



**Request for Proposals**  
**For**  
**Design Services - Cobble Hill Sewer Integration Expansion Project**

Request for Proposals No.: **R18-77**

Issued: **September 11, 2018**

Submission Deadline: **October 3, 2018, @ 2 p.m. local time**

---

## TABLE OF CONTENTS

---

<b>PART 1 – INVITATION AND SUBMISSION INSTRUCTIONS.....</b>	<b>3</b>
1.1 Invitation to Proponents.....	3
1.2 RFP Contact.....	3
1.3 Type of Contract for Deliverables .....	3
1.4 RFP Timetable .....	3
1.5 Submission of Proposals .....	4
<b>PART 2 - EVALUATION, NEGOTIATION AND AWARD .....</b>	<b>6</b>
2.1 Stages of Evaluation and Negotiation.....	6
2.2 Stage I – Mandatory Submission Requirements .....	6
2.3 Stage II – Evaluation .....	6
2.4 Stage III – Pricing .....	6
2.5 Stage IV – Ranking and Contract Negotiations.....	6
<b>PART 3 – TERMS AND CONDITIONS OF THE RFP PROCESS.....</b>	<b>8</b>
3.1 General Information and Instructions .....	8
3.2 Communication after Issuance of RFP .....	9
3.3 Notification and Debriefing.....	9
3.4 Conflict of Interest and Prohibited Conduct.....	10
3.5 Confidential Information.....	11
3.6 Procurement Process Non-Binding.....	12
3.7 Governing Law and Interpretation.....	12
<b>APPENDIX A – FORM OF AGREEMENT .....</b>	<b>14</b>
<b>APPENDIX B – SUBMISSION FORM .....</b>	<b>15</b>
<b>APPENDIX C – PRICING .....</b>	<b>18</b>
<b>APPENDIX D – RFP PARTICULARS.....</b>	<b>19</b>
A. THE DELIVERABLES .....	19
B. MATERIAL DISCLOSURES.....	22
C. MANDATORY SUBMISSION REQUIREMENTS .....	22
D. MANDATORY TECHNICAL REQUIREMENTS.....	23
E. PRE-CONDITIONS OF AWARD .....	23
F. RATED CRITERIA .....	24
<b>APPENDIX E – REFERENCE FORM .....</b>	<b>19</b>

## PART 1 – INVITATION AND SUBMISSION INSTRUCTIONS

### 1.1 Invitation to Proponents

This Request for Proposals (the “RFP”) is an invitation by the Cowichan Valley Regional District (the “CVRD”) to prospective proponents to submit proposals for **Design Services for the Cobble Hill Sewer Integration Expansion Project** as further described in Section A of the RFP Particulars (Appendix D) (the “Deliverables”).

The CVRD operates two small sewer systems in the Cobble Hill area; the Cobble Hill Sewer System and Twin Cedars Sewer System. The Cobble Hill treatment plan is nearing the end of its lifecycle and is needing replacement. The Cobble Hill Integration and Effluent Re-use Expansion Project will combine these two sewer systems into one. This RFP requests civil design services for the necessary upgrades to both sewer systems as well as conceptual drawings for servicing to expand the service area to include the existing CVRD-operated Maple Hills sewer system and servicing of properties fronting the proposed sewer main.

### 1.2 RFP Contact

For the purposes of this procurement process, the “RFP Contact” will be:

Attention: Erin Annis, Procurement Specialist

Email: [purchasing@cverd.bc.ca](mailto:purchasing@cverd.bc.ca)

Proponents and their representatives are not permitted to contact any employees, officers, agents, elected or appointed officials or other representatives of the CVRD, other than the RFP Contact, concerning matters regarding this RFP. Failure to adhere to this rule may result in the disqualification of the proponent and the rejection of the proponent's proposal.

### 1.3 Type of Contract for Deliverables

The selected proponent will be requested to enter into direct contract negotiations to finalize an agreement with the CVRD for the provision of the Deliverables. It is the CVRD's intention to enter into an agreement with only one (1) legal entity. The terms and conditions found in the Form of Agreement (Appendix A) are to form the basis for commencing negotiations between the CVRD and the selected proponent.

### 1.4 RFP Timetable

Issue Date of RFP	September 11, 2018
Site Visit / Pre-Bid Meeting	September 21, 2018 @ 9:00 AM local time
Deadline for Questions	September 25, 2018 @ 4:00 PM local time
Deadline for Issuing Addenda	September 28, 2018 @ 4:00 PM local time
Submission Deadline	October 3, 2018, @ 2:00 PM local time
Rectification Period	3 business days
Anticipated Ranking of Proponents	October 10, 2018
Contract Negotiation Period	5 business days
Anticipated Execution of Agreement	October 17, 2018

The RFP timetable is tentative only, and may be changed by the CVRD at any time. For greater clarity, business days means all days that the CVRD is open for business.

A site meeting will be held on Friday, September 21, 2018, at 9:00 a.m. at the Twin Cedars Waste Water Treatment Facility located at 1413 Hutchinson Road.

## **1.5 Submission of Proposals**

### **1.5.1 Proposals to be Submitted to Prescribed Location**

Proposals must be submitted at: [purchasing@cverd.bc.ca](mailto:purchasing@cverd.bc.ca)

### **1.5.2 Proposals to be Submitted on Time**

Proposals must be submitted to the email address set out above on or before the Submission Deadline. Proposals submitted after the Submission Deadline will be rejected. The CVRD does not accept any responsibility for proposals delivered to any other email address or by any other means by the proponent. Proponents are advised to submit their Proposals well before the deadline. Proponents submitting proposals near the deadline do so at their own risk. Proposals will be deemed to be received when they enter into the CVRD system and the CVRD accepts no responsibility for proposals sent prior to the deadline that fail for any reason to enter into the CVRD system by the deadline.

The determination of whether the proposal is delivered by the Submission Deadline shall be based on the electronic time and date stamp generated by the CVRD's server, whether or not accurate.

### **1.5.3 Proposals to be Submitted in Prescribed Format**

Proponents must submit one electronic copy of their proposal to the email address noted in 1.5.1. The email should indicate the RFP title and number (see RFP cover page) in the subject line and the full legal name of the proponent in the body of the email.

Proponents should note that the maximum acceptable email size is 8MB. If greater than 8MB, proponents should email proposals in multiple emails. If sending in multiple emails, each email should indicate the total number of emails that are being sent. All emails must be received prior to the Submission Deadline.

### **1.5.4 Amendment of Proposals**

Proponents may amend their proposals prior to the Submission Deadline by submitting the amendment in the same prescribed format as detailed in 1.5.3. Any amendment should clearly indicate which part of the proposal the amendment is intended to amend or replace.

### **1.5.5 Withdrawal of Proposals**

At any time throughout the RFP process until the execution of a written agreement for provision of the Deliverables, a proponent may withdraw a submitted proposal. To withdraw a proposal, a notice of withdrawal must be emailed to the RFP Contact in the same prescribed format as detailed in 1.5.3 and must be signed by an authorized representative of the proponent. The CVRD is under no obligation to return withdrawn proposals.



[End of Part 1]

## **PART 2 – EVALUATION, NEGOTIATION AND AWARD**

### **2.1 Stages of Evaluation and Negotiation**

The CVRD will conduct the evaluation of proposals and negotiations in the following stages:

### **2.2 Stage I – Mandatory Submission Requirements**

Stage I will consist of a review to determine which proposals comply with all of the mandatory submission requirements. If a proposal fails to satisfy all of the mandatory submission requirements, the CVRD will issue the proponent a rectification notice identifying the deficiencies and providing the proponent an opportunity to rectify the deficiencies. If the proponent fails to satisfy the mandatory submission requirements within the Rectification Period, its proposal will be rejected. The Rectification Period will begin to run from the date and time that the CVRD issues a rectification notice to the proponent. The mandatory submission requirements are set out in Section C of the RFP Particulars (Appendix D).

### **2.3 Stage II – Evaluation**

Stage II will consist of the following two sub-stages:

#### **2.3.1 Mandatory Technical Requirements**

The CVRD will review the proposals to determine whether the mandatory technical requirements as set out in Section D of the RFP Particulars (Appendix D) have been met. Questions or queries on the part of the CVRD as to whether a proposal has met the mandatory technical requirements will be subject to the verification and clarification process set out in Part 3.

#### **2.3.2 Rated Criteria**

The CVRD will evaluate each qualified proposal on the basis of the non-price rated criteria as set out in Section F of the RFP Particulars (Appendix D).

### **2.4 Stage III – Pricing**

Stage III will consist of a scoring of the submitted pricing of each qualified proposal in accordance with the price evaluation method set out in Pricing (Appendix C). The evaluation of price will be undertaken after the evaluation of mandatory requirements and rated criteria has been completed.

### **2.5 Stage IV – Ranking and Contract Negotiations**

#### **2.5.1 Ranking of Proponents**

After the completion of Stage III, all scores from Stage II and Stage III will be added together and the proponents will be ranked based on their total scores. The top-ranked proponent will receive a written invitation to enter into direct contract negotiations to finalize the agreement with the CVRD. In the event of a tie, the selected proponent will be the proponent selected by way of coin toss.

## **2.5.2 Contract Negotiation Process**

Any negotiations will be subject to the process rules contained in the Terms and Conditions of the RFP Process (Part 3) and will not constitute a legally binding offer to enter into a contract on the part of the CVRD or the proponent and there will be no legally binding relationship created with any proponent prior to the execution of a written agreement. The terms and conditions found in the Form of Agreement (Appendix A) are to form the basis for commencing negotiations between the CVRD and the selected proponent. Negotiations may include requests by the CVRD for supplementary information from the proponent to verify, clarify or supplement the information provided in its proposal or to confirm the conclusions reached in the evaluation, and may include requests by the CVRD for improved pricing or performance terms from the proponent.

## **2.5.3 Time Period for Negotiations**

The CVRD intends to conclude negotiations and finalize the agreement with the top-ranked proponent during the Contract Negotiation Period, commencing from the date the CVRD invites the top-ranked proponent to enter negotiations. A proponent invited to enter into direct contract negotiations should therefore be prepared to satisfy the pre-conditions of award listed in Section E of the RFP Particulars (Appendix D), provide requested information in a timely fashion and conduct its negotiations expeditiously.

## **2.5.4 Failure to Enter into Agreement**

If the pre-conditions of award listed in Section E of the RFP Particulars (Appendix D) are not satisfied or if the parties cannot conclude negotiations and finalize the agreement for the Deliverables within the Contract Negotiation Period, the CVRD may discontinue negotiations with the top-ranked proponent and may invite the next-best-ranked proponent to enter into negotiations. This process will continue until an agreement is finalized, until there are no more proponents remaining that are eligible for negotiations or until the CVRD elects to cancel the RFP process.

## **2.5.5 Notification of Negotiation Status**

Other proponents that may become eligible for contract negotiations may be notified at the commencement of the negotiation process with the top-ranked proponent.

[End of Part 2]

## **PART 3 – TERMS AND CONDITIONS OF THE RFP PROCESS**

### **3.1 General Information and Instructions**

#### **3.1.1 Proponents to Follow Instructions**

Proponents should structure their proposals in accordance with the instructions in this RFP. Where information is requested in this RFP, any response made in a proposal should reference the applicable section numbers of this RFP.

#### **3.1.2 Proposals in English**

All proposals are to be in English only.

#### **3.1.3 No Incorporation by Reference**

The entire content of the proponent's proposal should be submitted in a fixed form, and the content of websites or other external documents referred to in the proponent's proposal but not attached will not be considered to form part of its proposal.

#### **3.1.4 Past Performance**

In the evaluation process, the CVRD may consider the proponent's past performance or conduct on previous contracts with the CVRD or other institutions.

#### **3.1.5 Information in RFP Only an Estimate**

The CVRD and its advisers make no representation, warranty or guarantee as to the accuracy of the information contained in this RFP or issued by way of addenda. Any quantities shown or data contained in this RFP or provided by way of addenda are estimates only, and are for the sole purpose of indicating to proponents the general scale and scope of the Deliverables. It is the proponent's responsibility to obtain all the information necessary to prepare a proposal in response to this RFP.

#### **3.1.6 Proponents to Bear Their Own Costs**

The proponent will bear all costs associated with or incurred in the preparation and presentation of its proposal, including, if applicable, costs incurred for interviews or demonstrations.

#### **3.1.7 Proposal to be Retained by the CVRD**

The CVRD will not return the proposal or any accompanying documentation submitted by a proponent.

#### **3.1.8 No Guarantee of Volume of Work or Exclusivity of Contract**

The CVRD makes no guarantee of the value or volume of work to be assigned to the successful proponent. The agreement to be negotiated with the selected proponent will not be an exclusive contract for the provision of the described Deliverables. The CVRD may contract with others for goods and services the same as or similar to the Deliverables or may obtain such goods and services internally.

## **3.2 Communication after Issuance of RFP**

### **3.2.1 Proponents to Review RFP**

Proponents should promptly examine all of the documents comprising this RFP, and may direct questions or seek additional information in writing by email to the RFP Contact on or before the Deadline for Questions. No such communications are to be directed to anyone other than the RFP Contact. The CVRD is under no obligation to provide additional information, and the CVRD is not responsible for any information provided by or obtained from any source other than the RFP Contact. It is the responsibility of the proponent to seek clarification from the RFP Contact on any matter it considers to be unclear. The CVRD is not responsible for any misunderstanding on the part of the proponent concerning this RFP or its process.

### **3.2.2 All New Information to Proponents by Way of Addenda**

This RFP may be amended only by addendum in accordance with this section. If the CVRD, for any reason, determines that it is necessary to provide additional information relating to this RFP, such information will be communicated to all proponents by addendum. Each addendum forms an integral part of this RFP and may contain important information, including significant changes to this RFP. Proponents are responsible for obtaining all addenda issued by the CVRD. In the Submission Form (Appendix B), proponents should confirm their receipt of all addenda by setting out the number of each addendum in the space provided.

### **3.2.3 Post-Deadline Addenda and Extension of Submission Deadline**

If the CVRD determines that it is necessary to issue an addendum after the Deadline for Issuing Addenda, the CVRD may extend the Submission Deadline for a reasonable period of time.

### **3.2.4 Verify, Clarify and Supplement**

When evaluating proposals, the CVRD may request further information from the proponent or third parties in order to verify, clarify or supplement the information provided in the proponent's proposal, including but not limited to clarification with respect to whether a proposal meets the mandatory technical requirements set out in Section D of the RFP Particulars (Appendix D). The CVRD may revisit, re-evaluate and rescore the proponent's response or ranking on the basis of any such information.

## **3.3 Notification and Debriefing**

### **3.3.1 Notification to Other Proponents**

Once an agreement is executed by the CVRD and a proponent, the other proponents may be notified directly in writing and will be notified by public posting in the same manner that this RFP was originally posted of the outcome of the procurement process.

### **3.3.2 Debriefing**

Proponents may request a debriefing after receipt of a notification of the outcome of the procurement process. All requests must be in writing to the RFP Contact and must be made within sixty (60) days of such notification.

### **3.3.3 Procurement Protest Procedure**

If a proponent wishes to challenge the RFP process, it should provide written notice to the RFP Contact in accordance with the CVRD's procurement protest procedures and any applicable trade agreement or other applicable bid protest procedures. The notice must provide a detailed explanation of the proponent's concerns with the procurement process or its outcome.

## **3.4 Conflict of Interest and Prohibited Conduct**

### **3.4.1 Conflict of Interest**

For the purposes of this RFP, the term "Conflict of Interest" includes, but is not limited to, any situation or circumstance where:

- (a) in relation to the RFP process, the proponent has an unfair advantage or engages in conduct, directly or indirectly, that may give it an unfair advantage, including but not limited to (i) having, or having access to, confidential information of the CVRD in the preparation of its proposal that is not available to other proponents, (ii) communicating with any person with a view to influencing preferred treatment in the RFP process (including but not limited to the lobbying of decision makers involved in the RFP process), or (iii) engaging in conduct that compromises, or could be seen to compromise, the integrity of the open and competitive RFP process or render that process non-competitive or unfair; or
- (b) in relation to the performance of its contractual obligations under a contract for the Deliverables, the proponent's other commitments, relationships or financial interests (i) could, or could be seen to, exercise an improper influence over the objective, unbiased and impartial exercise of its independent judgement, or (ii) could, or could be seen to, compromise, impair or be incompatible with the effective performance of its contractual obligations.

### **3.4.2 Disqualification for Conflict of Interest**

The CVRD may disqualify a proponent for any conduct, situation or circumstances, determined by the CVRD, in its sole and absolute discretion, to constitute a Conflict of Interest as defined above.

### **3.4.3 Disqualification for Prohibited Conduct**

The CVRD may disqualify a proponent, rescind an invitation to negotiate or terminate a contract subsequently entered into if the CVRD determines that the proponent has engaged in any conduct prohibited by this RFP.

### **3.4.4 Prohibited Proponent Communications**

Proponents must not engage in any communications that could constitute a Conflict of Interest and should take note of the Conflict of Interest declaration set out in the Submission Form (Appendix B).

### **3.4.5 Proponent Not to Communicate with Media**

Proponents must not at any time directly or indirectly communicate with the media in relation to this RFP or any agreement entered into pursuant to this RFP without first obtaining the written permission of the RFP Contact.

### **3.4.6 No Lobbying**

Proponents must not, in relation to this RFP or the evaluation and selection process, engage directly or indirectly in any form of political or other lobbying whatsoever to influence the selection of the successful proponent(s).

### **3.4.7 Illegal or Unethical Conduct**

Proponents must not engage in any illegal business practices, including activities such as bid-rigging, price-fixing, bribery, fraud, coercion or collusion. Proponents must not engage in any unethical conduct, including lobbying, as described above, or other inappropriate communications; offering gifts to any employees, officers, agents, elected or appointed officials or other representatives of the CVRD; deceitfulness; submitting proposals containing misrepresentations or other misleading or inaccurate information; or any other conduct that compromises or may be seen to compromise the competitive process provided for in this RFP.

### **3.4.8 Past Performance or Past Conduct**

The CVRD may prohibit a supplier from participating in a procurement process based on past performance or based on inappropriate conduct in a prior procurement process, including but not limited to the following:

- (a) illegal or unethical conduct as described above;
- (b) the refusal of the supplier to honour its submitted pricing or other commitments; or
- (c) any conduct, situation or circumstance determined by the CVRD, in its sole and absolute discretion, to have constituted an undisclosed Conflict of Interest.

## **3.5 Confidential Information**

### **3.5.1 Confidential Information of the CVRD**

All information provided by or obtained from the CVRD in any form in connection with this RFP either before or after the issuance of this RFP:

- (a) is the sole property of the CVRD and must be treated as confidential;
- (b) is not to be used for any purpose other than replying to this RFP and the performance of any subsequent contract for the Deliverables;
- (c) must not be disclosed without prior written authorization from the CVRD; and
- (d) must be returned by the proponent to the CVRD immediately upon the request of the CVRD.

### **3.5.2 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 the CVRD. The confidentiality of such information will be maintained by the CVRD, except as otherwise required by 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 the CVRD 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.

## **3.6 Procurement Process Non-Binding**

### **3.6.1 No Contract A and No Claims**

This procurement process is not intended to create and will not create a formal, legally binding bidding process and will instead be governed by the law applicable to direct commercial negotiations. For greater certainty and without limitation:

- (a) this RFP will not give rise to any Contract A–based tendering law duties or any other legal obligations arising out of any process contract or collateral contract; and
- (b) neither the proponent nor the CVRD will have the right to make any claims (in contract, tort, or otherwise) against the other with respect to the award of a contract, failure to award a contract or failure to honour a proposal submitted in response to this RFP.

### **3.6.2 No Contract until Execution of Written Agreement**

This RFP process is intended to identify prospective suppliers for the purposes of negotiating potential agreements. No legal relationship or obligation regarding the procurement of any good or service will be created between the proponent and the CVRD by this RFP process until the successful negotiation and execution of a written agreement for the acquisition of such goods and/or services.

### **3.6.3 Non-Binding Price Estimates**

While the pricing information provided in proposals will be non-binding prior to the execution of a written agreement, such information will be assessed during the evaluation of the proposals and the ranking of the proponents. Any inaccurate, misleading or incomplete information, including withdrawn or altered pricing, could adversely impact any such evaluation or ranking or the decision of the CVRD to enter into an agreement for the Deliverables.

### **3.6.4 Cancellation**

The CVRD may cancel or amend the RFP process without liability at any time.

## **3.7 Governing Law and Interpretation**

These Terms and Conditions of the RFP Process (Part 3):



- (a) are intended to be interpreted broadly and independently (with no particular provision intended to limit the scope of any other provision);
- (b) are non-exhaustive and will not be construed as intending to limit the pre-existing rights of the parties to engage in pre-contractual discussions in accordance with the common law governing direct commercial negotiations; and
- (c) are to be governed by and construed in accordance with the laws of the province of British Columbia and the federal laws of Canada applicable therein.

[End of Part 3]

## **APPENDIX A – FORM OF AGREEMENT**

Purchase Order Terms and Conditions are available on our website:

<https://www.cvr.bc.ca/DocumentCenter/View/89882/Purchase-Order-Terms-and-Conditions>

## APPENDIX B – SUBMISSION FORM

### 1. Proponent Information

Please fill out the following form, naming one person to be the proponent's contact for the RFP process and for any clarifications or communication that might be necessary.	
Full Legal Name of Proponent:	
Any Other Relevant Name under which Proponent Carries on Business:	
Street Address:	
City, Province/State:	
Postal Code:	
Phone Number:	
Fax Number:	
Company Website (if any):	
Proponent Contact Name and Title:	
Proponent Contact Phone:	
Proponent Contact Fax:	
Proponent Contact Email:	

### 2. Acknowledgment of Non-Binding Procurement Process

The proponent acknowledges that the RFP process will be governed by the terms and conditions of the RFP, and that, among other things, such terms and conditions confirm that this procurement process does not constitute a formal, legally binding bidding process (and for greater certainty, does not give rise to a Contract A bidding process contract), and that no legal relationship or obligation regarding the procurement of any good or service will be created between the CVRD and the proponent unless and until the CVRD and the proponent execute a written agreement for the Deliverables.

### 3. Ability to Provide Deliverables

The proponent has carefully examined the RFP documents and has a clear and comprehensive knowledge of the Deliverables required. The proponent represents and warrants its ability to provide the Deliverables in accordance with the requirements of the RFP for the rates set out in its proposal.

### 4. Non-Binding Pricing

The proponent has submitted its pricing in accordance with the instructions in the RFP and in Pricing (Appendix C) in particular. The proponent confirms that the pricing information provided

is accurate. The proponent acknowledges that any inaccurate, misleading or incomplete information, including withdrawn or altered pricing, could adversely impact the acceptance of its proposal or its eligibility for future work.

## **5. Addenda**

The proponent is deemed to have read and taken into account all addenda issued by the CVRD prior to the Deadline for Issuing Addenda. The proponent is requested to confirm that it has received all addenda by listing the addenda numbers, or if no addenda were issued by writing the word "None", on the following line: \_\_\_\_\_. Proponents who fail to complete this section will be deemed to have received all posted addenda.

## **6. No Prohibited Conduct**

The proponent declares that it has not engaged in any conduct prohibited by this RFP.

## **7. Conflict of Interest**

Proponents must declare all potential Conflicts of Interest, as defined in section 3.4.1 of the RFP. This includes disclosing the names and all pertinent details of all individuals (employees, advisers, or individuals acting in any other capacity) who (a) participated in the preparation of the proposal; **AND** (b) were employees of the CVRD within twelve (12) months prior to the Submission Deadline.

If the box below is left blank, the proponent will be deemed to declare that (a) there was no Conflict of Interest in preparing its proposal; and (b) there is no foreseeable Conflict of Interest in performing the contractual obligations contemplated in the RFP.

Otherwise, if the statement below applies, check the box.

- ☐ The proponent declares that there is an actual or potential Conflict of Interest relating to the preparation of its proposal, and/or the proponent foresees an actual or potential Conflict of Interest in performing the contractual obligations contemplated in the RFP.

If the proponent declares an actual or potential Conflict of Interest by marking the box above, the proponent must set out below details of the actual or potential Conflict of Interest:

---

---

---

---

## 8. Disclosure of Information

The proponent hereby agrees that any information provided in this proposal, even if it is identified as being supplied in confidence, may be disclosed where required by law or by order of a court or tribunal. The proponent hereby consents to the disclosure, on a confidential basis, of this proposal by the CVRD to the advisers retained by the CVRD to advise or assist with the RFP process, including with respect to the evaluation this proposal.

---

Signature of Proponent Representative

---

Name of Proponent Representative

---

Title of Proponent Representative

---

Date

I have the authority to bind the proponent.

## APPENDIX C – PRICING

### 1. Instructions on How to Provide Pricing

- (a) Proponents should provide the information requested under section 3 below (“Required Pricing Information”) by reproducing and completing the table below in their proposals, or, if there is no table below, by completing the attached form and including it in their proposals.
- (b) Rates must be provided in Canadian funds, inclusive of all applicable duties and taxes except for GST and PST, which should be itemized separately.
- (c) Rates quoted by the proponent must be all-inclusive and must include all labour and material costs, all travel and carriage costs, all insurance costs, all costs of delivery, all costs of installation and set-up, including any pre-delivery inspection charges, and all other overhead, including any fees or other charges required by law.

### 2. Evaluation of Pricing

Pricing is worth 40 points of the total score.

Pricing will be scored based on a relative pricing formula using the rates set out in the pricing form. Each proponent will receive a percentage of the total possible points allocated to price for the particular category it has submitted a proposal for, which will be calculated in accordance with the following formula:

$$\text{lowest price} \div \text{proponent's price} \times \text{weighting} = \text{proponent's pricing points}$$

### 3. Required Pricing Information

Each proponent should provide the following in its pricing submission:

- (a) Breakdown of team members and roles, sub consultants, tasks, hours and fees. An example of the preferred format is shown below. Phase 1 (Civil Design), Phase 2 (Conceptual Design) and Phase 3 (Contract Administration).

Pricing Submission Table	RFP - Project Title								
	Team Member Role 1	Team Member Role 2	Team Member Role 3	Consultant Hours Task Total	Subconsultant 1	Subconsultant 2	Subconsultant 3	Disbursements	TASK TOTAL
Hourly Fee									
<b>Project Phase 1</b>									
Task 1A	(hrs)	(hrs)	(hrs)	(hrs)	(\$)	(\$)	(\$)	(\$)	(\$)
Task 1B									
<b>Project Phase 2</b>									
Task 2A									
Task 2B									
<b>Project Phase 3</b>									
Task 3A									
Task 3B									
Subtotal Hours									
Subtotal Fees									
Total Work (no GST)									
GST @ 5%									
Total Fees									

## APPENDIX D – RFP PARTICULARS

### A. THE DELIVERABLES

#### Background

The CVRD operates two small sewer systems located in the Cobble Hill area; Cobble Hill Sewer System and Twin Cedars Sewer System. Cobble Hill Sewer System produces Class C effluent quality through a Rotating Biological Contractor (RBC) treatment plant servicing 84 residential properties. The treatment plant is nearing the end of its lifecycle and is needing replacement. Twin Cedars Sewer System produces Class A effluent using membrane filtration (MBR) technology. The treated effluent is used for toilet flushing in a public washroom and for irrigation at a community park. The Cobble Hill Sewer Integration and Effluent Re-use Expansion Project will combine these two sewer systems into one.

#### Project Area

The following map shows the site location.



## **Project Overview**

The majority of the pipe-works to connect the two sewer systems have previously been installed. The existing tank at Cobble Hill Sewer System, which currently houses the RBC unit, will be converted to a pump station that will pump STEP sewage to Twin Cedars Sewer for treatment. The existing sludge tanks at Cobble Hill will remain for sludge settling. The treated effluent from Twin Cedars treatment plant will be sent for ground disposal at either the existing Rapid Infiltration Basins (RIB) at Twin Cedars, the to-be-constructed RIBs at Cobble Hill sewer system or it will be used for irrigation water during the irrigation season in community parks. The existing membranes at Twin Cedars have been replaced with new higher capacity Toray NHP210 membranes modules. It is estimated that the upgraded plant will have the capacity to treat 450 m<sup>3</sup> per day. The effluent re-use program will be expanded to include at least one additional community park (Cobble Hill Commons Park). Expanded servicing to extend to another CVRD-operated sewer system, Maple Hills Sewer System, may be included in the project.

## **Objectives**

Objectives of the Cobble Hill Sewer Integration and Expansion of the Effluent Re-Use Program are to:

1. Convert the RBC treatment plant at Cobble Hill Sewer to a lift station to pump the STEP sewage to Twin Cedars sewer for treatment
2. Design and convert the disposal field at Cobble Hill Sewer to Rapid Infiltration Basins
3. Expand the effluent re-use for irrigation to the Cobble Hill Commons Park
4. Upgrade Twin Cedars treatment plant's components as necessary to match the treatment capacity provided by the higher capacity Toray NHP210 membranes modules
5. Provide conceptual design to expand servicing to Maple Hills sewer system including servicing of properties fronting the sewer main.

## **Available Background Documents**

The following information is available to the proponents.

1. Drawings
  - a. Parks Service drawing 1
  - b. Parks Service drawing 2
  - c. Lines from WWTP to Watson Road
  - d. Reclaim drawings
2. Site Plan
3. Twin Cedars Sewer System Map
4. Cobble Hill Sewer System Map
5. Cobble Hill Area Map
6. Maple Hills Sewer System Map

One component of the deliverables will be to provide civil design services for the necessary upgrades at Cobble Hill Sewer and Twin Cedars Sewer Systems.

A second component is to provide conceptual drawings for servicing to expand the service area to include the existing CVRD-operated Maple Hills Sewer System and servicing of properties fronting the proposed sewer main. The conceptual design is to include: routing of the proposed sewer mains, proposed lift station(s), and proposed tie-in points to the existing infrastructure.



Verification of pipe capacities in the existing Twin Cedars collection system will be required to confirm capacity to accept the additional flow from Maple Hills. Analysis of the existing lift station to confirm maximum capacity and identify any required upgrades.

## **Scope of Work**

### **Design Drawings**

- Gather available background information including;
  - Existing reports and studies
- Review treatment process at Twin Cedars wastewater plant;
  - Review and confirm treatment capacity of Toray NHP210 membranes,
    - Review each system component (pumps, tanks, biological treatment, etc.) and confirm required upgrades to match Toray NHP210 membranes treatment capacity
  - Computer model of blower distribution manifolds piping and identify any modifications to the piping to optimize aeration to the treatment process and blower efficiency;
  - Review system process and pump run times and make recommendations for modifications to optimize treatment process and energy requirement. Consultation with Clean Harbours to verify system controls to optimize system efficiency and treatment.
  - Design required system upgrades
- Recommendations for make and model of new aeration blowers; recommendations to include:
  - An air demand analysis to identify and adequately size the blowers.
  - Consideration for energy efficiency, life cycle costs, operation and maintenance costs, warranty terms and noise level. Comparisons clearly shown in a table format for the recommended makes/models
- Confirmation on the need (or not) for an additional primary screen at Twin Cedars for the STEP sewage from Cobble Hill Sewer.
  - If deemed necessary, design to incorporate additional screen into existing system
  - If deemed not necessary, design to show re-routing of pipe works from Cobble Hills sewer directly into equalization tanks.
- Design of sewer force main from Twin Cedars treatment facility to the corner of Watson and Fisher road for a dedicated effluent reuse line to connect to the existing force main to Cobble Hill Sewer (see Drawing A, Alignment of New Force main)
- Design of reclaimed effluent service pipe from Fisher Road to Cobble Hill Commons Park
- Design of the lift station at Cobble Hill Sewer. Consideration in the design to include:
  - energy cost savings;
  - appropriately sized pump(s);
  - long-term durability of the components;
  - health and safety of workers while working in the lift station;
  - condition assessment on the existing concrete tank and recommendations made for tank liners, if required.
- Design showing a FilterPro odour control unit at the following locations:
  - Twin Cedars treatment plant head works. Design is to maximize the level of odour management to include as many system components as feasible to provide superior odour control.

- Cobble Hill sewer lift station. Design is to include odour management of the sludge settling tanks if possible.
- Selection for location and design of an additional reclaimed water storage tank and related pipe-works to connect the tank to the existing system
- Determination for the need of an additional UV disinfection unit to treat to the maximum treatment capacity of the plant. If an additional unit is deemed necessary, design is to include the additional unit.
- Recommendations for composite tops/lids on the anoxic zone tanks and MBR tanks to replacing the existing steel grating.
- Selection and design of appropriately sized effluent pumps at Twin Cedars Treatment Plant lift station to pump to Cobble Hill sewer RIBs
- Design to show new NHP210 membrane modules
- Provide and implement a Commissioning (Process Optimization) Plan and develop a Re-commissioning Plan/Schedule
- Update Operations and Maintenance Plan
- Class A cost estimates
- Provide Contract Administration during construction
- Prepare as-constructed drawings
- Update Asset Inventory, Condition Assessment and 10-year Financial Plan in CVRD format.
- Complete Environmental Impact Study (EIS) at Cobble Hill Disposal Fields

### **Conceptual Design**

- Gather available background information including;
  - Existing reports and studies
  - GIS maps from CVRD, including shape files and layers
  - Existing site services (water, sanitary, stormwater, electricity, and telecom)
- Prepare Information including;
  - Topographic Survey (LiDAR data available)
- Prepare a base map based on gathered background information showing all of the existing services (water, sewer, roads and drainage features), and natural features
- Prepare design report for pump stations, force mains, sewer mains, capacity of existing collection pipe works, proposed tie-in points to existing infrastructure.
- Preparing conceptual design as per the design report.
- Class C cost estimates

## **B. MATERIAL DISCLOSURES**

Completion of the Design and Conceptual Design is required by January 15, 2019 at the latest to accommodate a project completion date of December 31, 2019.

### **Collaborative Team**

The successful proponent will work closely with CVRD Engineering Staff throughout the Project to confirm project objectives, design criteria, process and supplier options, schedule and budget.

## **C. MANDATORY SUBMISSION REQUIREMENTS**

### **1. Submission Form (Appendix B)**

Each proposal must include a Submission Form (Appendix B) completed and signed by an authorized representative of the proponent.

### **2. Pricing (Appendix C)**

Each proposal must include pricing information that complies with the instructions contained in Pricing (Appendix C).

### **3. Other Mandatory Submission Requirements**

N/A

## **D. MANDATORY TECHNICAL REQUIREMENTS**

N/A

## **E. PRE-CONDITIONS OF AWARD**

### WorkSafe BC

The successful Proponent will be required to show proof of WorkSafeBC's coverage confirming that the Proponent is active, in good standing, and has met WorkSafeBC's criteria for advance clearance.

### Insurance

The successful Proponent shall at all times during the currency of this Project and any extension or renewal thereof, at its own expense, obtain and provide the CVRD with evidence of:

**Commercial General Liability Insurance**, against all claims for personal injury, including bodily injury resulting in death, and property damage with an inclusive limit of not less than Two Million (\$2,000,000) per occurrence. Such policy shall name the CVRD as an additional insured with respect to the liability arising out of the operations of the named insured.

The CVRD reserves the right to request such higher limits of insurance or other types of insurance policies appropriate to this AGREEMENT as the CVRD may reasonably require from time to time.

### Indemnification

The Proponent will be required to agree to the following respecting liability and indemnity:

The Proponent agrees that the Cowichan Valley Regional District (referred hereinafter as the CVRD) shall not be liable for any injury or damage (including death) to any employees, officer or agent of the Proponent, unless the injury loss or damage is caused by the negligence of an officer or employee of the CVRD while acting within the scope of his/her employment.

The Proponent agrees that it shall, at all times, indemnify and save harmless the CVRD, and each of its elected officials, officers, employees and agents from and against all claims, demands,

losses, costs, damages, action, suits or other proceedings made, sustained, brought or made upon the CVRD in respect of any costs, expenses, loss, damage or injury, including death, and reasonable legal fees, arising out of any cause, whether direct or indirect, by reason of or in connection with negligent acts or omissions of the Proponent or any of its officers, directors, employees or agents in connection with the services performed, purportedly performed or required to be performed by the Proponent under this contractual agreement.

**Professional Liability Insurance** with a minimum per claim limit of not less than One Million (\$1,000,000), and a minimum annual aggregate of not less than Two Million (\$2,000,000).

## F. RATED CRITERIA

The following sets out the categories, weightings and descriptions of the rated criteria of the RFP. Proponents who do not meet a minimum threshold score for a category will not proceed to the next stage of the evaluation process.

<b>Rated Criteria Category</b>	<b>Weighting (Points)</b>	<b>Minimum Threshold</b>
i. Experience and Qualifications	20 points	16
ii. Project Lead & Team Composition	15 points	12
iii. Understanding of Project & Deliverables	15 points	12
iv. References	10 points	8
v. Pricing (See Appendix C for details)	40 points	N/A
<b>Total Points</b>	100 points	N/A

### Suggested Proposal Content for Non-Price Criteria

#### i. Experience and Qualifications – Total Points = 20 points

Each proponent should provide the following in its proposal:

- a brief description of the proponent;
- a description of its knowledge, skills and experience relevant to the Deliverables;
- a description of how the proponent will provide the Deliverables, which should include a work plan and incorporate an organizational chart indicating how the proponent intends to structure its working relationship with the CVRD.

#### ii. Project Lead & Team Composition – Total Points = 15 points

- Identify the Project Lead and describe the role and responsibilities the Project Lead would undertake as part of this Project.
- Provide a resume for the Project Lead along with their availability and proposed time commitment to the Project work plan for the deliverables outlined in the proposal.
- Provide resumes for team members and clearly identify their relevant skills sets, credentials and project experience in delivering comparable projects.

- Outline team members along with their availability and proposed time commitments to the Project work plan for deliverables outlined in the proposal.

**iii. Understanding of Project & Deliverables – Total Points = 15 points**

- Identify all services included in your proposal along with any optional, excluded services, or services assumed to be provided by others.
- Identify any unique design challenges with the proposed project concept.
- Identify critical project items that you think will define overall success of the project and how your team will work with the CVRD to deliver these items.

**iv. References – Total Points = 10 Points**

Each proponent is requested to provide three (3) reference from clients who have obtained goods or services similar to those requested in this RFP from the proponent in the last five (5) years. References should be provided in the format provided in Appendix E.

## APPENDIX E – REFERENCE FORM

The proponent must provide details of three (3) projects similar to this project.

### Reference contact Information

**Name:**

**Organisation:**

**Title:**

**Email:**

**Phone Number:**

**Project name:**

**Value of the Project:**

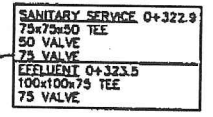
**Contract Period:**

**Description of the Project:**

**Positive Aspects of the Project:**

<b>Challenges Faced on the Project:</b>
<b>Scheduling Challenges:</b>
<b>Innovation and Value Added Services:</b>

110m



PROPOSED				EXISTING				E		D		C		B		A		No.		REVISION DESCRIPTION	
1	WATERMAIN	→	WATER VALVE	→	DITCH	→	ANCHOR														
2	SANITARY SEWER	→	HYDRANT	→	CULVERT	→	UTILITY POLE														
3	STORM DRAIN	→	WATER METER	→	CATCH BASIN	→	FENCE														
4	CURB AND GUTTER	→	AIR VALVE	→	MANHOLE	→	SLOPE														
5	EDGE OF PAVEMENT	→	CLEANOUT	→		→															

DESIGN: DWA  
DRAWING: PWF  
APPROVED: DWA  
DATE: 2012 11 09  
SCALE: AS SHOWN  
BENCHMARK: MON=94C308  
EL=96.589

**ANDERSON CIVIL**  
Consultants Inc.  
10208-536 Highway Street, Nanaimo, B.C. V9P 2T5  
Tel 250 754 1877 Fax 250 754 4375 email andersonc@andersoncivild.com

CLIENT: COWICHAN VALLEY REGIONAL DISTRICT  
PROJECT: COBBLE HILL VILLAGE  
RECLAIMED EFFLUENT SYSTEM  
HOLLAND AVE  
STA 0+010 TO STA 0+125

SHEET No. 5 OF 6  
DRAWING No. 2240-2-5  
CAD FILE No.

REV. E

DESTROY ALL DRAWINGS BEARING 1 EITHER OR BOTH OF THE FOLLOWING NUMBERS



our map.



Extend main outside  
service line

LOCATION OF NEW  
SOD SERVICE.

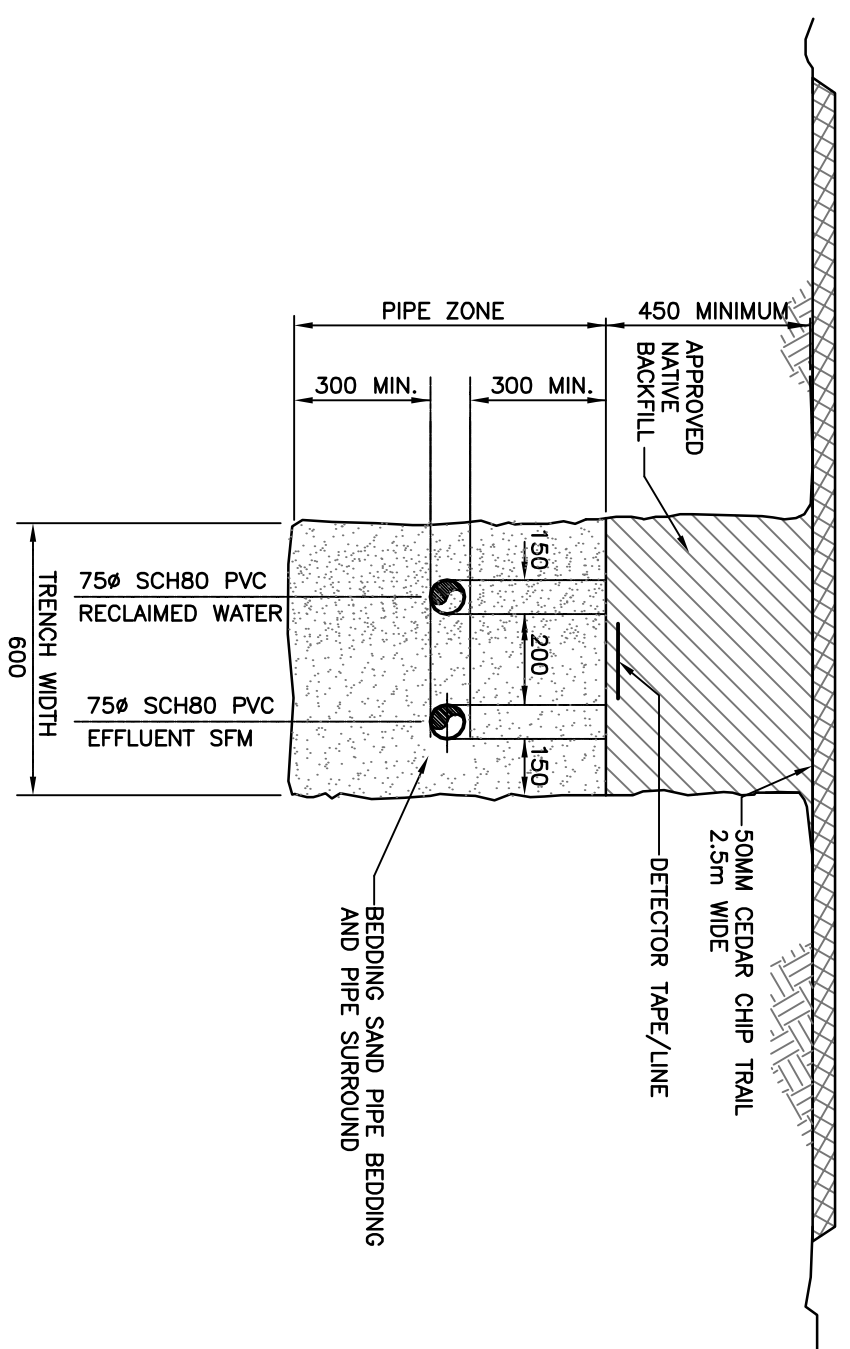
APPROX LOCATIONS  
OF CAPPED 750  
AND 250 SERVICE

Palmer Rd

Fisher Rd

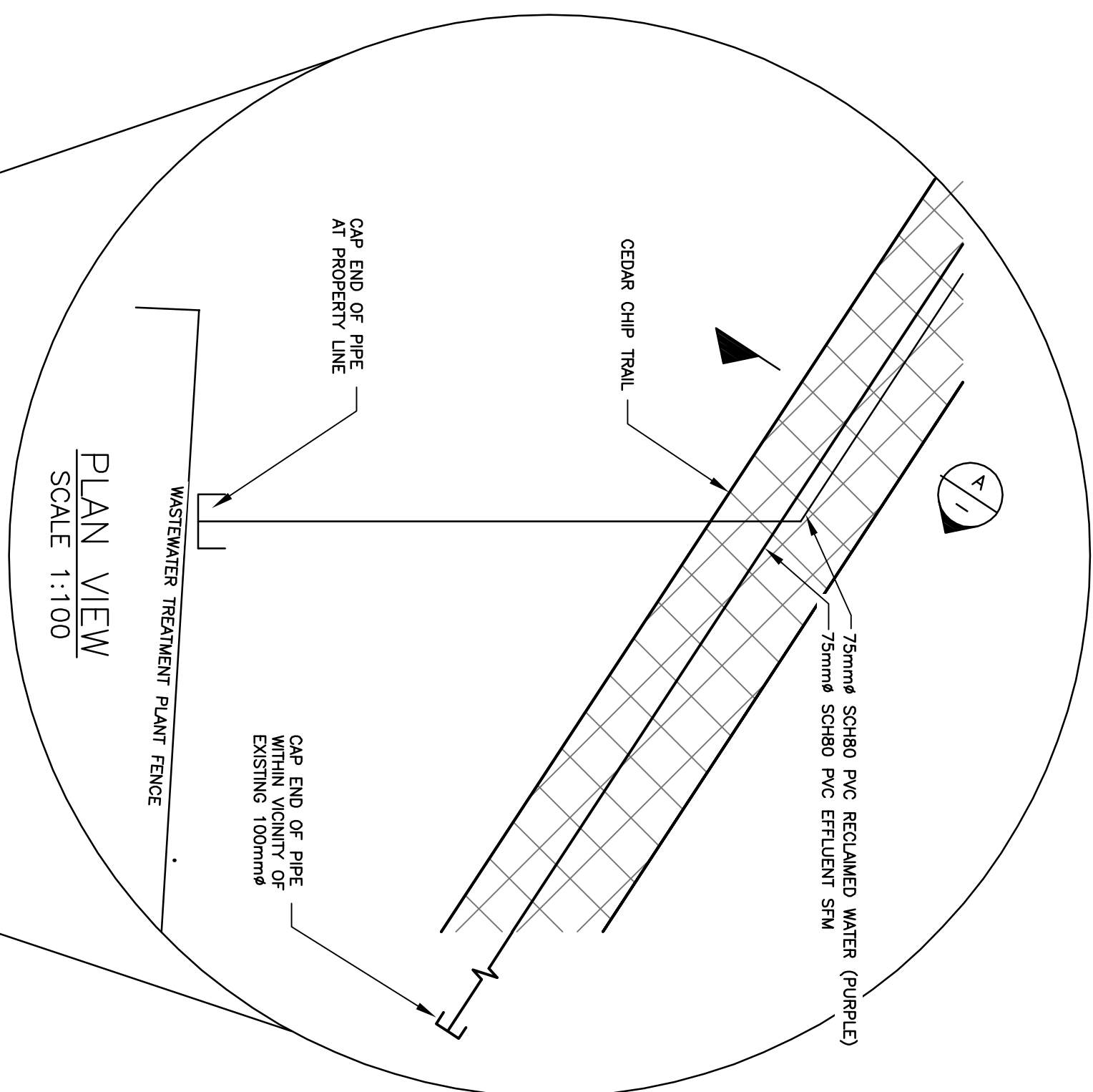
Watson Ave





- NOTES:**
1. TRENCH SIDE SLOPES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST W.C.B. REGULATIONS.
  2. RESTORE ALL DISTURBED AREAS TO ORIGINAL OR BETTER CONDITION UNLESS NOTED OTHERWISE.

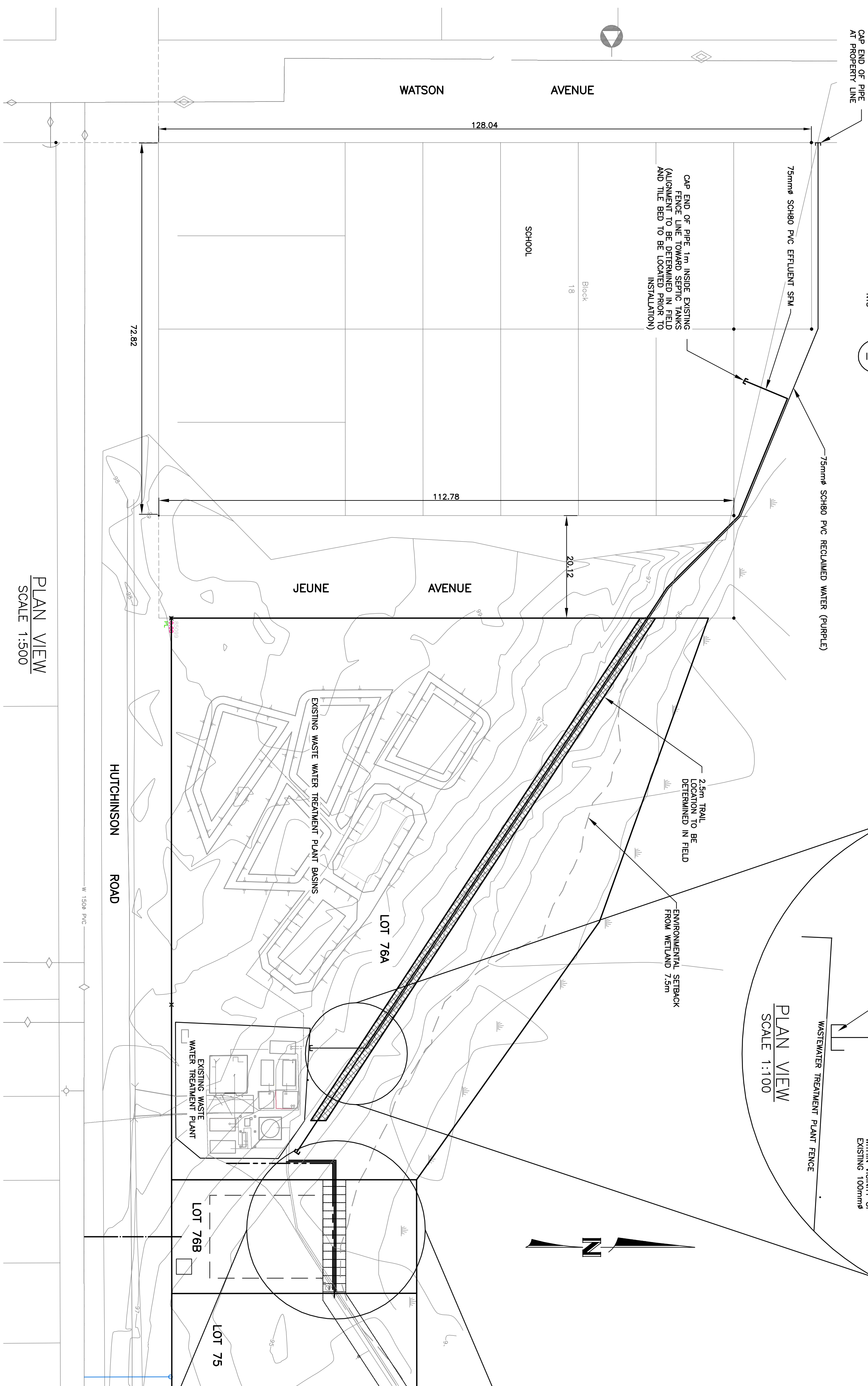
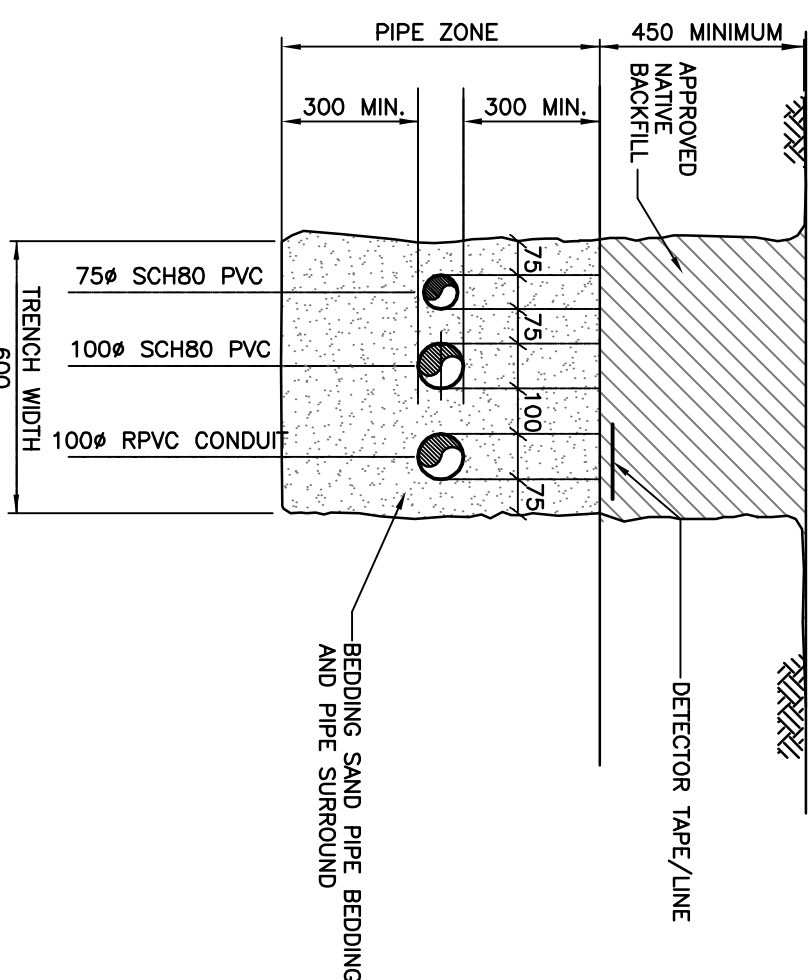
SECTION A  
—  
NTS



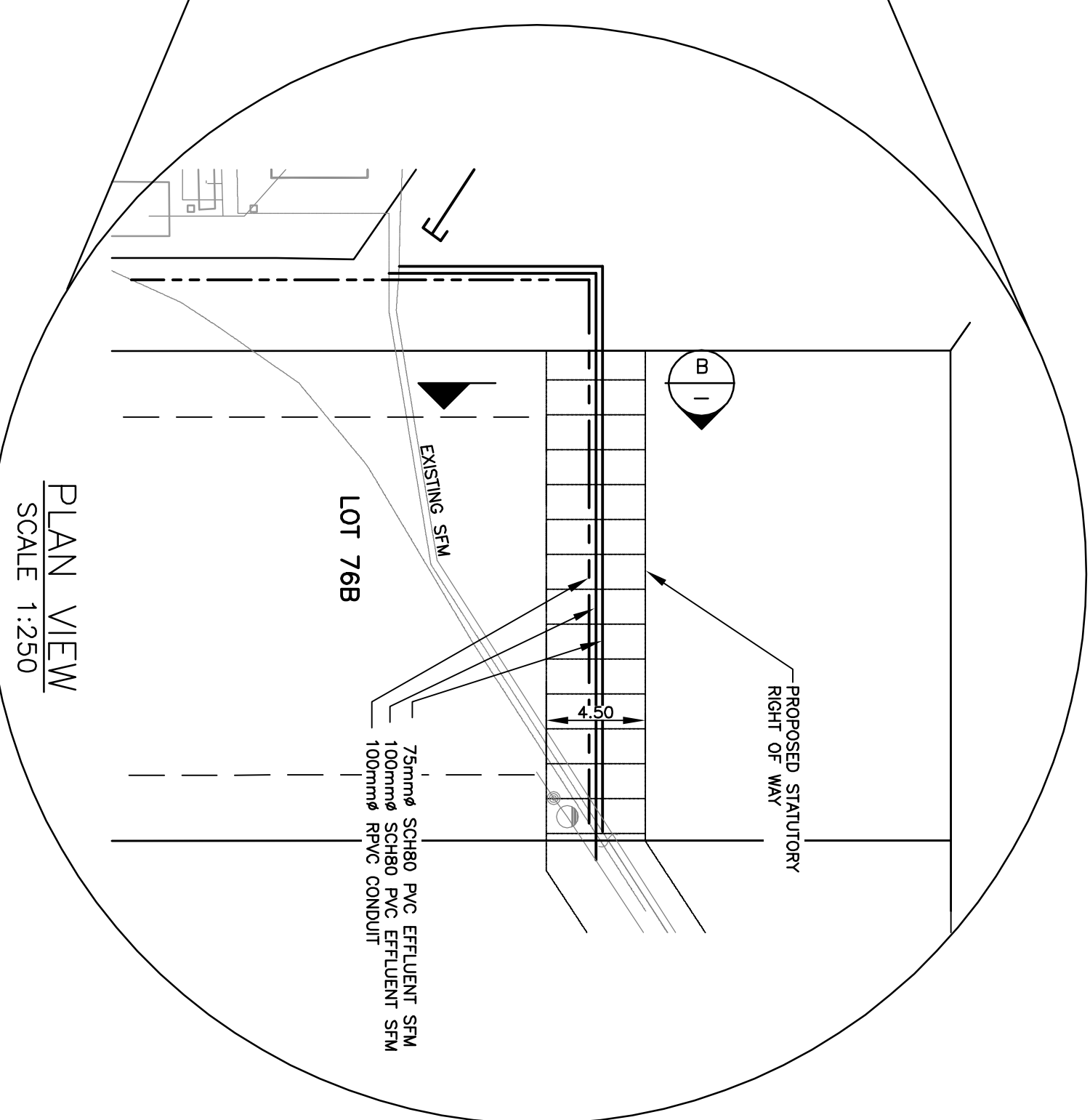
PLAN VIEW  
SCALE 1:100

- NOTES:**
1. TRENCH SIDE SLOPES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST W.C.B. REGULATIONS.
  2. RESTORE ALL DISTURBED AREAS TO ORIGINAL OR BETTER CONDITION UNLESS NOTED OTHERWISE.

SECTION B  
—  
NTS

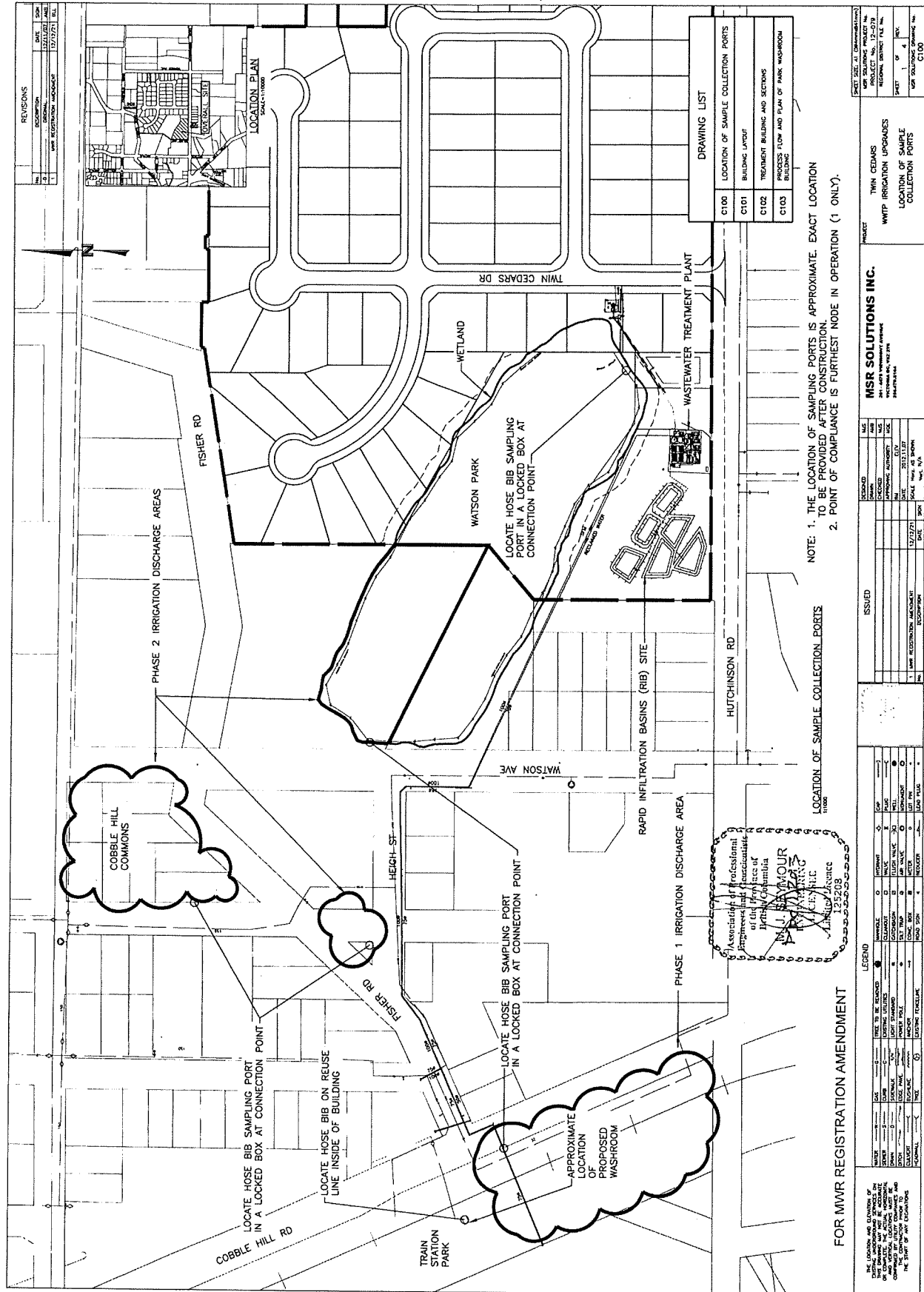


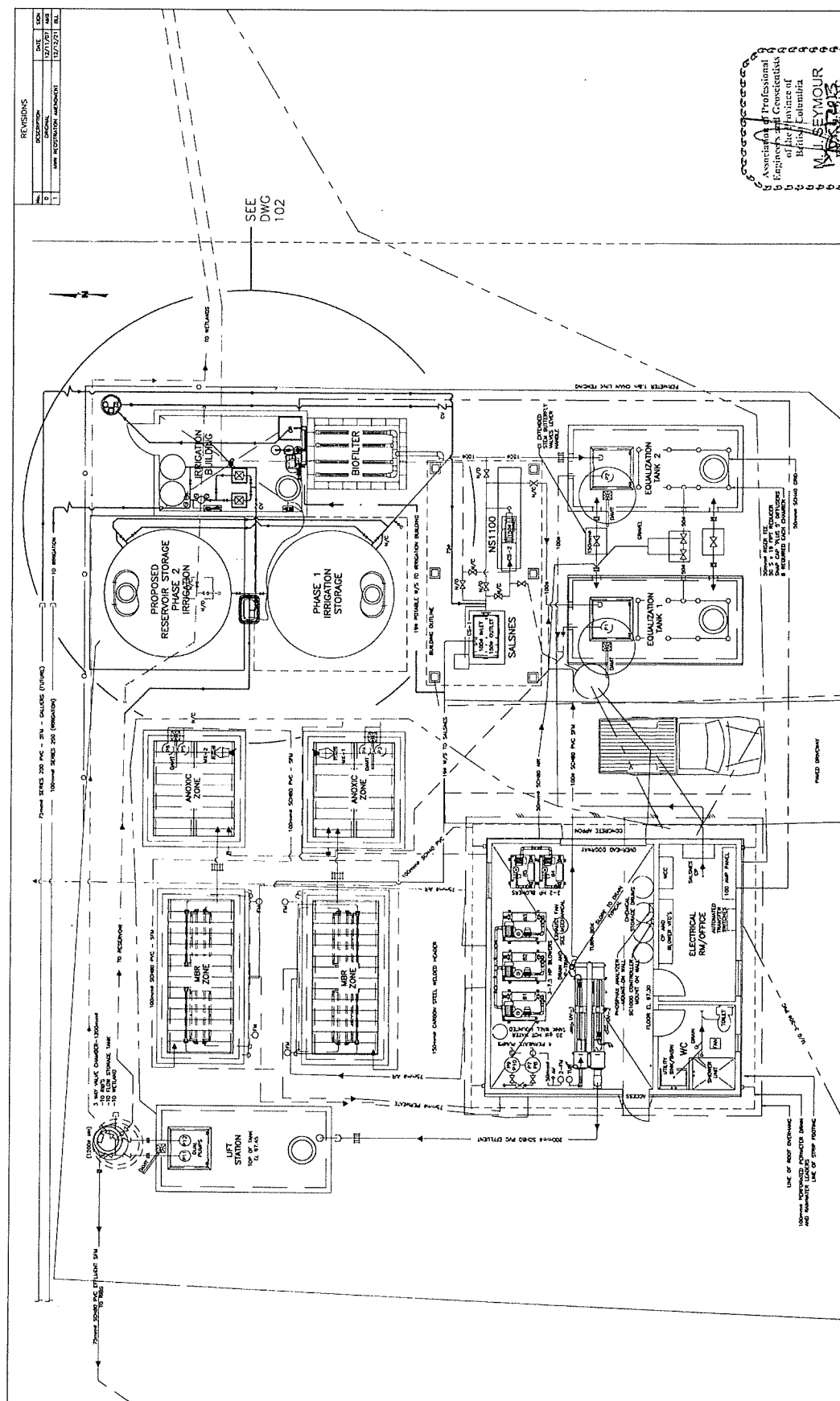
PLAN VIEW  
SCALE 1:500



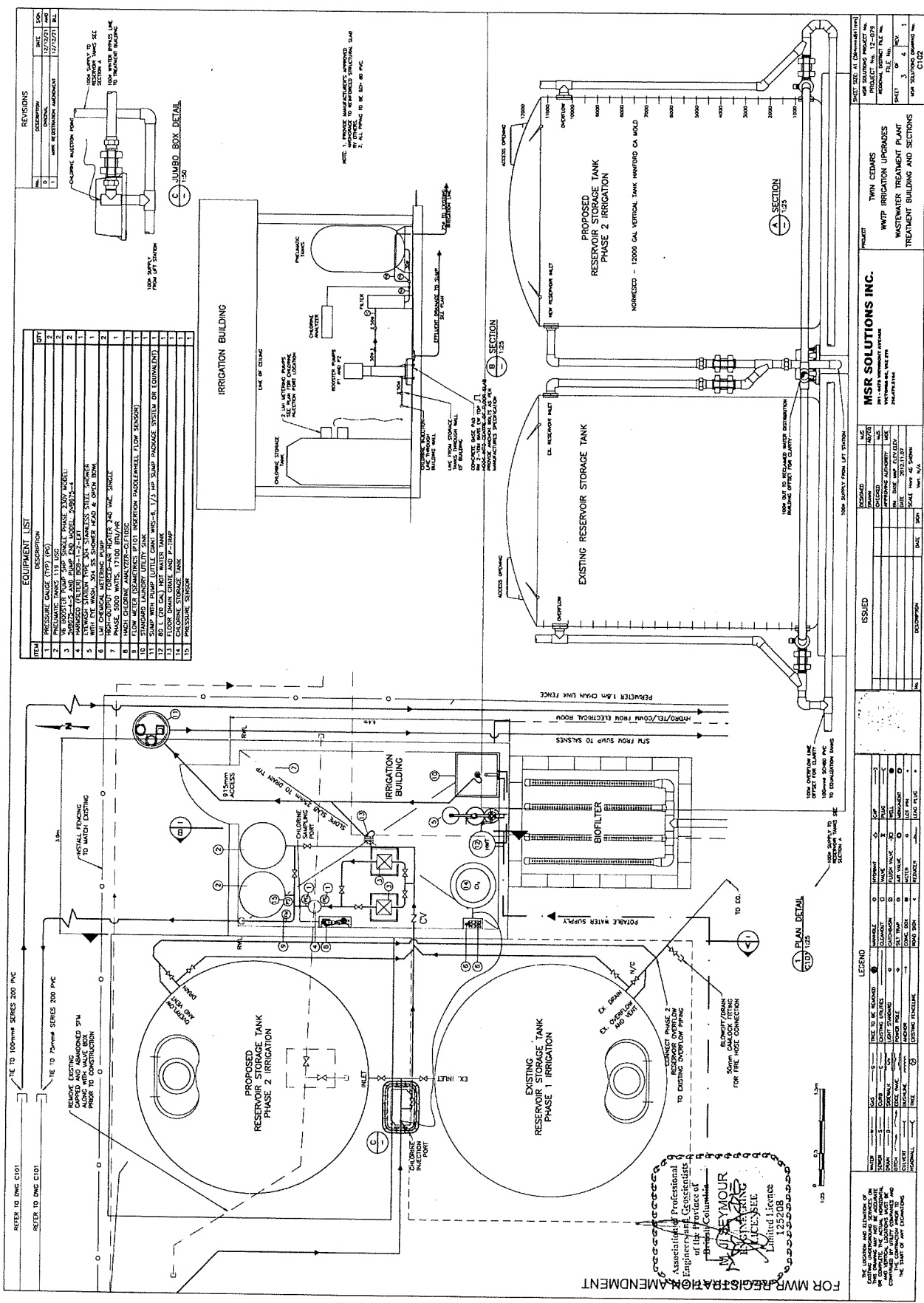
PLAN VIEW  
SCALE 1:250

THE LOCATION AND ELEVATION OF EXISTING DRAWING POINTS AND BEARS TO BE LOCATED FOR THE PROPOSED ACCURATE OR COMPLETE. THE LOCATION MUST BE CONFIRMED BY UTILITY COMPANIES AND THE START OF ANY EXCAVATIONS									
BENCHMARK									
DRAWING COORDINATES ARE LOCAL BASED ON UTM NAD 83 REFERENCE MONUMENT									
N: ##### E: #####									
MEAN C: #####									
ALL DISTANCES ARE GROUND LEVEL DISTANCES									
ALL ELEVATIONS ARE GEODETIC ELEVATIONS									
ALL DRAWING UNITS ARE METERS UNLESS NOTED OTHERWISE.									
ISSUED									
REVISIONS									
SCALE									
DESIGNED									
AW									
CHECKED									
DATE JAN 5 2011									
B.M.									
ELEV.									
SCALE Horiz.									
VERT.									
PROJECT									
HUTCHINSON ROAD									
LOT 76 TRAIL									
PLAN									
CONSULTANTS No.									
101									

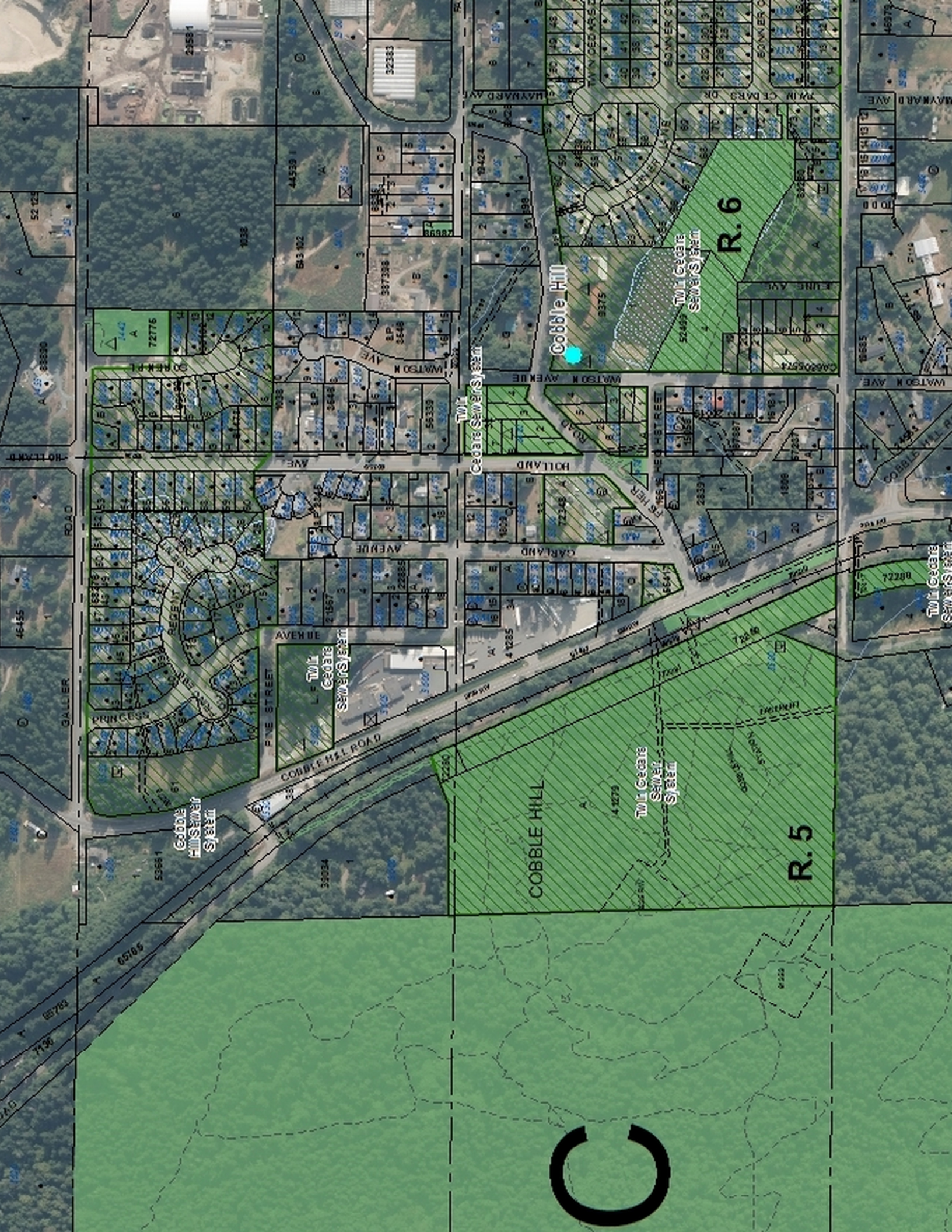




THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND SERVICES. THIS DRAWING MAY NOT BE ACCURATE OR COMPLETE. THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS MUST BE CONFIRMED BY UTILITY COMPANIES PRIOR TO THE CONTRACTOR'S START OF ANY OCCUPATION.









## DRAWING LIST

The figure consists of ten vertical panels, each containing a black-and-white micrograph of an embryo at a specific developmental stage. The panels are numbered 1 through 10 from top to bottom. Panel 1 shows a very early stage, likely a zygote or cleavage stage. Panels 2 through 9 show progressively more advanced stages, including blastulation, gastrulation, and neurulation. Panel 10 shows a late-stage embryo, possibly a hatched larva, with distinct body structures visible.

SHEET 4 - ROAD B - PLAN / PROFILE

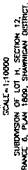
**SHEET 6 - ROAD D AND EMERGENCY**

[illegible]

AND FISHER ROAD

PLAN / PROFILE

SHEET 12 - STORMWATER PC

[illegible]

**BENCHMARK**

CONFIRM  
UNDERGROUND  
LOCATION WITH  
UTILITY COMPANIES

LEGEND			
—	WATERMAIN	— S —	SEWER
○	WATER CONNECTION	— ○ —	MANHOLE
—	WATER VALVE	— D —	STORM DRAIN
◇	HYDRANT	— T —	CULVERT
⑥	FLUSH VALVE	— ○ —	CATCHBASIN
④	AIR RELEASE VALVE	— ⊕ —	SILT TRAP

END : ALL PROPOSED SEWERS SHOWN SOLID & BOLD	
--- 6 ---	GAS MAIN
--- 8 ---	GAS CONNECTION
--- 10 ---	GAS VALVE
--- 12 ---	FENCE
--- 14 ---	TRAFFIC SIGN
--- 16 ---	SURVEY MONUMENT
--- 18 ---	GAS MAIN
--- 20 ---	GAS CONNECTION
--- 22 ---	GAS VALVE
--- 24 ---	FENCE
--- 26 ---	TRAFFIC SIGN
--- 28 ---	SURVEY MONUMENT
--- 30 ---	GAS MAIN
--- 32 ---	GAS CONNECTION
--- 34 ---	GAS VALVE
--- 36 ---	FENCE
--- 38 ---	TRAFFIC SIGN
--- 40 ---	SURVEY MONUMENT
--- 42 ---	GAS MAIN
--- 44 ---	GAS CONNECTION
--- 46 ---	GAS VALVE
--- 48 ---	FENCE
--- 50 ---	TRAFFIC SIGN
--- 52 ---	SURVEY MONUMENT
--- 54 ---	GAS MAIN
--- 56 ---	GAS CONNECTION
--- 58 ---	GAS VALVE
--- 60 ---	FENCE
--- 62 ---	TRAFFIC SIGN
--- 64 ---	SURVEY MONUMENT
--- 66 ---	GAS MAIN
--- 68 ---	GAS CONNECTION
--- 70 ---	GAS VALVE
--- 72 ---	FENCE
--- 74 ---	TRAFFIC SIGN
--- 76 ---	SURVEY MONUMENT
--- 78 ---	GAS MAIN
--- 80 ---	GAS CONNECTION
--- 82 ---	GAS VALVE
--- 84 ---	FENCE
--- 86 ---	TRAFFIC SIGN
--- 88 ---	SURVEY MONUMENT
--- 90 ---	GAS MAIN
--- 92 ---	GAS CONNECTION
--- 94 ---	GAS VALVE
--- 96 ---	FENCE
--- 98 ---	TRAFFIC SIGN
--- 100 ---	SURVEY MONUMENT

	SW	SEAWALK	SW	ANCHOR POLE
	D/W & PEDESTRIAN DROP		→	ANCHOR
	HYDRO POLE	○ SW	○	POLE-MOUNTED
	TELEPHONE POLE	○ M	△	DAINT LAMP
	UTILITY POLE (BOTH)	○ SW		
REG				

**FOCUS**  
Engineering • Planning • Geomatics

REVISIONS	
F	AS-CONSTRUCTED
C	REVISED FOR CONSTRUCTION
D	ISSUED FOR CONSTRUCTION
C	ISSUED FOR CMO APPROVAL
B	ISSUED FOR VHA APPROVAL
A	ISSUED FOR CMO APPROVAL

DESIGN	RT	CHITGO	SCALE:
DRAWN:	RT	DATE:	RT
	JAN10/08	P.M.:	RT
	MAY1/07	ELEV.:	RT
	MAR1/07		RT
	DEC1/06		RT
	NOV6/06		RT
	SEP11/06		RT

PROJECT:	J5
	RCM
ID:	RT
	MARCH 2006
	760J BC
	93.482
	Hz. 1:1000

ON ROAD SUBDIVISION  
ARS DEVELOPMENT CORP.  
PLAN & DRAWING LIST

CONSULTANTS' No.	011497-20
N.C. Folio No.	23923 PLA
REV No.	1
Sheet	of

[illegible]

**SEWER AND DRAIN SINKING CONNECTIONS ARE 100% PVC DOWNS AT A MINIMUM ORANGE OF 2 INCH DITCH BELOW LAND ARE 100% PVC DOWNS UNLESS OTHERWISE NOTED. IF DOWN IS LESS THAN 750MM, USE EXCELLENT WIRE PIPE.**

**UNDER CONSTRUCTION, SANITARY SEWERS MUST BE LAPPED, MESSAGE TIGHTED AND VIDEO INSPECTED BY CONTRACTORS.**

**STANDARD CHANGE LOGIC**

**ALL UTILITIES ON IMMINENT PROPERTY ARE WITHIN STATUTORY RIGHTS OF WAY THAT ARE REGISTERED ON PROPERTY TITLE USING THE OWNER'S SURVEYOR CHARGE LOGIC.**

[illegible][illegible][illegible]

1000  
 1001  
 1002  
 1003  
 1004  
 1005  
 1006  
 1007  
 1008  
 1009  
 1010  
 1011  
 1012  
 1013  
 1014  
 1015  
 1016  
 1017  
 1018  
 1019  
 1020  
 1021  
 1022  
 1023  
 1024  
 1025  
 1026  
 1027  
 1028  
 1029  
 1030  
 1031  
 1032  
 1033  
 1034  
 1035  
 1036  
 1037  
 1038  
 1039  
 1040  
 1041  
 1042  
 1043  
 1044  
 1045  
 1046  
 1047  
 1048  
 1049  
 1050  
 1051  
 1052  
 1053  
 1054  
 1055  
 1056  
 1057  
 1058  
 1059  
 1060  
 1061  
 1062  
 1063  
 1064  
 1065  
 1066  
 1067  
 1068  
 1069  
 1070  
 1071  
 1072  
 1073  
 1074  
 1075  
 1076  
 1077  
 1078  
 1079  
 1080  
 1081  
 1082  
 1083  
 1084  
 1085  
 1086  
 1087  
 1088  
 1089  
 1090  
 1091  
 1092  
 1093  
 1094  
 1095  
 1096  
 1097  
 1098  
 1099  
 1100  
 1101  
 1102  
 1103  
 1104  
 1105  
 1106  
 1107  
 1108  
 1109  
 1110  
 1111  
 1112  
 1113  
 1114  
 1115  
 1116  
 1117  
 1118  
 1119  
 1120  
 1121  
 1122  
 1123  
 1124  
 1125  
 1126  
 1127  
 1128  
 1129  
 1130  
 1131  
 1132  
 1133  
 1134  
 1135  
 1136  
 1137  
 1138  
 1139  
 1140  
 1141  
 1142  
 1143  
 1144  
 1145  
 1146  
 1147  
 1148  
 1149  
 1150  
 1151  
 1152  
 1153  
 1154  
 1155  
 1156  
 1157  
 1158  
 1159  
 1160  
 1161  
 1162  
 1163  
 1164  
 1165  
 1166  
 1167  
 1168  
 1169  
 1170  
 1171  
 1172  
 1173  
 1174  
 1175  
 1176  
 1177  
 1178  
 1179  
 1180  
 1181  
 1182  
 1183  
 1184  
 1185  
 1186  
 1187  
 1188  
 1189  
 1190  
 1191  
 1192  
 1193  
 1194  
 1195  
 1196  
 1197  
 1198  
 1199  
 1200  
 1201  
 1202  
 1203  
 1204  
 1205  
 1206  
 1207  
 1208  
 1209  
 1210  
 1211  
 1212  
 1213  
 1214  
 1215  
 1216  
 1217  
 1218  
 1219  
 1220  
 1221  
 1222  
 1223  
 1224  
 1225  
 1226  
 1227  
 1228  
 1229  
 1230  
 1231  
 1232  
 1233  
 1234  
 1235  
 1236  
 1237  
 1238  
 1239  
 1240  
 1241  
 1242  
 1243  
 1244  
 1245  
 1246  
 1247  
 1248  
 1249  
 1250  
 1251  
 1252  
 1253  
 1254  
 1255  
 1256  
 1257  
 1258  
 1259  
 1260  
 1261  
 1262  
 1263  
 1264  
 1265  
 1266  
 1267  
 1268  
 1269  
 1270  
 1271  
 1272  
 1273  
 1274  
 1275  
 1276  
 1277  
 1278  
 1279  
 1280  
 1281  
 1282  
 1283  
 1284  
 1285  
 1286  
 1287  
 1288  
 1289  
 1290  
 1291  
 1292  
 1293  
 1294  
 1295  
 1296  
 1297  
 1298  
 1299  
 1300  
 1301  
 1302  
 1303  
 1304  
 1305  
 1306  
 1307  
 1308  
 1309  
 1310  
 1311  
 1312  
 1313  
 1314  
 1315  
 1316  
 1317  
 1318  
 1319  
 1320  
 1321  
 1322  
 1323  
 1324  
 1325  
 1326  
 1327  
 1328  
 1329  
 1330  
 1331  
 1332  
 1333  
 1334  
 1335  
 1336  
 1337  
 1338  
 1339  
 1340  
 1341  
 1342  
 1343  
 1344  
 1345  
 1346  
 1347  
 1348  
 1349  
 1350  
 1351  
 1352  
 1353  
 1354  
 1355  
 1356  
 1357  
 1358  
 1359  
 1360  
 1361  
 1362  
 1363  
 1364  
 1365  
 1366  
 1367  
 1368  
 1369  
 1370  
 1371  
 1372  
 1373  
 1374  
 1375  
 1376  
 1377  
 1378  
 1379  
 1380  
 1381  
 1382  
 1383  
 1384  
 1385  
 1386  
 1387  
 1388  
 1389  
 1390  
 1391  
 1392  
 1393  
 1394  
 1395  
 1396  
 1397  
 1398  
 1399  
 1400  
 1401  
 1402  
 1403  
 1404  
 1405  
 1406  
 1407  
 1408  
 1409  
 1410  
 1411  
 1412  
 1413  
 1414  
 1415  
 1416  
 1417  
 1418  
 1419  
 1420  
 1421  
 1422  
 1423  
 1424  
 1425  
 1426  
 1427  
 1428  
 1429  
 1430  
 1431  
 1432  
 1433  
 1434  
 1435  
 1436  
 1437  
 1438  
 1439  
 1440  
 1441  
 1442  
 1443  
 1444  
 1445  
 1446  
 1447  
 1448  
 1449  
 1450  
 1451  
 1452  
 1453  
 1454

HYDRO TELLING, STREET LIGHTING, AND GAS CONNECTIONS "THIRD CALL" AT 1-800-474-6868 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. LOW VOLT SERVICES UNDERGROUND. GAS AND TUNGSTEN GAS FACILITIES ARE SHOWN SCHEMATIC ON THIS DRAWING REFERRED TO UTILITY COMPANY DRAWINGS FOR CONSTRUCTION DETAILS. HYDRO TELLING, STREET LIGHTING AND GAS CONNECTIONS ARE SHOWN SCHEMATIC ON THIS DRAWING REFERRED TO UTILITY COMPANY DRAWINGS FOR CONSTRUCTION DETAILS. TUNGSTEN GAS FACILITIES ARE SHOWN SCHEMATIC ON THIS DRAWING REFERRED TO UTILITY COMPANY DRAWINGS FOR CONSTRUCTION DETAILS. TUNGSTEN GAS FACILITIES ARE SHOWN SCHEMATIC ON THIS DRAWING REFERRED TO UTILITY COMPANY DRAWINGS FOR CONSTRUCTION DETAILS. TUNGSTEN GAS FACILITIES ARE SHOWN SCHEMATIC ON THIS DRAWING REFERRED TO UTILITY COMPANY DRAWINGS FOR CONSTRUCTION DETAILS.

NO CONSTRUCTION, FILLING OR REMOVAL OF VEGETATION OCCURRED WITHIN THE ENVIRONMENTAL STANCE WITHOUT PROPOSAL APPEARING FROM THE MOUNTAIN OF WATKIN LAND AND AN PROTECTION EXCEPT FOR THE FILL AREA IN LOTS 71 AND 72.

PROPOSAL AND SITE CHANGES WILL BE IN ACCORDANCE WITH PROVISIONS AND OCCURS CANADA AND THE MOUNTAIN OF WATKIN LAND AND AN PROTECTION.

RETAINED VEGETATION AND GRASSING OTHER WHERE POSSIBLE.

RESTRICTED VEHICLE ACCESS AND PROVIDED A SURFACED WALKING AREA.

DO NOT DISSEMINATE THIS FILE OR DISCUSS IT WITH PERSONNEL OF WAMP.  
SOURCE HAS BEEN ADVISED THAT THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED  
UNLESS INDICATED OTHERWISE BY THE SOURCE AND MAY BE RELEASED TO THE PUBLIC.  
LIMITED MACHINE ACCESS AND DEPENDENCY TO PREPARED AREAS ONLY.  
ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN  
OTHERWISE BY THE SOURCE. ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED  
UNLESS INDICATED OTHERWISE BY THE SOURCE AND MAY BE RELEASED TO THE PUBLIC.  
UNLESS INDICATED OTHERWISE BY THE SOURCE AND MAY BE RELEASED TO THE PUBLIC.  
WHEN POSSIBLE, COLLECTED RUNOFF INTO SITE SEDIMENT TRAPS PRIOR TO DISCHARGE OFF SITE

TRAINING: B.S., IN INDUSTRIAL  
 ENGINEERING, UNIVERSITY OF  
 CALIFORNIA, RIVERSIDE, 1968;  
 M.S., IN INDUSTRIAL ENGINEERING,  
 UNIVERSITY OF CALIFORNIA, RIVERSIDE,  
 1970; PH.D., IN INDUSTRIAL ENGINEERING,  
 UNIVERSITY OF CALIFORNIA, RIVERSIDE,  
 1973.

EMPLOYMENT: SENIOR DESIGN  
 ENGINEER, GENERAL ELECTRIC,  
 1968-1970; SENIOR DESIGN  
 ENGINEER, GENERAL ELECTRIC,  
 1970-1973.

RESEARCH INTERESTS: DESIGN  
 OF MECHANICAL SYSTEMS;  
 DESIGN OF MECHANICAL SYSTEMS;  
 DESIGN OF MECHANICAL SYSTEMS.

AS-CONSTRUCTED

Cowichan Valley Regional District

PROJECT:	BOOK:	S:	CONSULTANT: NO.
			01497-20

[illegible]



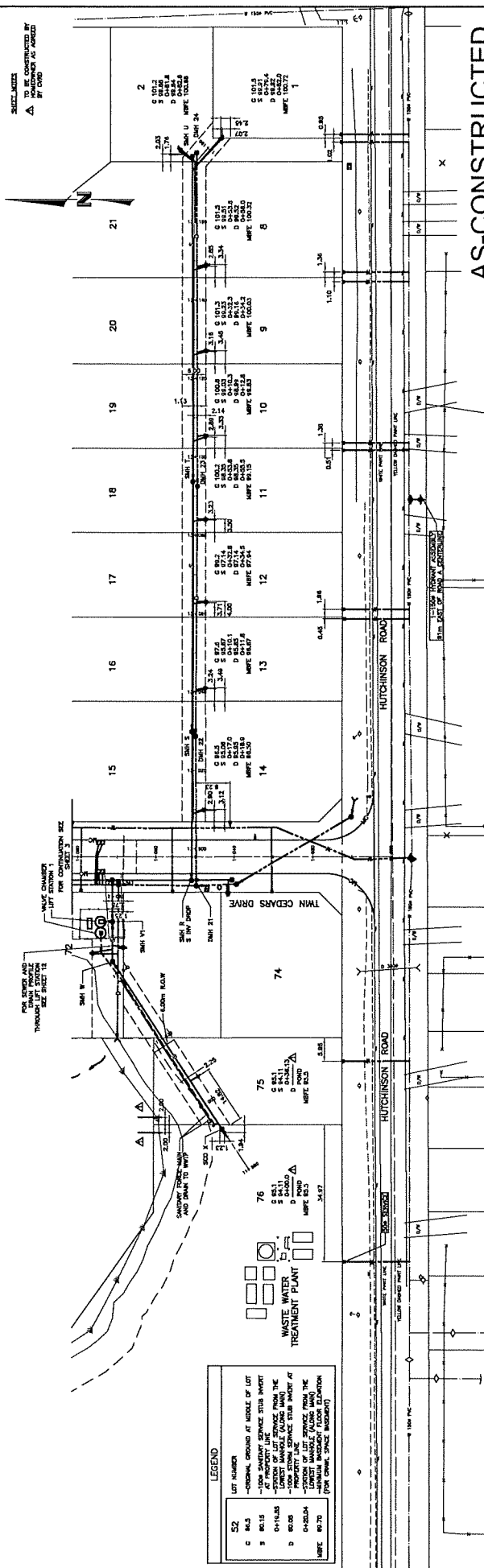
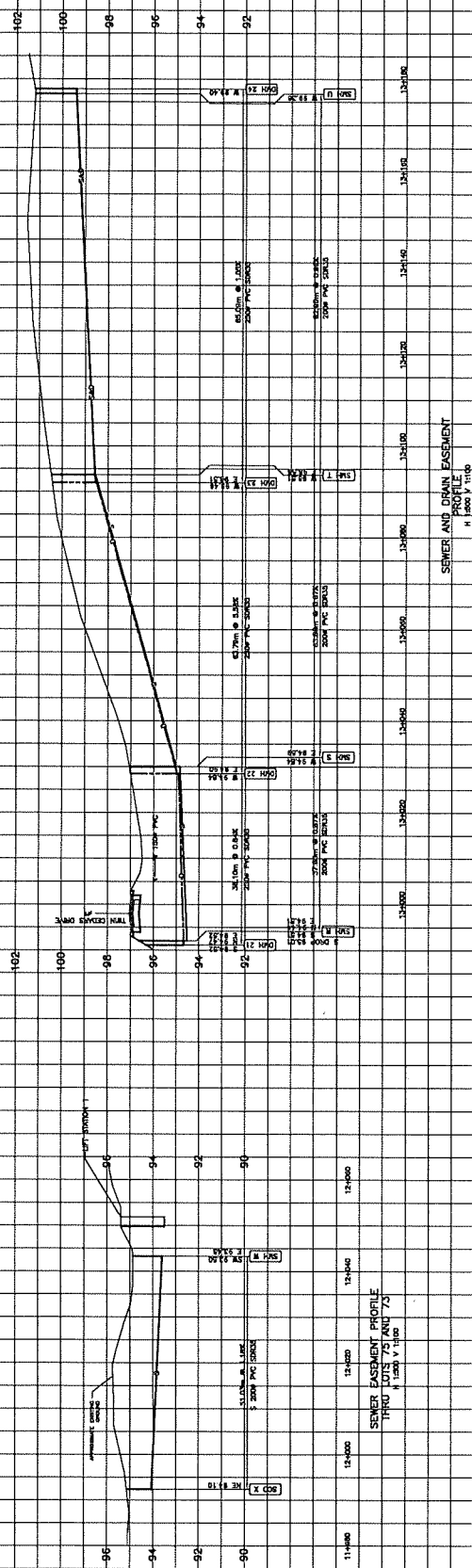










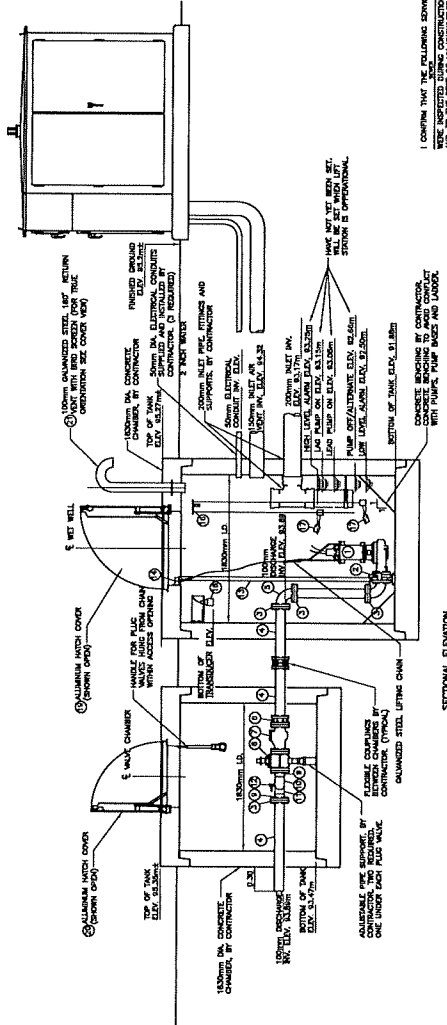
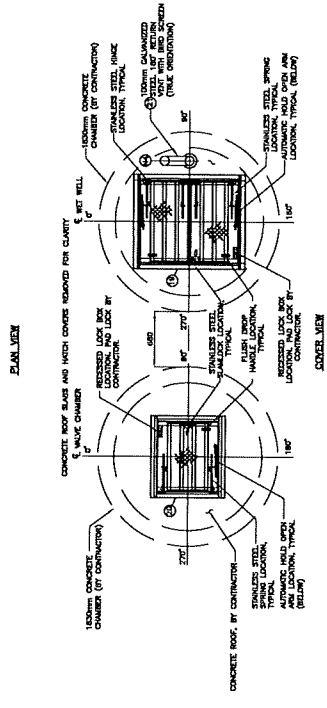
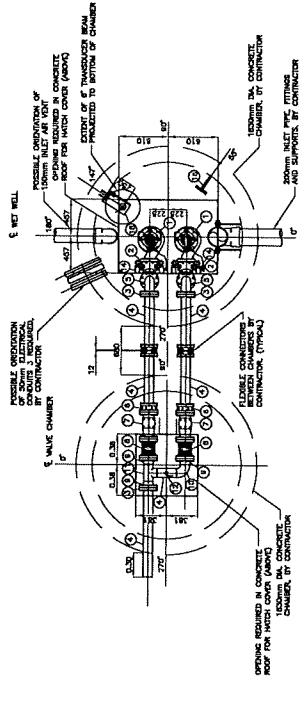
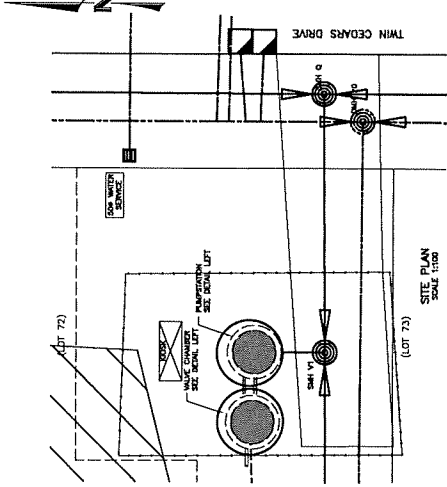
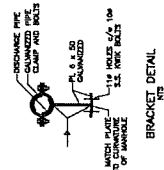
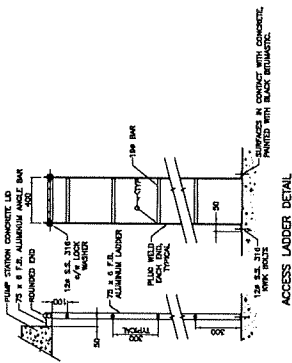
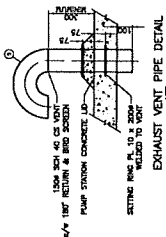
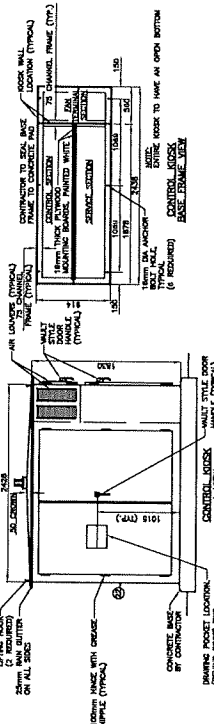


CONFIRM										LEGEND : ALL PROPOSED SERVICES SHOWN SOLID & BOLD										FOCUS										REVISIONS										PROJECT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
UNDERGROUND										LOCATION WITH UTILITY COMPANIES										HUTCHINSON ROAD SUBDIVISION										HUTCHINSON ROAD SUBDIVISION										HUTCHINSON ROAD SUBDIVISION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
TWIN CEDARS DEVELOPMENT CORP.										TWIN CEDARS DEVELOPMENT CORP.										TWIN CEDARS DEVELOPMENT CORP.										TWIN CEDARS DEVELOPMENT CORP.										TWIN CEDARS DEVELOPMENT CORP.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SEWER AND DRAIN EXEMPT										SEWER AND DRAIN EXEMPT										SEWER AND DRAIN EXEMPT										SEWER AND DRAIN EXEMPT										SEWER AND DRAIN EXEMPT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
PLAN / PROFILE										PLAN / PROFILE										PLAN / PROFILE										PLAN / PROFILE										PLAN / PROFILE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
DATE: 10/19/2010										DATE: 10/19/2010										DATE: 10/19/2010										DATE: 10/19/2010										DATE: 10/19/2010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
DRAWN BY: J. H. HARRIS										DRAWN BY: J. H. HARRIS										DRAWN BY: J. H. HARRIS										DRAWN BY: J. H. HARRIS										DRAWN BY: J. H. HARRIS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
CHECKED BY: J. H. HARRIS										CHECKED BY: J. H. HARRIS										CHECKED BY: J. H. HARRIS										CHECKED BY: J. H. HARRIS										CHECKED BY: J. H. HARRIS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SCALE: 1" = 40'										SCALE: 1" = 40'										SCALE: 1" = 40'										SCALE: 1" = 40'										SCALE: 1" = 40'																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SHEET NO. 10										SHEET NO. 10										SHEET NO. 10										SHEET NO. 10										SHEET NO. 10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
PROJECT NO. 10										PROJECT NO. 10										PROJECT NO. 10										PROJECT NO. 10										PROJECT NO. 10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1 - WATER MAIN										2 - WASTEWATER MAIN										3 - GAS MAIN										4 - POWER MAIN										5 - CABLE TV										6 - FIBER OPTIC										7 - TELEPHONE										8 - RAILROAD										9 - HIGHWAY										10 - AIRCRAFT										11 - OTHER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
12 - EXISTING										13 - PROPOSED										14 - REMOVED										15 - AS-BUILT										16 - AS-CONSTRUCTED										17 - AS-PROPOSED										18 - AS-EXISTING										19 - AS-PROPOSED										20 - AS-EXISTING										21 - AS-PROPOSED										22 - AS-EXISTING										23 - AS-PROPOSED										24 - AS-EXISTING										25 - AS-PROPOSED										26 - AS-EXISTING										27 - AS-PROPOSED										28 - AS-EXISTING										29 - AS-PROPOSED										30 - AS-EXISTING										31 - AS-PROPOSED										32 - AS-EXISTING										33 - AS-PROPOSED										34 - AS-EXISTING										35 - AS-PROPOSED										36 - AS-EXISTING										37 - AS-PROPOSED										38 - AS-EXISTING										39 - AS-PROPOSED										40 - AS-EXISTING										41 - AS-PROPOSED										42 - AS-EXISTING										43 - AS-PROPOSED										44 - AS-EXISTING										45 - AS-PROPOSED										46 - AS-EXISTING										47 - AS-PROPOSED										48 - AS-EXISTING										49 - AS-PROPOSED										50 - AS-EXISTING										51 - AS-PROPOSED										52 - AS-EXISTING										53 - AS-PROPOSED										54 - AS-EXISTING										55 - AS-PROPOSED										56 - AS-EXISTING										57 - AS-PROPOSED										58 - AS-EXISTING										59 - AS-PROPOSED										60 - AS-EXISTING										61 - AS-PROPOSED										62 - AS-EXISTING										63 - AS-PROPOSED										64 - AS-EXISTING										65 - AS-PROPOSED										66 - AS-EXISTING										67 - AS-PROPOSED										68 - AS-EXISTING										69 - AS-PROPOSED										70 - AS-EXISTING										71 - AS-PROPOSED										72 - AS-EXISTING										73 - AS-PROPOSED										74 - AS-EXISTING										75 - AS-PROPOSED										76 - AS-EXISTING										77 - AS-PROPOSED										78 - AS-EXISTING										79 - AS-PROPOSED										80 - AS-EXISTING										81 - AS-PROPOSED										82 - AS-EXISTING										83 - AS-PROPOSED										84 - AS-EXISTING										85 - AS-PROPOSED										86 - AS-EXISTING										87 - AS-PROPOSED										88 - AS-EXISTING										89 - AS-PROPOSED										90 - AS-EXISTING										91 - AS-PROPOSED										92 - AS-EXISTING										93 - AS-PROPOSED										94 - AS-EXISTING										95 - AS-PROPOSED										96 - AS-EXISTING										97 - AS-PROPOSED										98 - AS-EXISTING										99 - AS-PROPOSED										100 - AS-EXISTING										101 - AS-PROPOSED										102 - AS-EXISTING										103 - AS-PROPOSED										104 - AS-EXISTING										105 - AS-PROPOSED										106 - AS-EXISTING										107 - AS-PROPOSED										108 - AS-EXISTING										109 - AS-PROPOSED										110 - AS-EXISTING										111 - AS-PROPOSED										112 - AS-EXISTING										113 - AS-PROPOSED										114 - AS-EXISTING										115 - AS-PROPOSED										116 - AS-EXISTING										117 - AS-PROPOSED										118 - AS-EXISTING										119 - AS-PROPOSED										120 - AS-EXISTING										121 - AS-PROPOSED										122 - AS-EXISTING										123 - AS-PROPOSED										124 - AS-EXISTING										125 - AS-PROPOSED										126 - AS-EXISTING										127 - AS-PROPOSED										128 - AS-EXISTING										129 - AS-PROPOSED										130 - AS-EXISTING										131 - AS-PROPOSED										132 - AS-EXISTING										133 - AS-PROPOSED										134 - AS-EXISTING										135 - AS-PROPOSED										136 - AS-EXISTING										137 - AS-PROPOSED										138 - AS-EXISTING										139 - AS-PROPOSED										140 - AS-EXISTING										141 - AS-PROPOSED										142 - AS-EXISTING										143 - AS-PROPOSED										144 - AS-EXISTING										145 - AS-PROPOSED										146 - AS-EXISTING										147 - AS-PROPOSED										148 - AS-EXISTING										149 - AS-PROPOSED										150 - AS-EXISTING										151 - AS-PROPOSED										152 - AS-EXISTING										153 - AS-PROPOSED										154 - AS-EXISTING										155 - AS-PROPOSED										156 - AS-EXISTING										157 - AS-PROPOSED										158 - AS-EXISTING										159 - AS-PROPOSED										160 - AS-EXISTING										161 - AS-PROPOSED										162 - AS-EXISTING										163 - AS-PROPOSED										164 - AS-EXISTING										165 - AS-PROPOSED										166 - AS-EXISTING										167 - AS-PROPOSED										168 - AS-EXISTING										169 - AS-PROPOSED										170 - AS-EXISTING										171 - AS-PROPOSED										172 - AS-EXISTING										173 - AS-PROPOSED										174 - AS-EXISTING										175 - AS-PROPOSED										176 - AS-EXISTING										177 - AS-PROPOSED										178 - AS-EXISTING										179 - AS-PROPOSED										180 - AS-EXISTING										181 - AS-PROPOSED										182 - AS-EXISTING										183 - AS-PROPOSED										184 - AS-EXISTING										185 - AS-PROPOSED										186 - AS-EXISTING										187 - AS-PROPOSED										188 - AS-EXISTING										189 - AS-PROPOSED										190 - AS-EXISTING										191 - AS-PROPOSED										192 - AS-EXISTING										193 - AS-PROPOSED										194 - AS-EXISTING										195 - AS-PROPOSED										196 - AS-EXISTING										197 - AS-PROPOSED										198 - AS-EXISTING										199 - AS-PROPOSED										200 - AS-EXISTING										201 - AS-PROPOSED										202 - AS-EXISTING										203 - AS-PROPOSED										204 - AS-EXISTING										205 - AS-PROPOSED										206 - AS-EXISTING										207 - AS-PROPOSED										208 - AS-EXISTING										209 - AS-PROPOSED										210 - AS-EXISTING										211 - AS-PROPOSED										212 - AS-EXISTING										213 - AS-PROPOSED										214 - AS-EXISTING										215 - AS-PROPOSED										216 - AS-EXISTING										217 - AS-PROPOSED										218 - AS-EXISTING										219 - AS-PROPOSED										220 - AS-EXISTING										221 - AS-PROPOSED										222 - AS-EXISTING										223 - AS-PROPOSED										224 - AS-EXISTING										225 - AS-PROPOSED										226 - AS-EXISTING										227 - AS-PROPOSED										228 - AS-EXISTING										229 - AS-PROPOSED										230 - AS-EXISTING										231 - AS-PROPOSED										232 - AS-EXISTING										233 - AS-PROPOSED										234 - AS-EXISTING										235 - AS-PROPOSED										236 - AS-EXISTING										237 - AS-PROPOSED										238 - AS-EXISTING										239 - AS-PROPOSED										240 - AS-EXISTING										241 - AS-PROPOSED										242 - AS-EXISTING										243 - AS-PROPOSED										244 - AS-EXISTING										245 - AS-PROPOSED										246 - AS-EXISTING										247 - AS-PROPOSED										248 - AS-EXISTING										249 - AS-PROPOSED										250 - AS-EXISTING										251 - AS-PROPOSED										252 - AS-EXISTING										253 - AS-PROPOSED										254 - AS-EXISTING										255 - AS-PROPOSED										256 - AS-EXISTING										257 - AS-PROPOSED										258 - AS-EXISTING										259 - AS-PROPOSED										260 - AS-EXISTING										261 - AS-PROPOSED										262 - AS-EXISTING										263 - AS-PROPOSED										264 - AS-EXISTING										265 - AS-PROPOSED										266 - AS-EXISTING										267 - AS-PROPOSED										268 - AS-EXISTING										269 - AS-PROPOSED										270 - AS-EXISTING										271 - AS-PROPOSED										272 - AS-EXISTING										273 - AS-PROPOSED										274 - AS-EXISTING										275 - AS-PROPOSED										276 - AS-EXISTING										277 - AS-PROPOSED										278 - AS-EXISTING										279 - AS-PROPOSED										280 - AS-EXISTING										281 - AS-PROPOSED										282 - AS-EXISTING										283 - AS-PROPOSED										284 - AS-EXISTING										285 - AS-PROPOSED										286 - AS-EXISTING										287 - AS-PROPOSED										288 - AS-EXISTING										289 - AS-PROPOSED										290 - AS-EXISTING										291 - AS-PROPOSED										292 - AS-EXISTING										293 - AS-PROPOSED										294 - AS-EXISTING										295 - AS-PROPOSED										296 - AS-EXISTING										297 - AS-PROPOSED										298 - AS-EXISTING										299 - AS-PROPOSED										300 - AS-EXISTING										301 - AS-PROPOSED										302 - AS-EXISTING										303 - AS-PROPOSED										304 - AS-EXISTING										305 - AS-PROPOSED										306 - AS-EXISTING										307 - AS-PROPOSED										308 - AS-EXISTING										309 - AS-PROPOSED										310 - AS-EXISTING										311 - AS-PROPOSED										312 - AS-EXISTING										313 - AS-PROPOSED										314 - AS-EXISTING										315 - AS-PROPOSED										316 - AS-EXISTING										317 - AS-PROPOSED										318 - AS-EXISTING										319 - AS-PROPOSED										320 - AS-EXISTING										321 - AS-PROPOSED										322 - AS-EXISTING										323 - AS-PROPOSED										324 - AS-EXISTING										325 - AS-PROPOSED										326 - AS-EXISTING										327 - AS-PROPOSED										328 - AS-EXISTING										329 - AS-PROPOSED										330 - AS-EXISTING										331 - AS-PROPOSED										332 - AS-EXISTING										333 - AS-PROPOSED										334 - AS-EXISTING										335 - AS-PROPOSED										336 - AS-EXISTING										337 - AS-PROPOSED										338 - AS-EXISTING										339 - AS-PROPOSED										340 - AS-EXISTING										341 - AS-PROPOSED										342 - AS-EXISTING										343 - AS-PROPOSED										344 - AS-EXISTING										345 - AS-PROPOSED										346 - AS-EXISTING										347 - AS-PROPOSED										348 - AS-EXISTING										349 - AS-PROPOSED										350 - AS-EXISTING										351 - AS-PROPOSED										352 - AS-EXISTING										353 - AS-PROPOSED										354 - AS-EXISTING										355 - AS-PROPOSED										356 - AS-EXISTING										357 - AS-PROPOSED										358 - AS-EXISTING										359 - AS-PROPOSED										360 - AS-EXISTING										361 - AS-PROPOSED										362 - AS-EXISTING										363 - AS-PROPOSED										364 - AS-EXISTING										365 - AS-PROPOSED										366 - AS-EXISTING										367 - AS-PROPOSED										368 - AS-EXISTING										369 - AS-PROPOSED										370 - AS-EXISTING										371 - AS-PROPOSED										372 - AS-EXISTING										373 - AS-PROPOSED										374 - AS-EXISTING										375 - AS-PROPOSED										376 - AS-EXISTING										377 - AS-PROPOSED										378 - AS-EXISTING										379 - AS-PROPOSED										380 - AS-EXISTING										381 - AS-PROPOSED										382 - AS-EXISTING										383 - AS-PROPOSED										384 - AS-EXISTING										385 - AS-PROPOSED										386 - AS-EXISTING										387 - AS-PROPOSED										388 - AS-EXISTING										389 - AS-PROPOSED										390 - AS-EXISTING										391 - AS-PROPOSED										392 - AS-EXISTING										393 - AS-PROPOSED										394 - AS-EXISTING										395 - AS-PROPOSED										396 - AS-EXISTING										397 - AS-PROPOSED										398 - AS-EXISTING										399 - AS-PROPOSED										400 - AS-EXISTING										401 - AS-PROPOSED										402 - AS-EXISTING										403 - AS-PROPOSED										404 - AS-EXISTING										405 - AS-PROPOSED										406 - AS-EXISTING										407 - AS-PROPOSED										408 - AS-EXISTING										409 - AS-PROPOSED										410 - AS-EXISTING										411 - AS-PROPOSED										412 - AS-EXISTING										413 - AS-PROPOSED										414 - AS-EXISTING										415 - AS-PROPOSED										416 - AS-EXISTING										417 - AS-PROPOSED										418 - AS-EXISTING										419 - AS-PROPOSED										420 - AS-EXISTING										421 - AS-PROPOSED										422 - AS-EXISTING										423 - AS-PROPOSED										424 - AS-EXISTING										425 - AS-PROPOSED										426 - AS-EXISTING										427 - AS-PROPOSED										428 - AS-EXISTING										429 - AS-PROPOSED										430 - AS-EXISTING										431 - AS-PROPOSED										432 - AS-EXISTING										433 - AS-PROPOSED										434 - AS-EXISTING										435 - AS-PROPOSED										436 - AS-EXISTING										437 - AS-PROPOSED										438 - AS-EXISTING										439 - AS-PROPOSED										440 - AS-EXISTING										441 - AS-PROPOSED										442 - AS-EXISTING										443 - AS-PROPOSED										444 - AS-EXISTING										445 - AS-PROPOSED										446 - AS-EXISTING										447 - AS-PROPOSED										448 - AS-EXISTING										449 - AS-PROPOSED										450 - AS-EXISTING										451 - AS-PROPOSED										452 - AS-EXISTING										453 - AS-PROPOSED										454 - AS-EXISTING										455 - AS-PROPOSED										456 - AS-EXISTING										457 - AS-PROPOSED										458 - AS-EXISTING										459 - AS-PROPOSED										460 - AS-EXISTING										461 - AS-PROPOSED										462 - AS-EXISTING										463 - AS-PROPOSED										464 - AS-EXISTING										465 - AS-PROPOSED										466 - AS-EXISTING										467 - AS-PROPOSED										468 - AS-EXISTING										469 - AS-PROPOSED										470 - AS-EXISTING										471 - AS-PROPOSED										472 - AS-EXISTING										473 - AS-PROPOSED										474 - AS-EXISTING										475 - AS-PROPOSED										476 - AS-EXISTING										477 - AS-PROPOSED										478 - AS-EXISTING										479 - AS-PROPOSED										480 - AS-EXISTING										481 - AS-PROPOSED										482 - AS-EXISTING										483 - AS-PROPOSED										484 - AS-EXISTING										485 - AS-PROPOSED										486 - AS-EXISTING										487 - AS-PROPOSED										488 - AS-EXISTING										489 - AS-PROPOSED										490 - AS-EXISTING										491 - AS-PROPOSED										492 - AS-EXISTING										493 - AS-PROPOSED										494 - AS-EXISTING										495 - AS-PROPOSED										496 - AS-EXISTING										497 - AS-PROPOSED										498 - AS-EXISTING										499 - AS-PROPOSED										500 - AS-EXISTING										501 - AS-PROPOSED										502 - AS-EXISTING										503 - AS-PROPOSED										504 - AS-EXISTING										505 - AS-PROPOSED										506 - AS-EXISTING										507 - AS-PROPOSED										508 - AS-EXISTING										509 - AS-PROPOSED										510 - AS-EXISTING										511 - AS-PROPOSED										512 - AS-EXISTING										513 - AS-PROPOSED										514 - AS-EXISTING										515 - AS-PROPOSED										516 - AS-EXISTING										517 - AS-PROPOSED										518 - AS-EXISTING										519 - AS-PROPOSED										520 - AS-EXISTING										521 - AS-PROPOSED										522 - AS-EXISTING										523 - AS-PROPOSED										524 - AS-EXISTING										525 - AS-PROPOSED										526 - AS-EXISTING										527 - AS-PROPOSED										528 - AS-EXISTING										529 - AS-PROPOSED										530 - AS-EXISTING										531 - AS-PROPOSED										532 - AS-EXISTING										533 - AS-PROPOSED										534 - AS-EXISTING										535 - AS-PROPOSED										536 - AS-EXISTING										537 - AS-PROPOSED										538 - AS-EXISTING										539 - AS-PROPOSED										540 - AS-EXISTING										541 - AS-PROPOSED										542 - AS-EXISTING										543 - AS-PROPOSED										544 - AS-EXISTING										545 - AS-PROPOSED										546 - AS-EXISTING										547 - AS-PROPOSED										548 - AS-EXISTING										549 - AS-PROPOSED										550 - AS-EXISTING										551 - AS-PROPOSED										552 - AS-EXISTING										553 - AS-PROPOSED										554 - AS-EXISTING										555 - AS-PROPOSED										556 - AS-EXISTING										557 - AS-PROPOSED										558 - AS-EXISTING										559 - AS-PROPOSED										560 - AS-EXISTING										561 - AS-PROPOSED										562 - AS-EXISTING										563 - AS-PROPOSED										564 - AS-EXISTING										565 - AS-PROPOSED										566 - AS-EXISTING										567 - AS-PROPOSED										568 - AS-EXISTING										569 - AS-PROPOSED										570 - AS-EXISTING										571 - AS-PROPOSED										572 - AS-EXISTING										573 - AS-PROPOSED										574 - AS-EXISTING										575 - AS-PROPOSED										576 - AS-EXISTING										577 - AS-PROPOSED										578 - AS-EXISTING										579 - AS-PROPOSED										580 - AS-EXISTING										581 - AS-PROPOSED										582 - AS-EXISTING										583 - AS-PROPOSED										584 - AS-EXISTING										585 - AS-PROPOSED										586 - AS-EXISTING										587 - AS-PROPOSED										588 - AS-EXISTING										589 - AS-PROPOSED										590 - AS-EXISTING										591 - AS-PROPOSED										592 - AS-EXISTING										593 - AS-PROPOSED										594 - AS-EXISTING										595 - AS-PROPOSED										596 - AS-EXISTING										597 - AS-PROPOSED										598 - AS-EXISTING										599 - AS-PROPOSED										600 - AS-EXISTING										601 - AS-PROPOSED										602 - AS-EXISTING										603 - AS-PROPOSED										604 - AS-EXISTING										605 - AS-PROPOSED										606 - AS-EXISTING										607 - AS-PROPOSED										608 - AS-EXISTING										609 - AS-PROPOSED										610 - AS-EXISTING										611 - AS-PROPOSED										612 - AS-EXISTING										613 - AS-PROPOSED										614 - AS-EXISTING										615 - AS-PROPOSED										616 - AS-EXISTING										617 - AS-PROPOSED										618 - AS-EXISTING										619 - AS-PROPOSED										620 - AS-EXISTING										621 - AS-PROPOSED										622 - AS-EXISTING										623 - AS-PROPOSED										624 - AS-EXISTING										625 - AS-PROPOSED										626 - AS-EXISTING										627 - AS-PROPOSED										628 - AS-EXISTING										629 - AS-PROPOSED										630 - AS-EXISTING										631 - AS-PROPOSED										632 - AS-EXISTING										633 - AS-PROPOSED										634 - AS-EXISTING										635 - AS-PROPOSED										636 - AS-EXISTING										637 - AS-PROPOSED										638 - AS-EXISTING										639 - AS-PROPOSED										640 - AS-EXISTING										641 - AS-PROPOSED										642 - AS-EXISTING										643 - AS-PROPOSED										644 - AS-EXISTING										645 - AS-PROPOSED										646 - AS-EXISTING										647 - AS-PROPOSED										648 - AS-EXISTING										649 - AS-PROPOSED										650 - AS-EXISTING										651 - AS-PROPOSED										652 - AS-EXISTING										653 - AS-PROPOSED										654 - AS-EXISTING										655 - AS-PROPOSED										656 - AS-EXISTING										657 - AS-PROPOSED										658 - AS-EXISTING										659 - AS-PROPOSE									

GENERAL NOTES:

- [illegible]

## LIST OF MATERIALS

[illegible]

## AS-CONSTRUCTED

I CONFIRM THAT THE FOLLOWING SERVICES  
WERE INSPECTED DURING CONSTRUCTION  
AND TO THE BEST OF MY KNOWLEDGE,  
WERE INSTALLED IN ACCORDANCE WITH  
MUNICIPAL SPECIFICATIONS AND AS  
SHOWN ON THESE DRAWINGS.

SECTIONAL ELEVATION

SECTIONAL ELEVATION

[illegible]

**FOCUS**  
Engineering • Planning • Construction

		DRAWN	RAG/HAL	RT	FEB 2008	SCALE: Horiz. AS NOTED
	JUNE27/06	RT	CHECKED:	DATE	B.L.A.J.	
	SEPT13/07	RT				
	MAY9/07	RT				
	DEC-7/06	RT				
	AUG23/06	RT				
	PLATE					

Cowichan Valley Regional District

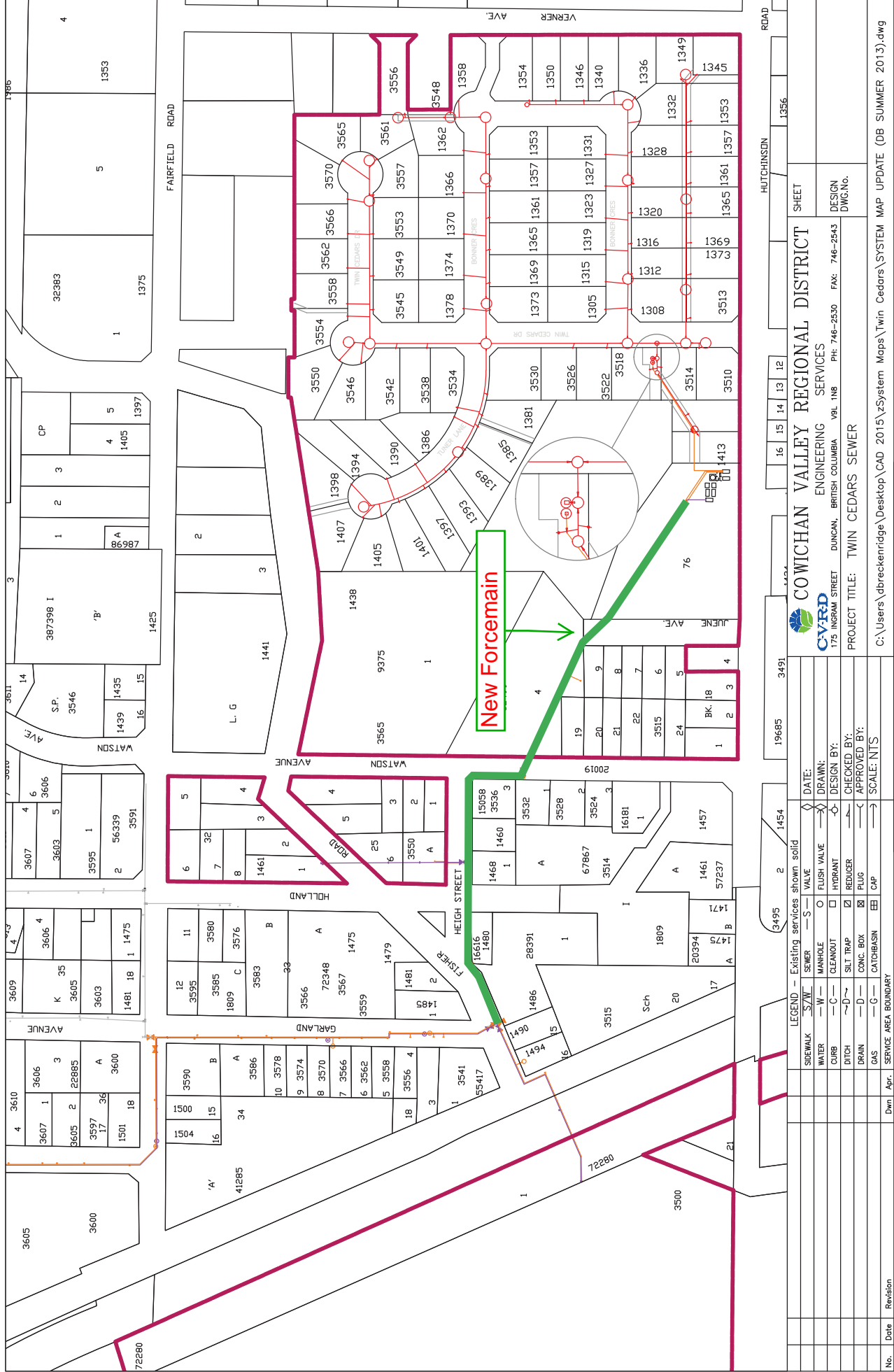
## FOCUS

HUTCHINSON ROAD SUBDIVISION  
TWIN CEDARS DEVELOPMENT CORP.

LIFT STATION #1

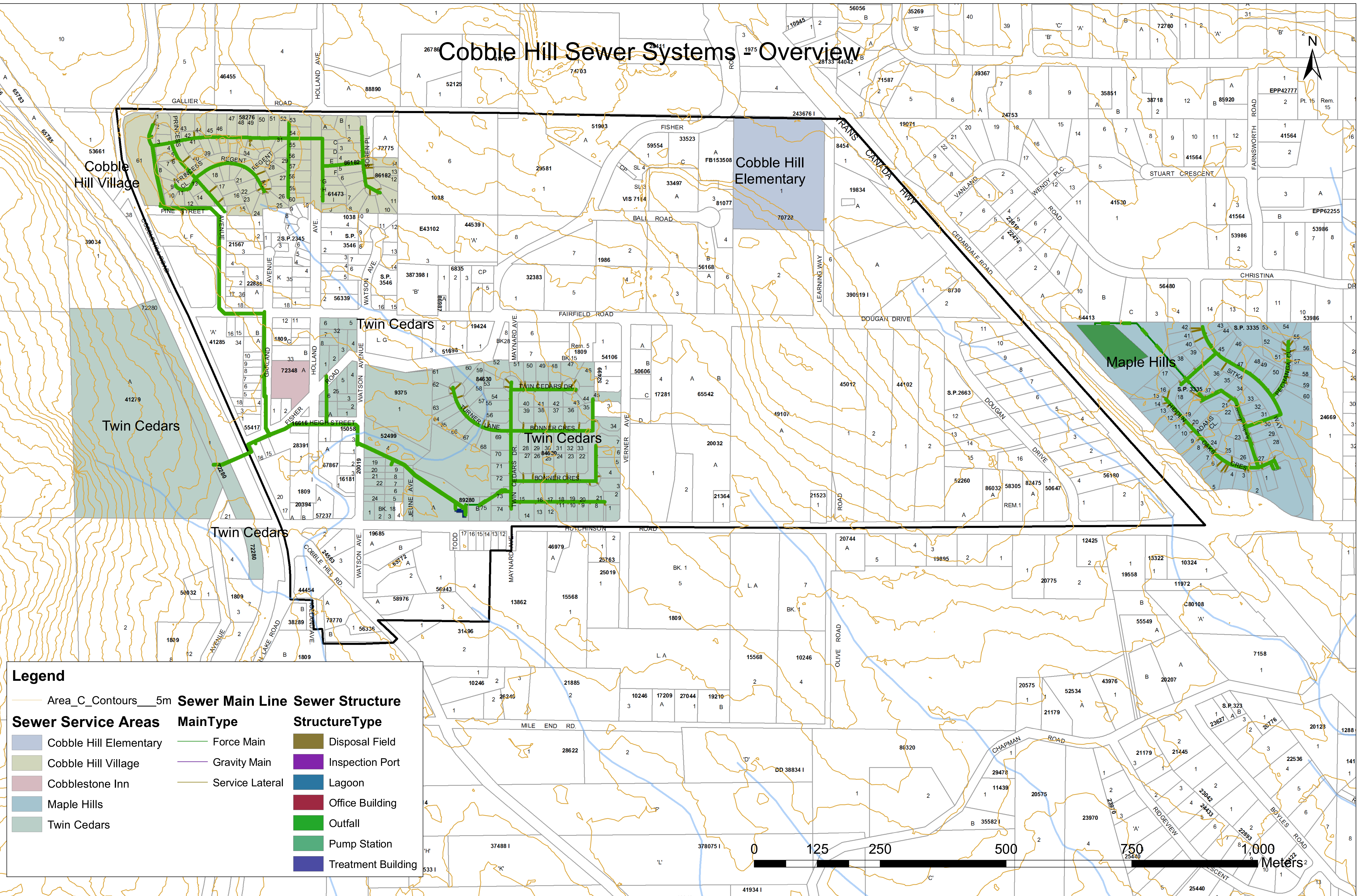
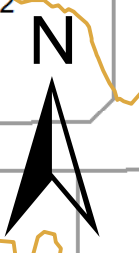
Student ID: 11

Drawing A  
Alignment of New  
Forcemain





# Cobble Hill Sewer Systems - Overview



**Legend**

**Sewer Service Areas**

- Area\_C\_Contours\_\_\_5m
- Cobble Hill Elementary
- Cobble Hill Village
- Cobblestone Inn
- Maple Hills
- Twin Cedars

**Sewer Main Line**

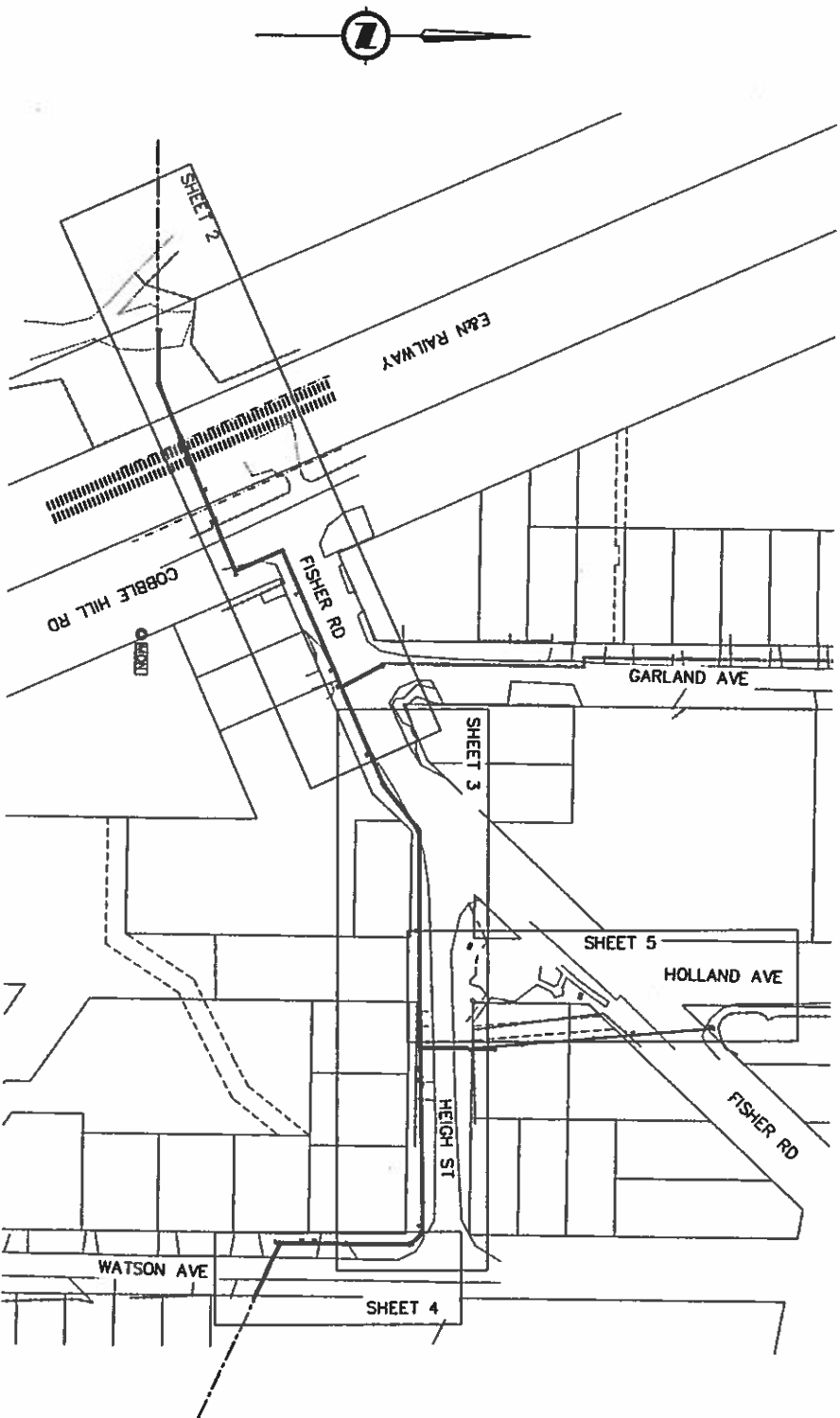
- Force Main
- Gravity Main
- Service Lateral

**Sewer Structure**

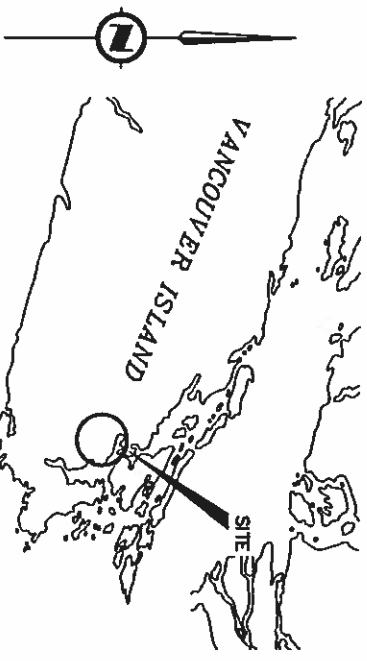
- Disposal Field
- Inspection Port
- Lagoon
- Office Building
- Outfall
- Pump Station
- Treatment Building



# COBBLE HILL VILLAGE SANITARY SEWER SERVICING PHASE 1



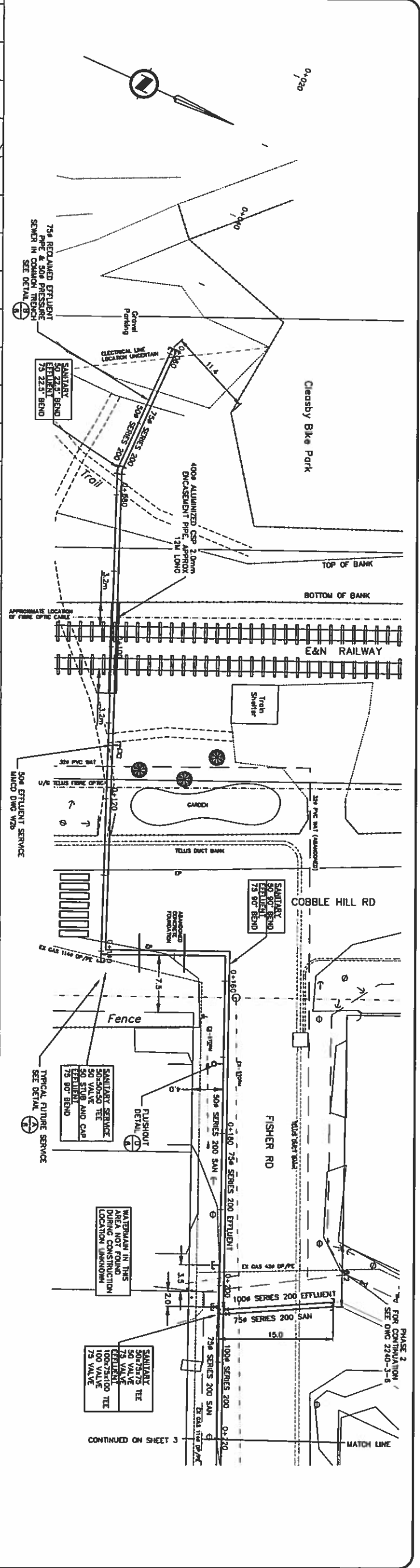
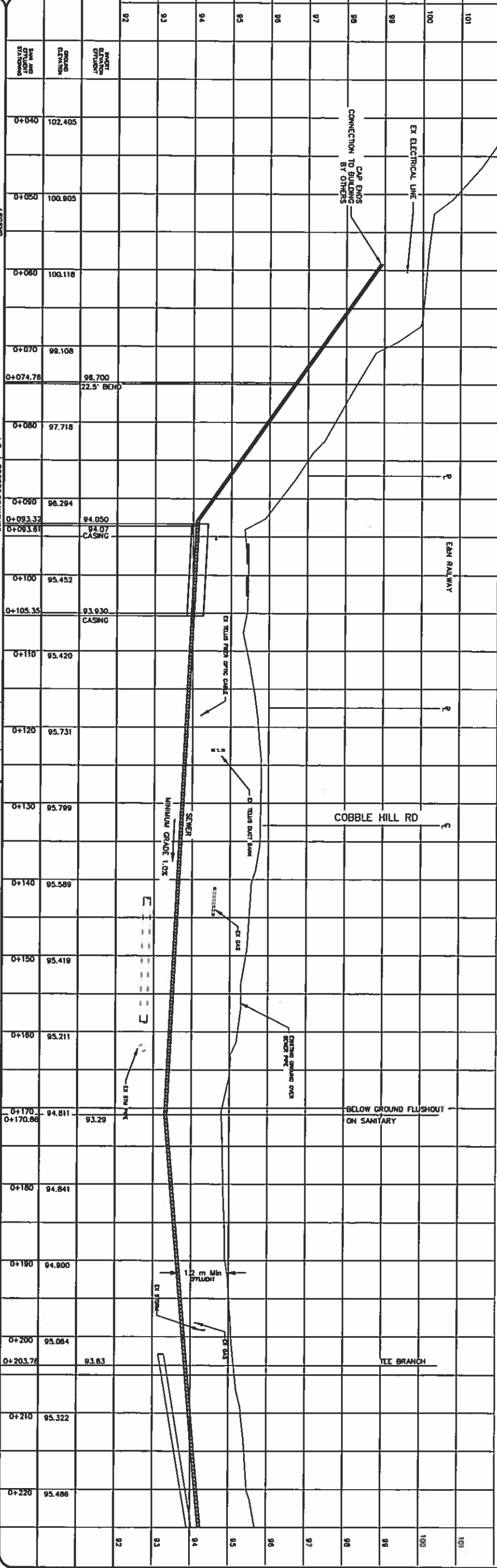
KEY PLAN  
SCALE: 1:1000

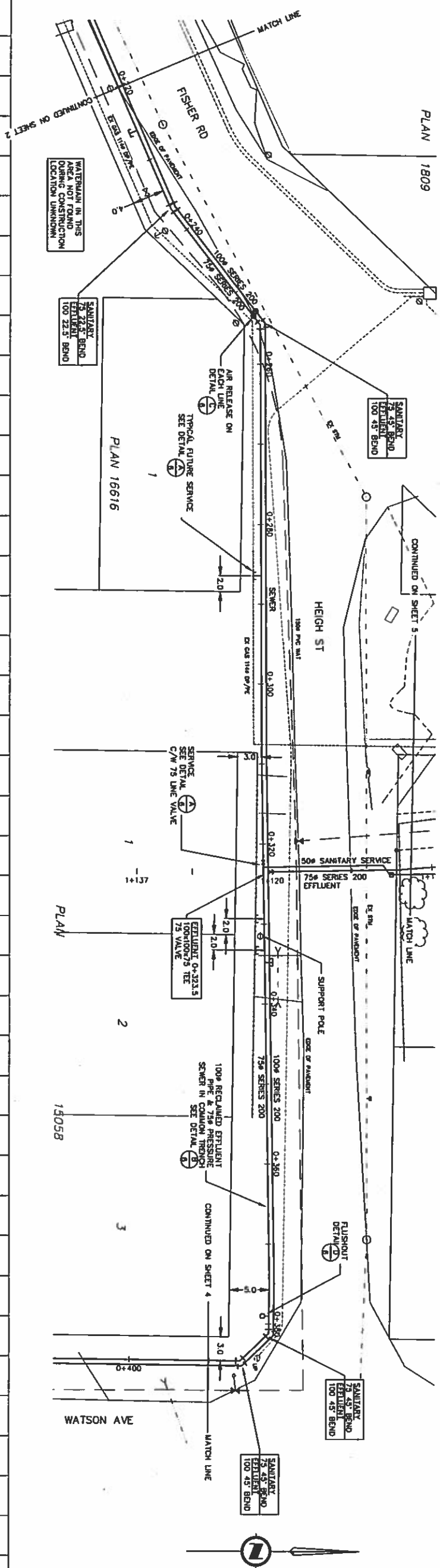


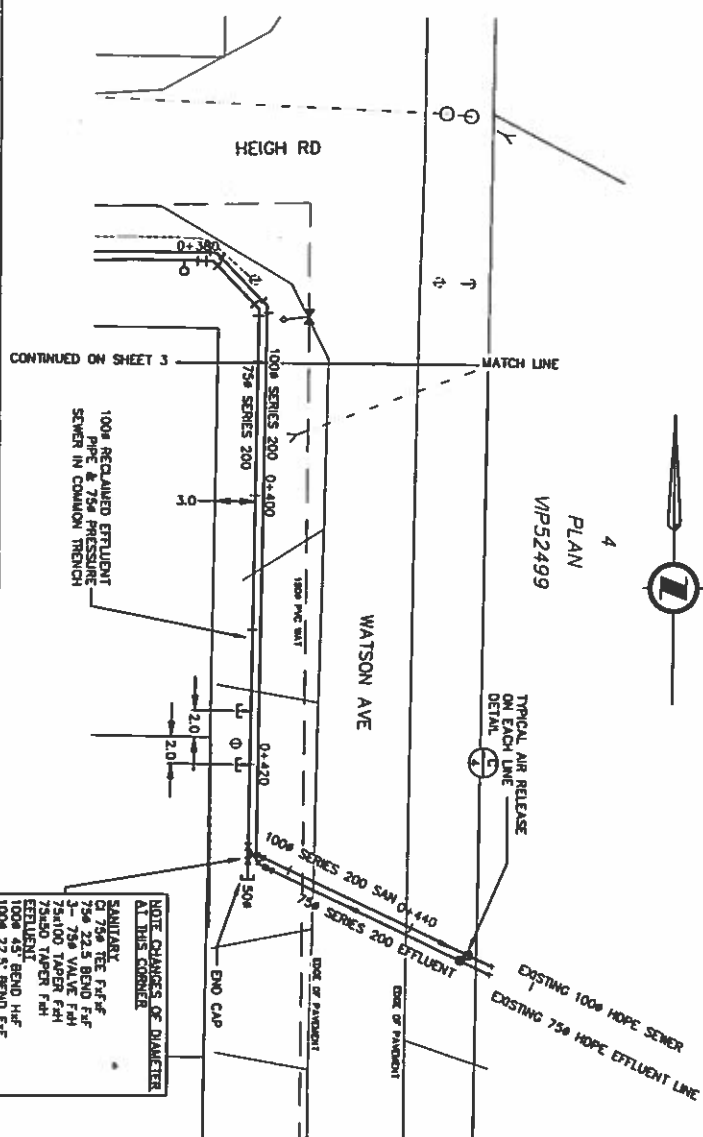
- GENERAL NOTES:
1. ALL CONSTRUCTION DONE IN ACCORDANCE WITH UNCO 2009 ENGINEERING STANDARDS AND SPECIFICATIONS.
  2. ALL ELEVATIONS ARE TO GEODETIC DATUM.
  3. ALL LOCATIONS AND ELEVATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY.
  4. EFFLUENT PIPE COLORED PURPLE, BY SUPPLIER.
  5. SANITARY FORCEMAIN PIPE COLORED WHITE AND WRAPPED WITH METALLIC TAPE.

SHEET NO.	DRAWING NO.	TITLE
1	2240-2-1	KEY PLAN
2	2240-2-2	LOCATION PLAN
3	2240-2-3	CLEVERLY PARK / FISHER RD STA 0+020 TO STA 0+220
4	2240-2-4	HEIGH ST STA 0+220 TO STA 0+380
5	2240-2-5	WATSON AVE STA 0+380 TO STA 0+460
6	2240-2-6	HOLLAND AVE DETAILS

LEGEND			
PROPOSED	EXISTING	RECORD DRAWINGS	DATE
WATER VALVE	ANCHOR	2013 JUL 05	PWF
STORMY SEWER	UTILITY POLE	2012 SEP 27	PWF
STORM DRAIN	UTILITY POLE	2012 JUL 20	PWF
CLAMP AND CUTTER	UTILITY POLE	2012 JUL 20	PWF
EDGE OF PAVEMENT	UTILITY POLE	2012 JUL 20	PWF
CLEANOUT	UTILITY POLE	2012 JUL 20	PWF
REVISION DESCRIPTION			
DATE			
BY			
DESIGN: DWA			
DRAWN: PWF			
APPROVED: DWA			
DATE: 2012 JUL 24			
SCALE: AS SHOWN			
BENCHMARK: TOWN 542300			
ELEVATION: 100.00			
JUN 05 2013			
ANDERSON CIVIL CONSULTANTS INC.			
1400 17th Ave, Suite 100, Vancouver, B.C. V6H 2T8			
CLIENT: COMWICHAN VALLEY REGIONAL DISTRICT			
PROJECT: COBBLE HILL VILLAGE RECLAIMED EFFLUENT SYSTEM			
KEY PLAN			
LOCATION PLAN			
SHEET NO. OF 6			
2240-2-1			
CUB FILE NO.			
REV: E			







- NOTE CHANGE OF DIAMETER AND RELATIONSHIP CROSSING WATSON AVE
- SEWER PIPE ALSO PAINTED PURPLE IN ERROR

NOTE: CHANGES OF DIAMETER  
AT THIS CORNER

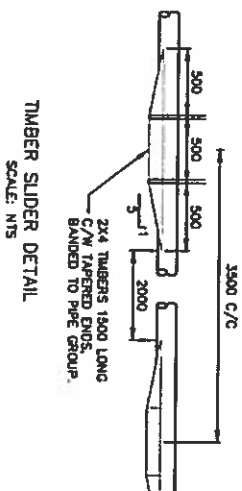
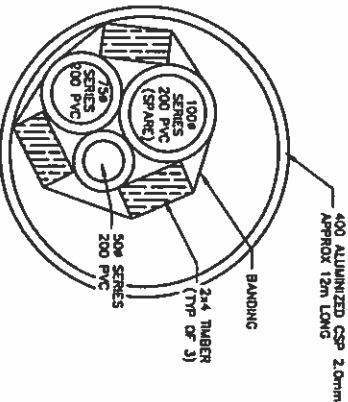
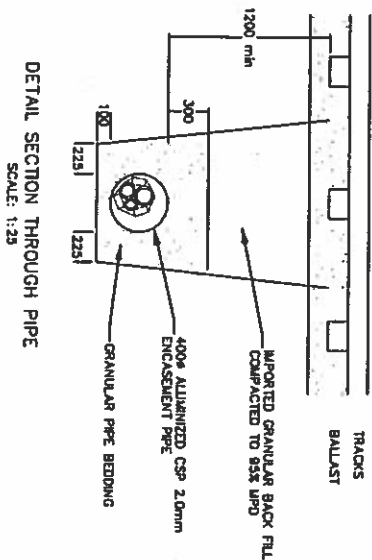
STATION	PIPE NO.	PIPE DIA.	PIPE MATERIAL	PIPE SLOPE	PIPE INVERT ELEVATION	PIPE OUTLET ELEVATION	PIPE LENGTH	PIPE VOLUME	PIPE WEIGHT	PIPE COST	PIPE NOTES
0+370	92	1.2 m	CLAY	0.005	94.611	94.611	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+380	93	1.2 m	CLAY	0.005	94.418	94.418	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+390	94	1.2 m	CLAY	0.005	94.826	94.826	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+400	95	1.2 m	CLAY	0.005	95.084	95.084	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+410	96	1.2 m	CLAY	0.005	95.823	95.823	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+420	97	1.2 m	CLAY	0.005	96.13	96.13	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+430	98	1.2 m	CLAY	0.005	95.982	95.982	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+440	99	1.2 m	CLAY	0.005	96.037	96.037	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+450	100	1.2 m	CLAY	0.005	96.54	96.54	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE
0+460	101	1.2 m	CLAY	0.005	96.54	96.54	10.0	0.000	0.000	0.000	EXISTING GROUND OVER SEWER PIPE

[illegible]

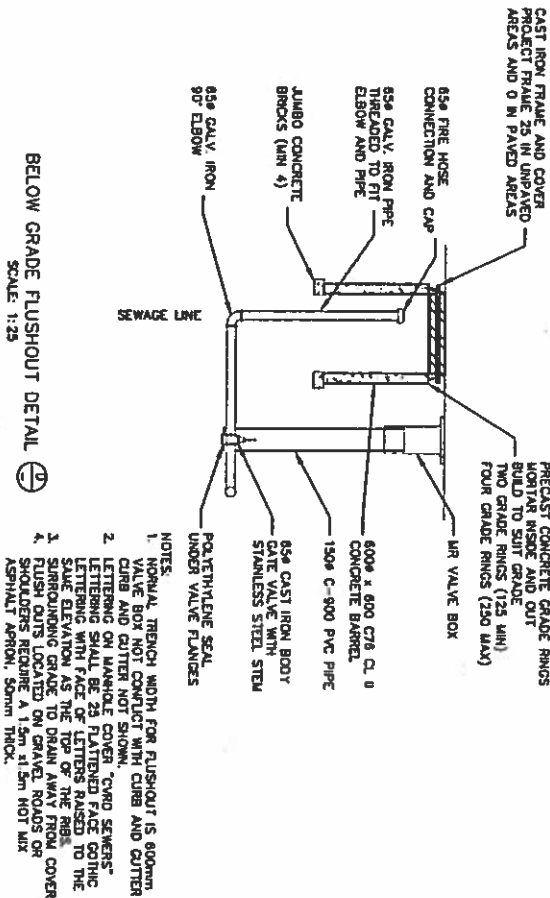
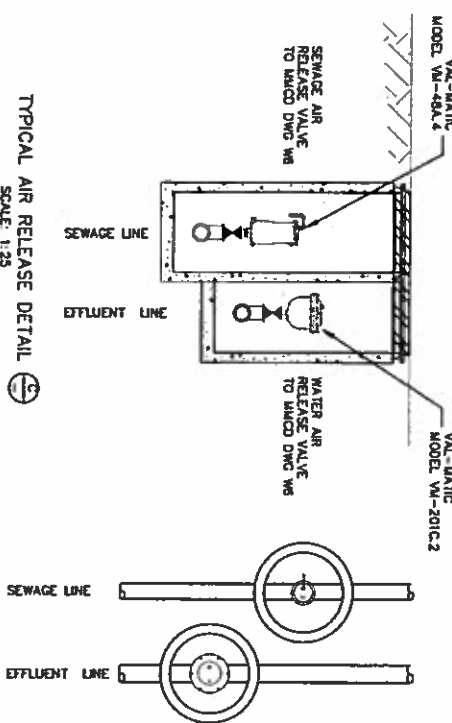
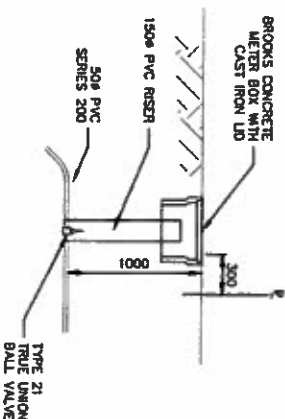
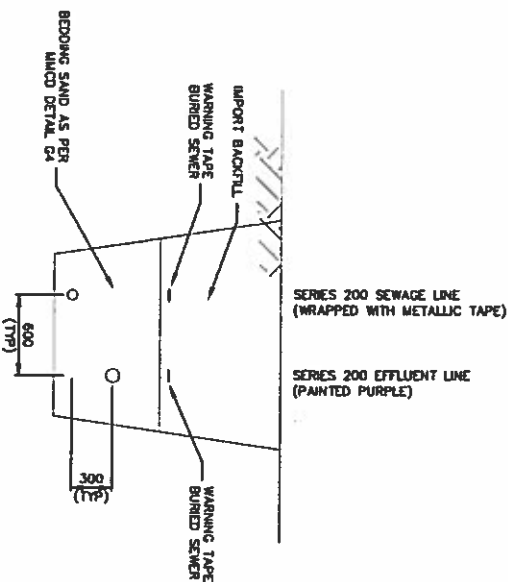
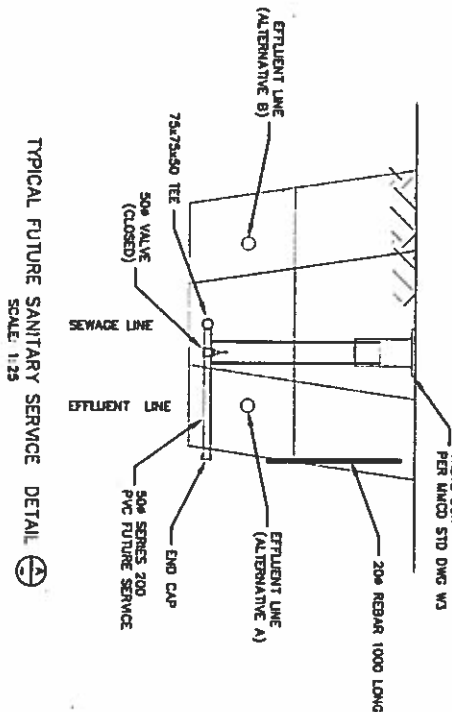


①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲	⑳	㉑	㉒	㉓	㉔	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜	㉝	㉞	㉟	㊱	㊲	㊳	㊴	㊵	㊶	㊷	㊸	㊹	㊺	㊻	㊼	㊽	㊾	㊿
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

EDGE OF PAVE



E&N RAILROAD



- NOTES:
1. TYPICAL TRENCH WIDTH FOR FLUSHOUT IS 800mm. VALVE BOX NOT CONFLICT WITH CURB AND GUTTER. CURB AND GUTTER NOT SHOWN.
  2. LETTERING ON MANHOLE COVER, "CAND SEWERS" LETTERING SHALL BE 25 FLATTENED FACE GOING TO THE TOP OF THE COVER. LETTERING SHALL BE 25 FLATTENED FACE GOING TO THE TOP OF THE COVER. LETTERING SHALL BE 25 FLATTENED FACE GOING TO THE TOP OF THE COVER. LETTERING SHALL BE 25 FLATTENED FACE GOING TO THE TOP OF THE COVER.
  3. FLUSH OUTS LOCATED ON GRAVEL ROADS OR ASPHALT APRON, 50mm THICK.

LEGEND				EXISTING			
PROPOSED				ANCHOR			
1	WATERMAIN	1	WATER VALVE	1	ANCHOR	1	ANCHOR
2	SANITARY SEWER	2	HYDRANT	2	UTILITY POLE	2	UTILITY POLE
3	STORM DRAIN	3	WATER METER	3	CEMENT BASE	3	CEMENT BASE
4	CURB AND GUTTER	4	AIR VALVE	4	MANHOLE	4	MANHOLE
5	EDGE OF PAVEMENT	5	CLEANOUT	5	SLOPE	5	SLOPE

DESIGN				REVISION DESCRIPTION			
DRAWING: PWT				REVISION DESCRIPTION			
APPROVED: DWA				REVISION DESCRIPTION			
DATE: 2012.02.21				REVISION DESCRIPTION			
SCALE: AS SHOWN				REVISION DESCRIPTION			
REVISION: 1.00				REVISION DESCRIPTION			
DATE: 2012.04.20				REVISION DESCRIPTION			
BY: PWT				REVISION DESCRIPTION			

JUN 05 2013

ANDERSON CIVIL CONSULTANTS INC.

4000 130 Street, Suite 200, Regina, S4S 0A6

TEL: 306 766 1877 FAX: 306 766 4373 andersoncivil.com

CLIENT: COMCHAM VALLEY REGIONAL DISTRICT

PROJECT: COBBLE HILL VILLAGE RECLAIMED EFFLUENT SYSTEM DETAILS

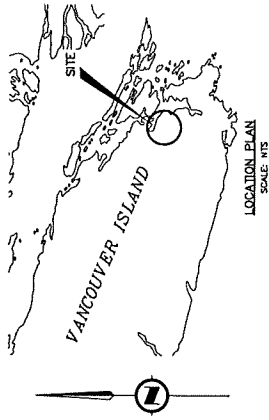
SHEET No. 6 OF 6

DRAWING No. 2240-2-6

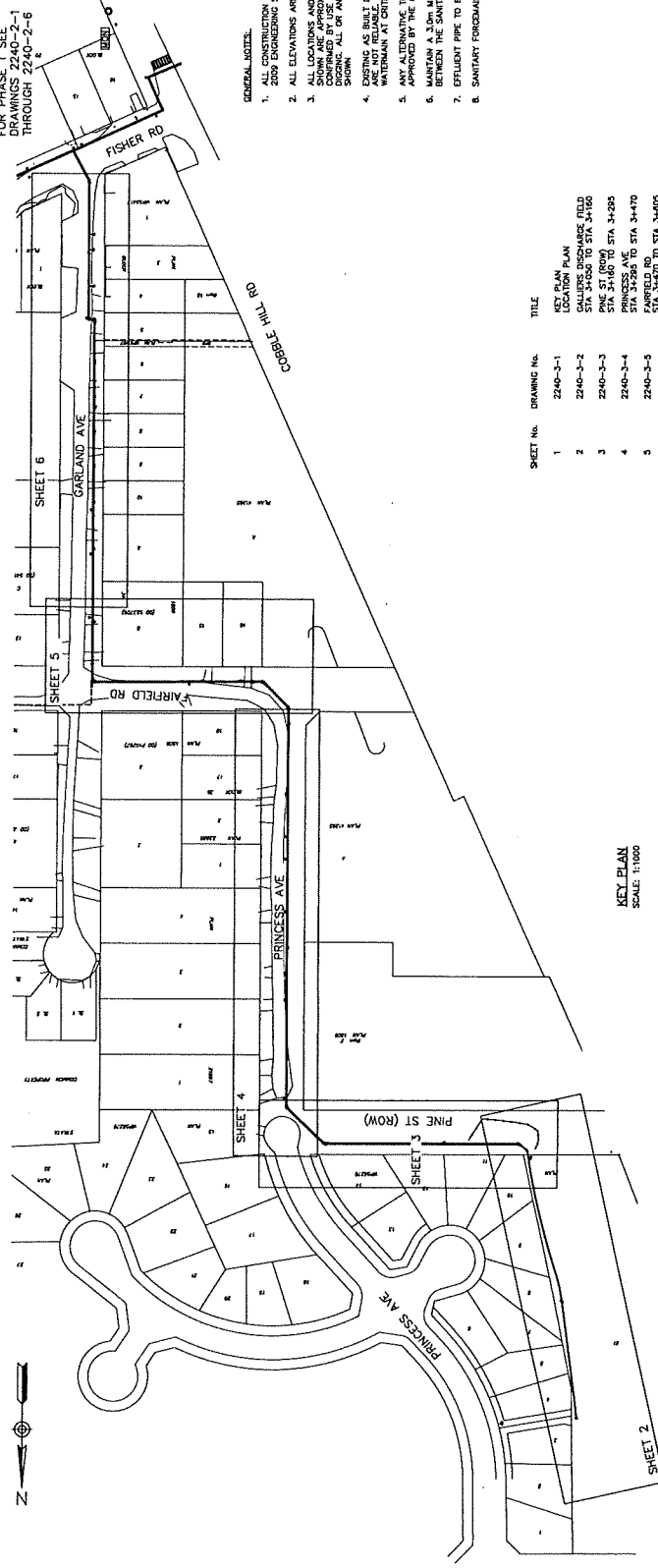
CAD FILE No. 2240-2-6

REV: C

# COBBLE HILL VILLAGE SANITARY SEWER SERVICING PHASE 2



FOR PHASE 1 SEE  
DRAWINGS 2240-2-1  
THROUGH 2240-2-6



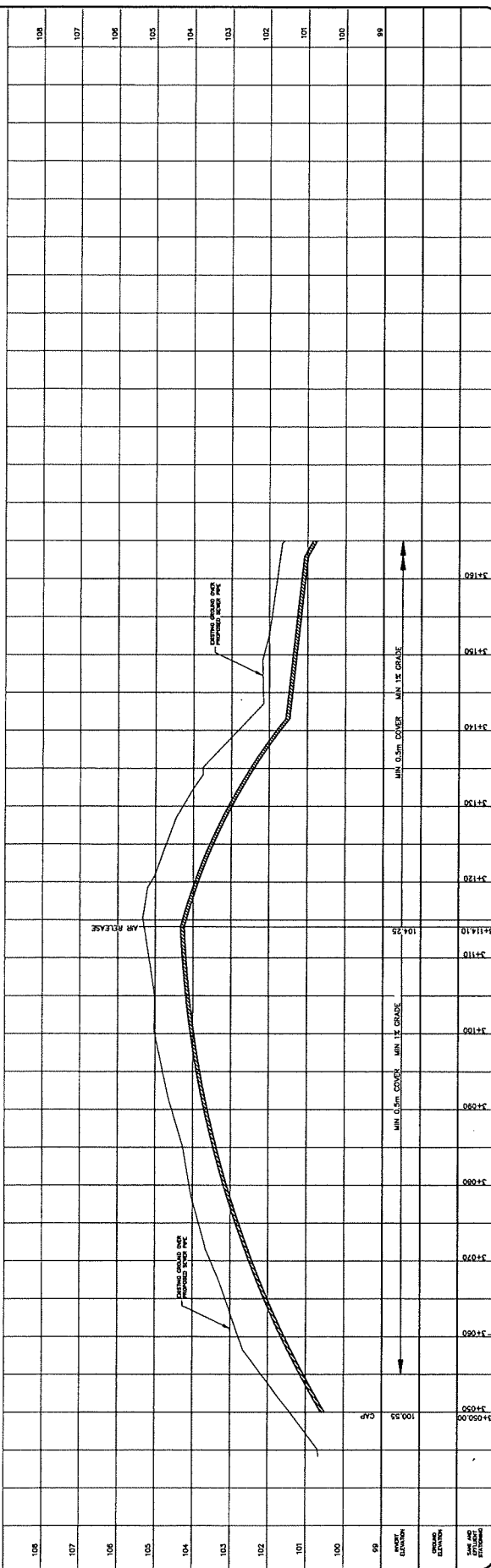
KEY PLAN  
SCALE: 1:1000



- GENERAL NOTES:
1. ALL CONSTRUCTION DONE IN ACCORDANCE WITH MCD 2000 ENGINEERING STANDARDS AND SPECIFICATIONS
  2. ALL ELEVATIONS ARE TO GEODETIC DATUM
  3. ALL LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD BE VERIFIED BY FIELD SURVEY PRIOR TO CONSTRUCTION. DIGGING ALL OR ANY STRUCTURES NOT NECESSARILY SHOWN
  4. EXISTING AS BUILT DRAWING FOR THE WATER SYSTEMS WATERMAIN AT CRITICAL LOCATION.
  5. ANY ALTERNATIVE TO BE SPECIFIED MATERIALS TO BE APPROVED BY THE CWD PRIOR TO CONSTRUCTION
  6. MAINTAIN A 3.0m MINIMUM HORIZONTAL SEPARATION BETWEEN THE SANITARY SEWERS AND WATERMAINS
  7. EFFLUENT PIPE TO BE COLORED PURPLE
  8. SANITARY FORCEMAIN PIPE COLORED WHITE

SHEET No.	DRAWING No.	TITLE
1	2240-2-1	KEY PLAN
2	2240-2-2	COBBLE HILL VILLAGE GALLIERS DISCHARGE FIELD STA 3+450 TO STA 3+160
3	2240-2-3	PINE ST (ROW) STA 3+285 PRINCESS AVE
4	2240-2-4	PRINCESS AVE STA 3+285 TO STA 3+470
5	2240-2-5	PRINCESS AVE STA 3+470 TO STA 3+605
6	2240-2-6	GARFIELD AVE STA 3+605 TO STA 3+600
7	2240-2-7	DETAILS

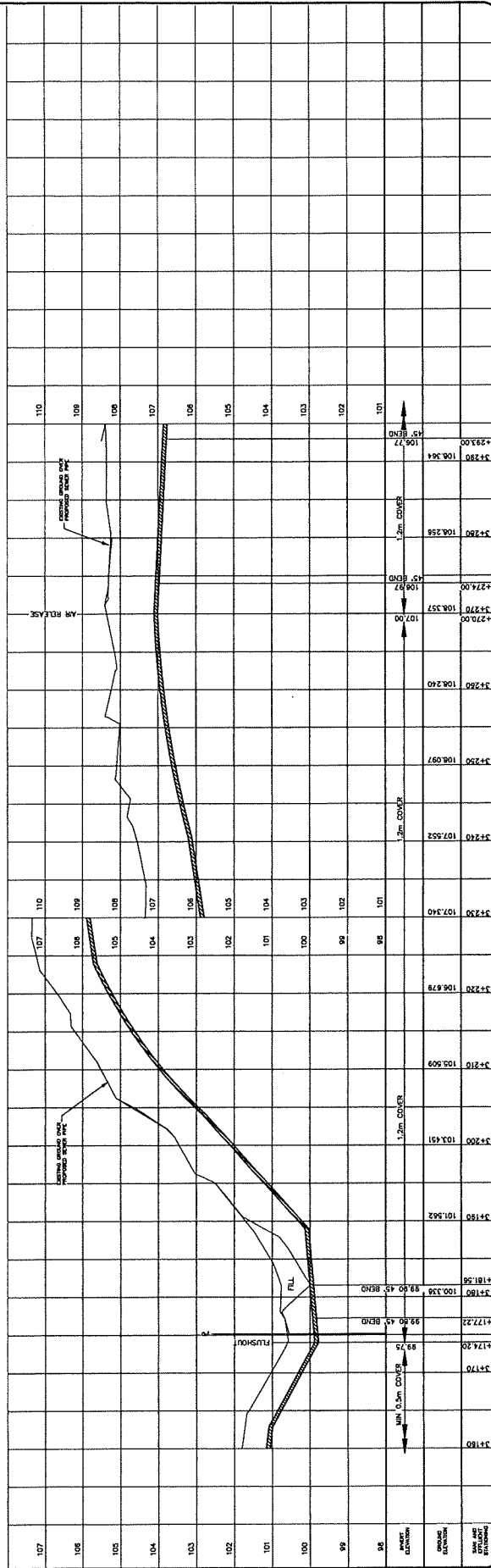
<p>ANDERSON CIVIL Consultants Inc. 4200 201 Street / Suite 100, North, B.C. V8P 2T5 Tel: 250-794-8877 Fax: 250-794-0358 andersoncivil.com</p>		<p>CLIENT: COWICHAN VALLEY REGIONAL DISTRICT</p> <p>PROJECT: COBBLE HILL VILLAGE RECLAIMED EFFLUENT SYSTEM - PHASE 2</p> <p>KEY PLAN LOCATION PLAN</p>	<p>SHEET No. 7</p> <p>OF 7</p> <p>DATE: 2240-2-1</p> <p>DATE: 2240-2-1</p> <p>REV: C</p>
<p>DESIGN: CWA</p> <p>DRAWING: PWF</p> <p>DATE: 2012.02.24</p> <p>SCALE: AS SHOWN</p> <p>REVISIONS:</p>	<p>2012 JAN 08 PWF</p> <p>2012 FEB 08 PWF</p> <p>2012 OCT 28 PWF</p> <p>DATE</p> <p>BY</p>	<p>AS BUILT</p> <p>ALIGNMENT CHANGED ALONG PINE ST</p> <p>CHANGED PIPE ALIGNMENT TO PINE ST</p> <p>REVISION DESCRIPTION</p>	<p>LEGEND</p> <p>WATERMAIN</p> <p>WATER VALVE</p> <p>WATERMETER</p> <p>STORM DRAIN</p> <p>STORM AND GUTTER</p> <p>EDGE OF PAVEMENT</p> <p>DITCH</p> <p>CATCH BASIN</p> <p>MANHOLE</p> <p>CLEANOUT</p> <p>ANCHOR</p> <p>UTILITY POLE</p> <p>FENCE</p> <p>1:1 SLOPE</p>

[illegible]

**DESTROY ALL DRAWINGS BEARING LETTER PRECEDING THIS**

Jun 05, 2013 -- 3:53PM P:\2240 Cobble Hill\03 Drawings\Phase 2\2240 - BASC-34-10.1-ABS.dwg



[illegible]





