



Invitation to Tender No. 22-080
Jack Bagley Community Park Washroom Building Construction

Information for Tenderers

The Regional District of Nanaimo, hereinafter referred to as the "Regional District", invites Tenders for the Jack Bagley Community Park Washroom Building Construction.

- SCOPE:** Brief description of the project:
- a) Demolition of existing site works
 - b) Installation washroom building
 - c) Repairs to landscape around building

The work is requested to be completed by June 1, 2023.

Tenders are to be submitted **via email** in PDF format with "22-080 Jack Bagley Community Park Washroom" as the subject line to Carolyn Kennedy at ckennedy@rdn.bc.ca bearing the name of the firm bidding on or before on or before **3:00:00 p.m. local time on the 17th day of November, 2022** (the "Tender Closing"). The Owner will not be responsible for any technological delays. It is the Tenderer's sole responsibility to ensure their Tender is received when, where and how it is specified in this document. Tenders received in any other manner will not be accepted.

Tenderers are responsible to visit the site on their own to familiarize themselves with the site conditions prior to submitting a tender.

All enquiries related to this Tender are to be directed in writing to, **Carolyn Kennedy, Parks Planner, Regional District of Nanaimo** at ckennedy@rdn.bc.ca

Tenders will not be opened in public. The Regional District will endeavor to post unverified bid results by 10:00 a.m. the business day following the Tender Closing.

Each Tender Form received from a Tenderer must be accompanied by a **verifiable digital E-Bid Bond** in the amount equal to TEN PERCENT (10%) of the TOTAL AMOUNT OF TENDER and a **verifiable digital Consent of Surety** as defined by the Surety Association of Canada. <https://suretycanada.com/SAC/Surety-Bonds/E-Bonding.aspx>. The successful Tenderer will be required to submit a 50% Labour & Materials Bond and a 50% Performance Bond.

Tenders must remain valid for sixty (60) days following the closing time and date. The Owner reserves the right to reject any or all tenders, to accept the tender deemed most favourable in the interests of the Owner. The lowest or any tender may not necessarily be accepted.

This procurement is subject to Chapter 5 of the Canadian Free Trade Agreement. The Regional District's language in its procurement documents shall be English.

RDN has obtained a Building Permit for this project, the inspection list is attached to this document.



Regional District of Nanaimo

Invitation to Tender No. 22-080

Jack Bagley Community Park Washroom Building Construction

Issue Date: October 20, 2022

TABLE OF CONTENTS

TENDERING REQUIREMENTS

Section 00100Instructions to Tenderers
Section 00200Form of Tender: Bid Form including Schedules: 1-Schedule
of Prices, 2- Tenderer’s Experience, 3-Tenderer’s Proposed
Construction Schedule

SPECIFICATIONS

Section 00300

- a) Architectural/Structural/Electrical/Mechanical/Landscape Specification Package by ISL Engineering and Land Services Ltd. (34 pages).
- b) Building Permit (1 page)
- c) Building Permit Inspections (1 page)

CONTRACTING REQUIREMENTS

Section 00400Form of Agreement – CCDC2-2020
Section 00500CCDC2-2020 Supplementary General Conditions

END OF SECTION

PART 1 INVITATION**1.1 INVITATION TO TENDER**

The Regional District of Nanaimo (the “Regional District”) invites tenders for the Jack Bagley Community Park Washroom Building Construction.

1.2 DESCRIPTION OF WORK

- a) Demolition of existing site works
- b) Installation washroom building
- c) Repairs to landscape around building

1.3 TENDER SUBMISSION

1.3.1 Tenders will be submitted **via email** in PDF format with “22-080 Jack Bagley Community Park Washroom” as the subject line to Carolyn Kennedy at ckennedy@rdn.bc.ca bearing the name of the firm bidding on or before on or before **3:00 p.m. local time on the 17 day of November, 2022** (the “Tender Closing”). The Owner will not be responsible for any technological delays. It is the Tenderer’s sole responsibility to ensure their Tender is received when, where and how it is specified in this document.

1.3.2 Electronically submitted Tenders will be deemed to be successfully received at the time as posted on the incoming email on the RDN’s server.

1.3.3 Tenders received after the Tender Closing date and time will not be considered by the Regional District.

1.3.4 The submission of a Tender constitutes the agreement of the Tenderer to be solely responsible for all costs and expenses incurred by it in preparing and submitting its Tender, including any costs incurred by the Tenderer after the Tender Closing.

PART 2 TENDER DOCUMENTS

2.1 Documents may be viewed and obtained directly from the Regional District of Nanaimo website at <https://www.rdn.bc.ca/current-bid-opportunities> or the BC Bid website at <https://new.bcbid.gov.bc.ca/>

PART 3 PRE-TENDER ENQUIRIES AND ADDENDA

3.1 Enquiries should be addressed to:

Carolyn Kennedy, Parks Planner, Regional District of Nanaimo

Email: ckennedy@rdn.bc.ca

Please Note: The Project Manager named above is the only valid contact for enquiries. No explanation, interpretation, or clarification of the Tender Documents by any other person whatsoever shall bind the Regional District in the interpretation of the Tender Documents.

- 3.2 Any requests for explanations, interpretations or clarifications made by Tenderers should be submitted in writing to the Regional District at least seven (7) calendar Days before Tender Closing to allow enough time for a response.
- 3.3 If the Regional District, in the Regional District's sole discretion, determines that a clarification, addition, deletion or revision of the Tender Documents is required then the Regional District will issue a written addendum. Notice of the issuance of a written addendum, and the issued written addendum, will be posted on the Regional District of Nanaimo website <https://www.rdn.bc.ca/current-bid-opportunities> and the BC Bid website <https://new.bcbid.gov.bc.ca/>. It is the sole responsibility of all prospective Tenderers to check for any addenda prior to submitting their Tender.
- 3.4 All Addenda issued by the Regional District shall be incorporated into and become part of the Tender Documents.
- 3.5 If a Tenderer finds any errors, omissions, or discrepancies in the Tender Documents, it shall immediately notify the Regional District in writing.
- 3.6 No oral explanation, interpretation, or clarification of the Tender Documents by any person whatsoever shall bind the Regional District in the interpretation of the Tender Documents.

PART 4 INSPECTION OF SITE

- 4.1 It is the responsibility of the Tenderer to examine the Work Site before submitting a Tender. It is the Tenderer's responsibility to be familiar with and allow for all site conditions which might affect the Work and the Tender. The Regional District will not grant, and the Tenderer will not be entitled to any additional payments or extensions of time due to site conditions which were or would have been reasonably foreseeable upon a proper inspection of the Work Site by the Tenderer.
- 4.2 The submission of a Tender by the Tenderer shall be deemed to be an acknowledgement that the Tenderer has relied and is relying on its own examination of the Work Site, and all other matters related to the completion of Work.
- 4.3 The Tenderer shall comply with all applicable regulations of the Workers' Compensation Board of British Columbia while attending the Work Site.

PART 5 COMPLETION OF TENDER DOCUMENTS

- 5.1 The Tenderer should complete the Tender Form in ink or in type.
- 5.2 All prices are to be in Canadian currency. Prices shall include all necessary costs including but not limited to supply, fabrication and finishing, conveyance and delivery to the Work Site, packing, crating, freight, cartage, shipping charges, unloading, installation, overhead, profit and all tariffs, duties, and taxes (excluding GST) unless otherwise indicated, including British Columbia Provincial Sales Tax. The applicable Federal Goods and Services Tax shall be shown as a separate item in the Tender Price.

PART 6 BID SECURITY

- 6.1 The Tenderer shall submit, with its Tender, a deposit in the form of **a verifiable digital bid bond (the "Bid Bond")** in favour of the Regional District of Nanaimo signed and sealed by the Tenderer and the Tenderer's Surety. The form of Bid Bond shall be in the form acceptable to the Regional District. The Bid Bond shall equal ten percent (10%) of the Total Tender Price. **A verifiable digital Consent of Surety** shall also be submitted with the Tender. <https://suretycanada.com/SAC/Surety-Bonds/E-Bonding.aspx>
- 6.2 The Regional District will retain the Bid Bond of the successful Tenderer until:
- (1) the successful Tenderer has executed the Agreement;
 - (2) the successful Tenderer has provided all bonding and documentation in accordance with Section 00100, Clauses 15.2 and 15.3.
- 6.3 All bonds and documentation required by Section 00100, Part 6 shall be issued by a company licensed to transact business in the Province of British Columbia. **All required bonds and documentation should be verifiable and in a digital format as defined by the Surety Association of Canada. <https://suretycanada.com/SAC/Surety-Bonds/E-Bonding.aspx>. Scanned photocopies and facsimiles, including those under seal, may result in the rejection of the Tender.**

PART 7 BID RIGGING

- 7.1 The Tenderer's attention is directed to the Competition Act which provides that bid-rigging as defined in the Act is an indictable offence punishable upon conviction by a fine or imprisonment or both.
- 7.2 The Tenderer shall not engage in collusion of any sort and shall ensure that no person or other legal entity, other than the bidder has an interest in the bidder's tender and prepare the tender without any knowledge of, comparison of figures with, or arrangement with any other person or firm preparing a Tender for the same work.

PART 8 SOLICITATION

8.1 The Tenderer may not make any representations or solicitations to any director, officer, or employee of the Regional District with respect to the Tender either before or after submission of the Tender except as provided herein. If any director, officer, employee, agent sub-contractor, supplier or other representative of the Tenderer communicates with any director, officer or employee of the Regional District or any consultant engaged by the Regional District in connection with this Invitation to Tender about this Invitation to Tender, other than the person named under Part 3 – Pre-Tender Enquiries and Addenda, the Regional District shall have the unfettered right, regardless of the nature of the communication, to reject the Tender submitted by the Tenderer.

PART 9 CONDITIONS OF TENDER

9.1 Tenders which contain qualifying conditions or otherwise fail to conform to the requirements of the Tender Documents may be disqualified or rejected. The Regional District may, however, in its sole discretion, reject or retain for its consideration Tenders which are non-conforming because they do not contain the content or form required by the Tender Documents or for failure to comply with the process for submission set out in this Section 00100.

PART 10 SUBMISSION OF TENDER

- 10.1 Tenders should be submitted **via email** in PDF format with “22-080 Jack Bagley Community Park Washroom” as the subject line to Carolyn Kennedy at ckennedy@rdn.bc.ca bearing the name of the firm bidding on or before on or before **3:00 p.m. local time on the 17 day of November, 2022** (the “Tender Closing”).
- 10.2 All Tenders shall be signed by authorized officers in the case of the Corporate Firm and in the case of an individual partnership or non-incorporated organization, shall be signed and witnessed.
- 10.3 It is solely the responsibility of the Tenderer to ensure that it has obtained, prior to the Tender Closing, all Addenda issued by the Regional District.
- 10.4 The Regional District may not accept an amendment to a previously submitted Tender unless:
- (1) it is in writing;
 - (2) it is electronically received via email prior to the Tender Closing with the email entitled: “22-080 Jack Bagley Community Park Washroom—Tenderer’s Name”.
 - (3) it indicates a change to a Tender already submitted; and

(4) it is signed by the person or persons who signed the original Tender.

10.5 Tenderers shall be solely responsible for the completion and delivery of Tenders and any amendments in the manner and time specified by Section 00100, Part 10. No extension of the Tender Closing will be given to accommodate Tenderers or amendments to Tenders that do not comply with the requirements of Section 00100, Part 10.

PART 11 VARIATION TO TENDER DOCUMENT

11.1 Technically compliant alternate products may be reviewed and considered during the shop drawing review process with the successful contractor. All Tenderers should submit pricing based on the products specified in the Tender documents.

11.2 If the Regional District stipulates a completion date herein, and the Tenderer is unable to commit to this date, the Tenderer may submit a Tender stating the Tenderer's best possible completion date (Section 00200 Schedule 3 - Tenderer's Proposed Construction Schedule). The acceptability of such completion date will be at the Regional District's sole and unfettered discretion and may be justification for rejecting the Tender.

PART 12 IRREVOCABILITY OF OFFER

12.1 The Tender submitted by the Tenderer shall be irrevocable and remain open for acceptance by the Regional District for a period of 60 Days from the Tender Closing, whether another Tender has been accepted or not. If at any time after 60 Days from the Tender Closing, the Tenderer has not revoked its Tender in writing, the Regional District may accept the Tender.

12.2 If a Tenderer, for any reason whatsoever, purports to revoke its Tender within 60 Days from the Tender Closing, or if for any reason whatsoever a successful Tenderer does not execute and deliver the Agreement in accordance with Section 00100, Clause 15.1, the Regional District, without limiting any other remedy it may have under the Tender Documents or otherwise, shall be entitled to:

- (1) exercise its rights under any Bid Bond and retain the amount payable to the Regional District under the Bid Bond as liquidated damages; or
- (2) require the Tenderer to pay to the Regional District an amount equal to the difference between the Tender price of its Tender and any other Tender which is accepted by the Regional District, if such other Tender is for a greater price, plus the total of all costs, expenses, and damages, including legal fees on a solicitor and own client basis, incurred by the Regional District because of or related to such revocation or failure by the Tenderer.

PART 13 TENDER OPENING

- 13.1 **Tenders will not be opened in public.** The Regional District of Nanaimo will endeavour to make available the unevaluated results of the Tender to Bidders by 10:00 a.m. the business day following the Tender Closing. The Regional District of Nanaimo wishes to thank all Tenderers for their effort in responding to this bidding opportunity.

PART 14 ACCEPTANCE AND REJECTION OF TENDERS

- 14.1 Notwithstanding any other provision in the Tender Documents, any practice or custom in the construction industry, or the procedures and guidelines recommended for use on publicly funded construction projects, the Regional District, in its sole discretion, shall have the unfettered right to:
- (1) accept any Tender;
 - (2) reject any Tender;
 - (3) reject all Tenders;
 - (4) accept a Tender which is not the lowest Tender;
 - (5) reject a Tender even if it is the only Tender received by the Regional District;
 - (6) accept all or any part of a Tender; and
 - (7) award all or a portion of the Work to any Tenderer.
- 14.2 If a Tender contains a defect or fails in some way to comply with the requirements of the Tender Documents, which in the sole and unfettered discretion of the Regional District is not material, the Regional District may waive the defect and accept the Tender.
- 14.3 Awards shall be made on Tenders that will, in the opinion of the Regional District, give the greatest value based on quality, service and price. In determining what constitutes greatest value, the Regional District may consider its previous experience with the Tenderer. Without limiting the generality of the foregoing, the Regional District may consider: the quality of work; the timeliness of completion; the number, scope, and reasonableness of requested change orders; public impact; compliance with applicable health, safety, labour, and environmental laws; environmental and social practices; and the number and reasonableness of any claims. The Regional District's previous experience with the Tenderer regarding its competence and cooperation may also be taken into consideration in determining greatest value. The Regional District reserves the right to rely upon its records, references, and recollections in this regard. The Regional District may also obtain references other than those provided by the Tenderer and may use these references in determining greatest value.

- 14.4 The Regional District, in its sole discretion, reserves the right to reject the Tender in the event the Regional District determines, acting reasonably on the information available to it, that the Tenderer is in material non-compliance with, or has been convicted of a material offence or violation of, health, safety, labour or environmental laws. The Regional District's judgment in this regard will be final.
- 14.5 The Regional District will notify the successful Tenderer in writing that its Tender has been accepted (the "Notice of Intent to Award").
- 14.6 No information about an award of a contract will be given out between the time of opening and the time an award has been made.

PART 15 SUCCESSFUL TENDERER REQUIREMENTS:

- 15.1 The successful Tenderer should execute and deliver the Agreement to the Regional District within ten (10) business days after it has received the Agreement from the Regional District such time limit being extended only with the written approval of the Owner.
- 15.2 The successful Tenderer should submit to the Regional District of Nanaimo the following original documentation (facsimile or photocopy copies not acceptable) within seven (7) business days of the notification of the successful Tender under Section 00100, Clause 14.5:
- (1) Original Performance Bond and Labour and Material Payment Bond (the "Bonds") each of which shall equal fifty percent (50%) of the Contract Price, issued by a Surety licensed to transact the business of suretyship in the Province of British Columbia, in favour of the Regional District, signed and sealed by the successful Tenderer and the Tenderer's Surety. The form of Performance Bond and Labour and Material Payment Bond shall be in a form acceptable to the Regional District. The Performance Bond shall encompass the Warranty and Guarantee period and shall, in any event, be in effect for no less than two (2) years from the date of issuance of the Notice of Acceptance.
 - (2) A certificate of General Liability insurance pursuant to "CCDC 41 – CCDC Insurance Requirements" with the Regional District of Nanaimo named as additionally insured.
 - (3) A Workers' Compensation Board Clearance Letter of Clearance indicating good standing and remittance up to date.
- 15.3 The successful Tenderer shall not commence the Work until it has received a Notice to Proceed issued by the Regional District.

PART 16 AWARD OF CONTRACT

- 16.1 All contracts require the approval of the appropriate Regional District authority prior to award. Where a contract requires the approval of the Regional District's Board prior to award, the total price of any Tender and the reason for selecting the successful Tenderer may be released at a regular meeting of the Regional District's Board or a Committee of the Board.
- 16.2 Notwithstanding Clause 18.1(4) below, the Regional District reserves the right to release to the public the total price of any Tender, regardless of whether it was identified by the Tenderer as confidential. By submitting a Tender, each Tenderer consents to the release of the total price and, where applicable, information disclosable under the Act that is relevant to the selection of the successful Tenderer, to provide transparency in relation to expenditures of this type.

PART 17 FORM OF CONTRACT

- 17.1 The successful contractor will be expected to enter a CCDC4-2011 Unit Price Contract as amended herein in the "Supplementary General Conditions" section 00500.

PART 18 CONFIDENTIALITY AND SECURITY

- 18.1 The following conditions apply:
- (1) The Tender Documents, or any portion thereof, may not be used for any purpose other than submission of Tenders; and
 - (2) The successful Tenderer must agree not to divulge or release any information that has been given to it or acquired by it on a confidential basis during the course of carrying out the Work or performing its services.
 - (3) It is the Regional District's policy to maintain confidentiality with respect to all confidential information related to the Tender, but the Tenderer acknowledges and agrees that the Tender becomes the property of the Regional District and any confidential information disclosed by it to the Regional District may be subject to a request for public disclosure under *the Freedom of Information and Protection of Privacy Act, R.S.B.C. 1996, c.165*, as amended from time to time (in this Clause and Clause 17.2, the "Act").
 - (4) The Tenderer acknowledges that the Act provides an exemption from disclosure for information as specified in Section 21 of the Act. Accordingly, if any information supplied to the Regional District fits within Section 21 of the Act, the Tenderer must specifically advise the Regional District and request the Regional District not to disclose that information, however confidentiality cannot be guaranteed.

PART 19 DISCLAIMERS/LIMITATIONS OF LIABILITY

- 19.1 Neither acceptance of a Tender nor execution of an Agreement shall constitute approval of any activity or development contemplated in any Tender that requires any approval, permit, or license pursuant to any federal, provincial, regional district or municipal statute, regulation, or bylaw. It is the responsibility of the Contractor to obtain such prior commencement of the Work.
- 19.2 The Regional District, its directors, officers, servants, employees, agents, and consultants expressly disclaim all liability for representations, warranties, express or implied or contained in, or for omissions from this Tender or any written or oral information transmitted or made available at any time to a Tenderer by or on behalf of the Regional District. Nothing in this Tender is intended to relieve a Tenderer from forming its own opinions and conclusions in respect of this Tender.
- 19.3 Except as expressly and specifically permitted in these Instructions to Tenderers, no Tenderer shall have any claim for any compensation of any kind whatsoever, because of participating in this Invitation to Tender, and by submitting a Tender each Tenderer shall be deemed to have agreed that it has no claim.

PART 20 SUSTAINABLE PURCHASING PRACTICE

- 20.1 It is the Regional District's policy to ensure that procurement decisions for the supply of goods, services and construction consider economic considerations, as well as the Tenderer's environmental and social practices. The Regional District expects that each Tenderer has and will comply with internationally recognized labour conventions and recommendations of the International Labour Organization (ILO), of which Canada is a member, and any applicable legislation pertaining to workplace safety, health, labour and employment, human rights, and the environment. In Canada this includes but is not limited to the latest editions of the following: *Corruption of Foreign Public Officials Act* (Canada), *Human Rights Code* (BC), *Employment Standards Act*, *Workers Compensation Act* (BC), *Canadian Environmental Protection Act*, *Fisheries Act* (Canada), *Transportation of Dangerous Goods Act* (BC), *Transportation of Dangerous Goods Act*, (Canada), *Environmental Management Act* (BC).

PART 21 PRIME CONTRACTOR

- 21.1 The successful Contractor shall be deemed to be the Prime Contractor within the meaning of Part 3, Division 3, Section 118(1) of the Workers Compensation Act. The successful Contractor must be qualified and willing to assume this responsibility.

PART 22 HOURS OF WORK

22.1 No work shall be performed under the Contract between the hours of 6:00 p.m. and 7:00 a.m. of the following day or on Saturdays, Sundays, or statutory holidays except as authorized in writing by the Regional District at the Regional District's sole discretion.

PART 23 CONFLICT OF INTEREST

23.1 The Tenderer declares that it has no financial interest, directly or indirectly in the business of any third party that would be or be seen to be a conflict of interest in carrying out the services. It warrants that neither it nor any of its officers or directors, or any employee with authority to bind the Bidder, has any financial or personal relationship or affiliation with any elected official or employee of the Regional District or their immediate families which might in any way be seen by the Regional District to create a conflict.

PART 24 LITIGATION CLAUSE

24.1 The RDN may, in its absolute discretion, reject a Tender, if the Tenderer, or any officer or director of the Tenderer is or has been engaged either directly or indirectly through another corporation in legal action against the RDN, its elected or appointed officers and employees in relation to:

- (a) any other contract for works or services; or
- (b) any matter arising from the RDN's exercise of its powers, duties, or functions under the Local Government Act, Community Charter, or another enactment within five years of the date of this Bid Call.

In determining whether to reject a Tender under this clause, the RDN will consider whether the litigation is likely to affect the Tenderer's ability to work with the RDN, its consultants and representatives and whether the RDN's experience with the Tenderer indicates that the RDN is likely to incur increased staff and legal costs in the administration of this Contract if it is awarded to the Tenderer.

PART 25 TENDER IRREGULARITIES

25.1 The Regional District may accept or waive a minor and inconsequential irregularity, or where practicable to do so, the Regional District may, as a condition of bid acceptance, request a Tenderer to correct a minor and inconsequential irregularity with no change in bid price. The determination of what is, or is not, a minor and inconsequential irregularity, the determination of whether to accept, waive, or require correction of an irregularity, and the final determination of the validity of a bid, shall be at the Regional District's sole discretion.

END OF SECTION

**Tender No. 22-080
Jack Bagley Community Park Washroom Building
Page 1 of 4**

Date: _____

Company: _____

Address: _____

Telephone: _____ Email: _____

To: Regional District of Nanaimo
Via email to ckennedy@rdn.bc.ca

SCHEDULE 1 – SCHEDULE OF PRICES

Having examined the Project site and having carefully examined all of the tender documents including all Addenda issued as supplements thereto, and having examined and complied with Instructions to Bidders, we hereby offer to perform the Work set forth in the aforesaid documents for the Pricing in Canadian Dollars. Prices include the Contractor’s labour, material, equipment, material costs, overhead and profit, all taxes and duties, and shall represent the cost to the RDN of such charges excluding GST which shall be shown separately.

Schedule of Prices

A – Base Bid

Unit Price Total: \$ _____

GST (5%): \$ _____

Total Contract Price: \$ _____

Total Contract Price will be used to establish low bidder

Provisional Items (At the sole discretion of the Regional District to accept all, some, or none)

B – Provisional Items

Item No.	Description	Unit of Measure	Estimated Quantity	Unit Price	Amount
F1	Decorative Asphalt coating 2-4/L04	Lump sum	1		
F2	Tree and shrub planting L03	Lump sum	1		
Subtotal:					

SCHEDULE 2 – TENDERER’S EXPERIENCE

The successful contractor or team must be regularly engaged in the Work described in the Tender Documents. The team must have completed three similar projects in the last five years. The following is a list of references that demonstrate the Tenderer’s successful performance in comparable work. References should be similar in size, type and scope to the Work described in the Tender Documents.

1. Project Name: _____

Project Location: _____

Contract Sum: _____

Date Start: _____ Date Complete: _____

Owner Name: _____ Contact Ph. No.: _____

Project Engineer: _____ Contact Ph. No.: _____

Key Subcontractors Used: _____

2. Project Name: _____

Project Location: _____

Contract Sum: _____

Date Start: _____ Date Complete: _____

Owner Name: _____ Contact Ph. No.: _____

Project Engineer: _____ Contact Ph. No.: _____

Key Subcontractors Used: _____

3. Project Name: _____

Project Location: _____

Contract Sum: _____

Date Start: _____ Date Complete: _____

Owner Name: _____ Contact Ph. No.: _____

Project Engineer: _____ Contact Ph. No.: _____

Key Subcontractors Used: _____

SCHEDULE 3 - TENDERER'S PROPOSED CONSTRUCTION SCHEDULE

The following is the schedule of the major phases of Work which the Tenderer intends to follow if awarded the Contract. The Tenderer shall complete the following proposed construction schedule filling in key tasks and dates. (Please indicate time proposed to be taken in form of bars). Assume date of Notice of Intent to Award of Dec 10, 2022.

Key Tasks	Dec	Jan	Feb	Mar	April	May	June
Mobilization							
Substantial completion							
Total completion							



ACCEPTANCE

- .1 This Bid is open to acceptance for a period of sixty (60) days from the date of bid closing.
- .2 Submission of this Bid implies acceptance of the existing conditions at the site.
- .3 We understand that the lowest or any Bid will not necessarily be accepted. The RDN may also elect not to proceed with the Project.
- .4 The RDN reserves the right to waive minor defects or irregularities in the bid.
- .5 The Tenderer agrees to be designated as the Prime Contractor for this project per WorkSafe BC OH&S Regulations Sections 20.2 Notice of Project and 20.3 Coordination of Multiple Employer Workplaces and Workers' Compensation Act, Section 118 Coordination of Multiple-Employer Workplaces (1) and (2). We are qualified and are willing to accept the responsibilities as Prime Contractor for the project.
- .6 We can complete the work by June 1, 2023.

Company: _____

Signature: _____
(Authorized Officer)

Printed: _____
(Authorized Officer)

REGIONAL DISTRICT OF NANAIMO

JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING

POWDER POINT ROAD, NANAIMO BC
2022-10-19
ISSUED FOR TENDER

OWNER

REGIONAL DISTRICT OF NANAIMO
6300 Hammond Bay Road,
Nanaimo BC V9T 6N2
Contact: Carolyn Kennedy
Email: ckennedy@rdn.bc.ca Tel: 250.248.4744

COUNSULTANTS

CIVIL AND LEAD:

ISL
1620 Cook Street,
Victoria BC V8T 3P1
Contact: Ian McKinnon
Email: imckinnon@isengineering.com Tel: 250.361.3230

ARCHITECTURAL:

HAECCTY STUDIO ARCHITECTURE
9611 Alberta Road,
Richmond BC V6Y 1T7
Contact: Travis Hanks
Email: thanks@haeccty.com Tel: 778.837.6744

STRUCTURAL:

ISL
#201, 3999 Henning Drive,
Burnaby, B.C. V5C 6P9
Contact: Janet Tong
Email: jtong@isengineering.com Tel: 604.629.2696

ELECTRICAL:

ISL
#201, 3999 Henning Drive,
Burnaby, B.C. V5C 6P9
Contact: Abhishek Gang
Email: agang@isengineering.com Tel: 604.629.2696

MECHANICAL:

AME
#200 - 638 Smith Street,
Vancouver, B.C. V6B 1E3
Contact: Jerry Chung
Email: jerychung@amegroup.ca Tel: 604.684.5995 x 110

GEOTECHNICAL:

TETRA TECH
1-4376 Boban Dr.,
Nanaimo BC V9T 6A7
Contact: Andrew Walker
Email: andrew.walker@tetratech.com Tel: 250.756.3966 x 241

LANDSCAPE:

ISL
#201, 3999 Henning Drive,
Burnaby, B.C. V5C 6P9
Contact: Andrew Robertson
Email: arobertson@isengineering.com Tel: 604.629.2696

Discipline	Sheet No.	Sheet Title
	00	COVER
CIVIL	C-01	CIVIL SITE SERVICING PLAN
ARCHITECTURAL	A1.00 A1.01 A1.02 A1.03 A2.01 A3.01 A3.02 A4.01 A5.01 A5.02 A6.00	PROJECT DATA AND SITE PLAN FLOOR PLAN ROOF PLAN RCP BUILDING SECTIONS BUILDING ELEVATIONS BUILDING ELEVATIONS INTERIOR ELEVATIONS DETAILS DETAILS AND FINISH SCHEDULE SCHEDULES
STRUCTURAL	ST-01 ST-02 ST-03 ST-04 ST-05	COVER GENERAL NOTES GENERAL NOTES TYPICAL DETAILS FOUNDATION AND ROOF FRAMING PLAN
ELECTRICAL	EL-01 EL-02	ELECTRICAL SPECIFICATIONS AND DETAILS ELECTRICAL BUILDING PLAN
MECHANICAL	M.001 M1.00 M1.01 M1.02	SITE PLAN PLUMBING PLAN PLUMBING PLAN HVAC PLAN
LANDSCAPE	L-00 L-01 L-02 L-03 L-04	LANDSCAPE SPECIFICATIONS DETAIL KEY PLAN GRADING PLAN PLANTING PLAN DETAILS



File: G:\Projects\33360\33360_RDN_Jack_Bagley_Park_Phase_1\B102_CADD\20_Drafting\202_Production\33360_SH_Cover.dwg

PLOT DATE: October 19, 2022

REV NO	REVISIONS	DATE	DRAWN	APPRD	OWNER
1	ISSUED FOR TENDER	2022-10-19	XJ	AR	



JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING
COVER



#201, 3999 Henning Drive, Burnaby, B.C. V5C 6P9
T: (604)629-2696 F: (604)629-2698

ISSUED FOR TENDER DESIGN NO.

33360

SCALE	DATE	Oct -19	DWG. NO.
DRAWN BY	JO	DESIGN BY	AR
CHECKED BY	AR	APPROVED BY	AR
			00 OF -
			REV. 1

DESTROY ALL PRINTS BEARING PREVIOUS NO.

GENERAL NOTES:

1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS TO UNDERTAKE THE WORKS FROM APPLICABLE AUTHORITIES.
2. ALL DAMAGED OR DISTURBED AREAS OUTSIDE OF THE WORK ZONE TO BE REPAIRED OR REPLACED TO EXISTING OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
3. ALL SHOP DRAWINGS AND MATERIAL SPECIFICATIONS TO BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION OR ORDERING. FABRICATION OR ORDERING SHALL NOT PROCEED WITHOUT REVIEWED SHOP DRAWINGS.
4. ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE. ALL ELEVATIONS ARE GIVEN IN METERS (m) UNLESS NOTED OTHERWISE. COORDINATES ARE GROUND LEVEL (UTM NAD 83) AND ALL ELEVATIONS ARE TO GEODETIC DATUM.
5. ANY ALTERNATIVES TO SPECIFIED MATERIALS TO BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT SURVEY.

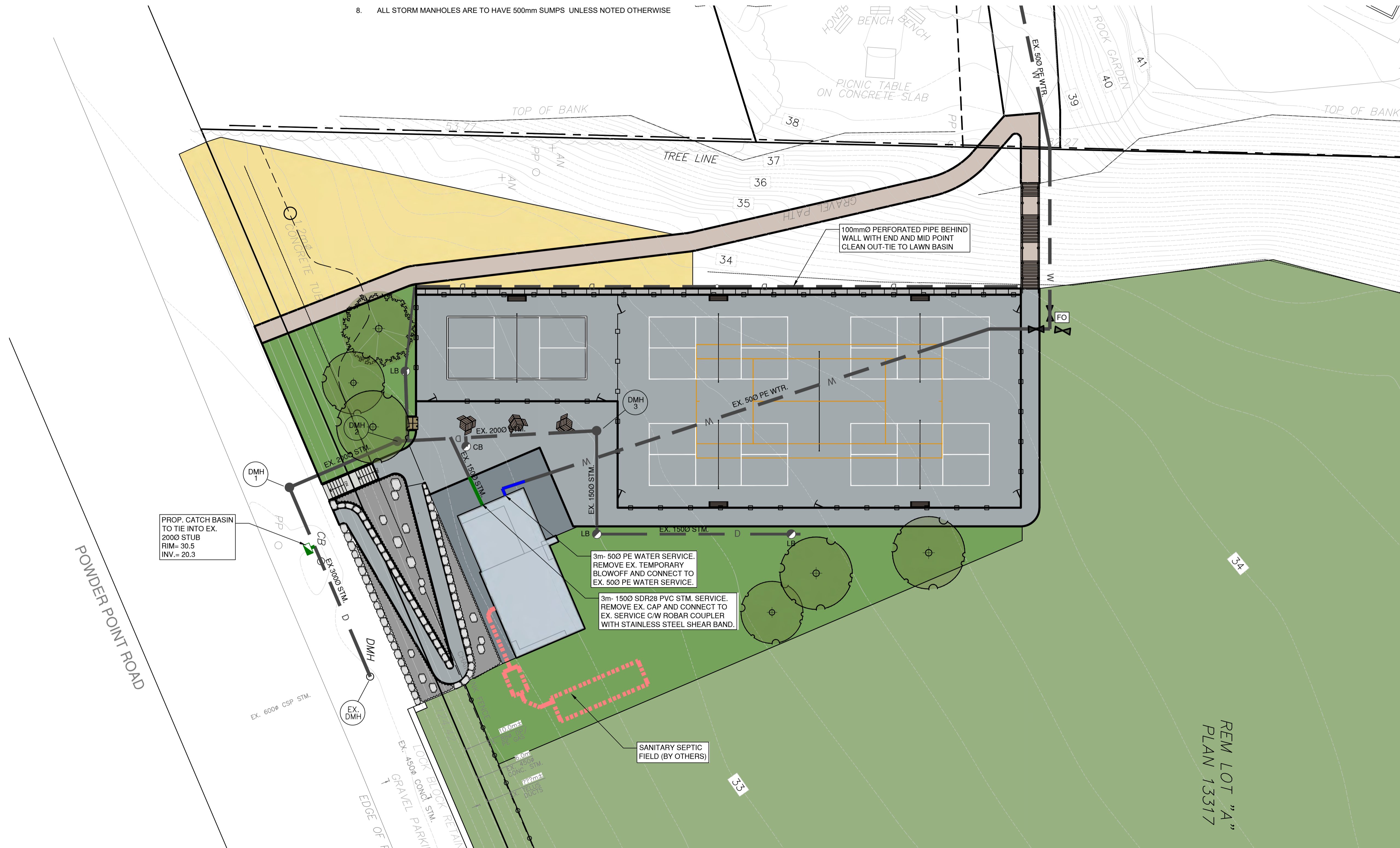
STORM AND SANITARY NOTES:

1. MINIMUM COVER ON SERVICES AND LEADS TO BE 0.6m. MINIMUM COVER ON STORM MAINS TO BE 1.2m.
2. CATCHBASIN LEADS TO HAVE MINIMUM 2.0% GRADE. CATCHBASIN LEAD TO BE 1500 DR28 PVC.
3. ALL LAWN BASIN LEADS AND SERVICE CONNECTIONS TO BE 1000 DR28 PVC UNLESS NOTED OTHERWISE ON THE DRAWINGS. LAWN BASIN AND SERVICE CONNECTION LEADS TO HAVE A MINIMUM 1.0% GRADE.
4. ALL SANITARY SERVICE CONNECTIONS TO BE 1000 DR28 PVC UNLESS NOTED OTHERWISE. SANITARY SERVICE CONNECTIONS TO HAVE A MINIMUM 2.0% GRADE.
5. ALL CONNECTIONS TO NEW PIPES SHALL BE ACCOMPLISHED WITH MANUFACTURED WYE BRANCHES. SERVICE CONNECTIONS FOUND AFTER STORM MAIN INSTALLATION AND ALL CONNECTIONS TO EXISTING PIPES SHALL BE ACCOMPLISHED WITH INSERT A-TEE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. ALL COUPLERS FOR PIPES UNDER 2000 TO BE MADE WITH STAINLESS SHEAR BAND TYPE.
7. ALL NEW STORM MAIN OVER 2000 TO BE VIDEO INSPECTED.
8. ALL STORM MANHOLES ARE TO HAVE 500mm SUMPS UNLESS NOTED OTHERWISE

WATER NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MASTER MUNICIPAL CONSTRUCTION DOCUMENT AND STANDARD DETAIL DRAWINGS (MMCD 2009), PLATINUM EDITION AND THE REGIONAL DISTRICT OF NANAIMO (RDN) SPECIFICATIONS AND DETAILED DRAWINGS UNLESS OTHERWISE NOTED.
2. MINIMUM COVER OVER WATER SERVICES TO BE 1.00m UNLESS OTHERWISE NOTED.
3. ALL SERVICE CONNECTIONS TO BE POLYETHYLENE TUBING, PRESSURE CLASS 200. SERVICE CONNECTIONS TO BE 25mm DIAMETER UNLESS OTHERWISE.
4. ALL WATERMAIN JOINTS WITHIN 3.0m HORIZONTAL OR 0.45m VERTICAL SEPARATION FROM SANITARY OR STORM DRAIN MAINS AND WHERE NOTED ON THE DRAWINGS TO BE PROTECTED BY SHRINK WRAP OR PETROLEUM TAPE.

5. MAXIMUM BEND RADIUS TO 1/2 x MANUFACTURER'S SPECIFICATIONS.
6. THE CONTRACTOR IS NOT TO OPERATE THE WATER SYSTEM (INCLUDING OPERATING ANY VALVES), ANY WATER SHUT DOWNS ARE TO BE COORDINATED WITH THE ENGINEER AND RDN WATER OPS.
7. CONNECTIONS TO LIVE AND EXISTING WATER SYSTEMS ARE TO BE MADE UNDER THE SUPERVISION OF THE ENGINEER AND RDN.
8. ALL TIE-IN LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED IN THE FIELD BY THE CONTRACTOR.
9. ALL NEW WATER SERVICES TO UNDERGO PRESSURE AND LEAKAGE TEST WITH A MINIMUM APPLIED PRESSURE OF 1380 Kpa FOR 2 HOURS AS PER AWWA C605.
10. ALL NEW WATER SERVICES TO BE DISINFECTED AND FLUSHED AS PER AWWA C651.



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REV NO	REVISIONS	DATE	DRAWN	APPRD
A	ISSUED FOR TENDER	2022-10-19	NL	IM

**JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING
CIVIL SITE SERVICING PLAN**



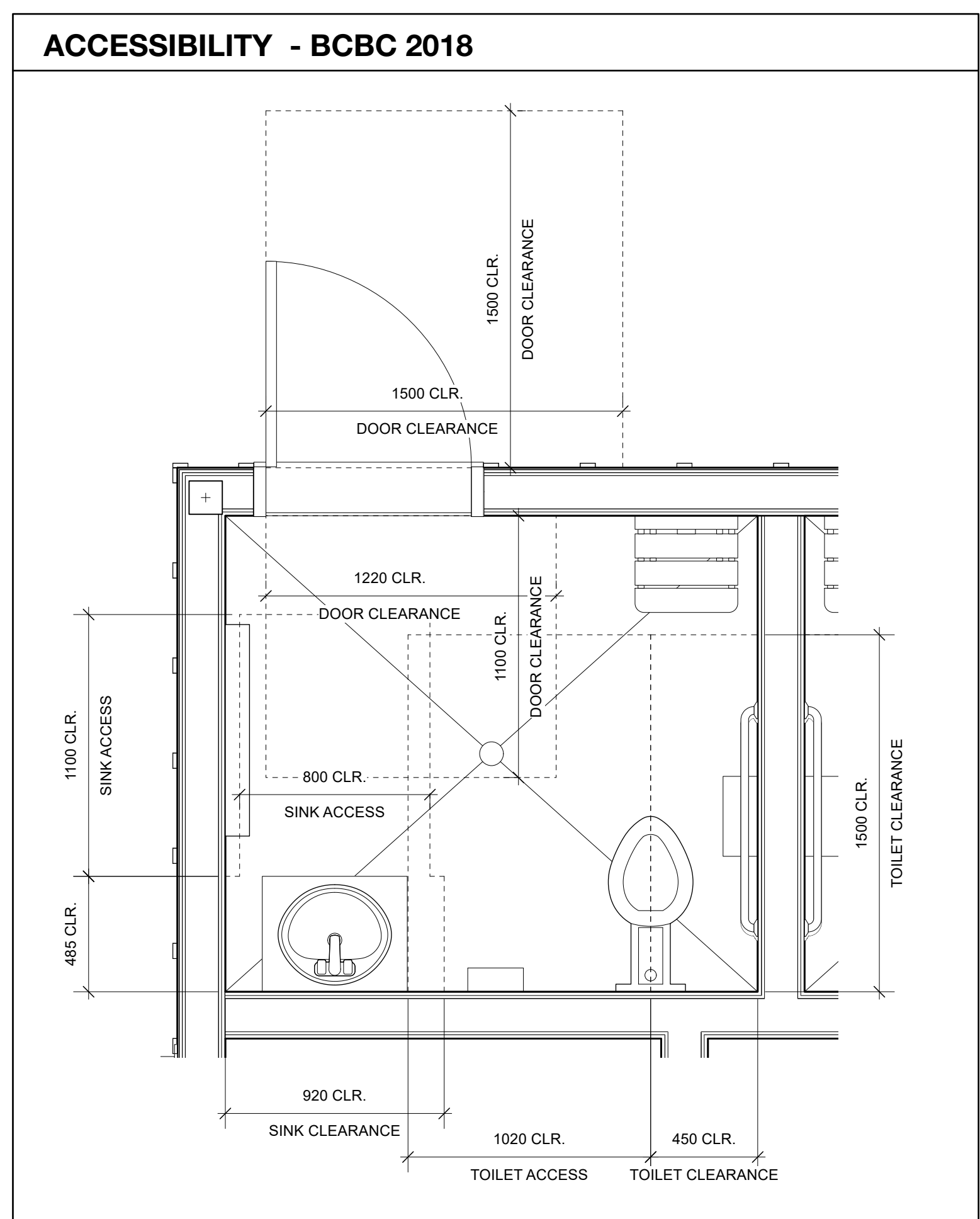
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DRAWN BY	NL	DESIGN BY	IM	C-01
CHECKED BY	IM	APPROVED BY	IM	OF 27
				REV. A

ISSUED FOR TENDER DESIGN NO.

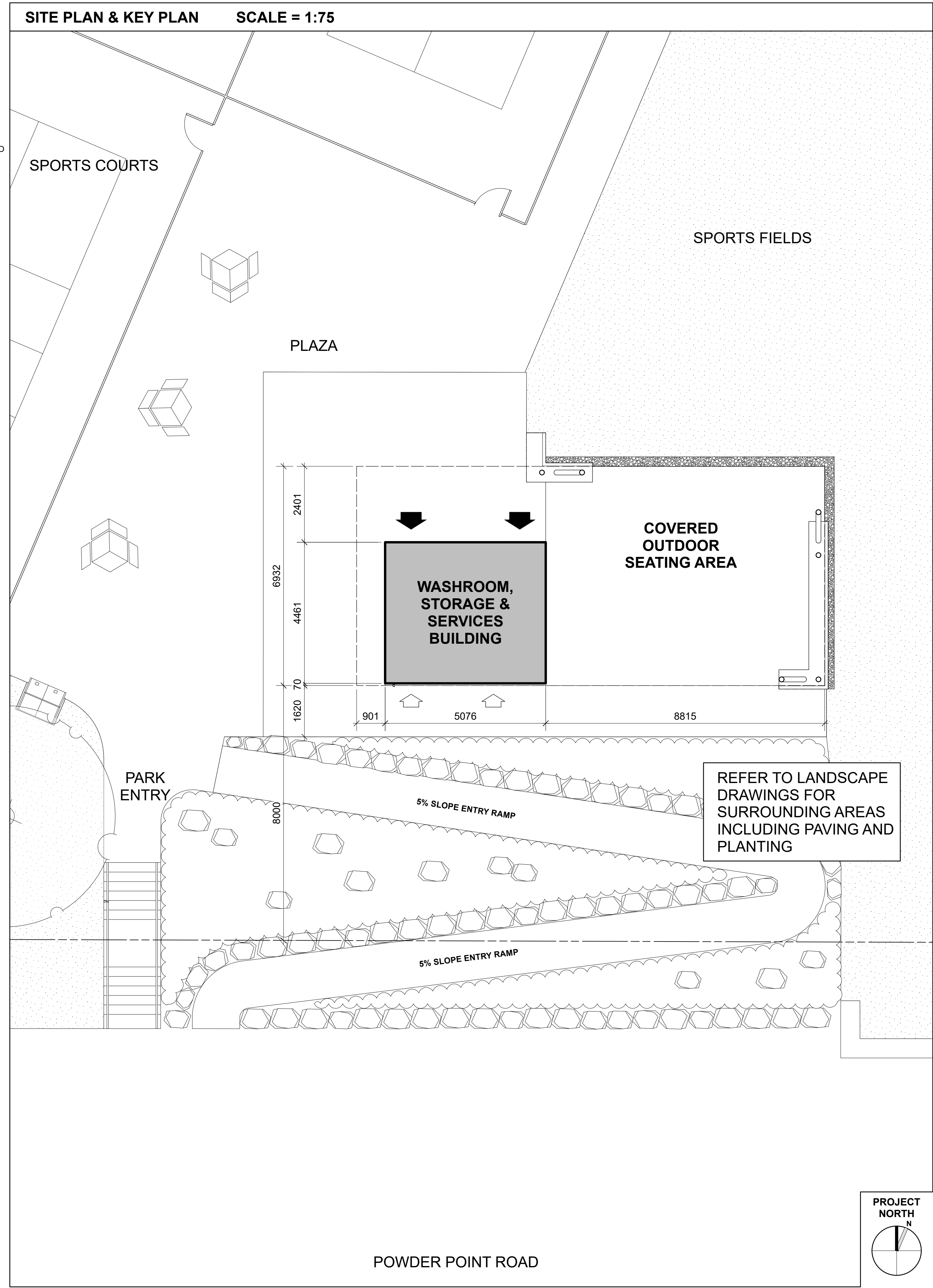
33360

PROJECT DATA		
Street Address	2535 Powder Point Rd	
	Nanoose Bay, BC V9P 9E9	
Major Occupancy	Accessory to Group A Division 4	
Floor Level	1 Level	
Parking	Street parking	
Building Area	243 sf (22.6 sm)	
Building Height	4m 3s	
Dist. to Lot Line	North	112 m
	East	78 m
	South	8.0 m
	West	40 m
Building Separation	N/A	
OCCUPANT LOAD (BCBC 2018 - 3.1.17.1)		
Room	Net Floor Area	Occupant Load
Interior		
Washroom 1	4.5 m2	1
Washroom 2	4.5 m2	1
Service Room	3.4 m2	1
Storage Room	4.9 m2	1
TOTAL INTERIOR		4
Exterior		
Covered Outdoor Area (non-fixed seats and tables)	60.9 m2	64 (0.95 m2/person)
TOTAL EXTERIOR		64
CODE REQUIREMENTS (BCBC 2018)		
Part	Requirement	Criteria
Table 3.1.3.1	No rated fire separations	Between A-4 Major Occupancies
3.2.2.35	Sprinklers not required; roof can be heavy timber construction	Group A Division 4; Occupant Load < 1500; limiting Distance > 6m

SHEET LIST		
SHEET NO.	DRAWING TITLE	SCALE
ARCHITECTURAL		
A1.00	PROJECT DATA & SITE PLAN	1:75 @ ARCH D
A1.01	FLOOR PLAN	1:25 @ ARCH D
A1.02	ROOF PLAN	1:25 @ ARCH D
A1.10	REFLECTED CEILING PLAN	1:25 @ ARCH D
A2.01	BUILDING SECTIONS	1:25 @ ARCH D
A3.01	BUILDING ELEVATIONS	1:25 @ ARCH D
A3.02	BUILDING ELEVATIONS	1:25 @ ARCH D
A4.01	INTERIOR ELEVATIONS	1:20 @ ARCH D
A5.01	DETAILS	1:4 @ ARCH D
A5.02	DETAILS & FINISH SCHEDULE	1:4 @ ARCH D
A6.01	SCHEDULES	AS NOTED @ ARCH D



NAME	SYMBOLS	NAME	SYMBOLS
DRAWING TITLE	# DRAWING TITLE Scale #:###	DETAIL REFERENCE	X/XX.XX
SECTION MARKER	ELEVATION MARKER	GRID LINE	1
INTERIOR ELEVATION DETAIL REFERENCE	1 WINDOW TAG 4 A#.## 2 3 DOOR TAG	PLAN ELEVATION MARKER	###
ELEVATION MARKER	00.000	REVISION NUMBER	#
NOTES	1	ROOM NUMBER	00-000
NORTH ARROW		HEIGHT MARKER	375 TOC
		ASSEMBLY TYPE	XXX
		BUILDING GRADE	NEW GRADE 00.000 EXISTING GRADE 00.000 T.O.W.
		EGRESS	PRIMARY EXIT SECONDARY EXIT



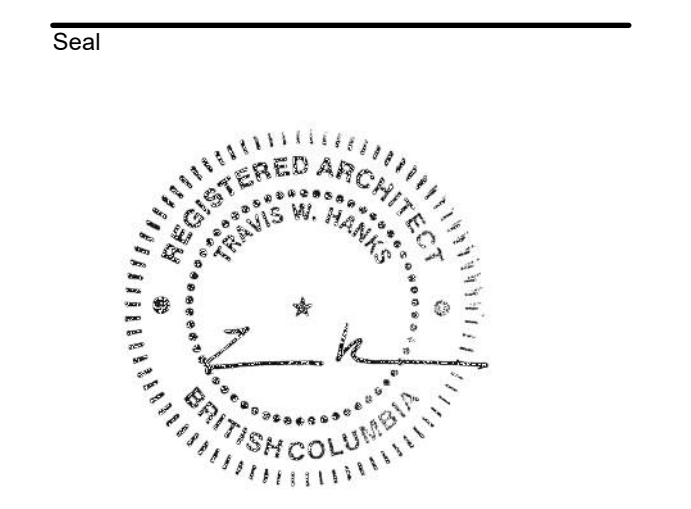
Project
JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING
 NANAIMO BC
 Owner / Client
 REGIONAL DISTRICT OF NANAIMO
 Architect



Consultant

Consultant Team

Issues / Revisions	
DATE	ISSUE
2021-07-07	ISSUED FOR 95% DD/BP
2021-09-17	ISSUED FOR TENDER RE-ISSUED FOR BP
2022-10-18	ISSUED FOR TENDER

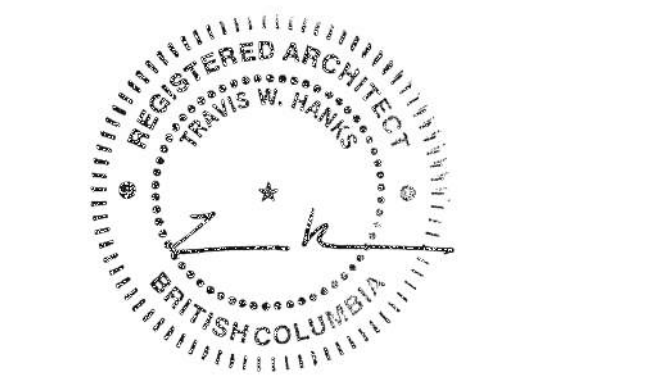


Sheet Title
PROJECT DATA & SITE PLAN
 Project ID 2004 Drawn JR Checked TH
 Scale AS NOTED Date OCTOBER 18, 2022
 Sheet No.

A1.00

Issues / Revisions

DATE	ISSUE
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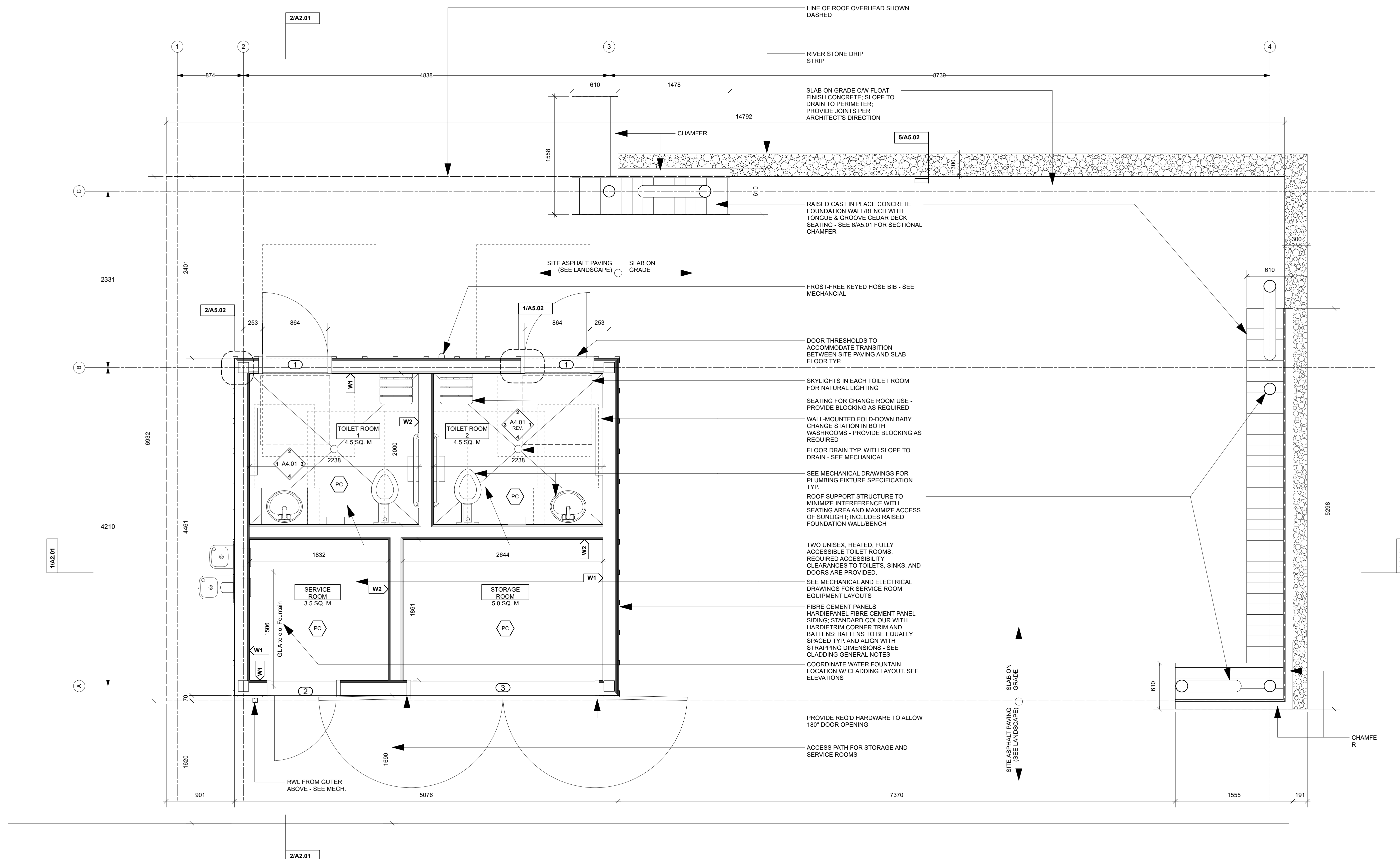


FLOOR PLAN

Project ID	2004	Drawn	JR	Checked	TH
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Scale	AS NOTED	Date	OCTOBER 18, 2022
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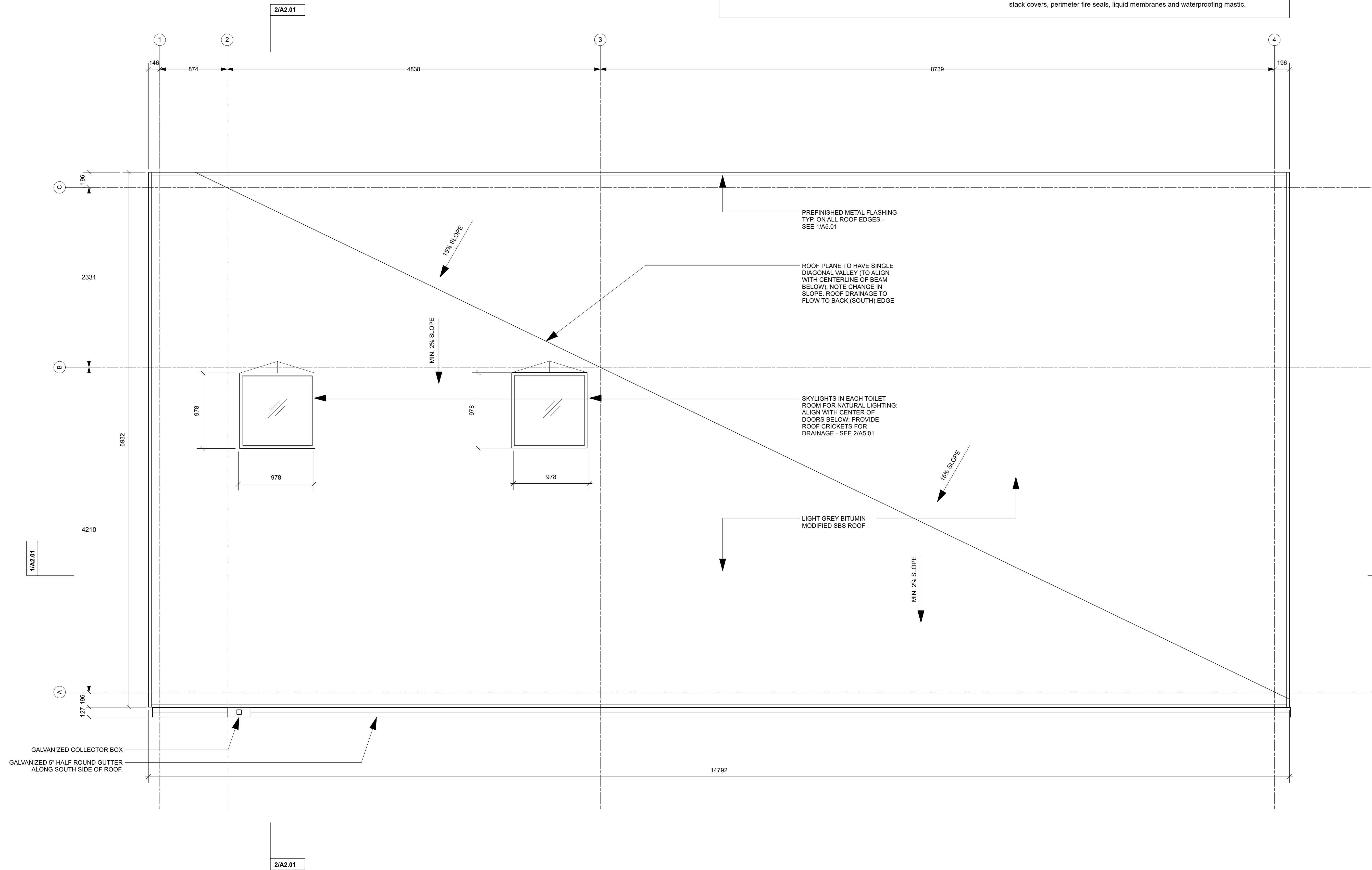
A1.01



1 PLAN
 Scale: 1:25

ROOFING GENERAL NOTES

1. All roofing products to be installed per manufacturers requirements and to Canadian Roofing Contractor's Association (CRCA) and Roofing Contractor's Association of British Columbia (RCABC) standards.
2. All Dampproofing and Waterproofing products to conform to Canadian Standards Association (CSA) and Underwriters Laboratories of Canada (ULC) standards, and be tested for compatibility with adjacent materials and products. Roofing membrane materials to be obtained through a single source.
3. Contractor to organize a pre-installation meeting one week prior to beginning work, with Contractor, Consultant, installer, and manufacturer's representative (as required) to review coordination of the work, including substrate conditions.
4. Provide Submittals of all products and components of the work including data sheets, performance criteria, and finish.
5. Provide Manufacturer's Certificate certifying that products meet or exceed requirements. Submit Manufacturer's field report indicating installation procedures and quality control of application.
6. Provide Manufacturer's Warranty for a minimum period of 5 years for workmanship and 20 years for material defect, including metal flashing.
7. Roofing system to consist of the following components:
 - A. PRIMER - as recommended by manufacturer to suit substrate and installation conditions.
 - B. OVERLAY – base layer with vapour retarder.
 - C. MEMBRANE - multi-ply SBS modified bituminous, thermo-fusible base sheet and interply sheets as required for desired warranty, and tied into flashing details, plus UV resistant granulated cap sheet.
8. Installer to provide all accessories as required for a complete and finished installation, including but not limited to sheet metal flashing, penetration flashings, drain pans, vent stack covers, perimeter fire seals, liquid membranes and waterproofing mastic.



Project
**JACK BAGLEY COMMUNITY
 PARK WASHROOM BUILDING**
 NANAIMO BC
 Owner / Client
 REGIONAL DISTRICT OF NANAIMO
 Architect



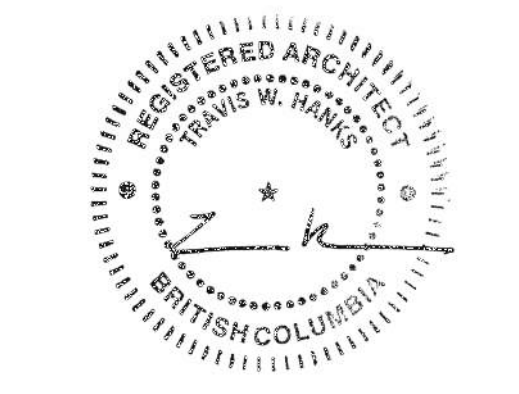
Consultant

Consultant Team

Issues / Revisions

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2021-09-17	ISSUED FOR TENDER RE-ISSUED FOR BP
2022-10-18	ISSUED FOR TENDER

Seal



Sheet Title
ROOF PLAN

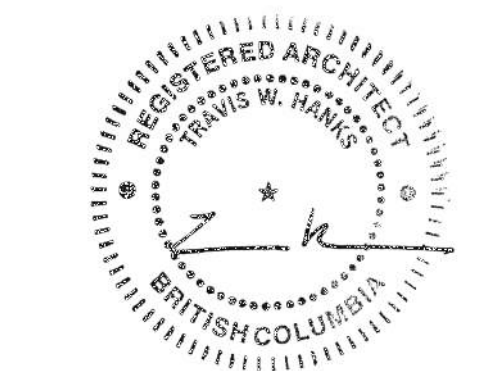
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2004	JR	TH
Scale	Date	
AS NOTED	OCTOBER 18, 2022	
Sheet No.		

1 ROOF PLAN
 Scale: 1:25

A1.02

Issues / Revisions

DATE	ISSUE
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2021-09-17	ISSUED FOR TENDER RE-ISSUED FOR BP
2022-10-18	ISSUED FOR TENDER

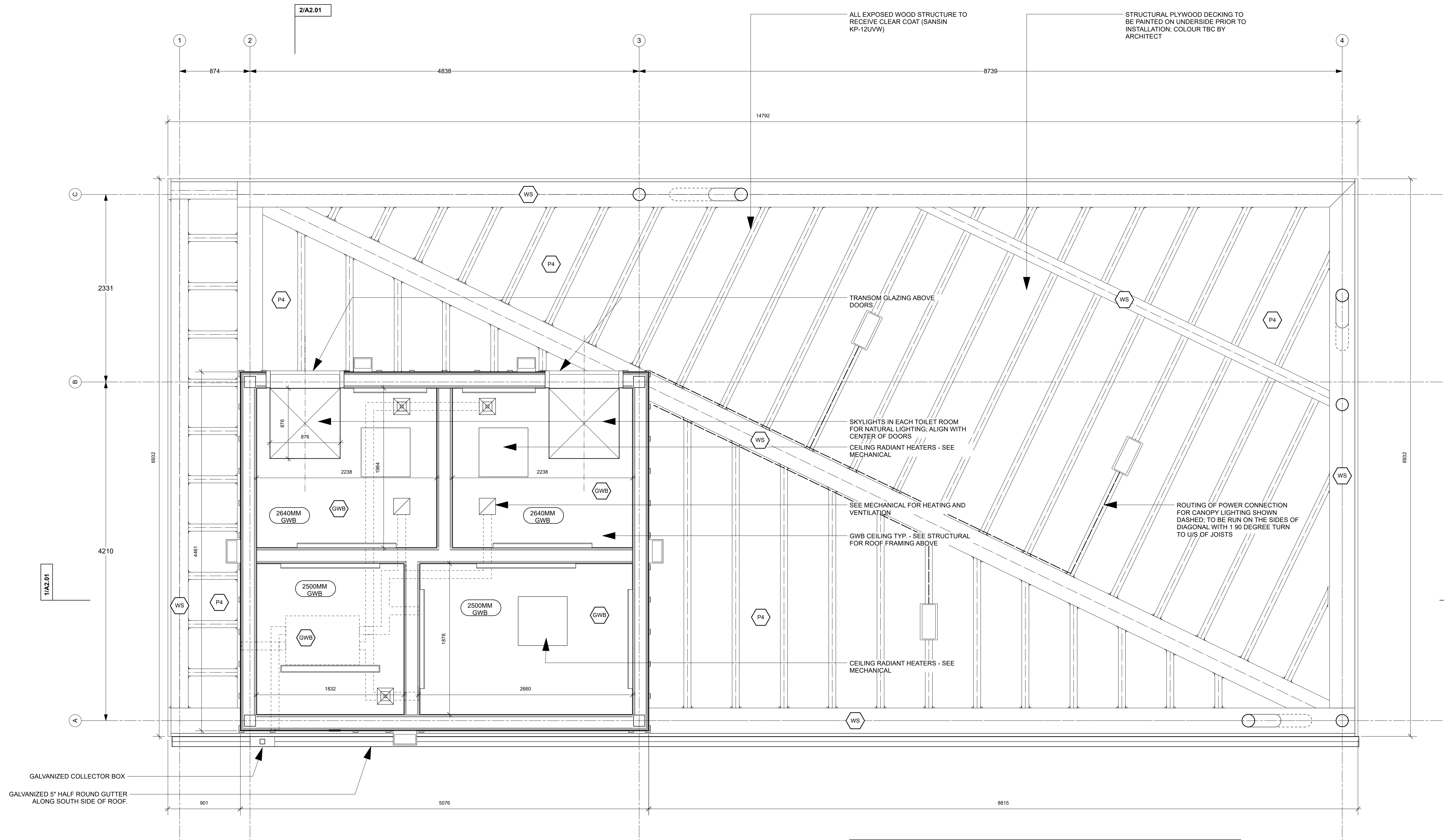


RCP

Project ID	Drawn	Checked
2004	JR	TH

Scale	Date
AS NOTED	OCTOBER 18, 2022

A1.03

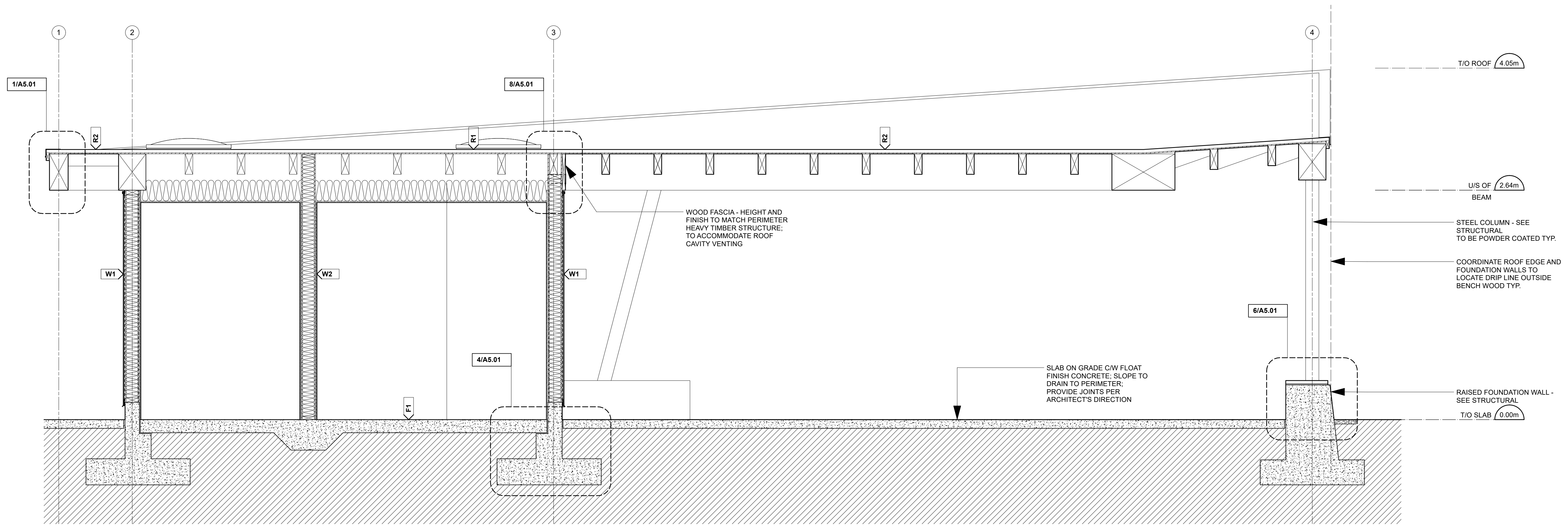


RCP LEGEND

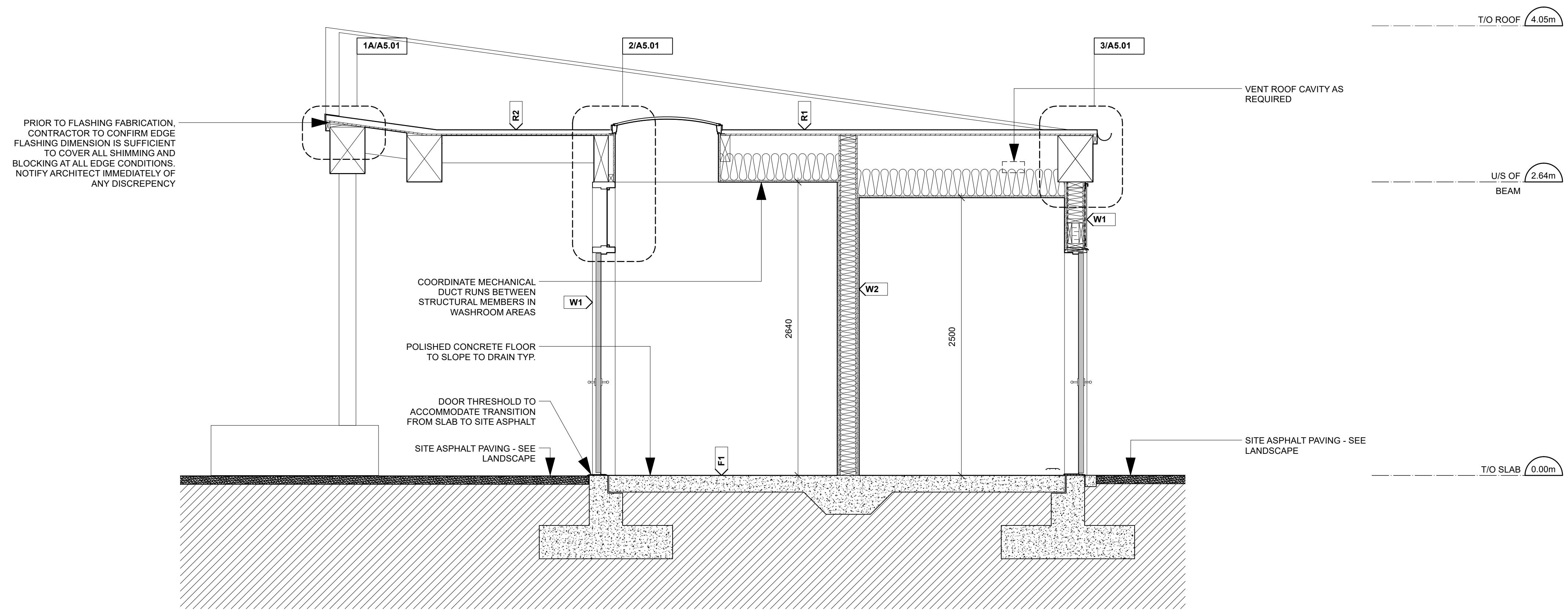
	LINEAR LIGHT FIXTURE (CEILING/WALL MOUNTED) - SEE ELECTRICAL FOR SIZING		RADIANT HEATING PANEL - SEE MECHANICAL
	SCONCE LIGHT FIXTURE - SEE ELECTRICAL FOR SIZING		AIR DIFFUSER - SEE MECHANICAL
	CANOPY LIGHT FIXTURE - SEE ELECTRICAL FOR POWER ROUTING		AIR VENTILATION - SEE MECHANICAL

1 REFLECTED CEILING PLAN
 Scale: 1:25

2/A2.01



1 EAST/WEST BUILDING SECTION
Scale: 1:25



2 NORTH/SOUTH BUILDING SECTION
Scale: 1:25

Project
JACK BAGLEY COMMUNITY
PARK WASHROOM BUILDING
NANAIMO BC
Owner / Client
REGIONAL DISTRICT OF NANAIMO

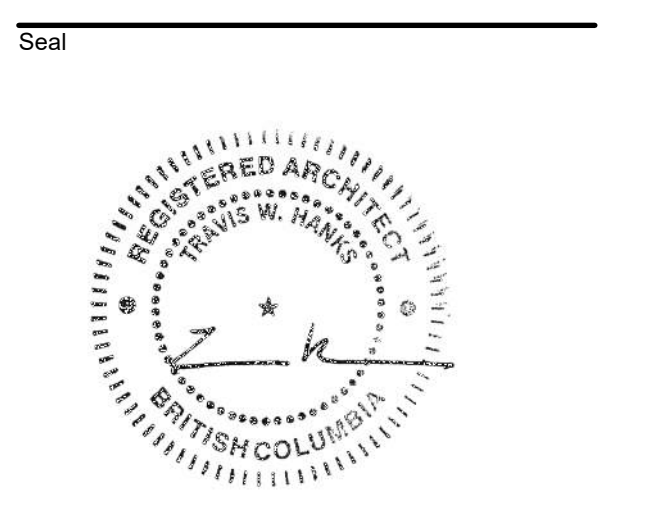
Architect
haeccity
STUDIO ARCHITECTURE INC

Consultant

Consultant Team

Issues / Revisions

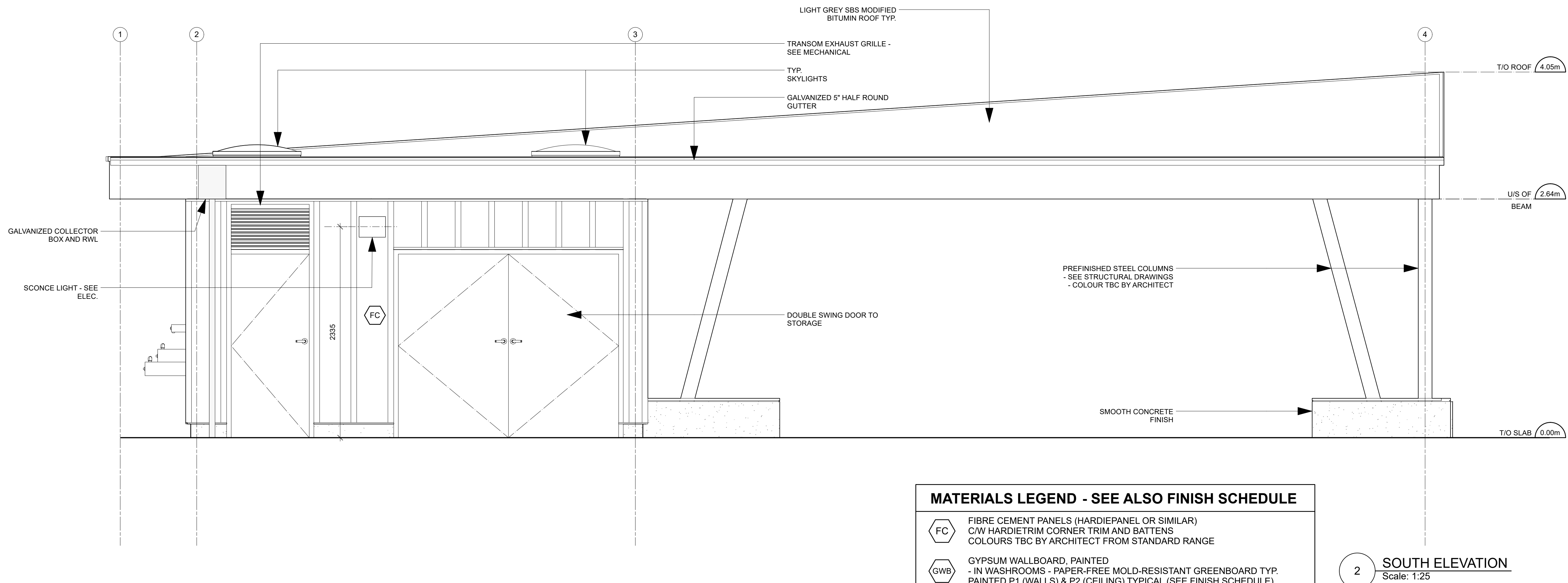
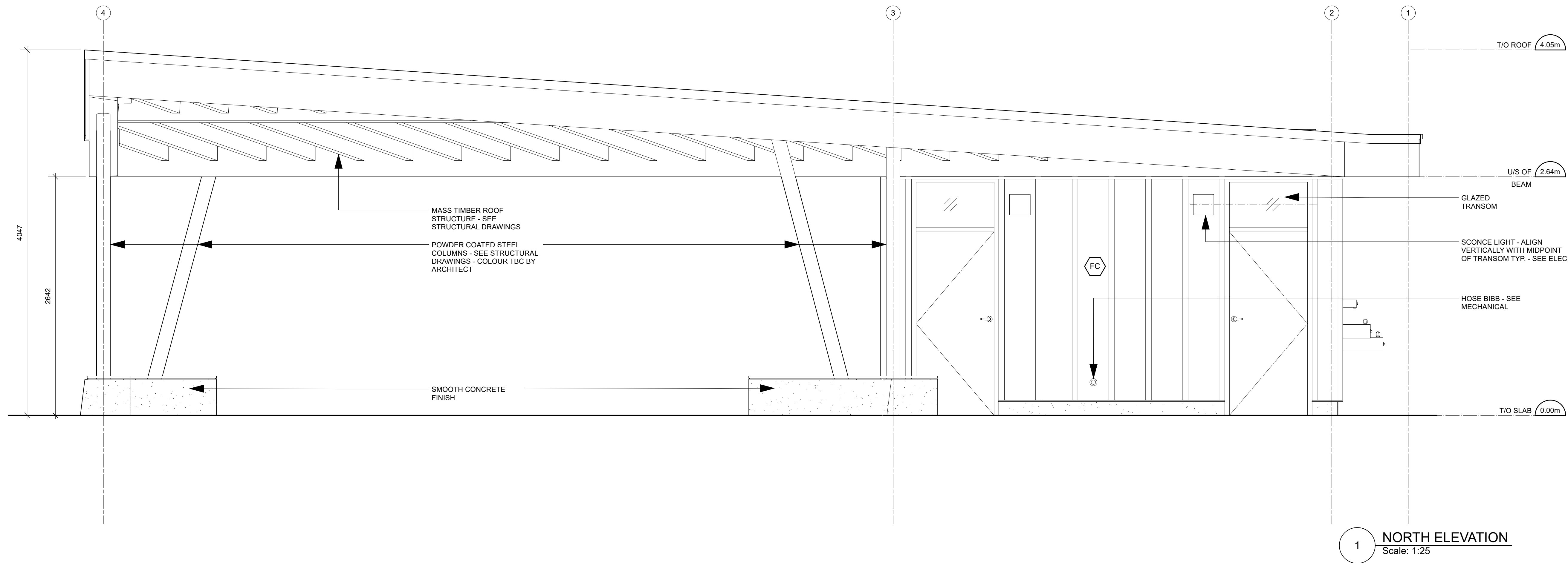
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2022-10-18	ISSUED FOR TENDER






Sheet Title
BUILDING SECTIONS

Project ID	2004	Drawn	JR	Checked	TH
Scale	AS NOTED	Date	OCTOBER 18, 2022		
Sheet No.					

A2.01

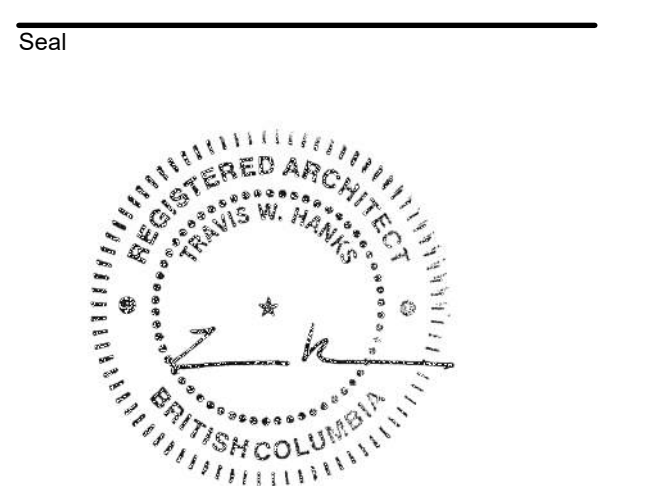


MATERIALS LEGEND - SEE ALSO FINISH SCHEDULE

	FIBRE CEMENT PANELS (HARDIEPANEL OR SIMILAR) C/W HARDIETRIM CORNER TRIM AND BATTENS COLOURS TBC BY ARCHITECT FROM STANDARD RANGE
	GYPSUM WALLBOARD, PAINTED - IN WASHROOMS - PAPER-FREE MOLD-RESISTANT GREENBOARD TYP. PAINTED P1 (WALLS) & P2 (CEILING) TYPICAL (SEE FINISH SCHEDULE)
	CERAMIC TILE C/W TILE COVE BASE AND QUARTER ROUND TRIM

Issues / Revisions

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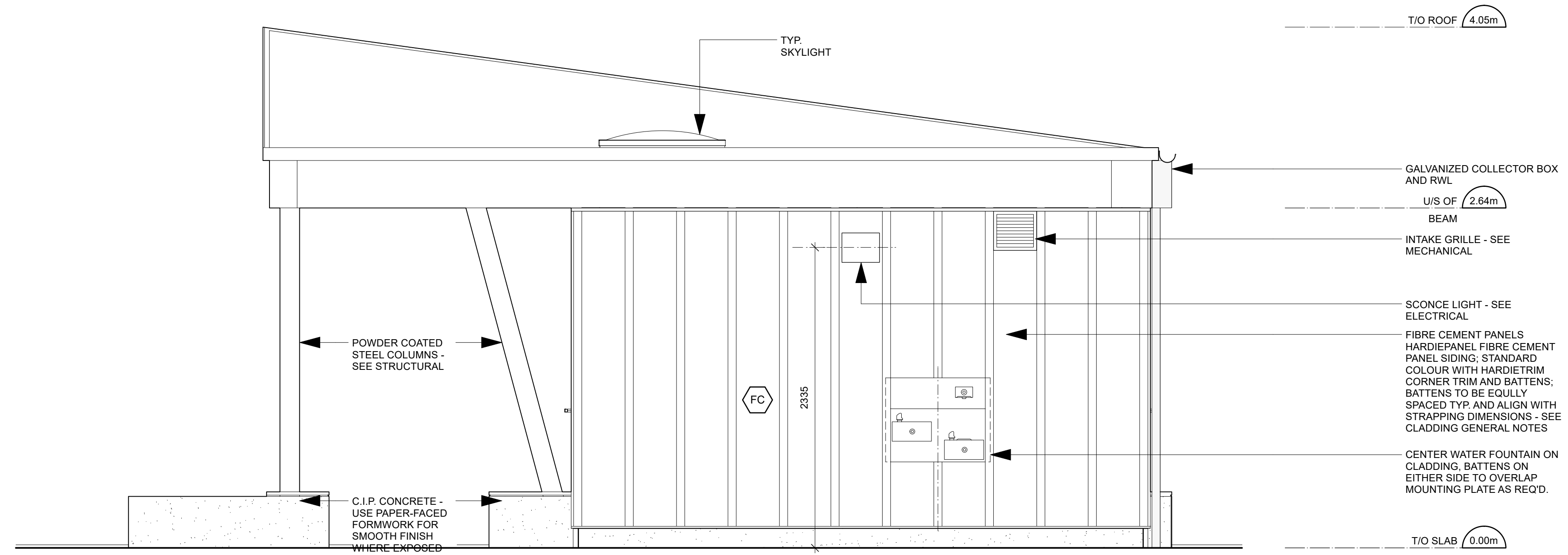
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BUILDING ELEVATIONS

Project ID	Drawn	Checked
2004	JR	TH
Scale	Date	
AS NOTED	OCTOBER 18, 2022	
Sheet No.		

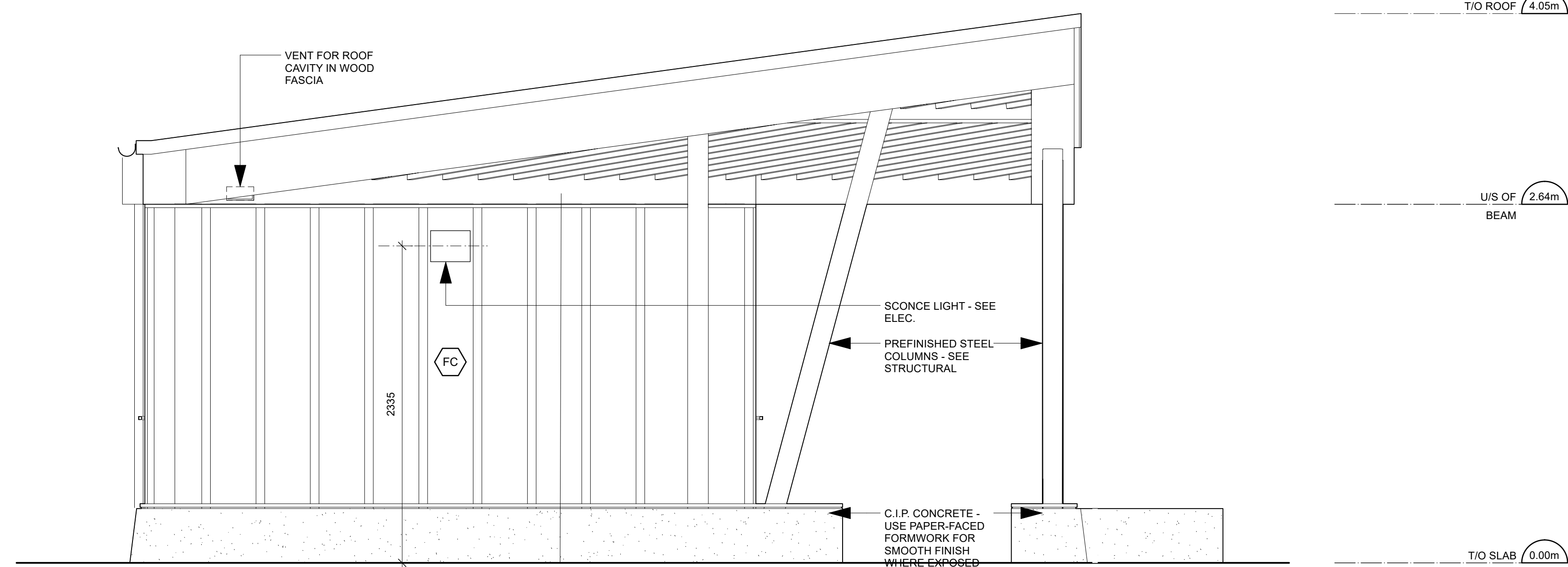
A3.01

CLADDING GENERAL NOTES

1. Submittals: Submit product data, shop drawings, and samples in accordance with Architect's requirements.
2. Sequencing: Coordinate installation with flashings, fascia, and other adjoining construction to ensure proper sequencing.
3. Quality Assurance: Engage experienced installer with a minimum of 3 years experience who has completed systems similar in material, design, and extent to that indicated for Project and with record of successful performance. Installation to provide for thermal movement of component materials, movement in wall system, and between wall system and building structure, caused by structural movements, without permanent distortion, buckling, racking of joints, failure of joint seals, undue stress on fasteners, or other detrimental effects.
4. Contractor to coordinate site walk-through and with Installer and Architect to review scope and detailing prior to commencing the work.
5. Fibre Cement Board Panels: Panels made from fibre reinforced cement board, free from asbestos fibres. Basis of design: Hardie Panel ColorPlus by James Hardie, Inc. or better.
6. Trim and Battens: Cladding trim and battens basis of design: HardieTrim ColorPlus by James Hardie Inc. or better. Thickness = 3/4", Width = 2 1/2", Texture = Smooth.
7. Fasteners: Corrosion resistant hot dipped galvanized or stainless steel fasteners as recommended by siding manufacturer for materials being fastened to and as follows:
A. Fastening to Wood: Ribbed, bugle head screws of sufficient length to penetrate a minimum of 25 mm into substrate.
B. Fastening to Metal: Ribbed, bugle head screws of sufficient length to penetrate a minimum of 6 mm or 3 - screw threads into substrate.
8. Flashing: Provide pre-finished, galvanized sheet steel flashing and trims in accordance with details and Consultant direction. Colour TBC by Architect.
9. Installation: Ensure air/vapour barrier installation is complete and has been reviewed by the Consultant. Building surfaces shall be smooth, clean and dry, and free from defects detrimental to the installation of the system. Install materials in strict accordance with manufacturer's installation instructions.
10. Finishing: Provide accessories and flashing matching colour and texture of adjacent siding, unless otherwise indicated. Site paint exposed cut edges to match colour of board, trim, or plank. Provide manufacturers standard touch-up kit for each colour provided.
12. Prepare mock-ups of cladding installation for Consultant review.



1 WEST ELEVATION
Scale: 1:25



2 EAST ELEVATION
Scale: 1:25

MATERIALS LEGEND - SEE ALSO FINISH SCHEDULE

	FIBRE CEMENT PANELS (HARDIPANEL OR SIMILAR) C/W HARDIETRIM CORNER TRIM AND BATTENS COLOURS TBC BY ARCHITECT FROM STANDARD RANGE
	GYPSUM WALLBOARD, PAINTED - IN WASHROOMS - PAPER-FREE MOLD-RESISTANT GREENBOARD TYP. PAINTED P1 (WALLS) & P2 (CEILING) TYPICAL (SEE FINISH SCHEDULE)
	CERAMIC TILE C/W TILE COVE BASE AND QUARTER ROUND TRIM

Project
**JACK BAGLEY COMMUNITY
PARK WASHROOM BUILDING**
NANAIMO BC

Owner / Client
REGIONAL DISTRICT OF NANAIMO

Architect



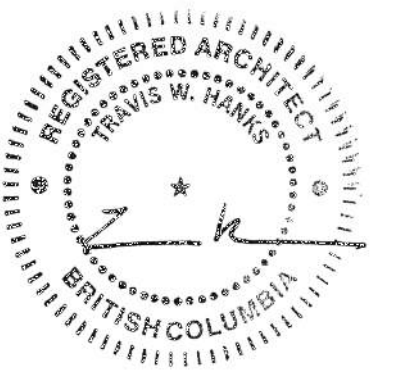
Consultant

Consultant Team

Issues / Revisions

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Seal

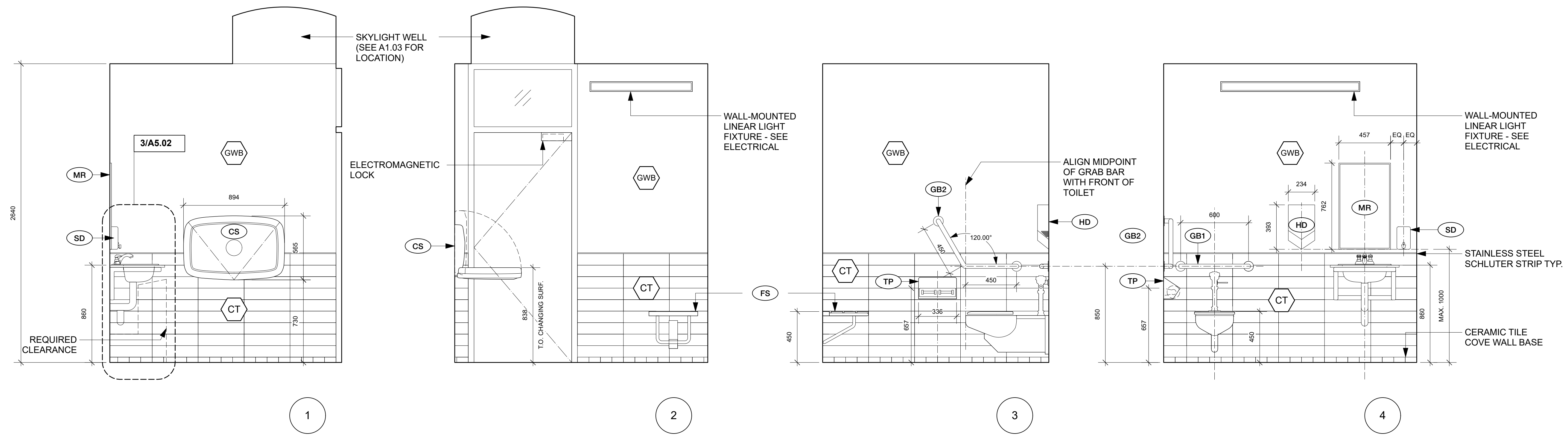


Sheet Title

BUILDING ELEVATIONS

Project ID	Drawn	Checked
2004	JR	TH
Scale	Date	
AS NOTED	OCTOBER 18, 2022	
Sheet No.		

A3.02



INTERIOR ELEVATIONS
 Scale: 1:20

MATERIALS LEGEND - SEE ALSO FINISH SCHEDULE

- FC** FIBRE CEMENT PANELS (HARDIEPANEL OR SIMILAR)
 C/W HARDIETRIM CORNER TRIM AND BATTENS
 COLOURS TBC BY ARCHITECT FROM STANDARD RANGE
- GWB** GYPSUM WALLBOARD, PAINTED
 - IN WASHROOMS - PAPER-FREE MOLD-RESISTANT GREENBOARD TYP.
 PAINTED P1 (WALLS) & P2 (CEILING) TYPICAL (SEE FINISH SCHEDULE)
- CT** CERAMIC TILE
 C/W TILE COVE BASE AND QUARTER ROUND TRIM

FITTINGS LEGEND

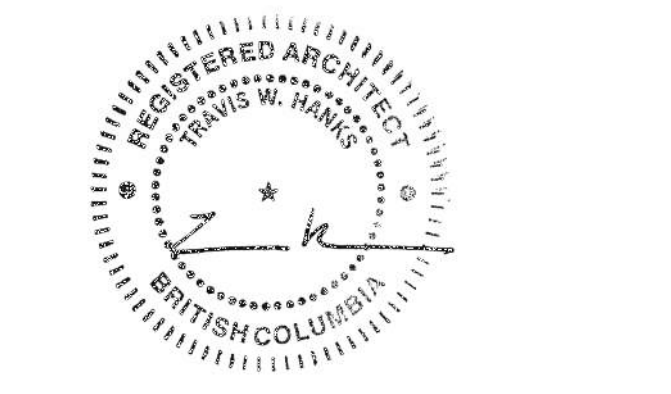
- CS** WALL-MOUNTED FOLD-DOWN BABY CHANGING STATION -
 KOALA CARE PRODUCTS KB200-SS OR APPROVED EQUIVALENT
- FS** FOLDING SEAT -
 BOBRICK B-5191 OR APPROVED EQUIVALENT
- GB1** GRAB BAR -
 GALLERY SPECIALTY C04 STRAIGHT GRAB BAR 24" OR APPROVED EQ.
- GB2** GRAB BAR -
 GALLERY SPECIALTY C31 120 DEGREE GRAB BAR OR APPROVED EQ.
- HD** HAND DRYER -
 DYSON AIRBLADE V HU02 (Sprayed Nickel) OR APPROVED EQUIVALENT
- MR** MIRROR -
 FROST STOCK SERIES 941-1830 OR APPROVED EQUIVALENT
- SD** SOAP DISPENSER -
 FROST TANK TYPE SOAP DISPENSER 708A OR APPROVED EQUIVALENT
- TP** ROLL TOILET TISSUE DISPENSER WITH HOOD -
 FROST 158S DOUBLE ROLL UNIT OR APPROVED EQUIVALENT

NOTE: SEE MECHANICAL DRAWINGS FOR PLUMBING FIXTURE SPECIFICATIONS

Issues / Revisions

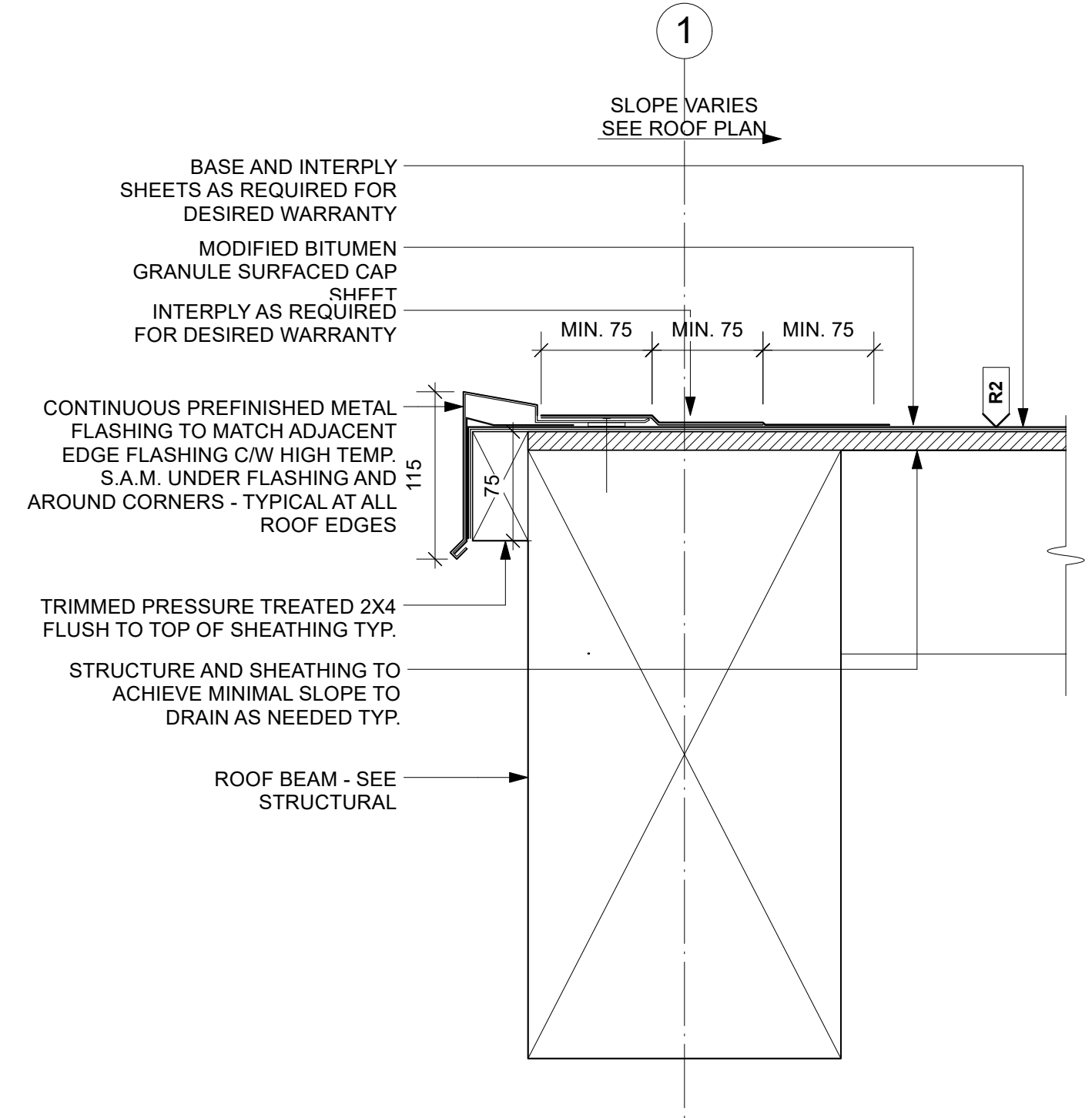
DATE	ISSUE
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2021-09-17	ISSUED FOR TENDER RE-ISSUED FOR BP
2022-10-18	ISSUED FOR TENDER

Seal

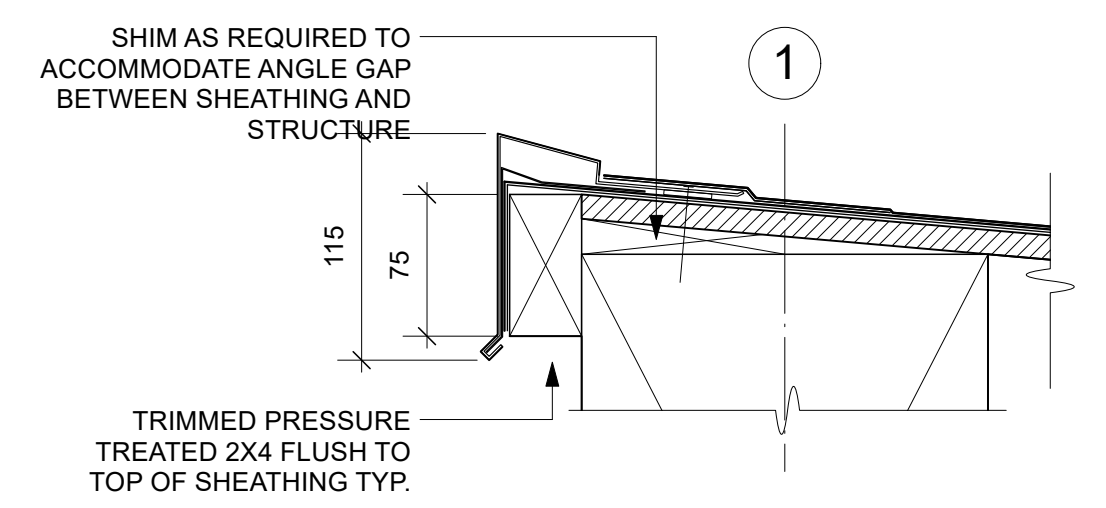


Sheet Title
INTERIOR ELEVATIONS

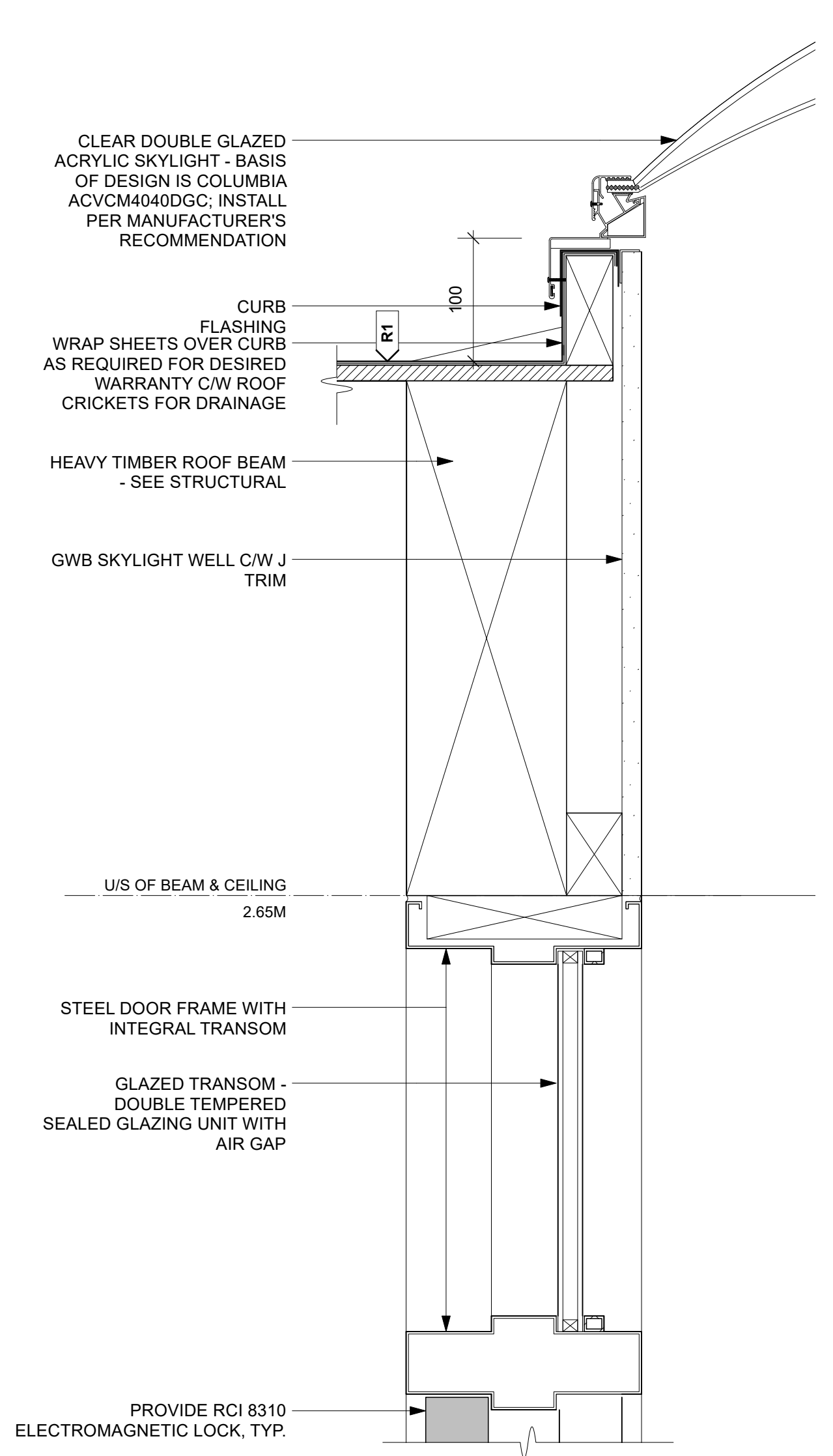
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2004	JR	TH
Scale	Date	
AS NOTED	OCTOBER 18, 2022	
Sheet No.		



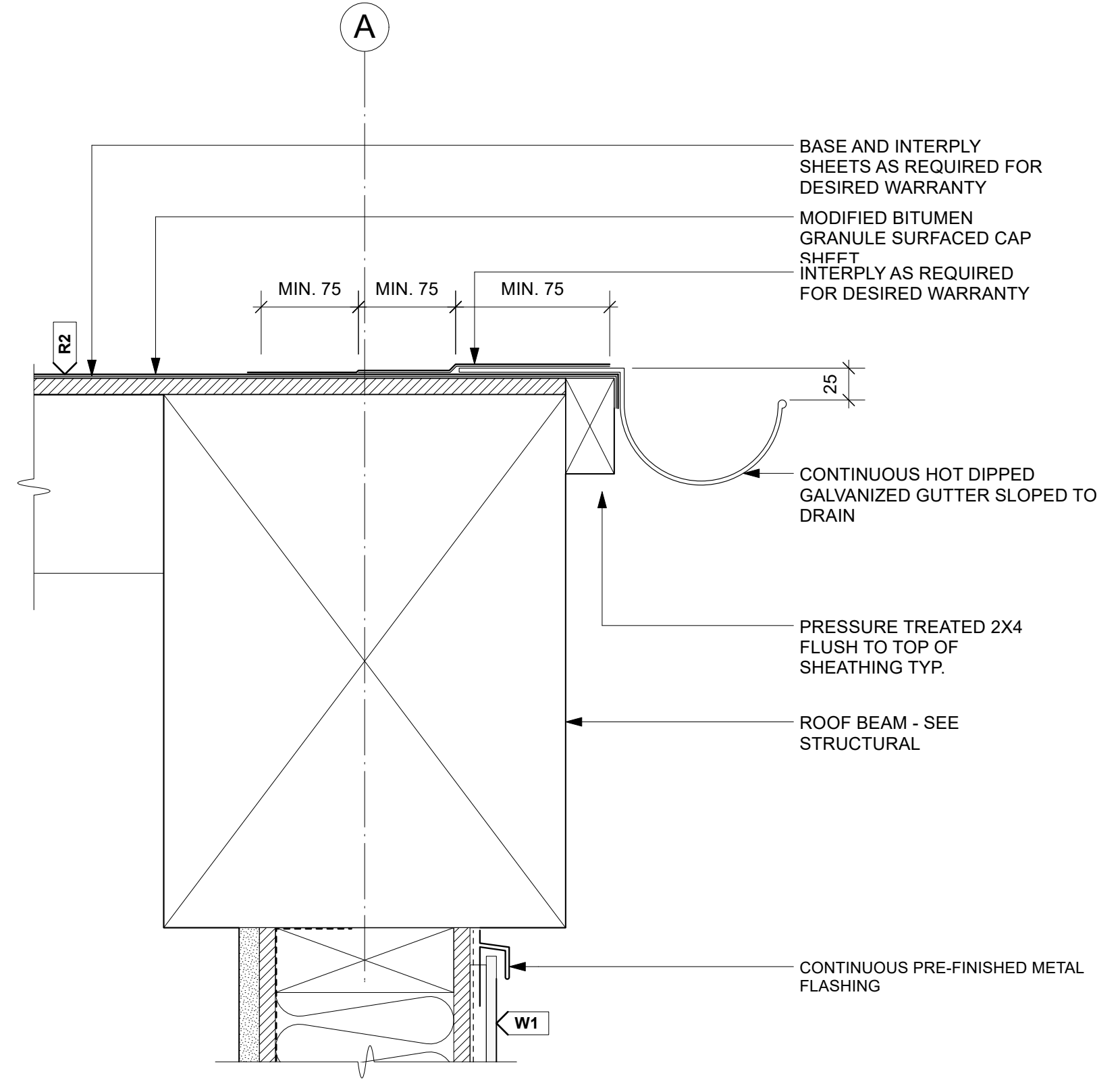
1 **ROOF DETAIL**
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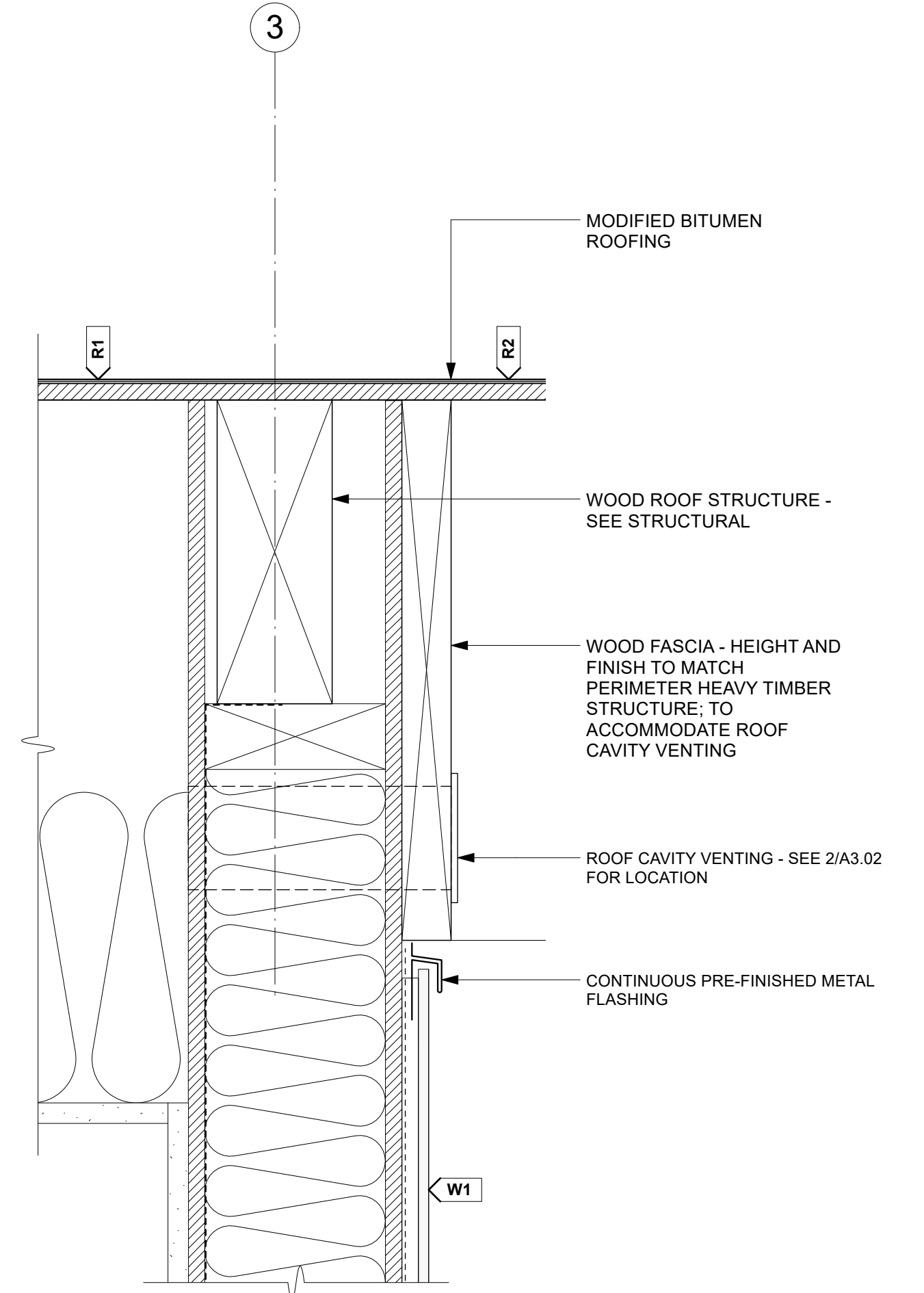
1A **ROOF DETAIL @ SLOPE**
 Scale: 1:4



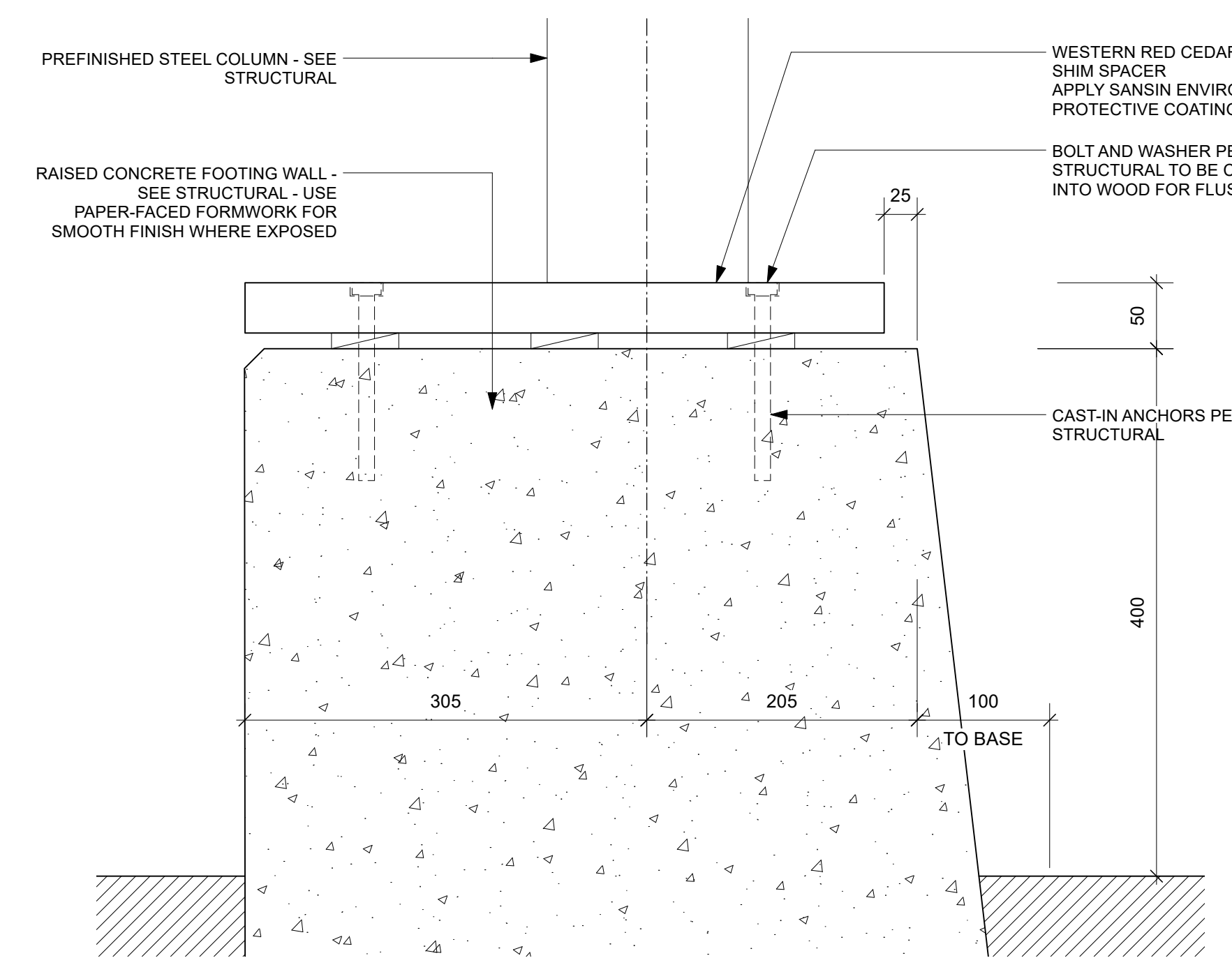
2 **SKYLIGHT & DOOR HEADER DETAIL**
 Scale: 1:4



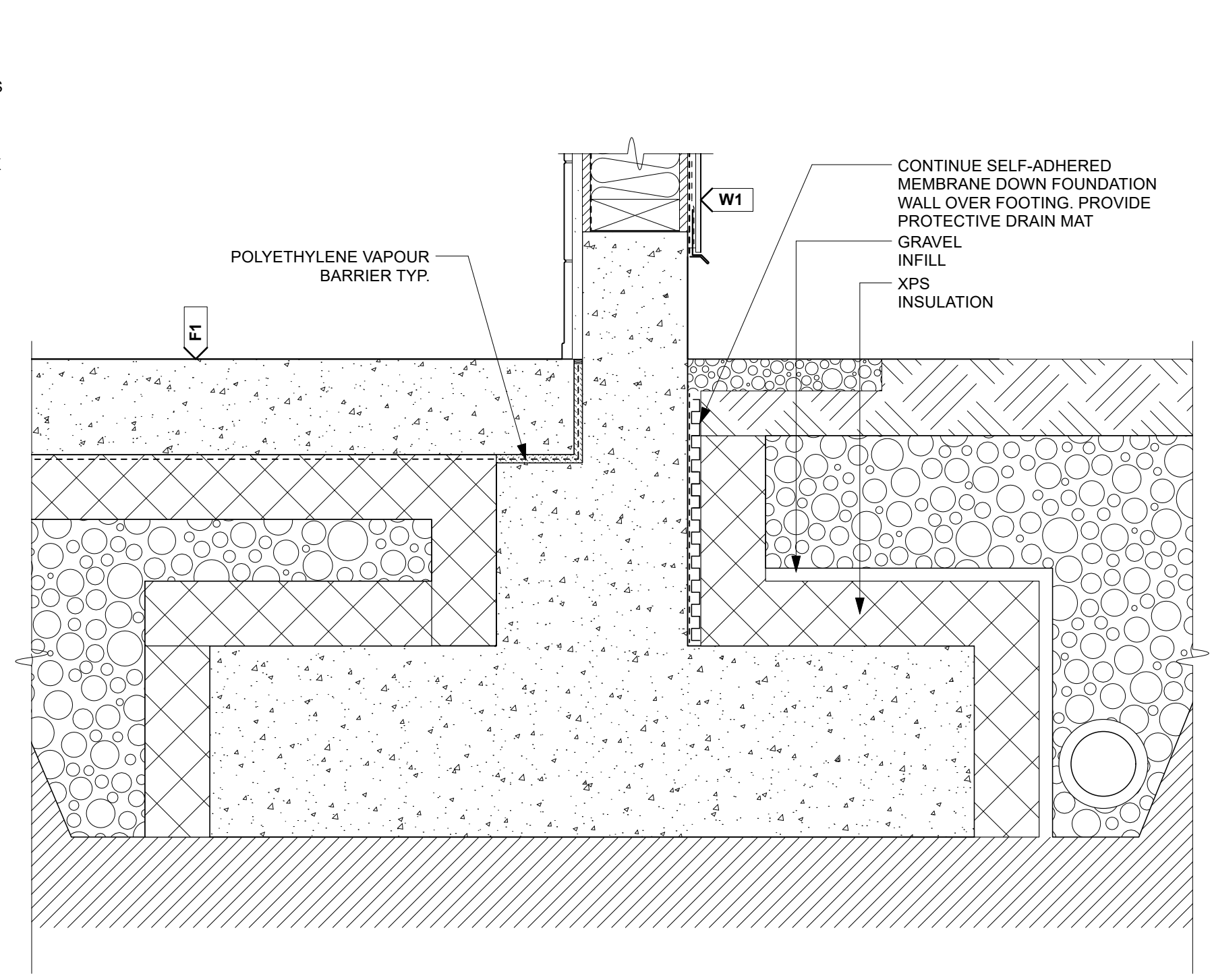
3 **GUTTER DETAIL**
 Scale: 1:4



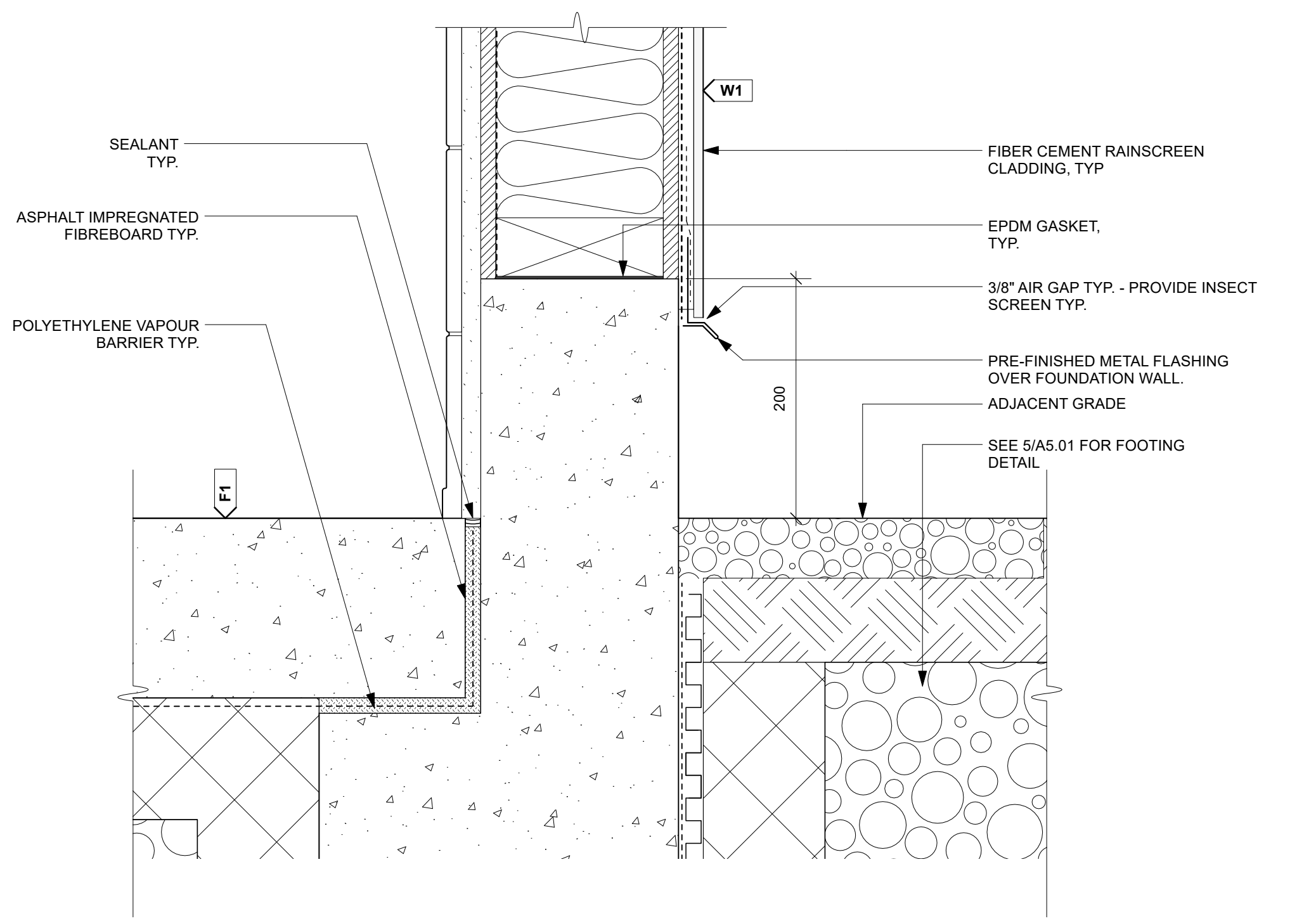
8 **FASCIA DETAIL**
 Scale: 1:4



6 **BENCH DETAIL**
 Scale: 1:4



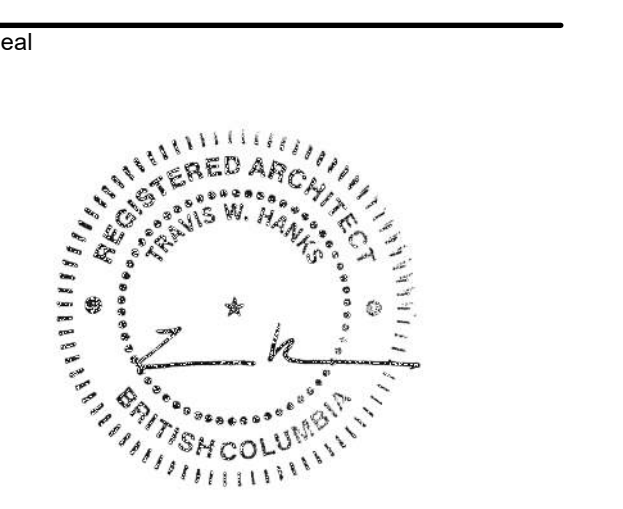
5 **FOOTING DETAIL**
 Scale: 1:8



4 **WALL BASE DETAIL**
 Scale: 1:4

Issues / Revisions

DATE	ISSUE
2021-07-07	ISSUED FOR 95% DD/BP
2021-09-17	ISSUED FOR TENDER RE-ISSUED FOR 8P
2022-10-18	ISSUED FOR TENDER

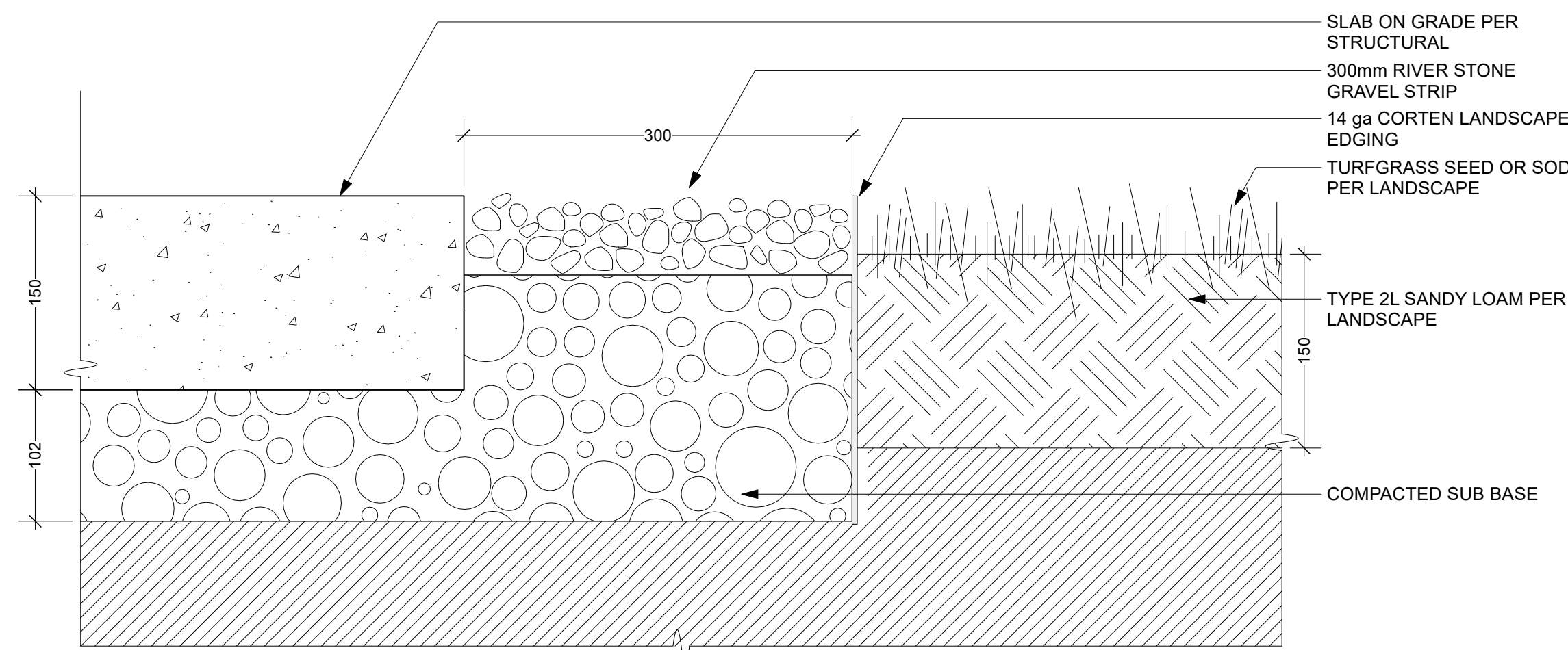


Sheet Title
DETAILS

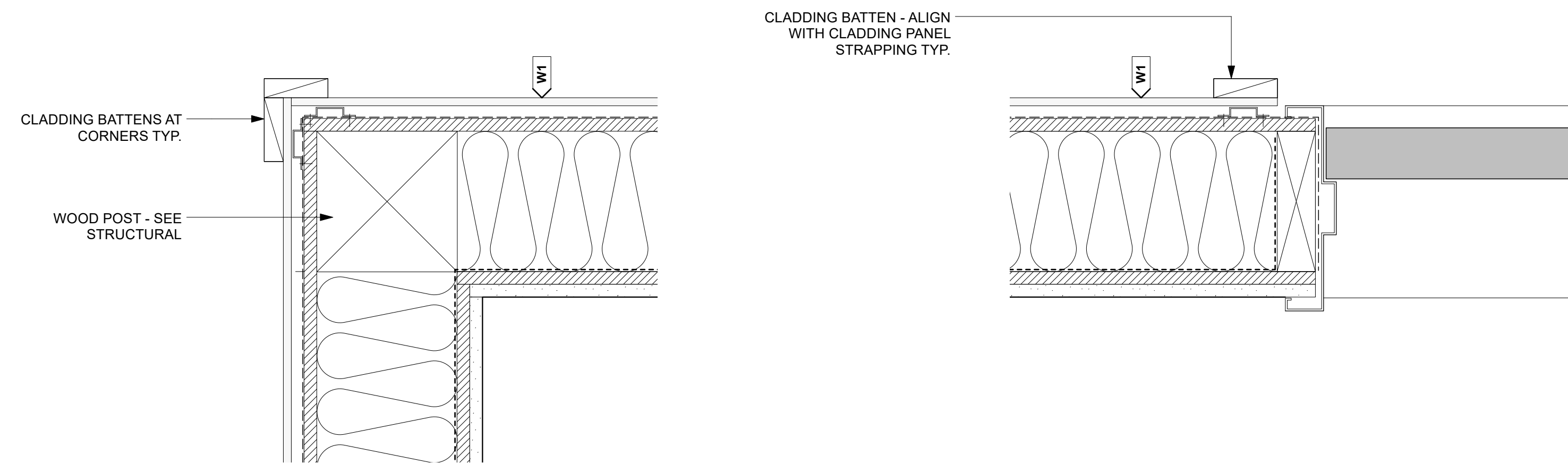
Project ID	Drawn	Checked
2004	JR	TH
Scale	Date	
AS NOTED	OCTOBER 18, 2022	
Sheet No.		

A5.01

DATE	ISSUE
2021-07-07	ISSUED FOR 95% DD/BP
2021-09-17	ISSUED FOR TENDER RE-ISSUED FOR BP
2022-10-18	ISSUED FOR TENDER

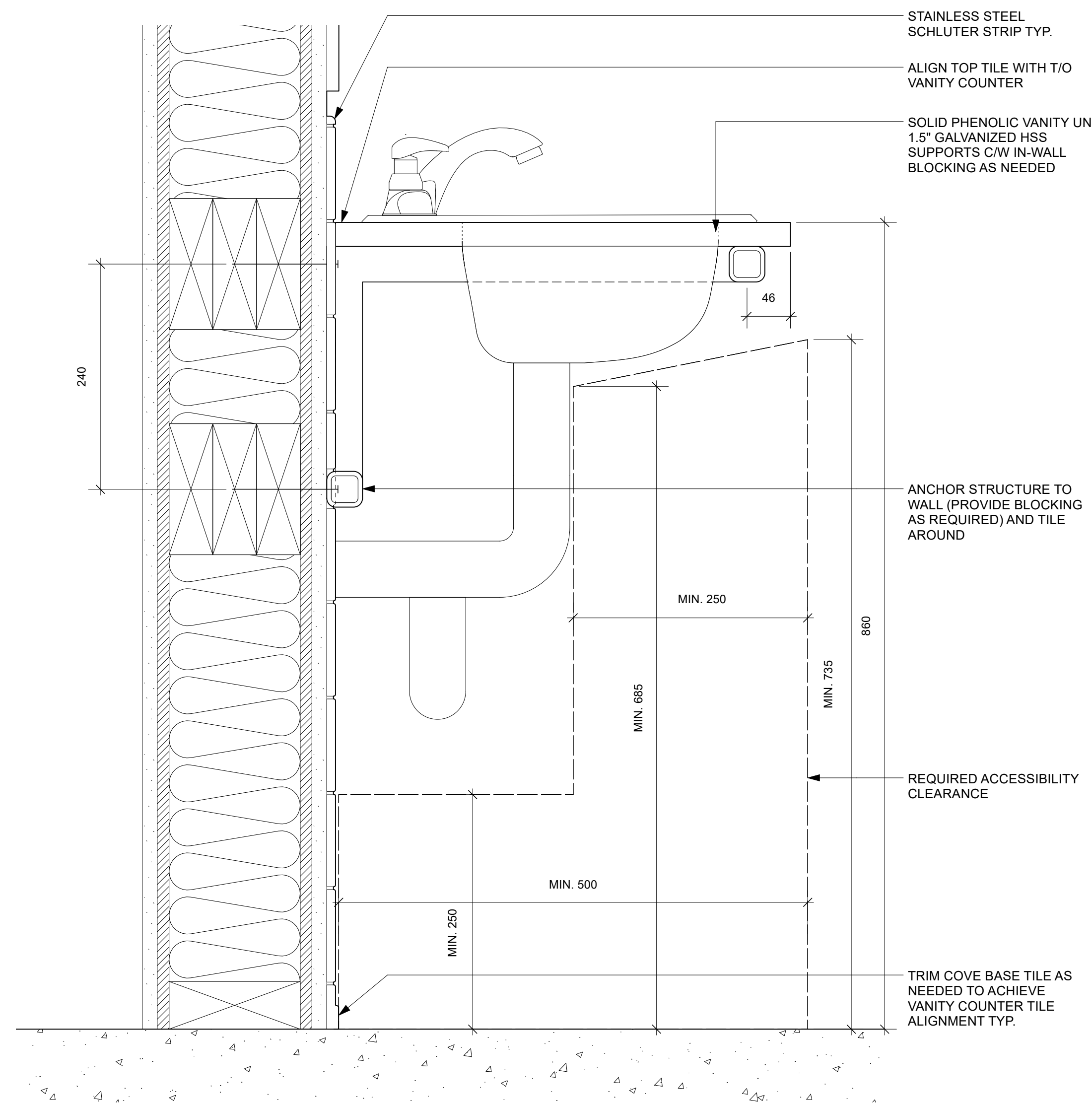


5 DRIP STRIP DETAIL
 Scale: 1:4



2 TYPICAL CLADDING DETAIL @ CORNER
 Scale: 1:4

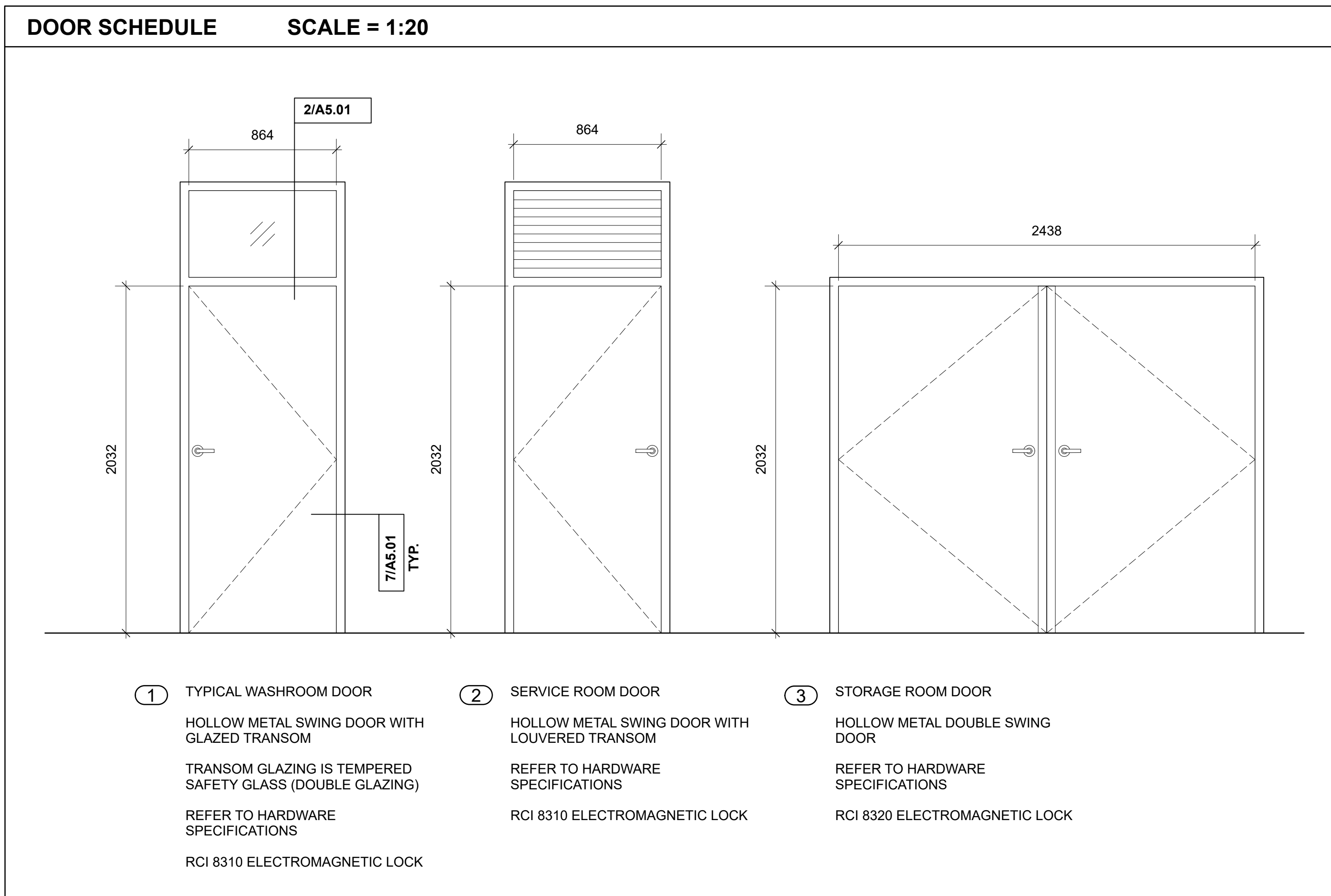
1 DOOR JAMB DETAIL
 Scale: 1:4



3 VANITY DETAIL
 Scale: 1:4

JACK BAGLEY PARK WASHROOM PAVILION									
FINISH SCHEDULE - BASIS OF DESIGN (ALTERNATES BY CLIENT APPROVAL)									
TAG	DESCRIPTION	AREA	CARRIER	PRODUCT	NUMBER	FINISH	COLOUR	THICKNESS	NOTES
CT	CERAMIC TILE	WASHROOMS	DALTILE	COLORMATCH GLAZED VERAMIC	-	MATTE	FERN 80	-	4X16 TILES C/W MATCHING 4X4 COVE BASE (TRIMMED AS REQUIRED)
FC	FIBRE CEMENT BOARD PANEL SIDING	EXTERIOR SIDING	THOMAS HARDIE	HARDIR PANEL SMOOTH	-	COLOUR PLUS SMOOTH	FROM STANDARD SELECTION	5/16"	C/W HARDIETRIM BATTEN BOARDS (STANDARD COLOURPLUS SMOOTH FINISH)
GWB	GYPSUM WALL BOARD	INTERIOR WALLS & CEILING	-	-	-	-	-	SEE ASSEMBLY SCHEDULE	USE PAPER-FREE MOLD-RESISTANT GREENBOARD IN WASHROOMS TYP.
P1	LATEX PAINT	INTERIOR WALLS	BENJAMIN MOORE	-	TBC	EGGSHELL	STANDARD COLOUR TO BE CONFIRMED	-	SUBMIT SAMPLES FOR ARCHITECT APPROVAL
P2	LATEX PAINT	INTERIOR CEILINGS	BENJAMIN MOORE	-	TBC	SATIN	STANDARD COLOUR TO BE CONFIRMED	-	SUBMIT SAMPLES FOR ARCHITECT APPROVAL
P3	LATEX PAINT	DOORS	BENJAMIN MOORE	-	TBC	SEMI-GLOSS	STANDARD COLOUR TO BE CONFIRMED	-	SUBMIT SAMPLES FOR ARCHITECT APPROVAL
P4	ACRYLIC PAINT	UNDERSIDE OF ROOF SHEATHING	BENJAMIN MOORE	-	TBC	-	STANDARD COLOUR TO BE CONFIRMED	-	SUBMIT SAMPLES FOR ARCHITECT APPROVAL
PC	POLISHED CONCRETE	FLOOR IN ALL AREAS	-	-	-	VARIES	NATURAL	-	APPLY DENSIFIER WHERE NOTED
SC	SMOOTH CONCRETE	CAST IN PLACE CONCRETE BENCHES	-	-	-	-	-	-	USE PAPER-FACED FORMWORK FOR SMOOTH FINISH
SP	SOLID PHENOLIC	WASHROOM VANITY COUNTER	BOBRICK	SIERRASERIES	-	-	STANDARD COLOUR TO BE CONFIRMED	3/4"	SUBMIT SAMPLES FOR ARCHITECT APPROVAL
WS	WOOD STAIN	EXPOSED TIMBER STRUCTURE	SANSIN	ENVIRO STAIN	KP-12UVW	-	GREY	-	SUBMIT SAMPLES FOR ARCHITECT APPROVAL

ASSEMBLY SCHEDULE						
WALL ASSEMBLIES						
WALL TYPE	PLAN	DESCRIPTION	REQUIRED			REMARKS
			FRR	STC	RSI	
W1		EXTERIOR WALL <ul style="list-style-type: none"> 5/16" FIBRE CEMENT BOARD 1/2" ALUMINUM CLIPS AIR-MOISTURE BARRIER 1/2" PLYWOOD (SEE STRUCTURAL) 5 1/2" WOOD STUDS 5 1/2" MINERAL WOOL INSULATION VAPOUR BARRIER 1/2" PLYWOOD (SEE STRUCTURAL) 5/8" TYPE X GYPSUM WALLBOARD 	N/A	N/A	3.60	- INCLUDE BLOCKING AS NEEDED FOR GRAB BAR AND FIXTURE SUPPORT - INTERIOR WALL FINISH AS NOTED IN ELEVATIONS (PAINTED TYP.)
W2		INTERIOR WALL <ul style="list-style-type: none"> 5/8" TYPE X GYPSUM WALLBOARD 1/2" PLYWOOD (SEE STRUCTURAL) 5 1/2" WOOD STUDS 5 1/2" MINERAL WOOL INSULATION 1/2" PLYWOOD (SEE STRUCTURAL) 5/8" TYPE X GYPSUM WALLBOARD 	N/A	N/A	N/A	- INCLUDE BLOCKING AS NEEDED FOR GRAB BAR AND FIXTURE SUPPORT - INTERIOR WALL FINISH AS NOTED IN ELEVATIONS (PAINTED TYP.)
ROOF ASSEMBLIES						
R1		MODIFIED BITUMEN ROOF <ul style="list-style-type: none"> MODIFIED BITUMEN 1/2" PLYWOOD SHEATHING WOOD STRUCTURE (SEE STRUCTURAL) 9 1/2" MINERAL WOOL INSULATION VAPOUR BARRIER 5/8" TYPE X GYPSUM WALLBOARD 	N/A	N/A	5.46	- SLOPE STRUCTURE TO ACHIEVE MINIMUM SLOPE TO DRAIN AS NEEDED - GWB CEILINGS TO BE PAINTED TYP.
R2		MODIFIED BITUMEN CANOPY <ul style="list-style-type: none"> MODIFIED BITUMEN 1/2" PLYWOOD SHEATHING WOOD STRUCTURE (SEE STRUCTURAL) 	N/A	N/A	N/A	- SLOPE STRUCTURE TO ACHIEVE MINIMUM SLOPE TO DRAIN AS NEEDED - UNDERSIDE OF SHEATHING TO BE PAINTED (COLOUR TBC BY ARCHITECT)
FLOOR ASSEMBLIES						
F1		FINISHED CONCRETE FLOOR <ul style="list-style-type: none"> 6" POLISHED REINFORCED CONCRETE POLYETHYLENE VAPOUR BARRIER 4" XPS RIGID INSULATION 4" GRAVEL FILL, NO FINES 	N/A	N/A	N/A	- SLOPE TO DRAIN IN WASHROOMS - APPLY CONCRETE DENSIFIER IN WASHROOMS



MATERIALS LEGEND - SEE ALSO FINISH SCHEDULE

	FIBRE CEMENT PANELS (HARDIE/PANEL OR SIMILAR) C/W HARDIE/TRIM CORNER TRIM AND BATTENS COLOURS TBC BY ARCHITECT FROM STANDARD RANGE
	GYPSUM WALLBOARD, PAINTED - IN WASHROOMS - PAPER-FREE MOLD-RESISTANT GREENBOARD TYP. PAINTED P1 (WALLS) & P2 (CEILING) TYPICAL (SEE FINISH SCHEDULE)
	CERAMIC TILE C/W TILE COVE BASE AND QUARTER ROUND TRIM

RCP LEGEND

	LINEAR LIGHT FIXTURE (CEILING/WALL MOUNTED) - SEE ELECTRICAL FOR SIZING		RADIANT HEATING PANEL - SEE MECHANICAL
	SCONCE LIGHT FIXTURE - SEE ELECTRICAL FOR SIZING		AIR DIFFUSER - SEE MECHANICAL
	CANOPY LIGHT FIXTURE - SEE ELECTRICAL FOR POWER ROUTING		AIR VENTILATION - SEE MECHANICAL

GENERAL NOTES					
<p>REGULATORY REQUIREMENTS</p> <p>References and Codes: Perform Work in accordance with 2018 BC Building Code and authorities having jurisdiction including amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.</p> <p>Meet or exceed requirements of: 1. Contract documents. 2. Specified standards, codes and referenced documents. 3. Municipalities' requirements</p> <p>REFERENCES 1 Canadian Construction Documents Committee (CCDC) 2, Agreement Between Owner and Construction Manager for Services and Construction.</p>	<p>QUALITY CONTROL</p> <p>1. Inspections: .1 Allow Consultant access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress. .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Consultant instructions, or law of Place of Work. .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or tests satisfactorily completed and make good such Work. .4 Consultant will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction, if such Work is found in accordance with Contract Documents, Consultant shall pay cost of examination and replacement.</p> <p>2. Independent Inspection Agencies: .1 Independent Inspection/Testing Agencies will be selected by Consultant for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Owner. .2 Provide equipment required for executing inspection and testing by appointed agencies. .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents. .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Consultant at no cost to Owner. Pay costs for retesting and reinspection.</p> <p>3. Access to Work: .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants. .2 Co-operate to provide reasonable facilities for such access.</p> <p>4. Procedures: .1 Notify appropriate agency in advance of requirement for tests, in order that attendance arrangements can be made. .2 Submit samples or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work. .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.</p>	<p>5. Manufacturer's Instructions: .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers. .2 Notify Consultant in writing, of conflicts between specifications and manufacturer's instructions.</p> <p>6. Rejected Work: .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Consultant as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents. .2 Make good other Contractor's work damaged by such removals or replacements promptly. .3 If in opinion of Consultant it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Consultant.</p> <p>7. Reports: .1 Submit electronic copies of inspection and test reports to Consultant. .2 Provide copies to subcontractor of work being inspected or tested and manufacturer or fabricator of material being inspected or tested.</p> <p>8. Tests and Mix Designs: .1 Furnish test results and mix designs as requested. .2 Cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work will be appraised by Consultant and may be authorized as recoverable.</p> <p>9. Mock-Ups: .1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of Sections required to provide mock-ups. .2 Construct in locations acceptable to Consultant or as specified in specific Section. .3 Prepare mock-ups for Consultant's review with reasonable promptness and in orderly sequence, to not cause delays in Work. .4 Failure to prepare mock-ups in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed. .5 If requested, Consultant will assist in preparing schedule fixing dates for preparation. .6 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed and when.</p> <p>10. Equipment and Systems: .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.</p>	<p>CLOSEOUT PROCEDURES</p> <p>1. Inspection and Declaration: .1 Contractor's Inspection: Contractor and Subcontractors: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents. Notify Consultant in writing of satisfactory completion of Contractor's Inspection and that corrections have been made. .2 Request Consultant's Field Review. .3 Consultant's Field Review: Consultant and Contractor will perform review of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly. .4 Completion: submit written certificate of completion. .5 Final Inspection: when items noted above are completed, request final inspection of Work by Owner, Consultant, and Contractor. If Work is deemed incomplete by Owner and Consultant complete outstanding items and request reinspection. .6 Declaration of Substantial Performance: when Owner and Consultant consider deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for certificate of Substantial Performance. Refer to CCDC 2, General Conditions Article for specifics to application. .7 Commencement of Lien and Warranty Periods: date of Owner's acceptance of submitted declaration of Substantial Performance shall be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.</p> <p>2. Final Cleaning: .1 Clean work prior to final review by Consultant. .2 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work. .3 Prior to final review remove surplus products, tools, construction machinery and equipment. .4 Remove waste and debris, including that caused by Owner or other Contractors, and leave Work clean and suitable for occupancy. .5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris. .6 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fittings, walls, and horizontal hard surfaces. .7 Clean lighting reflectors, lenses, and other lighting surfaces. .8 Remove dirt and other disfiguration from exterior surfaces. .9 Sweep and wash clean paved areas. .10 Clean drainage systems. .11 Remove debris and surplus materials from accessible concealed spaces.</p>	<p>CLOSEOUT SUBMITTALS</p> <p>1. Submittals in accordance with Submittal Procedures: .1 Prepare instructions and data using personnel experienced in maintenance and operation of described products. .2 Copy will be returned after final inspection, with Consultant's comments. .3 Revise content of documents as required prior to final submittal. .4 Two weeks prior to Substantial Performance of the Work, submit to the Consultant, one final copy and one digital version of Operations and Maintenance manuals in English. .5 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work. .6 Furnish evidence, if requested, for type, source and quality of products provided. .7 Defective products will be rejected, regardless of previous inspections. Replace products at own expense. .8 Submit 'redline' marked up construction drawings to the Consultant within 30 days of Substantial Performance and prior to final completion.</p> <p>2. Operations and Maintenance Manual: .1 Organize data as instructional manual. .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets. .3 When multiple binders are used correlate data into related consistent groupings. Identify contents of each binder on spine. .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents. .5 Arrange content by systems, process flow, under Section numbers and sequence of Table of Contents. .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment. .7 Text: manufacturer's printed data, or typewritten data. .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages. .9 Contents: a. Provide Table of Contents w/ title of project, date of submission b. Provide contact info of Consultant and Contractor c. Schedule of products and systems, indexed to content of volume. d. For each product or system: list names, contact info of subcontractors and suppliers, including local source of supplies and replacement parts. e. Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation. f. Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. g. Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.</p>	<p>3. Equipment and Systems: 1. Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.</p> <p>4. Materials and Finishes: 1. Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products. 2. Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.</p> <p>5. Spare Parts: 1. Provide spare parts, in quantities specified in individual specification sections.</p> <p>6. Maintenance Materials: 1. Provide maintenance and extra materials, in quantities specified in individual specification sections. 2. Provide items of same manufacture and quality as items in Work. 3. Deliver to site, location as directed; place and store.</p> <p>7. Special Tools: 1. Provide special tools, in quantities specified in individual specification section. 2. Provide items with tags identifying their associated function and equipment.</p> <p>8. Storage, Handling and Protection: 1. Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.</p> <p>9. Warranties and Bonds: 1. Develop warranty management plan to contain information relevant to Warranties. 2. Warranty management plan to include required actions and documents to assure that Owner receives warranties to which they are entitled. 3. Provide list for each warranted equipment, item, feature of construction or system. 4. Assemble approved information in binder and submit upon acceptance of work. 5. Warranty Tag: tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Consultant.</p>

Project
JACK BAGLEY COMMUNITY
PARK WASHROOM BUILDING
NANAIMO BC
Owner / Client

Architect



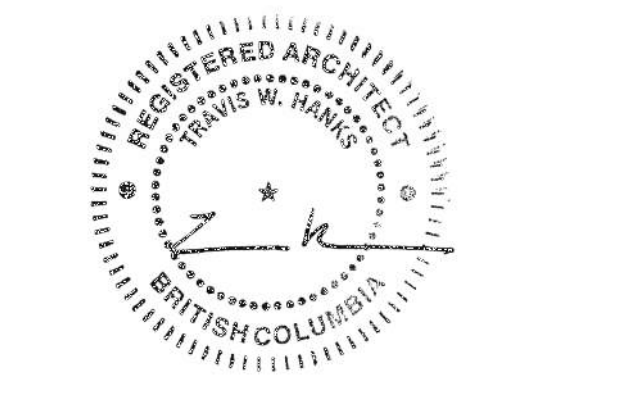
Consultant

Consultant Team

Issues / Revisions

DATE	ISSUE
2021-07-07	ISSUED FOR 95% DD/BP
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Seal



Sheet Title

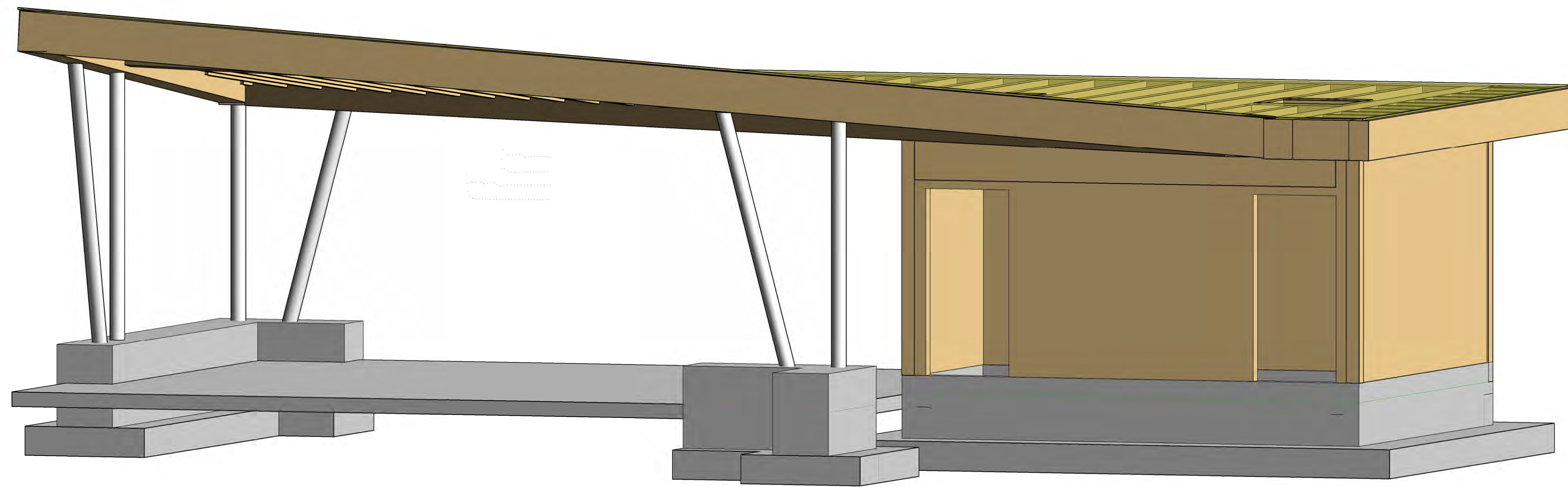
SCHEDULES

Project ID 2004 Drawn JR Checked TH

Scale AS NOTED Date OCTOBER 18, 2022

Sheet No.

A6.00



NOTE: THIS DRAWING IS
 HALF SCALE WHEN PRINTED
 TO 11" x 17" FORMAT

PRELIMINARY
 FOR DISCUSSION ONLY
 SUBJECT TO REVISION

DESIGN PHASE

REVISIONS			
No.	DESCRIPTION	BY	DATE
1	IFT		2022.10.18



REGIONAL DISTRICT OF NANAIMO
JACK BAGLEY COMMUNITY PARK
WASHROOM BUILDING

Drawn: DA Designed Checked: DE Date
 Designed: MH Discipline Review: JT Date

COVER

Drawing No.
32345
ST
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 Sheet No.

G:\Projects\33000\33000\33360_RDN_Jack_Bagley_Park_Phase_1\B102_CADD\00_Drafting\04_Structural\33360_Jack_Bagley_Washroom_R20.rvt

TIMBER JOINERY SPECIFICATIONS

- TENONS:**
 - 7 1/2" (IN SMALLER DIRECTION) OR LARGER POSTS, RAFTERS OR GIRTS: 2"(W)x4 1/2"(D) TENON TYP.
 - SMALLER THAN 7 1/2" (IN SMALLER DIRECTION) BRACES AND STRUTS: 1 5/8"(W) x4"(D) TENON TYP.
 - DEPTH MAY BE REDUCED IN CASES OF TENON INTERFERENCE (SEE DETAILS)
 - BOTH SIDE WALLS OF MORTISES SHALL BE GREATER THAN OR EQUAL TO THE MORTISE WIDTH.
- HOUSINGS:**
 - 1/2" HOUSINGS FOR BRACES AND STRUTS
 - MIN. 1" HOUSINGS OR SLOPED SHOULDER FOR BEAMS, RAFTERS, PURLINS, JOISTS AND ALL OTHER MEMBERS. LARGER HOUSINGS MAY BE SPECIFIED.
 - MINIMUM RELISH BELOW HOUSING ON RECEIVING MEMBER TO BE 1/4 OF THE RECEIVING MEMBER DEPTH. LARGER DISTANCE MAY BE SPECIFIED.
- PEGS:**
 - 1" PEGS FOR ALL CONNECTIONS EXCEPT WHEN BOTH MALE AND FEMALE MEMBERS ARE SMALLER THAN 6" (IN SMALLER DIRECTION).
 - PEG HOLES ARE TYPICALLY 1/16" DRAUGHT BORED.
 - PEGS ARE KILN-DRIED, CLEAR, STRAIGHT-GRAIN, DEFECT-FREE WHITE OAK, SLOPE OF GRAIN LESS THAN 1:15
 - MINIMUM PEG END DISTANCE (FROM CENTER OF PEG TO END OF TENON) IS 2xPEG DIAMETERS.
 - MINIMUM PEG EDGE DISTANCE (FROM CENTER OF PEG TO FACE OF MORTISED MEMBER) IS 2.5x PEG DIAMETERS.
 - PEG SPACING IS 2.5x PEG DIAMETERS O/C U.N.O.
 - PEGS TO BE LOCATED AS CLOSE TO THE BEARING SURFACE AS POSSIBLE WITHOUT EXCEEDING ABOVE SPECIFICATIONS.
- WEDGES, SPLINES AND FREE TENONS:**
 - FABRICATED FROM CLEAR STRAIGHT-GRAIN DEFECT-FREE WOOD STOCK WITH A SPECIFIC GRAVITY EQUAL TO OR EXCEEDING THAT OF THE RECEIVING MEMBERS.
- COMMON RAFTERS:**
 - HOUSE RAFTERS 1" WHERE FLUSH FRAMED OR BIRDSMOUTH WITH 1 1/2" MINIMUM SEAT.
 - BIRDSMOUTH DEPTH NOT TO EXCEED 1/4 OF RAFTER DEPTH ATTACH W/ 3/8" SFS INTEC BLUE MAX OR GRK RSS FASTENERS (MIN. 3" PENETRATION IN SUPPORTING MEMBER).
- PURLINS AND JOISTS:**
 - HOUSE 1" INTO SUPPORTING MEMBER U.N.O.
 - ATTACHED W/ 3/8" SFS INTEC BLUE MAX OR GRK RSS FASTENERS (OPPOSING SCREWS SET AT 45 ANGLE).
- HOLD DOWNS, HANGERS AND STRAPS:**
 - SIMPSON STRONG-TIE AS SPECIFIED ON FOUNDATION OR FRAMING PLANS (BY OTHERS UNLESS SPECIFICALLY DETAILED ON THESE DRAWINGS).

SHORING NOTES

- THE DESIGN OF THE SHORING FOR THE EXCAVATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- SHORING IS NOT TO IMPOSE LOADS ON THE STRUCTURE DURING OR AFTER CONSTRUCTION.
- SHORING IS TO BE PROVIDED IN AREAS WHERE REQUIRED AND UNLESS NOTED, IS TO BE REMOVED ONCE THE FOUNDATION IS IN PLACE, AT STRENGTH AND PROPERLY AND PERMANENTLY SUPPORTED.
- UNDERPINNING AND PROTECTION OF ADJACENT STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.

TIMBER FRAMING

- ALL SAWN TIMBER TO BE DOUGLAS FIR No.1 OR BETTER.
- ALL TIMBER SIZES ARE NOMINAL DIMENSIONS OF GROSS SECTION PRIOR TO SEASONING.
- CONFIRM ALL DIMENSIONS, CONNECTION GEOMETRY AND CONSTRUCTABILITY OF THE ASSEMBLIES BEFORE PROCEEDING WITH FABRICATION. REPORT DISCREPANCIES TO THE ENGINEER.
- TIMBER FRAME SUPPLIER TO SUBMIT DIGITAL PDF COPY OF SHOP DRAWINGS FOR REVIEW AND APPROVAL OF THE ENGINEER PRIOR TO PROCEEDING WITH THE FABRICATION.
- ALL CONNECTIONS TO MEET THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE AND CSA 086-14 ENGINEERING DESIGN IN WOOD.
- TEMPORARY SUPPORT AND TEMPORARY BRACING OF THE TIMBER ELEMENTS DURING ERECTION AND CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- PROVIDE MECHANICAL ANCHORAGE OF TIMBER FRAME POSTS TO THE FOUNDATION BY MEANS OF A FRAMING STRAP, KNIFE PLATE, OR OTHER MEANS.

MATERIAL SPECIFICATIONS

- WOOD**
- TO CONFORM WITH CSA/CAN 086.14 ENGINEERING DESIGN IN WOOD (LIMIT STATES DESIGN)
- FRAMING**
- GRADES AND TYPES TO BE AS FOLLOWS U.N.O.:
 - BEAMS & MULTI-PLY BEAMS: PARALLAM BY TRUS-JOIST MACMILLAN LTD. OR APPROVED EQUAL
 - WOOD BASED SHEATHING: ORIENTED STRANDBOARD TO CAN-0473.0-93 GRADE 0-2, PLYWOOD TO CSA 0325-07
 - STRUCTURAL JOISTS & PLANKS: SPF #2 OR BETTER
 - STRUCTURAL LIGHT FRAMING: SPF #2 OR BETTER
 - WOOD POSTS & BUILT UP COLUMNS: SPF #2 OR BETTER
 - RIM BOARD: 1 1/4" LSL 1.3E
- TIMBER**
- TO MEET NLGA VISUAL GRADING RULES U.N.O.:
 - SPECIES: D. FIR-L
 - GRADE: No.1 OR BETTER
 - FINISH SIZE: 1/2" UNDERSIZE NOMINAL DIMENSIONS OF GROSS SECTION PRIOR TO SEASONING. (EG. 8x8 CALLED OUT = 7 1/2"x7 1/2" NOMINAL)
- GLULAM**
- TO MEET CAN/CSA 0122-16 REQUIREMENTS, WESTLAM OR APPROVED EQUAL
 - SPECIES: D.FIR
 - GRADE: 24F EX FOR SINGLE SPAN BEAM
 - 24F EX FOR 2 OR MORE SPAN CONTINUOUS BEAMS
 - 16c-E FOR COLUMNS
- STEEL**
- PROVIDE STRUCTURAL STEEL TO CSA/CAN-G40.20-13/G40.21-13 OR ASTM STANDARD A 992/A992M. THE FOLLOWING SHOULD HAVE GRADES MINIMUM OF:
 - HOLLOW STRUCTURAL SECTIONS — 350W CLASS 'C'
 - COLUMN BASE PLATES — 300W
 - MISCELLANEOUS PLATES — 260W
 - ALL STRUCTURAL STEEL TO BE GALVANIZED. GALVANIZATION: TO CAN/CSA G164, HOT -DIP, MIN. ZINC COATING 610 g/m². ALL GALVANIZATION DAMAGED DURING CONSTRUCTION TO BE TOUCHED UP.
 - SHOP COAT PRIMER FOR STEEL CONNECTIONS: TO CAN/CGSB-1.40.
 - PAINT AND FINISHES TO ARCHITECT SPECIFICATIONS
- WELDING**
- WELDING TO BE METAL ARC WELDING TO CSA W59 BY WELDERS APPROVED BY THE CANADIAN WELDING BUREAU TO REQUIREMENTS OF CSA W47.1. CERTIFICATE TO BE MADE AVAILABLE UPON REQUEST.
 - WELD REINFORCEMENT STEEL TO CSA W186.
- HARDWARE**
- TO CONFORM TO THE FOLLOWING U.N.O.:
 - BOLTS: ASTM A307, A325, A325M, A490, A490M OR F182.
 - THREADED ROD: ASTM A307
 - LAG BOLTS: ASTM A307
 - DRIFT PINS: ASTM A307 OR CSA/CAN-G40.21 300W
 - SCREWS: GRK RSS, SFS INTEC BLUE MAX OR SPAX T-STAR
 - WASHERS: MALLEABLE CAST IRON
 - SPLIT RINGS: 2 1/2"Ø OR 4"Ø AS SPECIFIED
 - SHEAR PLATES: ASTM A47 GRADE 32510
 - STEEL ROD: ASTM A449 OR ASTM A307
 - HOT DIP GALVANIZE ALL HARDWARE PERMANENTLY EXPOSED TO WEATHER OR WHERE STAINING OF TIMBER IS A CONCERN. PAINT AND FINISHES TO ARCHITECT SPECIFICATION.
- CONCRETE**
- CAST-IN-PLACE CONCRETE AND CONSTITUENT MATERIAL SHALL COMPLY WITH CSA A23.1.
 - CONCRETE SHALL BE PROPORTIONED AND PRODUCED IN ACCORDANCE WITH CSA A23.1 OR CSA A23.4.
 - CONCRETE SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH CSA A23.1 OR CSA A23.4.
- CONCRETE IS TO BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

ELEMENT	COMPRESSIVE STRENGTH (MPa)	EXPOSURE CLASS	SPECIAL REQUIREMENTS & REMARKS
FOOTINGS	35	F2	AIR 5-8% SLUMP 80 ± 30
FOUNDATION WALLS	35	F2	AIR 5-8% SLUMP 80 ± 30

EXCAVATION AND BACKFILL

- THE OWNER SHALL OBTAIN THE SERVICES OF A QUALIFIED TESTING AGENCY TO PERFORM COMPACTION TESTS AS REQUESTED BY THE ENGINEER.
- EXCAVATE TO THE LEVELS NOTED ON THE DRAWINGS FOR THE EXTENT OF THE STRUCTURE. STRIP THE OVER-EXCAVATED AREA OF ALL SILT. FOOTING LEVELS SHOWN ARE NOT FINAL AND MAY VARY ACCORDING TO SITE CONDITIONS. EXTEND ALL FOOTINGS TO A BEARING LAYER APPROVED BY THE GEOTECHNICAL ENGINEER.
- FILL TO THE DESIGN SUBGRADE WITH PITRUN GRAVEL COMPACTED TO 98% STANDARD PROCTOR DENSITY.
- KEEP EXCAVATION FREE OF WATER WHILE FILL AND CONCRETE FOUNDATION IS PLACED.
- PROTECT BOTTOM OF EXCAVATION FROM FROST. DO NOT PLACE CONCRETE ON FROZEN SOIL.
- REMOVE ALL VEGETATION, ORGANIC SOIL AND CONSTRUCTION DEBRIS FROM BUILDING AND CONSTRUCTION AREA TO EXPOSE INORGANIC SUBGRADE SOIL. THE EXPOSED EXCAVATION MUST BE INSPECTED FOR APPROVAL PRIOR TO PROOF ROLLING. PROOFROLL THE EXPOSED INORGANIC SUBGRADE SOIL TO PROVIDE A GOOD BASE FOR COMPACTING THE FIRST LIFT OF MATERIAL TO THE SPECIFIED DENSITY.
- ANY SOFT SUBGRADE SOIL ENCOUNTERED SHOULD BE SUB-EXCAVATED AND REPLACED WITH FREE DRAINING PITRUN GRAVEL. SOFT SUBGRADE SOIL WILL LIKELY BE ENCOUNTERED DURING SITE PREPARATION. COMPACT FREE DRAINING PITRUN GRAVEL TO NOT LESS THAN 95% STANDARD PROCTOR DRY DENSITY.
 - A MINIMUM OF 200 (8") THICK NON-PLASTIC CRUSHED GRAVEL MUST BE PLACED BENEATH THE ENTIRE SLAB AND ABOVE THE PREPARED SUBGRADE SOIL. THE CRUSHED GRAVEL MUST BE UNIFORMLY COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY. THE GRAVEL SHALL MEET THE FOLLOWING GRADATION STANDARD:

SIEVE SIZE	% PASSING BY WEIGHT
19mm [3/4"]	100
12.5mm [1/2"]	70-100
4.75mm [3/16"]	40-60
1.18mm [0.0469"]	25-45
0.30mm [0.0117"]	10-25
0.075mm [0.0029"]	2-12
- THE SLAB BASE GRAVEL AND SUBGRADE SOIL MUST BE PROTECTED FROM RAIN, SNOW, EXCESSIVE DRYING AND INGRESS OF FREE WATER DURING AND AFTER THE CONSTRUCTION TO PREVENT ANY FOUNDATION MOVEMENT.
- REFER TO ARCHITECTURAL DRAWINGS FOR GROUND ELEVATIONS AND DRAINAGE SLOPES.
- CONFIRM EXACT LOCATIONS OF ALL UTILITY LINES WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.

ROUGH CARPENTRY

- WOOD FRAMING TO CONFORM TO NLGA STANDARD GRADING RULES FOR CANADIAN LUMBER AND CSA 086-14 ENGINEERING DESIGN IN WOOD (LIMIT STATES DESIGN)
- THE ROOF SHEATHING AND SUPPORTING ROOF MEMBERS HAVE BEEN DESIGNED AS A DIAPHRAGM. DIAPHRAGM CONNECTION REQUIREMENTS FOR THE ROOF SHEATHING ARE: 64 (2 1/2") LONG COMMON NAILS @ 75 (3") O/C AT SUPPORTED PANEL EDGE AND AT 300 (12") O/C ALONG INTERMEDIATE FRAMING MEMBERS.
- THE WALL SHEATHING AND SUPPORTING MEMBERS HAVE BEEN DESIGNED AS SHEAR WALLS. SHEAR WALL CONNECTION REQUIREMENTS FOR THE WALL SHEATHING ARE: 64 (2 1/2") LONG COMMON NAILS @ 150 (6") O/C AT SUPPORTED PANEL EDGE AND AT 300 (12") O/C ALONG INTERMEDIATE FRAMING MEMBERS.
- WIRE NAILS, SPIKES AND STAPLES TO CSA R2003.
- ALL FRAMED EXTERIOR WALLS TO BE 2x6 (38x140) @ 400 (16") O/C U.N.O. ON PLANS.
- ALL FRAMED INTERIOR WALLS (INCLUDING KNEE WALLS) TO BE 2x6 (38x140) @ 400 (16") O/C U.N.O. ON PLANS.
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.

DESIGN DATA

- DESIGN CODE : BCBC 2018
- IMPORTANCE FACTOR (Is) = 1
- ROOF**
- DEAD LOADS:
- ROOFING & INSULATION ————— 0.19 kPa
- LIVE LOADS:
- ROOF ————— 1.00 kPa
- ENVIRONMENTAL LOADS:
- DESIGN SNOW LOAD (Ss) ————— 2.10 kPa
 - RAIN LOAD (S_r) ————— 0.40 kPa
- FLOOR**
- LIVE LOADS:
- WASHROOMS ————— 2.40 kPa
- WIND LOADS: HOURLY WIND PRESSURE (1/50) ————— 0.39 kPa
- SEISMIC DATA: Sa(0.2) = 0.948
 Sa(0.5) = 0.882
 Sa(1.0) = 0.525
 Sa(2.0) = 0.323
 PGA = 0.419
 SITE CLASS: D

- SOIL CONDITIONS:**
- THE FOUNDATION HAS BEEN DESIGNED BASED ON THE GEOTECHNICAL INVESTIGATION REPORT 704-ENG.VGE03721-01 DATED JULY 6, 2020 BY TETRA TECH CANADA INC. ON THE FOLLOWING ASSUMED VALUES:
- SERVICE BEARING CAPACITY ————— 75 kPa
- ULTIMATE BEARING CAPACITY ————— 150 kPa
- FROST DEPTH ————— 0.6 m
- DESIGN DEFLECTION LIMITS:**
- DEFLECTION LIMITS (SERVICEABILITY) LESSER OF U.N.O.:
 ROFS, TOTAL LOAD = SPAN / 180
 WALLS, WIND LOAD = SPAN / 360

ABBREVIATIONS

AIFB	ASPHALT IMPREGNATED FIBRE BOARD	JT.	JOINT
ALT.	ALTERNATE	LG.	LONG
ARCH.	ARCHITECTURAL	L.L.	LIVE LOAD
B.C.E.	BOTTOM CHORD EXTENSION	LLH	LONG LEG HORIZONTAL
BLL	BOTTOM LOWER LAYER	LLV	LONG LEG VERTICAL
BUL	BOTTOM UPPER LAYER	LSH	LONG SIDE HORIZONTAL
BM.	BEAM	LSV	LONG SIDE VERTICAL
BOT.	BOTTOM	L.V.	LENGTH VARIES
BPO	BAR PLACING ORDER	L.W.	LONG WAY
BTWN	BETWEEN	MAX.	MAXIMUM
BRG.	BEARING	MECH.	MECHANICAL
CANT.	CANTILEVER	MIN.	MINIMUM
C.J.	CONTROL JOINT	N.I.C.	NOT IN CONTRACT
CL.	CENTER LINE	N.S.	NEAR SIDE
CL.R.	CLEAR	N.T.S.	NOT TO SCALE
COL.	COLUMN	O/C	ON CENTRE
CONC.	CONCRETE	O.F.	OUTSIDE FACE
CONT.	CONTINUOUS	OPP.	OPPOSITE
C.P.	COMPLETE PENETRATION	OWSJ	OPEN WEB STEEL JOIST
C/W	COMPLETE WITH DETAIL	PLA	POINT LOAD ABOVE
DET	DEAD LOAD	P/T	PRESSURE TREATED
D.L.	DO OVER (DITTO)	R.D.	ROOF DRAIN
D.O.	DEEP	REINF.	REINFORCING
DP.	DRAWING	R/W	REINFORCED WITH LOAD
DWG.	DOWELS	S.D.L.	SUPERIMPOSED DEAD LOAD
DWLS	EACH END	SIM.	SIMILAR
E.E.	EACH FACE	S.I.P.	STRUCTURAL INSULATED PANEL
E.F.	ELECTRICAL	S.O.G.	SLAB ON GRADE
ELEC.	ELEVATION	STAG.	STAGGERED
EL.	ELEVATION	STR.	STIRRUP
ELEV.	EACH SIDE	S.W.	SHORT WAY
E.W.	EACH WAY	TEMP.	TEMPERATURE REINFORCING
EXIST.	EXISTING	THK.	THICK
EX.	EXTRA	THRU	THROUGH
EXT.	EXTERIOR	T.J.	TIE JOIST
F.D.	FLOOR DRAIN	TLL	TOP LOWER LAYER
F.S.	FAR SIDE	T.O.	TOP OF
FTG	FOOTING	T.O/C	TOP OF CONCRETE
GALV.	GALVANIZED	T.O.S.	TOP OF STEEL/SLAB
G.L.	GRID LINE	TUL	TOP UPPER LAYER
H1E	HOOK ONE END	TYP.	TYPICAL
H2E	HOOK 2 ENDS	T & B	TOP AND BOTTOM
H.D.G.	HOT DIPPED GALVANIZED	T & G	TONGUE AND GROOVE
HOR.	HORIZONTAL	U.N.O.	UNLESS NOTED OTHERWISE
HORIZ.	HORIZONTAL	U/S	UNDERSIDE
I.F.	INSIDE FACE	VERT.	VERTICAL
INT.	INTERIOR	WT.	WALL THICKNESS
		W.P.	WORK POINT

GENERAL

- THE CONTRACTOR SHALL EXAMINE ALL CONTRACT DOCUMENTS, CHECK DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER FOR CLARIFICATION PRIOR TO COMMENCING CONSTRUCTION. DISCREPANCIES NOT REPORTED ARE THE RESPONSIBILITY OF THE CONTRACTOR. CHECK AND VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS BEFORE COMMENCING WITH ANY WORK. NOTIFY THE ARCHITECT OF ANY ERRORS OR OMISSIONS.
- READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS.
- TEMPORARY SUPPORT AND TEMPORARY AND PERMANENT BRACING OF LOAD BEARING AND NON-LOAD BEARING ELEMENTS DURING CONSTRUCTION TO RESIST DEAD, LIVE AND CONSTRUCTION LOADS IS THE RESPONSIBILITY OF THE CONTRACTOR. DESIGN OF THE TEMPORARY SUPPORTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION".
- THE GENERAL CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW BY THE ENGINEER OF RECORD. ALLOW ADEQUATE TIME FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO FABRICATION OR ERECTION. SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR REVIEW BY THE ENGINEER OF RECORD. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT PROVINCE OR STATE OF JURISDICTION. THE SHOP DRAWING ENGINEER SHALL ENSURE THAT THE FABRICATION AND ERECTION OF THESE ELEMENTS ARE IN ACCORDANCE WITH THEIR DESIGN AND THAT THE DESIGN IS IN ACCORDANCE WITH ALL RELEVANT CODES AND REGULATIONS. SHOP DRAWINGS SHALL BE SUPPLIED FOR REVIEW FOR THE FOLLOWING BUT NOT LIMITED TO:
 - REINFORCING STEEL FOR CONCRETE
 - STRUCTURAL STEEL SHAPES AND PLATES
 - TIMBER
 - ENGINEERED WOOD PRODUCTS
 - WOOD DECKING
- ALL DESIGN TO CONFORM TO THE BCBC 2018, CAN/CSA 086-14, CAN/CSA A23.3-19, CAN/CSA S16-14(R19) AND ALL OTHER APPLICABLE CODES AND PRACTICES AND BEST PRACTICES.
- FIELD REVIEWS: NOTIFY THE ENGINEER 48 HOURS IN ADVANCE FOR FIELD REVIEWS AND APPROVAL OF THE FOLLOWING:
 - CONCRETE REINFORCEMENT BEFORE EACH CONCRETE POUR
 - STRUCTURAL STEEL BEFORE COVERING UP
 - WOOD FRAMING BEFORE COVERING UP
- THE DESIGN HAS BEEN PREPARED BASED ON THE ASSUMPTION THAT THE OWNER AND/OR OPERATOR HAS A SITE SAFETY PLAN IN PLACE TO ADDRESS AND MITIGATE SAFETY HAZARDS, BOTH COMMON AND SPECIFIC TO THIS PROJECT.
- TYPICAL DETAILS AND GENERAL NOTES APPLY UNLESS NOTED OTHERWISE ON PLANS.
- GENERAL CONTRACTOR TO ADVISE AND COORDINATE WITH CONSULTANTS IF CONFLICTS ARISE BETWEEN SPECIFICATIONS AND DRAWINGS PRIOR TO PROCEEDING WITH SHOP DRAWINGS, FABRICATION, AND/OR CONSTRUCTION.

CONCRETE FORMWORK

- CONSTRUCT FORMWORK IN ACCORDANCE WITH WCB REGULATIONS AND CSA S269.1-16. FORMWORK DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR. DO NOT POUR CONCRETE UNTIL FORMWORK HAS BEEN INSPECTED AND CERTIFIED BY THE FORMWORK ENGINEER.
- NO COLUMN OR WALL FORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 75% OF DESIGN STRENGTH OR 4 DAYS, WHICHEVER COMES LATER, AND REPLACE IMMEDIATELY WITH ADEQUATE RESHORING.
- NO SLAB OR BEAM FORM SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 75% OF DESIGN STRENGTH.
- THE STRENGTH OF CONCRETE IS TO BE DETERMINED BY FIELD CURED CYLINDERS.
- RE-USE FORMWORK AND FALSEWORK SUBJECT TO REQUIREMENTS OF CSA-A23.1/A23.2

NOTE: THIS DRAWING IS HALF SCALE WHEN PRINTED TO 11" x 17" FORMAT

PRELIMINARY
FOR DISCUSSION ONLY
SUBJECT TO REVISION

DESIGN PHASE

No.	DESCRIPTION	BY	DATE
1	IFT		2022.10.11
REVISIONS			



Scale: 1 : 1

ISL Engineering
and Land Services

REGIONAL DISTRICT OF NANAIMO

JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING

Drawn: DA Designed: DE Checked: DE Date: _____

Designed: MH Discipline Review: JT Date: _____

GENERAL NOTES

Drawing No. **32345 ST 02**

Sheet No. _____

WOOD SHEAR WALL NOTES

- ALL PANEL EDGES ARE TO BE BLOCKED.
- SHEATHING NAILING IS AT 300mm (12") O/C TO INTERMEDIATE SUPPORTS.
- NAIL SPACING IS FOR 75mm (3") COMMON NAILS. ALTERNATE NAILS MAY REQUIRE REDUCED SPACING. STAPLES ARE NOT ACCEPTABLE FOR SHEAR WALLS.
- HOLD-DOWN ANCHOR LOCATIONS ARE SHOWN ON PLAN AS PER SHEAR WALL SCHEDULE. LOCATE HOLD-DOWNS AT SHEAR WALL ENDS IF NOT INDICATED OTHERWISE. ALL HOLD-DOWNS TO BE INSTALLED W/ MIN. 3-PLY POST.
- HOLD-DOWN REFERENCES ARE TO BE SIMPSON STRONG-TIE PRODUCTS.
- HOLD-DOWN ANCHORS ARE THREADED ROD AS SPECIFIED BY THE MANUFACTURER C/W NUT EMBEDDED IN CONCRETE U.N.O.
- BLOCK BETWEEN FLOORS AT THE DOWN LOCATIONS. REFER TO TYPICAL DETAILS FOR BLOCKING REQUIREMENTS.
- WHERE BOTH SIDES ARE SHEATHED, PANEL EDGES ARE TO BE STAGGERED.
- WALL SHEATHING TO EXTEND TO UNDERSIDE OF FLOOR OR ROOF SHEATHING ABOVE.
- HOLD-DOWNS ARE TO BE CARRIED DOWN TO FOUNDATION.
- HOLES UP TO 125mm [5"] SQUARE DO NOT REQUIRE BLOCKING AND E.N.
- HOLES FROM 125mm [5"] SQUARE TO 400mm [16"] SQUARE REQUIRE BLOCKING AND E.N.
- HOLES LARGER THAN 400mm [16"] SQ. ARE NOT ALLOWED.
- HOLE SIZE INCLUDES THE LENGTH OF THE OVERCUT.
- MAX. ACCUMULATED LENGTH OF OPENINGS SHALL NOT EXCEED 20 PERCENT OF THE WALL LENGTH.
- OPENING MUST BE A MIN. 300mm [12"] FROM SILL PLATE, TOP PLATES AND END POSTS.
- RECOMMEND CIRCULAR BORED HOLES OR RADIUS CORNER CUTS.
- END POSTS SHOULD NOT BE CUT FOR ANY REASON, STUDS AND TOP PLATE MAY BE NOTCHED PER TYPICAL DETAILS

GLUED LAMINATED CONSTRUCTION CONT.

- PROTECT PROTECTIVE SEALER FROM DAMAGE BEFORE AND DURING ERECTION.
- TOUCH UP DAMAGED AREAS ON SITE WITH SPECIFIED SEALER.
- ERECT GLUE-LAMINATED MEMBERS IN ACCORDANCE WITH REVIEWED ERECTION DRAWINGS.
- BRACE AND ANCHOR MEMBERS UNTIL PERMANENTLY SECURED BY THE STRUCTURE. MAKE ADEQUATE PROVISIONS FOR THE ERECTION STRESSES.
- SPLICE AND JOIN ONLY AT PLACATIONS AS INDICATED ON REVIEWED ERECTION DRAWINGS.
- DO NOT FIELD CUT OR ALTER MEMBERS WITHOUT THE ENGINEER'S. IF APPROVED, TREAT CUT ENDS WITH PRESERVATIVE.
- SUBMIT A MOISTURE AND HUMIDITY CONTROL PLAN. PLAN TO IDENTIFY METHODS OF CONTROL OF MOISTURE WITHIN THE WOOD DURING CONSTRUCTION. PLAN IS TO BE DEVELOPED TO FOLLOW THE SUPPLIER'S RECOMMENDATIONS FOR MITIGATION OF CRACKS, CHECKS AND DEFECTS IN THE FINISHED PRODUCT. PROVIDE RELATIVE HUMIDITY GAUGES AND PORTABLE HUMIDIFIERS OR OTHER EQUIPMENT NECESSARY AS REQUIRED TO ADHERE TO THE PLAN.

TIMBER FASTENERS

- THE FOLLOWING TIMBER SCREWS ARE ACCEPTABLE UNLESS SPECIFICALLY NOTED ON DRAWINGS:

A. PARTIALLY THREADED SELF-TAPPING	
MANUFACTURER	FASTENER TYPE
GRK FASTENER	RSS LTF
HECO	TOPIX (TAPERED SCREW HEAD U.N.O.)
SFS INTEC	SFS WFC-T (COUNTERSUNK HEAD)
	SFS WFR-T (COUNTERSUNK HEAD)
	SFS WFD-T (HEX-HEAD [W/ WASHER FOR TIMBER TO TIMBER])
SWG (WURTH)	ASSY 3.0 SK
	ASSY 3.0 KOMBI (HEX-HEAD [W/ WASHER FOR TIMBER TO TIMBER])
SPAX	T-STAR (COUNTERSUNK, PAN-HEAD OR HEX-HEAD AS REQ'D BELOW)

SIMPSON SDS SCREWS ARE ONLY ACCEPTABLE WHERE SPECIFICALLY INDICATED ON STRUCTURAL DRAWINGS.

B. FULLY THREADED SELF-TAPPING	
MANUFACTURER	FASTENER TYPE
HECO	TOPIX CC
SFS INTEC	SFS WT-T
	SFS WFR-T
	SFS W8
SWG (WURTH)	ASSY PLUS VG (CYLINDER HEAD OR COUNTERSUNK HEAD)
SPAX	T-STAR
- SCREW TYPES SPECIFIED ON STRUCTURAL DRAWINGS SUPERSEDE THE INFORMATION ABOVE U.N.O..
- WHERE SELF-TAPPING TIMBER SCREWS ARE USED IN COMBINATION WITH EXPOSED STEEL PLATES, OR WHERE FLUSH FINISHED IS REQUIRED, USE SCREWS WITH TAPERED SCREW HEAD (COUNTERSUNK) UNLESS NOTED OTHERWISE. COUNTERSINK HOLE IN STEEL TO RECEIVE TAPERED SCREW HEADS. HOLE TO MATCH MANUFACTURER'S SPECIFICATION.
- WHERE SELF-TAPPING SCREWS ARE USED IN COMBINATION WITH STEEL PLATES NOT EXPOSED TO VIEW, USE SCREWS WITH A HEX HEAD U.N.O..
- METRIC CONVERSIONS:

DIAMETER	LENGTH
8mm (5/16")	25mm (1")
10mm (3/8")	ROUND UP TO NEAREST STANDARD
12mm (1/2")	ROUND UP TO NEAREST STANDARD
- FOR PARTIALLY THREADED SCREWS, EMBED FULL THREAD INTO SECONDARY MEMBER OR AS SPECIFIED.
- HOLES IN STEEL PLATE TO MATCH THE SCREW TYPE USED.
- WHERE PRE-DRILLING OF SCREWS IS RECOMMENDED BY THE SCREW MANUFACTURER, HOLE DIAMETER TO BE STRICTLY AS PER MANUFACTURER'S RECOMMENDATIONS.
- WOOD TO WOOD CONNECTIONS TO HAVE WASHER OR PAN-HEAD U.N.O..
- THE FOLLOWING PRE-ENGINEERED CONCEALED CONNECTORS ARE ACCEPTABLE. UNLESS SPECIFIED ON STRUCTURAL DRAWINGS:

MANUFACTURER	FASTENER TYPE
HARRER	SHERPA
PITZL	HPV
KNAPP	MEGANT
- THE INSTALLATION OF CONNECTOR AND SCREW TYPE TO BE STRICTLY AS PER MANUFACTURER'S SPECIFICATIONS AND EUROPEAN APPROVALS.
- ALL OTHER FASTENING SYSTEMS ARE SPECIFIED ON DRAWINGS, OR ENGINEERING BY SUPPLIER IF NOT SPECIFIED. REFER TO WOOD FRAME GENERAL NOTES WHERE APPLICABLE.

GLUED LAMINATED CONSTRUCTION

- GLUE LAMINATED CONSTRUCTION SHALL CONFORM TO THE FOLLOWING STANDARDS:
 - CAN/CSA-0122-16 (2016), STRUCTURAL GLUED-LAMINATED TIMBER
 - CAN/CSA-0177-06 (2006), QUALIFICATION CODE FOR MANUFACTURERS OF STRUCTURAL GLUE-LAMINATED TIMBER.
- SUBMIT SHOP DRAWINGS FOR APPROVAL.
- SHOP DRAWINGS FOR MEMBERS TO INDICATE, STRESS GRADE, SERVICE GRADE AND APPEARANCE GRADE, SHOP APPLIED FINISHES, CAMBER, CUTS, LEDGERS, HOLES AND CONNECTION DETAILS
- EACH ERECTION AND SHOP DRAWING SUBMISSION, FOR ITEMS DESIGNED BY FABRICATOR OR MANUFACTURER, SHALL BEAR SIGNATURE AND STAMP OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA, CANADA.
- MANUFACTURE STRUCTURAL GLUE-LAMINATED MEMBERS IN PLANT CERTIFIED BY THE CSA AS MEETING THE REQUIREMENTS OF CAN/CSA-0177, CLASS X.
- SUBMIT CERTIFICATE IN ACCORDANCE WITH CAN/CSA-0177, APPENDIX B AT COMPLETION OF FABRICATION.
- PLACE AUTHORIZATION LABELS ON GLUE-LAMINATED MEMBERS INDICATING MANUFACTURED IN CSA CERTIFIED PLANT.
- DELIVER HANDLE STORE AND PROTECT MATERIALS OF THIS SECTION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- APPLY PROTECTIVE SEALER TO GLUE-LAMINATED UNITS BEFORE SHIPPING UNLESS SPECIFIED OTHERWISE.
- WRAP QUALITY GRADE MEMBERS WITH A MOISTURE RESISTANT WRAPPING PRIOR TO LEAVING PLANT.
- USE PADDED NON-MARRING SLINGS FOR HANDLING GLUE LAMINATED UNITS.
- PROTECT CORNERS WITH WOOD BLOCKING.
- SLIT UNDERSIDE OF MEMBRANE COVERING DURING STORAGE AT SITE. DO NOT DEFACE MEMBERS.
- STORE GLUE-LAMINATED UNITS AND PROTECT FROM WEATHER, BLOCK OFF THE GROUND AND SEPARATE WITH STRIPPING, SO THAT AIR MAY CIRCULATE AROUND ALL FACES OF THE UNITS.
- COVER GLUE-LAMINATED UNITS WITH OPAQUE MOISTURE RESISTANT MEMBRANE IF STORED OUTSIDE.
- LAMINATING STOCK: DOUGLAS FIR-LARCH TO CAN/CSA-0122.
- ADHESIVE TO CAN/CSA 0112 SERIES, TO GRADE OF SERVICE REQUIRED IN ACCORDANCE WITH CAN/CSA-0122.
- SEALER FOR GLUE-LAMINATED MEMBERS: PENETRATING TYPE, CLEAR, NON-YELLOWING LIQUID.
- FASTENING:
 - SPLIT RING CONNECTIONS: HOT ROLLED CARBON STEEL, SAE 1010.
 - MEETING REQUIREMENTS OF SAE HANDBOOK.
 - SHEAR PLATE CONNECTORS:
 - PRESSED STEEL TYPE: HOT ROLLED CARBON STEEL, SAE 1010
 - MEETING REQUIREMENTS OF SAE HANDBOOK.
 - MALLEABLE IRON TYPE: TO ASTM A47/A47M, GRADE 350.
 - LAG SCREWS: AS SPECIFIED IN CSA STANDARD B34.
 - BOLTS TO ASTM A307.
 - SIDE PLATES: TO CAN/CSA-G40.20/G40.21 OR ASTM A36.
 - DRIFT PINS: TO ASTM A307.
 - GLUE-LAMINATED RIVETS: HOT DIP GALVANIZED TO CAN/CSA-G40.20/G40.21.
 - NAILS AND SPIKES TO CSA B111.
- SHOP COAT PRIMER FOR STEEL CONNECTIONS: TO CAN/CGSB-1.40.
- GALVANIZING: TO CAN/CSA-G164, HOT DIP, MIN. ZINC COATING 610g/m².
- PRESERVATIVE: SEE ARCHITECTURAL.
- FIRE RETARDANT: SEE ARCHITECTURAL.
- FABRICATE MEMBERS TO FOLLOWING CLASSIFICATIONS:
 - STRESS GRADE: BEAMS TO 24f-EX BENDING GRADE, COLUMNS TO 16c-E
 - COMPRESSION GRADE UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - SERVICE GRADE: EXTERIOR.
 - APPEARANCE GRADE: QUALITY.
- MARK LAMINATED MEMBERS FOR IDENTIFICATION DURING ERECTION. MARKS ARE NOT TO BE VISIBLE IN FINAL ASSEMBLY.
- DO NOT APPLY SEALER TO AREAS WHICH ARE TO RECEIVE STAINED FINISH OR PRESERVATIVE TREATMENT.
- DESIGN CONNECTIONS TO CAN/CSA-086, AND CAN/CSA S16 UNLESS SPECIFICALLY DETAILED TO RESIST SHEARS, MOMENTS AND FORCES INDICATED.
- CONNECTIONS TO BE GALVANIZED, OR PAINTED AFTER FABRICATION, AS INDICATED.

CONCRETE REINFORCEMENT NOTES

- TIE ALL BARS SECURELY IN PLACE TO PREVENT DISPLACEMENT. SUPPORT SLAB REINFORCEMENT ON SUITABLE CHAIRS OR SUPPORTS AT MAXIMUM 1.2m CENTRES. PROVIDE CORNER BARS TO MATCH HORIZONTAL WALL REINFORCEMENT.
- CLEAR COVER TO REINFORCEMENT (PRINCIPAL REINFORCEMENT) IS:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	75mm
EXPOSED TO EARTH OR WEATHER	50mm
- ALL BOTTOM STEEL TO BE CONTINUOUS AND SPLICED WHERE REQUIRED.
- UNLESS OTHERWISE NOTED, USE CLASS B TENSION SPLICE FOR ALL REINFORCING STEEL.
- PROVIDE MINIMUM 2-15M BARS AROUND ALL OPENINGS LARGER THAN 450mm AT EACH SIDE OF OPENING AND ON DIAGONALS. EXTEND 600mm PAST CORNER. PROVIDE 1-15M 1200mm DIAGONAL AT EACH CORNER OF ALL OPENINGS.
- THE DESIGNATION OF REINFORCEMENT IN DRAWINGS IS AS FOLLOWS:
 - BARS IN TOP OF BEAMS AND SLABS OR IN NEAR FACE OF WALL ARE SHOWN AS A SOLID LINE.
 - BARS IN BOTTOM OF BEAMS AND SLABS OR IN FAR FACE OF WALL ARE SHOWN AS A DASHED LINE: _____
 - STRAIGHT BARS: 6-15M4500 MEANS 6-15M BARS, 4500 LONG
 - BENT BARS:
 - 13-A15M1500 MEANS 13-15M BARS, 1500 LONG HOOKED ONE END 180°
 - 3-C15M1200 MEANS 3-15M BARS, 1200 LONG, HOOKED ONE END 90°
 - THE BAR LENGTHS NOTED ARE EXCLUSIVE OF THE STANDARD HOOK.
- FOUNDATION WALL REINFORCEMENT
 - PROVIDE CONTROL JOINTS AT 12m MAXIMUM SPACING FOR ALL WALLS IN CONTACT WITH GRADE AND ALL EXTERIOR WALLS EXPOSED TO THE WEATHER.
 - PROVIDE MINIMUM REINFORCEMENT FOR WALLS AS SHOWN ON PLAN.
 - INSTALL ALL WALL REINFORCEMENT CONTINUOUSLY WITH HOOKS OR CORNER BARS AT ALL WALL JUNCTIONS. EXTEND HOOKS TO FAR FACE OF WALL. LOCATE CORNER BARS ON OUTSIDE FACE OR CENTRE OF WALL.
 - AT ENDS OF ALL WALLS, INSTALL 2-15M VERTICAL LAPPED 600mm U.N.O. ON WALL SCHEDULE.
 - PROVIDED MINIMUM 2-15M BARS AROUND ALL OPENINGS LARGER THAN 450mm, EXTENDING 600mm PAST CORNERS. PROVIDE 1-15M1200 DIAGONAL AT EACH CORNER OF ALL OPENINGS.
- SPLICES
 - WHERE SPLICES ARE DIMENSIONED ON THE DRAWINGS, SUCH DIMENSIONS SHALL APPLY. USE TENSION AND COMPRESSION SPLICES AT LOCATIONS INDICATED ON THE DRAWINGS. USE TENSION SPLICE WHERE NO SPLICE IS INDICATED ON THE DRAWINGS.
 - LENGTH OF SPLICE:

		TENSION SPLICE (CLASS B)					
		CONCRETE STRENGTH (MPa)					
BAR SIZE	COMP. SPLICE	20	25	30	35	40	45
15M	470 (19")	647 (26")	579 (23")	530 (21")	490 (20")	458 (18")	432 (17")

NOTES:
MULTIPLY ABOVE VALUES BY:
1.5 FOR EPOXY COATED REINFORCEMENT
1.7 FOR EPOXY COATED TOP REINFORCEMENT

CONCRETE NOTES

- CONCRETE IS TO BE TESTED IN ACCORDANCE WITH CSA A23.1-14/A23.2-14 AND BY A QUALIFIED TESTING AGENCY AS REQUESTED BY THE ENGINEER. THREE TEST CYLINDERS SHOULD BE TAKEN FOR EVERY 75 CU METERS OR LESS OF CONCRETE PLACED. A MINIMUM OF ONE TEST OF THREE CYLINDERS IS REQUIRED PER POUR.
- ENSURE SLEEVES, TIES, ANCHOR BOLTS, PIPE HANGERS AND ANY OTHER INSERTS OR OPENINGS REQUIRED IN THE CONCRETE BY OTHER TRADES ARE COMPLETED.
- INSTALL ALL CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- COLD WEATHER CONCRETING
 - COLD WEATHER CONCRETING IS TO COMPLY WITH CSA/CAN-A23.1 AND ACI STANDARD 306R-10.
 - USE HOT WATER WHEN TEMPERATURE IS BELOW +3°C.
 - A MAXIMUM OF 1/2% CALCIUM CHLORIDE MAY BE USED EXCEPT FOR POST TENSIONED AND PARKING SLABS.
 - WHERE SUPPLEMENTARY HEAT IS PROVIDED, USE APPROVED CONCRETE HEATERS WITH EXHAUST VENTED AWAY FROM SURFACE OF CONCRETE.
 - FOR TEMPERATURES BELOW -10°C, PROVIDE CONCRETE POUR PROCEDURES TO ENGINEER FOR REVIEW
- PROCEDURES (TEMPS SPECIFIED ARE MINIMUM TEMPS):

FOUNDATIONS	NO SPECIAL REQUIREMENTS
ABOVE 0°C:	COVER WITH INSULATION BLANKET FOR FIRST 24 HOURS
-3°C TO 0°C:	DO NOT POUR ON FROZEN SOIL. COVER AND PROVIDE SUPPLEMENTARY HEAT FOR FIRST 24 HOURS. ALTERNATIVELY USE INSULATED BLANKET
BELOW -3°C:	
FLOOR SLAB ON GRADE	
0°C TO +3°C:	COVER WITH POLY RAISED UP ON 2x4 SLEEPERS
-3°C TO 0°C:	COVER WITH INSULATION BLANKET FOR FIRST 36 HOURS
BELOW -3°C:	DO NOT POUR ON FROZEN SOIL. COVER WITH BLANKET AND HEAT FOR FIRST 36 HOURS. FOR SUSPENDED SLABS, PROVIDE HEAT TO SPACE BENEATH

STRUCTURAL STEEL

- FABRICATE AND ERECT STRUCTURAL STEEL TO CSA S16-14.
- DESIGN OF CONNECTIONS BY STEEL FABRICATOR UNLESS DETAILED ON THE DRAWINGS. USE MIN. 2 BOLTS PER CONNECTION AND DESIGN FOR BEARING CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. SPECIALTY STRUCTURAL ENGINEER TO DESIGN CONNECTION FOR FACTORED REACTION SHOWN ON PLAN. WHERE REACTIONS ARE NOT NOTED, DESIGN CONNECTION FOR END REACTION DUE TO A UNIFORMLY DISTRIBUTED LOAD CAUSING A MOMENT EQUAL TO THE MOMENT CAPACITY OF THE BEAM.
- ANCHOR BOLTS TO ASTM A36 OR A307 UNLESS NOTED. OTHERWISE STRUCTURAL BOLTS AND NUTS TO ASTM A325 OR ASTM F3125/F3125M OR ASTM F1554 GRADE 36. TIGHTEN ALL BOLTS WITH AN IMPACT WRENCH.
- ALL ANCHOR BOLTS, NUTS AND WASHER TO BE HOT DIP GALVANIZED GALVANIZATION: TO CAN/CSA G164, HOT-DIP, MIN. ZINC COATING 610 g/m². ALL GALVANIZATION DAMAGED DURING CONSTRUCTION TO BE TOUCHED UP. PAINT AND FINISHES TO ARCHITECT SPECIFICATION.
- PROVIDE A CONTINUOUS 35 MPa GROUT BED BENEATH BASE PLATES AND OTHER CONNECTIONS BEARING ONTO CONCRETE.
- SUBMIT SHOP DRAWINGS TO THE ENGINEER AND RECEIVE APPROVAL PRIOR TO FABRICATION. SHOW ALL DETAILS, INCLUDING FIELD WELDS, AND MATERIAL SPECIFICATIONS. SHOP DRAWINGS TO BE SEALED BY A PROFESSIONAL ENGINEER FOR DESIGN OF CONNECTIONS.
- MINIMUM SIZE OF FIELD WELD, 2mm LESS THAN THE THICKNESS OF THE MATERIAL BUT NOT LESS THAN 6mm.
- TOUCH UP ALL FIELD WELDS WITH PRIMER AFTER SLAG HAS BEEN REMOVED.
- METAL DECK: SEE ARCHITECTURAL DRAWINGS.
- STEEL COLUMNS MAY ONLY BE CALLED UP AT THE BASE OF THE COLUMN.
- PROVIDE 6mm CAP PLATES ON ALL HSS SECTIONS UNLESS NOTED OTHERWISE.
- STEEL FABRICATOR SHALL BE CERTIFIED BY CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF CSA W47.1-09, DIVISION 1 OR 2. WELDING TO BE METAL ARC WELDING TO CSA W59-13. PROVIDE COPY OF CERTIFICATE FOR REVIEW BY THE STRUCTURAL ENGINEER.

NOTE: THIS DRAWING IS HALF SCALE WHEN PRINTED TO 11" x 17" FORMAT

PRELIMINARY
FOR DISCUSSION ONLY
SUBJECT TO REVISION

DESIGN PHASE

No.	DESCRIPTION	BY	DATE
1	IFT		2022.10.11
REVISIONS			



Scale 1 : 1

ISL Engineering and Land Services

REGIONAL DISTRICT OF NANAIMO

JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING

Drawn: DA	Designed Checked: DE	Date
Designed: MH	Discipline Review: JT	Date

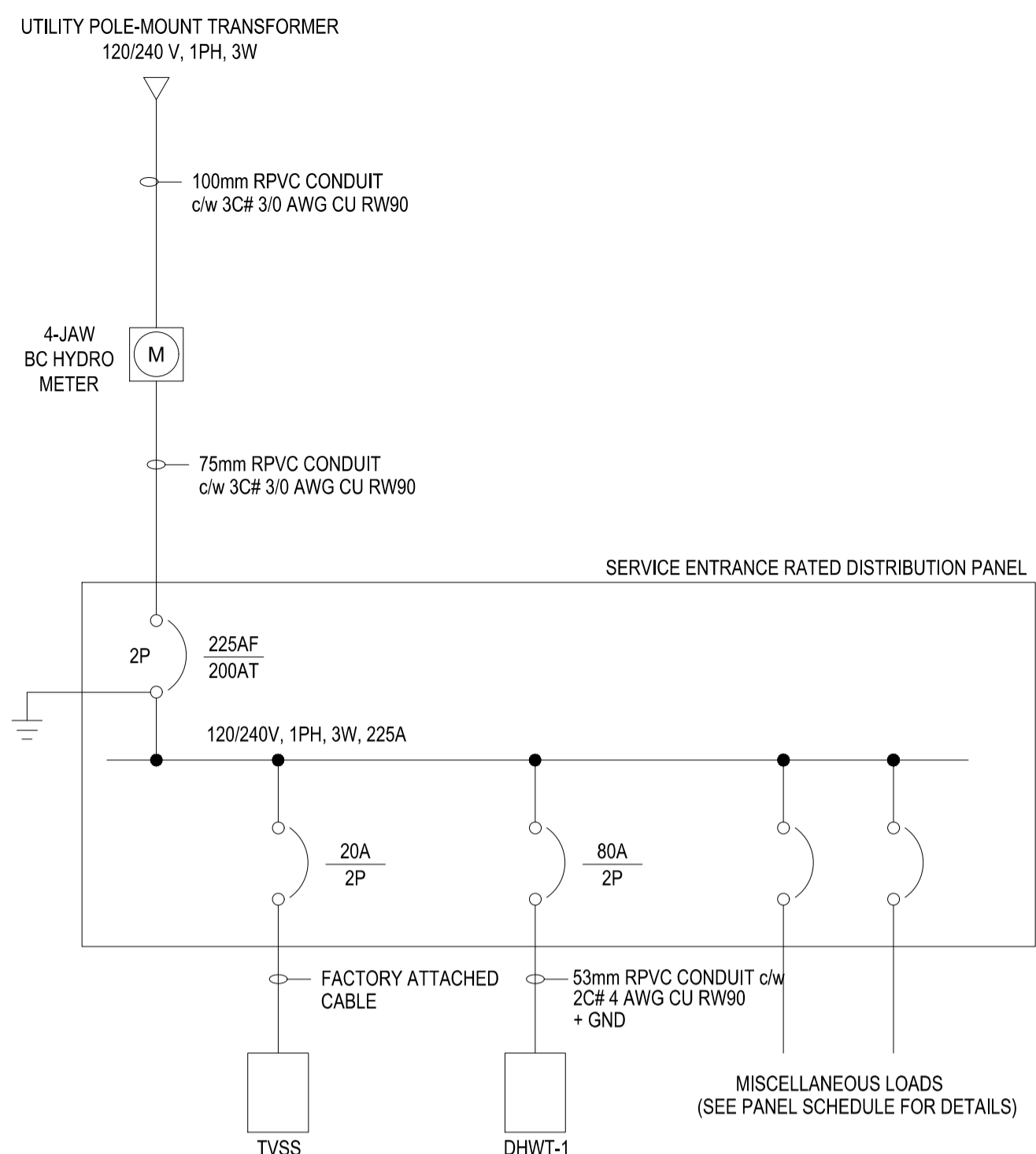
GENERAL NOTES

Drawing No. **32345 ST 03**

Sheet No.

SPECIFICATIONS

- 1.0 GENERAL
- 1.1 WORK SHALL INCLUDE THE FURNISHING OF ALL LABOR AND MATERIALS, UNLESS SPECIFICALLY NOTED OTHERWISE, TO COMPLETE AND PUT INTO OPERATING CONDITION ALL ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.
- 1.2 INSTALLATION SHALL CONFORM TO SEISMIC STANDARD AS OUTLINED IN BRITISH COLUMBIA BUILDING CODE.
- 1.3 ALL MATERIALS, SUPPLIED UNDER THIS CONTRACT, SHALL BE NEW, INDUSTRIAL GRADE AND CARRY CSA APPROVAL. MAINTAIN UNIFORMITY OF MANUFACTURER FOR ANY PARTICULAR ITEM.
- 1.4 INSTALLATION SHALL MEET ALL THE REQUIREMENTS OF CANADIAN ELECTRICAL CODE, PART 1 - C22.1, AS ADOPTED AND AMENDED BY BC REGULATORY AUTHORITY.
- 1.5 INSTALLATION SHALL MEET ALL THE STANDARD SPECIFICATIONS AND DETAILS OUTLINED IN ARCHITECT SPECIFICATIONS FOR THIS PROJECT.
- 1.6 RESPONSIBILITY AS TO WHICH TRADE PROVIDES REQUIRED ARTICLES OR MATERIALS RESTS SOLELY WITH THE GENERAL CONTRACTOR. EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE IN INTERPRETATION OF SPECIFICATIONS AS TO WHICH TRADE INVOLVED SHALL PROVIDE CERTAIN SPECIALTIES OR MATERIALS.
- 1.7 AT COMPLETION, ELECTRICAL INSTALLATION SHALL BE LEFT IN A CLEAN FINISHED CONDITION TO SATISFACTION OF THE ENGINEER.
- 2.0 SCOPE OF WORK
- 2.1 PROVIDE ALL NECESSARY ELECTRICAL SERVICES FOR A COMPLETE AND OPERABLE SYSTEM INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING MAIN COMPONENTS:
 - 1. PERMITS, BONDS AND WARRANTIES;
 - 2. POWER SERVICE AND DISTRIBUTION;
 - 3. CONDUIT AND CABLE SYSTEM;
 - 4. LIGHTING AND RECEPTACLES AS SPECIFIED;
 - 5. IRRIGATION PACKAGE ELECTRICAL INSTALLATIONS.
- 2.2 OBTAIN REQUIRED PERMITS TO COMPLETE THE WORK.
- 2.3 UPON COMPLETION OF WORK, SUBMIT CERTIFICATE OF ACCEPTANCE FROM INSPECTION AUTHORITY TO THE ENGINEER.
- 2.4 SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
- 2.5 ALTERNATES SHALL BE CONSIDERED IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
- 2.6 THE LOCATION AND ARRANGEMENT OF ELECTRICAL EQUIPMENT AS SHOWN ON THE DRAWINGS IS A CLOSE APPROXIMATION ONLY. SUBMIT SCALABLE SHOP DRAWINGS WITH LOCATION AND ARRANGEMENT OF ELECTRICAL EQUIPMENT. THE ENGINEER RESERVES THE RIGHT TO APPROVE SHOP DRAWINGS AND RECOMMEND CHANGES, ALL SUCH CHANGES SHALL BE DONE AT NO COST TO THE OWNER. PROVIDE 1 YEAR WRITTEN WARRANTY FOR ALL EQUIPMENT AND SYSTEMS SUPPLIED UNDER DIVISION 16.
- 2.7
- 3.0 BC HYDRO SERVICE
- 3.1 COORDINATE UTILITY POWER SERVICE DIRECTLY WITH BC HYDRO, INCLUDING SERVICE APPLICATION SUBMISSION AND CONNECTION.
- 3.2 PERMANENT POWER INSTALLATION SHALL MEET ALL BC HYDRO REQUIREMENTS. COORDINATE SITE INSPECTIONS DIRECTLY WITH BC HYDRO.
- 3.3 BC HYDRO CHARGES RELATED TO TEMPORARY CONSTRUCTION POWER CONNECTION SHALL BE PAID BY CONTRACTOR.
- 3.4 BC HYDRO CHARGES RELATED TO PERMANENT POWER CONNECTION SHALL BE PAID BY OWNER.
- 3.5 THE LOCATION AND ARRANGEMENT OF TRANSFORMER AS SHOWN ON THE DRAWING IS PROPOSED ONLY. LOCATE TRANSFORMER PER FINAL BC HYDRO APPROVED DRAWINGS.
- 3.6 POWER SOURCE TRANSFORMER LOCATION SHALL BE IDENTIFIED BY BC HYDRO. ALLOW FOR PROVISIONS OF POWER SERVICE CONDUIT UP TO LENGTH OF 150m FROM PROPERTY LINE.
- 3.7 THE UTILITY METER SHALL BE RECESSED MOUNT, IN NEMA 4 STAINLESS STEEL ENCLOSURE, WITH LOCKABLE COVER. USE HAMMOND ECLIPSE JUNIOR SERIES, SINGLE DOOR ENCLOSURE.
- 4.0 GROUNDING
- 4.1 SUPPLY AND INSTALL GROUNDING SYSTEM CONSISTING OF 3 ROD ELECTRODES BURIED AT A DEPTH OF AT LEAST 1m BELOW FINISHED GRADE IN UNDISTURBED SOIL.
- 4.2 ROD ELECTRODES SHALL BE COPPER CLAD STEEL, 19mm DIAMETER x 3m LENGTH AND AT LEAST 3m APART. ROD ELECTRODES SHALL BE LOCATED MINIMUM 1.5m AWAY FROM BURIED STRUCTURE.
- 4.3 GROUNDING CONDUCTOR SHALL BE BARE STRANDED COPPER, SOFT ANNEALED AND TINNED, SIZE AS INDICATED. MINIMUM SOIL COVER - 450mm. ONLY EXOTHERMIC WELD OR COMPRESSION CONNECTION TO ROD ELECTRODES SHALL BE ALLOWED. MECHANICAL CONNECTION SHALL NOT BE ACCEPTABLE.
- 4.4 PROVIDE A COMPLETE GROUNDING SYSTEM, INCLUDING GROUNDING LUGS INSIDE THE PANEL BOARD.
- 5.0 CUTTING AND PATCHING
- 5.1 CO-ORDINATE WITH GENERAL CONTRACTOR FOR ALL CUTTING AND PATCHING REQUIRED FOR THE ELECTRICAL INSTALLATION. STRUCTURAL MEMBERS SHALL NOT BE CUT WITHOUT THE CONSENT OF THE STRUCTURAL ENGINEER.
- 6.0 AS-BUILT AND OPERATION AND MAINTENANCE MANUALS SHALL BE PROVIDED IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
- 7.0 WIRE AND CABLING
- 7.1 ALL WIRING SHALL BE RW 90 COPPER WITH 600 VOLT INSULATION AND BEAR CSA LABELLING, UNLESS SPECIFIED OTHERWISE.
- 7.2 THE MINIMUM SIZE OF THE CONDUCTOR FOR POWER WIRING SHALL BE NO.12 AWG.
- 7.3 COLOR CODING OF CONDUCTORS SHALL BE AS PER CANADIAN ELECTRICAL CODE.
- 7.4 PROVIDE RAIN TIGHT FITTINGS FOR ALL CABLE AND CONDUIT CONNECTIONS.
- 7.5 ALL CONTROL WIRES FOR 24 VAC ELECTRIC CONTROL VALVES SHALL BE NO. 14 AWG, COMMON WIRE SHALL BE NO 12 AWG.
- 7.6 ALL CONDUITS AND JUNCTION BOXES SHALL BE INSTALLED RECESSED WITHIN WALLS, CEILINGS AND FLOOR SLABS WITH ACCESS PANELS AS REQUIRED BY CODE. ELECTRICAL CONTRACTOR SHALL COORDINATE THIS WORK WITH BUILDING CONTRACTOR.
- 8.0 LIGHT SWITCHES & RECEPTACLES:
- 8.1 LIGHT SWITCHES AND RECEPTACLES SHALL BE BLACK FINISH c/w STAINLESS STEEL COVER.
- 8.2 LIGHT SWITCH MOUNT HEIGHT 1220mm ABOVE FINISHED FLOOR.
- 8.3 RECEPTACLES MOUNT SINK HEIGHT, COORDINATE WITH MILLWORK.
- 8.4 RECEPTACLES: CSA TYPE 5-15 R, 125V, 15 Amp, GFCI DUPLEX RECEPTACLE WITH LOCKABLE COVER, THOMAS&BETTS, CKNM SERIES. SWITCHES: 15Amp, 120V, SINGLE POLE, THREE-WAY SWITCH c/w STAINLESS STEEL COVER PLATE.
- 9.0 IRRIGATION VENDOR SYSTEM
- 9.1 SEE VENDOR PACKAGE DETAILS FOR COMPLETE WIRING REQUIREMENTS OF ELECTRICAL IRRIGATION SYSTEM.
- 9.2 RUN 53mm RPVC CONDUIT ADJACENT TO WATER MAINLINE, FOR 24 VAC ELECTRICAL CONTROL VALVES (IRRIGATION CONTROL WIRING PROVIDED BY OTHERS). SEE IRRIGATION SYSTEM DRAWINGS TO LOCATE CONTROL VALVES BOXES AND CONDUIT ROUTING.
- 9.3 PROVIDE 35mm RPVC CONDUITS / FITTINGS FOR CONTROL WIRING BETWEEN PUMP STARTER, MASTER VALVE AND FLOW SENSOR INSIDE SERVICE MECHANICAL ROOM (CONTROL WIRING PROVIDED BY OTHERS). SEE IRRIGATION SYSTEM DRAWINGS FOR DEVICE LOCATIONS.
- 9.4 PROVIDE IRRIGATION PUMP STARTER PANEL AND ASSOCIATED WIRING. CONFIRM IRRIGATION PUMP DETAILS PRIOR TO ORDERING. PROVIDE POWER WIRING FOR IRRIGATION CONTROLLER.
- 10.0 FAUCETS, TOILETS AND URINALS ELECTRIC SYSTEM
- 10.1 SEE VENDOR PACKAGE DETAILS FOR COMPLETE ELECTRICAL WIRING REQUIREMENTS.
- 10.2 FOR FAUCETS, TOILETS AND URINALS CONTROLS, USE ONE DELTA TRANSFORMER, 110VAC TO 24VAC, CLASS II, 100VA, UP TO 25 ELECTRONIC VALVES, CATALOGUE # 060772A.
- 11.0 LIGHTING
- 11.1 REFER TO ARCHITECTURAL REFLECTED CEILING PLAN (A1.03) FOR EXACT LOCATION OF LUMINAIRES.
- 11.2 LUMINAIRE TYPE 'L1': 48" LINEAR LED, w/ ACRYLIC LENS, SURFACE MOUNT WALL AT 8' A.F.F., LITHONIA MODEL # CLX L48 3000LM SEF RDL MVOLT G210 40K 80CRI WH c/w MOUNTING BRACKET.
- 11.3 LUMINAIRE TYPE 'L2': OUTDOOR ARCHITECTURAL WALL PACK, WALL MOUNT AT 10' A.F.F., LITHONIA MODEL # WDG2E LED P3 40K 80CRI WH MVOLT DDBXD w/ MOUNTING ACCESSORIES.
- 11.4 LUMINAIRE TYPE 'L3': PARKING GARAGE LED, CEILING SURFACE MOUNT ON JOIST, LITHONIA MODEL # DSXPG LED 30C 700 40K ASY MVOLT c/w SURFACE MOUNTING ACCESSORIES.
- 11.5 LUMINAIRE TYPE 'L4': 36" LINEAR LED, w/ ACRYLIC LENS, SURFACE MOUNT WALL AT 8' A.F.F., LITHONIA MODEL # CLX L36 3000LM SEF RDL MVOLT G210 40K 80CRI WH c/w MOUNTING BRACKET.
- 11.6 EMERGENCY LIGHTING: WALL MOUNT AT 8FT. A.F.F., LITHONIA MODEL # INDX1236-LP05V5.
- 11.7 LUMINAIRE MAKE AND MODEL AS SHOWN OR PRE-APPROVED EQUAL.
- 12.0 LIGHTING CONTROL CABINET
- 12.1 CUSTOM NEMA 4 ENCLOSURE c/w DOOR MOUNT 3-POSITION 'HAND-OFF-AUTO' SWITCH.
- 12.2 LIGHTING CONTACTOR: 120V, 20AMP, 2 POLE, CUTLER HAMMER CN35 SERIES OR PRE-APPROVED EQUAL.
- 12.3 DIGITAL TIMER: NSI TORK MODEL # DIN100B OR PRE-APPROVED EQUAL.
- 13.0 PANEL BOARD
- 13.1 PANEL BOARD SHALL BE CUTLER HAMMER POW-R-LINE 1A SERIES OR PRE-APPROVED EQUAL.
- 13.2 PROVIDE PANEL BOARD WITH NEUTRAL AND GROUND LUGS.
- 14.0 IRRIGATION CONTROL SYSTEM
- 14.1 COORDINATE WITH IRRIGATION CONTROL SYSTEM VENDOR FOR WIRING REQUIREMENTS.
- 15.0 BUILDING ACCESS AND SECURITY
- 15.1 PROVIDE DEDICATED DUPLEX RECEPTACLE AT LOCATION OF FUTURE SECURITY PANEL, AS SHOWN IN SERVICE ROOM.
- 15.2 PROVIDE ROUND JUNCTION BOXES c/w COVER PLATES ABOVE EACH DOOR FOR MAGNETIC DOOR LOCK DEVICE. PROVIDE 2 WEATHER-PROOF JUNCTION BOXES c/w COVER PLATES, LOCATION AS SHOWN ON LAYOUT, FOR FUTURE SECURITY DEVICE.
- 15.3 PROVIDE 27mm RPVC CONDUIT w/ PULL STRING FROM EACH JB TO TERMINATE AT LOCATION OF ACCESS CONTROL PANEL AND FUTURE SECURITY PANEL IN SERVICE ROOM.
- 16.0 PROVIDE LOW VOLTAGE WIRING FOR HANDS FREE FAUCET CONTROL. COORDINATE WITH MECHANICAL.



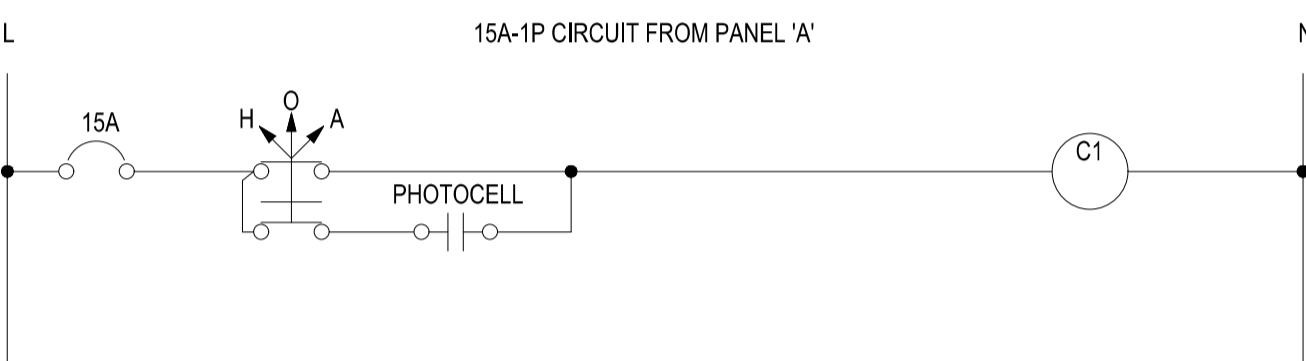
SINGLE LINE DIAGRAM

LOAD	DESCRIPTION	BKR	CIRCUIT	BKR	DESCRIPTION	LOAD
100W	SERVICE ROOM LTG.	15	1	2	TOILET ROOMS LTG.	150W
1000W	SERVICE ROOM REC.	15	3	4	TOILET ROOMS REC.	1000W
13000W	HOT WATER TANK HWT-1	80	5	6	STORAGE ROOM LTG. & REC.	500W
		2P	7	8	OUTDOOR SEATING AREA LTG.	1000W
1000W	HEAT RECOVERY UNIT	15	9	10	FUTURE SECURITY PANEL	
		2P	11	12	TOILET ROOM#1 HEATER	500W
5000W	SERVICE ROOM UNIT HEATER	30	13	14	TOILET ROOM#2 HEATER	500W
		2P	15	16	STORAGE ROOM HEATER	500W
50W	TVSS	20	17	18		
		2P	19	20		
50W	LOW VOLTAGE TRANSFORMER	15	21	22		
	SPARE	15	23	24		
	SPARE	15	25	26		
			27	28		
			29	30		
			31	32		

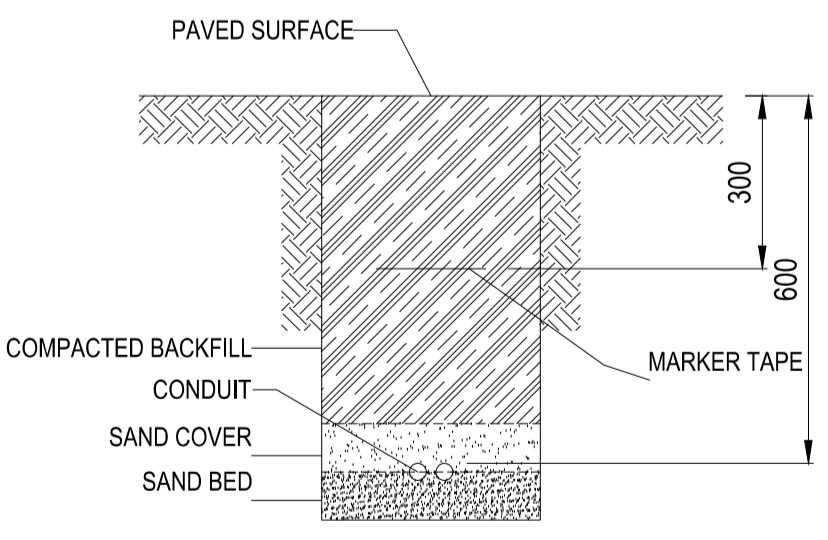
NOTES:

- 1. PROVIDE RAIN-TIGHT PANEL COMPLETE WITH NEUTRAL AND GROUND LUGS.

PANEL SCHEDULE

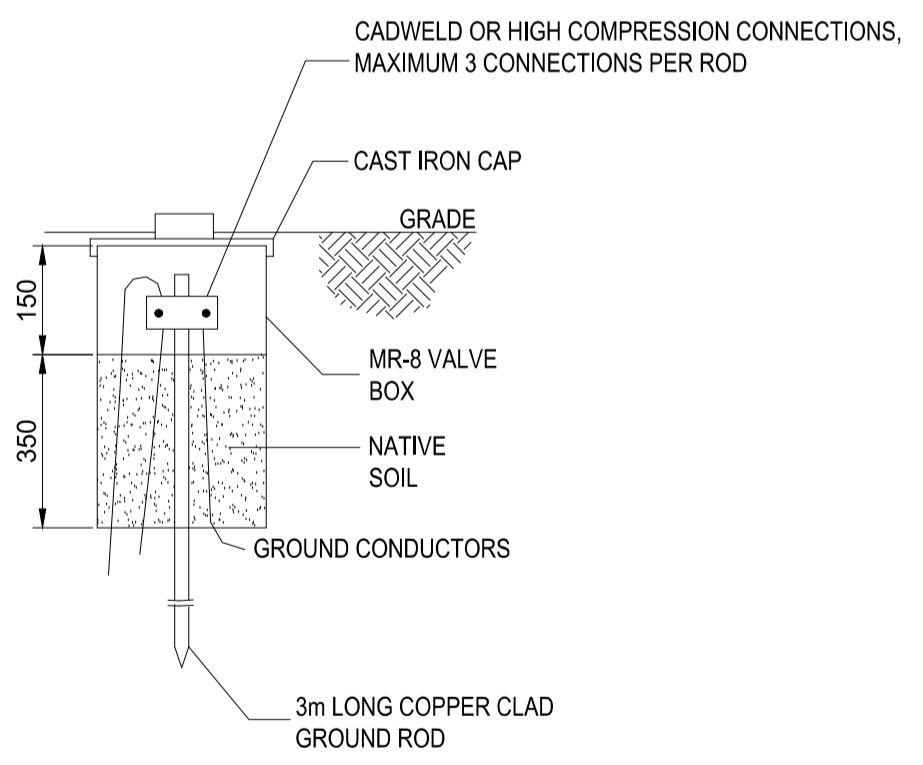


EXTERIOR LIGHTING CONTROLS WIRING



- NOTES:**
- 1. SAND BED AND COVER AS PER SPECIFICATIONS.
 - 2. COMPACTION AS PER SPECIFICATIONS.
 - 3. TRENCH WIDTH AS PER SPECIFICATIONS OR AS REQUIRED.
 - 4. RE-STORE SURFACE TO ORIGINAL CONDITIONS.

TYPICAL TRENCH DETAIL



NOTES:

- 1. CONNECTIONS SHALL BE ACCESSIBLE FOR INSPECTION AT ALL TIMES. HIGH-COMPRESSION OR CAD-WELD CONNECTIONS ONLY. MECHANICAL CONNECTIONS NOT PERMITTED.
- 2. MINIMUM 3 GROUND RODS SPACED MINIMUM 3m APART, IN UNDISTURBED SOIL, TO COMPLETE GROUNDING SYSTEM.
- 3. DO NOT DRIVE GROUND RODS INTO FROZEN SOIL.

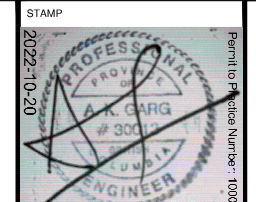
TYPICAL GROUNDING DETAIL

PLOT DATE: October 17, 2022

REV NO	REVISIONS	DATE	DRAWN	APPRD	OWNR
1	ISSUED FOR TENDER	2022-10-19	AG	AR	



**JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING
ELECTRICAL SPECIFICATIONS AND DETAILS**



ISSUED FOR TENDER DESIGN NO.

SCALE	NOT TO SCALE	DATE	Oct-14
DRAWN BY	AG	DESIGN BY	AG
CHECKED BY	AR	APPROVED BY	AR

33360

DWG. NO. EL-01 OF 02

REV. 1



RADIANT CEILING PANEL (ELECTRIC)									
EQUIPMENT TAG	QTY	LOCATION	MANUFACTURER	MOUNTING TYPE	MODEL	HGT CAP (KW)	ELEC (V/PH/Hz)	NOTES	
CP-1	1	TOILET ROOM	BERKO	CEILING	CP372F	0.35	240/1/60	ALL	
CP-2	1	TOILET ROOM	BERKO	CEILING	CP372F	0.35	240/1/60	ALL	
CP-3	1	STORAGE ROOM	BERKO	CEILING	CP372F	0.35	240/1/60	ALL	
NOTES:									
1	W/ SURFACE MOUNTING FRAME				4	W/ LINE VOLTAGE WALL T-STAT			
2	COLOUR SELECTED BY ARCHITECT								
3	W/ P/E SWITCH - FACTORY PREWIRED TO HEATERS								

DIFFUSERS AND GRILLES					
EQUIPMENT TAG	DESCRIPTION/TYPE	MANUFACTURER	SERVICE	MODEL NUMBER	NOTES
S-1	LOUVERED FACE GRILLE	EH PRICE	SUPPLY	520D	ALL
R-1	LOUVERED FACE GRILLE	EH PRICE	REUTRN	535D	ALL
L-1	EXTRUDED DRAINABLE LOUVER	EH PRICE	O/A & E/A	DE 635	1,2,3
NOTES:					
1	PROVIDE DIFFUSERS AND GRILLES WITH BORDER STYLES THAT ARE COMPATIBLE WITH ADJACENT WALLS AND CEILING SYSTEMS. REFER TO ARCHITECTURAL DRAWINGS.				
2	NC LEVELS BASED ON OCTAVE BANDS 2-7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB, MEASURED PER ASHRAE 70-91.				
3	FINAL COLOUR OF PRODUCT TO BE SELECTED BY THE ARCHITECT DURING THE SHOP DRAWINGS SUBMITTAL PROCESS.				
4	C/W OPPOSED BLADE DAMPER				

PLUMBING FIXTURE SCHEDULE		
EQUIPMENT TAG	MANUFACTURER / MODEL	DESCRIPTION/TYPE
LAV-1	KINDRED VANITY BASIN / V1619 / 6	BOWL: DECK MOUNTED BASIN 18-10 STAINLESS STEEL, MIRRORRED FINISH RIM, SATIN FINISH BOWL - FRONT OVERFLOW, 3 HOLE FAUCET MOUNT
		11" x 15 3/16" x 6" COMPARTMENT
	CHICAGO FAUCETS / EVR-A12D-42ABCP	FAUCET: TOUCHLESS LAVATORY FAUCET, POLISHED CHROME FINISH, PRESSURE COMPENSATING 0.35 GPM NON-AERATING SPRAY OUTLET
		HARDWIRED
	MCQUIRE - LFH170BV / 8872C P-TRAP	ACCESSORIES: CHROME PLATED FINISH POLISHED BRASS, 1/4 TURN BALL VALVE ANGLE STOPS, 5" HORIZONTAL EXTENSION TUBE, CONVERTIBLE
		1/4 TURN/LOOSE KEY HANDLES, ESCUTCHEON AND FLEXIBLE COPPER RISERS, P-TRAP: CHROME PLATED FINISH, HEAVY CAST BRASS BODY W/ SLIP NUT
		W/ CLEANOUT, SEAMLESS TUBULAR WALL BEND.
	WATTS / CA-311 CARRIER	CARRIER: STEEL HANGER PLATE, HEAVY GAUGE EPOXY COATED STEEL OFFSET UPRIGHTS WITH WELDED FEET SUPPORTS, 4" MINIMUM WALL THICKNESS
		FOR ONE UNIT, 6" FINISHED METAL STUD WALL TO BACK OF PIPE SPACE FOR TWO TO SIX UNITS IN A ROW
	LAWLER / TMM-1070 MIXING VALVE	MIXING VALVE: BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMP ADJUSTING DIAL, HIGH TEMP THERMOSTAT: LIMIT STOP, SHUT OFF W/ AUTOMATIC RESET WHEN EXCEEDS 120F, INTEGRAL CHECKS.
WC-1		FLOOR MOUNTED TOILET - BACK OUTLET, SATIN FINISH, 14 GA TYPE 304 STAINLESS STEEL SEAMLESS WELD CONSTRUCTION - ELONGATE BOWL
	ACORN / 1685-W-2-FY-HET-1.28-GW	BLOWOUT JET FLUSHING ACTION, INSTALLED ON FINISHED WALL, 80 PSI MAX WORKING PRSSURE, 14"(W) x 24-1/4" (L) x 15" (H).
FD-1	WATTS / FD-100-B	FLOOR DRAIN W/ ROUND HEAVY DUTY STRAINER, EPOXY COATED CAST IRON FLOOR DRAIN W/ ANCHOR FLANGE, REVERSIBLE CLAMPING COLLAR W/ PRIMARY AND SECONDARY WEEPHOLES, ADJUSTABLE HEAVY DUTY ROUND HELL PROOF NICKEL BRONZE STRAINER, AND NO HUB OUTLET.
HB-1	JAY R SMITH / 5509QT	QUARTERHORSE 1/4 TURN NON FREEZE WALL HYDRANT W/ INTEGRAL VACUUM BREAKER AND STAINLESS STEEL KEYS BOX
DF-1	HAWS 1119FR-1920FR	ADA OUTDOOR FREEZE-RESISTANT VANDAL-RESISTANT FOUNTAIN AND BOTTLE FILLER, 1x HAWS MODEL 6700, 4 IN-WALL MOUNTING PLATE PER FOUNTAIN.
		2x HAWS MODEL 6521FR FREEZE RESISTANT VALVE ASSEMBLY PER FOUNTAIN.
NOTES:		
1: PROVIDE TEE, ADAPTORS AND FLEX FOR FITTINGS.		
2: PROVIDE FLOOR FLANGES FOR CONNECTING PIPE DRAINS OFF FIXTURES		

DOMESTIC WATER HEATER (ELECTRIC)									
EQUIPMENT TAG	LOCATION	MANUFACTURER	MODEL	INPUT (KW)	MAX FLOWRATE (LPS)	AMPS	POWER (V/PH/Hz)	SHIPPING WEIGHT (KG)	NOTES
DHWT-1	SERVICE	EEMAX	EEM24013	13	0.3	54	240/1/60	3.18	ALL
NOTES:									
1	C/W DRAIN PAN.		4. 150 MAX WORKING PRESSURE						
2	C/W VACUUM RELIEF VALVE.		5. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.						
3	C/W COMPRESSION FITTINGS.								

REDUCED PRESSURE BACKFLOW PREVENTER									
EQUIPMENT TAG	QTY	LOCATION	SERVICE	BACKFLOW PREVENTOR TYPE	MANUFACTURER	MODEL NO.	SIZE (mm)	MAX WORKING PRESS. (kPa)	NOTES
DCVA-1	1	SERVICE	DOMESTIC COLD WATER	DCVA	WATTS	LF007	50	1205	ALL
DCVA-2	1	SERVICE	IRRIGATION	RPBA	WATTS	LF009	75	1205	ALL
NOTES:									
1	LEAD FREE (NO EXCEPTIONS)								
2	PROVIDE AIR GAP CONNECTION FITTING								

HEAT RECOVERY UNIT VENTILATOR SCHEDULE									
EQUIPMENT TAG	QTY	LOCATION	MANUFACTURER	MODEL	SUPPLY & EXHAUST SIDE (2 FANS)			ELEC (V/PH/Hz)	NOTES
					AIR FLOW (LPS)	MCA	ESP (PA)		
HRV-1	1	SERVICE ROOM	DAIKIN	VAM300GVJU	113	1.8	65	240/1/60	ALL
NOTES:									
1	C/W WASHABLE FILTER				4. VIBRATION ISOLATION				
2	3. SPEED MODE (EX-H,H,L), DEFROST MODE								
3	C/W REMOTE CONTROLLER (INDEPENDENT SYSTEM)								

UNIT HEATER (ELECTRIC)											
EQUIPMENT TAG	QTY	LOCATION	MANUFACTURER	TYPE	MOUNTING TYPE	MODEL	AIR FLOW (LPS)	HGT CAP (kW)	LINE AMPS (A)	ELEC (V/PH/Hz)	NOTES
UH-1	1	SERVICE ROOM	QMARK	HORIZONTAL	CEILING	MWUH5004	125	5.0	20.9	240/1/60	ALL
NOTES:											
1	AUTOMATIC FAN DELAY OPERATION				4	HIGH LIMIT THERMAL CUTOUT					
2	COLOUR SELECTED BY ARCHITECT				5	C/W DISCONNECT SWITCH DS-30					
3	BUILT IN THERMOSTAT				6	C/W MOUNTING BRACKET KIT					

- 2020-09-01 ISSUED FOR COORDINATION
- 2021-04-01 ISSUED FOR BP REVIEW SET
- 2021-04-15 ISSUED FOR 75% DD
- 2021-07-08 ISSUED FOR 95% DD/BP
- 2021-09-03 ISSUED FOR BP/TENDER
- 2022-10-19 ISSUED FOR TENDER



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Permit to Practice No: 1000236



Sheet Title

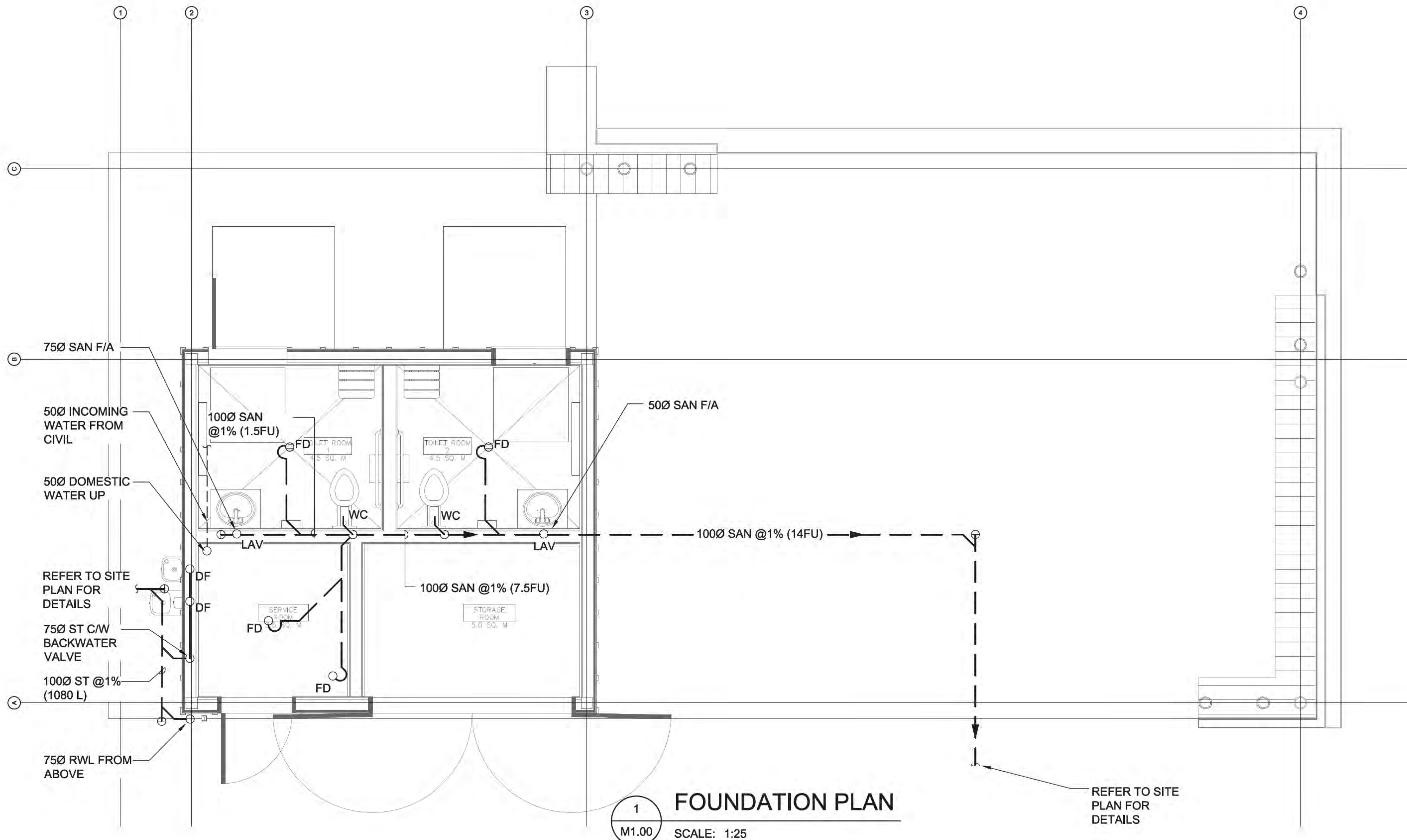
PLUMBING PLAN

Project ID: 000b-1039-20 Drawn: BB/KR Checked: MK/JC

Scale: 1:25 Date: OCT 19, 2022

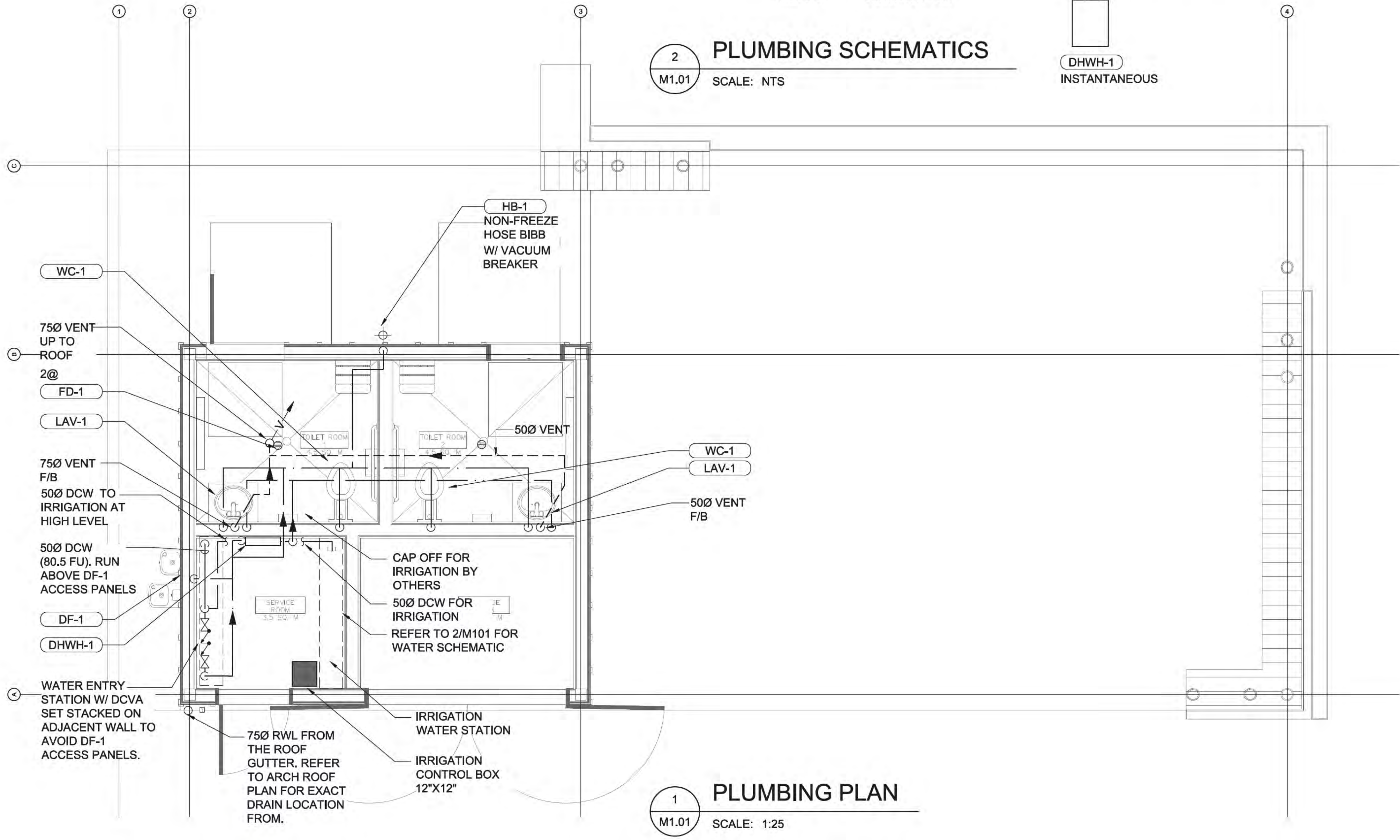
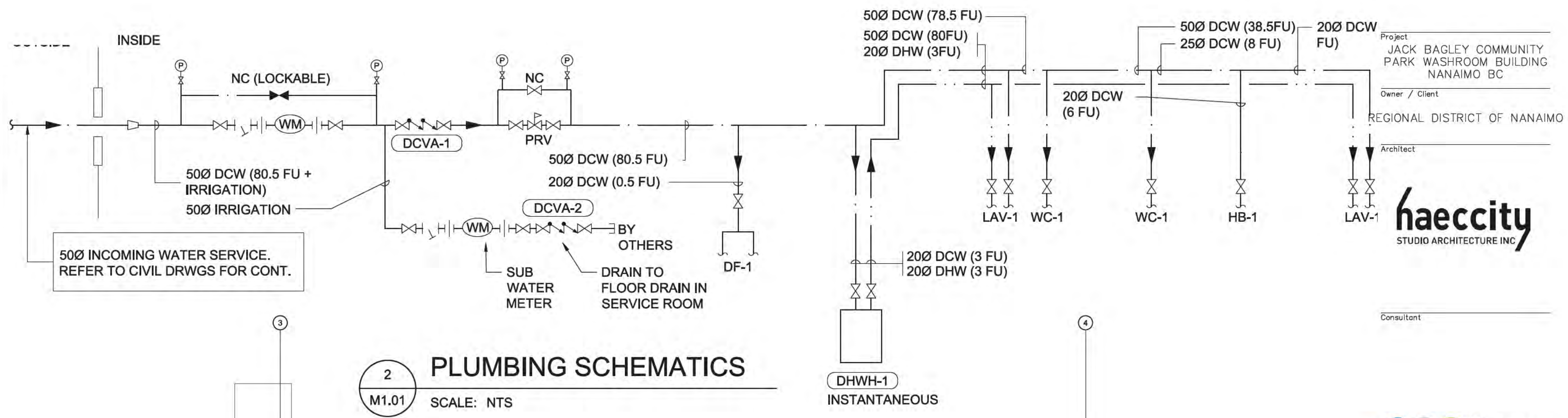
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1
 FOUNDATION PLAN
 SCALE: 1:25

- GENERAL NOTES:**
1. PROVIDE WATER HAMMER ARRESTORS ON BRANCH SUPPLIES CONNECTED TO GROUP FIXTURES, FLUSH VALVES, AND ALL QUICK-CLOSING DEVICES, AND INSTALL COMPLETE WITH ACCESSIBLE ISOLATION VALVE
 2. REFER TO THE SCHEMATIC FOR PIPE SIZE



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Owner / Client
REGIONAL DISTRICT OF NANAIMO

Architect



Consultant

AME Group
consulting mechanical engineers

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6	2022-10-19		ISSUED FOR TENDER

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PLUMBING PLAN

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OCT 19, 2022

Sheet No.
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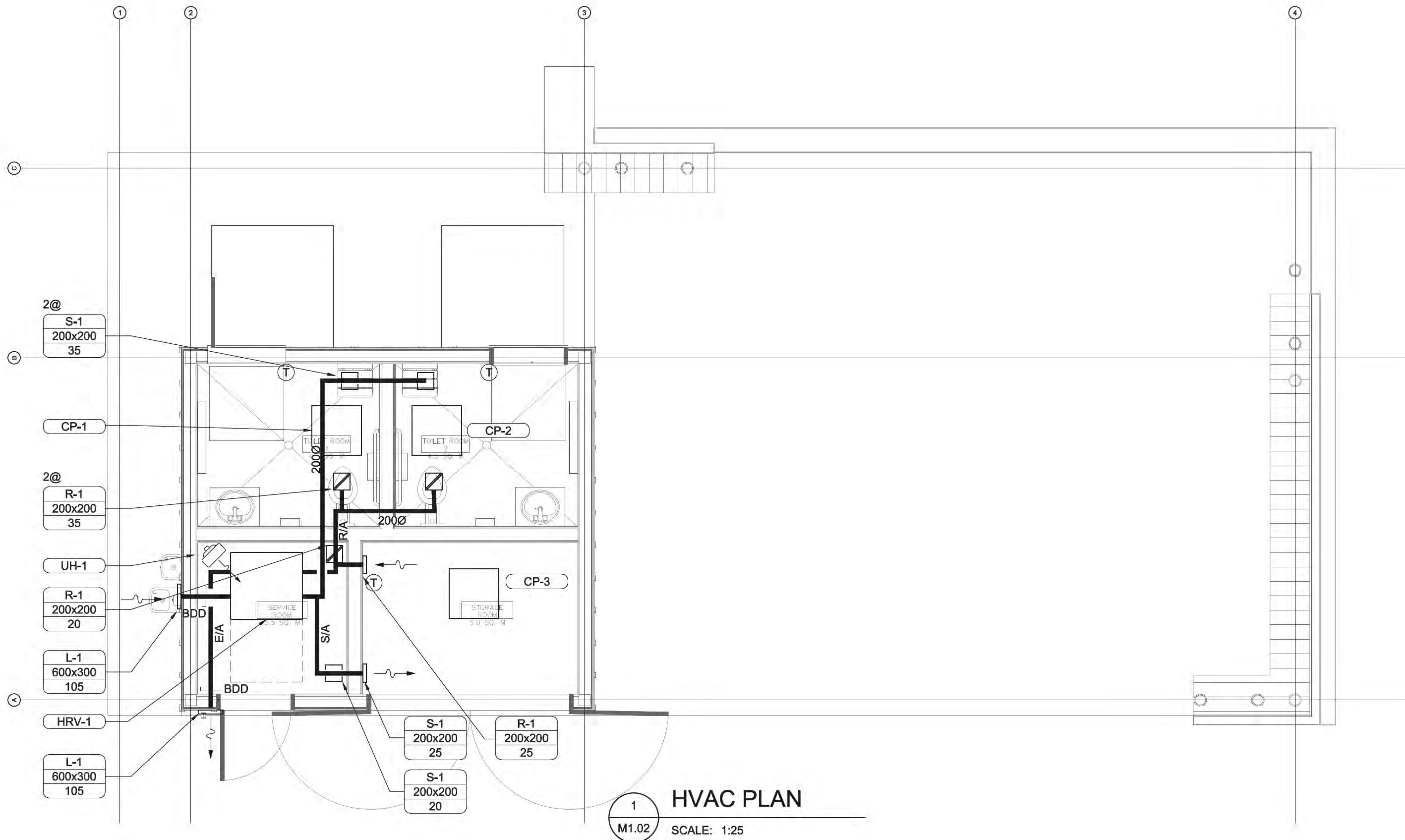
HVAC PLAN

Project ID: 000b-1039-20
 Drawn: BB/KR
 Checked: MK/JC

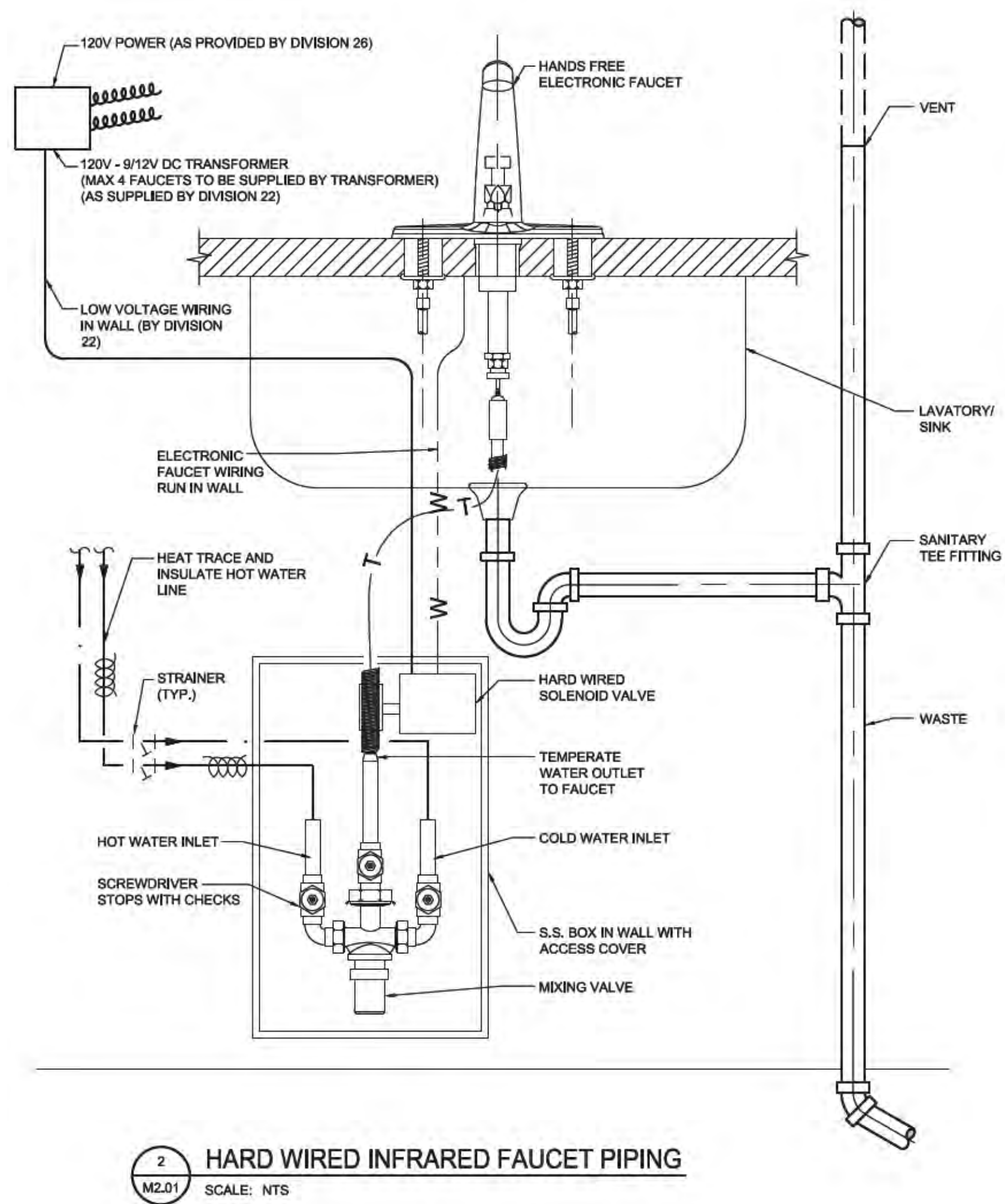
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 Date: OCT 19, 2022

Sheet No.

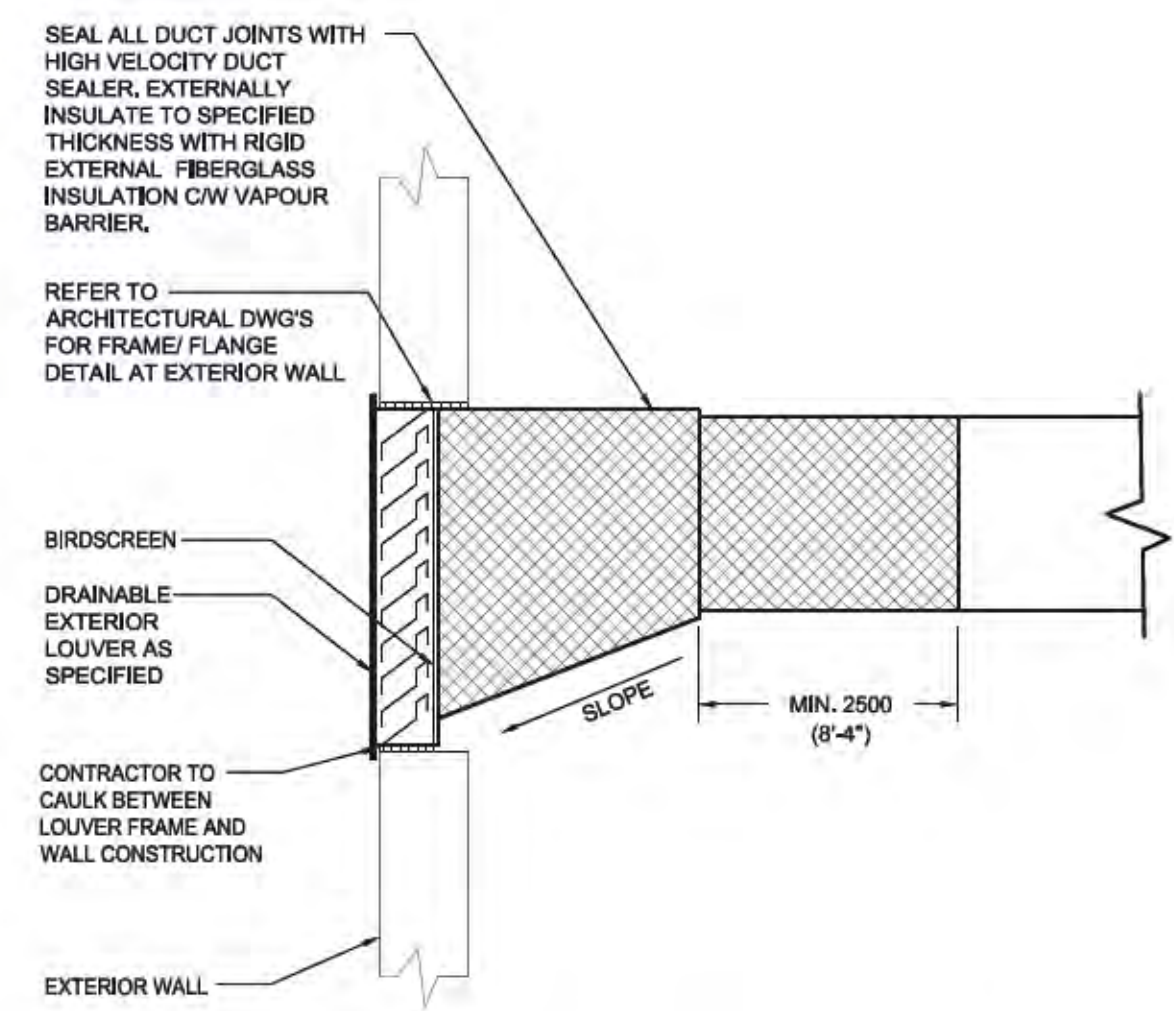
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1
M1.02
HVAC PLAN
 SCALE: 1:25



2 HARD WIRED INFRARED FAUCET PIPING
SCALE: NTS



1 EXTERIOR LOUVER CONNECTION
SCALE: NTS

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 WEDDINGTON: 778-115-0011

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Permit to Practice No: 1000236

2022-10-19

Sheet Title
STANDARD DETAILS

Project ID	Drawn	Checked
000b-1039-20	BB/KR	MK/JC
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Sheet No.		

M2.01

COMMON WORKS

1. General

1.1 Code Compliance, Permits and Fees

All work shall comply with current editions of the National, Provincial and Municipal Codes, Standards, Acts and Bylaws and will meet the requirements of the Authority having jurisdiction.

Obtain all permits and pay all fees applicable to the scope of work. Contractor shall arrange for inspections of the work by the authorities having jurisdiction and shall provide certificates indicating Final Approval.

1.2 Tender Price Breakdown

Submit a tender price breakdown within thirty (30) days of tender closing and before first progress claim, in a format agreed to with the Consultant. As a minimum include equipment, materials and labour for Mechanical, Plumbing, Sheet Metal, Fire Protection and Controls.

1.3 Submittals

Comply with Division 1 - Submission and Closeout Procedures and in addition the following:

Closeout Submittals: Provide a minimum of two (2) mechanical operation and maintenance manuals and one digital copy, prepared by the TAB Contractor.

Operation and maintenance manual approved by, and final copies deposited with the Consultant a minimum of 7-days before final inspection.

Operation and maintenance manual to include but not limited to: Layman's description of the systems and associated controls; Operational instructions, servicing, maintenance, operation and trouble-shooting instructions for each item of equipment; Warranties; Equipment manufacturer's performance datasheets indicating point of operation as left after commissioning is complete; Testing, adjusting and balancing reports.

Record Drawings: Consultant will provide 1 set of white prints at contractors cost to mark changes as work progresses and as changes occur. Use different colour waterproof ink for each service. Do not use pencil or black ink. Transfer information weekly to show work as actually installed. Drawings shall be available on a weekly basis for review by the Consultant.

Identify each drawing in lower right hand corner in letters at least 12 mm high as follows: - "AS BUILT DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW MECHANICAL SYSTEMS AS INSTALLED" (Signature of Contractor) (date).

Submit to Consultant for approval and make corrections as directed.

Submit completed CAD record drawings with final Operating and Maintenance Manuals within two (2) weeks of substantial completion. Failure to submit drawings will result in the work being undertaken by the Owner and deducted from the Contractor's hold back amount. Cost to transfer record information onto reproducible media & Auto-CAD disks are this contractor's responsibility. Consultant will release drawings to contractor after signing a copyright form. Should the Contractor choose to utilise this consultant for transferring as built information, allow \$400 / sheet for all drawings in the construction set. This will cover costs for drafting time & printing costs.

1.4 Quality of Work

All work shall be by qualified tradesmen with valid Provincial Trade Qualification Certificates. Spot checks will be made by the Consultant. Work which does not conform to standards may be rejected by the Consultant. The Contractor shall redo rejected work to the accepted standard at no cost to the Owner.

1.5 Metric Conversion

All units are expressed in SI units. On all submittals (shop drawings etc.) use the same SI units as stated in the specification.

Where pipes are specified with metric dimensions and Imperial sized pipes are available, provide equivalent nominal Imperial sized pipe as indicated in the table, and provide at no extra cost adapters to ensure compatible connections to all metric sized fittings, equipment and piping.

When CSA approved SI Metric pipes are provided, the Contractor shall provide at no extra cost adapters to ensure compatible connections between the SI Metric pipes and all new and existing pipes, fittings, and equipment.

EQUIVALENT NOMINAL DIAMETER OF PIPES

15mm = NPS ½

20mm = NPS ¾

25mm = NPS 1

30mm = NPS 1-1/4

40mm = NPS 1-1/2

50mm = NPS 2

65mm = NPS 2-1/2

75mm = NPS 3

100mm = NPS 4

150mm = NPS 6

200mm = NPS 8

The Metric duct sizes are expressed as 25 mm = 1 inch.

1.6 Drawings and Specifications

Should any discrepancy appear between drawings and specifications obtain written clarification from the Consultant during the tender period. Without a written clarification the better quality and/or greater quantity of work or materials shall be estimated, performed and furnished within the tendered price.

1.7 Cutting, Patching and Coring

Provide holes and sleeves, cutting and fitting required for mechanical work. Relocate improperly located holes and sleeves. All work shall be coordinated with other trades.

Obtain written approval from the Structural Consultant before cutting or burning structural members.

1.8 Installation of Equipment

Pipe all equipment drains to building drains except systems containing glycol.

Unions and flanges shall be provided in piping or ductwork to permit easy removal of equipment.

Maintain permanent access to equipment for maintenance.

1.9 Equipment and Materials

Where two or more products of the same type are required, products shall be of the same manufacturer.

Notify the Consultant in writing ten (10) days prior to the tender close, any materials or equipment specified which is not currently available or will not be available for use as called for herein. Failing this, the contract will assume that the most expensive alternate has been included in the tender price.

Approved equivalents and/or alternatives to specified products shall be equal to the specified product in every respect, operate as intended, and meet the space, capacity, and noise requirements outlined.

The Contractor shall be fully responsible for any additional labour and materials required by any trades or other Contractors to accommodate the use of other than specified materials or equipment. The Contractor shall bear any and all costs for design/system modifications to accommodate the "alternate" equipment. Extras will not be approved to cover such work.

1.10 Delivery, Storage and Handling

Store materials and equipment in accordance with the manufacturer's recommendations in a clean, dry, well-ventilated area.

Replace defective or damaged materials with new.

1.11 Access Doors

Provide access doors for maintenance or adjustment of all parts of the mechanical system.

Provide 300 mm x 300 mm minimum size for inspection and hand access.

600 mm x 600 mm minimum size, larger if indicated on drawings, where entry is required and access is difficult.

1.12 Escutcheons and Plates

Provide escutcheons and plates on all piping and ductwork passing through finished walls, floors, and ceilings.

1.13 Guarantee / Warranty

Furnish a written guarantee stating that all work executed in this contract will be free from defective workmanship and materials for a period of one (1) year from the date of Substantial Performance.

1.14 Balancing

The approved balancing agencies are: KD Engineering, MDT Systems, Western Mechanical Systems, Blue Collar Group, Flotech Mechanical, Raincity Technical Services, NovaGreen

Balance exhaust fans and air outlets to air quantities indicated on the drawings and in this specification. Where outlet quantities are not indicated, divide capacity equally among all outlets.

Submit a PDF copy of the report to the Consultant within two (2) weeks after substantial completion. Failure to submit the report within the specified time will result in the work being done by the Owner and the costs deducted from final payment.

Balancing shall be performed to the following:

Air-Terminal Outlets ±10%

Air-Central Equipment ±5%

Provide a drop test of all fire dampers and a letter/certificate confirming this work.

Cooperate with the Balancing Agency and make any corrections as required by Balancing Agency.

Provide balancing valves and dampers, pulleys, sheaves etc. as requested by the Balancing Agency and/or necessary to properly adjust or correct the systems to design flows, without additional cost to Owner.

1.15 Commissioning and Demonstration

Be responsible for the performance and commissioning of all equipment supplied and re-used under Divisions 22 and 23 including plumbing fixtures.

At the conclusion of commissioning, demonstrate the operation of the systems to the consultant and then to the owner's operating staff.

At the completion of the commissioning, testing, balancing and demonstration submit to the consultant a letter certifying that all work specified under this contract is complete, clean and operational in accordance with the specification and drawings.

1.16 Vibration Isolation

Provide neoprene isolators for deflections 6mm (1/4") and under.

Provide either neoprene or steel spring isolators for deflections between 6mm and 12mm (½").

Provide steel spring isolators for deflections of 12mm (½") and over.

Provide adjustable limit stops for spring isolation mounts on equipment with operating weights substantially different from the installed weights

All spring isolators shall be "open spring" unless otherwise stated. Seismically rated housed spring isolators may be used in lieu provided that they meet this project's requirements for seismic restraint.

Select isolators in accordance with equipment weight distribution to allow for an average deflection meeting or exceeding the specified deflection requirements and so that no isolator has a deflection less than 80% of the static deflection specified. A minimum of 4 isolators are required for each piece of equipment, unless specified otherwise.

1.17 Substantial and Total Performance

Prior to requesting an inspection for Substantial Performance, provide a complete list of items, which are deficient.

A certificate of Substantial Performance will not be granted unless the following items are completed and available to the Owner's Consultant:

Final Plumbing Inspection Certificate from the Authority having Jurisdiction.

Final Backflow Prevention test reports for all backflow devices.

Draft Operating/Maintenance Manuals have been submitted for review.

All mechanical systems have been commissioned and are capable of operation with alarm controls functional and automatic controls in operation.

Air and water systems have been balanced with draft report submitted to the Consultant.

Operating and Maintenance demonstrations have been provided to the Owner.

Record drawings have been submitted.

All previously identified deficiencies have been corrected and accepted.

Prior to a Total Performance Inspection provide declaration in writing that substantial performance deficiencies have been corrected and final TAB reports and O&M manuals have been submitted.

The Consultant shall provide one (1) visitation for the purpose of total performance inspection. Subsequent visitations if required shall be at the expense of the Contractor.

2. PRODUCTS

2.1 Acceptable Manufacturers

2.2 Pipe Hangers and Supports

Provide hangers and supports to secure equipment in place, prevent vibration, protect against damage from earthquake, maintain grade, provide for expansion and contraction, and accommodate insulation.

Provide galvanized hangers and supports for all piping except hangers and supports shall be copper plated or epoxy coated for copper piping.

Toggle hangers and/or strap hangers shall not be used for pipe hangers.

Power actuated fasteners and "drop-in" anchors shall not be used.

Provide ring type hangers for piping up to NPS 1½ and clevis type hangers for piping over NPS 1½.

2.3 Access Doors

Drywall Surface: Extruded aluminum frame with gypsum board inlay and structural corner elements. Hinge to be concealed 2-point hinge, non-corroding with screwdriver operated cam latch.

Tile Surface: Universal design, stainless steel door (16ga) and stainless steel frame (18ga), door flush to frame, rounded safety corners, continuous concealed hinge, screwdriver operated cam latch, #4 satin stainless steel finish.

Plaster Walls and Ceiling: steel door (14ga) and steel frame (14ga), door flush to frame edge, expansion casing bead and 75 mm wide galvanized lath surround recessed 18 mm to receive plaster, continuous concealed hinge, screwdriver operated cam latch, prime coat grey painted finish.

Ductwork: Ultra low leakage type, flat oval design, galvanized steel frame (22ga), double skin galvanized steel door (22 ga) with 25mm insulation fully enclosed in panel, bulb type seal integrally fastened to door, lever cam locks. Provide stainless steel in lieu of galvanized steel in stainless steel ductwork.

Acceptable manufacturers: Maxam, Acudor, Milcor, Can.Aqua, Mifab, Bilco, Baucoplus

2.4 Identification

Identify piping with labels and flow arrows. Provide identification at 15m (50ft) maximum intervals, before and after pipes passing through walls, at all sides of tees, behind access doors. Use Brady B-500 vinyl cloth labels for non insulated pipes and B-350 for insulated pipes.

Provide 20mm (3/4") diameter brass tags, secure to valve stems with key chain. Provide a valve directory at all mechanical rooms, in the O&M manuals and a digital copy cross referenced with any associated controls nomenclature.

Each piece of equipment shall be identified with its equipment schedule identification, e.g. supply fan SF-1, cooling coil CC-1, pump P-1 with lamacoid plates having 6mm (1/4") minimum letter size.

Acceptable manufacturers: Brady

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STUDIO ARCHITECTURE INC

Consultant

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VICTORIA 1.250.553.8995
1.250.363.9796
371 JIMCROFT ST
VICTORIA, BC V8M 1A8
VANCOUVER 1.604.688.9795
500-138 BURET ST
VANCOUVER, BC V6B 1E5
CALGARY 1.403.252.3333
1.403.252.3333
775-115-6010 BURET ST
CALGARY, AB T2B 1M1

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Permit to Practice No: 1000236



Sheet Title

MECHANICAL SPECIFICATION I

Project ID
000b-1039-20

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Date
OCT 19, 2022

Sheet No.

M3.01

2.5 Vibration Isolation

Neoprene Washer/Bushing: A one piece molded bridge bearing neoprene washer/bushing. The bushing shall surround the anchor bolt and have a flat washer face to avoid metal to metal contact. Use washer/bushing only on light-weight equipment.

Acceptable manufacturer: Mason HG hemi grommet or equal

Neoprene Pad Isolators: Neoprene or neoprene / steel / neoprene pad isolators. Minimum static deflection 2.5 mm (0.1") or greater.

Acceptable manufacturer: Mason WMSW or equal

Rubber Floor Mounts: Bridge bearing neoprene mountings. Minimum static deflection of 5mm (0.2") or greater and all directional seismic capability.

Acceptable manufacturer: Mason RAA or ND or equal

Spring Floor Mounts: Spring isolators built into a ductile iron or steel housing to provide all directional seismic snubbing. The snubber shall be adjustable vertically and allow a maximum of 6mm (1/4") travel in all directions before contacting the resilient snubbing collars. Molded neoprene cup or 1/4" (6mm) neoprene acoustical friction pad between the baseplate and the support. Spring diameters shall be no less than 0.8 of the compressed height of the spring at rated load. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection.

Acceptable manufacturer: Mason SSLFH or equal

Spring Hangers: Hangers shall consist of rigid steel frames containing minimum 32mm (1 1/4") thick neoprene elements at the top and a steel spring seated in a steel washer reinforced neoprene cup on the bottom. Provide a combination rubber and steel rebound washer as the seismic upstop for suspended piping, ductwork and equipment. Rubber thickness shall be a minimum of 6mm (1/4"). Colour coded springs, rust resistant, painted box type hangers. To maintain stability the boxes shall not be articulated as clevis hangers nor the neoprene element stacked on top of the spring.

Acceptable manufacturer: Mason HD, HS or equal

Alternate vibration isolation acceptable manufacturers, Korfund, Vibro-Acoustics

1. EXECUTION

3.1 Painting Repairs and Restoration

Do painting in accordance with Division 09 – Interior Painting. Prime and touch up marred finished paintwork to match original. Restore to new condition, finishes which have been damaged.

Clean exposed bare metal surfaces supplied under Divisions 21, 22, 23 and 25. Apply at least one coat of corrosion resistant primer paint to all supports and equipment fabricated from ferrous metal.

3.2 Demonstration

Supply tools, equipment, personnel to demonstrate and instruct the operating, and maintenance personnel in operating, controlling, adjusting, trouble-shooting, and servicing of all systems and equipment during regular work hours, prior to acceptance.

3.3 Firestopping and Smoke Seals

The Owner's Consultant shall conduct mandatory destructive reviews for each type of installation. Destructive testing shall be at the discretion of the Owner's Consultant and Authority having jurisdiction

Allow for destructive testing of 5% of fire stopping applications. Should installations not conform to manufacturer's listed assembly, an additional 25% of installations may be destructively tested and should there be more failures, the contractor will be responsible to remove all fire stopping products and reinstall products correctly, at no additional cost to the project.

Tag all penetrations and every 3 meters of joint seal with printed tags. Tags shall Indicate product, system #, date installed, installed by: (name and phone number of subcontractor) and re-penetrated by & date.

Tags shall state: CAUTION! FIRESTOP - DO NOT REMOVE, PUNCTURE OR DISCONTINUE UNLESS PREPARED TO RE-SEAL IMMEDIATELY WITH SPECIFIED PRODUCT

Comply with manufacturer's instructions for installation of through-penetration joint materials. Where possible, use metal sleeves for floor penetrations to prevent/mitigate the consequences of leakage or flooding.

Perform under this section patching and repairing of firestop caused by cutting or penetrating of existing firestop systems already installed by other trades.

3.4 Pipe Hangers and Supports

Pipe support spacing and hanger rod diameter shall be:

Pipe Size: NPS 1/2 Rod Diameter 9mm (3/8"), Spacing 1.8m (6')

Pipe Size: NPS 3/4 to 1½ Rod Diameter 9mm (3/8"), Spacing 2.4m (8')

Pipe Size: NPS 2 to 2½ Rod Diameter 9mm (3/8"), Spacing 3m (10')

Pipe Size: NPS 3 to 4 Rod Diameter 16mm (5/8"), Spacing 3.6m (12')

3.5 Pipe Pressure Testing

Advise Consultant or project manager 48 hours minimum prior to performance of pressure tests.

Hydrostatic test: 150% of working pressure, but not less than 860 kPa (125 psig). Maintain test pressure without loss for 4 hours minimum unless specified for longer period of time in relevant mechanical sections.

Prior to tests, isolate equipment and other parts which are not designed to withstand test pressure or media.

Conduct tests in presence of construction manager or project manager.

Examine all joints for leaks and remake all leaking joints with new materials. Pay costs for repairs or replacement, retesting, and making good. Consultant to determine whether repair or replacement is appropriate.

Insulate or conceal work only after approval and certification of tests by authorities.

Submit copies of pressure test reports for all sections of piping.

3.6 Access Doors

Provide all access doors required to access work installed by Divisions 21, 22, 23 and 25. Be responsible for coordinating locations, cutting opening and installing panels. Any secondary supports, blocking etc. will be by the

ceiling or wall contractor. Ensure that equipment is within view and accessible for operating, inspecting, adjusting, servicing without using special tools.

3.7 Vibration Isolation

Neoprene Washer/Bushing: Isolate variable frequency drive controller using neoprene washer/bushing isolators or soft grommets such that structure borne noise transmission to occupied space is less than airborne noise transmission.

Rubber Floor Mounts: Mount in-line pumps on two (2) rubber floor mount isolators under each support foot. For equipment mounted on a slab on grade mount on rubber floor mount isolators unless otherwise specified. Provide protection of the rubber element from contact with oil in the mechanical room.

Spring Floor Mounts: Isolate all floor or pier mounted equipment on spring floor mount isolators, unless otherwise specified.

Spring Hangers: Locate isolation hangers as near to the overhead support structure as possible. Installation shall permit hanger box or rod to move through a 30 degrees arc without metal to metal contact. All discharge ductwork runs for a distance of 15m (50') from the connected equipment shall be isolated from the building structure by means of spring hangers. Spring deflection shall be a minimum of 19mm (0.75").

DIVISION 22 PLUMBING

1. GENERAL

1.1 Section Scope

Piping, valves and specialties serving building water distribution systems to 1m (36") outside the building and sanitary and storm drain waste and vent piping, equipment and accessories between plumbing fixtures to 1m (36") from the building.

1.2 Cleanouts

Provide sanitary and storm piping cleanouts at all changes in direction, at the ends of all horizontal runs, at the base of every stack, where drains leave the building; where shown on the drawings and in compliance with the local plumbing code, bylaws and ordinances.

Provide caulked or threaded type cleanouts extended to finished floor wall surface.

Provide bolted cover plate clean outs on vertical rainwater leaders only. Ensure ample clearance at dean out for rodding of drainage system.

2. PRODUCTS

2.1 Pipe and Fittings

Sanitary and Storm Drainage, and Vent (above grade) shall be DWV Copper, cast Iron class 4000, PVC-15 schedule 40

Sanitary and Storm Drainage and Vent (below grade inside building to 1m outside) shall be cast Iron class 4000, PVC-DWV schedule 40 or ABS-DWV (solid core) schedule 40.

Domestic Water (above grade inside building) shall be:

Type "K" copper for hot and type "L" copper for cold water hard drawn seamless copper tubing to ASTM B88 with cast brass or wrought copper solder joint pressure fittings with 95/5 Sn/Sb or Silvabrite 100 solder joints.

2.2 Valves

Wherever possible all valves shall be of one manufacturer.

Grooved valves shall be of the same manufacturer as the adjoining couplings.

Provide valves with manufacturer's name and pressure rating clearly marked on outside of body. All valves must be suitable in all respects for service used.

All valves shall have a Provincial CRN number which is current.

Ball Valves 2 NPS and under shall be low lead forged brass body, 2 piece body, full port, chrome plated ball, PTFE seats, blow out proof stem, adjustable packing nut, for domestic water service, class 4140 kPa (600 psi) W.O.G.

Gate Valves 2 NPS and under shall be lead free bronze body, solid wedge disc, bronze or stainless steel trim, non-rising stem, for domestic water service, Class 1380 kPa (200 psi) W.O.G.

Globe Valves 2 NPS and under shall be lead free bronze body, swivel type stainless steel disc, union bonnet, for domestic water service, class 1380 kPa (200 psi) W.O.G.

Check Valves 2 NPS and smaller shall be lead free bronze swing check with bronze disc capable of being reground, Y pattern, suitable for domestic water use, class 1380 kPa (200 psi) W.O.G.

Pressure Reducing Valve NPS 1 and smaller shall be lead free copper silicon alloy body or low lead bronze body, SS integral strainer, renewable SS seat, serviceable inline, built in bypass check valve, suitable for hot and cold water potable water. Rated at maximum inlet pressure of 2100 kPa (305 psi) and 82°C (180°F) temperature.

Pressure Reducing Valve NPS 1-¼ NPS to NPS 2 shall be pilot operated with low flow bypass, diaphragm actuated globe valve, lead free, bronze body or ductile iron to ASTM A536. Lead free bronze, stainless steel or ductile iron internals. All ductile iron components including body and cover shall be lined and coated with epoxy coating.

Backflow Preventers Double Check Valve Assembly (DCVA) shall be 2 NPS and smaller, lead free cast copper silicone alloy body, twin positive seat check modules, captured springs, replaceable check module seats and discs, two isolation valves, test cocks and a bronze strainer. Comply with CSA B64.5 and AWWA C510

Strainers shall be ¼ - 2 NPS threaded ends, bronze body, 1034 kPa (150 psi) rating.

Water Hammer Arrestors shall be bellows type with welded stainless steel nesting bellows or piston style and stainless steel casing. Air chambers are unacceptable.

2.3 Prefomed Pipe Insulation

Preformed insulation, fine fibrous glass or formed mineral fibre pipe insulation with all service jacket vapour retarder (ASJ). ASJ shall be re-enforced with glass fibre, factory applied with pressure sensitive lap closure. Maximum "K" value at 38°C (100°F) = 0.035 W/m.°C (0.24 Btu.in/hr.ft2.°F). Acceptable manufacturers: Manson Insulation, Knauf, Roxul, Johns Manville, Fibrex

Thermocanvas finishing jacket: fire rated, 170g (6 oz.) fire retardant canvas jacket for covering mechanical insulation indoors, 25/50 fire class, plain wave cotton, no dyes.

PVC finishing jacket: white, UV resistant, for indoor or outdoor applications, 25/50 fire class, minimum 0.50 mm (0.02") thick.

Aluminum finishing jacket: 0.51 mm (22 ga.) thick stucco or smooth aluminum jacketing with longitudinal slip joints and 50mm (2") end laps with factory applied protective liner on interior surface.

2.4 Cleanouts

Floor - Unfinished Area: Cast iron floor level cleanout assembly with extra heavy duty, round, adjustable, scoriated, secured cast iron top and no-hub outlet. Suitable for heavy traffic

Floor - Finished Area: General areas shall be cast iron cleanout with extra heavy duty round, adjustable, scoriated, secured nickel bronze top, and no-hub outlet. Foot traffic areas with sheet goods flooring shall be cast iron floor level cleanout assembly with a square adjustable nickel bronze top with 6mm (1/8") tile recess, and no-hub outlet. Carpeted floor area subject to foot traffic shall be cast iron floor level cleanout assembly with round, adjustable, scoriated, nickel bronze top and carpet clamping frame.

Wall - Finished Area shall be concealed drainage line in a finished wall: Cast iron cleanout tee and cast iron countersunk plug with stainless steel round cover and screw.

3. EXECUTION

3.1 Piping

Pipe connections NPS 1½ and less shall be soldered or screwed joint unless noted otherwise.

Pipe connections NPS 2 shall be screwed joint for liquid systems unless noted otherwise.

Pipe connections NPS 2½ and larger shall be welded or flanged unless noted otherwise.

3.2 Pressure Testing

Advise Consultant or project manager 48 hours minimum prior to performance of pressure tests.

Use only potable water for testing of potable water systems.

Test pressure shall be the greater of 1.5 times maximum system operating pressure or 860 kPa for 8 hours.

Prior to tests, isolate equipment and other parts which are not designed to withstand test pressure or media.

Insulate or conceal work only after approval and certification of tests by authorities.

Submit copies of pressure test reports for all sections of piping.

3.3 Valves

Install all valves in accordance with manufacturer's recommendations.

Install valves in accessible locations with stems upright or angled 45° above horizontal unless approved otherwise. Valves must be accessible without removing adjacent piping.

Install control valves with their stems upright unless approved otherwise and with adequate clearance for removal of actuators.

Provide stem extensions on all insulated valves.

Provide full port ball valves in piping 50 mm (2") and smaller and butterfly valves in piping 65 mm (2-½") and larger for shut-off, equipment isolation, throttling, bypass or manual flow control services.

Throttling valves are not to be used for shut-off; additional valves shall be installed for isolation purposes.

Provide isolation valves at branch take-offs, to isolate each piece of equipment, upstream of all meters, gauges, automatic air vents, and as indicated.

Use silent check valves on discharge of pumps and in vertical pipes with downward flow, and as indicated.

Use circuit setting globe valves complete with lock shield to control flow in circuits, except where balancing cocks are specifically specified.

Project
JACK BAGLEY COMMUNITY
PARK WASHROOM BUILDING
NANAIMO BC

Owner / Client
REGIONAL DISTRICT OF NANAIMO

Architect

STUDIO ARCHITECTURE INC


Consultant

consulting mechanical engineers

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Consultant Team

Issues / Revisions			
No.	Date	YMD	Notes
1	2020-09-01	ISSUED FOR COORDINATION	
2	2021-04-01	ISSUED FOR BP REVIEW SET	
3	2021-04-15	ISSUED FOR 75%DD	
4	2021-07-08	ISSUED FOR 95%DD/BP	
5	2021-09-03	ISSUED FOR BP/TENDER	
6	2022-10-19	ISSUED FOR TENDER	

Sheet Title
<p style="text-align: center;">Permit to Practice No: 1000236</p>  <p style="text-align: center;">2022-10-19</p>

Sheet Title		
MECHANICAL SPECIFICATION II		
Project ID 000b-1039-20	Drawn BB/KR	Checked MK/JC
Scale NOT TO SCALE	Date OCT 19, 2022	
Sheet No.		
M3.02		

3.4 Piping Insulation Minimum Thickness Schedule (ASHRAE 90.1)

Hot water 41°C to 60°C (106-141°F):

Pipe diameters up to NPS 1¼ = 25mm minimum thickness

Pipe diameters NPS 1-½ and larger = 40mm minimum thickness

Cold water above 5°C (41°F):

All pipe diameters = 25mm minimum thickness

Note: Where the thermal conductivity of a proposed insulation is greater than specified, the thickness will be increased by the ratio of U2/U1.

U2 = proposed insulation “k” value at the table mean rating temperature.

U1 = upper range limit “k” value from the table above.

3.5 Piping Finish Schedule

Indoors concealed; factory finish

Indoors exposed in mechanical room and elsewhere; canvas jacket

Indoors, exposed in utility areas, parkade, etc.; PVC jacket

Outdoors; metal jacket

3.6 Safes, Flashing and Vent Terminals

Provide flexible flashing and metal counter flashing where piping penetrates weather or waterproofed walls and floors.

CPE, Chloraloy 240 lining or lead material may be used at floor drains and cleanouts. Chloraloy shall be solvent welded to manufacturer's installation instructions. Lead shall not be used on roofs where the roofing material is applied by a torch-on method.

Flash floor drains in floors with topping over occupied areas with lead or CPE membrane, a minimum of 300mm (12”) clear on sides with minimum 900mm x 900mm (36” x 36”) sheet size. Fasten flashing to drain clamp device.

DIVISION 23 HVAC

1. GENERAL

1.1 Grilles, Louvres and Diffusers

Airflow tests and sound level measurement shall be made in accordance with applicable ADC equipment test codes, ASHRAE Standards and AMCA Standards.

Manufacturer shall certify catalogued performance and ensure correct application of air outlet types.

Outside louvers shall bear AMCA seal for free area and water penetration.

Project Conditions: Review requirements of outlets as to size, finish and type of mounting prior to submitting shop drawings and schedules of outlets. Positions indicated are approximate only. Check locations of outlets and make necessary adjustments in position to conform with Architectural features, symmetry, and lighting arrangement.

2. PRODUCTS

2.1 Ductwork and Accessories

Provide ductwork constructed, reinforced, sealed, and installed to withstand 1-½ times the working static pressure.

Provide Low Pressure Ductwork 500 Pa (2” W.G.) for supply ductwork and plenums on systems without terminal mixing boxes or air valves, supply ductwork downstream from terminal mixing boxes or air valves, outdoor air ductwork and plenums, return air ductwork and plenums, exhaust and relief air ductwork and plenums, unless noted otherwise.

Low pressure insulated flexible ductwork shall be equal to Thermaflex Type M-KC.

2.2 Duct Sealing

Duct sealing low pressure ductwork 500 Pa (2” W.G.) and under shall be SMACNA seal class A. Seal all supply, return and exhaust duct joints, longitudinal as well as transverse joints as follows:

Slip Joints: Apply heavy brush-on high pressure duct sealant. Apply second application after the first application has completely dried out. Where metal clearance exceeds 1.5 mm (1/16”) use heavy mastic type sealant.

Flanged Joints: Soft elastomer butyl or extruded form of sealant between flanges followed by an application of heavy brush-on high pressure duct sealant.

Other Joints: Heavy mastic type sealant.

Duct sealing medium pressure ductwork to 1000 Pa (4”W.G.) shall be the same as 500 Pa ductwork except provide a combination of woven fabrics and sealing compound followed by an application of high pressure duct sealant.

Duct tapes as a sealing method are not permitted, except on residential ductwork - minimum 2 wraps of 2” wide (50mm) foil duct tape is acceptable.

Do not insulate any section of the ductwork until it has been inspected and approved of duct sealant application, by the Consultant.

2.3 Duct Hangers and Supports

Hangers and Supports to SMACNA standards.

Strap hangers: of same material as duct but next sheet metal thickness heavier than duct.

Maximum size duct supported by strap hanger: 500 mm.

Hangers: Galvanized steel angle with galvanized steel rods to SMACNA.

Toggle hangers and/or strap hangers shall not be used.

Power actuated fasteners and “drop-in” anchors shall not be used.

2.4 Duct and Breaching Insulation

Round Ducts and Concealed Rectangular Ducts: External flexible insulation, service temperature 5°C to 232°C (41°F to 450°F), glass fiber or mineral fiber flexible blanket for low and medium temperature applications, all service aluminum foil-scrim kraft (FSK) vapour barrier jacket with glass fibre reinforcement, factory applied. Density 12kg/m3 (0.75PCF), Minimum RSI 0.49/25mm (R 2.8/in) (installed)

2.5 Ductwork Finish Jackets

Thermocanvas Jacket: fire rated, 170g (6 oz) fire retardant canvas jacket for covering mechanical insulation indoors, 25/50 fire class, plain wave cotton, no dyes.

Utility Finish: Over rigid insulation for rectangular ductwork and flexible insulation for round ductwork. Apply continuous metal corner bead to all corners. Adhere vapor retarder tape over all joints and breaks in vapor retarder, and at all corners.

Aluminum Jacket: 51 mil (22 ga.) thick stucco or smooth aluminum jacketing with longitudinal slip joints and 50mm (2”) end laps with factory applied protective liner on interior surface.

2.6 Grilles, Louvres and Diffusers

Acceptable Manufactures for Air Terminals: E.H. Price, Titus, Anemostat, Nailor.

Acceptable Manufacturers for Louvres: Airo-lite, Penn, Airstream, West Vent, Nailor, Ruskin.

Provide baffles to direct air away from walls, columns or other obstructions within the radius of diffuser operation.

Provide plaster frame for diffusers located in plaster surfaces and anti-smudge frames or plaques on diffusers located in rough textured surfaces such as acoustical plaster.

Provide 30 mm margin frame on grilles with [concealed fastening].

Provide opposed blade balance damper, accessible from grille face on all grilles located in drywall ceilings or bulkheads.

Fabricate goosenecks of minimum 1.3 mm (18 ga.) galvanized steel. Mount on minimum 300 mm (12 in.) high curb base where size exceeds 225 mm x 225 mm (9 in. x 9 in).

Refer to Grilles and Diffuser schedule for types and capacities.

Capacity as scheduled.

3. EXECUTION

3.1 Ductwork and Accessories

Fabricate ductwork in accordance with SMACNA Duct Construction Standards - metal and flexible, NFPA 90A Standard for the Installation of Air-Conditioning and Ventilating Systems, and NFPA 90B Standard for the Installation of Warm Air Heating and Air-Conditioning Systems

Prior to fabrication of ductwork, check all ceiling spaces and heights and conflicts with other trades.

Duct sizes indicated are inside clear dimensions. For acoustically lined or internally insulated ducts allow for insulation thickness and maintain interior clear dimensions indicated.

Connect outlet terminals to low pressure ducts with 900mm (36”) maximum length of stretched flexible duct. Hold in place with strap or clamp, caulk sealed. Do not use flexible duct to change directions.

Provide a flexible connection where low pressure ducts are connected to fan equipment, terminal boxes or any other apparatus. Joint shall be screwed or bolted flexible gasketed joint, minimum 50mm (2”) wide.

Provide fire dampers where ducts cross fire separations. Fire dampers shall be ULC listed and “dynamic”; rated to close under airflow. Refer to architectural drawings for fire separation ratings and locations.

Provide balancing dampers where indicated on drawings and at points on low pressure supply, return and exhaust ducts where branches are taken from larger ducts.

Modify ceiling system where required to accommodate grilles and diffusers.

Size round ducts, installed in place of rectangular ducts, from ASHRAE table of equivalent rectangular and round ducts. No variation of duct configuration or sizes permitted except by permission from the Consultant.

Exposed round ductwork to be spiral lock seam type only.

Provide duct hangers and supports in accordance with SMACNA manuals.

Confirm the existing base building standards prior to submitting tender.

Ductwork shall be galvanized steel unless noted otherwise.

3.2 Duct Hangers and Supports

Duct support shall be:

Up to 750mm duct size: angle size 25x25x3 mm with 6mm rod size

For concrete: manufactured concrete inserts.

For steel joist: manufactured joist clamp.

For steel beams: manufactured beam clamps.

3.3 Valves

Install valves in accessible locations with stems upright or angled 45° above horizontal unless approved otherwise. Valves must be accessible without removing adjacent piping.

Provide stem extensions on all insulated valves.

Provide ball valves in piping NPS 2 and smaller and butterfly valves or gate valves in piping NPS 2-½ and larger for shut-off, equipment isolation, throttling, bypass or manual flow control services. Ball valves used for shut-off /

isolation shall be full port.

Throttling valves are not to be used for shut-off; additional valves shall be installed for isolation purposes.

Provide isolation valves at branch take-offs, to isolate each piece of equipment, upstream of all meters, gauges, automatic air vents, and as indicated.

Provide isolation valves in all systems such that floor by floor for horizontal systems, all risers in vertical systems and zone areas on a large horizontal system can be isolated.

Use swing or soft seated spring loaded check valves in horizontal and vertical up-flow pipes and on the discharge of pumps. Spring loaded water check valves shall be located eight (8) pipe diameters downstream of pumps or elbows. Use silent check valves on discharge of pumps and in vertical pipes with downward flow, and as indicated.

Do not install balancing or throttling valve on discharge of pumps equipped with VFD. Install pressure ports for flow measurement.

3.4 Duct and Breaching Insulation

Duct Insulation Minimum Thickness Table (ASHRAE 90.1 Zone 5 and 6)

Rigid Exterior Duct Insulation				
Duty	Plenum(4)	Duct Location		
		Interior		Exterior
		Conditioned Space	Unconditioned Space	
Minimum Insulation Thickness in mm (in.)				
Cooling Only Air Supply	25 (1”)	25 (1”)	40 (1-1/2”)	50 (2”)
Heating or H/C Air Supply	25 (1”)	25 (1”)	40 (1-1/2”)	75 (3”)
Outdoor Air Supply	40 (1-1/2”)	40 (1-1/2”)	40 (1-1/2”)	0
Combustion Air	40 (1-1/2”)	40 (1-1/2”)	40 (1-1/2”)	0
Return Air	0	0	40 (1-1/2”)	75 (3”)
Exhaust Air (1)(2)	0	0	25 (1”)	25 (1”)
Grease Hood Exhaust (5)	N/A	40 (1-1/2”)	40 (1-1/2”)	0
Tempered Air Supply or Makeup Air	0	0	40 (1-1/2”)	75 (3”)
Mixed Air (3)	25 (1”)	25 (1”)	40 (1-1/2”)	75 (3”)

See note (6) for factory installed duct and plenums

Note (1): Air temperatures 15°C to 49°C (60°F to 120°F).

Note (2): Provide 38mm (1-½”) flexible duct insulation on all exhaust air ductwork from outside wall or roof to damper but a minimum of 1.5 m (5 ft.) inside building.

Note (3): Mixed Air includes tempered air downstream of heat recovery units.

Note (4): Plenums located outside the building shall be insulated to the values listed in the exterior column.

Note (5): Provides 1 hour fire rating. Thickness shall be doubled for 2 hour applications.

Note (6): Factory installed ductwork and plenums provided with equipment need not comply with this table provided they meet the requirements of the relevant CSA Standard for that equipment and is insulated to RSI 0.58 (R3.3) or greater. Refer to NECB article 5.2.12.1 for relevant CSA Standards.

3.5 Duct Finishes Table

Indoors concealed; factory finish

Indoors exposed in mechanical room and elsewhere; canvas jacket as per TIAC standard CRF/1 - CRD/1

Indoors, exposed in utility areas, parkade, etc.; Utility finish as per TIAC code CRF/2 - CRD/2

Indoor exposed in utility areas, parkade, etc. provide a utility finish as per TIAC code CRF/2 and CRD/2

Outdoors; aluminum jacket as per TIAC code CRF/3 - CRD/3

Sizes NPS 1-½ to 8 - 50mm thick.

Project
JACK BAGLEY COMMUNITY
PARK WASHROOM BUILDING
NANAIMO BC

Owner / Client

REGIONAL DISTRICT OF NANAIMO

Architect

haeccity
STUDIO ARCHITECTURE INC

Consultant

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consulting mechanical engineers I

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Consultant Team

Issues / Revisions

No. Date YMD Notes

1 2020-09-01 ISSUED FOR COORDINATION
2 2021-04-01 ISSUED FOR BP REVIEW SET
3 2021-04-15 ISSUED FOR 75%DD
4 2021-07-08 ISSUED FOR 95%DD/BP
5 2021-09-03 ISSUED FOR BP/TENDER
6 2022-10-19 ISSUED FOR TENDER

Seal

Permit to Practice No: 1000236



2022-10-19

Sheet Title

MECHANICAL SPECIFICATION III

Project ID 000b-1039-20 Drawn BB/KR Checked MK/JC

Scale NOT TO SCALE Date OCT 19, 2022

Sheet No.

M3.03

SPECIFICATIONS

SPECIFICATION 32 91 21: TOPSOIL AND FINISH GRADING

1 - GENERAL

1.1 SECTION INCLUDES

- All materials, labour, equipment, and services to supply and install all
- Planting medium
- Finish grade the site

1.2 RELATED SECTIONS

- Section 31 23 13 - Subgrade Preparation
- Section 32 92 23 - Turf and Grasses

1.3 REFERENCES

- American Society for Testing and Materials (ASTM):
 - ASTM C602-95a (2001), Standard Specification for Agricultural Lining Materials
 - ASTM D5268-92 (1997), Standard Specification for Topsoil Used for Landscaping Purposes
- Canadian Council of Ministers of the Environment (CME)
- CCME 106F, Guidelines for Compost Quality (1996)
- Standards Council of Canada
- CAN/BQ 0413 200 M55 Amendment organiques - Compost (Organic Soil Conditioners - Compost)

1.4 DEFINITIONS

- For the purpose of this specification, the term **planting medium** shall mean a mixture of mineral particulates, micro-organisms and organic matter that provides suitable medium for supporting intended plant growth. Commercially available soils or native site soils, if proposed for use, will be also be subject to landscape soil assessment analysis.

1.5 SOURCE QUALITY CONTROL

- Advise Consultant of sources of planting medium 28 days or more in advance of delivery. Provide samples of material in time to allow testing, review of test results and recommendations, and repetition of the testing and approval cycle if materials are rejected, prior to delivery.
- Contractor is responsible for planting medium analysis, compost analysis, Agrolgist recommendations, and requirements for amendments to supply planting medium as specified.

1.6 QUALITY ASSURANCE

- Soil Testing Laboratory Qualifications: Engage an independent soil testing laboratory, acceptable to the Consultant, with the experience and capability to conduct the testing indicated, that specializes in the types of tests to be performed. The laboratory shall be accredited by the Standards Council of Canada for all specified tests and procedures for which such accreditation is available.
- Soil Analysis: Furnish soil analysis stating test results for all parameters specified. Include in addition any parameters necessary to determine conformance with applicable referenced standards, and any analyses required by the Agrolgist responsible for making recommendations. Indicate test methods used. Test texture and organic content in accordance with ASTM D5768.
- Recommendations: Provide a report based on the soil and compost analyses, and with reference to the contract documents, prepared by an accredited and approved professional Agrolgist.
 - Report suitability of soil for lawn and woody plant growth.
 - State all aspects of the soil analysis that indicate the soil does not conform to referenced standards.
 - State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory soil for lawns and other plantings indicated or specified.
 - Take into account and adjust recommendations for soil depths indicated and amendments already specified.
 - The cost of soil testing and Agrolgist's reports is included in the Contract.
- Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of lawns and grasses.
- Installer's Field Supervisor: Require installer to maintain an experienced full time supervisor on Project site when exterior planting is in progress.
- Pre-Installation Meeting: Conduct meeting at Project site to address quality of materials, inspection schedule and samples including, but not limited to, the following:
 - Protection of existing trees and facilities.
 - Landscape materials and installation procedures.
 - Verification of required planting medium depths at turfgrass, tree pits and planting bed locations prior to installation of topsoil/ manufactured soils.

1.7 SUBMITTALS

- Provide submittals and wait for Consultant's review and acceptance, prior to placement of any materials on site.
- Submit product data for each type of product indicated.
- Submit product certificates for soil amendments and fertilizers, signed by product manufacturer.
- Submit soil analysis report and Agrolgist's recommendations indicating recommended amendments.
- Resubmit samples of soil amended as recommended by report for verification of compliance with specified requirements.
- Submit one copy of all new soil reports to Consultant until approval.

1.8 DELIVERY, STORAGE, AND HANDLING

- Stockpile planting medium off-site, in a location dedicated to this project, or in a location on site approved by the Owner.
- If stockpile is accessible to the public, never leave a slope that is steeper than the angle of repose unattended.
- Stockpile materials in bulk form in paved areas approved by Consultant. Take all precautions to prevent contamination of basic materials from wind blown soil particles, weed seeds and insects. Contamination of ingredients shall result in their rejection for use. Where paved surfaces are not available, prevent contamination by on-site soil or soil sub or construction materials.
- Store fertilizer and chemical ingredients in the manufacturer's original containers.

2 - PRODUCTS

2.1 MATERIALS

- Planting Medium:
 - For all lawn areas: 2H as per Canadian Landscape Standards
 - For tree pits and planting beds: 2P as per Canadian Landscape Standards

3 - EXECUTION

3.1 VERIFICATION OF CONDITIONS

- Verify that subgrade is ready to receive soil in accordance with Section 31 23 13 - Subgrade Preparation, and do not proceed until it is.
- Check subgrade compaction, and ensure that the density is as specified, or if unspecified then at least 95% of standard density (Modified Proctor). Verify that compaction is uniform.

3.2 PROTECTION OF EXISTING WORK

- Prevent damage to fencing, trees, landscaping, natural features, bench marks, existing buildings, existing pavement, culverts and utility lines which are to remain. Make good any damage.

3.3 PREPARATION OF SUBGRADE

- Locate utility lines before commencement of work and protect from damage.
- Remove foreign material, undesirable plants, roots, stones in excess of 25mm diameter, debris, and soil contaminated with oil or gasoline, from site. Do not bury foreign material beneath areas to be landscaped.
- Grade subgrade to eliminate uneven areas, low spots and ensure positive drainage.
- Maintain maximum 1:1 slope from back of curb faces and pavement edges. Do not excavate vertically at pavements and curbs so as to compromise the structural integrity of adjacent sub base material.
- Cultivate clayey or silty subsoil, if present, to depth of 100 mm. Rip top 100mm of granular soil.
- Immediately prior to spreading of topsoil for lawns, broadcast bonemeal onto the subsoil at a rate recommended by the Agrolgist.
- Re-cultivate clayey or silty subsoil compacted during hauling or spreading.
- Place the soil to the following depths:
 - Lawn (seeded): 150mm min.
 - Planting bed: 450mm
 - Tree pit: 900mm

3.4 SOIL CONDITIONING

- Apply lime, peat moss, sulphur or other recommended soil conditioning at rates recommended by the Agrolgist.

3.5 CLEAN-UP

Keep roadway, walkway, and surrounding areas free of soil and debris as a result of work done under this section at the end of each working day or as directed by the Owner.

- Dispose of surplus soil not required for fine grading and landscaping off site.
- Restore stockpile sites on site to "take clean" condition acceptable to the Owner.
- Dispose of unacceptable soil material off site.

END OF SECTION

SPECIFICATION 32 93 10: TREES, SHRUBS AND ORNAMENTALS

1 - GENERAL

1.1 RELATED SECTIONS

- Section 32 91 21 - Topsoil and Finish Grading

1.2 DEFINITIONS

- Balled and Burlapped Stock: Exterior plants dug with firm, natural balls of earth in which they are grown, with ball size not less than sizes indicated on Drawings; wrapped, tied, rigidly supported, and drum laced as recommended by ANSI Z60.1.
- Balled and Potted Stock: Exterior plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than sizes indicated on Drawings.

1.3 REFERENCES

- American National Standards Institute (ANSI): ANSI Z60.1-1996, Nursery Stock
- BCNTA Guide Specifications for Nursery Stock
- BCNTA Guide Specifications for Landscape Construction
- Canadian Landscape Standard Current Edition

1.4 QUALITY ASSURANCE

- Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of exterior plants, and now is a member of BC Landscaping & Nursery Association.
- Provide quality, size, genus, species, and variety of exterior plants indicated, using ANSI Z60.1 terminology and methods of measurement.
- Selection of exterior plants will be made by Consultant, who will tag plants at their place of growth before they are prepared for transplanting.
- Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position:
 - Take caliper measurements 150mm above ground for trees up to 100 mm caliper size, and 305mm above ground for larger sizes.
 - Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.
 - Do not prune to obtain required sizes.
 - Observation: Consultant will observe trees and shrubs for compliance with requirements for genus, species, variety, size, and quality as follows:
 - Consultant retains right to review trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work.
 - Remove rejected trees or shrubs immediately from Project site.
 - Notify Consultant of sources of planting materials seven (7) days in advance of delivery to site.
 - The Consultant will review trees and shrubs at the following stages to verify conformance with specified requirements:
 - Trees and shrubs at source within 50 km of the site; supplier shall provide transportation where distance exceeds 50 km.

1.6 SUBSTITUTIONS

- Substitute plants only with prior approval of Consultant.
- Submit proof that plant species and sizes specified are unobtainable prior to making substitutions.
- Substitutions shall be of nearest similar species and size specified.
- Substitution of plants larger than specified shall be permitted with no increase in Contract Price.

1.7 DELIVERY, STORAGE, AND HANDLING

- Deliver exterior plants freshly dug.
- Do not prune trees and shrubs before delivery, except as accepted by Consultant.
 - Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage.
 - Do not bend or blind the trees or shrubs in such a manner as to destroy their natural shape.
 - Provide protective covering of exterior plants during delivery.
 - Do not drop exterior plants during delivery.
 - Handle planting stock by root ball.
 - Deliver exterior plants after preparations for planting have been completed and install immediately; set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist if planting is delayed more than six (6) hours after delivery, and as follows:
 - Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 - Do not remove container grown stock from containers before time of planting.
 - Water root systems of exterior plants stored on-site with a fine mist spray.
 - Water as often as necessary to maintain root systems in a moist condition.

1.8 COORDINATION

- Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.
- Coordination with Lawns: Plant trees and shrubs after finish grades are established and before planting lawns, unless otherwise acceptable to Consultant.

1.9 WARRANTY

- Special Warranty: Warrant the exterior plants against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, or incidents that are beyond Trade Contractor's control.
 - Warranty Period for Trees and Shrubs: One (1) year from date of Substantial Performance.
 - Warranty Period for Ground Cover and Plants: One (1) year from date of Substantial Performance.
 - Remove dead exterior plants immediately; replace immediately unless required to plant in the succeeding planting season.
 - Replace exterior plants that are more than 25% dead or in an unhealthy condition at end of warranty period.
 - A limit of one replacement of each exterior plant will be required, except for losses or replacements due to failure to comply with requirements.

2 - PRODUCTS

2.1 TREES AND WOODY PLANTS

- Furnish nursery grown plants with healthy root systems developed by transplanting or root pruning, grown in nurseries in the same agricultural climate zone as the site.
- Provide well shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- Provide plants of sizes complying with ANSI Z60.1 for types required; plants of a larger size may be used if acceptable to Consultant, with a proportionate increase in size of roots or balls.
- Label at least one plant of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- Select stock for uniform height and spread, and number label to assure symmetry in planting.
- Minimum ball sizes for nursery grown deciduous trees:

Caliper (mm) Min. / Ball Diameter (m):	
35	0.60
50	0.70
60	0.80
70	0.90
- Adjust ball size according to growing habits of trees.
- All ball sizes shall be sufficiently large to contain at least 75% of fibrous root system with a ball depth not less than 50% of ball diameter.
- Move trees with large solid soil ball wrapped in burlap in accordance with BC Landscape Standard.

2.2 SHADE AND FLOWERING TREES

- Shade Trees: Single stem trees with straight trunk, well balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required, and as follows:
 - Provide balled and burlapped trees.
 - Branching Height: One-third to one-half tree height.
 - Small Spreading Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1; stem form as follows:
 - Stem Form: Single stem.
 - Provide balled and burlapped trees.
 - Multi stem Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1; stem form as follows:
 - Stem Form: Clump.
 - Provide balled and burlapped trees.

DECIDUOUS SHRUBS

- Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub.
- Provide balled and burlapped or balled and potted shrubs.

2.4 CONIFEROUS SHRUBS

- Form and Size: Specimen quality, exceptionally heavy, tightly knit, symmetrically shaped coniferous evergreens:

- Provide trees balled and burlapped
- Provide balled and burlapped or potted shrubs.

2.5 PERENNIALS AND ORNAMENTAL GRASSES

- Provide perennials and ornamental grasses of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1 and the following requirements:
 - Pot Size: As identified on planting schedule.
 - Age: Two year minimum plant, well branched tops, with a vigorous well developed root system.
 - Grown Condition: Perennials and grasses grown in pots or other containers of adequate size and acclimated to outside conditions will be acceptable.

2.7 MULCHES

- Shrub Beds and Tree Saucers: Organic Mulch: Screened and partially composted bark and wood derived from processing Spruce, Pine, and Fir logs, with 30% by mass of material passing a 10mm screen. Free from live seeds and deleterious materials and suitable as a top dressing of trees and shrubs.
- Perennial and Ornamental Grass Beds: Fine Garden Mulch: screened and partially composted bark, Ckamt Green NatureCover, passing a 10mm screen.

2.9 STAKES AND GUYS

- Guy Posts: Steel T bar stakes, 2.1 m long, scaled and painted.
- Paint Finish: one coat, zinc rich paint to CGSB 1-GP-1816. Colour: Black.
- Guy Stakes: Rough sawn, sound, new hardwood, redwood, or pressure preservative treated softwood, free of knots, holes, cross grain, and other defects, 38mm x 38mm by length indicated, pointed at one end.
- Guy and Tie Wire: in accordance with ASTM A641, Class 1, galvanized steel wire
- Small sized trees: single strand 2mm in diameter
- Tall or large sized trees: 5 strand cable 5 mm diameter, galvanized steel cable, with zinc coated turnbuckles, a minimum of 76mm long, with two 10mm galvanized eyebolts.
- Hose Chafing Guard: Reinforced rubber or plastic hose at least 13mm in diameter, black, cut to lengths required to protect tree trunks from damage.
- Flags: Standard surveyor's plastic flagging tape, white, 150mm long.

2.10 MISCELLANEOUS PRODUCTS

- Anti-desiccant: Water insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs.
- Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- Trunk Wrap Tape: Two layers of crinkled paper cemented together with bituminous material, 100mm wide minimum, with stretch factor of 33%.

3 - EXECUTION

3.1 EXAMINATION

- Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.
- Provide erosion control measures to prevent erosion or displacement of soils and discharge of soil bearing water runoff or airborne dust to adjacent properties and walkways.
- Lay out individual tree and shrub locations and areas for multiple exterior plantings; stake locations, outline areas, adjust locations when requested, and obtain Consultant's acceptance of layout before planting; make minor adjustments as required.
- Apply anti-desiccant to trees and shrubs using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage to protect during digging, handling, and transportation; spray with anti-desiccant at nursery before moving and again two weeks after planting if deciduous trees or shrubs are moved in full leaf.

3.3 PLANTING BED ESTABLISHMENT

- Loosen subgrade of planting beds to a minimum depth of 150mm.
- Remove stones larger than 25mm in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- Apply fertilizer directly to subgrade before loosening.
- Thoroughly blend and spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix:
 - Mix lime with dry soil before mixing fertilizer.
 - Spread planting soil mix to a depth of 300mm minimum, but not less than required to meet finish grades after natural settlement.
 - Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
 - Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

3.4 EXCAVATION

- Pits and Trenches:
 - Excavate circular pits with sides sloped inward.
 - Trim base leaving center area raised slightly to support root ball and assist in drainage.
 - Do not further disturb base.
 - Scarfify sides of plant pit and trenches.
 - Subsoil removed from excavations may be used as backfill if found acceptable for use, otherwise remove from site and replace with suitable material.
 - Obstructions: Notify Consultant if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

3.5 PLANTING

- Set balled and burlapped stock plumb and in center of pit or trench with top of root ball flush with adjacent finish grades, and as follows:
 - Remove burlap and wire baskets from tops of root balls and partially from sides, but do not remove from under root balls; remove pallets, if any, before setting; do not use planting stock if root ball is cracked or broken before or during planting operation.
 - Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets; when pit is approximately one half backfilled, water thoroughly before placing remainder of backfill; repeat watering until no more water is absorbed; water again after placing and tamping final layer of planting soil mix.
 - Set balled and potted stock plumb and in center of pit or trench with top of root ball flush with adjacent finish grades, and as follows:
 - Carefully remove root ball from container without damaging root ball or plant.
 - Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets; when pit is approximately one half backfilled, water thoroughly before placing remainder of backfill; repeat watering until no more water is absorbed; water again after placing and tamping final layer of planting soil mix.
 - Do not install any trees closer than 1000mm to edge of walkways, driveways or building foundations.
 - Vertically slice rootball of container stock with sharp blade, minimum four cuts per rootball.
 - Organic Mulching: Apply 76mm average thickness of organic mulch extending 305mm beyond edge of planting pit or trench; do not place mulch within 76mm of trunks or stems.
 - Wrap trees of 50mm caliper and larger with trunk wrap tape, as follows:
 - Start at base of trunk and spiral cover trunk to height of first branches.
 - Overlap wrap, exposing half the width, and securely attach without causing girdling.
 - Inspect tree trunks for injury, improper pruning, and insect infestation; take corrective measures required before wrapping.

3.6 PRUNING

- Prune, thin, and shape trees and shrubs according to standard horticultural practice.
- Prune trees to retain required height and spread; do not cut tree leaders; remove only injured or dead branches.
- Prune shrubs and vines to retain natural character; sizes indicated are sizes after pruning.

3.7 GUYING AND STAKING

- Upright Staking and Tying:
 - Stake trees of 50mm and greater caliper.
 - Stake trees of less than 50mm caliper only as required to prevent wind pit out.
 - Tree staking or guying shall not be required for trees located within steel tree grades.
- Use a minimum of 2 stakes of length required to penetrate at least 450mm below bottom of backfilled excavation and to extend at least 1830mm above grade.
- Set vertical stakes and space to avoid penetrating root balls or root masses.
- Support trees with two strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.

3.8 CLEANUP AND PROTECTION

- During exterior planting, keep adjacent paving and construction clean and work area in an orderly condition.
- Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

3.9 DISPOSAL

- Dispose: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SPECIFICATION 32 93 13: HYDRAULIC SEEDING

1 - GENERAL

1.1 RELATED SECTIONS

- Section 32 91 21 - Topsoil and Finish Grading

1.2 SUBMITTALS

- Comply with requirements of Division 01.
- Certificate(s) of analysis with each seed sample. Seed analysis report to be current and show specie and variety of seed, date, and results of all tests.
- Fiber mulch and tackifier manufacturer's product data, installation instructions and application rate for approval.

1.3 TESTING

- Owner may appoint and pay for services of testing laboratory to verify seed conformance to specified requirements.

1.4 DELIVERY AND STORAGE

- Fertilizer:
 - Deliver and store in original sealed waterproof packages showing net mass, analysis and manufacturer.
 - Store on pallets in dry location and protect from the elements.
 - Grass seed: deliver in original package and store in dry location protected from the elements and rodents. Each seed package to contain suppliers label indicating:
 - Analysis of seed mixture.
 - Percentage of pure seed by weight.

1.5 SCHEDULING

- Schedule hydraulic seeding to coincide with preparation of soil surface.

2 - PRODUCTS

2.1 MATERIALS

- Fertilizer:
 - To Canada "Fertilizers Act" and "Fertilizers Regulations".
 - Complete commercial granular fertilizer, minimum of 50% of elements derived from organic sources.
 - Consultant may adjust specified fertilizer analysis after topsoil test analysis results are received, with no change in Contract Price.
 - Grass seed: Certified Canada No. 1 seed, free of chaff, weed seeds or other foreign materials in accordance with the Canada "Seeds Act" and "Seeds Regulations" for large mixtures, having minimum purity of 97% and germination of 75%.
 - Water: clean water free of contaminants that may inhibit germination and plant growth.
 - Water for water hauling equipment: supplied and paid for by Contractor.
 - Water for hydraulic seeding and mulking equipment: supplied and paid for by Contractor.
 - Hydraulically Applied Growth Medium:
 - Profile Hydrostraw HE Plus, Profile All in One Gear Plus (www.hydrostraw.com), and Premier Pacific Seeds Ltd. Rainier Fiber (19315 96th Ave, Surrey BC VAN 4C4 Ph: 604-552-3960) OR approved alternate.

Composition:

- Free of growth or germination inhibiting ingredients.
 - Specially manufactured for use in hydraulic seeding and mulking equipment.
 - Minimum organic matter content of 74.5%.
 - Interlocking fiber content of 5%.
 - Minimum moisture content of 10.5%.
 - Water absorption potential: 1500%.
 - Tackifier: non-toxic, water dilutable, liquid dispersion, much binder free of growth or germination inhibiting factors.
 - Inoculants: inoculant containers to be tagged with expiry date.
- Grass Seed Mixture:
 - Turf Grass Seed mixture:
 - Premier Pacific Seeds Ltd. (19315 96th Ave, Surrey BC VAN 4C4 Ph: 604-552-3960) Sports Turf Mix OR approved alternate.
 - Substitutions to specified seed species and variety require approval of Consultant before sowing. Contractor shall submit documentation from seed supplier verifying unavailability of any specified seed specie and variety with recommendations.

3 - EXECUTION

3.1 WORKMANSHIP

- Do not spray onto structures, signs, fences, plant material, utilities and other than surfaces intended.
 - Clean up immediately, any material sprayed where not intended, to satisfaction of Consultant.
 - Do not perform work under adverse field conditions such as wind speeds over 10 km/h, frozen ground or ground covered with snow, ice or standing water.
 - Hydroseeded only when conditions are favourable for successful seed germination.
 - Protect seeded areas from trespass until plants are established.
- PREPARATION OF SURFACES
 - Prepare soil to receive hydraulic seeding in accordance with Section 32 01 90.33.01 - Topsoil Preservation.
 - Fine grade areas to be seeded free of lumps and hollows. Ensure areas are free of deleterious and refuse materials.
 - Cultivated areas identified by the Consultant as requiring cultivation to depth of 25 mm.
 - Ensure areas to be seeded are moist to depth of 100 mm before seeding.
 - Obtain Consultant's approval of grade and topsoil depth before starting to seed.

3.3 FERTILIZING

- Apply fertilizer only after final grade has been approved by Consultant.
- Apply 12-51-0 fertilizer at 3kg/100 m² evenly with calibrated mechanical distributor. Adjust fertilizer analysis to meet agrolgist's recommendations as specified under Section 32 01 90.33.01 - Topsoil Preservation.
 - Fertilizer application may be combined with hydro seeding operations.
 - Mix thoroughly into upper 50mm of topsoil.

3.4 PREPARATION OF SLURRY

- Measure quantities of materials by weight or weight calibrated volume measurement in accordance with manufacturers written instructions. Supply equipment required for this work.
- Charge required water into feeder. Add material into hydraulic seeder under agitation. Pulverize mulch and charge slowly into seeder.
 - After all other material is in the seeder and well mixed, charge tackifier into seeder and mix thoroughly to complete slurry.

3.5 SLURRY APPLICATION

- Hydraulic seeding equipment:
 - Slurry tank.
 - Agitation system for slurry to be capable of operating during charging of tank and during seeding, consisting of recirculation of slurry and/or mechanical agitation method.
 - Capable of seeding by 50 metre hand operated hoses and appropriate nozzles.
 - Slurry mixture application rates, generally:
 - Seed: Grass mixture 3 kg/100m².
 - Mulch: 3400 kg/ha.
 - Tackifier: in accordance with growth medium manufacturer's written instructions.
 - Water: in accordance with growth medium manufacturer's written instructions.
 - Apply seed and mulch using Two Step Hydraulic seeding and mulking methods in accordance with growth medium manufacturer's written instructions.
 - Apply slurry uniformly, at optimum angle of application for adherence to surfaces and germination of seed.
 - Using correct nozzle for application.
 - Using hoses for surfaces difficult to reach and to control application.
 - Using hydraulic hydro mulking equipment, mix grass seed, fertilizer, water, and a small amount of fiber mulch in accordance with growth medium manufacturer's written instructions.
 - Apply fiber mulch immediately following seeding. Mix fiber mulch in water for minimum application of 3400 kg/ha and to form a uniform and strong moisture retaining mat.
 - Blend applications of seed and mulch 300 mm into adjacent grass areas to form uniform surfaces.
 - Agitate slurry mixes constantly during spraying to keep it homogeneous and avoid blockage to pipes.
 - Re apply where application is not uniform.
 - Remove slurry from lenses and areas not designated to be sprayed.
 - Area seeded and mulched shall not exceed area which can be mulched on same day.
 - Clean and remove mulch sprayed where not intended.

3.6 PROTECTION OF SEEDED AREAS - GENERAL

- Immediately after seeding, provide protection satisfactory to Consultant against erosion, pedestrian, and vehicular traffic damages.
- Remove protection after seed areas become when directed by Consultant.

3.7 MAINTENANCE

- Maintain hydroseeded areas as per Specification 32 93 53 Exterior Maintenance until Total Completion of the project including watering, weeding, fertilizing and cutting of established grass.
- Reseed areas of grass which show root growth failure, deterioration, bare or thin spots, or which have been damaged by any means or cause, including replacement operations. Overseed areas that show inadequate or improper sowing of seed with brillon or other methods.

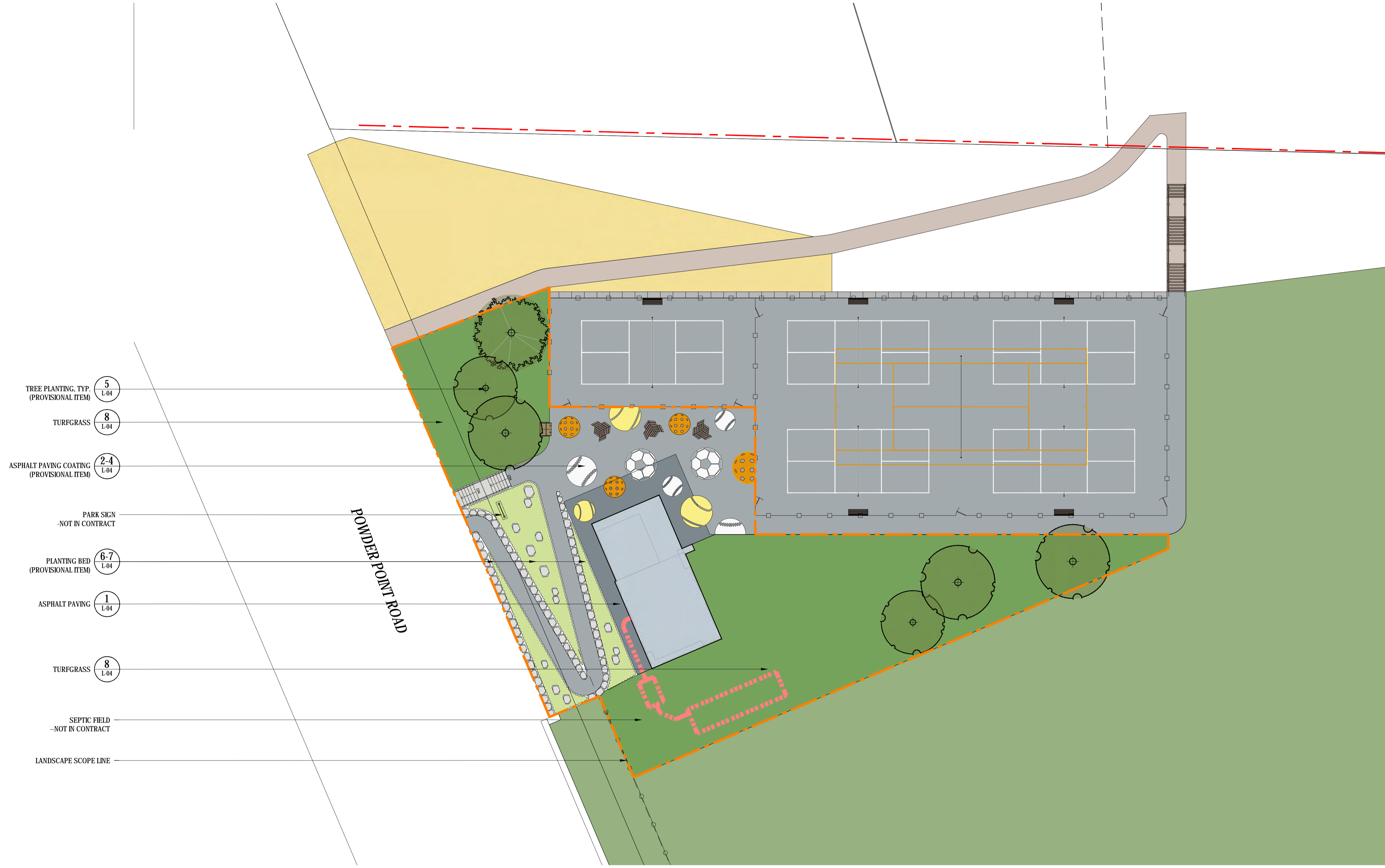
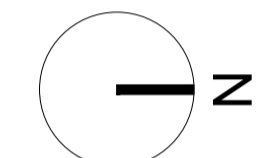
3.8 ACCEPTANCE

- Seeded areas will be accepted by Consultant at end of maintenance period provided:
 - Seeded areas are properly, uniformly, and well established.
 - Turf is free of bare and dead spots and weeds.

END OF SECTION

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KEY	SYMBOL	DESCRIPTION
		PROPERTY LINE
		PROJECT SCOPE LINE
		EXISTING CONCRETE PAVING TO BE RETAINED
		EXISTING ASPHALT PAVING TO BE RETAINED
1 L-04		NEW ASPHALT PAVING
		EXISTING TURFGRASS TO BE RETAINED
8 L-04		NEW TURFGRASS
6-7 L-04		NEW PLANTING BED
5 L-04		NEW TREES



- TREE PLANTING, TYP. (PROVISIONAL ITEM)
- TURFGRASS
- ASPHALT PAVING COATING (PROVISIONAL ITEM)
- PARK SIGN -NOT IN CONTRACT
- PLANTING BED (PROVISIONAL ITEM)
- ASPHALT PAVING
- TURFGRASS
- SEPTIC FIELD -NOT IN CONTRACT
- LANDSCAPE SCOPE LINE

1
L-01
DETAIL KEY PLAN
PLAN

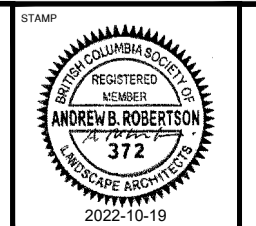
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REV NO	REVISIONS	DATE	DRAWN	APPRD
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JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING
DETAIL KEY

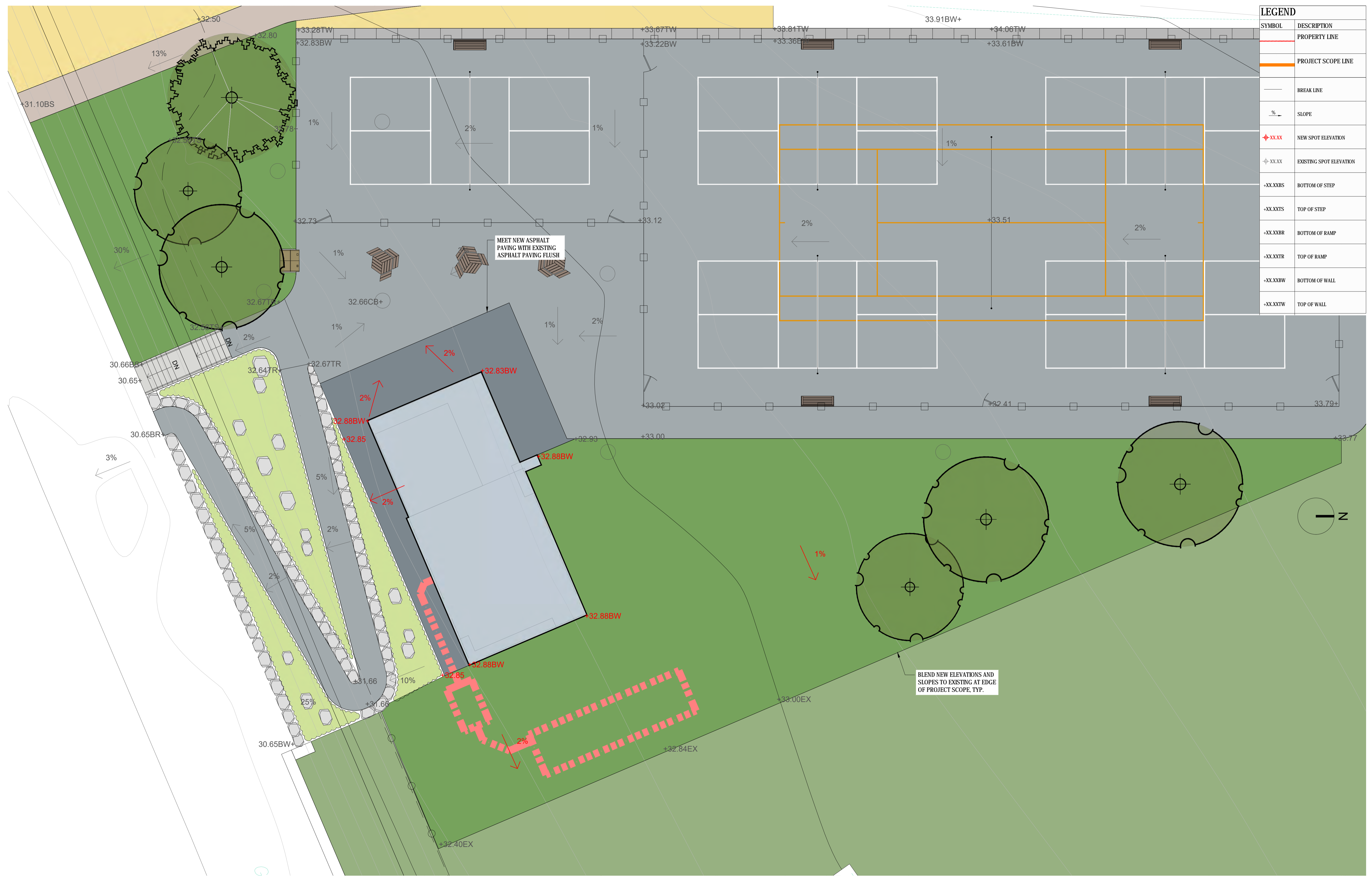


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CHECKED BY	AR	APPROVED BY	AR	-
				REV. 1

33360

LEGEND	
SYMBOL	DESCRIPTION
	PROPERTY LINE
	PROJECT SCOPE LINE
	BREAK LINE
	SLOPE
	NEW SPOT ELEVATION
	EXISTING SPOT ELEVATION
	BOTTOM OF STEP
	TOP OF STEP
	BOTTOM OF RAMP
	TOP OF RAMP
	BOTTOM OF WALL
	TOP OF WALL



1 GRADING PLAN
L-02 PLAN

SCALE 1:200

ISSUED FOR TENDER DESIGN NO.

33360

REV NO	REVISIONS	DATE	DRAWN	APPRD	OWNER
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JACK BAGLEY PARK: WASHROOM BUILDING
GRADING PLAN

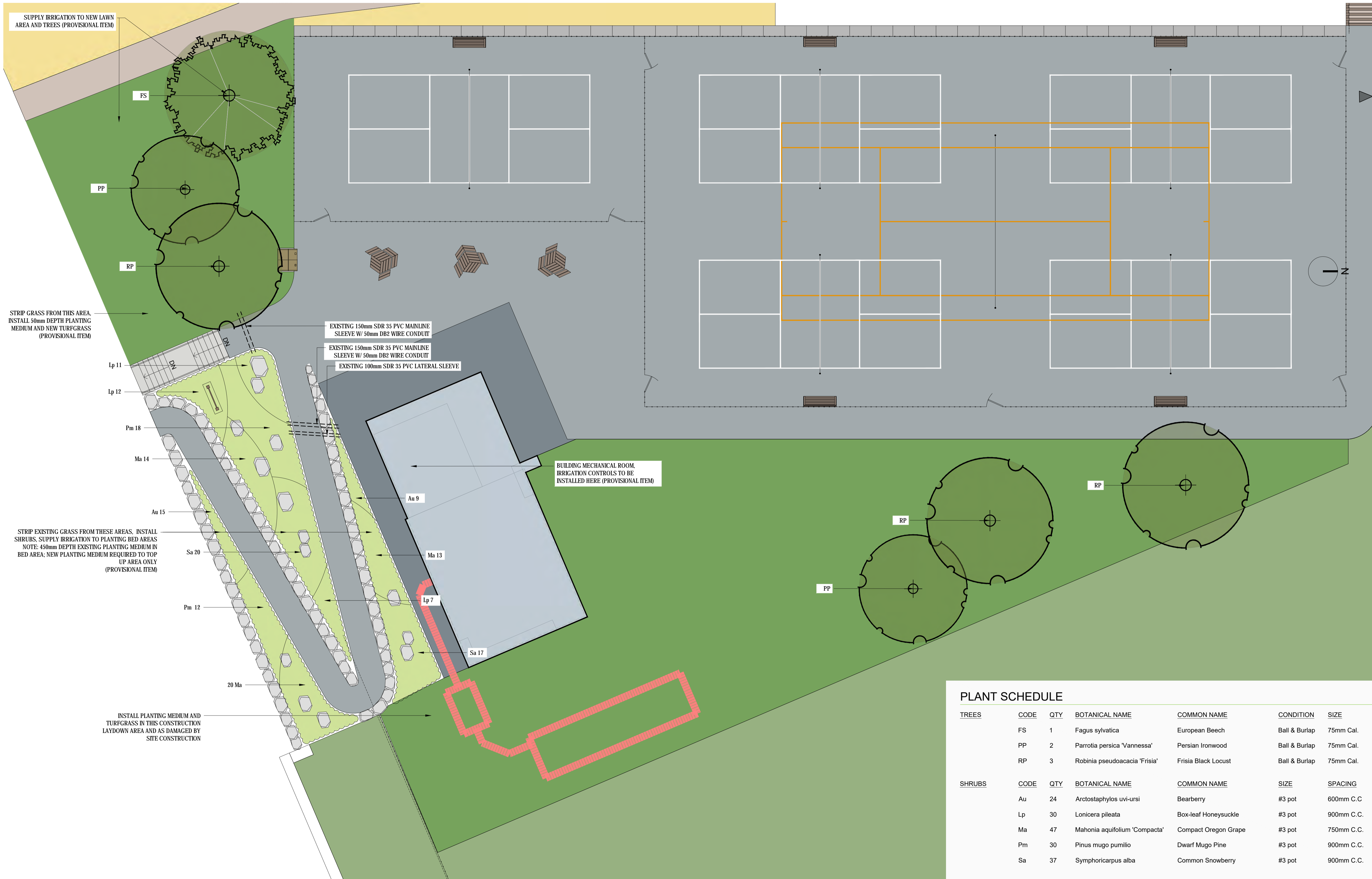


#503, 4190 Longhead Hwy, Burnaby, B.C. V5C 6A8
T: (604)629-2696 F: (604)629-2698

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				REV. 1

DESTROY ALL PRINTS BEARING PREVIOUS NO.

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PLANT SCHEDULE						
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONDITION	SIZE
	FS	1	Fagus sylvatica	European Beech	Ball & Burlap	75mm Cal.
	PP	2	Parrotia persica 'Vannessa'	Persian Ironwood	Ball & Burlap	75mm Cal.
	RP	3	Robinia pseudoacacia 'Frisia'	Frisia Black Locust	Ball & Burlap	75mm Cal.
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	Au	24	Arctostaphylos uva-ursi	Bearberry	#3 pot	600mm C.C
	Lp	30	Lonicera pileata	Box-leaf Honeysuckle	#3 pot	900mm C.C.
	Ma	47	Mahonia aquifolium 'Compacta'	Compact Oregon Grape	#3 pot	750mm C.C.
	Pm	30	Pinus mugo pumilio	Dwarf Mugo Pine	#3 pot	900mm C.C.
	Sa	37	Symphoricarpos alba	Common Snowberry	#3 pot	900mm C.C.

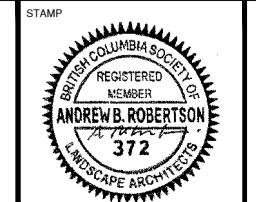
1 PLANTING PLAN
L03 PLAN

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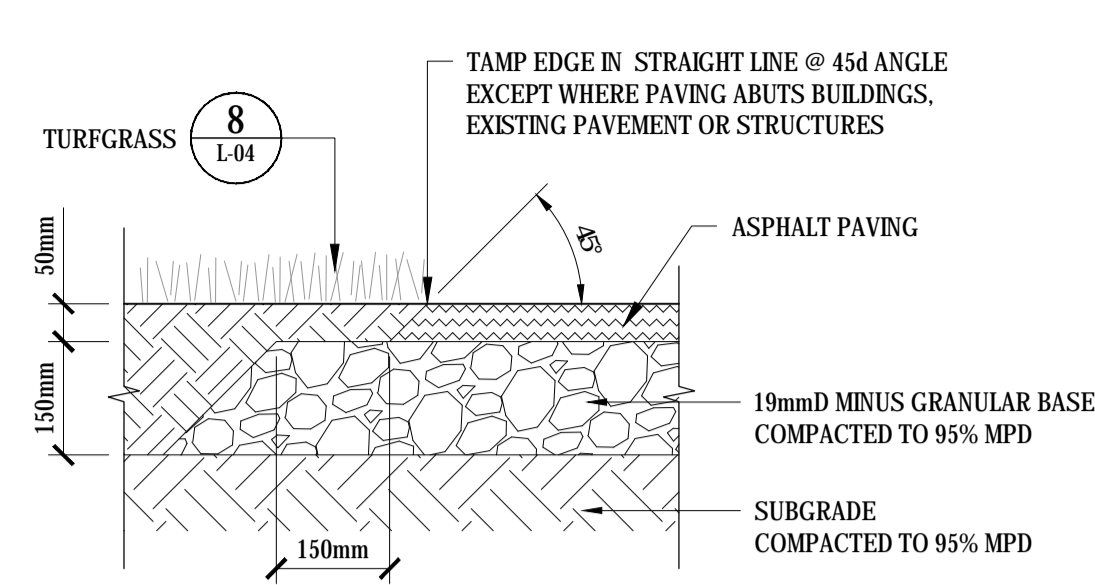
JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING
PLANTING PLAN



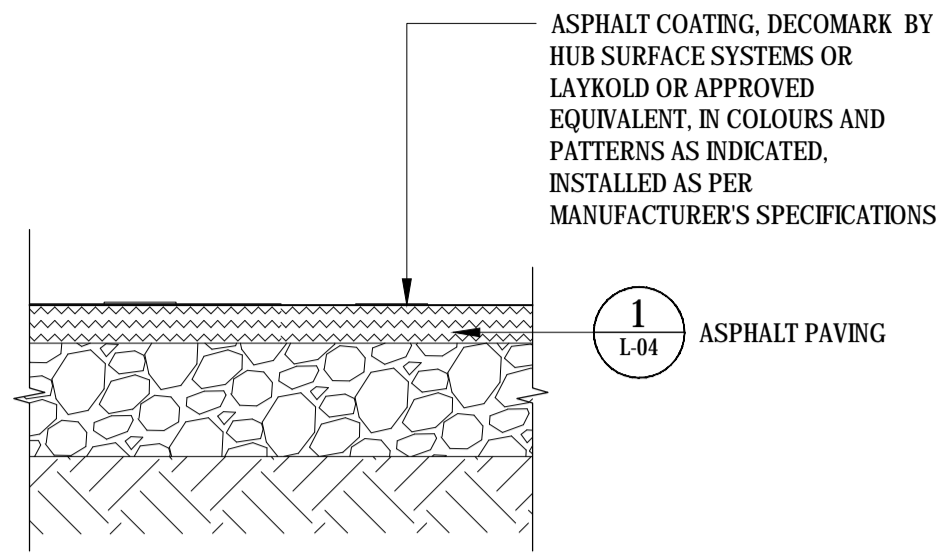
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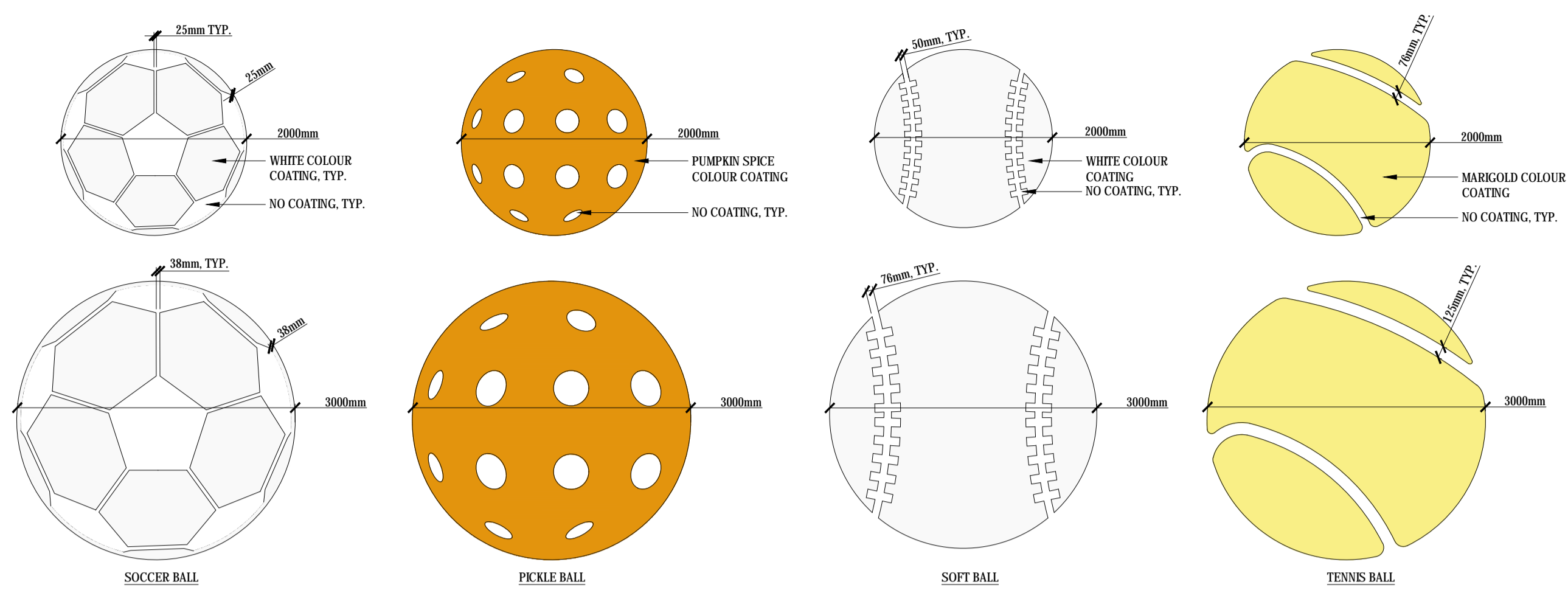
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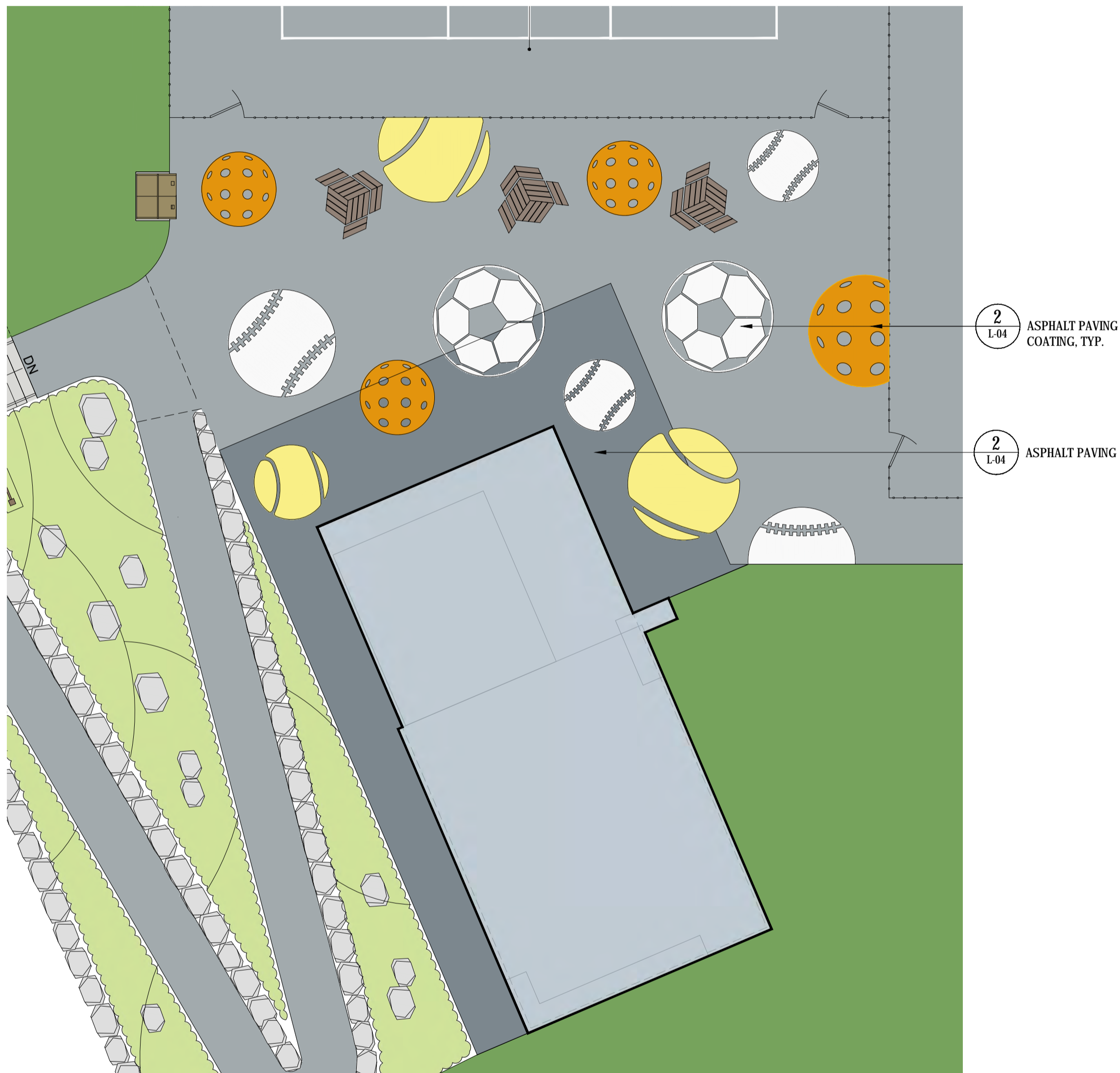
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L-04 SECTION SCALE 1:10



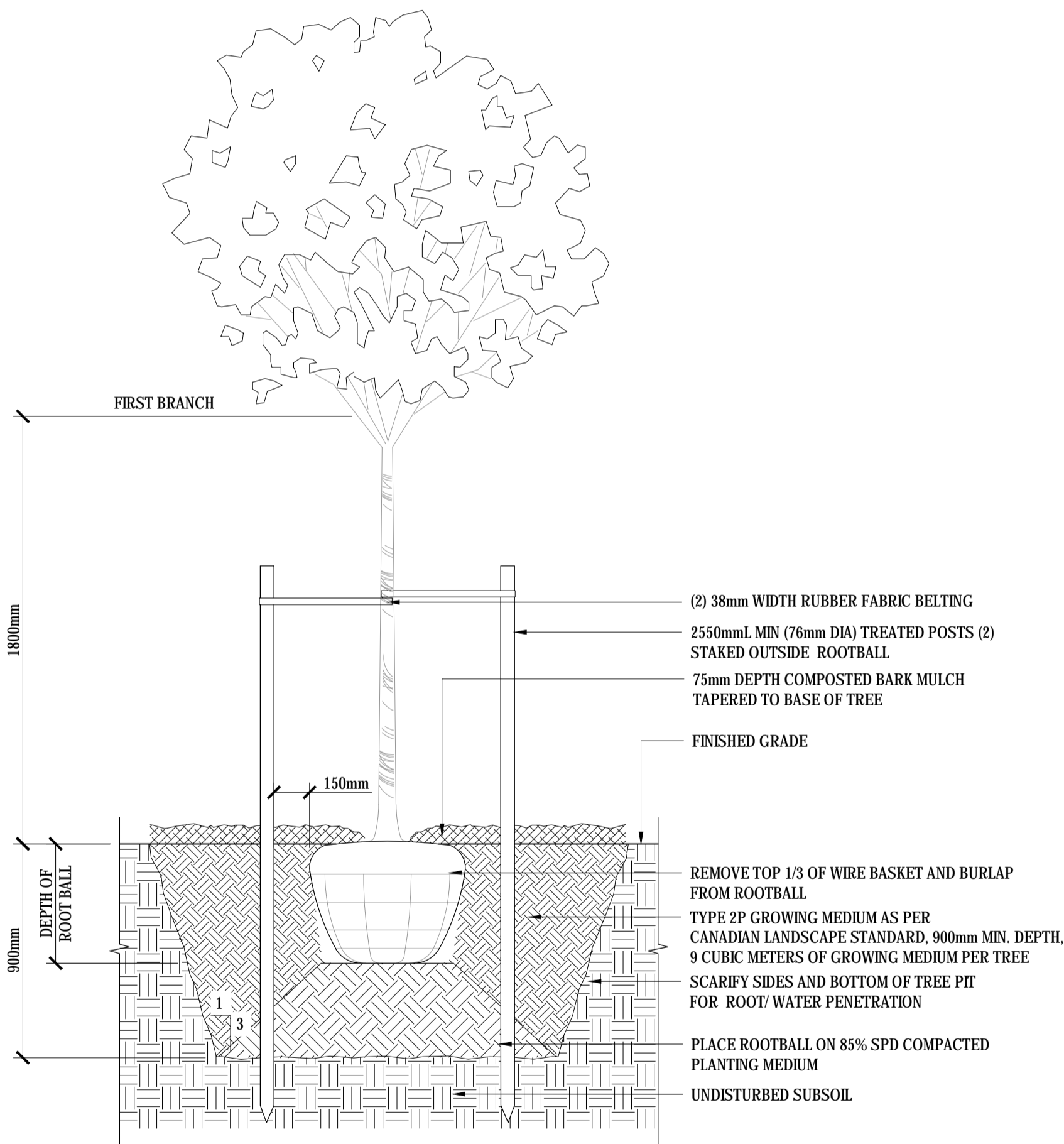
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L-04 SECTION SCALE 1:10



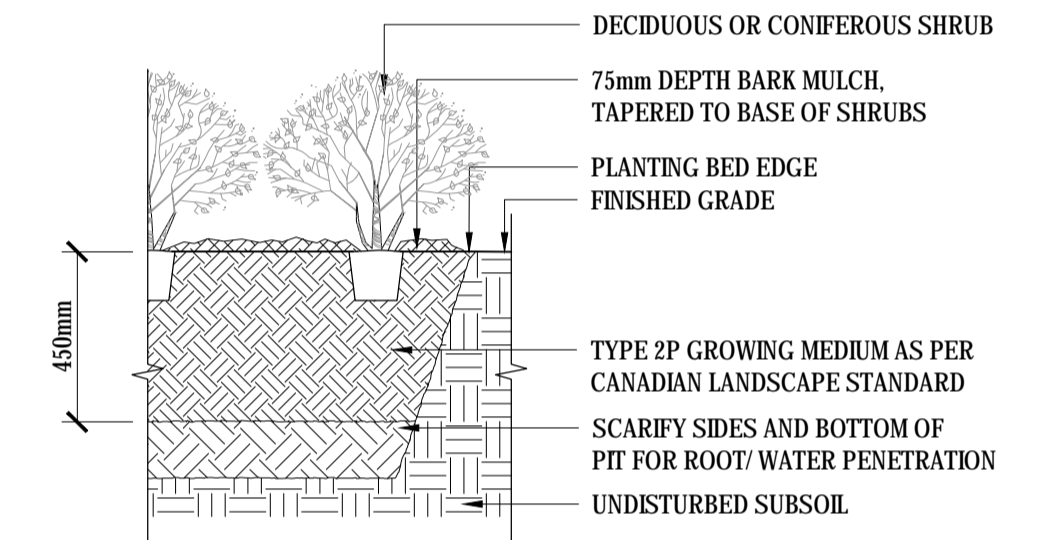
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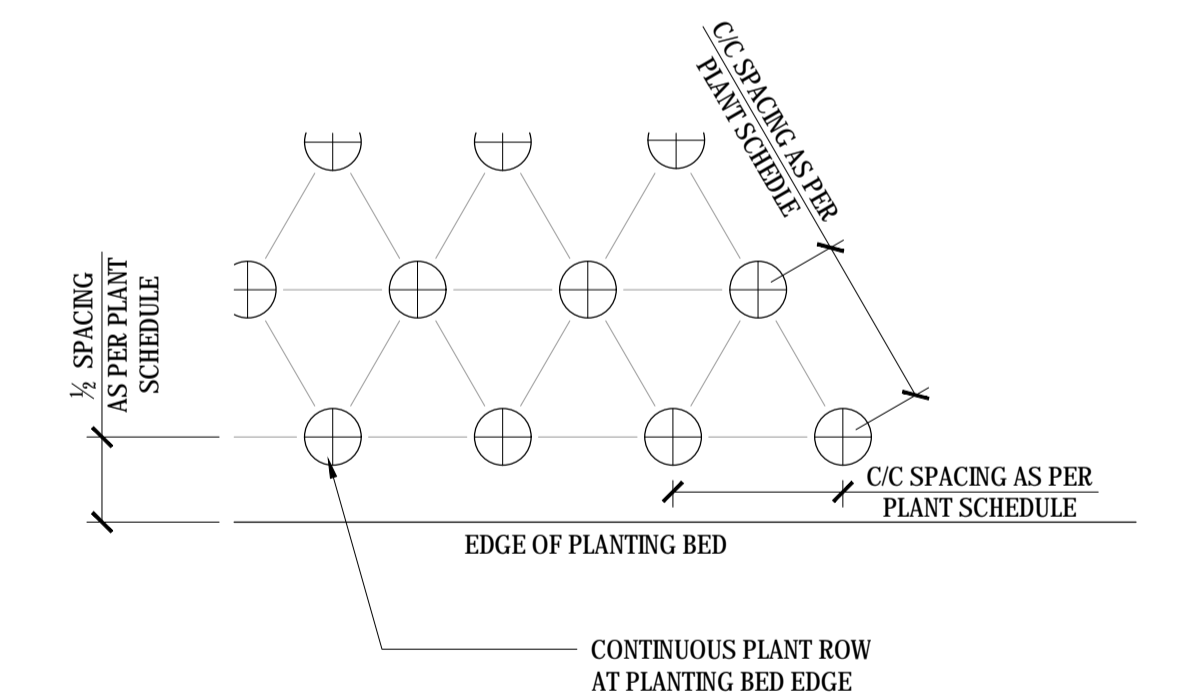
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L-04 PLAN SCALE 1:100



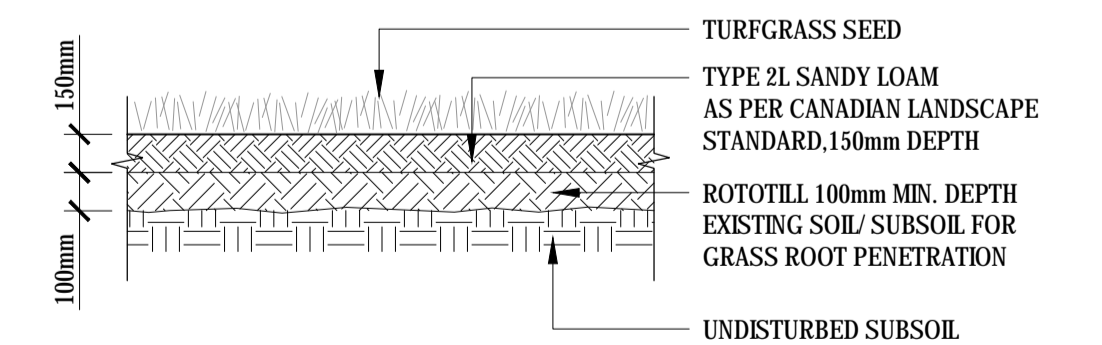
5 TREE PLANTING
L-04 SECTION SCALE 1:20



6 SHRUB PLANTING
L-04 SECTION SCALE 1:20



7 SHRUB PLANTING LAYOUT
L-04 SECTION SCALE 1:20



8 TURFGRASS PLANTING
L-04 SECTION SCALE 1:20

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REV NO	REVISIONS	DATE	DRAWN	APPRD	OWNER
1	ISSUED FOR TENDER	2022-10-19	XJ	AR	



JACK BAGLEY COMMUNITY PARK WASHROOM BUILDING
DETAILS



ISSUED FOR TENDER DESIGN NO.

SCALE	VARIABLES	DATE	APR-27	DWG. NO.
DRAWN BY	JO	DESIGN BY	AR	L-04
CHECKED BY	AR	APPROVED BY	AR	OF -
				REV. 1

33360

DESTROY ALL PRINTS BEARING PREVIOUS NO.



BUILDING INSPECTION DIVISION
6300 Hammond Bay Road
Nanaimo BC V9T 6N2
Telephone:
390-6530 Nanaimo
954-3809 Parksville/Qualicum
1-877-607-4111 Toll free
Fax 390-6513

**FIELD
COPY**

BUILDING PERMIT NO. 21-00453

DATE October 26, 2021

REVIEWED BY DCS

The attached drawings and specifications have been reviewed and are subject to compliance with the corrections and additions as indicated below.

This sheet forms part of the permit drawings and shall remain attached thereto and be kept on the job site until completion of construction.

Review of the drawings, specifications and issuance of the building permit does not prevent the building inspector from thereafter requesting the correction of errors in the application or specifications and in no way relieves the owner from full responsibility for compliance with the requirements of the BC Building Code (current edition) and all applicable bylaws.

1. **All construction to meet 2018 BC Building Code.**
2. **All plumbing to adhere to 2018 BC Building and Plumbing Codes - protect water lines from freezing.**
3. **Approved Building Permit Plans MUST be on site for ALL inspections. If approved plans are not on site, no inspection will be done.**
4. **REVISIONS TO PLANS AFTER PERMIT HAS BEEN ISSUED WILL BE SUBJECT TO A PLANS REVIEW. A SUBSEQUENT BUILDING PERMIT AND ASSOCIATED FEES MAY BE REQUIRED.**
5. **Compliance required with all notes on the drawings, including requirement for on-site water storage for fire fighting purposes.**
6. **Take notice that the Regional District of Nanaimo, in issuing this Permit has relied upon the certification of compliance for architectural, structural, geotechnical, electrical, mechanical and plumbing by your professional Engineers and/or Architect, submitted with the plans of construction, that the plans comply with the current British Columbia Building Code and other applicable enactments respecting safety of the building or structure. Schedule B's are attached forming part of this permit, Schedule C-B's to follow.**
7. **Ensure that the proper assigned address numbers are installed and are clearly visible to the street prior to occupancy inspection.**
8. **All construction shall be started (one required inspection requested and approved) within six (6) months from the date of issuing the Permit; work shall not be discontinued or suspended (one required inspection requested and approved) for a period of more than one (1) year; all Permits shall expire two (2) years from the date of issue; if construction is not completed when a Permit expires, a new Permit shall be required for the remaining construction.**

The following inspections are required at various points during construction

FOOTINGS:	Forms and steel reinforcing for the footings are complete, but prior to placing any concrete.
Sewerline:	All pipes and connections must be visible (no backfill). Pipe must be on 6" on a compacted sand bed, loaded and subjected to 10' of head pressure.
Waterline:	Pipe is in trench and sand bedded.
STORMLINE:	Pipe is in trench, sand-bedded and rock pit (which may require engineering) is complete.
DRAINAGE:	After installation of perimeter drain tiles, roof drains, drain rock and damp proofing, but prior to backfilling against the foundation. *If required, BC Land Survey must be provided at this inspection*
UNDERSLAB POLYETHYLENE/ INSULATION/ PLUMBING:	When any polyethylene, insulation and/or pipes in a plumbing system are installed in a location where they will be covered by concrete or other means at a later stage of construction. DWV piping must be loaded and subjected to 10' of head pressure.
INSLAB HEATING:	When hydraulic heating pipes are installed and air test is on. Hydronic heating layout required at inspection – Must have passed Underslab Insulation
ROUGH IN PLUMBING:	Roughed in plumbing and mechanical works, including piping drainage and venting system which would be concealed at a later stage of construction are complete. Supply piping must be under pressure-test and DWV must be loaded.
FRAMING & SHEATHING:	When the structure is at lock-up stage, before any Insulation is installed. Rough in plumbing, electrical and mechanical are completed. Exterior finishing may be applied, provided exterior wall sheathing has been reviewed and approved.
INSULATION & VAPOUR BARRIER:	Air barrier, insulation and vapour barrier are completed, but interior finish (drywall) that could conceal the insulation is not applied. *If spray foam is installed the project must be ventilated at least 24 hours prior to inspection and the daily work sheet must be provided to inspector before they enter the project.*
FIREPLACE:	The smoke chamber of a fireplace or chimney thimble is complete but before continuation of the assembly above this point.
OCCUPANCY:	When the dwelling unit is complete and ready for occupancy but not occupied. *All necessary documentation is required by this inspection*
FINAL:	When an accessory building is ready for a final inspection or demolition of an existing building is complete. *All necessary documentation is required by this inspection*

- The approved “Field Copy” of plans must be on site for inspection or inspection will not be performed
- Please consult with your Building Inspector to determine what additional documents may be required at the time of Occupancy and Final inspections.
- **Always Quote your Building Permit Number when booking inspections 250-390-6530**

CCDC 2

Stipulated Price Contract

2 0 2 0

Name of Project

Apply a CCDC 2 copyright seal here. The application of the seal demonstrates the intention of the party proposing the use of this document that it be an accurate and unamended form of CCDC 2 – 2020 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE

CCDC 2 STIPULATED PRICE CONTRACT

TABLE OF CONTENTS

AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A-1 The Work
- A-2 Agreements and Amendments
- A-3 Contract Documents
- A-4 Contract Price
- A-5 Payment
- A-6 Receipt of and Addresses for Notices in Writing
- A-7 Language of the Contract
- A-8 Succession

DEFINITIONS

- Change Directive
- Change Order
- Construction Equipment
- Consultant
- Contract
- Contract Documents
- Contract Price
- Contract Time
- Contractor
- Drawings
- Notice in Writing
- Owner
- Other Contractor
- Payment Legislation
- Place of the Work
- Product
- Project
- Ready-for-Takeover
- Shop Drawings
- Specifications
- Subcontractor
- Substantial Performance of the Work
- Supplemental Instruction
- Supplier
- Temporary Work
- Value Added Taxes
- Work
- Working Day

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

- GC 1.1 Contract Documents
- GC 1.2 Law of the Contract
- GC 1.3 Rights and Remedies
- GC 1.4 Assignment

PART 2 ADMINISTRATION OF THE CONTRACT

- GC 2.1 Authority of the Consultant
- GC 2.2 Role of the Consultant
- GC 2.3 Review and Inspection of the Work
- GC 2.4 Defective Work

PART 3 EXECUTION OF THE WORK

- GC 3.1 Control of the Work
- GC 3.2 Construction by the Owner or Other Contractors
- GC 3.3 Temporary Work
- GC 3.4 Construction Schedule
- GC 3.5 Supervision
- GC 3.6 Subcontractors and Suppliers
- GC 3.7 Labour and Products
- GC 3.8 Shop Drawings

PART 4 ALLOWANCES

- GC 4.1 Cash Allowances
- GC 4.2 Contingency Allowance

PART 5 PAYMENT

- GC 5.1 Financing Information Required of the Owner
- GC 5.2 Applications for Payment
- GC 5.3 Payment
- GC 5.4 Substantial Performance of the Work and Payment of Holdback
- GC 5.5 Final Payment
- GC 5.6 Deferred Work
- GC 5.7 Non-conforming Work

PART 6 CHANGES IN THE WORK

- GC 6.1 Owner's Right to Make Changes
- GC 6.2 Change Order
- GC 6.3 Change Directive
- GC 6.4 Concealed or Unknown Conditions
- GC 6.5 Delays
- GC 6.6 Claims for a Change in Contract Price

PART 7 DEFAULT NOTICE

- GC 7.1 Owner's Right to Perform the Work, Terminate the Contractor's Right to Continue with the Work or Terminate the Contract
- GC 7.2 Contractor's Right to Suspend the Work or Terminate the Contract

PART 8 DISPUTE RESOLUTION

- GC 8.1 Authority of the Consultant
- GC 8.2 Adjudication
- GC 8.3 Negotiation, Mediation and Arbitration
- GC 8.4 Retention of Rights

PART 9 PROTECTION OF PERSONS AND PROPERTY

- GC 9.1 Protection of Work and Property
- GC 9.2 Toxic and Hazardous Substances
- GC 9.3 Artifacts and Fossils
- GC 9.4 Construction Safety
- GC 9.5 Mould

PART 10 GOVERNING REGULATIONS

- GC 10.1 Taxes and Duties
- GC 10.2 Laws, Notices, Permits, and Fees
- GC 10.3 Patent Fees
- GC 10.4 Workers' Compensation

PART 11 INSURANCE

- GC 11.1 Insurance

PART 12 OWNER TAKEOVER

- GC 12.1 Ready-for-Takeover
- GC 12.2 Early Occupancy by the Owner
- GC 12.3 Warranty

PART 13 INDEMNIFICATION AND WAIVER

- GC 13.1 Indemnification
- GC 13.2 Waiver of Claims

CCDC 2 is the product of a consensus-building process aimed at balancing the interests of all parties on the construction project. It reflects recommended industry practices. The CCDC and its constituent member organizations do not accept any responsibility or liability for loss or damage which may be suffered as a result of the use or interpretation of CCDC 2.

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AGREEMENT BETWEEN OWNER AND CONTRACTOR

For use when a stipulated price is the basis of payment.

This Agreement made on _____ day of _____ in the year _____.
by and between the parties

hereinafter called the "Owner"

and

hereinafter called the "Contractor"

The *Owner* and the *Contractor* agree as follows:

ARTICLE A-1 THE WORK

The *Contractor* shall:

1.1 perform the *Work* required by the *Contract Documents* for *(insert below the description or title of the Work)*

located at *(insert below the Place of the Work)*

for which the Agreement has been signed by the parties, and for which *(insert below the name of the Consultant)*

is acting as and is hereinafter called the "*Consultant*" and

1.2 do and fulfill everything indicated by the *Contract Documents*, and

1.3 commence the *Work* by the _____ day of _____ in the year _____ and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Ready-for-Takeover*, by the _____ day of _____ in the year _____.

ARTICLE A-2 AGREEMENTS AND AMENDMENTS

2.1 The *Contract* supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the *Work*, including the bid documents that are not expressly listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS.

2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement – THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- General Conditions

*

** (Insert here, attaching additional pages if required, a list identifying all other Contract Documents e.g. supplementary conditions; Division 01 of the Specifications – GENERAL REQUIREMENTS; Project information that the Contractor may rely upon; technical Specifications, giving a list of contents with section numbers and titles, number of pages and date; material finishing schedules; Drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date; time schedule)*

ARTICLE A-4 CONTRACT PRICE

4.1 The *Contract Price*, which excludes *Value Added Taxes*, is:

/100 dollars \$

4.2 *Value Added Taxes* (of _____ %) payable by the *Owner* to the *Contractor* are:

/100 dollars \$

4.3 Total amount payable by the *Owner* to the *Contractor* for the *Work* is:

/100 dollars \$

4.4 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.5 All amounts are in Canadian funds.

ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents* and *Payment Legislation*, and in accordance with legislation and statutory regulations respecting holdback percentages, the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* unless otherwise prescribed by *Payment Legislation* together with such *Value Added Taxes* as may be applicable to such payments,
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by adjudication, arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:
 - (1) 2% per annum above the prime rate for the first 60 days.
 - (2) 4% per annum above the prime rate after the first 60 days.
 Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by *(Insert name of chartered lending institution whose prime rate is to be used)*

for prime business loans as it may change from time to time.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.2.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

6.1 *Notices in Writing* will be addressed to the recipient at the address set out below.

6.2 The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender.

6.3 A *Notice in Writing* delivered by one party in accordance with this *Contract* will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it will be deemed to have been received five calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* will be deemed to have been received on the *Working Day* next following such day.

6.4 A *Notice in Writing* sent by any form of electronic communication will be deemed to have been received on the date of its transmission provided that if such day is not a *Working Day* or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it will be deemed to have been received at the opening of business at the place of receipt on the first *Working Day* next following the transmission thereof.

6.5 An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

Owner

*name of Owner**

address

email address

Contractor

*name of Contractor**

address

email address

Consultant

*name of Consultant**

address

email address

** If it is intended that a specific individual must receive the notice, that individual's name shall be indicated.*

ARTICLE A-7 LANGUAGE OF THE CONTRACT

- 7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English / French # language shall prevail.
Complete this statement by striking out inapplicable term.
- 7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

ARTICLE A-8 SUCCESSION

- 8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

In witness whereof the parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED
in the presence of:

WITNESS

OWNER

name of Owner

signature

signature

name of person signing

name and title of person signing

WITNESS

CONTRACTOR

name of Contractor

signature

signature

name of person signing

name and title of person signing

- N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:*
- (a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or*
 - (b) the affixing of a corporate seal, this Agreement should be properly sealed.*

DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

Change Directive

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon adjustments in the *Contract Price* and the *Contract Time*.

Change Order

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

Construction Equipment

Construction Equipment means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

Consultant

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*.

Contract

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

Contract Documents

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS and amendments agreed upon between the parties.

Contract Price

The *Contract Price* is the amount stipulated in Article A-4 of the Agreement – CONTRACT PRICE.

Contract Time

The *Contract Time* is the time from commencement of the *Work* to the date of *Ready-for-Takeover* as stipulated in paragraph 1.3 of Article A-1 of the Agreement – THE WORK .

Contractor

The *Contractor* is the person or entity identified as such in the Agreement.

Drawings

The *Drawings* are the graphic and pictorial portions of the *Contract Documents*, wherever located and whenever issued, showing the design, location and dimensions of the *Work*, generally including plans, elevations, sections, details, and diagrams.

Notice in Writing

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

Owner

The *Owner* is the person or entity identified as such in the Agreement.

Other Contractor

Other Contractor means a contractor, other than the *Contractor* or a *Subcontractor*, engaged by the *Owner* for the *Project*.

Payment Legislation

Payment Legislation means such legislation in effect at the *Place of the Work* which governs payment under construction contracts.

Place of the Work

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

Product

Product or Products means material, machinery, equipment, and fixtures forming part of the *Work*, but does not include *Construction Equipment*.

Project

The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.

Ready-for-Takeover

Ready-for-Takeover shall have been attained when the conditions set out in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER have been met, as verified by the *Consultant* pursuant to paragraph 12.1.4.2 of GC 12.1 – READY-FOR-TAKEOVER.

Shop Drawings

Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.

Specifications

The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.

Subcontractor

A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.

Substantial Performance of the Work

Substantial Performance of the Work is as defined in the lien legislation applicable to the *Place of the Work*.

Supplemental Instruction

A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models, or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.

Supplier

A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.

Temporary Work

Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.

Value Added Taxes

Value Added Taxes means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the *Contractor* by tax legislation.

Work

The *Work* means the total construction and related services required by the *Contract Documents*.

Working Day

Working Day means a day other than a Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 The *Contract Documents* are complementary, and what is required by one shall be as binding as if required by all. Performance by the *Contractor* shall be required only to the extent consistent with the *Contract Documents*.
- 1.1.3 The *Contractor* shall review the *Contract Documents* for the purpose of facilitating co-ordination and execution of the *Work* by the *Contractor*.
- 1.1.4 The *Contractor* is not responsible for errors, omissions or inconsistencies in the *Contract Documents*. If there are perceived errors, omissions or inconsistencies discovered by or made known to the *Contractor*, the *Contractor* shall promptly report to the *Consultant* and shall not proceed with the work affected until the *Contractor* has received corrected or additional information from the *Consultant*.
- 1.1.5 If there is a conflict within the *Contract Documents*:
- .1 the order of priority of documents, from highest to lowest, shall be
 - the Agreement between *Owner* and *Contractor*,
 - the Definitions,
 - Supplementary Conditions,
 - the General Conditions,
 - Division 01 of the *Specifications*,
 - technical *Specifications*,
 - material and finishing schedules,
 - the *Drawings*.
 - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
 - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
 - .4 amended or later dated documents shall govern over earlier documents of the same type.
 - .5 noted materials and annotations shall govern over graphic indications.
- 1.1.6 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
- .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
 - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.7 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.8 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.9 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.10 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.11 Physical models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

- 1.3.2 No action or failure to act by the *Owner*, the *Consultant* or the *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

GC 1.4 ASSIGNMENT

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Consultant* and the *Contractor*.

GC 2.2 ROLE OF THE CONSULTANT

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 Based on the *Consultant's* observations and evaluation of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement – PAYMENT, GC 5.3 – PAYMENT and GC 5.5 – FINAL PAYMENT.
- 2.2.5 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to perform the *Work* in accordance with the *Contract Documents*.
- 2.2.6 Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.7 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.8 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.9 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.10 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 2.2.11 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or other persons performing any of the *Work*.
- 2.2.12 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.13 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other submittals by the *Contractor*, in accordance with the *Contract Documents*.

- 2.2.14 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 2.2.15 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* and verify that *Ready-for-Takeover* has been attained.
- 2.2.16 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.17 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.
- 2.2.18 If the *Consultant's* engagement is terminated, the *Owner* shall immediately engage a *Consultant* against whom the *Contractor* makes no reasonable objection and whose duties and responsibilities under the *Contract Documents* will be that of the former *Consultant*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for tests, inspections or approvals in the *Contract Documents*, by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for review and inspection. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for special tests, inspections or approvals before such special tests, inspections or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the inspections or tests satisfactorily completed, and make good covering work at the *Contractor's* expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is required by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by others if such test or inspection is designated in the *Contract Documents*.

GC 2.4 DEFECTIVE WORK

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work was incorporated in the *Work* or the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly *Other Contractors' work* destroyed or damaged by such corrections at the *Contractor's* expense.
- 2.4.3 If in the opinion of the *Consultant* it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a finding.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.

3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

GC 3.2 CONSTRUCTION BY THE OWNER OR OTHER CONTRACTORS

3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to *Other Contractors* and to perform work with own forces.

3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner*'s own forces, the *Owner* shall:

- .1 provide for the co-ordination of the activities and work of *Other Contractors* and the *Owner*'s own forces with the *Work* of the *Contract*;
- .2 enter into separate contracts with *Other Contractors* under conditions of contract which are compatible with the conditions of the *Contract*;
- .3 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 – INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
- .4 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of *Other Contractors* or the *Owner*'s own forces.

3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner*'s own forces, the *Contractor* shall:

- .1 afford the *Owner* and *Other Contractors* reasonable opportunity to store their products and execute their work;
- .2 co-ordinate and schedule the *Work* with the work of *Other Contractors* or the *Owner*'s own forces that are identified in the *Contract Documents*;
- .3 participate with *Other Contractors* and the *Owner* in reviewing their construction schedules when directed to do so; and
- .4 report promptly to the *Consultant* in writing any apparent deficiencies in the work of *Other Contractors* or of the *Owner*'s own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.

3.2.4 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of *Other Contractors* or *Owner*'s own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

3.2.5 Disputes and other matters in question between the *Contractor* and *Other Contractors* shall be dealt with as provided in Part 8 of the General Conditions – DISPUTE RESOLUTION provided the *Other Contractors* have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any *Other Contractor* whose contract with the *Owner* contains a similar agreement to arbitrate. In the absence of *Other Contractors* having reciprocal obligations, disputes and other matters in question initiated by the *Contractor* against *Other Contractors* will be considered disputes and other matters in question between the *Contractor* and the *Owner*.

3.2.6 Should the *Owner*, the *Consultant*, *Other Contractors*, or anyone employed by them directly or indirectly be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 3.3 TEMPORARY WORK

3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work* unless otherwise specified in the *Contract Documents*.

3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.

3.3.3 Notwithstanding the provisions of GC 3.1 – CONTROL OF THE WORK, paragraphs 3.3.1 and 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

GC 3.4 CONSTRUCTION SCHEDULE

3.4.1 The *Contractor* shall:

- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
- .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
- .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions – CHANGES IN THE WORK.

GC 3.5 SUPERVISION

3.5.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while the *Work* is being performed. The appointed representative shall not be changed except for valid reason.

3.5.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor*'s appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

3.6.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:

- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
- .2 incorporate the applicable terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
- .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and any persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.

3.6.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.

3.6.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.

3.6.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the difference occasioned by such required change.

3.6.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.

3.6.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor*'s or *Supplier*'s work which has been certified for payment.

GC 3.7 LABOUR AND PRODUCTS

3.7.1 The *Contractor* shall maintain good order and discipline among the *Contractor*'s employees engaged on the *Work* and employ only workers that are skilled in the tasks assigned.

3.7.2 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.

3.7.3 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.

GC 3.8 SHOP DRAWINGS

3.8.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.

3.8.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in accordance with an agreed schedule, or in the absence of an agreed schedule, in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of *Other Contractors* or the *Owner*'s own forces.

- 3.8.3 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
 - .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.8.4 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.8.5 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.8.6 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.8.7 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of the *Work* or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.
- 4.1.5 The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.
- 4.1.6 The value of the *Work* performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the items called for under cash allowances must be ordered to avoid delaying the progress of the *Work*.

GC 4.2 CONTINGENCY ALLOWANCE

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

GC 5.2 APPLICATIONS FOR PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement – PAYMENT shall be submitted monthly to the *Owner* and the *Consultant* simultaneously as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 The amount claimed shall be for the value, proportionate to the amount of the *Contract*, of *Work* performed and *Products* delivered to the *Place of the Work* as of the last day of the payment period.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the parts of the *Work*, aggregating the total amount of the *Contract Price*, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values shall be made out in such form as specified in the *Contract* and supported by such evidence as the *Consultant* may reasonably require.
- 5.2.6 Applications for payment shall be based on the schedule of values accepted by the *Consultant* and shall comply with the provisions of *Payment Legislation*.
- 5.2.7 Each application for payment shall include evidence of compliance with workers' compensation legislation at the *Place of the Work* and after the first payment, a declaration by the *Contractor* as to the distribution made of the amounts previously received using document CCDC 9A 'Statutory Declaration'.
- 5.2.8 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

GC 5.3 PAYMENT

- 5.3.1 After receipt by the *Consultant* and the *Owner* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 – APPLICATIONS FOR PAYMENT:
 - .1 The *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* certifies a different amount, or rejects the application or part thereof, the *Owner* shall promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
 - .2 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT on or before 28 calendar days after the receipt by the *Owner* and the *Consultant* of the application for payment, and in any event, in compliance with *Payment Legislation*.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

- 5.4.1 The *Consultant* will review the *Work* to certify or verify the validity of the application for *Substantial Performance of the Work* and will promptly, and in any event, no later than 20 calendar days after receipt of the *Contractors* application:
 - .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
 - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.2 Where the holdback amount required by the applicable lien legislation has not been placed in a separate lien holdback account, the *Owner* shall, no later than 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.4.3 Subject to the requirements of any *Payment Legislation*, all holdback amount prescribed by the applicable lien legislation for the *Work* shall become due and payable to the *Contractor* no later than 10 *Working Days* following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*.
- 5.4.4 The *Contractor* shall submit an application for payment of the lien holdback amount in accordance with GC 5.3 – PAYMENT.
- 5.4.5 Where legislation permits progressive release of the holdback for a portion of the *Work* and the *Consultant* has certified or verified that the part of the *Work* has been performed prior to *Substantial Performance of the Work*, the *Owner* hereby agrees to release, and shall release, such portion to the *Contractor* in accordance with such legislation.

5.4.6 Notwithstanding any progressive release of the holdback, the *Contractor* shall ensure that such parts of the *Work* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when the holdback was released.

GC 5.5 FINAL PAYMENT

- 5.5.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.5.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and when the *Consultant* finds the *Contractor*'s application for final payment valid, the *Consultant* will promptly issue a final certificate for payment to the *Owner*, with a copy to the *Contractor*.
- 5.5.3 If the *Consultant* rejects the application or part thereof, the *Owner* will promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
- 5.5.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS' COMPENSATION, and any legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement – PAYMENT and in any event, in compliance with *Payment Legislation*.

GC 5.6 DEFERRED WORK

5.6.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, or if the *Owner* and the *Contractor* agree that, there are items of work that must be deferred, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such deferred *Work*.

GC 5.7 NON-CONFORMING WORK

5.7.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
 - .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

GC 6.2 CHANGE ORDER

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present to the *Consultant*, in a form that can be reasonably evaluated, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.
- 6.2.2 When the *Owner* and the *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the applications for progress payment.

GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.

- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor*'s actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- 1 If the change results in a net increase in the *Contractor*'s cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor*'s cost, plus the *Contractor*'s percentage fee on such net increase.
 - 2 If the change results in a net decrease in the *Contractor*'s cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor*'s cost, without adjustment for the *Contractor*'s percentage fee.
 - 3 The *Contractor*'s fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following in as much as it contributes directly to the implementation of the *Change Directive*:

Labour

- 1 rates that are listed in the schedule or as agreed by the *Owner* and the *Contractor* including wages, benefits, compensation, contributions, assessments, or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan for:
 - (1) trade labour in the direct employ of the *Contractor*;
 - (2) the *Contractor*'s personnel when stationed at the field office;
 - (3) the *Contractor*'s personnel engaged at shops or on the road, in expediting the production or transportation of materials or equipment; and
 - (4) the *Contractor*'s office personnel engaged in a technical capacity, or other personnel identified in Article A-3 of the Agreement – CONTRACT DOCUMENTS for the time spent in the performance of the *Work*;

Products, Construction Equipment and Temporary Work

- 2 cost of all *Products* including cost of transportation thereof;
- 3 in the absence of agreed rates, cost less salvage value of *Construction Equipment*, *Temporary Work* and tools, exclusive of hand tools under \$1,000 owned by the *Contractor*;
- 4 rental cost of *Construction Equipment*, *Temporary Work* and tools, exclusive of hand tools under \$1,000;
- 5 cost of all equipment and services required for the *Contractor*'s field office;

Subcontract

- 6 subcontract amounts of Subcontractor with pricing mechanism approved by the *Owner*;

Others

- 7 travel and subsistence expenses of the *Contractor*'s personnel described in paragraph 6.3.7.1;
- 8 deposits lost provided that they are not caused by negligent acts or omissions of the *Contractor*;
- 9 cost of quality assurance such as independent inspection and testing services;
- 10 charges levied by authorities having jurisdiction at the *Place of the Work*;
- 11 royalties, patent license fees, and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor*'s obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 – PATENT FEES;
- 12 premium for all contract securities and insurance for which the *Contractor* is required, by the *Contract Documents*, to provide, maintain and pay in relation to the performance of the *Work*;
- 13 losses and expenses sustained by the *Contractor* for matters which are the subject of insurance under the policies prescribed in GC 11.1 – INSURANCE when such losses and expenses are not recoverable because the amounts are in excess of collectible amounts or within the deductible amounts;
- 14 taxes and duties, other than *Value Added Taxes*, income, capital, or property taxes, relating to the *Work* for which the *Contractor* is liable;
- 15 charges for voice and data communications, courier services, expressage, transmittal and reproduction of documents, and petty cash items;
- 16 cost for removal and disposal of waste products and debris;
- 17 legal costs, incurred by the *Contractor*, in relation to the performance of the *Work* provided that they are not:
 - (1) relating to a dispute between the *Owner* and the *Contractor* unless such costs are part of a settlement or awarded by arbitration or court,
 - (2) the result of the negligent acts or omissions of the *Contractor*, or
 - (3) the result of a breach of this *Contract* by the *Contractor*;
- 18 cost of auditing when requested by the *Owner*; and
- 19 cost of *Project* specific information technology in accordance with the method determined by the parties.

- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* performance of the *Work* attributable to the *Change Directive* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for a finding.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* and differ materially from those indicated in the *Contract Documents*; or
 - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will promptly inform the *Owner* and the *Contractor* in writing.
- 6.4.4 If such concealed or unknown conditions relate to toxic and hazardous substances and materials, artifacts and fossils, or mould, the parties will be governed by the provisions of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES, GC 9.3 – ARTIFACTS AND FOSSILS and GC 9.5 – MOULD.

GC 6.5 DELAYS

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by the *Owner*, the *Consultant*, or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, resulting in the failure of the *Contractor* to attain *Ready-for-Takeover* by the date stipulated in Article A-1 of the Agreement – THE WORK, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
 - .2 fire, unusual delay by common carriers or unavoidable casualties,
 - .3 abnormally adverse weather conditions, or

.4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, the *Consultant* or anyone employed or engaged by them directly or indirectly.

6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.

6.5.5 If no schedule is made under paragraph 2.2.12 of GC 2.2 – ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.

6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:

- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
- .2 keep such records as may be necessary to support the claim.

6.6.3 The party making the claim shall submit within a reasonable time to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based and the *Consultant* will make a finding upon such claim.

6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.

6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.

6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION.

PART 7 DEFAULT NOTICE

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.

7.1.2 If the *Contractor* neglects to perform the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* which provides the detail of such neglect to perform the *Work* properly or such failure to comply with the requirements of the *Contract* to a substantial degree, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor Notice in Writing*, containing particulars of the default including references to applicable provisions of the *Contract*, that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.

7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:

- .1 commences the correction of the default within the specified time,
- .2 provides the *Owner* with an acceptable schedule for such correction, and
- .3 corrects the default in accordance with the *Contract* terms and with such schedule.

- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may by giving *Notice in Writing*:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* for the *Work* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
 - .2 terminate the *Contractor*'s right to continue with the *Work* in whole or in part or terminate the *Contract*.
- 7.1.5 If the *Owner* terminates the *Contractor*'s right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense,
 - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued,
 - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant*'s additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 – WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
 - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor*'s work under GC 12.3 – WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor*'s obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue in force after such termination of the *Contract*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner*'s insolvency, or if a receiver is appointed because of the *Owner*'s insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* is suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner*'s contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner*'s obligations under the *Contract*,
 - .2 the *Consultant* fails to issue a certificate as provided in Part 5 of the General Conditions – PAYMENT,
 - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by adjudication, arbitration or court, or
 - .4 the *Owner* fails to comply with the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, gives a written statement to the *Owner* and the *Contractor* that provides detail of such failure to comply with the requirements of the *Contract* to a substantial degree.
- 7.2.4 The *Contractor*'s *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* by giving a *Notice in Writing* to the *Owner* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved

in the first instance by findings of the *Consultant* as provided in GC 2.2 – ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions – DISPUTE RESOLUTION.

- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.3.3 to 8.3.8 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.4 – RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.
- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

GC 8.2 ADJUDICATION

- 8.2.1 Nothing in this *Contract* shall be deemed to affect the rights of the parties to resolve any dispute by adjudication as may be prescribed by applicable legislation.

GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.3.1 In accordance with the rules for mediation as provided in CCDC 40 ‘Rules for Mediation and Arbitration of Construction Industry Disputes’ in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
 - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.3.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 – ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.3.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid, and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.3.4 After a period of 10 *Working Days* following receipt of a responding party’s *Notice in Writing* of reply under paragraph 8.3.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the rules for mediation as provided in CCDC 40 in effect at the time of bid closing.
- 8.3.5 If the dispute has not been resolved at the mediation or within such further period as is agreed by the parties, the Project Mediator will terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.3.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.3.5, either party may refer the dispute to be finally resolved by arbitration under the rules of arbitration as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.3.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.3.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.3.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.
- 8.3.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.3.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.3.6 shall be:
- .1 held in abeyance until:
 - (1) *Ready-for-Takeover*,
 - (2) the *Contract* has been terminated, or
 - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and

.2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.3.6.

GC 8.4 RETENTION OF RIGHTS

- 8.4.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions – DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.
- 8.4.2 Nothing in Part 8 of the General Conditions – DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.3.6 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

- 9.1.1 The *Contractor* shall protect the *Work*, the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors or omissions in the *Contract Documents*; or
 - .2 acts or omissions by the *Owner*, the *Consultant*, *Other Contractors*, or their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or the *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
 - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substance exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless any toxic or hazardous substance which was present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
 - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
 - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substance exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
 - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.

- 9.2.6 If the *Owner* and the *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.2.7 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
 - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.8 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

GC 9.3 ARTIFACTS AND FOSSILS

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place or Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.

GC 9.4 CONSTRUCTION SAFETY

- 9.4.1 The *Contractor* shall be responsible for establishing, initiating, maintaining, and supervising all health and safety precautions and programs in connection with the performance of the *Work* in accordance with the applicable health and safety legislation.
- 9.4.2 The *Owner* and the *Contractor* shall comply with all health and safety precautions and programs established at the *Place of the Work*.
- 9.4.3 The *Owner* and the *Contractor* shall comply with the rules, regulations and practices required by the applicable health and safety legislation.
- 9.4.4 The *Owner* shall cause the *Consultant*, *Other Contractors* and the *Owner's* own forces to comply with all health and safety precautions and programs established by the *Contractor* at the *Place of the Work*.
- 9.4.5 Nothing in this *Contract* shall affect the determination of liability under the applicable health and safety legislation.

GC 9.5 MOULD

- 9.5.1 If the *Contractor* or the *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing,
 - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and

- .3 if the *Owner* and the *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.5.2 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor's* operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor's* own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.3 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor's* operations under the *Contract*, the *Owner* shall promptly, at the *Owner's* own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed as provided by GC 9.5 – MOULD.

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement – CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.
- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will issue the changes required to the *Contract Documents* as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

GC 10.3 PATENT FEES

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*'s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*'s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention in executing anything for the purpose of the *Contract*, the physical model, plan or design of which was supplied to the *Contractor* as part of the *Contract*.

GC 10.4 WORKERS' COMPENSATION

- 10.4.1 Prior to commencing the *Work*, and again with the *Contractor*'s applications for payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation at the *Place of the Work*.

PART 11 INSURANCE

GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 13.1 – INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the requirements of which are specified in CCDC 41 'CCDC Insurance Requirements' in effect at the time of bid closing except as hereinafter provided:
- .1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Ready-for-Takeover*. Liability coverage shall be provided for completed operations hazards from the date of *Ready-for-Takeover*, as set out in the certificate of *Ready-for-Takeover*, on an ongoing basis for a period of 6 years following *Ready-for-Takeover*.
 - .2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
 - .3 Unmanned aerial vehicle aircraft, manned aircraft or watercraft Liability Insurance when owned or non-owned manned or unmanned aircraft or watercraft are used directly or indirectly in the performance of the *Work*.
 - .4 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
 - (1) 10 calendar days after the date of *Ready-for-Takeover*;
 - (2) on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*; and
 - (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
 - .5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Ready-for-Takeover*.
 - .6 The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
 - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except

that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;

- (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
- (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces or *Other Contractors*, the *Owner* shall, in accordance with the *Owner's* obligations under the provisions relating to construction by the *Owner* or *Other Contractors*, pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.

- .7 *Contractors' Equipment Insurance* from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
- .8 *Contractors' Pollution Liability Insurance* from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.

11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.

11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.

11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.

11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.

11.1.6 If a revised version of CCDC 41 is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor's* insurance policy becoming due for renewal, and record any agreement in a *Change Order*.

11.1.7 If a revised version of CCDC 41 is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.

11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41.

PART 12 OWNER TAKEOVER

GC 12.1 READY-FOR-TAKEOVER

12.1.1 The prerequisites to attaining *Ready-for-Takeover* of the *Work* are limited to the following:

- .1 The *Consultant* has certified or verified the *Substantial Performance of the Work*.
- .2 Evidence of compliance with the requirements for occupancy or occupancy permit as prescribed by the authorities having jurisdiction.
- .3 Final cleaning and waste removal at the time of applying for *Ready-for-Takeover*, as required by the *Contract Documents*.
- .4 The delivery to the *Owner* of such operations and maintenance documents reasonably necessary for immediate operation and maintenance, as required by the *Contract Documents*.
- .5 Make available a copy of the as-built drawings completed to date on site.
- .6 Startup, testing required for immediate occupancy, as required by the *Contract Documents*.
- .7 Ability to secure access to the *Work* has been provided to the *Owner*, if required by the *Contract Documents*.
- .8 Demonstration and training, as required by the *Contract Documents*, is scheduled by the *Contractor* acting reasonably.

12.1.2 If any prerequisites set forth in paragraphs 12.1.1.3 to 12.1.1.6 must be deferred because of conditions reasonably beyond the control of the *Contractor*, or by agreement between the *Owner* and the *Contractor* to do so, *Ready-for-Takeover* shall not be delayed.

12.1.3 When the *Contractor* considers that the *Work* is *Ready-for-Takeover*, the *Contractor* shall deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for *Ready-for-Takeover* for review. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.

12.1.4 The *Consultant* will review the *Work* to verify the validity of the application and will promptly, and in any event, no later than 10 calendar days after receipt of the *Contractor's* list and application:

- 12.1.5 Immediately following the confirmation of the date of *Ready-for-Takeover*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.
- 12.1.6 The provision of GC 12.1 – READY-FOR-TAKEOVER shall be subject to GC 12.2 – EARLY OCCUPANCY BY THE OWNER.

GC 12.2 EARLY OCCUPANCY BY THE OWNER

- 12.2.1 The *Owner* may take occupancy of a part or the entirety of the *Work* before *Ready-for-Takeover* has been attained only as agreed by the *Contractor* which agreement shall not be unreasonably withheld.
- 12.2.2 The *Owner* shall not occupy a part or the entirety of the *Work* without prior approval by authorities having jurisdiction.
- 12.2.3 If the *Owner* takes occupancy of a part of the *Work* before *Ready-for-Takeover* has been attained:
- .1 The part of the *Work* which is occupied shall be deemed to have been taken over by the *Owner* as from the date on which it is occupied.
 - .2 The *Contractor* shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the *Owner*.
 - .3 The warranty period specified in paragraph 12.3.1 of GC 12.3 – WARRANTY for that part of the *Work* shall start from the date on which it is occupied.
- 12.2.4 If the *Owner* takes occupancy of the entirety of the *Work* before all the prerequisites are met as described in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER, the *Work* shall, subject to the requirements of the applicable lien legislation, be deemed to achieve *Ready-for-Takeover*. This shall not relieve the *Contractor*'s responsibility to complete the *Work* in a timely manner.

GC 12.3 WARRANTY

- 12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date when *Ready-for-Takeover* has been attained.
- 12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.
- 12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.
- 12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor*'s expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.
- 12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.
- 12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor*'s responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.

PART 13 INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

- 13.1.1 Without restricting the parties' obligation to indemnify respecting toxic and hazardous substances, patent fees and defect in title claims all as described in paragraphs 13.1.4 and 13.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:
- .1 caused by:
 - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose negligent acts or omissions that party is liable, or
 - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and
 - .2 made by *Notice in Writing* within a period of 6 years from the *Ready-for-Takeover* date or within such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.
- The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.
- 13.1.2 The obligation of either party to indemnify as set forth in paragraph 13.1.1 shall be limited as follows:

- 13.1.2 The obligation of either party to indemnify as set forth in paragraph 13.1.1 shall be limited as follows:
- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the minimum liability insurance limit for one occurrence, of the applicable insurance policy, as referred to in CCDC 41 in effect at the time of bid closing.
 - .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
 - .3 In respect to indemnification by a party against the other with respect to losses suffered by them, such obligation shall be restricted to direct loss and damage, and neither party shall have any liability to the other for indirect, consequential, punitive or exemplary damages.
 - .4 In respect to indemnification respecting claims by third parties, the obligation to indemnify is without limit.
- 13.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 13.1.1 and 13.1.2 shall be inclusive of interest and all legal costs.
- 13.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.
- 13.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:
- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
 - .2 arising out of the *Contractor*'s performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.
- 13.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:
- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based become known; and
 - .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

GC 13.2 WAIVER OF CLAIMS

- 13.2.1 Subject to any lien legislation applicable to the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than 5 calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work* or 20 calendar days following the *Ready-for-Takeover* date, whichever is later;
 - .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances, patent fees and defect in title matters for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 13.1.4 or 13.1.5 of GC 13.1 – INDEMNIFICATION; and
 - .4 claims resulting from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.2 The *Contractor* waives and releases the *Owner* from all claims resulting from acts or omissions which occurred after the *Ready-for-Takeover* date except for:
- .1 indemnification respecting third party claims, and claims respecting toxic and hazardous substances, patent fees and defect in title matters, all as referred in paragraphs 13.2.1.2 and 13.2.1.3; and
 - .2 claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.3 Subject to any lien legislation applicable to the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than 20 calendar days following the *Ready-for-Takeover* date;

- .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 13.1.4 of GC 13.1 – INDEMNIFICATION;
 - .4 damages arising from the *Contractor*'s actions which result in substantial defects or deficiencies in the *Work*. “Substantial defects or deficiencies” mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
 - .5 claims arising pursuant to GC 12.3 – WARRANTY; and
 - .6 claims arising from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.4 Respecting claims arising upon substantial defects and deficiencies in the *Work*, as referenced in paragraph 13.2.3.4, and notwithstanding paragraph 13.2.3.5, the *Owner* waives and releases the *Contractor* from all claims except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the *Ready-for-Takeover* date, provided that any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, the time within which any such claim may be brought shall be such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.
- 13.2.5 The *Owner* waives and releases the *Contractor* from all claims arising from acts or omissions which occur after the *Ready-for-Takeover* date, except for:
- .1 indemnification for claims advanced against the *Owner* by third parties, as referenced in paragraph 13.2.3.2;
 - .2 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor*, as referenced in paragraph 13.2.3.3;
 - .3 claims arising under GC 12.3 – WARRANTY; and
 - .4 claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.6 “*Notice in Writing* of claim” as provided for in GC 13.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 13.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of an intention to claim;
 - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
 - .3 a statement of the estimated quantum of the claim.
- 13.2.7 A claim for lien asserted under the lien legislation prevailing at the *Place of the Work* shall qualify as notice of claim for the purposes of this *Contract*.
- 13.2.8 The party giving the *Notice in Writing* of claim as provided for in GC 13.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.
- 13.2.9 Where the event or series of events giving rise to a claim made under paragraphs 13.2.1 or 13.2.3 has a continuing effect, the detailed account submitted under paragraph 13.2.8 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which such claim is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 13.2.10 Nothing in GC 13.2 – WAIVER OF CLAIMS shall be deemed to affect the rights of the parties under any lien legislation or limitations legislation prevailing at the *Place of the Work*.

PART 1.3 SUPPLEMENTARY CONDITIONS

For use with CCDC 2-2020 Stipulated Price Contract

ARTICLES

Add new:

Article A-9 TIME IS OF THE ESSENCE

“Time is of the essence in the performance of the Contract.”

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.3 REVIEW AND INSPECTION OF THE WORK

2.3.2 Add, in the first sentence “review,” before the word “tests”.

2.3.4 In the first sentence, replace “special” with “review,” and add “review,” before the third instance of “inspections”.

Add new:

2.3.8 Should the *Consultant* be required to make more than one review of rejected work or should the *Consultant* perform additional reviews due to failure of the Work to comply with the application for status of completion made by the *Contractor*, the *Contractor* is required to compensate the *Owner* for such additional *Consultant* services including expenses incurred. Adjustment for such compensation should be made as outlined under PART 6 CHANGES IN THE WORK.

PART 3 EXECUTION OF THE WORK

GC 3.5 SUPERVISION

3.5.1 Add after the last sentence:

“The appointed *Contractor* representative shall not be changed without consultation with and written acceptance of the *Owner*. This acceptance shall not be unreasonably withheld.”

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

3.6.4 Add at the end of the sentence “, as outlined in GC 6.3 – CHANGE DIRECTIVE.”

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.2 Add, after the first sentence “Unless noted otherwise, none of the work included in the drawings and specifications is intended to be paid for by the cash allowances. The cash allowances are for the *Owner’s* use, at the *Owner’s* sole discretion.”

PART 5 PAYMENT

Amend the heading “**GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER**” to read “**GC 5.1 FINANCING INFORMATION REQUIRED**”

Delete paragraph 5.1.1 and 5.1.2 in their entirety and replace with:

- 5.1.1 The *Owner* and the *Contractor* shall provide each other with timely *Notice in Writing* of any material change in their financial ability to fulfill their respective obligations under the *Contract*.

GC 5.2 APPLICATIONS FOR PAYMENT

- 5.2.4 Add, after the first sentence:
“A secondary schedule, stating the anticipated monthly progress payments, is to be submitted upon request.”

Add new:

- 5.2.9 An application for payment shall be deemed received only if submitted complete with required supporting documentation as determined by the *Consultant*.

GC 5.3 PAYMENT

- 5.3.1.1 Add another sentence:
“If, after a certificate of payment has been issued to the *Owner* (and prior to payment by the *Owner*), the *Consultant* determines on the basis of new information that the amount certified for payment is inappropriately high or low relative to the value of the work performed, then the *Consultant* shall issue a revised certificate of payment, and promptly advise the *Contractor* in writing giving reasons for the amendment.”

Add new:

- 5.3.2 At the first application for payment following *Ready-for-Takeover*, the *Consultant* shall issue to the *Owner* and copy to the *Contractor*, a certificate for payment for an amount that deducts an amount equal to twice the value of any deficiencies as determined by the *Consultant*.

Add new:

5.3.3 Partial payment may not be made for the completion or correction of any deficiencies shown on the comprehensive list of items to be completed or corrected prior to the date of the issuance of the final certificate of payment.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

5.4.1 Change “20 calendar days” to “10 days”.

Add new:

5.4.7 At *Substantial Performance of the Work*, the *Consultant* shall issue a list itemizing the value of any items to be corrected or completed to the *Owner* and copy to the *Contractor*.

GC 5.5 FINAL PAYMENT

5.5.2 Change “calendar days” to “*Working Days*”

5.5.4 Change “5 calendar days” to “10 *Working Days*”

PART 6 CHANGES IN THE WORK

GC 6.2 CHANGE ORDER

Add new:

6.2.3 The following shall determine *Contractor* markup on *Change Orders* by percentage:

- .1 To the cost of the *Work* performed by the *Contractor* directly, the *Contractor* may add a maximum of 20% markup for overhead and profit combined.
- .2 To the cost of the *Work* performed by *Subcontractors* for the *Contractor*, before the *Subcontractor's* markup, the *Contractor* may add a maximum of 10% markup for overhead and profit combined.
- .3 On *Work* deleted from the *Contract*, not covered by unit prices, the credit to the *Owner* shall be the cost of the *Work* as set out in GC 6.3 – CHANGE DIRECTIVE, article 6.3.7.
- .4 For a detailed list of what the *Contractor* may include in the cost of the *Work* before adding markups, refer to GC 6.3 CHANGE DIRECTIVE, article 6.3.7.

GC 6.3 CHANGE DIRECTIVE

Add new:

6.3.14 The following shall determine *Contractor* markup on *Change Directives* by percentage:

- .1 To the cost of the *Work* performed by the *Contractor* directly, the *Contractor* may add a maximum of 20% markup for overhead and profit combined.
- .2 To the cost of the *Work* performed by Subcontractors for the *Contractor*, before the Subcontractor's markup, the *Contractor* may add a maximum of 10% markup for overhead and profit combined.
- .3 On *Work* deleted from the Contract, not covered by unit prices, the credit to the Owner shall be the cost of the *Work* as set out in GC 6.3 – CHANGE DIRECTIVE, article 6.3.7.

GC 6.5 DELAYS

6.5.3.3 Add the word "local" after the word "adverse".

Add new:

6.5.6 The party making the claim shall submit to the *Consultant*, within 10 *Working Days*, an estimated quantum of the claim and of the *Contract Time* extension claimed, and the grounds upon which the claim is based complete with required supporting documentation as determined by the *Consultant*.

Add new:

- 6.5.7 Should the *Consultant*, in consultation with the *Contractor*, determine the *Contractor* is delayed in performance of the *Work*, or any part thereof, by the *Contractor's* inaction, or by delay or inaction of anyone employed or engaged by the *Contractor* directly or indirectly, and the *Contract Time* is compromised:
- .1 Then the *Contractor* shall accelerate the *Work* as required to meet the *Contract Time*.
 - .2 The *Consultant* will promptly give *Notice in Writing* of such determination to the *Owner* and the *Contractor*.
 - .3 The *Contractor* shall then promptly give the *Owner* and the *Consultant Notice in Writing* of specific changes to the construction scheduling and construction processes the *Contractor* will implement to accelerate the *Work*.
 - .4 The *Contractor* shall not be entitled to payment for costs to accelerate the *Work* to meet the *Contract Time*.
 - .5 If either party does not accept the *Consultant's* determination, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. It being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed.

[Empty Box]

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

6.6.1 Delete: “Timely” and add “10 Working Days from the event or series of events giving rise to the claim”

PART 7 DEFAULT NOTICE

GC 7.1 OWNER’S RIGHT TO PERFORM THE WORK, STOP THE WORK, OR TERMINATE THE CONTRACT

7.1.5 In the first sentence, after “paragraph 7.1.1,” replace “and” with “or”.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.4 CONSTRUCTION SAFETY

Add to end of 9.4.1: “and be designated as the prime contractor”

PART 10 GOVERNING REGULATIONS

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

Add new:

10.2.8 The *Contractor* shall provide to the *Consultant* copies of all inspection reports from the various authorities having jurisdiction within two *Working Days* of their receipt.

GC 10.4 WORKERS’ COMPENSATION

Add new:

10.4.2 The *Contractor* is formally designated as the “prime contractor.”

PART 12 OWNER TAKEOVER

GC 12.2 EARLY OCCUPANCY BY THE OWNER

Add new:

GC 12.2.5

The *Owner* may take possession of and use completed or partially completed portion of the *Work*, in addition to occupancy conditions included in the Contract, providing:

- .1 Only as agreed by the Contractor, such agreement will not be unreasonably withheld.
- .2 the portion of the *Work* is ready to be used for the purpose intended, to the satisfaction of the *Consultant* and authorities having jurisdiction; and
- .3 the *Owner’s* possession and use do not interfere with the Contractor’s *Work*; and
- .4 the *Consultant* conducts a review prior to possession by the *Owner*; and
- .5 any extra costs are borne by the *Owner*, subject to the provisions of GC 6.5 Delays.

GC 12.3 WARRANTY

12.3.4 Add a second sentence “In effecting a correction of defects or deficiencies, the *Contractor* shall also bear all costs involved in removing, replacing, repairing, or restoring aspects of the *Work* that may be affected in the process of making the correction.”

Add new:

12.3.7 Where a material, product or installation referenced in 12.3.1 covered by warranty fails, the stipulated warranty and warranty period shall be renewed for the specific work being replaced or repaired, with the exception of warranties referred to in GC 12.3.6. Such extended warranties referenced in 12.3.1, shall not exceed one year from the date of removing, replacing, repairing, or restoring.

Add new:

PART 14 MISCELLANEOUS

14.1 CONFIDENTIALITY

14.1.1 All information provided by or obtained from the *Owner* in any form in connection with the *Project*:

1. is the sole property of the *Owner* and must be treated as confidential;
2. is not to be used for any purpose other than the performance of the *Work*;
3. is not to be disclosed without prior written authorization from the *Owner*; and
4. must be returned to the *Owner* immediately upon request.

14.2 INFORMATION TECHNOLOGY RELATED THREATS

14.2.1 The *Contractor* shall notify the *Owner* and its mutual affiliates, as soon as reasonably possible, of any information technology related threat that may be transmitted electronically to the *Owner* or any of its affiliates which includes but is not limited to: viruses, rogue security software, trojan horses, spyware, computer worms, phishing, rootkits and any real or perceived electronic attack (the “IT Threat”).

14.2.2 In the event the *Owner* becomes aware of an IT Threat, the *Owner* may as soon as reasonably possible, notify any organization that it reasonably believes could be exposed to the same IT Threat and include in such notification any relevant details for the purpose of avoiding or minimizing any negative impact.