGH AS POSSIBLE, TIGHT TO STRUCTURE ABOVE, EXCEPT WHERE CONFLICT OCCURS WITH REQUIREMENTS LISTED UNDER SPECIFICATION (VIBRATION ISOLATION).
- THE MECHANICAL PLANS ARE DIAGRAMMATIC IN NATURE AND DO NOT ATTEMPT TO SHOW ALL REQUIRED OFFSETS.
- COORDINATE ALL MECHANICAL WORK WITH THAT OF OTHER TRADES TO ENSURE PROPER AND ADEQUATE INTERFACE OF THEIR WORK WITH THE WORK OF THIS CONTRACTOR. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO FABRICATION AND INSTALLATION.
- COORDINATE EXACT LOCATIONS OF ALL TEMPERATURE SENSORS WITH CLIENT PRIOR TO INSTALLATION.
- THE MECHANICAL CONTRACTOR SHALL INCLUDE FOR ALL PERMITS AS REQUIRED BY THE LOCAL AUTHORITY.
- PROVIDE VENT FROM ALL GAS PRESSURE REGULATORS TO A SAFE LOCATION OUTSIDE THE BUILDING.
- BEFORE FABRICATION AND INSTALLATION OF DUCTWORK AND PIPING, MAKE

- CERTAIN THAT SUCH ITEMS CAN BE INSTALLED AS SHOWN ON THE DRAWINGS WITHOUT INTERFERENCE WITH THE STRUCTURE OR THE WORK OF OTHER TRADES. IF ANY MATERIALS ARE FABRICATED OR INSTALLED PRIOR TO THE INVESTIGATION AND REACHING OF A SOLUTION TO POSSIBLE INTERFERENCE PROBLEMS, NECESSARY CHANGES SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
- NOTE THE REMOVAL OF MECHANICAL WORK IS NOT SHOWN ON PLANS. CONTRACTOR SHALL VISIT THE SITE AND CONFIRM ALL OF THE EXISTING MECHANICAL ITEMS TO BE REMOVED AND THE REMOVAL WORK SHALL BE INCLUDED IN THE TENDER PRICING. PROTECT FINISHED OR UNFINISHED WORK AND OPERATING WORK AREAS BY TARPAULINS OR OTHER COVERING FROM DAMAGE DUE TO EXECUTION OF WORK. REPAIR DAMAGE TO BUILDING RESULTING FROM MECHANICAL WORK TO THE SATISFACTION OF CONSULTANTS AT NO EXPENSE TO THE OWNER.
  - SHUT-DOWNS OF EXISTING SYSTEMS REQUIRED FOR THIS INSTALLATION SHALL BE FULLY COORDINATE WITH THE BUILDING MANAGEMENT AND THIS WORK PERFORMED AS DIRECTED IN WRITING BY THE BUILDING MANAGEMENT. CONNECTION TO EXISTING SERVICES SHALL BE PERFORMED DURING OFF-WORK HOURS OR ON WEEKEND IN PREMIUM TIME.
  - INSULATE ALL CONDENSER WATER, HEATING WATER, AND CONDENSATE DRAIN PIPING WITH 1-1/2 IN. (38 MM) THICK 3.5 LB/CU. FT. DENSITY, FIBROUS GLASS WITH WHITE KRAFT BONDED TO ALUMINUM FOIL. FITTINGS SHALL BE INSULATED WITH PRE-MOLDED FIBERGLASS INSULATION. THE INTEGRITY OF THE VAPOR BARRIER SHALL BE MAINTAINED THROUGHOUT THE INSTALLATION. TAPE AND SEAL ALL JOINTS OF VAPOR BARRIER TAPE.
  - APPLY INSULATION TO CLEAN, DRY PIPING WITH ALL JOINTS TIGHTLY BUTTED. ADHERE THE FACTORY APPLIED VAPOR BARRIER JACKET. LAP SMOOTHLY AND SECURELY AT THE LONGITUDINAL LAPS WITH A WHITE VAPOR BARRIER ADHESIVE. ADHERE 3 IN. (75 MM) WIDE BUTT JOINT STRIPS OVER ALL END JOINTS WITH VAPOR BARRIER ADHESIVE TO ENSURE A CONTINUOUS VAPOR BARRIER. INSULATE ALL FITTINGS ON PIPING WITH INSULATION CEMENT TO THE SAME THICKNESS AS THE ADJACENT INSULATION.
  - VAPOR SEAL WITH 1/8 IN. (3 MM) WET COATS OF VAPOR BARRIER MASTIC, REINFORCED WITH GLASS FABRIC.
  - PROVIDE ALL NECESSARY PIPING MATERIAL AND LABOR FOR THE SYSTEMS SHOWN ON THE DRAWINGS. PIPING AND FITTINGS SHALL BE IN ACCORDANCE WITH CURRENT EDITION OF APPLICABLE CODES AND LATEST REVISIONS.
  - PROVIDE ULC LISTED BACKFLOW PREVENTERS AS SHOWN ON DRAWINGS AND/OR AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION.
  - PROVIDE AIR GAP FITTING ON DRAIN FROM REQUIRED FIXTURES ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

### ELECTRICAL NOTES:

- PROVIDE NEC CODE MINIMUM HORIZONTAL AND VERTICAL WORKING CLEARANCE FOR ALL ELECTRICAL PANELS AND EQUIPMENT. OFFSET MECHANICAL WORK AS REQUIRED.
- VERIFY VOLTAGE ON SITE BEFORE ORDERING EQUIPMENT.

## MECHANICAL LEGEND

— — — — —	HEATING WATER SUPPLY
- - - - -	HEATING WATER RETURN
— C —	CONDENSATE
—  —	EMERGENCY SHUT-OFF VALVE
— C —	DROP (TO BELOW)
— O —	TO ABOVE
— X-X —	EQUIPMENT / FIXTURE TYPE
—  —	FIRE DAMPER
— Y —	OPEN DRAIN
—  —	THERMOSTAT
—  —	DIRECTION OF FLOW
—  —	SLOPE PIPE OR DUCT
—  —	PIPE UNION
—  —	CAP OR PLUG
—  —	CHECK VALVE
—  —	BALANCING VALVE
—  —	PRESSURE REDUCING VALVE
—  —	STRAINER
—  —	THERMOMETER
—  —	PUMP
—  —	BALANCING DAMPER
—  —	BACK DRAFT DAMPER
—  —	MOTORIZED DAMPER
—  —	ACCESS PANEL
—  —	DUCT OR PIPE CAP-OFF
—  —	SUPPLY OUTLET
—  —	RETURN OR EXHAUST INLET



## SITE PLAN

SCALE: NONE

## COVER PAGE, PROJECT NOTES & MECHANICAL LEGEND

SCALE: NONE

## DISCLAIMER NOTE

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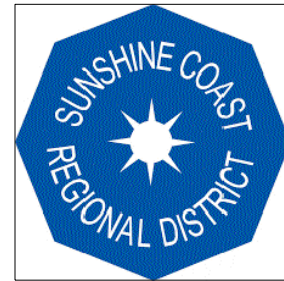
2	ISSUED FOR TENDER	23/12/19
1	ISSUED FOR REVIEW	23/09/11
#	REVISIONS	(YR/M/D)

## ISSUED FOR TENDER NOT FOR CONSTRUCTION

Project

### GIBSONS & DISTRICT AQUATIC FACILITY ROOFTOP UNIT UPGRADE

953 GIBSONS WAY, GIBSONS, BC V0N 1V0



MECHANICAL & ELECTRICAL ENGINEERS

### BUILDING ENERGY SOLUTIONS

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Title

### COVER PAGE, PROJECT NOTES & MECHANICAL LEGEND

Scale

AS NOTED

Drawn

MM

Checked

SM

Project No.

21-B338

Drawing No.

# M0.1

Latest Revision No.

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GENERAL PROVISIONS

- 1.0 SCOPE:
- 1.1 PROVIDE COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM TO MEET REQUIREMENTS HEREIN AND IN ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES.
- 1.2 VISIT THE SITE BEFORE SUBMITTING TENDER AND EXAMINE LOCAL AND EXISTING CONDITIONS ON WHICH THE WORK IS DEPENDANT. NO CONSIDERATION WILL BE GRANTED FOR MISUNDERSTANDING OF WORK TO BE DONE RESULTING FROM FAILURE TO VISIT THE SITE.
- 1.3 SHOULD THE CONTRACTOR DISCOVER ANY SPECIFIED EQUIPMENT, MATERIAL OR INSTALLATION WHICH MAY BE IN VIOLATION OF LAWS, ORDINANCES, OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION, PROMPTLY BRING THIS MATTER TO THE ATTENTION OF THE CONSULTANT.
- 1.4 ASSUME RESPONSIBILITY OF LAYING OUT OF WORK AND FOR DAMAGE CAUSED BY IMPROPER EXECUTION OF WORK.
- 1.5 PROTECT FINISHED AND UNFINISHED WORK FROM DAMAGE. REPAIR DAMAGE TO PARTS OF BUILDING RESULTING FROM IMPROPER EXECUTION OF WORK.
- 1.6 GIVE NOTICES, OBTAIN PERMITS AND PAY ALL FEES FOR THE WORK SPECIFIED HEREIN. CERTIFY THAT WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- 1.7 PROTECT EQUIPMENT AND MATERIALS IN STORAGE ON SITE DURING AND AFTER INSTALLATION UNTIL FINAL ACCEPTANCE. THOROUGHLY CLEAN PIPING, DUCTS AND EQUIPMENT OF DIRT, CUTTINGS AND OTHER FOREIGN SUBSTANCES.
- 1.8 ALL NECESSARY CUTTING, CORING AND PATCHING OF EXISTING WALL, FLOOR AND ROOF REQUIRED TO COMPLETE NEW MECHANICAL INSTALLATION SHALL BE INCLUDED IN THIS CONTRACT. CONFIRM WITH AND OBTAIN PERMISSION FROM BUILDING OWNER AND YOUR STRUCTURAL ENGINEER PRIOR TO CUTTING AND/OR CORING OF EXISTING STRUCTURE. CUTTING OF EXISTING CONCRETE SURFACES SHALL BE BY MACHINE SAW CUTTING. HOLES FOR PIPES IN CORE CONCRETE WALLS AND FLOORS SHALL BE MADE WITH CORE DRILLING EQUIPMENT. ALLOW TO MAKE GOOD ALL EXPOSED SURFACES AT COMPLETION OF MECHANICAL AND ELECTRICAL WORK.
- 1.9 REPAIR BUILDING WHERE DAMAGED FROM EQUIPMENT, INSTALLATION, IMPROPERLY LOCATED HOLES ETC. BY THIS SECTION OF WORK. USE MATERIAL MATCHING MATERIALS EXISTING BUILDING.
- 1.10 CONTRACT DOCUMENTS OF THIS DIVISION AND DRAWINGS ARE DIAGRAMMATIC AND APPROXIMATELY TO SCALE UNLESS DETAILED OTHERWISE. THEY ESTABLISH SCOPE, MATERIAL AND INSTALLATION QUALITY AND ARE NOT DETAILED INSTALLATION INSTRUCTIONS.
- 1.11 THIS DRAWING INDICATES THE GENERAL LOCATION AND ROUTE TO BE FOLLOWED BY THE PIPING FOR DESIGN INTENT ONLY. THE PIPES SHALL BE INSTALLED IN SUCH A WAY AS TO CONSERVE HEAD ROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF SPACE THROUGH WHICH THEY PASS. SERVICE LINES SHALL BE PARALLEL TO BUILDING LINES. ALL PIPES AT CEILING SHALL BE KEPT AS TIGHT AS POSSIBLE TO BEAMS OR OTHER LIMITING MEMBERS AT HIGH END.

2.0 MATERIALS

- 2.1 PIPING MATERIAL SHALL BE IN ACCORDANCE WITH B.C BUILDING CODE WITH THE FOLLOWING STANDARDS
- 2.1.1 HYDRAULIC HEATING PIPING SHALL BE SCHEDULE 40 A53 PIPE WITH SCHEDULE 40 FITTINGS.
- 2.2 WHERE PIPES, DUCTS, CABLES ETC. PARTIALLY PENETRATE OR PASS THROUGH FIRE RATED WALLS OR SMOKE PARTITION WALLS, SEAL ALL JOINTS BETWEEN PIPES, DUCT AND WALL WITH A ULC APPROVED FIRE STOPPING TO THE HOURLY RATING REQUIRED BY THE NATIONAL BUILDING CODE OR LOCAL CODES. FIRE-STOPPING SHALL BE INSTALLED BY A CONTRACTOR REGULARLY ENGAGING IN THIS WORK. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO COMMENCING WORK. SUBMIT REPORT CONFIRMING THIS WORK HAS BEEN COMPLETED AT THE END OF THE PROJECT.
- 3.0 TESTING
- 3.1 ALL SYSTEMS, EQUIPMENT AND MATERIALS SHALL BE TESTED. TESTING PROCEDURES SHALL BE AS REQUIRED BY SPECIFICATION BELOW OR AUTHORITY HAVING JURISDICTION. CARRY OUT HYDRAULIC TESTS FOR AN 8 HOUR PERIOD AND MAINTAIN PRESSURE WITH NO APPRECIABLE PRESSURE DROP. WHERE LEAKAGE OCCURS, REPAIR AND RETEST.
- 3.1.1 TEST DRAINAGE SYSTEMS BY FILLING WITH WATER TO PRODUCE WATER PRESSURE OF 5 FEET MINIMUM, 25 FEET MAXIMUM. CHECK FOR PROPER GRADE AND OBSTRUCTION BY BALL TEST.
- 3.1.2 TEST LOW VELOCITY DUCTS FOR TIGHTNESS SUCH AS LEAKAGE IS INAUDIBLE AND NOT DETECTABLE BY FEEL.
- 3.1.3 PERFORM LEAKAGE TEST ON LOW VELOCITY DUCTWORK AS PER THE SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL WITH A LEAKAGE CLASS OF 24 FOR RECTANGULAR DUCTS AND A LEAKAGE CLASS OF 12 FOR ROUND DUCTS.

4.0 SHOP DRAWINGS

- 4.1 SUBMIT THREE (3) COPIES OF SHOP DRAWINGS FOR REVIEW OF EQUIPMENT USED.

5.0 MECHANICAL SYSTEMS VERIFICATION

- 5.1 THE MECHANICAL CONTRACTOR IS TO INCLUDE IN THE SUBMITTED BID PRICE THE COST OF COMMISSIONING WORK. AN APPROVED COMMISSIONING AGENCY WILL BE APPOINTED BY THE CONTRACTOR AND APPROVED BY THE CONSULTANT.
- 5.2 THE CX AGENCY SHALL PROVIDE THE FOLLOWING SCOPE OF SERVICES TO REVIEW, INSPECT AND VERIFY ALL MECHANICAL SYSTEMS INSTALLED UNDER THIS CONTRACT ARE OPERATING IN CONFORMANCE TO THE DESIGN INTENT.
- 5.2.1 REVIEW OF THE DRAWINGS AND SPECIFICATIONS AS ISSUED FOR CONSTRUCTION, AND CONFIRMATION TO THE OWNER AND CONSULTANT THAT THE CX AGENT UNDERSTANDS THE INTENDED AND DESIGN INTENT AND SPECIFIED SEQUENCE OF OPERATIONS, THE CX AGENT SHALL ALLOW ADEQUATE TIME TO REVIEW WITH THE OWNER AND CONSULTANT THE DESIGN INTENT OF THE PROJECT AND THE INTENDED OPERATION.
- 5.2.2 VERIFICATION OF CONDITION AND OPERATION OF INSTALLED EQUIPMENT AND REPORTING ON SUCH AS INDICATED BELOW.
- 5.2.3 REVIEW OF THE BALANCING REPORTS, AND COORDINATION WITH THE BALANCING AGENT TO ENSURE THAT ALL SYSTEMS ARE FUNCTIONING AS INTENDED.
- 5.2.4 PARTICIPATING IN END-TO-END CHECKS ON ALL SPECIFIED SEQUENCE OF OPERATIONS, WORKING IN CONJUNCTION WITH THE CONTRACTOR.
- 5.2.5 CO-ORDINATE AND SUPERVISE THE START-UP OF EQUIPMENT AND SYSTEMS AS SPECIFIED BELOW. UTILIZE THE START-UP SERVICES OF THE MANUFACTURERS REPRESENTATIVE WHERE SPECIFIED. ENSURE THAT THE EQUIPMENT IS OPERATING IN A SATISFACTORY MANNER.
- 5.2.6 RESOLVE INTER-CONTRACTOR COORDINATION PROBLEMS. WHERE PROBLEMS BECOME APPARENT DURING THE CX PROCESS, WORK AT THE IDENTIFICATION AND RESOLUTION OF THESE PROBLEMS.
- 5.3 ORGANIZE AND CONDUCT THE DEMONSTRATION TO THE OWNER OF ALL MECHANICAL EQUIPMENT AND SYSTEMS SUPPLIED UNDER THIS CONTRACT. THE DEMONSTRATIONS SHALL OCCUR ONLY AFTER THE OPERATION AND TESTING HAS BEEN SUCCESSFULLY COMPLETED. EQUIPMENT SUPPLIERS AND THE BALANCING AGENT SHALL PARTICIPATE IN THE DEMONSTRATION AS REQUIRED.
- 5.3.1 THE CX AGENT BEARS THE RESPONSIBILITY TO ENSURE THE MECHANICAL INSTALLATION FUNCTIONS AS INTENDED, OR TO INDICATE IF CERTAIN COMPONENTS OF THE SYSTEMS CANNOT OPERATE AS INTENDED, WHY SUCH IS THE CASE AND WHAT IS RECOMMENDED TO RECTIFY THE PROBLEMS.
- 5.3.2 THE CX AGENT WILL COORDINATE THE WORK OF THE MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, BALANCING AGENT AND CONTROLS CONTRACTOR, INCLUDING ORGANIZATION AND CHAIRING OF ANY MEETINGS REQUIRED BETWEEN THESE PARTIES TO RESOLVE AND COORDINATE THE CX PROCESS. THE CO-OPERATION OF ALL TRADES IS ESSENTIAL FOR AN EFFICIENT AND PLANNED PROCESS. A TEAM COMPRISING THE ABOVE PARTIES IS RECOMMENDED ALONG WITH AN OWNER'S REPRESENTATIVE.
- 5.4 OPERATING AND MAINTENANCE DATA AND AS-BUILT DRAWINGS
- 5.4.1 PROVIDE THREE (3) COPIES TO CONSULTANT OF HARD COVER TYPE BINDERS AT COMPLETION OF PROJECT. ASHRAE STANDARD FOR O&M MANUALS SHALL FORM PART OF THIS SPECIFICATION.

6.0 MECHANICAL INSULATION

- 6.1 INSULATION THICKNESS AND PERFORMANCE SHALL CONFORM TO REQUIREMENTS OF ASHRAE/IES STANDARD 90.1-1989
- 6.2 EXPOSED DUCTWORK: RIGID MINERAL FIBRE INSULATION WITH FACTORY APPLIED FOIL FACED JACKET, STANDARD 1502-A.2. FOR ROUND DUCTWORK SMALLER THAN 24" IN DIAMETER, USE FLEXIBLE INSULATION.
- 6.3 CONCEALED DUCTWORK: FLEXIBLE MINERAL FIBRE INSULATION WITH FACTORY APPLIED FOIL FACED JACKET, STANDARD 1502-B.2.
- 6.4 ACOUSTIC LINING: FIBREGLASS INSULATION WITH NEOPRENE SURFACE COATING OR MATT FACED TO PREVENT FIBRE EROSION, STANDARD 1502-C.2 FOR DUCTWORK AND 1502-C.1 FOR PLENUMS.
- 6.5 PIPING: MINERAL FIBRE INSULATION PREFORMED FOR PIPING WITH INTEGRAL ALL SERVICE JACKET, STANDARD 1501-A.2.

INSULATION THICKNESS SCHEDULE

- OUTSIDE AIR DUCTS  
SUPPLY AIR DUCTS AND PLENUMS EXPOSED IN FINISHED AREAS AND MECHANICAL ROOMS  
CONDITIONED SUPPLY AIR DUCTS IN HEATED SPACE  
ACOUSTIC DUCT LINERS (UNLESS INDICATED OTHERWISE ON THE DRAWINGS)
- CONDENSER WATER EXPOSED TO OUTDOORS
- 7.0 PAINTING AND IDENTIFICATION
- 7.1 CLEAN ALL EXPOSED BARE METAL SURFACES SUPPLIED BY THE MECHANICAL AND PLUMBING TRADE BY REMOVING ALL DIRT, DUST, GREASE AND LMSCALE.
- 7.2 REPAINT ALL MARRED FACTORY FINISHED EQUIPMENT WHICH IS NOT SCHEDULED TO BE REPAINTED TO MATCH ORIGINAL FACTORY FINISH.
- 7.3 NATURAL GAS AND FIRE PROTECTION PIPING SHALL BE COLOR CODED AS FOLLOWS:  
GAS - YELLOW - C.G.S.B. 505-101  
FIRE - RED - C.G.S.B. 509-102
- 7.4 THE PAINT USED IN THIS STANDARD IS TO BE IN ACCORDANCE WITH 'THAT SPECIFIED IN C.G.S.B PUBLICATION 1-GP-60C VIZ 'ENAMEL, INTERIOR, GLOSS, ALKYD TYPE'
- 8.0 AIR DISTRIBUTION
- 8.1 PROVIDE AIR DISTRIBUTION SYSTEMS TO CODE REQUIREMENTS.
- 8.2 FOLLOW ASHRAE AND SMACNA STANDARDS INCLUDING LATEST ISSUE OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE" AND SMACNA "HVAC DUCT LEAKAGE TEST MANUAL." FOR SHEET METAL DUCT CONSTRUCTION THE STATED STANDARDS SHALL BE CONSIDERED AS PART OF THIS SPECIFICATION. AIR DISTRIBUTION DUCTWORK SHALL BE INSULATED TO MEET THE REQUIREMENTS AS NOTED IN ASHRAE 90.1.
- 8.3 FANS SHALL MEET AMCA BULLETINS AND BEAR AMCA CERTIFIED RATING SEALS (AIR AND SOUND) AND CSA LABEL.
- 8.4 DUCTWORK AND PLENUMS
- 8.4.1 GALVANIZED DUCT SYSTEMS: DUCTWORK SHALL BE G-60 COATED GALVANIZED STEEL OF LOCK FORMING GRADE CONFORMING TO ASTM STANDARDS A-525 AND A-527. MINIMUM DUCT GAUGE FOR RECTANGULAR DUCTWORK SHALL BE 26 GAUGE; 28 GAUGE FOR ROUND DUCT OR TO SMACNA STANDARDS, WHICHEVER IS MOST STRINGENT. DUCTWORK, CASINGS, EXTERIOR COMPONENTS, FITTINGS, HANGERS, REINFORCEMENT AND OTHER CONSTRUCTION OR INSTALLATION REQUIREMENTS FOR DUCT SYSTEMS AND RELATED COMPONENTS SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS REFERENCED ABOVE.
- 8.4.2 FLEXIBLE DUCTS: CLASS 1 VINYL COATED FIBREGLASS CLOTH OVER STEEL SPRING, FLEXMASTER FABRIFLEX TYPE 4 (UNINSULATED) OR THERMAFLEX MKE (INSULATED) TO SUIT PRESSURE CLASS. FLEXIBLE DUCTS SHALL CONFORM TO UL STANDARD 181 AND NFPA BULLETIN 90A. FIRE RATING OF FLEXIBLE DUCTS SHALL BE 1/2 HOUR OR MORE AS MEASURED BY UL STANDARD 181, PARAGRAPH 7. FLAME PENETRATION TEST.
- 8.4.3 SEALANTS AND GASKETING: LOW VOC EMITTING, WATER-RESISTANT, FIRE-RESISTIVE, COMPATIBLE WITH METAL AND INSULATIONS. CLASS A, B OR C TO SUIT PRESSURE CONSTRUCTION CLASS OF DUCTWORK FOR PROJECT.
- 8.5 DUCT ACCESS DOORS
- 8.5.1 FABRICATE TO SUIT PRESSURE CLASS OF DUCT SYSTEM IN ACCORDANCE WITH SMACNA RECOMMENDATIONS.
- 8.5.2 FABRICATE RIGID, CLOSE-FITTING DOORS OF GALVANIZED STEEL WITH SEALING GASKETS AND LOCK FASTENING LOCKING DEVICES. INSTALL MINIMUM 1" THICK INSULATION WITH SHEET METAL FRAME AND INSIDE PANEL FOR INSULATED DUCTWORK. EQUAL TO "SANDWICH" DUCTMATE ACCESS DOOR.
- 8.5.3 FABRICATE DUCT ACCESS DOORS WITH BUTT HINGES, SASH LOCKS FOR SIZES UP TO 18".
- 8.5.4 FABRICATE CASING ACCESS DOOR WITH HINGES AND COMPRESSION LATCHES WITH OUTSIDE AND INSIDE HANDLES FOR SIZES UP TO 24" X 48" AND ADDITIONAL HINGE FOR LARGER SIZES. DOOR SHALL OPEN AGAINST PRESSURE. REFER TO SECTION 15050 FOR REQUIRED OPENING SIZES.
- 8.6 FIRE DAMPERS
- 8.6.1 FIRE DAMPERS SHALL BE UL555S AND ILC555S CLASSIFIED AND LABELED.
- 8.6.2 FABRICATE OF GALVANIZED OR PRIME COATED STEEL, WEIGHTED TO CLOSE AND LOCK WHEN RELEASED BY FUSIBLE LINK.
- 8.6.3 FIRE DAMPERS IN LOW PRESSURE DUCTWORK MAY BE MULTI-BLADE, OFFSET BUTTERFLY OR TYPE B CURTAIN TYPE. TYPE A IS ACCEPTABLE AT GRILLES WHERE GRILLE HEIGHT IS INCREASED BY 3".
- 8.6.4 FABRICATE COMBINATION FIRE AND BALANCING DAMPERS WITH LINKAGE READILY ADJUSTABLE IN OPEN POSITION. PROVIDE CURTAIN TYPE WITH EXTENDED LINK STRAPS.
- 8.6.5 FIRE DAMPERS IN MEDIUM PRESSURE DUCTWORK SHALL BE TYPE B CURTAIN TYPE.
- 8.6.6 CURTAIN FIRE DAMPERS SHALL HAVE BLADES RETAINED IN RECESS SO FREE AREA OF CONNECTING DUCTWORK IS NOT REDUCED (TYPE B).
- 8.6.7 FUSIBLE LINKS SHALL BE SET FOR 171°C.
- 8.7 SMOKE AND COMBINATION SMOKE/FIRE DAMPERS
- 8.7.1 ULC APPROVED MULTI BLADE COMBINATION FIRE/SMOKE DAMPERS SHALL BE UL555S CLASSIFIED AND LABELLED AS CLASS 1 (MAXIMUM 4 CFM PER FT2 AT 1"W.G.) WITH 1-1/2 HOUR FIRE RATING AND 71°C FUSIBLE LINK. DAMPERS UNDER 1.5 FT2 SHALL BE 2" WIDER AND 4" HIGHER TO ACCOMMODATE FRAME AND BLADE STOPS.
- 8.7.2 PROVIDE 120 VOLT AIR CLOSED, FACTORY MOUNTED MOTOR TO MEET UL 555S RATING, EQUAL TO HONEYWELL M445D.
- 8.7.3 PROVIDE MICROSWITCH PACKAGE TO PROVIDE 2-POSITION INDICATION MOUNTED IN ENCLOSURE WITH SWITCH AND WIRE OUTSIDE DUCT. LINK SWITCH DIRECTLY TO DAMPER BLADE. EQUAL TO RUSKIN SP-100.
- 8.8 VOLUME DAMPERS
- 8.8.1 FABRICATE OF GALVANIZED STEEL, MINIMUM 16 GAUGE WITH QUADRANTS OR CONTINUOUS ADJUSTMENT RODS AND LOCK SCREW WITH 1/8" CLEARANCE ALL AROUND. ROUND PIN DAMPERS WILL NOT BE ACCEPTED.
- 8.8.2 FABRICATE SINGLE AND MULTI-BLADE DAMPERS FOR DUCTS TO SMACNA STANDARDS.
- 8.8.3 MULTI-BLADE BALANCING DAMPERS SHALL BE OPPOSED BLADE PATTERN OF 18 GAUGE METAL WITH MAXIMUM FRAME WIDTH OF 48". MAXIMUM BLADE HEIGHT SHALL BE 12". ASSEMBLY OF THE BALANCING REPORTS, AND COORDINATION WITH THE BALANCING AGENT TO ENSURE THAT ALL SYSTEMS ARE FUNCTIONING AS INTENDED.
- 8.8.4 CONSTRUCT DAMPER BLADES FOR MEDIUM PRESSURE SYSTEMS TO BLOCK AIR PASSAGE 70% MAXIMUM, WITH LOCKING HANDLES.
- 8.8.5 FABRICATE MULTI-BLADE, PARALLEL ACTION GRAVITY BALANCED BACKDRIFT DAMPERS WITH BLADES MAXIMUM 6" WIDTH WITH FELT OR FLEXIBLE VINYL SEALING EDGES, LINKED IN RATTLE FREE MANNER WITH ADJUSTMENT DEVICE TO PERMIT SETTING FOR VARYING DIFFERENTIAL STATIC PRESSURE.
- 8.9 FLEXIBLE CONNECTIONS
- 8.9.1 PROVIDE APPROVED FLAME-PROOF FABRIC CONNECTIONS: MINIMUM 4" WIDE WITH METAL EDGE STRIPS ATTACHED TO DUCT OR EQUIPMENT BY SCREWS OR BOLTS AT 6" INTERVALS AND SEALED WITH HIGH VELOCITY DUCT SEALER.
- 8.9.2 FLEXIBLE CONNECTORS SHALL BE FACTORY INSULATED WITH 1" THICK FLEXIBLE FIBROUS INSULATION, FOIL BACKED.
- 8.10 OUTSIDE OPENINGS
- 8.10.1 OUTSIDE LOUVRES: FABRICATE OF 12 GAUGE ALUMINUM OR 16 GAUGE GALVANIZED STEEL WITH 4" DEEP BLADES AT 45° SLOPE WITH ALUMINUM INSECT SCREEN. INTAKES SHALL HAVE CENTRE BAFFLE AND RETURN BEND STORMPROOF PROFILE. PROVIDE INSULATED BLANK-OFF PANELS BEHIND UNUSED PORTIONS OF LOUVRES. INTAKE AND EXHAUST LOUVRES EQUAL TO TACO 3000 SERIES FIXED BLADE LOUVRES. LOUVRÉ FINISH TO BE CONFIRMED BY ARCHITECT PRIOR TO PRODUCTION OF SHOP DRAWINGS.
- 8.11 AIR OUTLETS
- 8.11.1 PROVIDE ADC RATED OUTLETS WITH SEISMIC ATTACHMENT TABS. BASE AIR OUTLET APPLICATION ON NC 25 MAXIMUM.
- 8.11.2 PROVIDE AIR OUTLETS WITH ACCESSORIES AS SPECIFIED. PROVIDE SPONGE RUBBER SEAL AROUND EDGE OF SUPPLY OUTLETS. PROVIDE 2 DIAMETER LENGTH OF STRAIGHT DUCT TO DIFFUSER OUTLETS.
- 8.11.3 REVIEW REQUIREMENTS OF OUTLET SIZE, FINISH AND TYPE OF MOUNTING BEFORE SUBMITTING SHOP DRAWINGS AND SCHEDULES OF OUTLETS. AIR OUTLETS SHALL BE PRODUCT OF ONE MANUFACTURER FOR GENERIC TYPE UNLESS OTHERWISE SPECIFIED.
- 8.11.4 PROVIDE BAFFLES ON DIFFUSERS TO DIRECT AIR AWAY FROM OBSTRUCTIONS WITHIN RADIUS OF DIFFUSER THROW.
- 8.11.5 PROVIDE ANTI-SMUDGE FRAMES OR PLAQUES ON ACOUSTIC PLASTER CEILINGS.
- 8.11.6 PROVIDE BALANCING DAMPERS ON AIR OUTLETS.
- 8.11.7 GRILLES SHALL HAVE GANG OPERATED OPPOSED BLADE DAMPERS WITH REMOVABLE KEY.
- 8.11.8 DIFFUSERS SHALL HAVE RADIAL OPPOSED BLADE OR BUTTERFLY WITH EQUALIZING GRID, DAMPERS ADJUSTABLE FROM DIFFUSER FACE.
- 8.11.9 PROVIDE EXTRACTORS WITH CURVED EXTRACTION BLADES FOR GRILLE CONNECTIONS LESS THAN 12" FROM DUCT MAIN OR RISER WITH ACCESSIBLE CONTROL IN AIR OUTLET COLLAR, STIFFENED TO AVOID VIBRATION. SIZE ON BASIS OF STRAIGHT AIR VOLUME PROPORTIONING.
- 8.11.10 SUPPLY DIFFUSERS IN TILED CEILING SHALL HAVE 1/2" RECESSED LIP WITH ADJUSTABLE PATTERN.
- 8.11.11 PROVIDE SEISMIC CLIPS ON DIFFUSERS.

9.0 INTERRUPTION OF EXISTING SERVICES

- 9.1 COORDINATE AND MAINTAIN LIAISON WITH THE OWNER TO INTERRUPT, RE-ROUTE OR CONNECT TO WATER, SEWER, STORM, HEATING OR COOLING SYSTEMS WITH MINIMAL INTERRUPTION OF SERVICE. CONTACT RESPECTIVE UTILITY COMPANIES AND BUILDING OWNER PRIOR TO STARTING WORK.
- 9.2 WHERE MODIFICATION OF EXISTING FACILITIES IS REQUIRED, ASSUME FULL RESPONSIBILITY FOR ANY DISRUPTION OF EXISTING SYSTEMS. PROVIDE ALL TEMPORARY CONNECTIONS REQUIRED TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING NORMAL OPERATING HOURS. SHUT DOWN OF EXISTING MAY ONLY MADE AS DIRECTED BY BUILDING OWNER. MAKE GOOD ALL MECHANICAL WORK DISTURBED DURING CONSTRUCTION. RELOCATE EXISTING WORK AND COMPONENTS TO ACCOMMODATE NEW WORK NECESSARY TO ALLOW COMPLETION OF THE SYSTEMS AS INDICATED.
- 9.3 ALL DELIVERIES AND STORAGE SHALL BE COORDINATED WITH THE CLIENT IN ADVANCED OF ORDERED AND SITE SET UP. CONTINUAL DIALOGUE BETWEEN THE CONTRACTOR AND CLIENT SHOULD BE ESTABLISHED TO ENSURE MINIMAL DISRUPTION TO THE OPERATION OF THE BUILDING.
- 10.0 WORK IN EXISTING AREAS:
- 10.1 COORDINATION BETWEEN NEW AND EXISTING INSTALLATIONS.
- 10.1.1 CHECK AND COORDINATE ALL SYSTEMS IN THE RENOVATION WHICH EXTEND TO EXISTING SYSTEMS TO ENSURE THEIR PROPER OPERATION.
- 10.1.2 PROVIDE INTERFACING COMPONENTS BETWEEN NEW AND EXISTING SYSTEMS AS NECESSARY FOR PROPER PERFORMANCE AND OPERATION.
- 10.2 USE OF EXISTING MATERIAL AND OPERATION
- 10.2.1 TEST EXISTING EQUIPMENT (AND/OR EXISTING PIPING) AT COMMENCEMENT OF WORK WHICH IS TO REMAIN AND TO BE RE-USED FOR PROPER OPERATION.
- 10.2.2 SERVICE ALL EXISTING EQUIPMENT (WHICH IS TO BE RE-USED) TO TOP OPERATING CONDITION.
- 10.2.3 REPORT TO THE CONSULTANT AT ONCE IF ANY EQUIPMENT (AND/OR PIPING) IS NOT IN PROPER OPERATING CONDITION.
- 10.2.4 IF NO REPORT IS SUBMITTED ON DEFECTS OF EXISTING EQUIPMENT AND/OR EXISTING PIPING WITHIN THREE WEEKS AFTER COMMENCEMENT OF WORK, THEN IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE GOODWILL DEFECTS AND DAMAGE IF FOUND TO BE NECESSARY IN FUTURE.
- 10.2.5 SUBMIT WRITTEN REPORT TO CONSULTANT AT COMPLETION OF PROJECT CONFIRMING ALL NECESSARY TESTING AND EXAMINATION OF EXISTING PIPING, EQUIPMENT, ETC. HAVE BEEN CARRIED OUT AND TO THE SATISFACTION OF THE CONTRACTOR.
- 10.3 SALVAGE MATERIAL
- 10.3.1 REMOVE FROM SITE ALL MATERIALS WHICH ARE NOT TO REMAIN OR BE RE-USED, UNLESS NOTED AS REAMING THE PROPERTY OF THE OWNER.
- 10.4 EXISTING SERVICES
- 10.4.1 DISCONNECT AND REMOVE ALL EXISTING PRODUCTS WHICH ARE TO BE ABANDONED.
- 10.4.2 REMOVE ALL PIPING WHICH IS ABANDONED EXCEPT INACCESSIBLE PIPING CUT AND CAP PIPING BELOW FINISHED SURFACES.
- 10.4.3 PLUG AND CAP ABANDONED DRAINS AND VENT POINTS IN SYSTEM WHICH ARE NOT BEING RE-USED. PLUG AND CAP TO THE APPROVAL OF THE LOCAL AUTHORITIES.
- 10.4.4 MAINTAIN HEATING AND COOLING IN THE BUILDING DURING CONSTRUCTION TO PROTECT THE BUILDING AND EQUIPMENT OR TO PROVIDE COMFORT CONDITIONS FOR THE OCCUPANTS.
- 10.4.5 KEEP ALL SPRINKLER, STANDPIPE AND OTHER FIRE AND LIFE SAFETY PROTECTION SERVICES IN OPERATION AT ALL TIMES.
- 10.4.6 ALL MECHANICAL SYSTEMS DEMOLITION WORK SHALL BE PERFORMED BY QUALIFIED PERSONNEL OF RESPECTIVE TRADES. EXISTING EQUIPMENT AND/OR SYSTEMS WHICH ARE TO REMAIN SHALL BE LEFT IN GOOD CONDITION.
- 10.5 WORKING ON A ROOF
- 10.5.1 CONTRACTOR TO PROVIDE GUARDRAILS ALONG PERIMETER OF BUILDING TO PROTECT WORKERS FROM FALL HAZARDS. GUARDRAILS TO BE 45 INCHES ABOVE WORKING SURFACE.
- 10.5.2 CONTRACTOR TO PROVIDE ALL NECESSARY PERSONAL FALL ARREST SYSTEM (PFAS) EQUIPMENT, WHICH INCLUDES ANCHORAGE, FULL-BODY HARNESS AND LANYARD OR LIFELINE.

11.0 ELECTRICAL MOTORS

- 11.1 SUPPLY MECHANICAL EQUIPMENT COMPLETE WITH ELECTRICAL MOTORS.
- 11.2 PROVIDE MOTORS TO CEMA AND CSA STANDARDS FOR HARD, CONTINUOUS SERVICE, DESIGNED TO LIMIT TEMPERATURES TO 150°C FOR MOTOR HOUSING AND 80°C FOR DRIP PROOF HOUSING, AND OPERATE 1200 OR 1800 RPMIN. UNLESS OTHERWISE SPECIFIED DO NOT USE AIR OVER RATINGS.
- 11.3 MOTORS SHALL HAVE BALL AND ROLLER TYPE BEARINGS WITH GREASE LUBRICATION FITTINGS.
- 11.4 ALL BELT-DRIVEN DEVICES SHALL HAVE THE MOTORS MOUNTED ON ADJUSTABLE BASES WITH ADJUSTING SCREWS SO THAT PROPER TENSION CAN BE MAINTAINED.
- 11.5 WHERE MECHANICAL EQUIPMENT HAS BEEN SELECTED BY THE DESIGN BUILD CONTRACTOR TO BE COMPLETE WITH STARTERS, DISCONNECTS AND/OR CONTROL PANELS, THE CONTRACTOR SHALL PROVIDE ANY REQUIRED WIRING AND CONDUIT BETWEEN THE EQUIPMENT AND THE ABOVE ITEMS.

12.0 ACCESS OF EQUIPMENT

- 12.1 MAKE ALL ARRANGEMENTS TO ENSURE THAT ACCESS INTO THE BUILDING IS AVAILABLE FOR ALL MECHANICAL EQUIPMENT. DO ALL HOISTING AND RIGGING INTO PLACE OF ALL SPECIFIED EQUIPMENT AND BE RESPONSIBLE FOR ANY DAMAGE INCURRED THEREFROM.

13.0 GUARANTEE WARRANTY

- 13.1 THE CONTRACTOR SHALL FURNISH A WRITTEN WARRANTY STATING THAT ALL WORK EXECUTED UNDER THIS DIVISION WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL PERFORMANCE, WHICH SHALL INCLUDE ONE (1) COMPLETE SUMMER AND ONE (1) COMPLETE WINTER OF UNINTERRUPTED OPERATION. WARRANTY SHALL INCLUDE ANY PART OF EQUIPMENT, UNITS OR STRUCTURES FURNISHED HEREUNDER AND SHOW DEFECTS IN THE WORKS UNDER NORMAL OPERATING CONDITIONS AND/OR FOR THE PURPOSE OF WHICH THEY WERE IN PRIME CONDITION.
- 13.2 THE CONTRACTOR SHALL AT THEIR OWN EXPENSE PROMPTLY INVESTIGATE ANY MECHANICAL OR CONTROL MALFUNCTION, AND REPAIR OR REPLACE ALL SUCH DEFECTIVE WORK, AND ALL OTHER DAMAGES THEREBY BECOMES DEFECTIVE DURING THE TIME OF THE GUARANTEE WARRANTY.
- 13.3 THE CONTRACTOR SHALL IDENTIFY MANUFACTURERS WARRANTY WITHIN THE OPERATION AND MAINTENANCE MANUAL.

14.0 SUBSTANTIAL PERFORMANCE INSPECTION

- 14.1 PRIOR TO THE CONTRACTOR REQUESTING AN INSPECTION FOR SUBSTANTIAL PERFORMANCE ALL THE FOLLOWING ITEMS MUST BE PROVIDED TO PERMIT BENEFICIAL USE BY THE OWNER:
- 14.1.1 COMPLY WITH THE REQUIREMENTS IN THE GENERAL CONTRACT CONDITIONS.
- 14.1.2 MAINTENANCE AND OPERATING MANUALS TO BE SUBMITTED AND APPROVED.
- 14.1.3 AS BUILT DRAWINGS
- 14.1.4 BALANCE REPORTS
- 14.1.5 ALL MOTOR NAME PLATE RATINGS AND ACTUAL OPERATING AMPS AND VOLTAGES.
- 14.1.6 ALL SYSTEMS SHALL BE CERTIFIED IN WRITING BY THE CONTRACTOR AS COMPLETE AND FULLY OPERATIONAL.
- 14.1.7 INSTRUCTIONS TO THE OWNERS OPERATING PERSONNEL SHALL BE PROVIDED IN ACCORDANCE WITH THE SPECIFICATIONS. A SIGNED STATEMENT TO THIS EFFECT, COUNTERSIGNED BY THE OWNER SHALL BE SUBMITTED TO THE CONSULTANT.
- 14.1.8 A COMPLETE LIST OF ITEMS WHICH THE CONTRACTOR HAS NOT FINISHED, OR ARE DEFICIENT SHALL BE PROVIDED, IF, IN THE OPINION OF THE CONSULTANT, THIS LIST INDICATES THE PROJECT IS EXCESSIVELY INCOMPLETE, A SUBSTANTIAL COMPLETION INSPECTION WILL NOT BE PERFORMED.
- 14.1.9 THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO ACCUMULATE ALL NECESSARY DATA FROM THEIR SUB-CONTRACTORS AND SUPPLIERS AND PRESENT SAME IN THE SPECIFIED FORMAT FOR APPROVAL BY THE CONSULTANT.

15.0 DEMONSTRATION AND INSTRUCTION TO OWNER

- 15.1 DEMONSTRATE TO AND INSTRUCT THE REPRESENTATIVE DESIGNATED BY THE OWNER ON THE COMPLETE SYSTEMS OPERATING AND MAINTENANCE PROCEDURES USING THE ASSISTANCE OF SPECIALIST SUB-TRADES AND MANUFACTURERS REPRESENTATIVES.
- 15.2 SUBMIT A PROGRAM FOR APPROVAL 14 DAYS PRIOR TO SUBSTANTIAL COMPLETION WHEN APPROVAL IS OBTAINED FROM THE CONSULTANT. ARRANGE AN ACCEPTABLE TIME WITH THE CONSULTANT FOR THE EXECUTION. ALLOW A PERIOD OF 5 DAYS DURING THIS PERIOD. THE FOLLOWING SYSTEMS SHALL BE DEMONSTRATED IN REGARDS TO PERFORMANCE AND SAFETY FEATURES (TO THE FULLEST)
- 15.2.1 CONTROL SYSTEMS
- 15.2.2 FIRE PROTECTION AND PLUMBING SYSTEMS
- 15.2.3 HEATING SYSTEMS
- 15.3 OBTAIN A SIGNED STATEMENT FROM THE OWNER CERTIFYING THAT THE DEMONSTRATION AND INSTRUCTIONS HAVE BEEN GIVEN TO HIS SATISFACTION.

16.0 FIELD REVIEWS

- 16.1 THE CONSULTANT OR HIS REPRESENTATIVE MAY CHOOSE TO REVIEW ALL WORK PRIOR TO IT BEING CONCEALED. ALL WORK SHALL BE APPROVED BY ANY OTHER REGULATORY BODY HAVING JURISDICTION. ALL OPENINGS SHALL BE SEALED APPROPRIATELY IN PARTICULAR IN FIRE RATED WALLS AND PIPING. SEALING SHALL BE APPROVED PRIOR TO COVERING.

17.0 NOT USED

18.0 SCHEDULE OF APPROVED EQUIPMENT

- 18.1 THIS CONTRACT SHALL BE BASED ON MATERIAL AND EQUIPMENT AS SPECIFIED. SUBMIT PROPOSALS TO SUPPLY EQUIVALENT MATERIALS OR EQUIPMENT IN WRITING TO THE CONSULTANT AT LEAST 7 WORKING DAYS PRIOR TO CLOSING DATE OF TENDER. ALL EQUIVALENT PRODUCTS SHALL BE LISTED IN THE CONTRACT DOCUMENTS OR IN ADDENDA.

EQUIPMENT	SPECIFIED	APPROVED EQUIVALENT
VALVES	BRASS & CAST IRON	CRANE NEWMAN HATTERSLEY VICTAULIC APOLLO KITZ WATTS FARRIS SINGER LONERGAN MARSH TAYLOR WEISS MARSHALLTOWN TOUR AND ANDERSON ARMSTRONG BELL & GOSSET ARMSTRONG VICTAULIC VICTAULIC GRUVLOK MATCH EXISTINGMANSON KNIFE
RELIEF VALVES		ARMSTRONG TACO MASON KORFUND VIBRO-ACOUSTICS TRARI
METERS AND GAUGES		LENNOX CARRIER
CIRCUIT BALANCING VALVES		
SUCTION GUIDES		
GROOVED COUPLINGS		
INSULATION		
PUMPS	GRUNDFOS	ARMSTRONG
FIRE STOPPING SEALANTS VIBRATION ISOLATION & SEISMIC RESTRAINTS ROOFTOP UNITS	DOW   ENGINEERED AIR.	
19.0 INSULATION		
19.1 THE BRITISH COLUMBIA INSULATION CONTRACTORS ASSOCIATION (BCICA) STANDARD MANUALS, LATEST EDITION SHALL FORM, PART OF THIS SPECIFICATION FOR THE MECHANICAL INSULATION		
20.0 SEISMIC RESTRAINTS		
20.1 PROVIDE SEISMIC RESTRAINTS ON ALL MECHANICAL EQUIPMENT, PIPING AND DUCTWORK IN ACCORDANCE WITH PART 4 OF NEC 1990 AND THE GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS, AS PREPARED BY SMACNA AND THE PLUMBING INSTITUTE COUNCIL.		
20.2 AT COMPLETION OF WORK, PROVIDE WRITTEN CONFIRMATION TO THE CONSULTANT THAT ALL MECHANICAL INSTALLATIONS HAVE BEEN PROVIDED WITH SEISMIC RESTRAINTS AS PER BUILDING CODE REQUIREMENTS.		
21.0 COMMISSIONING		
21.1 COMMISSIONING IS THE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE THE SERVICES OF A SPECIALIST COMPANY TO CO-ORDINATE THE COMMISSIONING OF THE EQUIPMENT AND SYSTEMS.		
21.2 TEST THE OPERATION OF INDIVIDUAL COMPONENTS AND SYSTEMS. GO THROUGH EACH STEP OF THE SEQUENCE OF OPERATION AND VERIFY THAT EACH COMPONENT OPERATES CORRECTLY. DIRECT AND ENSURE THAT ALL TRADES INVOLVED MAKE THE REQUIRED CHANGES AND ADJUSTMENTS TO AFFECT THE PROPER OPERATION OF ALL COMPONENTS AND SYSTEMS. DOCUMENT THE OPERATIONS AND SEQUENCES.		
21.3 IN CONJUNCTION WITH THE BALANCING CONTRACTOR, DOCUMENT THE PERFORMANCE OF EACH COMPONENT. VERIFY THE OPERATION POINT OF EQUIPMENT WITH RESPECT TO CERTIFIED PERFORMANCE DATA. REVIEW THE RESULTS WITH THE MANUFACTURERS.		
21.4 PROVIDE DOCUMENTATION OF THE COMMISSIONING PROCESS FOR INCLUSION INTO THE MAINTENANCE MANUALS. THESE ARE TO INCLUDE CHECK OUT SHEETS, EQUIPMENT DATA SHEETS, START-UP CERTIFICATES FROM SUPPLIERS INVOLVED IN THE START UP AND DOCUMENTATION CONCERNING DEMONSTRATION TO THE OWNER. INCLUDE ALL RECORD AND RESULT SHEETS FROM TESTS.		
21.5 ORGANIZE AND ATTEND THE DEMONSTRATION TO THE OWNER OF ALL EQUIPMENT AND SYSTEMS SUPPLIED UNDER THIS CONTRACT. THE DEMONSTRATION SHALL OCCUR ONLY AFTER THE OPERATION AND TESTING HAS BEEN COMPLETED. EQUIPMENT SUPPLIERS SHALL PARTICIPATE IN THE DEMONSTRATION AS REQUIRED.		
22.0 CONTROLS		
22.1 ALL CONTROLS SHALL BE ELECTRIC		
22.2 INCLUDE MANUFACTURER'S SITE ATTENDANCE DURING COMMISSIONING PHASE		
22.3 PROVIDE ALL SAFETY CONTROLS FOR THE CONDENSERS AS REQUIRED BY CODE.		
23.0 LAWS, NOTICES, PERMITS AND FEES		
23.1 GIVE ALL NECESSARY NOTICES. OBTAIN ALL NECESSARY PERMITS AND PAY ALL FEES IN ORDER THAT THE WORK SPECIFIED MAY BE CARRIED OUT, AND FURNISH ANY CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAW AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.		
23.2 ALL WORK SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THE FOLLOWING AUTHORITATIVE BODIES, THE CODES IN EFFECT AT THE TIME OF TENDER, AND ANY OTHERS HAVING JURISDICTION:		
23.2.1 FIRE MARSHALL		
23.2.2 CANADIAN ELECTRICAL CODE		
23.2.3 B.C. BUILDING CODE AND LOCAL BUILDING BY-LAWS		
23.2.4 WORKER'S COMPENSATION BOARD		
23.2.5 CANADIAN STANDARDS ASSOCIATION		
23.2.6 NATIONAL BUILDING CODE OF CANADA		
23.2.7 B.C. BOILER AND PRESSURE VESSEL ACT		
23.2.8 NATIONAL FIRE PROTECTION ASSOCIATION		
23.2.9 UNDERWRITERS' LABORATORIES OF CANADA		

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BUILDING ENERGY SOLUTIONS IS NOT RESPONSIBLE FOR THE ACCURACY OF THESE DRAWINGS, THEY ARE ISSUED FOR INFORMATION PURPOSES ONLY. EXACT DIMENSIONS AND LOCATIONS OF ALL SERVICES SHALL BE COORDINATED AND VERIFIED WITH THE CONTRACTOR

2	ISSUED FOR TENDER	23/12/19
1	ISSUED FOR REVIEW	23/09/11
#	REVISIONS	(YR/M/D)

ISSUED FOR TENDER  
NOT FOR CONSTRUCTION

GIBSONS & DISTRICT AQUATIC FACILITY  
ROOFTOP UNIT UPGRADE

953 GIBSONS WAY, GIBSONS, BC V0N 1V0



BUILDING ENERGY SOLUTIONS

SUITE 722 - 550 WEST BROADWAY  
VANCOUVER, BC, CANADA, V5Z 0A9  
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Title	
Scale	AS NOTED
Drawn	MM
Checked	SM
Project No.	21-B338
Drawings No.	

MECHANICAL SPECIFICATIONS

Drawing No.

M1.1

Latest Revision No. 2

MECHANICAL SPECIFICATIONS

SCALE: NONE



GENERAL DEMOLITION NOTES:

1. CONTRACTOR SHALL VISIT THE SITE AND CONFIRM ALL OF THE EXISTING MECHANICAL ITEMS TO BE REMOVED AND THE REMOVAL WORK SHALL BE INCLUDED IN THE TENDER PRICING. PROTECT FINISHED OR UNFINISHED WORK AND OPERATING WORK AREAS BY TARPULINS OR OTHER COVERING FROM DAMAGE DUE TO EXECUTION OF WORK. REPAIR DAMAGE TO BUILDING RESULTING FROM MECHANICAL WORK TO THE SATISFACTION OF CONSULTANTS AT NO EXPENSE TO THE OWNER.
2. THE CONTRACTOR SHALL PROVIDE THE OWNER REPRESENTATIVE WITH AT LEAST 72 HOURS WRITTEN NOTICE OF ANY FURTHER SHUTDOWNS THAT MAY BE REQUIRED IN ORDER TO MINIMIZE THE IMPACT TO THE OPERATIONS IN THE ZONE/S AFFECTED.
3. ANY EQUIPMENT AND/OR PIPING IDENTIFIED BY THE CLIENT SHALL BE SET ASIDE BY THE CONTRACTOR AND TURNED OVER. THE OWNER HAS FIRST REFUSAL OF ALL REDUNDANT EQUIPMENT AND PIPING.
4. ALL REDUNDANT PIPING, HANGERS, CONDUIT AND WIRING WHICH IS NO LONGER REQUIRED SHALL BE REMOVED BY THE CONTRACTOR.
5. ALL NEW AND EXISTING OPENINGS AROUND PIPING, CONDUITS, ARE TO BE FIRE STOPPED WHERE THEY PENETRATE THE SPACE.
6. ALL OTHER COORDINATION AND SCHEDULING TASKS SHALL BE PERFORMED PER THE SPECIFICATION.
7. PRIOR TO REMOVAL OF ANY EQUIPMENT IN THIS AREA, THE CONSULTANT SHALL WALK THROUGH WITH THE CONTRACTOR TO IDENTIFY ANY SERVICES TO BE RETAINED. DO NOT REMOVE ANY EQUIPMENT WITHOUT AUTHORIZATION OF THE CONSULTANT AND/OR OWNER.
8. THE EXISTING SERVICES SHOWN ON THIS DRAWING SHEET ARE PROVIDED FOR INFORMATION PURPOSES & TO ILLUSTRATE GENERAL LAYOUT. THEY MAY NOT BE 100% ACCURATE. IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK LOCATION AND ROUTES OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS.
9. DEMOLITION SHALL INCLUDE ALL EQUIPMENT & SERVICES IDENTIFIED BELOW, BUT NOT LIMITED TO:
  - 9.1 REMOVE ROOFTOP UNIT & ANCILLARIES AS SHOWN.

THE SCOPE OF WORK FOR THIS PROJECT GENERALLY INCLUDES THE FOLLOWING, BUT NOT LIMITED TO:

1. DEMOLITION
2. ALL PERMITS AND CERTIFICATION AS REQUIRED BY CODE AND THE LOCAL JURISDICTION
3. NEW ROOFTOP UNIT AND ANCILLARY COMPONENTS AS SPECIFIED AND AS REQUIRED BY CODE
4. VERIFICATION OF SYSTEM INCLUDING:
  - 4.1 SYSTEM BALANCING.
  - 4.1 OPERATION AND MAINTENANCE MANUALS
  - 4.2 SEISMIC DESIGN (RESTRAINTS) AND PERMITS
  - 4.3 ELECTRICAL INSTALLATION
  - 4.4 CONTROLS INSTALLATION
  - 4.5 REMEDIATION
  - 4.6 ADHERENCE WITH CODE AND JURISDICTIONAL REQUIREMENTS

GENERAL NOTES (INSTALLATION):

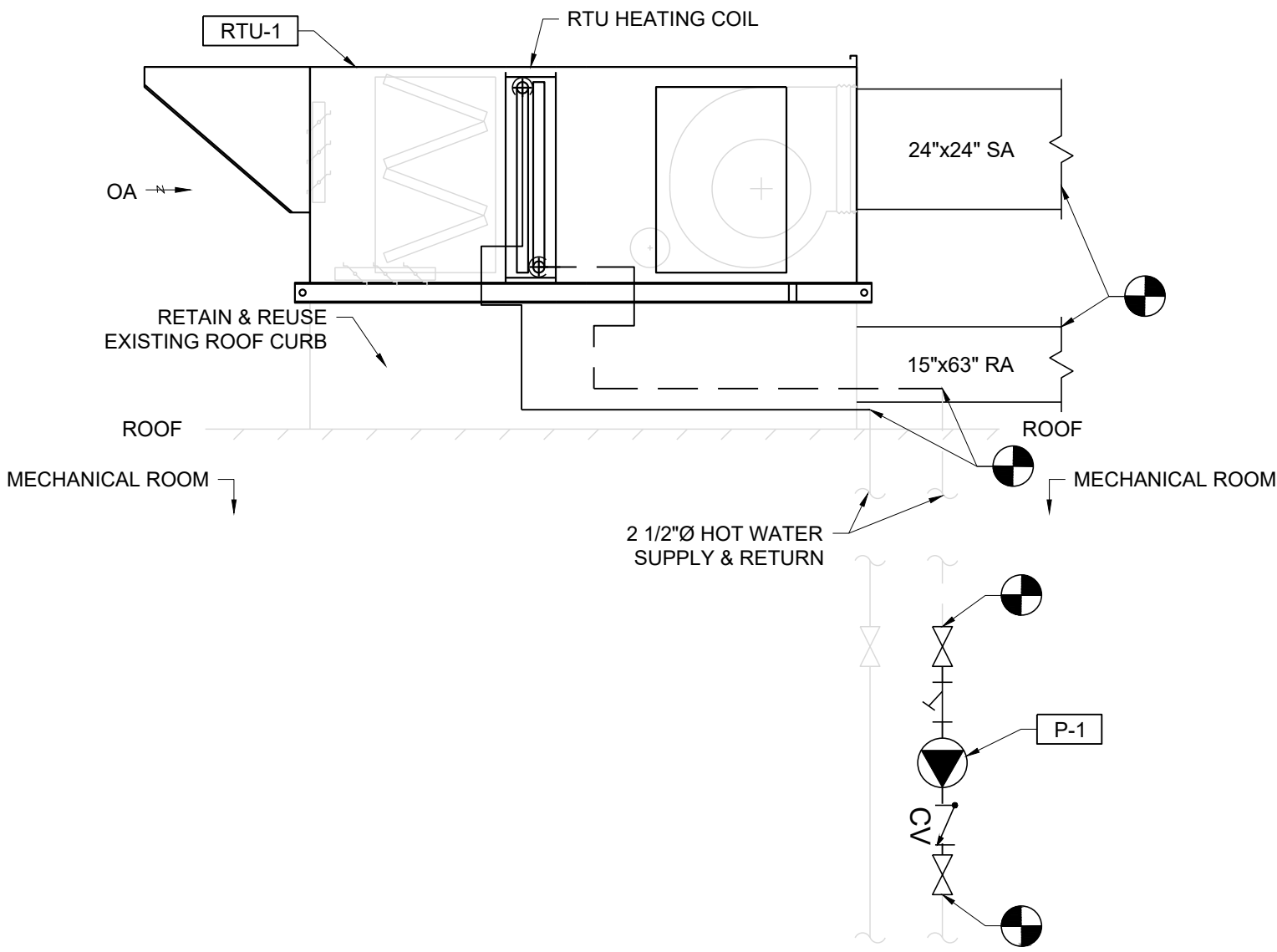
1. THE CONTRACTOR WILL SHUT DOWN THE EXISTING EQUIPMENT BEFORE WORKS COMMENCE WITH THE BUILDING FMO STAFF IN ATTENDANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING OF THE SYSTEMS.
2. THE CONTRACTOR SHALL PROVIDE THE CORPORATION WITH AT LEAST 72 HOURS WRITTEN NOTICE OF ANY FURTHER SHUTDOWNS THAT MAY BE REQUIRED.
3. THE CONTRACTOR SHALL PROVIDE THE PROJECT MANAGER WITH AT LEAST 72 HOURS WRITTEN NOTICE OF ANY EQUIPMENT START-UP.
4. ALL NEW DUCTWORK / PIPING SHALL BE THERMALLY INSULATED AS PER THE SPECIFICATION.
5. ALL NEW AND EXISTING OPENINGS AROUND PIPING, CONDUITS ARE TO BE FIRE STOPPED WHERE THEY PENETRATE THE MECHANICAL ROOM WALLS.
6. THE MECHANICAL PLANS ARE DIAGRAMMATIC IN NATURE AND DO NOT ATTEMPT TO SHOW ALL REQUIRED OFFSETS.
7. THE CONTRACTOR SHALL REVIEW THE PROPOSED MECHANICAL PIPING LAYOUT ON SITE WITH THE CONSULTANT PRIOR TO COMMENCING THE INSTALLATION OR PRE-FABRICATION. THE CONTRACTOR SHALL NOT FABRICATE ANY PIPING UNTIL THE FINAL PIPING LAYOUT HAS BEEN APPROVED BY THE CONSULTANT.
8. COORDINATE WITH SPECIFICATIONS. IN CASE OF CONFLICT BETWEEN SPECIFICATIONS AND DRAWINGS THE MORE STRINGENT SHALL APPLY.
9. DO NOT SCALE THE DRAWINGS. OBTAIN ACCURATE MEASUREMENTS FROM SITE.
10. ALL NEW PUMPS AND VALVES SHALL BE MOUNTED AND INSTALLED IN ACCESSIBLE POSITIONS THAT ALLOW EASY MAINTENANCE. IT IS EXPECTED THAT THEY WILL BE INSTALLED WITHIN 5 FEET OF THE FINISHED FLOOR LEVEL. ANY DEVIATION FROM THIS MUST BE APPROVED BY THE PROJECT MANAGER. RELOCATION OF IMPROPERLY LOCATED PUMPS AND VALVES WILL BE AT THE CONTRACTORS EXPENSE.
11. ALL TEMPERATURE AND PRESSURE GAUGES SHALL BE INSTALLED SO THAT THEY ARE EASILY READABLE TO THE MAINTENANCE STAFF. ANY DEVIATION FROM THIS MUST BE APPROVED BY THE CORPORATION. RELOCATION OF IMPROPERLY LOCATED GAUGES WILL BE AT THE CONTRACTORS EXPENSE.
12. THE CONTRACTOR SHALL PROVIDE ALL PERMITS AND CERTIFICATION AS REQUIRED BY CODE AND THE LOCAL JURISDICTION
13. ALL NEW AND EXISTING BACK FLOW PREVENTORS SHALL BE TESTED AND CERTIFIED.
14. ALL STRUCTURAL WORKS ASSOCIATED WITH THE PIPING SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH THE BC BUILDING CODE 2018. IMPROPER STRUCTURAL WORKS SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
15. NEW ISOLATION VALVES SHALL BE INSTALLED ON ALL NEW AND EXISTING PIPING LEAVING/ENTERING THE MECHANICAL ROOM WHETHER SHOWN ON THE MECHANICAL LAYOUT DRAWINGS OR NOT.
16. ALL NEW PIPING RUNS TO BE AGREED WITH THE PROJECT MANAGER.
17. NO CORING ON EXISTING STRUCTURES SHALL COMMENCE UNTIL THE AREA IS SCANNED AND THE PROJECT MANAGER HAS APPROVED SCAN REPORT.
18. ALL ROOFING WORKS ASSOCIATED WITH THE INSTALL SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF THE ROOFING CONTRACTORS ASSOCIATION OF BRITISH COLUMBIA'S ROOFING PRACTICES MANUAL. IMPROPER ROOFING WORKS SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
19. CRANE LOCATIONS MUST BE AGREED WITH THE BUILDING OWNER. BEFORE COMMENCEMENT, THE CONTRACTOR SHALL REVIEW THE CRANE LOCATIONS WITH THE OWNER TO ENSURE THERE ARE NO SITE SERVICES UNDERNEATH THE PROPOSED CRANE LOCATIONS. THE CONTRACTOR IS REQUIRED TO GIVE THE OWNER A MINIMUM OF FIVE DAYS WRITTEN NOTICE IN ADVANCE OF CRANE ARRIVING ON SITE.
20. ENSURE ALL WORKS ARE CARRIED OUT IN ACCORDANCE WITH WORKSAFE BC AND HEALTH AUTHORITY GUIDELINES, INCLUDING FOR THE PROVISION OF DUST CONTROL MEASURES IN THE OCCUPIED SPACES.

HATCHED AREA INDICATES SERVICES AND EQUIPMENT TO BE REMOVED AS PART OF THIS PROJECT (TYP)



(1) EXISTING ROOFTOP UNIT TO BE REMOVED

SCALE: NONE



(2) PROPOSED ROOFTOP UNIT HEATING COIL DETAIL

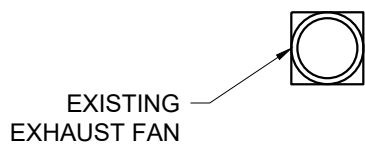
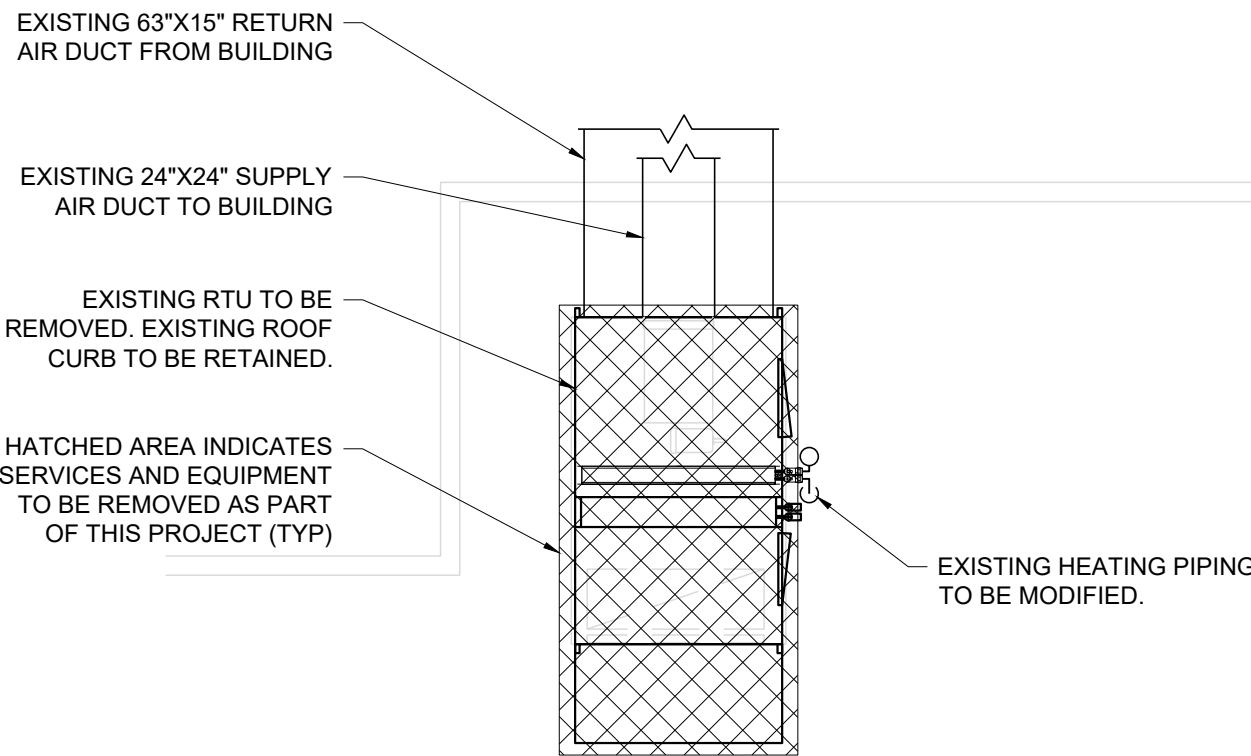
SCALE: NONE

ROOFTOP UNIT SCHEDULE (BASIS OF DESIGN)

TAG	DESCRIPTION/ SERVICE	MANUFACTURER	MODEL	SUPPLY FAN CHARACTERISTICS			HOT WATER COIL PERFORMANCE							FEATU RES	PHYSICAL CHARACTERISTICS			MECHANICAL REMARKS	POWER SUPPLY										CONTROLS			OTHER REQUIREMENTS				OTHERS	ELECTRICAL REMARKS	
				DESIGN AIRFLOW (CFM)	E.S. P. (IN)	MOTOR (HP)	OUTPUT T (MBH)	E.A.T. DB (°F)	L.A.T. DB (°F)	E.W.T. (°F)	L.W.T. (°F)	FLOW (GPM)	WPD (FT)		FILTER (MERV)	OVERALL DIMENSION (L x W x H)	WEIGHT (LBS)		MCCP (A)	MCA (A)	FLA (A)	VOLTS	PHASE	Hz	FED FROM	EM.	NORM.	MAN.	AUTO	INTERLOCK BY		W.P. DISC. AT MOTOR	DISC. AT MOTOR	F.A. SHUT DOWN				
																														M	E							
RTU-1	POOL AREA	ENGINEERED AIR	LMB/C/O/R	8000	1.0	5	769.5	15	104.1	200	176	66	5.6	8	109" X 69" X 47"	2300		40	26		208	3	60	PANEL B	●			VFD	●		●							PROVIDE 40A/3P BREAKER WITH 3#8 + #10G IN 3/4"C
NOTES: 1. HIGH EFFICIENCY MOTOR.      2. C/W MERV 8 FILTER.      3.C/W CUSTOM ROOF CURB																																						

PUMP SCHEDULE (BASIS OF DESIGN)

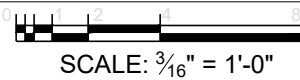
TAG	DESCRIPTION/ SERVICE	LOCATION	PUMP TYPE	MANUFACTURER	MODEL	FLOW (GPM)	HEAD (FT)	CONNECTION SIZES	MOTO R SIZE	MECHANICAL REMARKS	POWER SUPPLY						STARTER				CONTROLS				OTHER REQUIREMENTS		OTHERS	ELECTRICAL REMARKS	
											VOLTS	PHASE	HZ	EM	NORM	FED FROM	SUPPLIED BY		INSTALLED BY		TYPE	MAN	AUTO	INTERLOCK BY		W.P. DISC AT MOTOR			DISC AT MOTOR
																	DIV. 15	DIV. 16	DIV. 15	DIV. 16				DIV. 15	DIV. 16				
P-1	RTU HEATING COIL	MECHANICAL ROOM	CIRCULATOR	GRUNDFOS	MAGNA 3 40-120F	66	16	1 1/2"	448W		208	1	60	●	PANEL A	●	●		VFD	●			DIV 16		PROVIDE 15A/2P BREAKER WITH 2#12 + #12 G IN 3/4"				



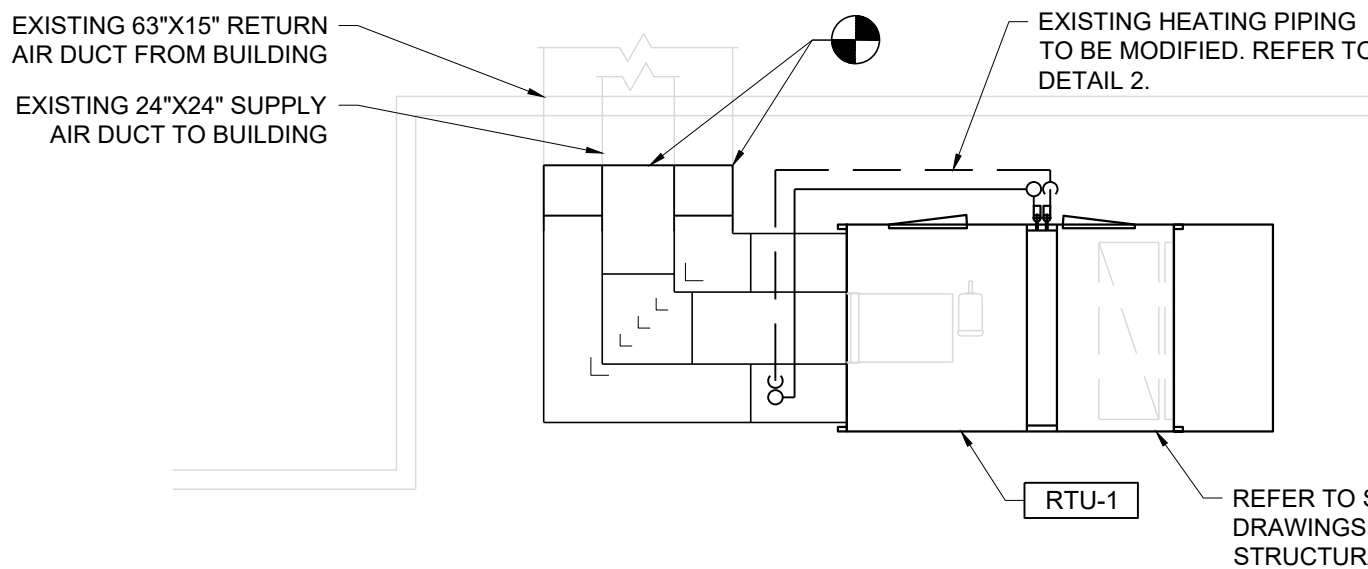
EXISTING EXHAUST FAN

LINE OF ROOF

EXISTING PARTIAL ROOF PLAN



SCALE: 3/16" = 1'-0"



EXISTING EXHAUST FAN

PROPOSED PARTIAL ROOF PLAN



SCALE: 3/16" = 1'-0"

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Project

GIBSONS & DISTRICT AQUATIC FACILITY  
ROOFTOP UNIT UPGRADE

953 GIBSONS WAY, GIBSONS, BC V0N 1V0



MECHANICAL & ELECTRICAL ENGINEERS

BUILDING ENERGY SOLUTIONS

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Tel: 1.778.371.3459

Title

EXISTING &  
PROPOSED  
ROOF PLANS

Scale

AS NOTED

Drawn

MM

Checked

SM

Project No.

21-B338

Drawing No.

M2.1

Latest Revision No.

2



1. GENERAL
- 1.1. THIS SPECIFICATION AND ALL DRAWINGS AND ADDENDA FORM PART OF THE CONTRACT FOR WORKMANSHIP AND SHALL BE READ IN CONJUNCTION WITH THE FOLLOWING UNLESS OTHERWISE SPECIFIED. PROVIDE ALL NECESSARY LABOUR, MATERIALS, TOOLS, TRANSPORTATION, SERVICES AND FACILITIES REQUIRED FOR THE COMPLETE ELECTRICAL INSTALLATION AS SHOWN ON THE DRAWINGS AND AS SPECIFIED.

1.2. PROVIDE ALL NECESSARY LABOUR, MATERIALS, EQUIPMENT, DEVICES AND APPARATUS NOT SPECIFICALLY MENTIONED IN THE DRAWINGS OR SPECIFICATIONS AS TO PROVIDE COMPLETE AND OPERATING ELECTRICAL SYSTEMS.

1.3. RESPONSIBILITY AS TO WHICH TRADE IS TO PROVIDE SPECIFIC ITEMS IS TO BE DETERMINED BY THE GENERAL CONTRACTOR. EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE IN INTERPRETATION OF SPECIFICATIONS AS TO WHICH TRADE SHALL PROVIDE CERTAIN ITEMS.

1.4. THE WORD 'PROVIDE' MEANS THE SUPPLY, DELIVERY, AND INSTALLATION OF REFERENCED ITEMS. 'SUPPLY' MEANS TO OBTAIN AND DELIVER TO THE PROJECT SITE AND TURN OVER TO THE DESIGNATED PARTY. 'INSTALL' MEANS RECEIVING, UNPACKING, ASSEMBLING, FINISHING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS AT THE DESIGNATED LOCATION AS SHOWN ON THE DRAWINGS OR IDENTIFIED IN THE SPECIFICATIONS OF ITEMS SUPPLIED BY OTHERS.

1.5. EXAMINE THE SITE PRIOR TO SUBMITTING TENDER. NO EXTRAS WILL BE PROVIDED FOR WORK THAT WOULD HAVE BEEN EVIDENT UPON AN INVESTIGATION OF THE SITE.

1.6. REMOVE AND REINSTALL EXISTING DEVICES TO FACILITATE CONSTRUCTION AS REQUIRED.

1.7. PROVIDE ALL NECESSARY TEMPORARY POWER AND LIGHTING AS REQUIRED TO COMPLETE THE SCOPE OF WORK.

1.8. EXAMINE CAREFULLY ALL PLANS AND SPECIFICATIONS INCLUDING THOSE OF ARCHITECTURAL, STRUCTURAL, AND MECHANICAL TRADES. PRIOR TO THE CLARIFICATION CUTOFF DATE, NOTIFY THE CONSULTANT OF ANY CONFLICTS IDENTIFIED.

1.9. THE DRAWINGS INDICATE GENERAL LOCATION AND ROUTING OF DEVICES, CONDUIT AND WIRING. COORDINATE WITH OTHER TRADES TO AVOID CONFLICT. REFER TO ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE SUBJECT TO SLIGHT REVISIONS TO ACCOMMODATE CONSTRUCTION CONDITIONS.

1.10. COORDINATE WORK SCHEDULE WITH BUILDING OWNER AND/OR GENERAL CONTRACTOR. CONFIRM PROJECT SCHEDULE, HOURS OF WORK AND ACCEPTABLE HOURS OF NOISY WORK. INCLUDE ALL WEEKEND, OVERNIGHT, AND OVERTIME WORK AS REQUIRED.

1.11. COORDINATE WITH OTHER TRADES WORKING ON SITE TO ENSURE ELECTRICAL INSTALLATION DOES NOT HOLD UP PROGRESS OF OTHER TRADES OR THE OVERALL PROJECT SCHEDULE.

1.12. PROVIDE ALL WORK FOR MECHANICAL EQUIPMENT INVOLVING 120V OR GREATER. ALL LOW VOLTAGE CONTROL WIRING AND ROUGH-IN TO BE DIV 15.

1.13. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF DRAWINGS AND SPECIFICATIONS AND SHALL BEAR ALL COSTS INVOLVED IN MAKING THE CORRECTIONS. WHERE INTENT IS NOT CLEAR, OBTAIN CLARIFICATION FROM THE CONSULTANT PRIOR TO PROCEEDING WITH THE WORK.

1.14. FIRE PROOF ALL FIRE RATED PENETRATIONS AFTER INSTALLATION. APPROVED SYSTEMS: HILTI, 3M, OR APPROVED ALTERNATE.
2. CODE, RULES AND REGULATIONS
- 2.1. INSTALLATIONS WITH THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE, BC BUILDING CODE AND THE REQUIREMENTS OF THE LOCAL INSPECTION AUTHORITY HAVING JURISDICTION.

2.2. PROVIDE ALL NECESSARY MATERIAL AND LABOUR REQUIRED TO MEET THE REQUIREMENTS OF THESE CODES, RULES AND REGULATIONS EVEN THOUGH THE WORK MAY NOT BE SHOWN ON THE DRAWINGS OR MENTIONED IN THE SPECIFICATIONS.
3. PERMITS AND FEES
- 3.1. PRIOR TO STARTING WORK ON THE PROJECT SITE, OBTAIN ALL PERMITS REQUIRED BY LOCAL AUTHORITIES. CALL FOR INSPECTIONS WITH THE LOCAL INSPECTION AHJ AS REQUIRED AND SUBMIT ALL INSPECTION CERTIFICATES TO THE CONSULTANT.

3.2. SUBMIT TO THE LOCAL INSPECTION DEPARTMENT THE REQUIRED NUMBER OF DRAWING SETS AND INCLUDE IN THE TENDER ALL COSTS FOR DRAWINGS PRINTS.
4. APPROVAL OF MATERIALS
- 4.1. UNLESS OTHERWISE NOTED, EQUIPMENT AND MATERIAL TO BE NEW AND CERTIFIED BY A CERTIFICATION BODY ACCREDITED BY THE STANDARDS COUNCIL OF CANADA (SCC), WHERE THERE IS EQUIPMENT REQUIRED THAT IS NOT SCC APPROVED, OBTAIN SPECIAL APPROVAL FROM THE CONSULTANT AND PAY ALL ASSOCIATED FEES TO CERTIFY EQUIPMENT.

4.2. NO SUBSTITUTIONS ARE PERMITTED WITHOUT THE WRITTEN ACCEPTANCE OF THE CONSULTANT 10 DAYS PRIOR TO TENDER CLOSING.

4.3. UNLESS OTHERWISE SPECIFIED, UNIFORMITY OF MANUFACTURER IS TO BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT.
5. SUBMITTALS
- 5.1. ALLOW A MINIMUM OF FIVE WORKING DAYS FOR CONSULTANT TO REVIEW EACH SUBMITTAL.

5.2. SUBMIT SHOP DRAWINGS IN A TIMELY MANNER SUCH THAT THE PROJECT SCHEDULE IS NOT IMPACTED.

5.3. SUBMIT SHOP DRAWINGS CLEARLY INDICATING DETAILS OF MATERIAL, FABRICATION, LAYOUT, DIMENSIONS, CAPACITIES, PERFORMANCE CHARACTERISTICS, CERTIFICATION STANDARDS, WEIGHT, WIRING DIAGRAMS, AND OTHER RELEVANT INFORMATION.

5.4. PROVIDE SHOP DRAWINGS FOR ALL SUPPLIED EQUIPMENT. SHOP DRAWINGS ARE TO BE REVIEWED BY THE CONTRACTOR AND STAMPED WITH A DATE PRIOR TO SUBMITTING TO THE CONSULTANT FOR REVIEW.

5.5. SHOP DRAWINGS ARE TO BE PROJECT SPECIFIC AND INDICATE EXACT PRODUCT OPTIONS AND PART NUMBERS. UNMARKED SHOP DRAWINGS OR INFORMATION PROVIDED NOT PERTAINING TO THIS PROJECT WILL BE REJECTED.

5.6. REVIEW OF SHOP DRAWINGS BY THE CONSULTANT IS FOR CONFORMANCE WITH THE GENERAL DESIGN INTENT ONLY. THE REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SHOP DRAWINGS OR OF THEIR RESPONSIBILITY OF MEETING ALL REQUIREMENTS IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING DIMENSIONS OF EQUIPMENT ON SITE PRIOR TO SUBMITTING SHOP DRAWINGS.

5.7. THE CONTRACTOR IS PROVIDE ONE SET OF DRAWINGS TO BE USED AS RECORD DRAWINGS ON SITE. MAINTAIN A DAILY RECORD OF REVISIONS AND ADDITIONS TO THE ORIGINAL WORK IN RED INK.

5.8. AT COMPLETION OF THE PROJECT, CONTRACTOR TO CERTIFY AND STAMP AS-BUILT DRAWINGS INCLUDING THE DATE AND SIGNATURE. SUBMIT STAMPED COPIES TO THE CONSULTANT FOR RECORD DRAWING CREATION.

5.9. PROVIDE TO THE CONSULTANT THREE HARD COPIES AND ONE PDF SOFT COPY OF OPERATING AND MAINTENANCE MANUALS AT SUBSTANTIAL COMPLETION. SUBMIT AN ELECTRONIC DRAFT COPY TO THE CONSULTANT FOR REVIEW PRIOR TO PRINTING. MANUALS TO INCLUDE:
  - INDEX OF CONTENTS
  - DIVIDERS BETWEEN SECTIONS
  - LIST OF SUPPLIERS WITH ADDRESSES, PHONE NUMBERS AND USEFUL CONTACT INFORMATION
  - HEAVY DUTY BINDERS WITH PROJECT TITLE, PROJECT LOCATION, DATE OF COMPLETION, NAME AND ADDRESS OF CONSULTANTS, NAME AND ADDRESS OF CONTRACTOR
  - CONTRACTOR'S WARRANTY CERTIFICATES
  - CERTIFICATIONS INCLUDING INSPECTION DEPARTMENT CERTIFICATES, FIRE ALARM VERIFICATION REPORT, SEISMIC SCHEDULES FROM A RECOGNIZED SEISMIC ENGINEER, AND ANY OTHER REQUIRED REPORTS/CERTIFICATES
  - SHOP DRAWINGS, TECHNICAL DATA, PRODUCT DATA, SUPPLEMENTED BY BULLETINS COMPONENT ILLUSTRATIONS, EXPLODED VIEWS, TECHNICAL DESCRIPTIONS OF ITEMS AND PARTS LISTS SEPARATED BY SECTIONS
  - WIRING AND SCHEMATIC DIAGRAMS
  - MANUFACTURE'S OPERATING AND MAINTENANCE INFORMATION FOR EACH RELEVANT PIECE OF EQUIPMENT
  - ANY OTHER PERTINENT INFORMATION THAT WOULD ASSIST IN THE OPERATIONS OF THE EQUIPMENT
- 6.10. THE FOLLOWING DOCUMENTATION WILL BE REQUIRED TO BE SUBMITTED TO THE CONSULTANT AND ACCEPTED FOR OCCUPANCY AND SUBSTANTIAL COMPLETION:
  - FIRE ALARM VERIFICATION REPORT
  - SEISMIC SCHEDULES FROM A RECOGNIZED SEISMIC ENGINEER
  - ELECTRICAL INSPECTION CERTIFICATE
- 6.11. THE FOLLOWING DOCUMENTATION WILL BE REQUIRED TO BE SUBMITTED TO THE CONSULTANT AND ACCEPTED FOR FINAL COMPLETION AND AUTHORIZATION OF FINAL PAYMENT:
  - OPERATION AND MAINTENANCE MANUALS
  - AS-BUILT DRAWINGS
  - ALL REPORTS LISTED IN SECTION 6.10
  - OWNER ACCEPTANCE OF SYSTEMS DEMONSTRATION AND TRAINING
7. CLEAN UP
- 7.1. REMOVE ALL DEBRIS FROM THE SITE IN A SAFE AND ENVIRONMENTALLY RESPONSIBLE MANNER AS IT OCCURS AND MAINTAIN A CLEAN WORK SITE.

7.2. TOUCH UP WITH MATCHING PAINT ANY EQUIPMENT THAT HAS BEEN DAMAGED DURING CONSTRUCTION.

7.3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGED CAUSED TO THE OWNER OR ANY OTHER TRADE BY IMPROPER LOCATION OR CARRYING OUT OF HIS WORK.
8. GUARANTEE
- 8.1. PROVIDE A WRITTEN WARRANTY GUARANTEEING THAT THE WORK WILL BE FREE OF DEFECTS

- FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE UNLESS OTHERWISE INDICATED.
- 8.2. REPLACEMENTS FORTHWITH, AT NO ADDITIONAL COST TO THE OWNER, ANY PART WHICH MAY PROVE TO BE DEFECTIVE WITHIN A PERIOD OF TWELVE MONTHS AFTER THE FINAL ACCEPTANCE OF THE COMPLETE HVAC SYSTEM, PROVIDED THAT SUCH FAILURE IS NOT DUE TO ANY IMPROPER USAGE OR ORDINARY WEAR AND TEAR.

8.3. NO CERTIFICATE GIVEN, PAYMENT MADE, PARTIAL OR ENTIRE USE OF THE EQUIPMENT BY THE OWNER, SHALL BE CONSTRUED AS ACCEPTANCE OF DEFECTIVE WORK.
9. SEISMIC RESTRAINTS
- 9.1. PROVIDE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL ELECTRICAL EQUIPMENT AND SERVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE BUILDING CODE AND ALL APPLICABLE BUILDING BYLAWS.

9.2. THIS CONTRACTOR SHALL ENGAGE A SEISMIC RESTRAINT CONSULTANT TO DESIGN AND REVIEW SEISMIC RESTRAINTS FOR ALL WORK ASSOCIATED WITH DIVISION 26. THE SEISMIC RESTRAINT CONSULTANT SHALL SUPERVISE THEIR INSTALLATION AND SUBMIT THE REQUISITE ASSURANCES TO THE LOCAL MUNICIPAL AUTHORITIES.

9.3. SUBMIT AN ASSURANCE COMMITMENT LETTER FROM THE SEISMIC RESTRAINT CONSULTANT AT THE COMMENCEMENT OF THE PROJECT AND ALL REQUIRED SIGNED AND SEALED SCHEDULES AT PROJECT COMPLETION INCLUDING BUT NOT LIMITED TO SCHEDULES S-8 AND S-C.
10. CONDUIT AND RACEWAY
- 10.1. RIGID STEEL CONDUIT: FOR ALL EXPOSED AND UNDERGROUND CONDUIT EXPOSED TO MECHANICAL DAMAGE. (MINIMUM SIZE: 3/4" (21mm))

10.2. ELECTRICAL METALLIC TUBING (EMT): INTERIOR POWER AND LIGHTING BRANCH CIRCUITS WHERE RUN CONCEALED ABOVE SUSPENDED CEILING, IN STUD WALLS, FURRED SPACES, AND WHERE NOT EXPOSED TO MECHANICAL DAMAGE, OR ABOVE 6' (1830mm) FROM FLOOR.

10.3. FLEXIBLE METALLIC CONDUIT: IN DRY LOCATIONS, CONNECTION TO TRANSFORMERS, (6' (1830mm) MAX.), VIBRATING EQUIPMENT (24" (610mm) MAX).

10.4. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT: IN DAMP AND WET LOCATIONS FOR CONNECTION TO ALL PUMP MOTORS, SOLENOID VALVES, HVAC EQUIPMENT AND SIMILAR DEVICES SHALL BE MADE USING LIQUID TIGHT FLEXIBLE METALLIC CONDUIT. PROVIDE SEPARATE GROUND WIRE INDEPENDENT OF CONDUIT, RUN INSIDE CONDUIT AND BONDED AT BOTH ENDS TO ENCLOSURES. MAXIMUM LENGTH OF 24" (610mm).

10.5. CONDUIT SYSTEM SHALL BE CONCEALED UNLESS EXPOSED WORK IS CLEARLY CALLED FOR ON DRAWINGS.

10.6. CONDUITS SHALL BE TIGHTLY COVERED AND WELL PROTECTED DURING CONSTRUCTION USING METALLIC BUSHINGS AND BUSHING "PENNIES" TO SEAL OPEN END.

10.7. IN ALL EMPTY CONDUITS OR DUCTS, INSTALL A 200 lb (90 kg) TENSILE STRENGTH POLYETHYLENE PULLING ROPES.

10.8. CONDUIT SYSTEMS SHALL BE ELECTRICALLY CONTINUOUS THROUGHOUT. INSTALL GROUNDING CONDUCTOR SIZED AS PER CANADIAN ELECTRICAL CODE (CEC). GROUND TO BE INSULATED GREEN, COPPER WIRE PULLED WITH PHASE AND/OR NEUTRAL CONDUCTORS.

10.9. LOCATIONS OF CONDUIT RUNS SHALL BE PLANNED IN ADVANCE OF THE INSTALLATION AND COORDINATED WITH THE DUCTWORK, PLUMBING, CEILING AND WALL CONSTRUCTION IN THE SAME AREAS AND SHALL NOT UNNECESSARILY CROSS OTHER CONDUITS OR PIPE. NOR PREVENT REMOVAL OF CEILING OR TILES OR PANELS, NOR BLOCK ACCESS TO MECHANICAL OR ELECTRICAL EQUIPMENT.

10.10. WHERE PRACTICAL, INSTALL CONDUITS IN GROUPS, IN PARALLEL, FOR VERTICAL AND HORIZONTAL RUNS AND AT ELEVATIONS THAT AVOID UNNECESSARY OFFSETS

10.11. EXPOSED CONDUIT SHALL BE RUN PARALLEL OR AT RIGHT ANGLES TO THE CENTERLINES OF COLUMNS, BEAMS AND THE STRUCTURAL LINES.

10.12. CONDUIT SHALL NOT BE PLACED CLOSER THAN 12" (300mm) FROM A PARALLEL HOT WATER OR STEAM LINE OR 3" (75mm) FROM SUCH LINES CROSSING PERPENDICULAR TO THE RUNS

10.13. ALL RACEWAY SYSTEMS SHALL BE SECURED TO THE BUILDING STRUCTURES USING SPECIFIED FASTENERS, CLAMPS AND HANGERS SPACED ACCORDING TO CODE REQUIREMENTS

10.14. SUPPORT SINGLE RUNS OF CONDUIT USING ONE HOLE PIPE STRAPS. WHERE RUN HORIZONTALLY ON WALLS IN DAMP OR WET LOCATION, INSTALL "CLAMP-BACKS" TO SPACE CONDUIT OFF THE SURFACE.

10.15. MULTIPLE CONDUIT RUNS SHALL BE SUPPORTED USING "TRAPEZIE" HANGERS, FABRICATED FROM SPECIFIED CONSTRUCTION CHANNEL, MOUNTED TO 3/8" (9.5mm) DIAMETER, THREADED STEEL RODS SECURED TO BUILDING STRUCTURES. FASTEN CONDUIT TO CONSTRUCTING CHANNEL WITH STANDARD ONE HOLE PIPE CLAMPS OR THE EQUIVALENT.

10.16. RACEWAYS SHALL BE JOINED USING SPECIFIED COUPLING OR TRANSITION COUPLINGS WHERE DISSIMILAR RACEWAY SYSTEMS ARE JOINED.

10.17. CONDUITS SHALL BE SECURELY FASTENED TO CABINETS, BOXES, AND GUTTERS USING TWO LOCKNUTS AND AN INSULATING BUSHING OR SPECIFIED INSULATING CONNECTORS. INSTALL GROUNDING BUSHINGS OR BONDING JUMPERS ON ALL CONDUITS TERMINATING AT CONCENTRIC KNOCKOUTS.

10.18. CONDUIT TERMINATIONS EXPOSED AT WEATHERPROOF ENCLOSURES AND CAST OUTLET BOXES SHALL BE MADE WATER TIGHT USING SPECIFIED CONNECTORS AND HUBS.

10.19. ALL PENETRATIONS OF FIRE RATED ASSEMBLIES ARE TO BE SEALED WITH A UL-APPROVED FIRESTOP SYSTEM. APPROVED SYSTEMS: HILTI, 3M, OR APPROVED ALTERNATE.
11. BOXES AND WIRING SERVICES
- 11.1. ALL OUTLETS SHALL FINISH FLUSH WITH BUILDING WALLS AND CEILING, EXCEPT WHERE EXPOSED WORK IS CALLED FOR. THERE SHALL BE NO GAP BETWEEN BOX AND WALL OR CEILING MATERIAL. ANY OPENING BETWEEN BOX AND WALL OR CEILING SHALL BE CAULKED AIRTIGHT.

11.2. INSTALL RAISED MUD RINGS ON ALL OUTLET BOXES AS REQUIRED TO FINISH FLUSH WITH SURFACE. COVERS SHALL BE OF A DEPTH TO SUIT THE WALL OR CEILING FINISH.

11.3. EXPOSED OUTLET BOXES AND BOXES IN DAMP AND WET LOCATIONS SHALL BE CAST METAL WITH GASKETED CAST METAL COVER PLATES.

11.4. OUTLET BOXES SHALL BE INSTALLED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE DRAWINGS, AS SPECIFIED HEREIN, OR AS SHOWN ON THE ARCHITECTURAL ELEVATION DRAWINGS IF AVAILABLE. MAKE ADJUSTMENTS IF CLARIFICATIONS TO ELEVATIONS ARE REQUIRED. CLARIFY WITH THE CONSULTANT PRIOR TO INSTALLATION.

11.5. OUTLET BOXES IN STUD WALL AND PARTITIONS SHALL NOT BE MOUNTED BACK-TO-BACK NOR SHALL THROUGH-WALL BOXES BE PERMITTED.

11.6. BOXES INSTALLED IN STUD WALL SHALL BE EQUIPPED WITH BRACKETS DESIGNED FOR ATTACHING DIRECTLY TO THE STUDS OR SHALL BE MOUNTED ON HEAVY GAUGE GALVANIZED STEEL BOX SUPPORTS.

11.7. ELECTRICAL CONTRACTOR SHALL PROVIDE VAPOUR BARRIERS FOR ALL OUTLETS THAT ARE LOCATED IN THE EXTERIOR INSULATED WALLS AND CEILINGS.

11.8. FLOOR BOXES TO BE INSTALLED IN THE RAISED FLOOR AS SHOWN ON THE ELECTRICAL DRAWINGS. ADJUST HEIGHT TO SUIT EXISTING CONDITIONS. COVER PLATE FINISH TO BE COORDINATED WITH THE INTERIOR DESIGNER. MINIMUM 1" CONDUIT TO FLOOR BOXES.

11.9. MOUNTING HEIGHTS: MOUNTING HEIGHTS: MOUNTING HEIGHTS FROM FINISHED FLOOR TO CENTER LINE OF DEVICE BOX SHALL BE AS PER THE ARCHITECTURAL OR INTERIOR DESIGNER DRAWINGS. IF NO DIMENSIONS ARE PROVIDED, THE FOLLOWING DIMENSIONS SHALL BE USED, AND IN ACCORDANCE WITH HANDICAPPED ACCESSIBILITY REQUIREMENTS OF GOVERNING CODE.
12. CABLE AND WIRE
- 12.1. ALL CABLES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND WARRANTY.

12.2. ALL ASPECTS OF SPLICING AND TERMINATING SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS PUBLISHED PROCEDURES.

12.3. MAKE UP ALL SPLICES IN OUTLET BOXES WITH CONNECTORS AS SPECIFIED HEREIN WITH SEPARATE TAILS OF CORRECT COLOR TO BE MADE UP TO SPLICE. PROVIDE AT LEAST 6" (150mm) OF TAILS PACKED IN BOX AFTER SPLICE IS MADE UP.

12.4. ALL WIRE AND CABLE IN PANELS, TERMINAL CABINETS AND EQUIPMENT ENCLOSURES SHALL BE BUNDLED AND CLAMPED.

12.5. ALL FEEDERS LESS THAN 60A SHALL BE COPPER. FEEDERS LARGER THAN 60A MAY UTILIZE ALUMINIUM CONDUCTORS WITH ENGINEER APPROVAL.

12.6. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG 900 COPPER.

12.7. ALL FEEDER CONDUCTORS TO HAVE A MAXIMUM VOLTAGE DROP OF 2% AT DESIGN LOAD. ALL BRANCH CIRCUIT CONDUCTORS TO HAVE A MAXIMUM VOLTAGE DROP OF 3% AT DESIGN LOAD.
13. WIRING DEVICES
- 13.1. SWITCHES

13.1.1. COMMERCIAL GRADE, WHITE, DECORATOR STYLE AVAILABLE FOR BACK AND SIDE WIRING. 20A, 120V OR 347V, SINGLE POLE, DOUBLE POLE, THREE-WAY OR FOUR-WAY AS INDICATED.

13.1.2. ACCEPTABLE MANUFACTURERS: HUBBELL, LEVITON, PASS & SEYMOUR, OR APPROVED ALTERNATE TO MATCH EXISTING.

13.2. RECEPTACLES

13.2.1. COMMERCIAL GRADE, WHITE, DECORATOR STYLE DUPLEX RECEPTACLE CSA TYPE 5-15R, 125V, 15A U-GROUNDED.

13.2.2. GROUND FAULT INTERRUPTER TYPE TO BE INDICATING, SPECIFICATION GRADE, IMPACT RESISTANT, U GROUND. COMPLETE WITH BREAKER AND RESET BUTTON.

13.2.3. ACCEPTABLE MANUFACTURERS: HUBBELL, LEVITON, PASS & SEYMOUR, OR APPROVED ALTERNATE TO MATCH EXISTING.

13.3. DIMMERS

13.3.1. FLUSH MOUNTED TYPE. WHITE. (1000 WATTS RATED)

13.3.2. ELECTRONIC WITH PRESET

13.3.3. ACCEPTABLE MANUFACTURERS: HUBBELL, LEVITON, PASS & SEYMOUR, OR APPROVED ALTERNATE.

13.4. COVER PLATES
- 13.4.1. STAINLESS STEEL, 1mm THICK BRUSHED COVER PLATES.

13.4.2. WEATHERPROOF, DURABLE, 'IN-USE' RATED COVER PLATES COMPLETE WITH GASKETS FOR WP DUPLEX RECEPTACLES AS INDICATED.

13.4.3. INSTALL SINGLE THROW SWITCHES WITH HANDLE IN 'UP' POSITION WHEN SWITCH CLOSED.

13.4.4. INSTALL RECEPTACLES/SWITCHES VERTICALLY IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE RECEPTACLE IS REQUIRED IN ONE LOCATION.

14. PANEL BOARDS

14.1. EXISTING PANELS TO BE UTILIZED TO PROVIDE BRANCH POWER FOR LIGHTING AND POWER CIRCUITS.

14.2. UPDATE PANEL BOARD DIRECTORIES OF EXISTING PANELS. SHALL BE TYPEWRITTEN, ARRANGED IN NUMERICAL ORDER AND SHALL SHOW THE NUMBER OF THE CIRCUIT. THE ROOM NUMBERS SHALL BE VERIFIED WITH THE OWNER AND SHALL NOT NECESSARILY BE THOSE USED IN THE DRAWINGS. DESCRIPTIONS SHALL INCLUDE DETAILS SPECIFIC TO THE PROJECT SITE SUCH AS LOCATION, EQUIPMENT, ETC. MOUNT TWO COPIES OF PANEL DIRECTORIES INSIDE EACH PANEL BOARD.

14.3. BALANCE PANEL LOADS FOR EACH PHASE. ALLOW FOR RELOCATING CIRCUITS WITHIN PANEL TO BALANCE THE LOAD.

14.4. NEW PANEL BOARDS TO MATCH EXISTING SQUARE D PANEL BOARDS.

15. PROTECTIVE DEVICES

15.1. REUSE EXISTING BREAKERS WHERE POSSIBLE FOR ALL EXISTING PANELBOARDS. PROVIDE NEW BREAKERS AS REQUIRED TO PROVIDE BRANCH CIRCUITS AS SHOWN ON THE ELECTRICAL DRAWINGS.

15.2. MATCH KAIC RATING AND MANUFACTURER OF EXISTING EQUIPMENT FOR ALL NEW BREAKERS INSTALLED. EXISTING MANUFACTURER IS SQUARE D.

15.3. MANUAL MOTOR STARTERS: FRACTIONAL H.P. 1 PHASE MOTORS SHALL BE PROTECTED BY THERMAL O.L. RELAY INTEGRAL WITH THE DISCONNECT.

15.4. RATINGS: REFER TO DRAWINGS AND PANEL SCHEDULES FOR TRIP FRAME AND POLES REQUIRED. MINIMUM SHORT CIRCUIT RATING FOR 120/208V BREAKERS IS 10,000A IF NOT OTHERWISE INDICATED.

15.5. THE ELECTRICAL CONTRACTOR IS TO PROVIDE DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT AND WHERE INDICATED ON THE DRAWINGS. ELECTRICAL CONTRACTOR IS TO CONFIRM WITH THE MECHANICAL TRADE SIZE, ELECTRICAL CHARACTERISTICS AND LOCATION OF EQUIPMENT.

16. GROUNDING

16.1. ENCLOSURES OF EQUIPMENT, RACEWAYS, AND FIXTURES SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED. PROVIDE CODE-SIZED (UNLESS OTHERWISE INDICATED) COPPER, INSULATED GREEN EQUIPMENT GROUND WITH ALL BRANCH AND FEEDER CIRCUIT RUNS. EQUIPMENT GROUND SHALL ORIGINATE AT PANEL BOARD GROUND BUS AND SHALL BE BONDED TO ALL SWITCH AND RECEPTACLE BOXES AND ELECTRICAL EQUIPMENT ENCLOSURES.

17. RECORD DRAWING

17.1. ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT MARKUPS TO ENGINEER FOR RECORDS

17.2. AS-BUILT MARKUPS ARE TO INDICATE THE FOLLOWING ITEMS: (AS APPLICABLE)

17.2.1. ALL REVISIONS TO DRAWINGS FROM SITE INSTRUCTIONS AND CHANGE ORDERS ARE TO BE INDICATED.

17.2.2. DEVICE LOCATION AND CIRCUITING WHERE DIFFERS FROM ORIGINAL DRAWINGS.

17.2.3. LUMINAIRE TYPE, LOCATION, CIRCUITING AND CONTROL WHERE DIFFERS FROM ORIGINAL DRAWINGS.

17.2.4. COMMUNICATION DROP ADDRESS.

17.2.5. FIRE ALARM DEVICE ADDRESS.

17.2.6. ALL ABANDONED JUNCTION BOXES AND CONDUITS.

17.2.7. CABLE TRAY ROUTING.

18. MAINTENANCE MANUALS

18.1. PROVIDE OPERATION AND MAINTENANCE MANUALS IN ACCORDANCE WITH SECTION 6 OF THE SPECIFICATIONS.

18.2. WIRING AND SCHEMATIC DIAGRAMS.
- | SYMBOL |   |       |         | DESCRIPTION  | NOTES |
|--------|---|-------|---------|--|-------|
| WALL   | ABOVE COUNTER                                 | FLOOR | CEILING |  |       |
|        |   |       |         | 15 AMP, 125V DUPLEX RECEPTACLE                                   |       |
|        |   |       |         | 15 AMP, 125V DUPLEX GROUND FAULT RECEPTACLE (GFCI)               |       |
|        |   |       |         | 15/20 AMP, 125V DUPLEX RECEPTACLE                                |       |
|        |   |       |         | 15 AMP, 15V QUAD RECEPTACLE                                      |       |
|        |   |       |         | 50 AMP, 250V RANGE RECEPTACLE                                    |       |
|        |   |       |         | TELEPHONE OUTLET   |       |
|        |   |       |         | DATA OUTLET  |       |
|        |   |       |         | COMBINATION COMMUNICATION OUTLET (#x TEL, #x DATA, #x HDMI/CATV) |       |
|        |   |       |         | TELEVISION OUTLET (HDMI / CATV AS NOTED)                         |       |
|        |   |       |         | MOTOR DISCONNECT SWITCH  |       |
|        |   |       |         | JUNCTION BOX   |       |
|        |   |       |         | GROUND REFERENCE BUSBAR  |       |
|        |   |       |         | EQUIPMENT TAG<br>REFER TO MECHANICAL EQUIPMENT SCHEDULE          |       |
|        |   |       |         | THERMOSTAT   |       |
| ER     | - EXISTING TO REMAIN                          |       |         |  |       |
| RL     | - RELOCATE EXISTING DEVICE AS INDICATED       |       |         |  |       |
| RM     | - REMOVE EXISTING DEVICE                      |       |         |  |       |
| RR     | - REMOVE EXISTING DEVICE AND REPLACE WITH NEW |       |         |  |       |
| WP     | - WEATHERPROOF ENCLOSURE                      |       |         |  |       |
- ## DISCLAIMER NOTE
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- |   |                   |          |
|---|-------------------|----------|
|   |                   |          |
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|   |                   |          |
|   |                   |          |
| 2 | ISSUED FOR TENDER | 23/12/19 |
| 1 | ISSUED FOR REVIEW | 23/09/11 |
| # | REVISIONS         | (YR/M/D) |
- ## ISSUED FOR TENDER NOT FOR CONSTRUCTION
- Project  
**GIBSONS & DISTRICT AQUATIC FACILITY  
ROOF TOP UNIT UPGRADE**
- 953 GIBSONS WAY, GIBSONS, BC V0N 1V0
- 
- 
- BUILDING ENERGY SOLUTIONS**
- SUITE 722 - 550 WEST BROADWAY  
VANCOUVER, BC, CANADA, V5Z 0A9  
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- |             |          |      |
|-------------|----------|------|
| Title       |          |      |
| Scale       | AS NOTED |      |
| Drawn       | MM       | Seal |
| Checked     | SM       |      |
| Project No. | 21-B338  |      |
- Drawing No.
- # E0.1
- Latest Revision No.
- 2
- ## ELECTRICAL SPECIFICATIONS
- SCALE: NONE



GENERAL NOTES:

- COORDINATE WITH THE MECHANICAL CONTRACTOR TO DEMO EXISTING ELECTRICAL SERVICES.
- ALL NEW BREAKERS TO MATCH EXISTING PANELBOARDS.
- PROVIDE ALL NEW DISCONNECTS, ENSURE DISCONNECTS DO NOT LIMIT ACCESS TO UNIT.
- ALL EXPOSED WIRING ON ROOF TO BE PROTECTED FROM THE SUN.
- ELECTRICAL CONTRACTOR TO DEMOLISH ALL EXISTING FEEDERS BACK TO SOURCE. IF ROUGH-IN IS IN SUITABLE CONDITION TO BE RE-USED, EXISTING INFRASTRUCTURE MAY BE RE-USED FOR NEW FEEDS. PROVIDE ALL NEW DISCONNECTS FOR NEW MECHANICAL EQUIPMENT.
- REFER TO DRAWING M2.1 FOR EQUIPMENT CABLE SIZES.



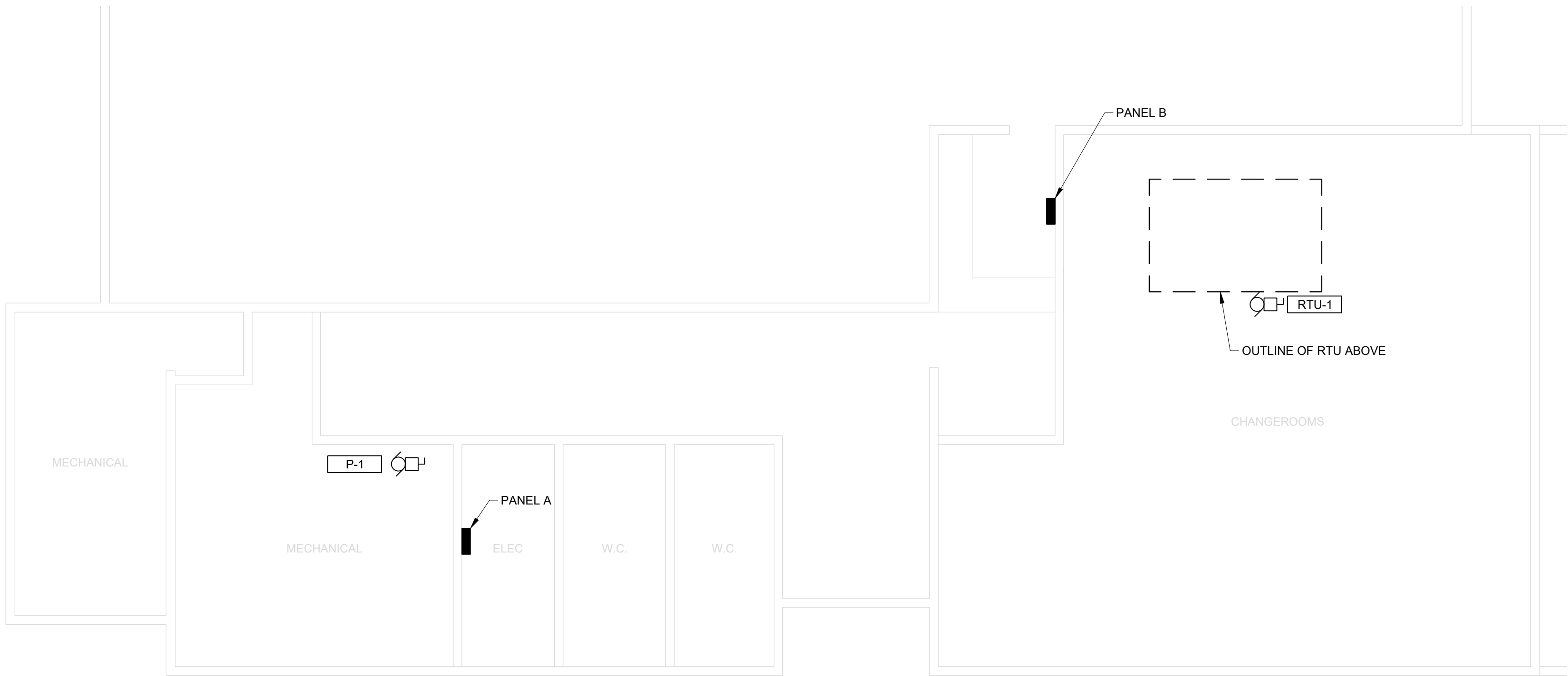
(1) PANEL A / B DETAILS  
SCALE: NONE

REPLACE EXISTING  
BREAKER AS NOTED

PROPOSED PANEL A									
MOUNTING - WALL LOCATION - ELECTRICAL ROOM FEEDER PANEL- CDP					VOLTAGE - 120/208 MAIN BUS - 225A				
NOTE	DESCRIPTION	BKR	CIRCUIT		DESCRIPTION	NOTE			
--	ELECTRICAL ROOM BOILER RM EMERG LGT	15 01	02	15	EXTERIOR LIGHTS	--			
--	COMMS PLUG ELEC RM	20 03	04	15	FOYER HEATING	--			
--	LAMP STANDARDS	15 05	06	15	SHOWERS EXHAUST FAN	--			
--	BOILER 1	15 07	08	20	S.E. POOL HALL EXHAUST FAN	--			
--	BOILER 2	15 09	10	15	N.E. POOL HALL EXHAUST FAN	--			
--	BOILER 3	15 11	12	15	S.W. POOL HALL EXHAUST FAN	--			
--	SPARE	15 13	14	40	PUMP ROOM SUB PANEL	--			
--	GRUNDOS PUMPS 3.4.5 BOILER ROOM	15 15	16			--			
--	EXTERIOR LIGHTING	15 17	18	5	RAIN POOL CIRC PUMP	--			
--	MP CIRC PUMP	40 19	20	15		--			
--		21	22	15	UNKNOWN	--			
--		23	24	15	UNKNOWN	--			
--	BOILER 4 / ALL BOILERS	15 25	26	15	TECKMAR CONTROLLER	--			
--	BLANK	15 27	28	20	SUMP PUMP	--			
--	STRANTALL PLUG	15 29	30	20	SUMP PUMP	--			
--	CONTROL TRANSFORMER, ESC	15 31	32	20	CHLORINE ROOM EXHAUST	--			
--		33	34	15	TEL BOARD	--			
--	P-1	15 35	36	15	LOBBY PUTLETS	--			
--	SPACE	-- 37	38	5	OFFICE HEAT	--			
--	SPACE	-- 39	40			--			
--	HOT TUB LIGHTS	15 41	42	15	EMERGENCY LIGHT STAFF CHANGE ROOM	--			

REPLACE EXISTING  
BREAKER AS NOTED

PROPOSED PANEL B									
MOUNTING - WALL LOCATION - ELECTRICAL ROOM FEEDER PANEL- CDP FEEDER BKR - 200A 3P					VOLTAGE - 120/208 MAIN BUS - 225A				
NOTE	DESCRIPTION	BKR	CIRCUIT		DESCRIPTION	NOTE			
--	EXIT LIGHT NORTH	15 01	02	15	EAST DECK LIGHTING	--			
--	OVERHEAD LIGHTS	20 03	04	15	SOUTH & WEST DECK LIGHTING	--			
--	OVERHEAD LIGHTS	15 05	06	15	NIGHT LIGHT	--			
--	CONTROL OFFICE PLUGS	15 07	08	20	OVERHEAD LIGHTS	--			
--	CONTROL OFFICE PLUGS	15 09	10	15	ALARM	--			
--	COUNTER/OFFICE PLUGS	15 11	12	15	STORE RM PLUGS/CIRC FANS	--			
--	HAND DRYER MENS	15 13	14	15	SOUTH POOL PLUG	--			
--	POOL CENTER LIGHTING	15 15	16	15	CONTROL OVERHEAD POOL HTRS	--			
--	WEST DECK LIGHTING	15 17	18	15	SOUTH DECK LIGHTING	--			
--	STORAGE ROOM	15 19	20	15	HAND DRYER - HC WC	--			
--	GFCI PLUG HC WC MEN CH	15 21	22	15	HAND DRYER FAM CH S	--			
--	FOYER & HALL LIGHTING	15 23	24	15	HAND DRYER FAM CH H	--			
--	CONV. PLUG FAM CH	15 25	26	15	CONV PLUGS M/W CH RMS	--			
--	GFCI PLUGS M/W CH RMS	15 27	28	15	HAND DRYER WOMEN CH W	--			
--	SP	15 29	30	15	HAND DRYER WOMEN CH E	--			
--	SP STORE RM JB	15 31	32	15	LIGHTING - WOMEN CH RM	--			
--	FOYER NIGHT LITE/EXISTS	15 33	34	15	LIGHTING MEN CH RM	--			
--	EXIT/ EMERGENCY LIGHTING	15 35	36	15	LIGHTING FAM CH RM	--			
--		37	38	15	HAND DRYER MEN CH S	--			
--	ROOFTOP UNIT	40 39	40	15	GFCI PLUGS M/W CH RM	--			
--		41	42	15	EXTERIOR LITE - S & W	--			



EXISTING PARTIAL ROOF PLAN

SCALE: 3/16" = 1'-0"

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2	ISSUED FOR TENDER	23/12/19
1	ISSUED FOR REVIEW	23/09/11
#	REVISIONS	(YR/M/D)

ISSUED FOR TENDER  
NOT FOR CONSTRUCTION

Project  
GIBSONS & DISTRICT AQUATIC FACILITY  
ROOFTOP UNIT UPGRADE

953 GIBSONS WAY, GIBSONS, BC V0N 1V0



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Title  
PROPOSED  
ELECTRICAL  
PLANS

Scale  
AS NOTED  
Drawn  
MM  
Checked  
SM  
Project No.  
21-B338

Seal

Drawing No.

E1.1

Latest Revision No.

2

1.0 GENERAL NOTES:

- RELOCATED ROOF TOP UNIT ON EXISTING ROOF STRUCTURE. NEW UNIT 2200 lbs, APPROX. 1000 lbs HEAVIER THAN EXISTING.
- RTU-1 FRAME AND CONNECTIONS DESIGNED TO BCBC 2018.

LOCATION: GIBSONS, BC

ELEVATION: +/- 28m

IMPORTANCE FACTOR: NORMAL

RTU1:

DL = 2300lbs / 10.2kN

SNOW:

NO ADDED SNOW PILING, NEW UNIT LOCATION WITHIN EXISTING SNOW PILING ZONE AT 10' ROOF STEP.

SEISMIC:

Sa(0.2) = 0.841, Sa(0.5) = 0.755, PGA = 0.366, Assumed Site Class "C"  
Cp = 1.0, Ar = 1.0, Rp = 1.25, "MACHINERY, RIGIDLY CONNECTED"

- COMPLETE WORK IN CONFORMANCE WITH BCBC 2018 AND REGIONAL BY-LAWS.
- CONFORM TO WORKSAFE BC SAFE WORKING REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION OF THE DESIGN.
- REPORT ANY CONFLICT OR CONDITION THAT MAY ADVERSELY AFFECT ADEQUATE PROJECT EXECUTION IMMEDIATELY UPON DISCOVERY. OBTAIN WRITTEN APPROVAL FROM THE ENGINEER BEFORE PROCEEDING.
- EXISTING CONSTRUCTION ASSUMED. CONTRACTOR TO CHECK ALL EXISTING DIMENSIONS, CLEARANCES AND TOLERANCES BEFORE PROCEEDING WITH WORK AND/OR MANUFACTURING.
- DRAWINGS ARE DIAGRAMMATIC AND INCLUDED MINIMUM CONSTRUCTION REQUIREMENTS.
- SUBMIT PROPOSED ALTERNATES OR REQUESTS FOR CLARIFICATION TO THE ENGINEER. OBTAIN WRITTEN APPROVAL BEFORE PROCEEDING.
- ENGINEER WILL REVIEW WORK FROM TIME-TO-TIME TO CHECK GENERAL CONFORMANCE WITH THE DESIGN INTENT.
- INCLUDED IS THE DESIGN OF THE VERTICAL AND LATERAL FORCE RESISTING SYSTEM FOR THE RTU, NAMELY COMPRISED OF WOOD AND CONCRETE.
- SHORING AND TEMPORARY WORKS HAVE NOT BEEN REVIEWED OR DESIGNED.
- FIRE RESISTANCE AND RATINGS ARE NOT ADDRESSED BY THE ENGINEER.
- SCAN SLAB FOR EMBEDDED ELECTRICAL OR OTHER SERVICES BEFORE DRILLING.
- DO NOT MAKE OPENINGS IN BEAMS OR CONCRETE WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
- OBTAIN APPROVAL FROM ENGINEER BEFORE CONCEALING: ROUGH FRAMING AND ROOF SLAB CONNECTIONS.

2.0 WOOD:

- INSTALL WOOD IN CONFORMANCE WITH BCBC 2018 PART 9.23 "WOOD FRAMING."
- DO NOT INSTALL LUMBER WITH MOISTURE CONTENT >19%.
- INSTALL SIMPSON CONNECTOR HARDWARE AND WEYERHAEUSER ENGINEERED LUMBER COMPONENTS IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

3.0 STEEL:

- WOOD BOLTS TO BE A307.
- STEEL BOLTS TO BE A325.
- ALL EXPOSED STEEL TO BE HDG OR SUFFICIENTLY COATED FOR MARINE EXPOSURE.

NOTES:

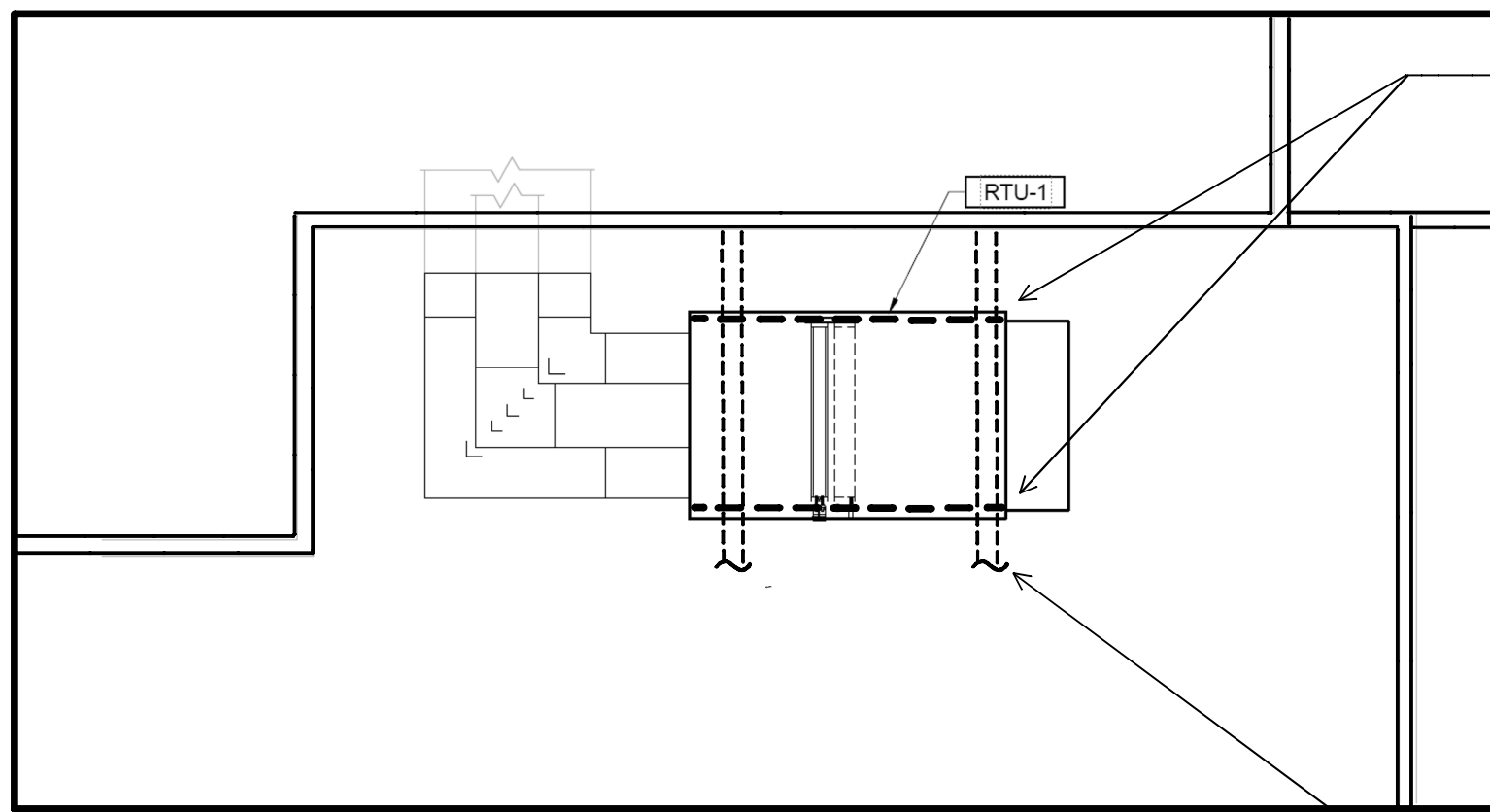
- REFER TO BES MECHANICAL DRAWING "GIBSONS & DISTRICT AQUATIC FACILITY ROOFTOP UNIT UPGRADE" DATED AUG 25, 2022 FOR INSTALLATION REQUIREMENTS
- RTU SCHEMATICS FROM TRANE DATED JULY 21 2022
- AERIAL PHOTO FROM GOOGLE MAPS
- SUBMIT TRANE CONNECTION LOCATION AND DESIGN, AND PROOF OF UNIT SEISMIC RATING, PRIOR TO INSTALLATION



AERIAL KEY PLAN

NTS

NEW INSTALLATION LOCATION

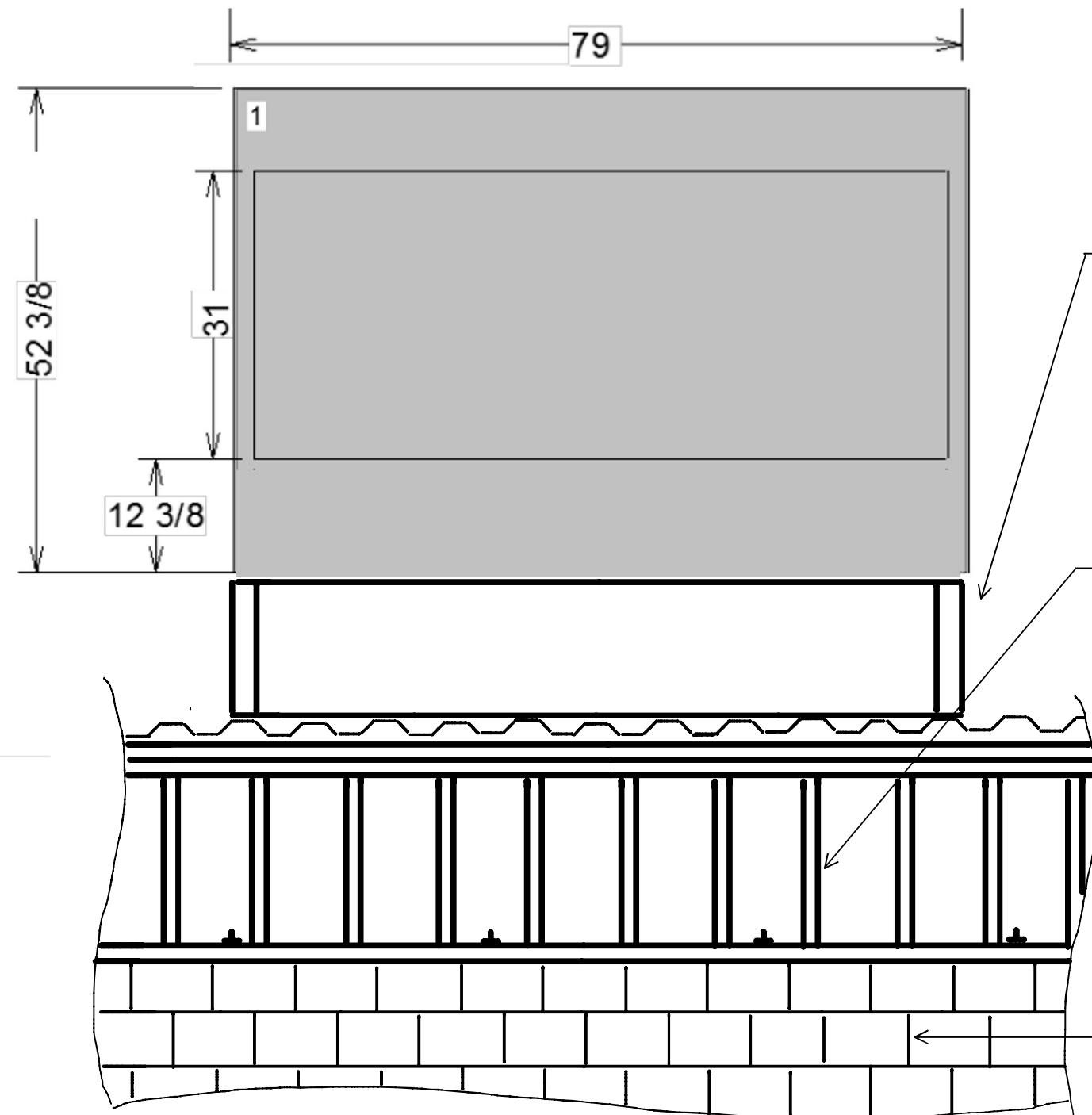


RTU LOCATION PLAN

NTS

CENTER RTU1 OVER CMU WALLS BELOW (SHOWN), INSTALL TWO (2) LVL 1-3/4"x9-1/2" BEAMS ACROSS CMU WALLS

EXISTING CMU WALLS BELOW, TYP.

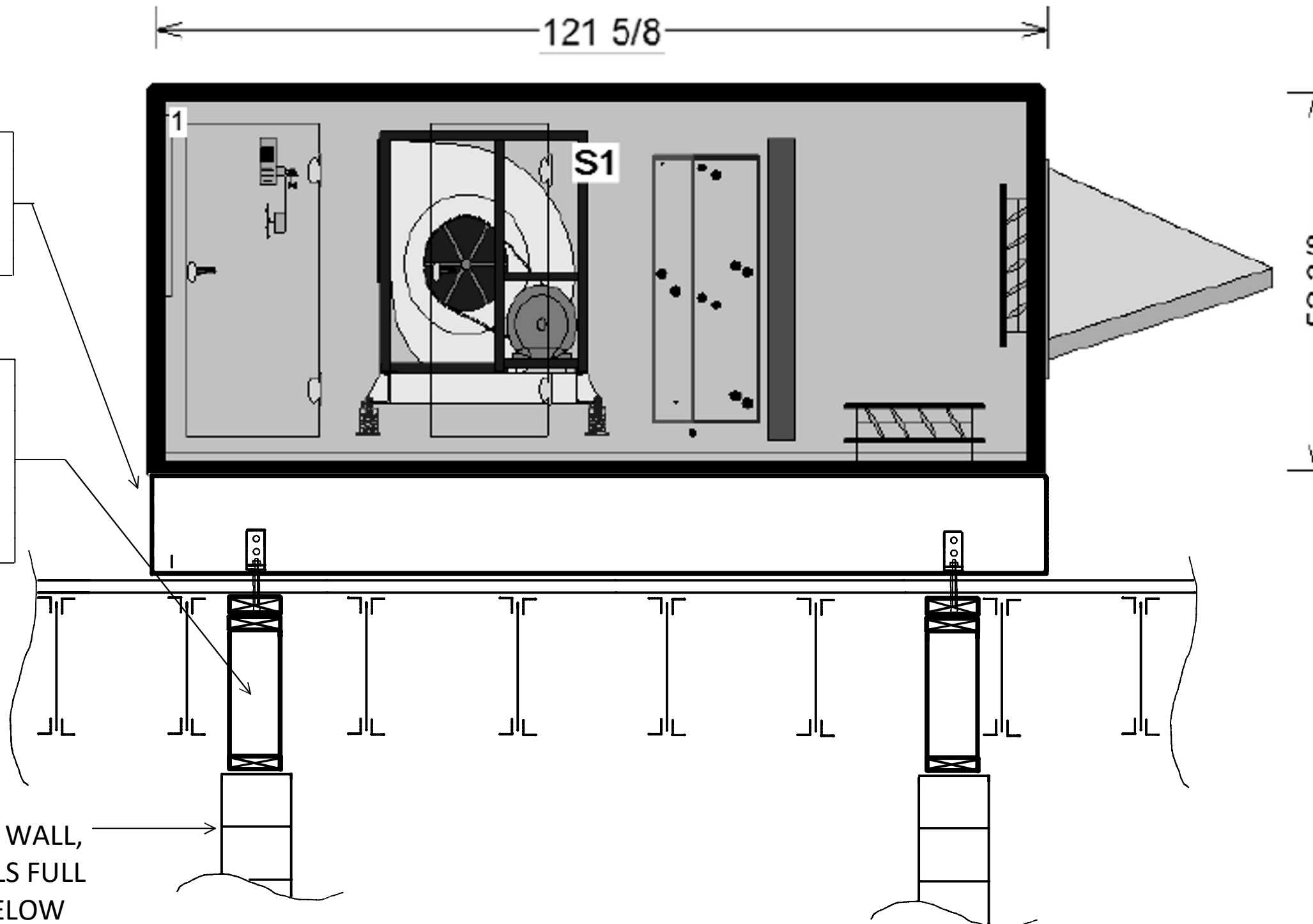


RTU END ELEVATION

NTS

STUD WALL;  
2x6 @ 16 o/c  
c/w 1/2"  
ANCHOR BOLT  
@24" o/c

EXIST. CMU WALL,  
GROUT CELLS FULL  
HEIGHT BELOW  
RTU-1



RTU SIDE ELEVATION

NTS

5/16"x3-1/2" GRK  
STRUCTURAL SCREW AT  
MANUFACTURER MOUNTING  
LOCATIONS, MIN. FOUR (4)  
PER SIDE, EQUALLY SPACED

PREFAB. METAL CURB PER  
TRANE (BY OTHERS),  
REINSTATE ROOFING AND  
FLASHING (BY OTHERS)

1-3/4"x9-1/2" LVL BEAM,  
FASTEN TO CURB w/ TWO (2)  
#12 x 1" SCREWS @ 12" o/c

SIMPSON HGA10 BRACKET  
AT EACH CORNER (4) c/w  
5/16" GRK SCREWS

FULL BLOCKING BETWEEN  
UNDERSIDE OF BEAMS AND TOP  
PLATES OF STUD WALL, c/w  
5/16"x6" GRK SCREWS @ 8" o/c

CURB AND BEAM SECTION

NTS



REVISIONS

NO.	DATE	DESCRIPTION
1	1 SEPT 2022	DRAFT FOR CLIENT REVIEW
2	2 SEPT 2022	METAL PREFAB. CURB CHANGE

GIBSONS AQUATIC FACILITY

953 GIBSONS WAY,  
GIBSONS, BC

title:

RTU FRAME PLAN  
AND ELEVATIONS

scale: NTS

date: 1 SEPT 22

by: BC

job: TE2206

drawing: **S101**

seal:

DRAFT NOT FOR  
CONSTRUCTION

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