



SPECIFICATIONS

SOLICITATION #: 18-22017

BUILDING: SAG
501 boul. de l'Université est
Saguenay, arr. Chicoutimi, QC

PROJECT: *Layout LGE-1 forming area, NRC-Saguenay*

PROJECT #: DDS18-S1

Date: August 2st, 2018

SPECIFICATION

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Construction Tender Form

Project Identification **Layout LGE-1 forming area, NRC-Saguenay**

Tender No.: **18-22017**

1.2 **Business Name and Address of Tenderer**

Name _____

Address _____

Contact Person (Print Name) _____

Telephone (_____) _____ Fax: (_____) _____

1.3 **Offer**

I/We the Tenderer, hereby offer to Her Majesty the Queen in Right of Canada (hereinafter referred to as "Her Majesty") represented by the National Research Council Canada to perform and complete the work for the above named project in accordance with the Plans and Specifications and other Tender Documents, at the place and in the manner set out therein for the Total Tender Amount (to be expressed in numbers only) of: \$_____. _____ **in lawful money of Canada** (excluding GST/HST).

Break down the costs as follows:

Administration, site management, etc.: _____

Mechanical : _____

Electric: _____

Structure: _____

Cash allocation for compressed air distribution: \$ 5,000

Distribution cash allowance 120V / 208V: \$ 10,000

Cash allowance for induction furnace power supply: ... \$ 5,000

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Administrative Services & Property management Branch (ASPM)	Direction des services administratif et gestion de l'immobilier (SAGI)

The above amount is inclusive of all applicable (*) Federal, Provincial and Municipal taxes except that in the event of a change in any tax imposed under the Excise Act, the Excise Tax Act, the Old Age Security Act, the Customs Act, the Customs Tariff or any provincial sales tax legislation imposing a retail sales tax on the purchase of tangible personal property incorporated into Real Property, that occurs

- .1 after the date this tender was mailed or delivered, or
- .2 if this tender is revised, after the date of the last revision

the amount of this offer shall be decreased or decreased in the manner provided for in GC22 of the General Conditions of the Contract Documents.

1.3.1 Offer (continued)

(*) For the purpose of this tender, the Goods and Services Tax (GST) is not to be considered as an applicable tax.

In the province of Quebec, the Quebec Sales Tax is not to be included in the tender amount because the Federal Government is exempt from this tax. Tenderers shall make arrangements directly with the provincial Revenue Department to recover any tax they may pay on good and servives acquired in the performance of this contract. However, tenderers should include in their tender amount Quebec Sales Tax for which an Input Tax Refund is not available.

1.4 Acceptance and Entry into Contract

I/We undertake, within fourteen (14) days of notification of acceptance of my/our offer, to sign a contract for the performance of the work provided I/we are notified, by the Department, of the acceptance of my/our offer within 30 days of the tender closing date.

1.5 Construction Time

I/We Agree to complete the work within the time stipulated in the specification from the date of notification of acceptance of my/our offer.

1.6 Bid Security

I/We herewith enclose tender security in accordance with Article 5 of the General Instruction to Tenderers.

I/We understand that if a security deposit is furnished as tender security and if I/we refuse to enter into a contract when called upon to do so, my/our security deposit shall be forfeited

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but the Minister may, if it is in the public interest, waive the right of Her Majesty to forfeit the security deposit.

I/We understand that if the security furnished is not in the approved form as described in Article 5 of the General Instructions to Tenderers, my/our tender is subject to disqualification.

1.7 Contract Security

Within fourteen (14) days after receipt of written notification of the acceptance of my/our offer, I/we will furnish contract security in accordance with the Contract Conditions "F" of the Contract Documents.

I/We understand that the contract security referred to herein, if provided in the form of a bill of exchange, will be deposited into the Consolidated Revenue Fund of Canada.

1.8 Appendix

This Tender Form includes Appendix No. N/A.

1.9 Addenda

The Total Tender Amount provides for the Work described in the following Addenda:

NUMBER	DATE	NUMBER	DATE

(Tenderers shall enter numbers and dates of addenda)

National Research Council Canada	Conseil national de recherches Canada
Administrative Services & Property management Branch (ASPM)	Direction des services administratif et gestion de l'immobilier (SAGI)

1.10 **Execution of Tender**

The Tenderer shall refer to Article 2 of the General Instructions to Tenderers.

SIGNED, ATTESTED TO AND DELIVERED on the _____ day of
 _____ on behalf of

 (Type or print the business name of the Tenderer)

AUTHORIZED SIGNATORY (IES)

 (Signature of Signatory)

 (Print name & Title of Signatory)

 (Signature of Signatory)

 (Print name & Title of Signatory)

SEAL

BUYandSELL NOTICE

Layout LGE-1 forming area, NRC-Saguenay

See the head of the request of proposal.

Suite ...

suite

Contracting Authority for this project is: **M. R-Michel Simard**, R-Michel.Simard@cnrc.gc.ca



Conseil national de recherches
Canada

National Research Council
Canada

Site Saguenay
Centre des technologies
de l'aluminium

Saguenay Site
Aluminium Technology
Centre



ANNEX A

MANDATORY SITE MEETING ATTENDANCE

Solicitation # 18-22017, Project # DDS18-S1

TITLE: Layout LGE-1 forming area, NRC-Saguenay

MEETING DATES: on August 14th at 10:00 and August 19th, 2018 at 13:00 O'clock.

NAME OF COMPANY (PRINT)	CONTACT PERSON (PRINT)	SIGNATURE	PICK UP ON

Construction Project coordinator _____
Signature Date

Name: _____
Departmental Representative (or his designate) or the Engineer



Conseil national de recherches
Canada

National Research Council
Canada

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Centre des technologies
de l'aluminium

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Centre



Annex B

Statement of Work (SOW)

Project title: *Layout LGE-1 forming area, NRC-Saguenay*

The National Research Council (NRC), Aluminium Technology Centre (ATC), Saguenay site, wishes to award a construction contract (general contractor) **to refurbish the forming laboratory in the LGE-1 area and make it more efficient, productive and safe for users of the Aluminum Technology Center and its research needs.**

Required work:

Work under this contract covers, without being limited to, the following items :

1. The addition of a steel mezzanine covering approximately 12.4 m².
2. Moving various industrial equipment that are used in research activities,
3. Installing:
 - a. electrical,
 - b. cooling water,
 - c. compressed air and
 - d. ventilation air supplies for those equipment,
4. Modifications to hydraulic lines feeding certain equipment,
5. Modifications to control wiring between certain equipment.

** Gain of space planned with the installation of a mezzanine.

The trades involved will be: Structure, Mechanics and Electrical.

The deliverable goods or services are:

1. Mezzanine installed
2. Equipment moved and reconnected according to plans and specifications, and functional (proof of operation before / after).

Partial monitoring of the work will be done by the engineering firm having prepared the Plans and Quotes.

Annex C1

Special Instructions to Bidders

1. BID RECIPIENT

1.1. Bids must be submitted in a sealed addressed envelope to:

National Research Council of Canada
Site: Saguenay
Aluminium Technology Centre
Boul. de l'Université Est
Saguenay (arr. Chicoutimi), (Québec) G7H 8C3

1.2. The envelope must state “**Submission for** (insert work title on drawings and specifications)” and the Bidder’s name and address must appear on the envelope.

2. TENDER RESULTS

2.1. Upon closing of the tender, the results will be faxed to all Bidders.

3. SECURITY REQUIREMENT FOR CANADIAN CONTRACTOR

3.1. Before the performance of the obligations in accordance with this contract, all contractors or their employees who will be involved with the project must have their security levels verified in order to obtain a RELIABILITY RATING as defined in the Government Security Policy of the Canada

Annex C2

INSTRUCTIONS TO BIDDERS

Article 1 – Receipt of Tender

- 1a) Tenders must be received not later than the specified tender closing time. Tenders received after this time are invalid and shall not be considered, regardless of any reason for their late arrival.
- 1b) A letter of printed telecommunication from a bidder quoting a price shall not be considered as a valid tender unless a formal tender has been received on the prescribed Tender Form.
- 1c) Bidders may amend their tenders by letter or printed telecommunication provided that such amendments are received not later than the specified tender closing time.
- 1d) Any amendments to the tender which are transmitted by telefax must be signed and must clearly identify the tenderer.

All such amendments are to be addressed to:

**National research center
Procurement service
c/o M. R-Michel Simard, Procurement officier, Qc Region
Saguenay Site
501, boul. de l'Université Est
Chicoutimi, Qc G7H 8C3**

Fax: (418) 545-5254

Article 2 – Tender Form & Qualifications

- 1) All tenders must be submitted on the Construction Tender Form and the tender must be signed in compliance with the following requirements:
 - a) Limited Company: The full names of the Company and the name(s) and status of the authorized signing officer(s) must be printed in the space provided for that purpose. The signature(s) of the authorized officer(s) and the corporate seal must be affixed.
 - b) Partnership: The firm name and the name(s) of the person(s) signing must be printed in the space provided. One or more of the partners must sign in the presence of a witness who must also sign. An adhesive coloured seal must be affixed beside each signature.
 - c) Sole Proprietorship : The business name and the name of the sole proprietor must be printed in the space provided. The sole proprietor must sign in the presence of a witness who must also sign. An adhesive coloured seal must be affixed beside each signature.

- 2) Any alterations in the printed part of the Construction Tender Form or failure to provide the information requested therein, may render the tender invalid.
- 3) All space in the Construction Tender Form must be completed and any handwritten or typewritten corrections to the parts so completed must be initialed immediately to the side of the corrections by the person or persons executing the tender on behalf of the tenderer.
- 4) Tenders must be based on the plans, specifications and tender documents provided.

Article 3 - Contract

- 1) The Contractor will be required to sign a contract similar to the Standard Contract Form for Fixed Price Construction Contracts, a blank specimen of which is enclosed in the package for reference purposes.

Article 4 – Tender Destination

- 1a) Tenders are to be submitted in sealed envelopes to:

National Research Council Canada, Administrative Services and Property Management Branch
SAG Building, 501 University Blvd East, Chicoutimi, QC, G7H 8C3, Canada.

Endorsed “Tender for (insert title of work as it appears in the drawings and specifications)” and must bear the name and address of the tenderer.

- 1b) Unless otherwise specified, the only documents required to be submitted with the tender are the Tender form and the Bid Security.

Article 5 - Security

- 1a) Bid Security is required and must be submitted in one of the following forms:

- i) a certified cheque payable to the Receiver General for Canada and drawn on a member of the Canadian Payments Association or a local cooperative credit society that is a member of a central cooperative credit society having membership in the Canadian Payments Association; **OR**
- ii) bonds of the Government of Canada, or bonds unconditionally guaranteed as to principal and interest by the Government of Canada; **OR**
- iii) a bid bond.

- 1b) Regardless of the Bid Security submitted, it should never be more than \$250,000 maximum, calculated at 10% of the first \$250,000 of the tendered price, plus 5% of any amount in excess of \$250,000.

- 2a) Bid Security shall accompany each tender or, if forwarded separately from the tender, shall be provided not later than the specified tender closing time. Bid Security must be in the ORIGINAL form. Fax or photocopies and NOT acceptable. FAILURE TO PROVIDE THE REQUIRED BID SECURITY SHALL INVALIDATE THE TENDER.

- 2b) If the tender is not accepted, the Bid Security submitted pursuant to Article 8 shall be returned to the tenderer.
- 3a) The successful tenderer is required to provide security within 14 days of receiving notice of tender acceptance. The tenderer must furnish EITHER:
 - i) a Security Deposit as described in 1(b) above together with a Labour and Material Payment Bond in the amount of at least 50% of the amount payable under the contract, OR
 - ii) a Performance Bond and a Labour and Material Payment Bond – each in the amount of 50% of the amount payable under the contract.
- 3b) Should it not be possible to obtain a Labour Material Payment Bond as required under 3(a) above, on making application thereof to at least two acceptable Bonding Companies, an additional Security Deposit of a straight 10% of the amount payable under the contract must be furnished.
- 3c) Where a tender has been accompanied by a Security Deposit, as described in 1(b) above, the amount of the Security Deposit required under 3(a) above may be reduced by the amount of the Security Deposit which accompanied the tender.
- 3d) Bonds must be in an approved form and from the companies whose bonds are acceptable to the Government of Canada. Samples of the approved form of Bid Bond, Performance Bond and Labour and Material Payment Bond and a list of acceptable Bonding Companies may be obtained from the Contracting Officer, National Research Council, Building M-22, Montreal Road, Ottawa, Ontario, K1A 0R6.

Article 6 – Interest On Security Deposits

- 1) Tenderers are notified that they must make their own arrangements with their bankers as to the interest, if any, on the amount of the certified cheque accompanying their tender. The Council will not pay interest on said cheque pending the awarding of the contract nor be responsible for the payments of interest under any arrangement made by the tenderers.

Article 7 – Sales Tax

- 1) The amount of the tender shall include all taxes as levied under the Excise Act, the Excise Tax Act, the Old Age Security Act, the Customs Act or the Customs Tariff, in force or applicable at the time.
- 2) In Quebec, the Provincial Sales Tax should not be included in the Tender Price as the Federal Government is exempt. Tenderers should contact the Provincial Revenue Minister to recover all taxes paid for goods and services rendered under this contract.

Tenderers must include in their Tender Price the amount of Provincial Sales Tax for which the exemption does not apply.

Article 8 – Examination of Site

- 1) All parties tendering shall examine the sites of the proposed work before sending in their tender and make themselves thoroughly acquainted with the same and obtain for themselves any and all information that may be necessary for the proper carrying out of the Contract. No after claim will be allowed or entertained for any work or material that may be requisite and necessary for the proper execution and completion of this Contract with the exception of that provided for under GC 35 in the General Conditions of the General Specification.

Article 9 – Discrepancies, Omissions, Etc.

- 1a) Bidders finding discrepancies in, or omissions from, drawings, specifications or other documents, or having any doubt as to the meaning or intent of any part thereof, should at once notify the Engineer who will send written instructions or explanation to all bidders.
- 1b) Neither the Engineer nor the Council will be responsible for oral instructions.
- 1c) Addenda or corrections issued during the time of the bidding shall be covered in the proposal. However, the contract supersedes all communications, negotiations and agreements, either written or oral, relating to the work and made prior to the date of the contract.

Article 10 – No additional Payments for Increased Costs

- 1) The only other adjustments in the contract price allowed are those specified in the General Conditions of the General Specification. The contract price will not be amended for change in freight rates, exchange rates, wage rates or cost of materials, plant or services.

Article 11 – Awards

- 1a) The Council reserves the power and right to reject tenders received from parties who cannot show a reasonable acquaintance with and preparation for the proper performance of the class of work herein specified and shown on plans. Evidence of such competence must be furnished by the tenderers if required to do so.
- 1b) A tenderer may be required to furnish to the Contracting Office, [National Research Council of Canada, Building SAG, Site Saguenay, 501, boul. de l'Université Est, Chicoutimi, Qc, G7H 8C3, Canada](#), unsigned copies of the insurance requirements as covered by the Insurance Conditions of the General Specification.
- 1c) The Council does not bind itself to accept the lowest or any tender.

Article 12 – Harmonized Sales Tax

- 1) The Harmonized Sales Tax (HST) which is now in effect shall be considered an applicable tax for the purpose of this tender. However, the bidder shall NOT include any amount in the bid price for said HST. The successful contractor will indicate on each application for payment as a separate amount the appropriate HST the Owner is legally obliged to pay. This amount will be paid to the Contractor in addition to the amount certified for payment under the Contract in addition to the amount certified for payment under the Contract and will therefore not affect the Contract Price. The Contractor agrees to remit any HST collected or due to Revenue Canada.

Annex D

Acceptable Bonding Companies

Published September 2010

The following is a list of insurance companies whose bonds may be accepted as security by the government.

1. Canadian Companies

- ACE INA Insurance
- Allstate Insurance Company of Canada
- Ascentus Insurance Ltd. (Surety only)
- Aviva Insurance Company of Canada
- AXA Insurance (Canada)
- AXA Pacific Insurance Company
- Canadian Northern Shield Insurance Company
- Certas Direct Insurance Company (Surety only)
- Chartis Insurance Company of Canada (formerly AIG Commercial Insurance Company of Canada)
- Chubb Insurance Company of Canada
- Commonwealth Insurance Company
- Co-operators General Insurance Company
- CUMIS General Insurance Company
- The Dominion of Canada General Insurance Company
- Echelon General Insurance Company (Surety only)
- Economical Mutual Insurance Company
- Elite Insurance Company
- Everest Insurance Company of Canada
- Federated Insurance Company of Canada
- Federation Insurance Company of Canada
- Gore Mutual Insurance Company
- Grain Insurance and Guarantee Company
- The Guarantee Company of North America
- Industrial Alliance Pacific General Insurance Corporation
- Intact Insurance Company
- Jevco Insurance Company (Surety only)
- Lombard General Insurance Company of Canada
- Lombard Insurance Company
- Markel Insurance Company of Canada
- The Missisquoi Insurance Company
- The Nordic Insurance Company of Canada
- The North Waterloo Farmers Mutual Insurance Company (Fidelity only)
- Novex Insurance Company (Fidelity only)
- The Personal Insurance Company
- Pilot Insurance Company
- Quebec Assurance Company
- Royal & Sun Alliance Insurance Company of Canada
- Saskatchewan Mutual Insurance Company

- Scottish & York Insurance Co. Limited
- The Sovereign General Insurance Company
- TD General Insurance Company
- Temple Insurance Company
- Traders General Insurance Company
- Travelers Guarantee Company of Canada
- Trisura Guarantee Insurance Company
- The Wawanesa Mutual Insurance Company
- Waterloo Insurance Company
- Western Assurance Company
- Western Surety Company

2. Provincial Companies

Surety bonds issued by the following companies may be accepted provided that the contract of suretyship was executed in a province in which the company is licensed to do business as indicated in brackets.

- AXA Boreal Insurance Company (P.E.I., N.B., Que., Ont., Man., B.C.)
- AXA Boreal Insurance Company (P.E.I., N.B., Que., Ont., Man., B.C.)
- ALPHA, Compagnie d'Assurances Inc. (Que.)
- Canada West Insurance Company (Ont., Man., Sask, Alta., B.C., N.W.T.) (Surety only)
- The Canadian Union Assurance Company (Que.)
- La Capitale General Insurance Inc. (Nfld. & Lab., N.S., P.E.I., Que.(Surety only), Man., Sask., Alta., B.C., Nun., N.W.T., Yuk.)
- Coachman Insurance Company (Ont.)
- Continental Casualty Company (Nfld. & Lab., N.S., P.E.I., N.B., Que., Ont., Man., Sask., Alta., B.C., Nun., N.W.T., Yuk.)
- GCAN Insurance Company (Nfld. & Lab., N.S., P.E.I., N.B., Que., Ont., Man., Sask., Alta., B.C., Nun., N.W.T., Yuk.)
- The Insurance Company of Prince Edward Island (N.S., P.E.I., N.B.)
- Kingsway General Insurance Company (N.S., N.B., Que., Ont., Man., Sask., Alta., and B.C.)
- Liberty Mutual Insurance Company (Nfld. & Lab., N.S., P.E.I., N.B., Que., Ont., Man., Sask., Alta., B.C., Nun., N.W.T., Yuk.)
- Manitoba Public Insurance Corporation (Man.)
- Norgroupe Assurance Générales Inc.
- Orleans General Insurance Company (N.B., Que., Ont.)
- Saskatchewan Government Insurance Office (Sask.)
- SGI CANADA Insurance Services Ltd. (Ont., Man., Sask., Alta.)
- L'Unique General Insurance Inc. (Nfld. & Lab., N.S., P.E.I., N.B., Que.(Surety only), Ont.(Surety only), Man., Sask., Alta., B.C.(Surety only), Nun., N.W.T., Yuk.)

3. Foreign Companies

- Aspen Insurance UK Limited
- Compagnie Française d'Assurance pour le Commerce Extérieur (Fidelity only)
- Eagle Star Insurance Company Limited
- Ecclesiastical Insurance Office Public Limited Company (Fidelity only)
- Lloyd's Underwriters
- Mitsui Sumitomo Insurance Company, Limited
- NIPPONKOA Insurance Company, Limited
- Sompo Japan Insurance Inc.
- Tokio Marine & Nichido Fire Insurance Co., Ltd.
- XL Insurance Company Limited (Surety only)
- Zurich Insurance Company Ltd

National Research Council
Canada

Conseil national de recherches
Canada

Administrative Services & Property management
Branch (ASPM)

Direction des services administratifs et de la gestion
de l'immobilier (SAGI)

Annex E

Articles of Agreement

Insert the document here



Articles of Agreement

Standard Construction Contract – Articles of Agreement
(23/01/2002)

- A1 Contract Documents
- A2 Date of Completion of Work and Description of Work
- A3 Contract Amount
- A4 Contractor's Address
- A5 Unit Price Table



Articles of Agreement

These Articles of Agreement made in duplicate this **Xrd** day of **month, year**.

Between

Her Majesty the Queen, in right of Canada (referred to in the contract documents as “Her Majesty”) represented by the National Research Council Canada (referred to in the contract documents as the “Council”)

and

Contractor

(referred to in the contract documents as the “Contractor”)

Witness that in consideration for the mutual promises and obligations contained in the contract, Her Majesty and the Contractor covenant and agree as follows:

**A1 Contract Documents
(23/01/2002)**

- 1.1 Subject to A1.4 and A1.5, the documents forming the contract between Her Majesty and the Contractor, referred to herein as the contract documents, are
- 1.1.1 these Articles of Agreement,
 - 1.1.2 the document attached hereto, marked “A” and entitled “Plans and Specifications”, referred to herein as the Plans and Specifications,
 - 1.1.3 the document attached hereto, marked “B” and entitled “Terms of Payment”, referred to herein as the Terms of Payment,
 - 1.1.4 the document attached hereto, marked “C” and entitled “General Conditions”, referred to herein as the General Conditions,
 - 1.1.5 the document attached hereto, marked “D” and entitled “Labour Conditions”, referred to herein as the Labour Conditions,
 - 1.1.6 the document attached hereto, marked “E” and entitled “Insurance Conditions”, referred to herein as the Insurance Conditions,
 - 1.1.7 the document attached hereto, marked “F” and entitled “Contract Security Conditions”, referred to herein as the Contract Security Conditions, and
 - 1.1.8 any amendment or variation of the contract documents that is made in accordance with the General Conditions.
 - 1.1.9 the document entitled Fair Wage Schedules for Federal Construction Contracts referred to herein as Fair Wage Schedules
 - 1.1.10



Articles of Agreement

The Council hereby designates **M. Philippe Tremblay of Automotive, Surface & Transportation Branch** of the Government of Canada as the Departmental Representative for the purposes of the contract, and for all purposes of or incidental to the contract, the Departmental Representative address shall be deemed to be:

National Research Council
Saguenay Site
501, boul. de l'Université EST
Saguenay, arr. Chicoutimi, QC
G7H 8C3 Canada

1.2 In the contract

1.3.1 “Fixed Price Arrangement” means that part of the contract that prescribes a lump sum as payment for performance of the work to which it relates; and

1.3.2 “Unit Price Arrangement” means that part of the contract that prescribes the product of a price multiplied by a number of units of measurement of a class as payment for performance of the work to which it relates.

1.3 Any of the provisions of the contract that are expressly stipulated to be applicable only to a Unit Price Arrangement are not applicable to any part of the work to which a Fixed Price Arrangement is applicable.

1.4 Any of the provisions of the contract that are expressly stipulated to be applicable only to a Fixed Price Arrangement are not applicable to any part of the work to which a Unit Price Arrangement is applicable.

A2 Date of Completion of Work and Description of Work
(23/01/2002)

2.1 The contractor shall, between the date of these Articles of Agreement and the **Xst day of month, Year**, in the careful and workmanlike manner, diligently perform and complete the following work:

Layout LGE-1 forming area, NRC-Saguenay

which work is more particularly described in the Plans and Specifications, **including addendum (s) # x.**



Articles of Agreement

**A3 Contract Amount
(23/01/2002)**

3.1 Subject to any increase, decrease, deduction, reduction or set-off that may be made under the Contract, Her Majesty shall pay the Contractor at the times and in the manner that is set out or referred to in the Terms of Payment

3.1.1 the sum of \$_____ (GST/HST extra), in consideration for the performance of the work or the part thereof that is subject to Fixed Price Arrangement, and

3.1.2 a sum that is equal to the aggregate of the products of the number of units of Measurement of each class of labour, plant and material that is set out in a Final Certificate of Measurement referred to in GC44.8 multiplied in each case by the appropriate unit price that is set out in the Unit Price Table in consideration for the performance of the work or the part thereof that is subject to a Unit Price Arrangement.

3.2 For the information and guidance of the Contractor and the persons administering the contract on behalf of Her Majesty, but not so as to constitute a warranty, representation or undertaking of any nature by either party, it is estimated that the total amount payable by Her Majesty to the Contractor for the part of the work to which a Unit Price Arrangement is applicable will be approximately \$ **N/A**

3.3 A3.1.1 is applicable only to a Fixed Price Arrangement.

3.4 A3.1.2 and A3.2 applicable only to a Unit Price Arrangement.

**A4 Contractor's Address
(23/01/2002)**

4.1 For all purposes of or incidental to the contract, the Contractor's address shall be deemed to be:

Name
Adresse
City, Prov.
P.C.



Articles of Agreement

**A5 Unit Price Table
(23/01/2002)**

5.1 Her Majesty and the Contractor agree that the following table is the Unit Price Table for the purposes of the contract.

Column 1 Item	Column 2 Class of Labour Plant Or Material	Column 3 Unit of Measurement	Column 4 Estimated Total Quantity	Column 5 Price per Unit	Column 6 Estimated Total Price
		N/A			

5.2 The Unit Price Table that is set out in A5.1 designates the part of the work to which a Unit Price Arrangement is applicable.

5.3 The part of the work that is not designated in the Unit Price Table referred to in A5.2 is the part of the work to which a Fixed Price Arrangement is applicable.



Articles of Agreement

Signed on behalf of Her Majesty by

Name - Signature

as Senior Contracting Officer

and _____
R-Michel Simard

as procurement officer, Qc area

of the **National Research Council Canada**

on the _____

day of _____

Signed, sealed and delivered by

as _____ and
Position

by _____

as _____
Position

of _____
Contractor

on the _____

day of _____

} Seal

Annex F

TABLE OF CONTENTS (00 01 10)

CONTRACTUAL AND SUPPLY REQUIREMENTS

Section 00 01 10	Table of contents	
Section 00 10 00	General Requirements	(F1)
Section 00 15 45	Security Requirements	(F2)

TECHNICAL REQUIREMENTS – Plans and Specifications (A)

Technical Requirements Booklet		
	- Specifications (A1)	(F3)
	- Plans (A2)	(F4)

END SECTION

National Research Council
Canada

Conseil national de recherches
Canada

Administrative Services & Property management
Branch (ASPM)

Direction des services administratifs et de la gestion
de l'immobilier (SAGI)

Annex F1

General instructions, section 00 10 00

Insert the document here

Layout LGE-1 forming area, NRC-Saguenay

1. CONTEXT

- .1 The National Research Council of Canada's Aluminium Technology Centre (NRC-ATC) is a federal research facility working in the fields of aluminum transformation and assembly. Through the Automotive and Surface Transformation portfolio of the National Research Council, (AST-NRC) the Canadian government supports the Canadian industry toward developing advanced technologies applied to that sector of the economy.
- .2 The NRC-ATC wishes to modify its large scale prototyping laboratory LGE-1 in its facility located in Saguenay Quebec, with the goal of optimizing operations and space usage in the forming area.

2. SCOPE OF WORK

- .1 Work under this contract covers, without being limited to, the following items :
 - .1 The addition of a steel mezzanine covering approximately 12.4 m².
 - .2 Moving various industrial equipment that are used in research activities,
 - .3 Installing:
 - .1 electrical,
 - .2 cooling water,
 - .3 compressed air and
 - .4 ventilation air supplies for those equipment,
 - .4 Modifications to hydraulic lines feeding certain equipment,
 - .5 Modifications to control wiring between certain equipment.

3. CASH ALLOWANCE

- .1 The Contractor shall include in the Total Contract Sum all allowances stated in the following table :

Provide and install a compressed air supply under the mezzanine, complete with reel and quick connects :	5,000\$
Provide and install a 120/208V electrical distribution panel under the mezzanine against the west wall :	10,000\$
Provide and install a 347/600V electrical supply to a future induction furnace, near the existing 1000 t hydraulic press that is adjacent to the mezzanine :	5,000\$

- .2 The complete technical requirements that will be necessary for the completion of those items will be provided by NRC after the contract is awarded, as soon as they become available.
- .3 For each of the items, the Contractor will provide a detailed proposal showing all the costs broken down by category, and each proposal will be verified by the consultants entrusted with the site supervision.

- .4 NRC does not commit to proceed with any or part of the items that are subject to a cash allowance.
- .5 Only the actual construction costs that will have been approved beforehand will be paid to the Contractor. In the event that some of the items are not completed, or if those items turn out to be less expensive than what is shown in the table, a credit will be issued by the Contractor.
- .6 Contractor's costs for transport, unloading and handling at the site, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum and not in the allowances.

4. DRAWINGS

- .1 The following drawings illustrate the work and form part of the contract documents:
 - .1 94410-101 Aménagement, Démolition
 - .2 94410-102 Aménagement, Nouveau
 - .3 94410-201 Structure, Mezzanine, Vue en plan et détails
 - .4 94410-202 Structure, Mezzanine, Vue en plan coupes et détails
 - .5 94410-401 Mécanique, Devis
 - .6 94410-402 Mécanique, Plomberie et eau refroidie, Démolition
 - .7 94410-403 Mécanique, Plomberie et eau refroidie, Nouveau
 - .8 94410-403 Mécanique, Ventilation, Démolition
 - .9 94410-405 Mécanique, Ventilation, Nouveau
 - .10 94410-501 Électricité, Démolition et relocalisation
 - .11 94410-502 Électricité, Nouvel aménagement
 - .12 94410-503 Électricité, Démolition et schéma unifilaire
 - .13 94410-504 Électricité, Démolition et schéma bloc contrôles

5. COMPLETION

- .1 Complete all work within [18] week(s) after receipt of notification of acceptance of tender.

6. GENERAL

- .1 The word "provide" in this Specification means to supply and install.
- .2 Provide items mentioned in either the drawings or the specification.

7. SPECIFIED ACCEPTABLE & ALTERNATIVE EQUIPMENT & MATERIALS

- .1 Materials and equipment scheduled and/or specified on the drawings or in the specifications have been selected to establish a performance and quality standard. In most cases, acceptable manufacturers are stated for any material or equipment specified by manufacturer's name and model number. Contractors may base their tender price on

materials and equipment supplied by any of the manufacturers' names as acceptable for the particular material or equipment.

- .2 In addition to the manufacturers specified or named as acceptable, you may propose alternative manufacturers of materials or equipment to the Departmental Representative for acceptance. For a product to be considered as an alternative product substitute, make a written application to the Departmental Representative during the tender period, not later than **ten (10)** working days before tender closing.
- .3 Certify in writing that the alternative meets all requirements of the specified material or equipment. In addition, it shall be understood that all costs required by or as a result of acceptance or proposed alternatives, will be borne by the contractor.
- .4 Approval of alternatives will be signified by issue of an Addendum to the Tender Documents.
- .5 Any alternative manufacturers or materials submitted which are incomplete and cannot be evaluated, or are later than **ten (10)** working days before tender closing date or after the tender period, will not be considered.

8. MINIMUM STANDARDS

- .1 Conform to or exceed minimum acceptable standards of the various applicable federal, provincial and municipal codes such as The National Building Code, The National Fire Code, Canadian Plumbing Code, Canadian Electrical Code, Canadian Code for Construction Safety and the Provincial Construction Safety Act.
- .2 Work to conform to referenced standards and codes as reaffirmed or revised to date of specification.

9. WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS)

- .1 The general contractor shall comply with Federal and Provincial legislation regarding the WHMIS. The contractor's responsibilities include, but are not limited to the following:
 - .1 To ensure that any controlled product brought on site by the contractor or sub-contractor is labeled;
 - .2 To make available to the workers and the Departmental Representative, Material Safety Data Sheets (MSDS) for these controlled products;
 - .3 To train own workers about WHMIS, and about the controlled products that they use on site;
 - .4 To inform other contractors, sub-contractors, the Departmental Representative, authorized visitors and outside inspection agency personnel about the presence and use of such products on the site.

The site foreman or superintendent must be able to demonstrate, to the satisfaction of the Departmental Representative, that he/she has had WHMIS training and is knowledgeable in its requirements. The Departmental

Representative can require replacement of this person if this condition or implementation of WHMIS is not satisfactory.

10. DESIGNATED SUBSTANCES

Comply with Provincial legislation if encountering specifically listed designated substances on the work site while performing the work described in these contract documents:

- .1 It is the responsibility of the general contractor to ensure that each prospective subcontractor for this project has received a copy of the listed designated substances which may be present on site.
- .2 In addition to the specific designated substances listed by the province, the following may also be present: **NONE**
- .3 The general contractor is advised to take the following precautions when dealing with the above substances: **DOES NOT APPLY**

11. COST BREAKDOWN

- .1 Submit, for approval by the Departmental Representative, a detailed cost breakdown of tender 72 hours after the contract is awarded.
- .2 Use the approved cost breakdown as the basis for submitting all claims.
- .3 Request Departmental Representative's verbal approval to amount of claim prior to preparing and submitting the claim in its final form.

12. SUB-TRADES

- .1 Submit no later than **72 hours** after tender closing, a complete list of sub trades for the Departmental Representative's review.

13. PERSONNEL SECURITY AND IDENTIFICATION

- .1 All persons employed by the contractor, or by any subcontractor and present on the site must be security cleared in accordance with the requirements of the Section entitled Special Instructions to Tenderers.
- .2 All such persons must wear and keep visible identification badges as issued by the Security Office of NRC.
- .3 The reliability status process can take as much as three (3) weeks to complete, and sometimes even more.

14. WORKING HOURS AND ESCORTING REQUIREMENTS

- .1 Normal working hours on the NRC property are from **7:30 a.m.** until **4:30 p.m.**, Monday to Friday inclusive, except statutory holidays.

- .2 At all other times, special written passes are required for access to the building site.
- .3 Before scheduling any work outside normal working hours, obtain permission from the Departmental Representative to perform the specific tasks.
- .4 An escort may be required whenever working outside normal hours. Contractor to bear the associated costs.

15. SCHEDULE

- .1 The contractor shall prepare a detailed schedule, fixing the date for commencement and completion of the various parts of the work and update the said schedule. Such schedule shall be made available to the Departmental Representative not later than two weeks after the award of the contract and prior to commencement of any work on site.
- .2 Notify Departmental Representative in writing of any changes in the schedule.
- .3 **Ten (10)** days before the scheduled completion date, arrange to do an interim inspection with the Departmental Representative.

16. PROJECT MEETINGS

- .1 Hold regular project meetings at times and locations approved by the Departmental Representative.
- .2 Notify all parties concerned of meetings to ensure proper coordination of work.
- .3 Departmental Representative will set times for project meetings and assume responsibility for recording and distributing minutes.

17. SHOP DRAWINGS

- .1 Submit to Departmental Representative for review, shop drawings, product data and samples specified within **two (2)** weeks after contract award.
- .2 Submit to Departmental Representative for review a complete list of all shop drawings, product data and samples specified and written confirmation of corresponding delivery dates within one (1) week after shop drawings, product data and samples approval date. This list shall be updated on a **two (2)** week basis and any changes to the list shall be immediately notified in writing to the Departmental Representative.
- .3 Review shop drawings, data sheets and samples prior to submission.
- .4 Submit an electronic **(1) copy** (PDF format) of all shop drawings and product data and samples for review, unless otherwise specified.
- .5 Review of shop drawings and product data by the Departmental Representative does not relieve the contractor of the responsibility for errors and omissions and for the conformity with contract documents.

18. SAMPLES AND MOCK-UPS

- .1 Submit samples in sizes and quantities as specified.
- .2 Where colour, pattern or texture is criterion, submit full range of samples.
- .3 Construct field samples and mock-ups at locations acceptable to Departmental Representative.
- .4 Reviewed samples or mock-ups will become standards of workmanship and material against which installed work will be checked on the project.

19. MATERIALS AND WORKMANSHIP

- .1 Install only new materials on this project unless specifically noted otherwise.
- .2 Only first class workmanship will be accepted, not only with regard to safety, efficiency, durability, but also with regard to neatness of detail and performance.

20. WORK & MATERIALS SUPPLIED BY OWNER

- .1 Work and materials not included in this contract are described on drawings and in this specification.
- .2 Deliver to a storage place, as directed by the Departmental Representative, all materials returned to the Owner.
- .3 Unless otherwise specified, accept owner-supplied materials at their storage location and provide all transportation as required.
- .4 General Contractor's duties:
 - .1 Unload at site.
 - .2 Promptly inspect products and report damaged or defective items.
 - .3 Give written notification to the Departmental Representative for items accepted in good order.
 - .4 Handle at site, including uncrating and storage.
 - .5 Repair or replace items damaged on site.
 - .6 Install, connect finished products as specified.

21. SITE ACCESS

- .1 Make prior arrangements with the Departmental Representative before starting work or moving materials and equipment on site.
- .2 Obtain approval of Departmental Representative for regular means of access during the construction period.

- .3 Obtain approval of Departmental Representative before temporarily suspending operations on site; before returning to the site and before leaving the site at the end of the job.
- .4 Provide and maintain access to site.
- .5 Build and maintain temporary roads and provide snow removal during period of work.
- .6 Make good any damage and clean up dirt, debris, etc., resulting from contractor's use of existing roads.

22. USE OF SITE

- .1 Restrict operations on the site to the areas approved by the Departmental Representative
- .2 Locate all temporary structures, equipment, storage, etc., to the designated areas.
- .3 Restrict parking to the designated areas.

23. ACCEPTANCE OF SITE

- .1 Inspect the site before commencing work, review any unexpected conditions with the Departmental Representative.
- .2 Commencement of work will imply acceptance of existing conditions.

24. SITE OFFICE & TELEPHONE

- .1 It is not mandatory for the Contractor to erect a temporary site office. If he chooses to erect one, it will be at his own expense.
- .2 If needed, the Contractor can install a container on the grounds outside of the building for tool and supply storage, at a place indicated by the departmental representative.
- .3 Use of NRC phones is not permitted unless in the case of an emergency.
- .4 Workers on the jobsite will be allowed to use the NRC workers lunchroom.

25. SANITARY FACILITIES

- .1 Obtain permission from the Departmental Representative to use the existing washroom facilities in the building.

26. TEMPORARY SERVICES

- .1 A source of temporary power will be made available in the area. Bear all costs to make connections to the power source and perform distribution on site.
- .2 Provide all load centres, breakers, conduit, wiring, disconnects, extension cords, transformers, as required from the source of power.

- .3 Power is to be used only for power tools, lighting, controls, motors, and not for space heating.
- .4 A source of temporary water will be made available if required.
- .5 Bear all costs associated with distributing the water to the required locations.
- .6 Comply with NRC requirements when connecting to existing systems in accordance with the articles entitled "Co-operation" and "Service Interruptions" of this section.

27. DOCUMENTS REQUIRED AT WORK SITE

- .1 The contractor shall keep on the site, one (1) up-to-date copy of all contract documents, including specifications, drawings, addenda, shop drawings, change notices, schedule and any reports or bulletins pertaining to the work, in good order, available to the Departmental Representative and to his / her representatives at all times.
- .2 At least one (1) copy of specifications and drawings shall be marked by the contractor to show all work "As Built" and shall be provided to the Departmental Representative with the Application for Payment and for the Final Certificate of Completion.

28. CO-OPERATION

- .1 Co-operate with NRC staff in order to keep disruption of normal research work to an absolute minimum.
- .2 Work out in advance, a schedule for all work which might disrupt normal work in the building.
- .3 Have schedule approved by the Departmental Representative.
- .4 **Notify** the Departmental Representative **in writing, 72 hours** prior to any intended interruption of facilities, areas, corridors, mechanical or electrical services and obtain requisite permission.

29. PROTECTION AND WARNING NOTICES

- .1 Provide all materials required to protect existing equipment.
- .2 Erect dust barriers to prevent dust and debris from spreading through the building.
- .3 Place dust protection in the form of cover sheets over equipment and furniture and tape these sheets to floors, to ensure no dust infiltration.
- .4 Repair or replace any and all damage to Owner's property caused during construction, at no cost to the Owner and to the satisfaction of the Departmental Representative.
- .5 Protect the buildings, roads, lawns, services, etc. from damage which might occur as a result of this work.

- .6 Plan and co-ordinate the work to protect the buildings from the leakage of water, dust, etc.
- .7 Ensure that all doors, windows, etc., that could allow transfer of dust, noise, fumes, etc., to other areas of the building are kept closed.
- .8 Be responsible for security of all areas affected by the work under the Contract until acceptance by NRC. Take all necessary precautions to prevent entry to the work area by unauthorized persons and guard against theft, fire and damage by any cause. Secure working area at the end of each day's work and be responsible for same.
- .9 Provide and maintain adequate safety barricades around the work sites to protect NRC personnel and the public from injury during the construction.
- .10 Post warnings, in all instances where possible injury could occur such as Work Overhead, Hard Hat Areas, etc. or as required by the Departmental Representative.
- .11 Provide temporary protective enclosures over building entrances and exits to protect pedestrians. All enclosures to be structurally sound against weather and falling debris.

30. BILINGUALISM

- .1 Ensure that all signs, notices, etc. are posted in both official languages.
- .2 Ensure that all identification of services called for by under this contract are bilingual.

31. LAYOUT OF WORK

- .1 Location of equipment, fixtures, outlets and openings indicated on drawings or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with the manufacturer's recommendations for safety, access and maintenance.
- .3 Employ competent person to lay out work in accordance with the contract documents.

32. DISCREPANCIES & INTERFERENCES

- .1 Prior to the start of the work, examine drawings and specifications. Report at once to the Departmental Representative, any defects, discrepancies, omissions or interferences affecting the work.
- .2 Contractor to immediately inform the Departmental Representative in writing, of any discrepancies between the plans and the physical conditions so the Departmental Representative may promptly verify same.
- .3 Any work done after such a discovery, until authorized, is at the contractor's risk.

- .4 Where minor interferences as determined by the Departmental Representative are encountered on the job and they have not been pointed out on the original tender or on the plans and specifications, provide offsets, bends or reroute the services to suit job conditions at no extra cost.
- .5 Arrange all work so as not to interfere in any way with other work being carried out.

33. MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- .2 Notify the Departmental Representative in writing of any conflict between these specifications and manufacturer's instruction. Departmental Representative will designate which document is to be followed.

34. TEMPORARY HEATING AND VENTILATING

- .1 Bear the costs of temporary heat and ventilation during construction including costs of installation, fuel, operation, maintenance, and removal of equipment.
- .2 Use of direct-fired heaters discharging waste products into the work areas will not be permitted unless prior approval is given by the Departmental Representative.
- .3 Furnish and install temporary heat and ventilation in enclosed areas as required to:
 - .1 Facilitate progress of work.
 - .2 Protect work and products against dampness and cold.
 - .3 Reduce moisture condensation on surfaces to an acceptable level.
 - .4 Provide ambient temperature and humidity levels for storage, installation and curing of materials.
 - .5 Provide adequate ventilation to meet health regulations for a safe working environment.
- .4 Maintain minimum temperature of 10 °C (50 °F) or higher where specified as soon as finishing work is commenced and maintain until acceptance by the Departmental Representative. Maintain ambient temperature and humidity levels as required for comfort of NRC personnel.
- .5 Prevent hazardous or unhealthy accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction including also, storage areas and sanitary facilities.
 - .1 Dispose of exhaust materials in a manner that will not result in a harmful or unhealthy exposure to persons.
- .6 Maintain strict supervision of operation of temporary heating and ventilating equipment.
 - .1 Enforce conformance with applicable codes and standards.
 - .2 Comply with instructions of the Departmental Representative including provision of full-time watchman services when directed.

- .3 Enforce safe practices.
- .4 Vent direct-fired combustion units to outside.
- .7 Submit tenders assuming existing or new equipment and systems will not be used for temporary heating and ventilating.
- .8 After award of contract, Departmental Representative may permit use of the permanent system providing agreement can be reached on:
 - .1 Conditions of use, special equipment, protection, maintenance, and replacement of filters.
 - .2 Methods of ensuring that heating medium will not be wasted and in the case of steam, agreement on what is to be done with the condensate.
 - .3 Saving on contract price.
 - .4 Provisions relating to guarantees on equipment.

35. CONNECTIONS TO AND INTERRUPTIONS TO EXISTING SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times and in the manner agreed to by the Departmental Representative and by authorities having jurisdiction, with minimum disruption to NRC Personnel and vehicular traffic and minimum service interruption. Do not operate any NRC equipment or plant.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Submit a schedule to and obtain approval from the Departmental Representative for any shut-down or closure of active service or facility; **allow minimum 72 hours notice**. Adhere to approved schedule and provide notice to the Departmental Representative.
- .4 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .5 Provide detours, bridges, alternate feeds, etc., as required to minimize disruptions.
- .6 Protect existing services as required and immediately make repairs if damage occurs.
- .7 Remove any abandoned service lines as indicated on the contract documents and as approved by the Departmental Representative; cap or otherwise seal lines at cut-off points. Record and provide a copy to the Departmental Representative of locations of maintained, re-routed and abandoned service lines.

36. CUTTING AND PATCHING

- .1 Cut existing surfaces as required to accommodate new work.
- .2 Remove all items as shown or specified.
- .3 Patch and make good with identical materials, the surfaces that have been disturbed, cut or damaged, to the satisfaction of the Departmental Representative.

- .4 Where new pipes pass through existing construction, core drill an opening. Size openings to leave 12mm (1/2") clearance around the pipes or pipe insulation. Do not drill or cut any surface without the approval of the Departmental Representative.
- .5 Obtain written approval of the Departmental Representative before cutting openings through existing or new structural members.
- .6 Seal all openings where cables, conduits or pipes pass through walls with an acoustic sealant conforming to CAN/CGSB-19.21-M87.
- .7 Where cables, conduits and pipes pass through fire rated walls and floors, pack space between with compressed glass fibres and seal with fire stop caulking in accordance with CAN/CGSB-19.13-M87 AND NBC 3.1.7.

37. FASTENING DEVICES

- .1 Do not use explosive actuated tools, without first obtaining permission from the Departmental Representative.
- .2 Comply with the requirements of CSA A-166 (Safety Code for Explosive Actuated Tools).
- .3 Do not use any kind of impact or percussion tool without first obtaining permission from the Departmental Representative.

38. OVERLOADING

- .1 Ensure that no part of the building or work is subjected to a load which will endanger safety or cause permanent deformation or structural damage.

39. DRAINAGE

- .1 Provide temporary drainage and pumping as required to keep excavations and site free of water.

40. ENCLOSURE OF STRUCTURES

- .1 Construct and maintain all temporary enclosures as required to protect foundations, sub-soil, concrete, masonry, etc., from frost penetration or damage.
- .2 Maintain in place until all chances of damage are over and proper curing has taken place.
- .3 Provide temporary weather tight enclosures for exterior openings until permanent sash and glazing and exterior doors are installed.
- .4 Provide lockable enclosures as required to maintain the security of NRC facilities and be responsible for the same.
- .5 Provide keys to NRC security personnel when required.

- .6 Lay out the work carefully and accurately and verify all dimensions and be responsible for them. Locate and preserve general reference points.
- .7 Throughout the course of construction, keep continuously acquainted with field conditions, and the work being developed by all trades involved in the project. Maintain an awareness of responsibility to avoid space conflict with other trades.
- .8 Conceal all services, piping, wiring, ductwork, etc., in floors, walls or ceilings except where indicated otherwise.

41. STORAGE

- .1 Provide storage as required to protect all tools, materials, etc., from damage or theft and be responsible for the same.
- .2 Do not store flammable or explosive materials on site without the authorization of the Departmental Representative.

42. GENERAL REVIEW

- .1 Periodic review of the contractor's work by the Departmental Representative does not relieve the contractor of the responsibility of making the work in accordance with contract documents. Contractor shall carry out his own quality control to ensure that the construction work is in accordance with contract documents.
- .2 Inform the Departmental Representative of any impediments to the installation and obtain his / her approval for actual location.

43. INSPECTION OF BURIED OR CONCEALED SERVICES

- .1 Prior to concealing any services that are installed, ensure that all inspection bodies concerned, including NRC, have inspected the work and have witnessed all tests. Failure to do so may result in exposing the services again at the contractor's expense.

44. TESTING

- .1 On completion, or as required by local authority inspectors and/or Departmental Representative during progress of work and before any services are covered up and flushing is complete, test all installations in the presence of the Departmental Representative.
- .2 Obtain and hand to the Departmental Representative all acceptance certificates or test reports from authority having jurisdiction. The project will be considered incomplete without the same.

45. PARTIAL OCCUPANCY

- .1 NRC may request partial occupancy of the facility if the contract extends beyond the expected completion date.

- .2 Do not restrict access to the building, routes, and services.
- .3 Do not encumber the site with materials or equipment.

46. DISPOSAL OF WASTES

- .1 Dispose of waste materials including volatiles, safely off NRC property. Refer to the section entitled "General and Fire Safety Requirements" included as part of this specification.

47. CLEAN-UP DURING CONSTRUCTION

- .1 On a daily basis, maintain project site and adjacent area of campus including roofs, free from debris and waste materials.
- .2 Provide on-site dump containers for collection of waste materials and rubbish.

48. FINAL CLEAN-UP

- .1 Upon completion do a final clean-up to the satisfaction of the Departmental Representative.
- .2 Clean all new surfaces, lights, existing surfaces affected by this work, replace filters, etc.
- .3 Clean all resilient flooring and prepare to receive protective finish. Protective finish applied by NRC

49. WARRANTY AND RECTIFICATION OF DEFECTS IN WORK

- .1 Refer to General Conditions "C", section GC32.
- .2 Ensure that all manufacturers' guarantees and warranties are issued in the name of the **General** Contractor and the National Research Council.

50. MAINTENANCE MANUALS

- .1 Provide **three (3)** bilingual copies of maintenance manuals or two (2) English and two French maintenance manuals immediately upon completion of the work and prior to release of holdbacks.
- .2 Manuals to be neatly bound in hard cover loose leaf binders.
- .3 Manuals to include operating and maintenance instructions, all guarantees and warranties, shop drawings, technical data, etc., for the material and apparatus supplied under this contract.

END OF SECTION

National Research Council
Canada

Conseil national de recherches
Canada

Administrative Services & Property management
Branch (ASPM)

Direction des services administratifs et de la gestion
de l'immobilier (SAGI)

Annex F2

GENERAL AND FIRE SAFETY REQUIREMENTS,

Section 00 15 45

Insert the document here

1. GENERAL CONSTRUCTION SAFETY REQUIREMENTS

- .1 The Contractor shall take all necessary steps to protect personnel (workers, visitors, general public, etc.) and property from any harm during the course of the contract.
- .2 The Contractor shall be solely responsible for the construction safety of both its employees and those of its sub-contractors at the work site, and for initiating, maintaining and supervising safety precautions, programs and procedures in connection with the performance of the work.
- .3 The Contractor shall comply with all Federal, Provincial and Municipal safety codes and regulations and all provincial OSH regulation . In the event of any conflict between any provisions in legislation or codes, the most stringent provisions shall apply.
- .4 Periodic review of the contractor's work by the Departmental Representative, using the criteria of the contract documents, does not relieve the contractor of his safety responsibilities in carrying out the work in accordance with the contract documents. The contractor shall consult with the Departmental Representative to ensure that this responsibility is carried out.
- .5 The Contractor shall ensure that only competent personnel are permitted to work on site. Throughout the term of the contract, any person will be removed from the site who is not observing or complying with the safety requirements.
- .6 All equipment shall be in safe operating condition and appropriate to the task.
- .7 Following a project and site hazard assessment, the Contractor shall develop a Site Specific Safety Plan based on the following minimum requirements:
 - .1 Provide a safety board mounted in a visible location on the project site, with the following information included thereon:
 - .1 Notice of Project
 - .2 Site specific Safety Policy
 - .3 Copy of Provincial OSH regulation
 - .4 Building Schematic showing emergency exits
 - .5 Building emergency procedures
 - .6 Contact list for NRC, Contractor and all involved sub-contractors
 - .7 Any related MSDS sheets
 - .8 Proper Emergency phone number
- .8 The Contractor shall provide competent personnel to implement its safety program and those of any Health and Safety Act legislation applicable at this project location, and to ensure they are being complied with.
- .9 The Contractor shall provide safety orientation to all its employees as well as those of any subcontractors under its jurisdiction.

- .10 The Departmental Representative will monitor to ensure that safety requirements are met and that safety records are properly kept and maintained. Continued disregard for safety standards can cause the contract to be cancelled and the Contractor or sub-contractors removed from the site.
- .11 The Contractor will report to the Departmental Representative and jurisdictional authorities, any accident or incident involving Contractor or NRC personnel or the public and/or property arising from the Contractor's execution of the work.
- .12 If entry to a laboratory is required as part of the work of the Contractor, a safety orientation shall be provided to all his employees as well as those of any subcontractors regarding lab safety requirements and procedures, as provided by the Researcher or the Departmental Representative.

2. FIRE SAFETY REQUIREMENTS

.1 Authorities

- 1. The Fire Commissioner of Canada (FC) is the authority for fire safety at NRC.
- 2. For the purpose of this document, "Departmental Representative" will be deemed as the NRC person in charge of the project and who will enforce these Fire Safety Requirements.
- 3. Comply with the following standards as published by the Office of the Fire Commissioner of Canada:
 - a. Standard No. 301 - June 1982 "Standard for Construction Operations";
 - b. Standard No. 302 - June 1982 "Standard for Welding and Cutting".

.2 Smoking

- .1 Smoking is prohibited inside all NRC buildings, as well as roof areas.
- .2 Obey all "NO SMOKING" signs on NRC premises.

.3 Hot Work

- .1 Prior to commencement of any "Hot Work" involving welding, soldering, burning, heating, use of torches or salamanders or any open flame, obtain a Hot Work Permit from the Departmental Representative.
- .2 Prior to commencement of "Hot Work", review the area of hot work with the Departmental Representative to determine the level of fire safety precautions to be taken.

.4 Reporting Fires

- .1 Know the exact location of the nearest Fire Alarm Pull Station and telephone, including the emergency phone number.
- .2 REPORT immediately, all fire incidents as follows:
 - .1 Activate nearest fire alarm pull station and;

- .2 Telephone the emergency phone numbers which will be provided at the project kick off meeting:
4. When reporting a fire by phone, give the location of fire, building number and be prepared to verify location.
5. The person activating fire alarm pull station must remain at a safe distance from the scene of the fire but readily available to provide information and direction to the Fire Department personnel.

.5 Interior and Exterior Fire protection & Alarm Systems

- .1 DO NOT OBSTRUCT OR SHUT OFF FIRE PROTECTION EQUIPMENT OR SYSTEMS, INCLUDING BUT NOT LIMITED TO FIRE ALARM SYSTEMS, SMOKE/HEAT DETECTORS, SPRINKLER SYSTEM, PULL STATIONS, EMERGENCY CALL BUTTONS AND PA SYSTEMS, WITHOUT AUTHORIZATION FROM THE DEPARTMENTAL REPRESENTATIVE.
- .2 WHEN ANY FIRE PROTECTION EQUIPMENT IS TEMPORARILY SHUT DOWN, ALTERNATIVE MEASURES AS PRESCRIBED BY THE DEPARTMENTAL REPRESENTATIVE SHALL BE TAKEN TO ENSURE THAT FIRE PROTECTION IS MAINTAINED.
- .3 DO NOT LEAVE FIRE PROTECTION OR ALARM SYSTEMS INACTIVE AT THE END OF A WORKING DAY WITHOUT NOTIFICATION AND AUTHORISATION FROM THE DEPARTMENTAL REPRESENTATIVE. THE DEPARTMENTAL REPRESENTATIVE WILL ADVISE THE (FPO) OF THE DETAILS OF ANY SUCH EVENT.
- .4 DO NOT USE FIRE HYDRANTS, STANDPIPES AND HOSE SYSTEMS FOR OTHER THAN FIRE FIGHTING PURPOSES UNLESS AUTHORISED BY DEPARTMENTAL REPRESENTATIVE.

.6 Fire Extinguishers

- .1 Provide a minimum of 1-20 lb. ABC Dry Chemical Fire Extinguisher at each hot work or open flame location.
- .2 Provide fire extinguishers for hot asphalt and roofing operations as follows:
 - a. Kettle area - 1-20 lb. ABC Dry Chemical;
 - b. Roof - 1-20 lb. ABC Dry Chemical at each open flame location.
- .3 Provide fire extinguishers equipped as below:
 - c. Pinned and sealed;
 - d. With a pressure gauge;
 - e. With an extinguisher tag signed by a fire extinguisher servicing company.
- .4 Carbon Dioxide (CO₂) extinguishers will not be considered as substitutes for the above.

.7 Roofing Operations

.1 Kettles:

- .1 Arrange for the location of asphalt kettles and material storage with the Departmental Representative before moving on site. Do not locate kettles on any roof or structure and keep them at least 10m (30 feet) away from a building.
- .2 Equip kettles with 2 thermometers or gauges in good working order; a hand held and a kettle-mounted model.
- .3 Do not operate kettles at temperatures in excess of 232°C (450 °F).
- .4 Maintain continuous supervision while kettles are in operation and provide metal covers for the kettles to smother any flames in case of fire. Provide fire extinguishers as required in article 2.6.
- .5 Demonstrate container capacities to Departmental Representative prior to start of work.
- .6 Store materials a minimum of 6m (20 feet) from the kettle.

.2 Mops:

- .1 Use only glass fibre roofing mops.
- .2 Remove used mops from the roof site at the end of each working day.

.3 Torch Applied Systems:

- .1 DO NOT USE TORCHES NEXT TO WALLS.
- .2 DO NOT TORCH MEMBRANES TO EXPOSED WOOD OR CAVITY
- .3 Provide a Fire Watch as required by article 2.9 of this section.

.4 Store all combustible roofing materials at least 3m (10 feet) away from any structure.

.5 Keep compressed gas cylinders a minimum of 6m (20 feet) away from the kettle, protected from mechanical damage and secured in an upright position.

.8 Welding / Grinding Operations

.1 Contractor to provide fire blankets, portable fume extraction devices, screens or similar equipment to prevent exposure to welding flash, or sparks from grinding.

.9 Fire Watch

.1 Provide a fire watch for a minimum of one hour after the termination of any hot work operation.

.2 For temporary heating, refer to General Instructions Section 00 010 00.

.3 Equip fire watch personnel with fire extinguishers as required by article 2.6.

.10 Obstruction of access/egress routes-roadways, halls, doors, or elevators

.1 Advise the Departmental Representative in advance of any work that would impede the response of Fire Department personnel and their apparatus. This

includes violation of minimum overhead clearance, erection of barricades and the digging of trenches.

- .2 Building exit routes must not be obstructed in any way without special permission from the Departmental Representative, who will ensure that adequate alternative routes are maintained.
- .3 The Departmental Representative will advise the FPO of any obstruction that may warrant advanced planning and communication to ensure the safety of building occupants and the effectiveness of the Fire Department.

.11 Rubbish and Waste Materials

- .1 Keep rubbish and waste materials to a minimum and a minimum distance of 6m (20 feet) from any kettle or torches.
- .2 Do not burn rubbish on site.
- .3 Rubbish Containers
 - .1 Consult with the Departmental Representative to determine an acceptable safe location for any containers and the arrangement of chutes etc. prior to bringing the containers on site.
 - .2 Do not overfill the containers and keep area around the perimeter free and clear of any debris.
- .4 Storage
 - .1 Exercise extreme care when storing combustible waste materials in work areas. Ensure maximum possible cleanliness, ventilation and that all safety standards are adhered to when storing any combustible materials.
 - .2 Deposit greasy or oily rags or materials subject to spontaneous combustion in CSA or ULC approved receptacles and remove at the end of the work day or shift, or as directed.

.12 Flammable Liquids

- .1 The handling, storage and use of flammable liquids is governed by the current National Fire Code of Canada.
- .2 Flammable Liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 45 litres (10 imp gal), provided they are stored in approved safety cans bearing the ULC seal of approval and kept away from buildings, stockpiled combustible materials etc. Storage of quantities of flammable liquids exceeding 45 litres (10 imp gal) for work purposes, require the permission of the Departmental Representative.
- .3 Flammable liquids are not to be left on any roof areas after normal working hours.
- .4 Transfer of flammable liquids is prohibited within buildings.

-
- .5 Do not transfer flammable liquids in the vicinity of open flames or any type of heat producing device.
 - .6 Do not use flammable liquids having a flash point below 38 °C (100 °F) such as naphtha or gasoline as solvents or cleaning agents.
 - .7 Store flammable waste liquids for disposal in approved container located in a safe, ventilated area. Waste flammable liquids are to be removed from the site on a regular basis.
 - .8 Where flammable liquids, such as lacquers or urethane are used, ensure proper ventilation and eliminate all sources of ignition. Inform the Departmental Representative prior to, and at the cessation of such work.

3. Questions and/or clarifications

- .1 Direct any questions or clarification on Fire or General Safety, in addition to the above requirements, to the Departmental Representative.

END OF SECTION

National Research Council
Canada

Conseil national de recherches
Canada

Administrative Services & Property management
Branch (ASPM)

Direction des services administratifs et de la gestion
de l'immobilier (SAGI)

Annex F3

Plans and Specifications (A)

Specifications (A1)

Insert the document here

CENTRE DE TECHNOLOGIE DE L'ALUMINIUM
OPTIMISATION DE L' AIRE DE FORMAGE AU LGE1
NRC-CNRC

94410

DEVIS TECHNIQUE

POUR SOUMISSION

N/📁 : 94410
Juillet 2018

Les présents documents (plans et devis) ont été préparés et vérifiés par UNIGEC, Experts-conseils, par les personnes ci-après identifiées.

Mario Girard, ing.
Électricité

Sceau et signature
Table des matières
Liste des plans

ÉLECTRICITÉ

26 05 00 Électricité – Exigences générales concernant les résultats des travaux
26 05 10 Électricité – Sommaire des travaux

Annexe A – Dessins de référence électriques

<u>No</u>	<u>DISCIPLINE</u>	<u>ÉTAPE</u>	<u>ÉTAGE</u>	<u>DESCRIPTION</u>
<u>AMÉNAGEMENT</u>				
100	AMÉNAGEMENT – MÉCANIQUE - ÉLECTRICITÉ	-	-	LISTE DE PLANS
101	AMÉNAGEMENT	DÉMOLITION	REZ-DE-CHAUSSÉE	VUE EN PLAN
102	AMÉNAGEMENT	NOUVEAU	REZ-DE-CHAUSSÉE ET MEZZANINE	VUES EN PLAN ET COUPE
<u>STRUCTURE</u>				
201	ACIER	NOUVEAU	MEZZANINE	VUE EN PLAN & DÉTAIL
202	ACIER	NOUVEAU	MEZZANINE	VUE EN PLAN, COUPES & DÉTAIL
<u>MÉCANIQUE</u>				
401	MÉCANIQUE	-	-	DEVIS
402	PLOMBERIE – EAU REFROIDIE	DÉMOLITION	REZ-DE-CHAUSSÉE	VUE EN PLAN
403	PLOMBERIE – EAU REFROIDIE	NOUVEAU	REZ-DE-CHAUSSÉE ET MEZZANINE	VUES EN PLAN
404	VENTILATION	DÉMOLITION	REZ-DE-CHAUSSÉE	VUE EN PLAN
405	VENTILATION	NOUVEAU	REZ-DE-CHAUSSÉE	VUE EN PLAN
<u>ÉLECTRICITÉ</u>				
501	DISTR. ÉLECTRIQUE CONTRÔLE	ET	DÉMOLITION & RELOC.	REZ-DE-CHAUSSÉE VUE EN PLAN
502	DISTR. ÉLECTRIQUE CONTRÔLE	ET	NOUVEL AMÉNAGEMENT	RDC ET MEZZANINE VUES EN PLAN
503	-		DÉMOLITION ET NOUVEAU	- SCHÉMAS UNIFILAIRES
504	CONTRÔLE DES PRESSES		DÉMOLITION ET NOUVEAU	- SCHÉMAS BLOC

1 GÉNÉRALITÉS

1.1 Références

- 1.1.1.1 CSA C22.1-F10, Code canadien de l'électricité, Première partie (21^e édition), et modifications du Québec (2011).
- 1.1.1.2 Hydro-Québec, Livre Bleu : Services d'électricité en basse tension, Norme E.21-10
- 1.1.1.3 Code de construction du Québec, Chapitre Bâtiment, édition en vigueur.
- 1.1.1.4 Codes et règlements municipaux, provinciaux et fédéraux.

1.2 Définitions

- 1.2.1 Termes d'électricité et d'électronique : sauf indication contraire, la terminologie employée dans la présente section et sur les dessins est fondée sur celle définie dans la norme IEEE SP1122.
- 1.2.2 Certains termes et expressions utilisés dans le devis sont définis comme suit:
 - 1.2.2.1 "Organisme d'inspection électrique" signifie l'agent de tout organisme compétent quant aux normes de construction relatives à toute partie des travaux électriques du projet;
 - 1.2.2.2 "Ingénieur" désigne:
UNIGEC, Experts-Conseils
1846, rue Outarde
Chicoutimi (Québec) G7K 1H1
ou son représentant autorisé;
 - 1.2.2.3 "Entrepreneur" désigne la personne ou la raison sociale ou leur représentant autorisé à qui sera octroyé le contrat de la section des travaux dans laquelle il est mentionné, il désigne également tous les sous-traitants de la division 26;
 - 1.2.2.4 "Propriétaire" désigne:
NRC-CNRC
 - 1.2.2.5 "Entreprise d'alimentation électrique" représente la société ou la commission responsable de la distribution d'électricité à l'installation;
 - 1.2.2.6 "Code d'électricité" signifie le Code canadien de l'électricité et Modifications du Québec" édition en vigueur au moment de la réalisation des travaux;
 - 1.2.2.7 "Selon les indications" signifie selon les indications des dessins ou des documents contractuels.

- 1.2.2.8 Les termes suivants signifient, sans s'y limiter :
- 1.2.2.9 Fournir : faire l'achat selon les spécifications et après approbation de l'Ingénieur, incluant la production des dessins d'atelier ou des feuillets techniques, l'approvisionnement, la réception et l'entreposage du matériel au chantier jusqu'à son installation. La fourniture doit aussi inclure tous les documents d'achat et feuillets techniques et manuels d'instruction d'opération et d'entretien du matériel.
- 1.2.2.10 Installer : transporter, manipuler et mettre en place d'aplomb, d'équerre et de niveau en fournissant tous les supports, ancrages, coulis de béton, quincaillerie, soudure et retouches de peinture requise. Toute installation requiert au préalable l'approbation particulière ou générale du Propriétaire ou de son représentant. L'installation inclut tout le câblage et le raccordement de l'appareillage électrique à installer. Ce câblage inclut l'alimentation, les dérivations secondaires, les commandes, les indications et alarmes et la mise à la terre. L'installation inclut aussi le raccordement lorsqu'il s'agit d'un câble. Fournir toute la main-d'oeuvre, la machinerie, l'équipement et l'outillage nécessaires à la réalisation des travaux. Lorsqu'il s'agit d'appareillage électrique qui requiert un assemblage au chantier, l'assemblage des différentes sections, incluant les barres principales et la filerie de commande, selon les instructions du Fabricant, doit être inclus.
- 1.2.2.11 Raccorder : fournir le matériel de raccordement et faire le raccordement. Fournir également le câblage lorsqu'il s'agit de raccorder à la terre.
- 1.2.2.12 Relocaliser : démanteler le matériel existant et installer à un nouvel emplacement. Fournir le matériel connexe d'installation tel que supports et raccords. Assurer la continuité des circuits altérés.
- 1.2.2.13 Démanteler : enlever par démontage sélectif l'appareillage électrique désigné complètement incluant les supports, le câblage, les conduits et les boîtes de jonction. Obstruer les ouvertures laissées dans les murs et les planchers de façon à leur redonner leur finition originale. Enlever les ancrages et obstruer les trous en réparant les surfaces. Assurer la continuité des circuits affectés de façon à conserver l'alimentation sur l'appareillage conservé. Disposer le matériel démantelé à l'endroit indiqué par le Propriétaire sur le site, et ce, au fur et à mesure de l'avancement des travaux de démantèlement de façon à garder la propreté et le bon ordre des lieux. Sur autorisation du Propriétaire seulement, l'Entrepreneur deviendra propriétaire du matériel démantelé et devra en disposer aussitôt à l'extérieur du site et selon les modalités convenues à ce moment.
- 1.2.2.14 Remplacer : démanteler l'appareillage. Conserver la filerie et les conduits ou suivre les indications aux plans pour l'installation du nouveau matériel. Disposer le matériel démantelé à l'endroit indiqué par le Propriétaire sur le site, et ce, au fur et à mesure de l'avancement des travaux de démantèlement de façon à garder la propreté et le bon ordre des lieux. Fournir tout le matériel requis pour que le nouvel appareillage soit entièrement fonctionnel.

1.3 Entretien, exploitation et mise en marche

- 1.3.1 Pour tout nouveau système installé et/ou système existant modifié dans le cadre de ce mandat, tel que et sans s'y limiter: incendie, intrusion, contrôle d'accès, etc., l'entrepreneur électrique sera responsable de la programmation du système, du calibrage des appareils, des essais et vérifications, et de la mise en service de tout le système. L'entrepreneur doit fournir la formation nécessaire au personnel d'entretien, relié à ce système et désigné par le propriétaire.

- 1.3.2 À des moments convenus avec le responsable du chantier, l'entrepreneur électrique devra enseigner le fonctionnement et l'entretien de l'installation afin de mettre l'installation en bon état de fonctionnement et s'assurer que le personnel d'exploitation soit familier avec tous les aspects de son entretien et de son fonctionnement.
- 1.3.3 Pour ces systèmes, l'entrepreneur devra fournir au propriétaire tous les rapports de conformité et les approbations nécessaires à son installation pour l'acceptation finale des travaux.
- 1.3.4 Après l'acceptation provisoire des travaux, il devra fournir au propriétaire, et selon les exigences de ce devis, les documents suivants:
- 1.3.4.1 les plans "tel que construit";
- 1.3.4.2 les manuels d'exploitation et d'entretien;
- 1.3.4.3 le certificat de garantie;
- 1.3.4.4 un rapport de vérification et un certificat d'inspection du manufacturier.
- 1.4 Exigences de conception
- 1.4.1 Les tensions de fonctionnement doivent être conformes à la norme CAN3-C235.
- 1.4.2 Les moteurs, les appareils de chauffage électriques, les dispositifs de commande/contrôle/régulation et de distribution doivent fonctionner d'une façon satisfaisante à la fréquence de 60 Hz et à l'intérieur des limites établies dans la norme susmentionnée.
- 1.4.2.1 Les appareils doivent pouvoir fonctionner sans subir de dommages dans les conditions extrêmes définies dans cette norme.
- 1.4.3 Langue d'exploitation et d'affichage : prévoir aux fins d'identification et d'affichage des plaques indicatrices et des étiquettes et en français pour les dispositifs de commande/contrôle.
- 1.5 Documents/échantillons à soumettre
- 1.5.1 Soumettre les fiches signalétiques requises, conformes au Système d'information sur les matières dangereuses utilisées au travail (SIMDUT).
- 1.5.2 Dessins d'atelier
- 1.5.2.1 Les dessins doivent porter le sceau et la signature d'un ingénieur compétent reconnu ou habilité à exercer au Canada, dans la province de Québec, si requis par l'Ingénieur.
- 1.5.2.2 Les schémas de câblage et les détails de l'installation des appareils doivent indiquer l'emplacement, l'implantation, le tracé et la disposition proposés, les tableaux de contrôle, les accessoires, la tuyauterie, les conduits et tous les autres éléments qui doivent être montrés pour que l'on puisse réaliser une installation coordonnée.
- 1.5.2.3 Les schémas de câblage doivent indiquer les bornes terminales, le câblage interne de chaque appareil de même que les interconnexions entre les différents appareils.

- 1.5.2.4 Les dessins doivent indiquer les dégagements nécessaires au fonctionnement, à l'entretien et au remplacement des appareils.
- 1.5.2.5 Soumettre 1 copie PDF ou papier des dessins, et des fiches techniques, à l'Ingénieur.
- 1.5.2.6 Si des changements sont requis, en informer l'Ingénieur avant qu'ils soient effectués.
- 1.5.3 Contrôle de la qualité :
- 1.5.3.1 Prévoir des appareils et des matériels certifiés CSA.
- 1.5.3.2 Dans les cas où l'on ne peut obtenir des appareils et des matériels certifiés CSA, soumettre les appareils et les matériels proposés à l'Ingénieur, aux fins d'approbation, avant de les livrer au chantier.
- 1.5.3.3 Soumettre les résultats des essais des systèmes et des instruments électriques installés.
- 1.5.3.4 Permis et droits : selon les conditions générales du contrat.
- 1.5.3.5 Une fois les travaux terminés, soumettre un rapport d'équilibrage des charges conformément à l'article ÉQUILIBRAGE DES CHARGES, de la PARTIE 3.
- 1.5.3.6 Une fois les travaux terminés, soumettre à l'Ingénieur, le certificat de réception délivré par l'autorité compétente.

1.6 Assurance de la qualité

- 1.6.1 Qualification : les travaux d'électricité doivent être exécutés par des électriciens agréés, qualifiés, par un maître électricien ou par un entrepreneur électricien titulaire d'une licence délivrée par la province dans laquelle les travaux seront exécutés ou par des apprentis selon les termes de la loi provinciale concernant la formation professionnelle et la qualification de la main-d'oeuvre.
 - 1.6.1.1 Les employés inscrits à un programme provincial d'apprentissage pourront exécuter des tâches spécifiques s'ils sont sous la surveillance directe d'un électricien agréé qualifié.
 - 1.6.1.2 Tâches permises : selon le degré de formation et selon les aptitudes démontrées pour l'exécution des tâches spécifiques et permises par les autorités de qualification de la main-d'oeuvre.
- 1.6.2 Réunions de chantier
 - 1.6.2.1 Tenir des réunions de chantier à fréquence périodiques selon les besoins mentionnés par l'Ingénieur et le propriétaire.
 - 1.6.2.2 Réunions de chantier : les contrôles effectués sur place par le fabricant doivent comprendre des visites de chantier aux étapes suivantes :
 - .1 une fois les produits livrés et entreposés sur le chantier, et les travaux préparatoires terminés, mais avant le début des travaux d'installation de l'ouvrage faisant l'objet de la présente section;
 - .2 une fois les travaux achevés et le nettoyage terminé.

1.7 Transport, entreposage et manutention

- 1.7.1 Calendrier de livraison des matériels : remettre un calendrier de livraison à l'Ingénieur dans les deux (2) semaines suivant l'attribution du contrat.

1.8 Mise en route de l'installation

- 1.8.1 Instruire l'Ingénieur et le personnel d'exploitation du mode de fonctionnement et des méthodes d'entretien de l'installation, de ses appareils et de ses composants.
- 1.8.2 Retenir et défrayer les services d'un ingénieur détaché de l'usine du fabricant pour surveiller la mise en route de l'installation, pour vérifier, régler, équilibrer et étalonner les divers éléments et pour instruire le personnel d'exploitation lorsque requis par l'étendue des travaux.
- 1.8.3 Fournir ces services pendant une durée suffisante, en prévoyant le nombre de visites nécessaires pour mettre les appareils en marche et faire en sorte que le personnel d'exploitation soit familier avec tous les aspects de leur entretien et de leur fonctionnement.

1.9 Instructions d'exploitation

- 1.9.1 Fournir des instructions d'exploitation pour chaque système principal et pour chaque appareil principal prescrit dans les sections pertinentes du devis, à l'intention du personnel d'exploitation et d'entretien.
- 1.9.2 Les instructions d'exploitation doivent comprendre ce qui suit :
 - 1.9.2.1 Schémas de câblage, schémas de commande, séquence de commande pour chaque système principal et pour chaque appareil.
 - 1.9.2.2 Procédures de démarrage, de réglage, d'ajustement, de lubrification, d'exploitation et d'arrêt.
 - 1.9.2.3 Mesures de sécurité.
 - 1.9.2.4 Procédures à observer en cas de panne.
 - 1.9.2.5 Autres instructions, selon les recommandations du fabricant de chaque système ou appareil.
- 1.9.3 Fournir des instructions imprimées ou gravées, placées sous cadre de verre ou plastifiées de manière approuvée.
- 1.9.4 Afficher les instructions aux endroits approuvés.
- 1.9.5 Les instructions d'exploitation exposées aux intempéries doivent être en matériau résistant ou elles doivent être placées dans une enveloppe étanche aux intempéries.
- 1.9.6 S'assurer que les instructions d'exploitation ne se décolorent pas si elles sont exposées à la lumière solaire.

1.10 Contradictions

- 1.10.1 Lorsqu'il y a contradiction entre les plans, le devis, les règlements ou codes, l'entrepreneur basera sa soumission en conformité des règlements ou spécifications les plus stricts. Avertir l'Ingénieur au moins quatre jours avant la fermeture des soumissions de toute anomalie pour que celui-ci émette un addenda.

1.11 Nature des plans

- 1.11.1 Les plans s'adressent à des personnes compétentes dans leur métier respectif. Ils sont en partie sous forme de diagrammes destinés à montrer l'arrangement général et l'étendue des travaux. La localisation exacte des conduits, tuyaux, sorties et de l'équipement sera dictée par les conditions du chantier.
- 1.11.2 Suivre les plans pour l'installation du matériel et consulter aussi les plans généraux et les plans des autres métiers afin de se familiariser avec toutes les conditions.
- 1.11.3 Sur les vues en plans électriques, la localisation exacte des équipements, des murs, des locaux, l'élévation des planchers, etc. n'est pas précise. La localisation et les dimensions civiles seront dictées par les plans des autres corps de métier : civil, mécanique, tuyauterie, etc.

1.12 Portée de l'ouvrage

- 1.12.1 L'ouvrage comprend toute la main-d'oeuvre et les matériaux requis pour l'installation, l'épreuve et la mise en bon état de fonctionnement des systèmes complets, tel que décrit dans les sections relatives à chaque corps de métier et représentées sur les plans.

1.13 Dégagement et dissimulation

- 1.13.1 Quand les tuyaux requis ne sont pas indiqués sur les plans ou qu'ils le sont seulement sous forme de diagramme, ils seront posés de façon à conserver un espace libre maximal et à entraver le moins possible l'utilisation de la pièce dans laquelle ils passeront.
- 1.13.2 Toute la tuyauterie et les conduits devront être dissimulés, si possible, dans les divisions, les murs et entre les planchers et les plafonds, à moins d'indication contraire sur les plans.

1.14 Examen des travaux

- 1.14.1 Avant de remettre sa soumission, l'entrepreneur devra visiter les lieux afin de se familiariser avec tout ce qui pourrait affecter ses travaux de quelque façon que ce soit.
- 1.14.2 Avant de commencer les travaux, il étudiera avec soin les dessins de charpente et les dessins architecturaux, et s'assurera que les travaux du présent contrat pourront être exécutés d'une façon satisfaisante sans changement à l'édifice tel qu'indiqué sur les plans.
- 1.14.3 Les anomalies seront signalées promptement à l'Ingénieur.
- 1.14.4 Il examinera l'ouvrage des autres métiers et signalera tout de suite tout défaut ou tout obstacle à l'exécution des travaux décrits dans sa section ou influant sur la garantie exigée.

1.15 Inspection

- 1.15.1 À l'achèvement des travaux, obtenir un certificat d'acceptation auprès de l'organisme d'inspection électrique et le remettre à l'Ingénieur.

1.15.2 L'Ingénieur fera l'inspection des travaux durant leur exécution ainsi qu'à leur achèvement et il dressera une liste des déficiences que l'entrepreneur doit corriger.

1.16 Compétences

1.16.1 L'entrepreneur doit disposer d'un personnel qualifié qui puisse continuellement diriger et surveiller tous les travaux électriques.

1.16.2 Le personnel de surveillance doit assister à toutes les rencontres tenues au chantier.

1.16.3 Planifier l'exécution des travaux avec ceux présents des autres divisions.

2 PRODUITS

2.1 Terminaisons du câblage

2.1.1 S'assurer que les cosses, les bornes et les vis des terminaisons du câblage conviennent autant pour des conducteurs en cuivre que pour des conducteurs en aluminium.

2.2 Produits acceptés

2.2.1 Les dessins et devis font mention de noms de manufacturiers d'équipements et de numéros de catalogue correspondant aux produits spécifiés.

2.2.2 Si l'entrepreneur présente des équivalents, il sera tenu de faire approuver ses équivalences par l'Ingénieur et le propriétaire qui seront seuls juges pour accepter ou refuser les équivalences proposées. En cas de refus, l'entrepreneur sera tenu de fournir les matériaux spécifiés sans rémunération supplémentaire, y compris les frais encourus. Ceci peut aller jusqu'à défrayer le coût de l'analyse par l'ingénieur, de ces demandes d'équivalences.

2.2.3 Si la demande d'équivalence devait être retenue, l'entrepreneur devra aussi tenir compte de tous changements aux autres sous-traitants ainsi qu'à l'entrepreneur général, et ce, à ses frais.

2.2.4 L'ingénieur et le propriétaire se réservent le droit d'accepter ou de refuser une équivalence (matériaux jugés équivalents par l'entrepreneur); sa décision est finale. L'entrepreneur peut donc soumettre une seule fois sur le même produit une équivalence aux spécifications des plans et devis. Si son produit proposé est refusé, il doit fournir le produit spécifié sur les plans et devis.

2.3 Désignation du matériel

2.3.1 Pour désigner le matériel électrique, utiliser des plaques signalétiques conçues comme suit:

2.3.2 Plaques signalétiques : Plaques à graver en plastique lamicoïd de 3 mm d'épaisseur à face blanche et âme noire, fixées mécaniquement au moyen de vis autotaraudeuses.

FORMAT DES PLAQUES SIGNALÉTIQUES

Format 1	10 x 50 mm	1 ligne	lettres de 3 mm de hauteur
Format 2	12 x 70 mm	1 ligne	lettres de 5 mm de hauteur
Format 3	12 x 70 mm	2 lignes	lettres de 3 mm de hauteur
Format 4	20 x 90 mm	1 ligne	lettres de 8 mm de hauteur
Format 5	20 x 90 mm	2 lignes	lettres de 5 mm de hauteur
Format 6	25 x 100 mm	1 ligne	lettres de 12 mm de hauteur
Format 7	25 x 100 mm	2 lignes	lettres de 6 mm de hauteur

- 2.3.3 Les termes à inscrire sur les plaques signalétiques doivent être approuvés par l'Ingénieur avant la fabrication de celles-ci.
- 2.3.4 Prévoir une moyenne de (25) vingt-cinq lettres par plaque.
- 2.3.5 Les inscriptions doivent être en français.
- 2.3.6 Les plaques signalétiques apposées sur les sectionneurs, démarreurs et contacteurs doivent indiquer l'appareil commandé et la tension.
- 2.3.7 Les plaques indicatrices des coffrets de borniers et des boîtes de jonction doivent indiquer les caractéristiques du réseau et/ou de la tension.
- 2.3.8 Les plaques indicatrices des sectionneurs, des démarreurs et des contacteurs doivent indiquer l'appareil commandé et la tension.
- 2.3.9 Les plaques indicatrices des coffrets de borniers et des boîtes de tirage doivent indiquer le réseau et la tension.
- 2.3.10 Les plaques indicatrices des transformateurs doivent indiquer la puissance ainsi que les tensions primaire et secondaire.

2.4 Identification du câblage

- 2.4.1 Les deux extrémités des conducteurs de phase de chaque artère et de chaque circuit de dérivation doivent être marquées de façon permanente et indélébile à l'aide d'un ruban de plastique.
- 2.4.2 Conserver l'ordre des phases et le même code de couleur pour toute l'installation, tel que prescrit par le Code d'électricité.
- 2.4.3 Utiliser des câbles de communication formés de conducteurs avec repérage couleur uniforme dans tout le réseau. Utiliser le standard du propriétaire tel que décrit aux plans ou tel qu'indiqué par le propriétaire.

3 EXÉCUTION

3.1 Installation

- 3.1.1 Sauf indication contraire, réaliser l'ensemble de l'installation conformément à la norme CSA C22.1.

- 3.1.2 Sauf indication contraire, installer les réseaux aériens et souterrains conformément à la norme CSA C22.3 numéro 1.
- 3.1.3 Respecter toutes normes en vigueur du distributeur d'électricité (Hydro-Québec ou autre).
- 3.2 Étiquettes, plaques indicatrices et plaques signalétiques
- 3.2.1 S'assurer que les étiquettes CSA, les plaques indicatrices et les plaques signalétiques sont visibles et lisibles une fois les matériels installés.
- 3.3 Installation des conduits et des câbles
- 3.3.1 Installer les conduits et les manchons avant la coulée du béton (si requis).
- 3.3.1.1 Manchons de traversée d'ouvrages en béton : tuyau de matériel autorisé, de diamètre permettant le libre passage du conduit et dépassant la surface en béton de 50 mm de chaque côté.
- 3.3.2 Lorsqu'on utilise des manchons en plastique pour les traversées de murs ou de planchers présentant un degré de résistance au feu, les retirer avant d'installer les conduits.
- 3.3.3 Installer les câbles, les conduits et les raccords qui doivent être noyés ou recouverts d'enduit en les disposant de façon soignée contre la charpente du bâtiment, de manière à réduire au minimum l'épaisseur des fourrures.
- 3.4 Emplacement des sorties et des prises de courant
- 3.4.1 Placer aux endroits indiqués les sorties et les prises de courant conformément aux plans et devis de l'Ingénieur et de l'Architecte.
- 3.4.2 Ne pas installer les sorties et les prises de courant dos à dos dans un mur; laisser un dégagement horizontal d'un minimum de 150 mm entre les boîtes.
- 3.4.3 L'emplacement des sorties et des prises de courant peut être modifié sans frais additionnels ni crédit, à la condition que le déplacement se fasse dans le même local et que l'avis soit donné avant l'installation.
- 3.4.4 Placer les interrupteurs d'éclairage près des portes, du côté de la poignée.
- 3.4.4.1 Dans les locaux des installations mécaniques et de la machinerie d'ascenseurs, placer les sectionneurs près des portes, du côté de la poignée.
- 3.5 Hauteurs de montage
- 3.5.1 La hauteur de montage du matériel est donnée à compter du plancher fini jusqu'à l'axe des appareils.
- 3.5.2 La hauteur exacte de montage des appareils non indiqués doit être vérifiée avec l'Ingénieur avant l'installation.
- 3.5.3 Sauf indications contraires, installer le matériel électrique à la hauteur indiquée ci-après:
- | | |
|--|---------|
| – Commutateurs et gradateurs d'éclairage | 1200 mm |
| – Bouton de sonnette | 1200 mm |

– Prises de courant DFT (à l'endroit des lavabos)	1200 mm
– Prises de courant (en général)	360 mm
– Prises de courant (accessibles aux handicapés)	540 mm
– Hauteur maximum des plinthes chauffantes	380 mm
– Thermostats	1525 mm

3.6 Identification des conduits et des câbles

3.6.1 Attribuer un code de couleur aux conduits, aux boîtes et aux câbles sous gaine métallique.

3.6.2 Appliquer du ruban de plastique ou de la peinture, comme moyen de repérage, sur les câbles ou les conduits à tous les 15 m et aux traversées des murs, des plafonds et des planchers.

	Couleur de base	Couleur complémentaire
Jusqu'à 250 V	Jaune	
Jusqu'à 600 V	Jaune	Vert
Jusqu'à 5 kV	Jaune	Bleu
Jusqu'à 15 kV	Jaune	Rouge
Téléphone	Vert	
Autres réseaux de communication	Vert	Vert
Alarme incendie	Rouge	
Communications d'urgence	Rouge	Bleu

3.7 Coordination des dispositifs de protection

3.7.1 S'assurer que les dispositifs de protection des circuits comme les déclencheurs de surintensité, les relais et les fusibles sont installés, qu'ils sont du calibre voulu et qu'ils sont réglés aux valeurs requises. Fournir à l'Ingénieur les calculs et rapports des fournisseurs. Fournir une (1) copie supplémentaire à la demande du distributeur d'électricité.

3.8 Contrôle de la qualité sur place

3.8.1 Équilibrage des charges

3.8.1.1 Mesurer le courant de phase des panneaux de distribution sous charges normales (éclairage) au moment de la réception des travaux. Répartir les connexions des circuits de dérivation de manière à obtenir le meilleur équilibre du courant entre les diverses phases et noter les modifications apportées aux connexions originales.

3.8.1.2 Mesurer les tensions de phase aux appareils et régler les prises des transformateurs pour que la tension obtenue soit à 2 % près de la tension nominale des appareils.

3.8.2 Effectuer les essais des éléments suivants :

3.8.2.1 Réseau de distribution d'électricité, y compris le contrôle des phases, de la tension et de la mise à la terre, et l'équilibrage des charges.

- 3.8.2.2 Circuits provenant des panneaux de dérivation.
- 3.8.2.3 Système d'éclairage et dispositifs de commande/régulation.
- 3.8.2.4 Moteurs, appareils de chauffage et dispositifs de commande/régulation connexes, y compris les commandes du fonctionnement séquentiel des systèmes s'il y a lieu.
- 3.8.2.5 Système d'alarme incendie et réseau de communication (lorsque requis).
- 3.8.2.6 Mesure de la résistance d'isolement
- .1 Mesurer, à l'aide d'un mégohmmètre de 500 V, la valeur d'isolement des circuits, des câbles de distribution et des appareils d'une tension nominale d'au plus 350 V.
 - .2 Mesurer, à l'aide d'un mégohmmètre de 1000 V, la valeur d'isolement des circuits, des artères et des appareils d'une tension nominale comprise entre 350 V et 600 V.
 - .3 Vérifier la valeur de la résistance à la terre avant de procéder à la mise sous tension.
- 3.8.3 Effectuer les essais en présence de l'Ingénieur.
- 3.8.4 Fournir les appareils de mesure, les indicateurs, les appareils et le personnel requis pour l'exécution des essais durant la réalisation des travaux et à l'achèvement de ces derniers.
- 3.8.5 Contrôles effectués sur place par le fabricant
- 3.8.5.1 Obtenir un rapport écrit du fabricant confirmant la conformité des travaux aux critères spécifiés en ce qui a trait à la manutention, à la mise en oeuvre, à l'application des produits ainsi qu'à la protection et au nettoyage de l'ouvrage, puis soumettre ce rapport conformément à l'article DOCUMENTS/ÉLÉMENTS A SOUMETTRE, de la PARTIE 1.
- 3.8.5.2 Le fabricant doit formuler des recommandations quant à l'utilisation du ou des produits, et effectuer des visites périodiques pour vérifier si la mise en oeuvre a été réalisée selon ses recommandations. Fournir les manuels.
- 3.9 Nettoyage
- 3.9.1 Nettoyer et retoucher les surfaces peintes en atelier qui ont été égratignées ou endommagées en cours de transport et d'installation; utiliser une peinture de type et de couleur identiques à la peinture d'origine.
- 3.9.2 Nettoyer les crochets, supports, attaches et autres dispositifs de fixation apparents, non galvanisés, et appliquer un apprêt pour les protéger contre la rouille.
- 3.9.3 Toujours quitter le chantier en s'assurant de laisser l'espace de travail propre et bien nettoyé.
- 3.9.4 Lorsque le secteur des travaux ou une partie du bâtiment demeure occupé en tout ou en partie lors des travaux, s'assurer que les travaux permettent une utilisation appropriée des lieux par l'occupant. Faire tout le nettoyage requis au fur et à mesure des travaux afin de limiter au maximum l'impact sur l'occupant. Respecter les consignes du propriétaire quant à la propreté des lieux et l'occupation partielle ou totale du chantier par l'occupant.

1 DESCRIPTION DES TRAVAUX

1.1 Les travaux consistent principalement, mais sans s'y limiter :

1.1.1.1 Relocalisation de la presse 75 tonnes, de son unité hydraulique et de interfaces (panneaux, boîtiers, etc.) s'y rattachant.

1.1.1.2 Relocalisation de la chambre CSZ-2.

1.1.1.3 Relocalisation de certains équipements du secteur pour permettre la construction du nouvel aménagement : système de chauffage, transformateurs, sectionneurs, armoires reliés à la presse hydraulique et de tout autres équipements tel que décrit aux plans.

1.1.1.4 Avant de débiter les travaux du présent contrat, le propriétaire fera une démonstration du bon fonctionnement de chacun des équipements du projet. Bien lire la note encadrée « IMPORTANT » sur les dessins concernés.

2 DÉMANTÈLEMENT

2.1 Débrancher et relocaliser tous les équipements tel que décrit aux plans.

2.2 Démantèlement de chemins de câbles existants.

2.3 Avant de disposer du matériel, l'entrepreneur doit valider avec le propriétaire si celui-ci désire le récupérer ou s'il est récupéré pour réinstaller dans le nouvel aménagement.

2.4 Toujours démanteler à partir de l'équipement jusqu'à la source.

2.5 Avant de couper ou de démanteler tout câblage et/ou équipement du secteur, s'assurer qu'il est hors service et qu'il fait partie du contrat. L'établissement demeure en fonction lors des travaux et il est possible que des câbles alimentant d'autres parties passent par nos secteurs à démanteler.

2.6 Valider avec les autres corps de métier pour la planification des travaux de construction, incluant la séquence de démantèlement. Les travaux de démantèlement se feront par étape. Ces travaux devront aussi être coordonnés avec le surveillant de chantier.

2.7 Se référer aux notes spéciales des plans pour des clauses particulières de démantèlement.

2.8 Avant de débrancher tout câblage existant sur les équipements du projet, bien lire les notes 1 et 2 au plan 503.

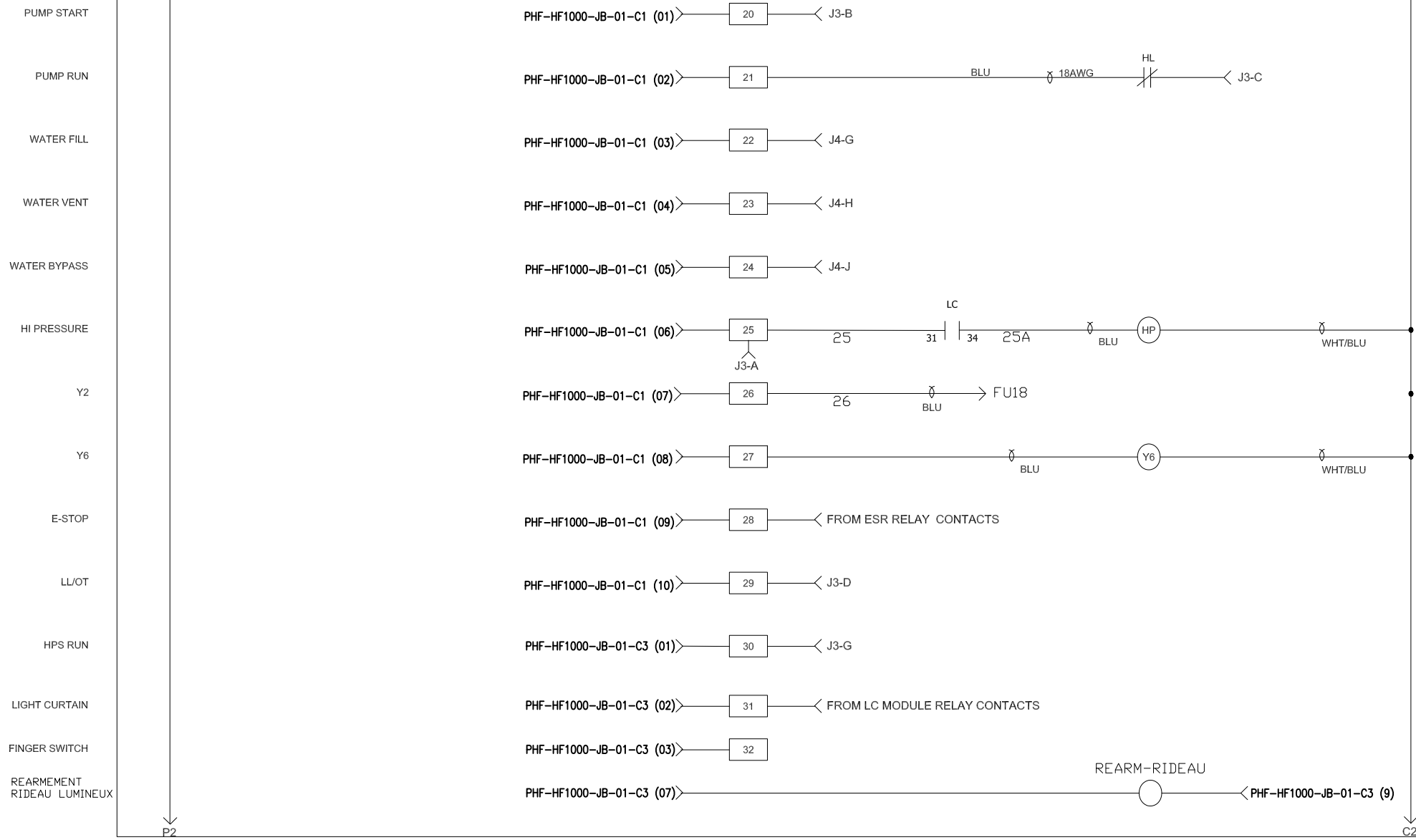
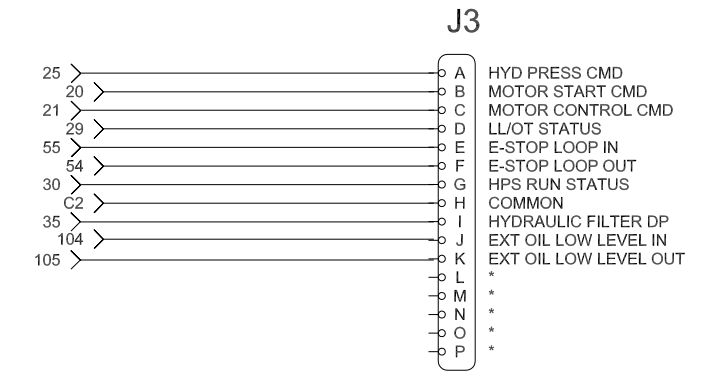
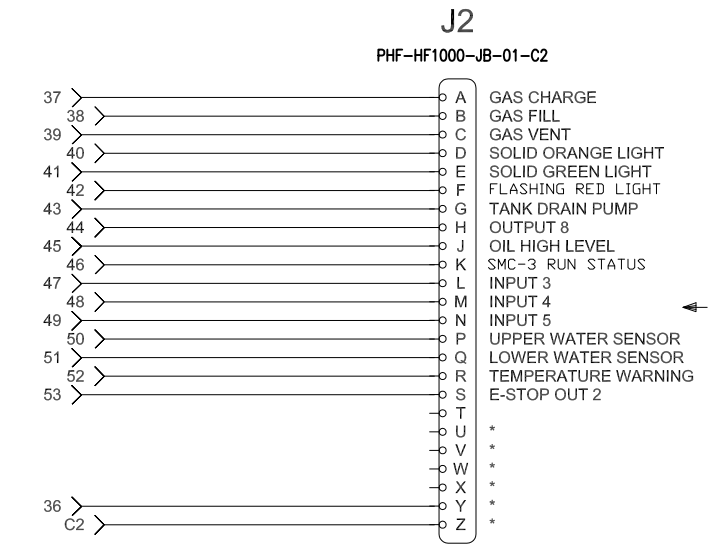
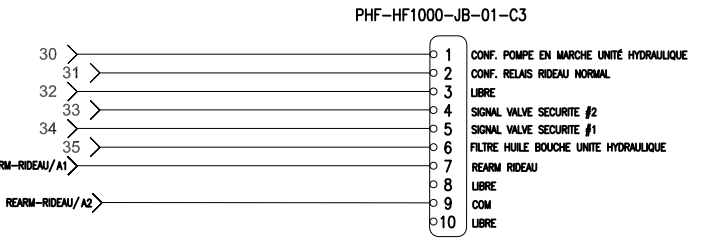
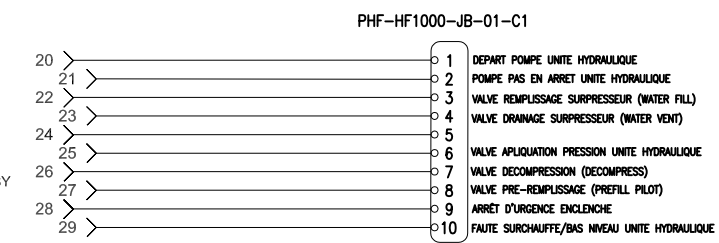
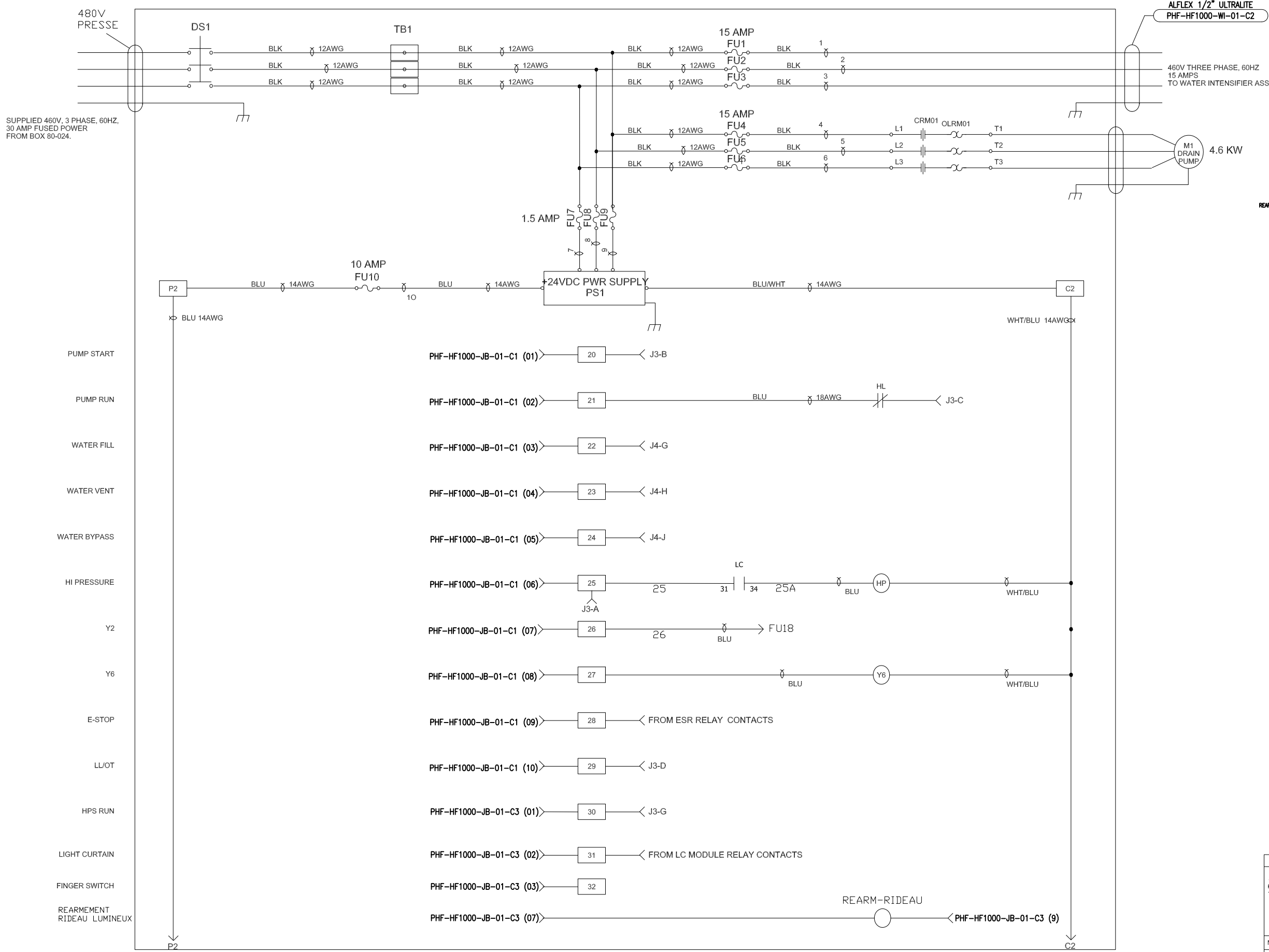
3 GÉNÉRALITÉS

3.1 Généralités

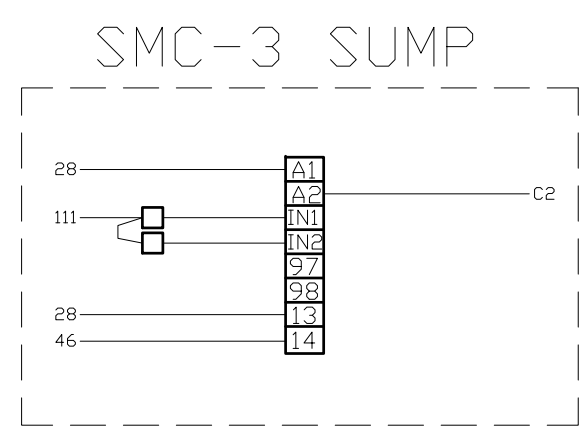
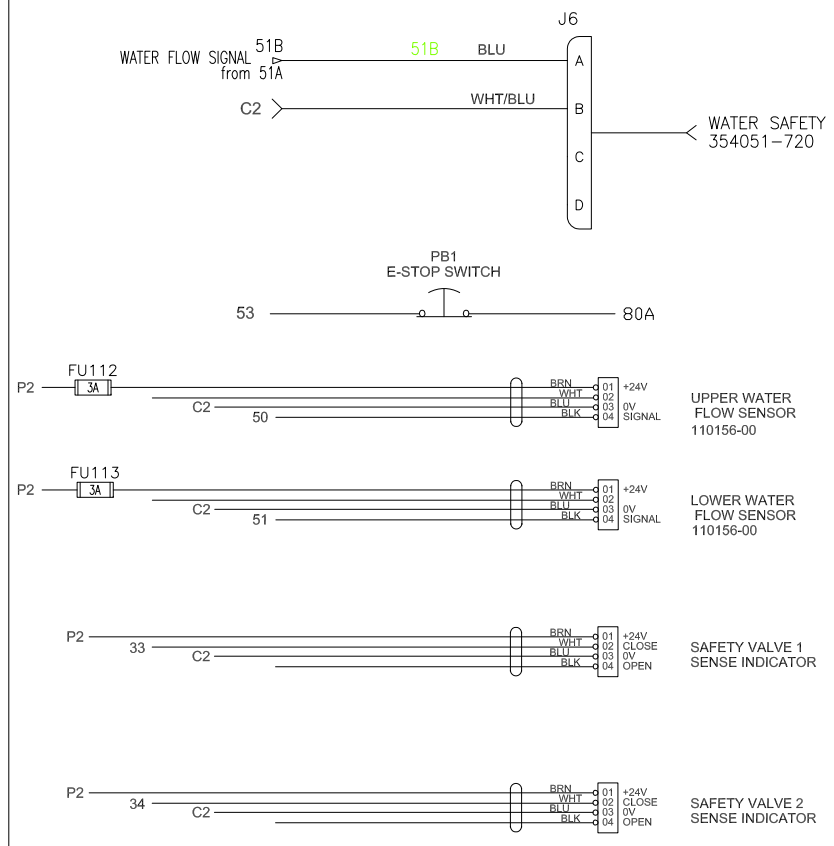
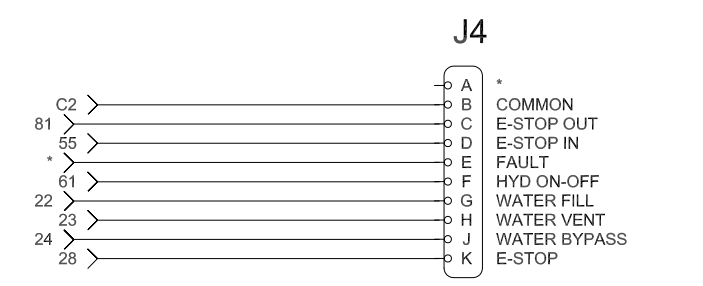
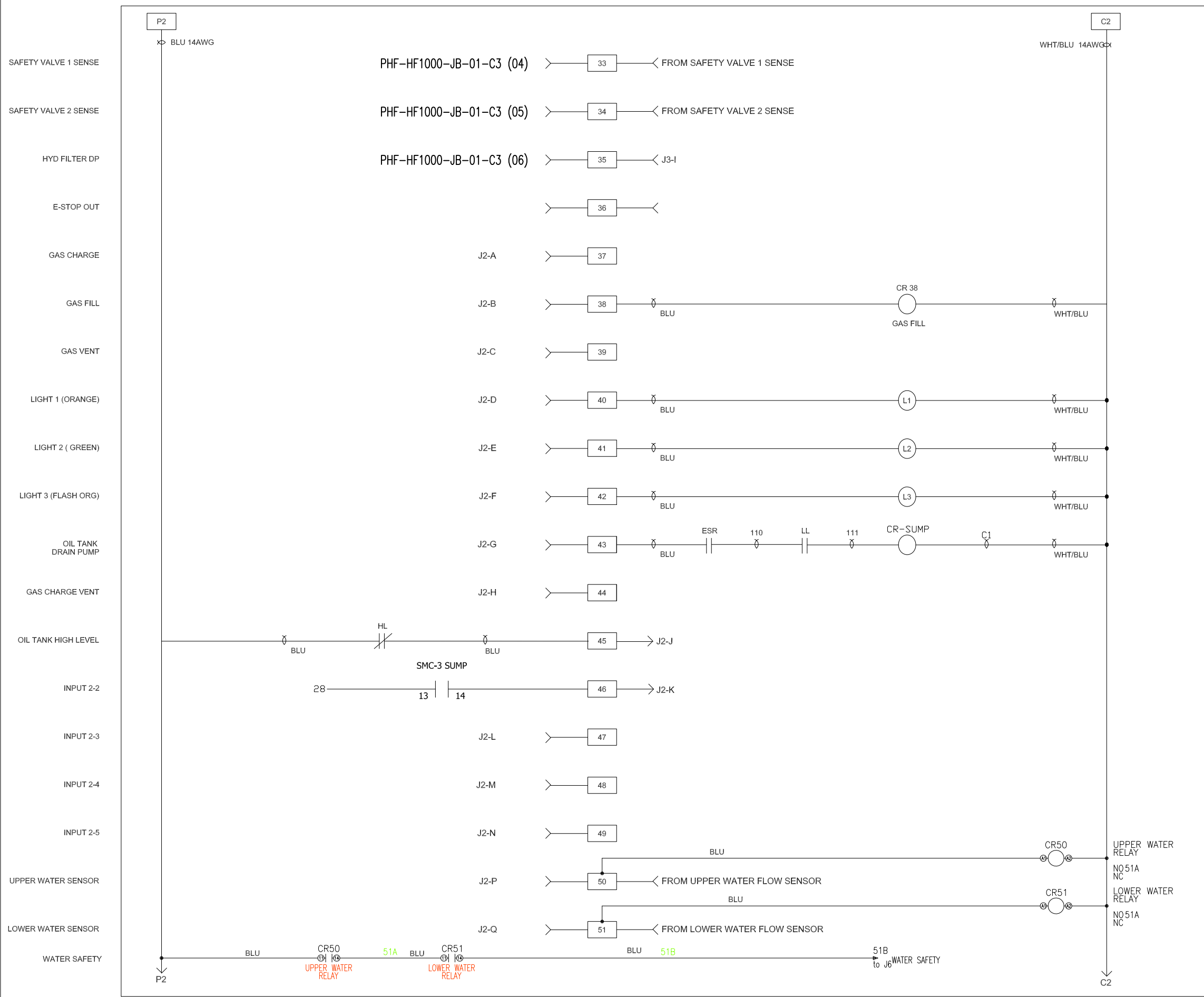
3.1.1 Fournir, installer et raccorder tout le nouveau câblage tel que décrit aux plans concernés.

- 3.1.2 Débrancher, relocaliser et rebrancher tous les câblages existants tel que décrit aux plans concernés et au devis. Lorsque les câbles existants sont devenus trop courts selon la nouvelle installation, fournir, installer et raccorder de nouveaux câbles et raccorder de nouveaux câbles tel que demandé aux plans.
- 3.1.3 Fournir et installer de nouveaux chemins de câbles tel que demandé aux plans. Réaliser la mise à la terre des chemins de câbles. Respecter le dégagement demandé dans les chemins de câbles.
- 3.1.4 Fournir, installer et raccorder les nouveaux luminaires du projet tel que décrit aux plans
- 3.1.5 Fournir, installer et raccorder une nouvelle prise de soudure.
- 3.1.6 Faire l'alimentation électrique des équipements mécaniques, tel que présenté aux plans concernés.
- 3.1.7 L'entrepreneur sera responsable de pratiquer toutes les ouvertures dans les murs et les planchers pour le passage des câbles et conduits électriques. Toutes les ouvertures dans les murs et les planchers doivent être obstruées avec du matériel ignifuge.
- 3.1.8 La position de tous les équipements, panneaux, etc. sur les vues en plan peut différer avec l'installation finale, à l'intérieur du même local. L'entrepreneur en électricité devra vérifier la position exacte de tout le matériel avant de mettre en place les câbles et conduits électriques. L'entrepreneur doit se référer aux plans des autres disciplines. Coordonner les emplacements avec les enlignements des autres disciplines incluant, sans s'y limiter, entrepreneur général, ventilation et plomberie. Aucun supplément ne sera accepté pour le déplacement à l'intérieur d'un même local.
- 3.1.9 Fabriquer et installer adéquatement tous les supports nécessaires à la mise en place des équipements.
- 3.1.10 L'entrepreneur devra identifier tout le matériel électrique et tout le câblage de son contrat. Se référer à la section 26 05 00 pour les détails.
- 3.1.11 Fourniture, installation et raccordement de tout le câblage, le matériel et l'équipement non énuméré spécifiquement sur les dessins ou au devis, mais nécessairement à la réalisation du projet.
- 3.1.12 L'entrepreneur devra fournir, à ses frais, tout le matériel et/ou la main d'œuvre spécialisée nécessaires à ses travaux, incluant, sans s'y limiter : grue, homme de services, camions de récupération, etc.
- 3.1.13 En règle générale, les câbles et les conduits électriques ne sont pas montrés aux plans. Certains câbles montrés sur les plans le sont à titre indicatifs seulement et non limitatif. L'entrepreneur doit réaliser tout le câblage nécessaire pour le bon fonctionnement des différents systèmes du présent contrat, tel que décrit sur les plans et devis.
- 3.1.14 Système de protection parasismique
- 3.1.14.1 L'entrepreneur électricien et ses sous-traitants réalisant des travaux à l'intérieur du projet devront assurer la responsabilité du système de protection parasismique, de son installation et l'inclure dans leurs frais.
- 3.1.14.2 L'entrepreneur électricien et ses sous-traitants devront engager à leurs frais, un ingénieur ayant une compétence reconnue en matière de parasismique et produire un rapport d'ingénierie détaillé, scellé et signé.

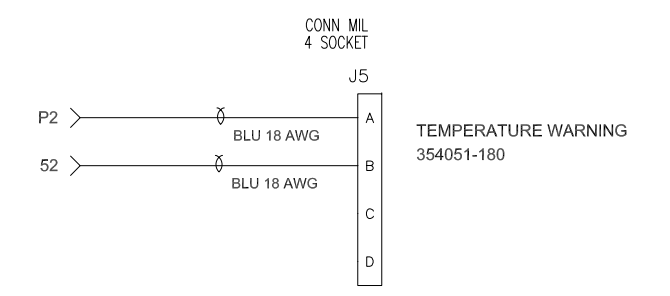
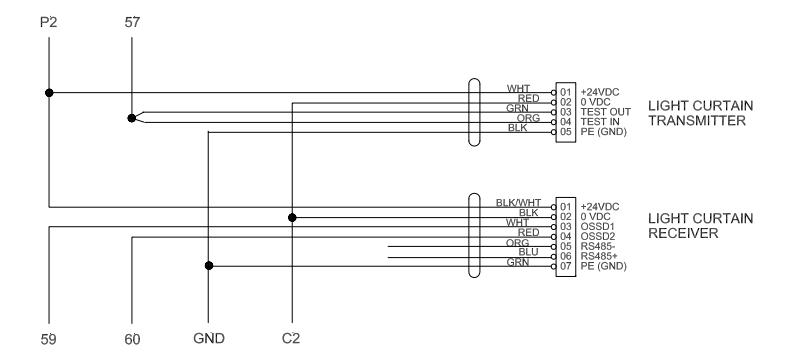
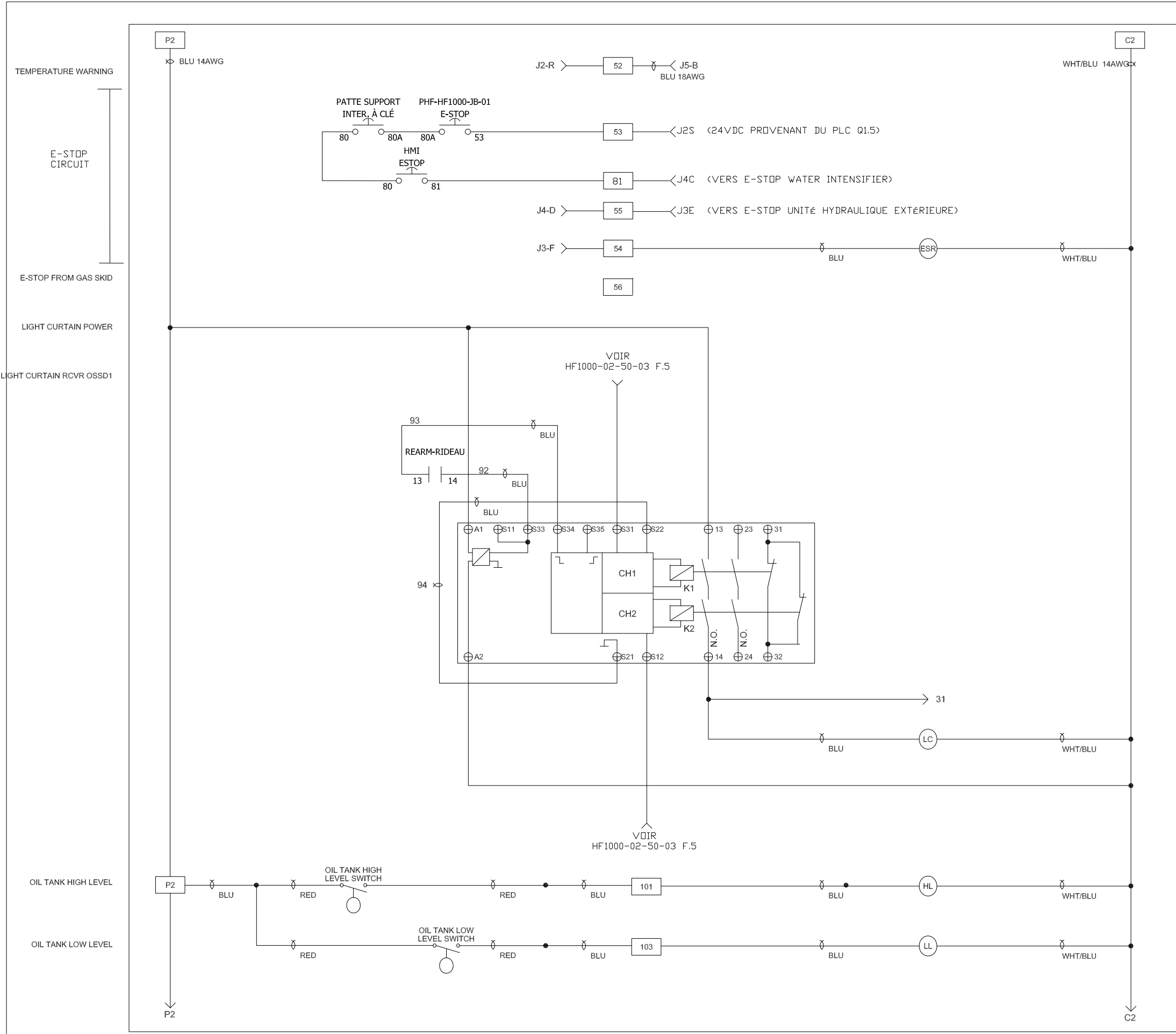
ANNEXE A
DESSINS DE RÉFÉRENCE ÉLECTRIQUES



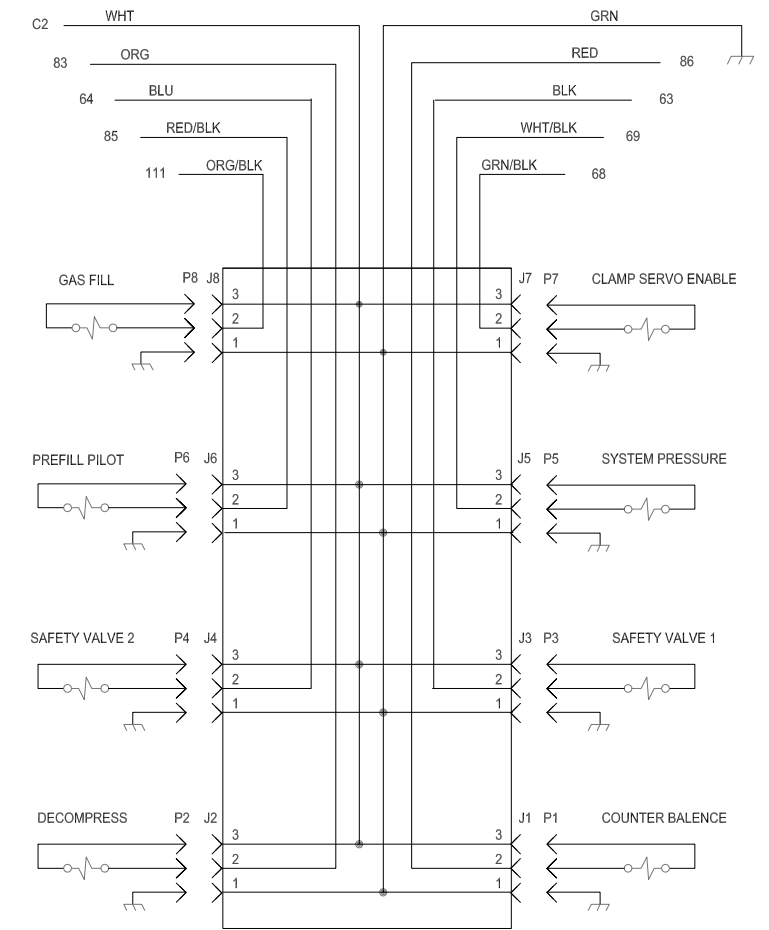
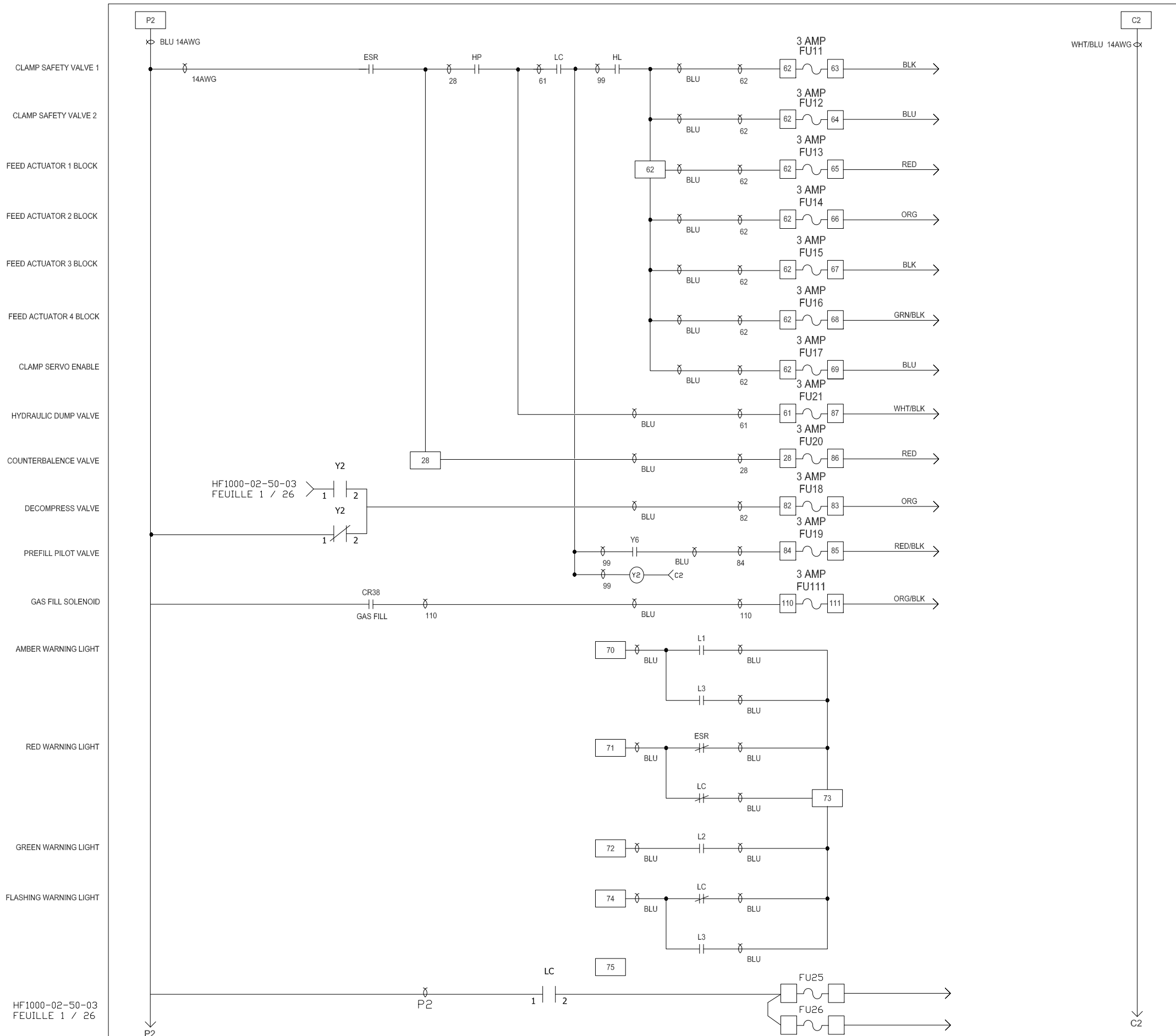
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REV-B	(PT 2017-08-18)	.XXX	±.005			
-TEL QUE CONSTRUIT		XXXX	±.0010			
		ANGLES	±1 deg			
		SURFACE FINISH 125µIN		DFT: DJW	SIZE	D/N:
MATERIAL: *		REMOVE ALL BURRS AND SHARP EDGES		DATE: 02/10	D	HF1000-02-50-03
FINISH: *				ENGR: DJW	P/N:	400030-05-2
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		SURFACE FINISH 125µIN		DATE: 02/10	D	HF1000-02-50-03	A
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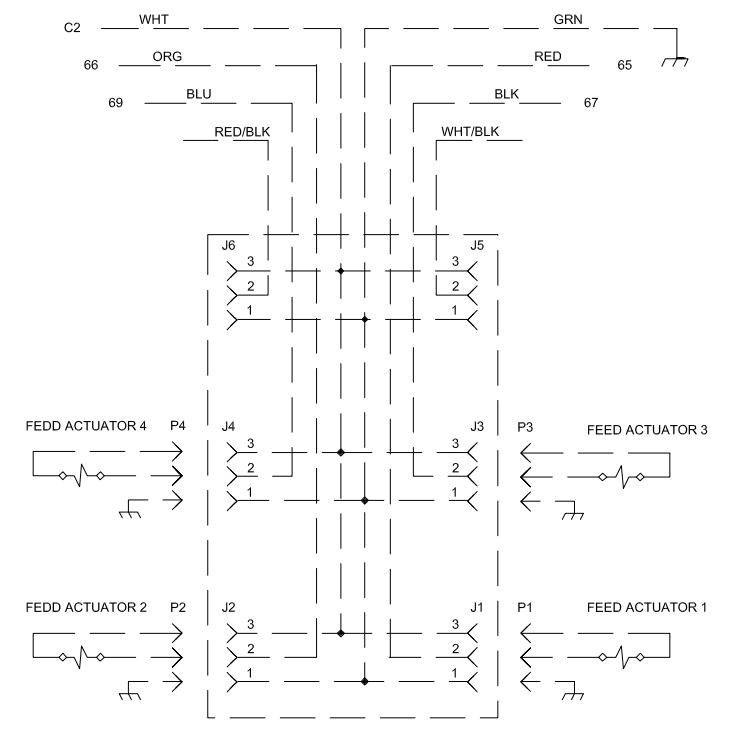
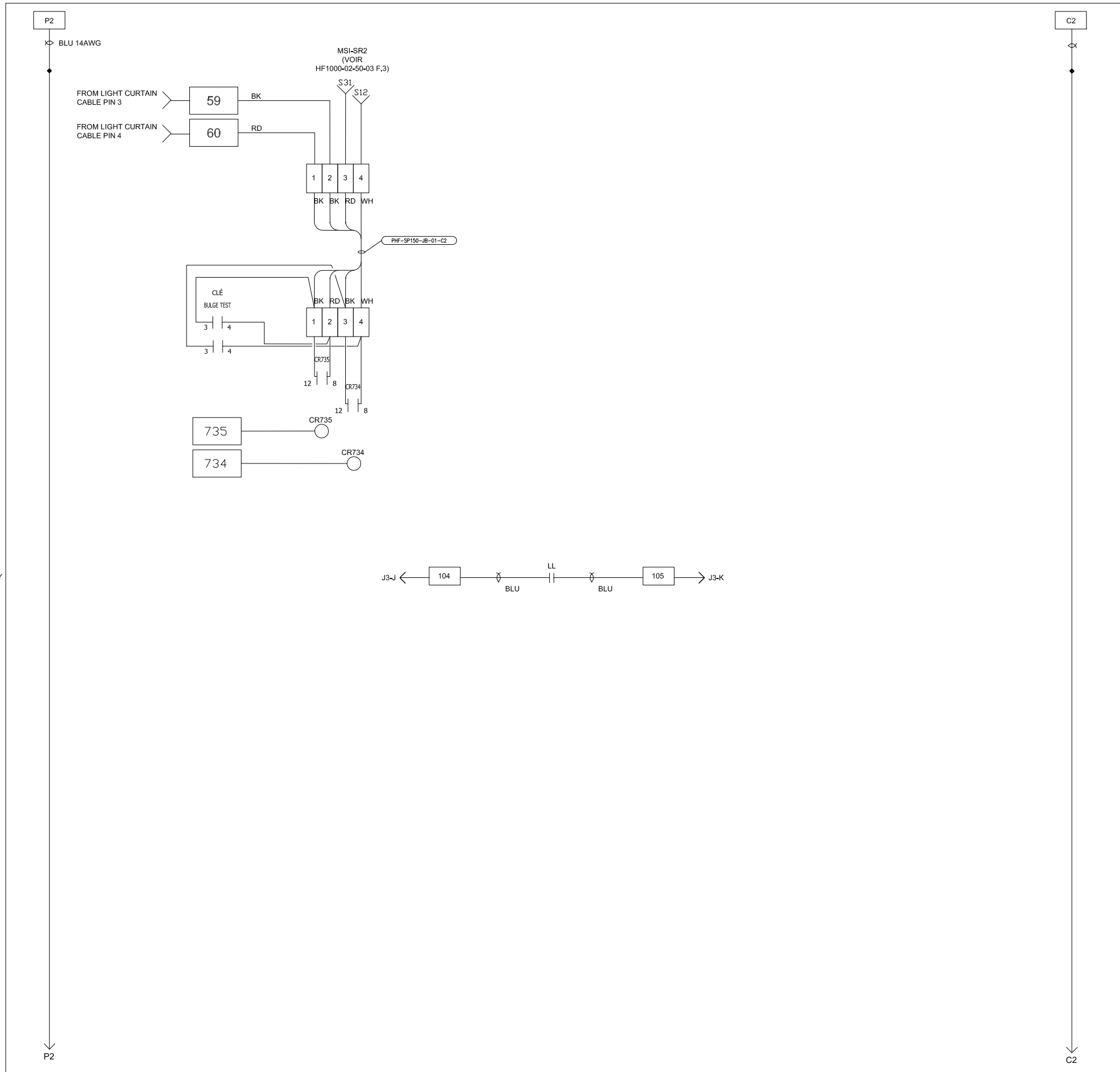


SEALED JUNCTION BOX WITH ATTACHED CABLE MOUNTED EXTERNAL TO ELECTRICAL BOX ON FRAME CLOSE TO CLAMP HYDRAULIC MANIFOLD.

HF1000-02-50-03
FEUILLE 1 / 26

REVISIONS		-TOLERANCES- UNLESS OTHERWISE NOTED		ITC Interlaken TECHNOLOGY CORP			
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REV-B (PT 2017-08-18) -TEL QUE CONSTRUIT		.XXX	±.005				
		XXXX	±.0010	DFTR: DJW	SIZE D	D/N: HF1000-02-50-03	REV A
		ANGLES	±1 deg	DATE: 02/10			
		SURFACE FINISH 125µIN					
		REMOVE ALL BURRS AND SHARP EDGES					
MATERIAL: *		STOCK SIZE: *		ENGR: DJW	P/N: 400030-05-2		
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TANK OIL LOW LEVEL RELAY

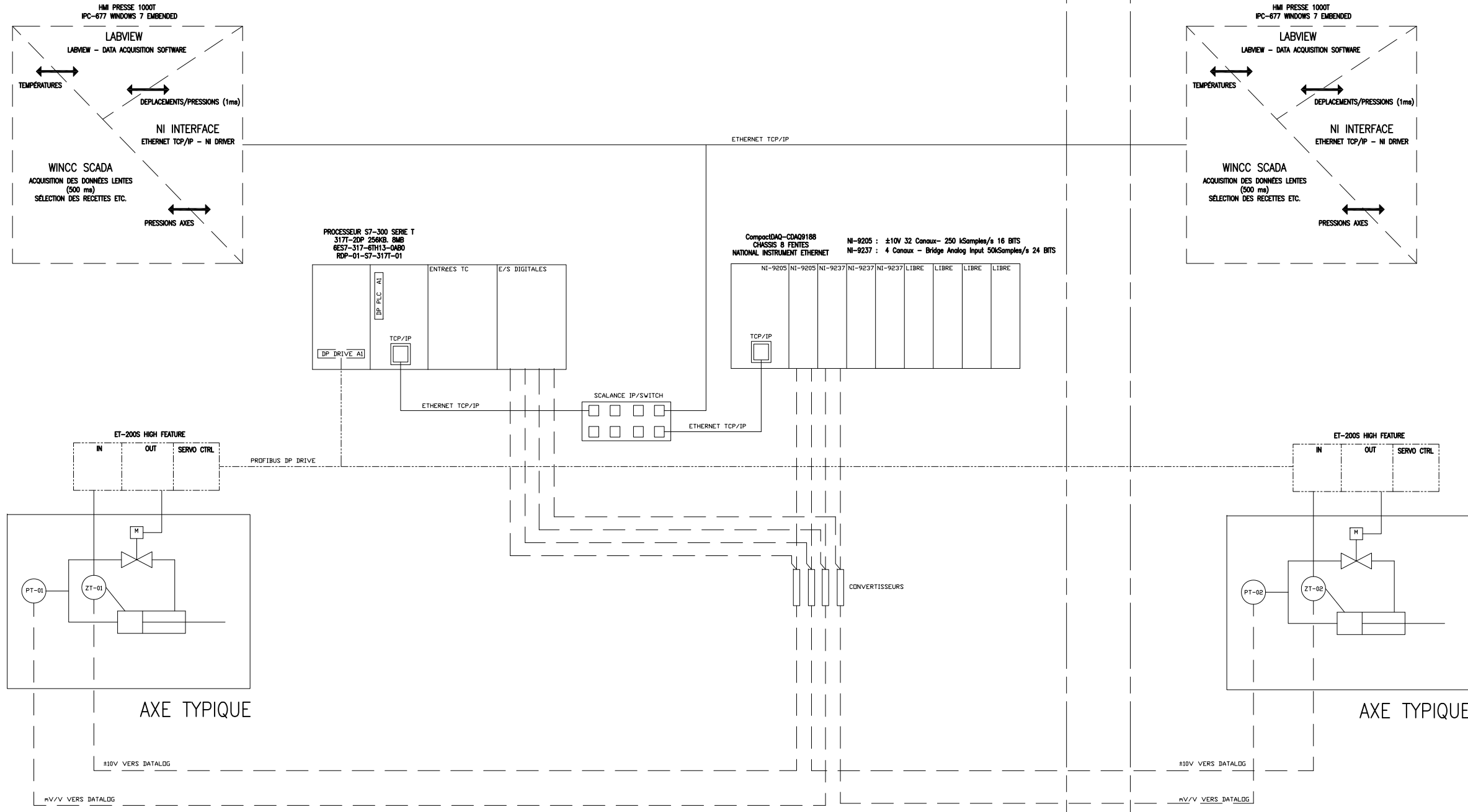


SEALED JUNCTION BOX WITH ATTACHED CABLE MOUNTED EXTERNAL TO ELECTRICAL BOX ON FRAME CLOSE TO CLAMP HYDRAULIC MANIFOLD.

REVISIONS REV-A -RELEASED FOR PRODUCTION REV-B (PT 2017-08-23) -TEL QUE CONSTRUIT		TOLERANCES: UNLESS OTHERWISE NOTED .XX ±.03 .XXX ±.005 .XXXX ±.0010 ANGLES ±1 deg SURFACE FINISH 125µIN REMOVE ALL BURRS AND SHARP EDGES		ITC Interlaken TECHNOLOGY CORP TITLE: FRAME I/F BOX, HF1000-02, 460 VOLT, 3 PHASE	
MATERIAL: *	STOCK SIZE: *	DATE: 03/22/04	SIZE: D	D/N: HF1000-02-50-3	REV: A
FINISH: *		ENGR: DHD	P/N: HF1000-02-50-3	SCALE: 00=00	SHEET 05 OF 08

SERVO CONTROLE PRESSE 1000T

SERVO CONTROLE PRESSE 75T



ND.	DATE	REV.	ÉMIS POUR	ÉMETTEUR
			RÉGISTRE D'ÉMISSION	

INDICES EN MILLIMÈTRES, SAUF SI INDICÉ

TOLERANCES GÉNÉRALES SI NON INDICÉES			
PRÉPARATION ET ASSEMBLAGE	USINAGE		
0 à 25 mm	±0.10 mm	0	±0.05 mm
25 à 60 mm	±0.15 mm	0.05	±0.05 mm
PLUS DE 60 mm	±0.20 mm	0.05	±0.05 mm

REV.	DESCRIPTION	DATE	PAR	APPR.	NO. DIQ
0	CONCEPTION INITIALE	2013-10-22	JBN		

SCEAU RÉVISEUR SCEAU ORIGINAL

CONFIDENTIALITE
 LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRIENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT RENDUES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRAIENT ÊTRE CONSIDÉRÉES CONFIDENTIELLES ET ELLES NE POURRAIENT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.

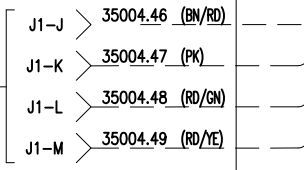
DYNAMIC CONCEPT
 Saguenay (QC)
 Canada
 418.542.6164
 www.dynamic-concept.ca

DESIGN: JEAN-BENOIT NERON DATE: 2013-11-22
 VÉRIFIÉ: DATE: TITRE: PRESSES HYDROFORMAGE - CNRC
 SCHEMA BLOC DE CONTRÔLE
 INGENIEUR: DATE: NO. DESSIN: 0207AA-E03-001 REVISION: 0 FORMAT: A1

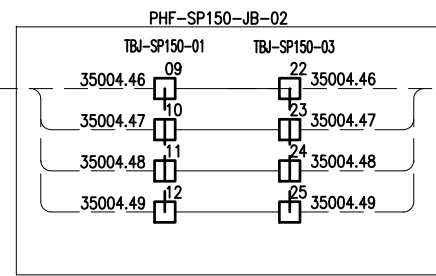
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SYSTEME PAS EN ARRÊT URGENCE
PAS DE FAUTE SURCHAUFFE/BAS NIVEAU
UNITE HYDRAULIQUE
CONF. POMPE EN MARCHÉ
UNITE HYDRAULIQUE
CONF. PORTE FERMÉE
(DOOR INTERLOCK)

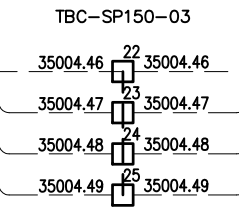
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DÉTAILS SUR DESSIN
HF1000-02-50-3



353578-360
PHF-SP150-JB-01-C1



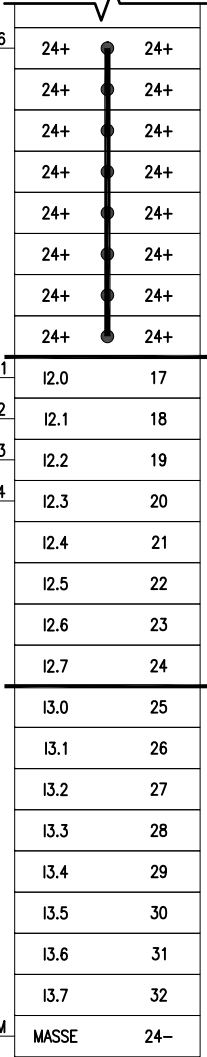
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PHF-SP150-JB-02-C2



PROVENANT DE FEUILLE 1,
LIGNE 35004.04

PROVENANT DE FEUILLE 1,
LIGNE 35004.28

SUITE DU PLAN
0207AA-E35-004 FEUILLE 1



VOIR LE DESSIN TYPIQUE
0207AA-E30-T03 POUR LE DÉTAILS
DES CONNEXIONS ENTRE LE BORNIER
IMAGE ET LES BORNE DE L'AUTOMATE

NE PAS MESURER - S'IL Y A DOUTE DEMANDER

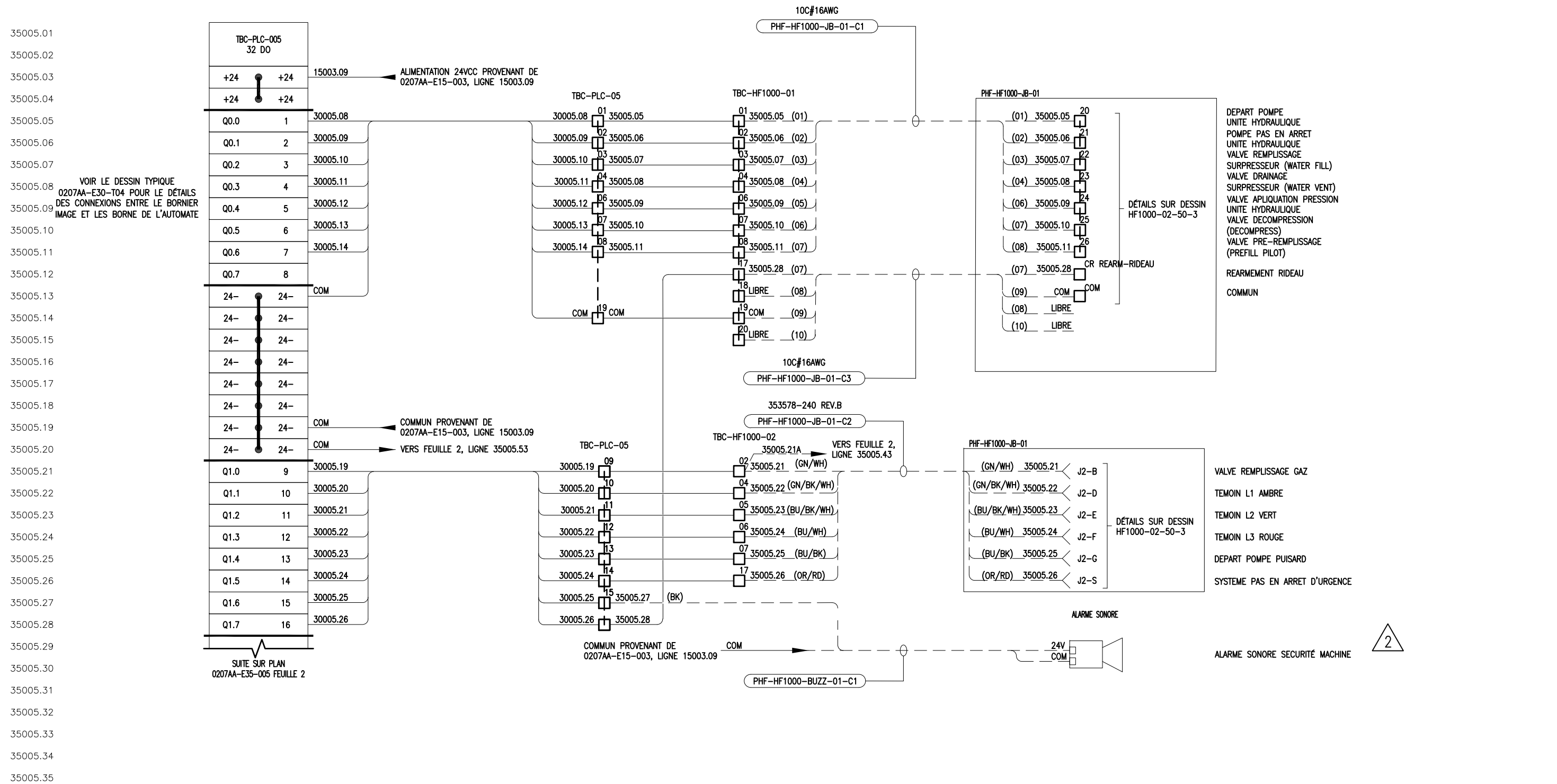
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2	TEL QUE CONSTRUIT	2017-06-29	PT		
1	TEL QUE CONSTRUIT	2014-05-08	DC		
0	CONCEPTION INITIALE	-	-	-	-
RÉVISIONS					

SCEAU

CONFIDENTIALITE	
LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.	
DESSINÉ: MARC-ANDRÉ ALLARD	DATE: 2013-12-06
VÉRIFIÉ: JEAN-BENOIT NÉRON	DATE:
INGÉNIEUR: DARRYL TREMBLAY	DATE:

DYNAMIC CONCEPT
Saguenay (QC)
Canada
418.542.6164
WWW.DYNAMIC-CONCEPT.CA

TITRE: PRESSES HYDROFORMAGE - CRNC CTA ENTRÉES 24V CC TOR 2/2	
NO. DESSIN: 0207AA-E35-004 FEUILLE 2	REVISION 0
FORMAT A3	



DÉPART POMPE
 UNITÉ HYDRAULIQUE
 POMPE PAS EN ARRÊT
 UNITÉ HYDRAULIQUE
 VALVE REMPLISSAGE
 SURPRESSEUR (WATER FILL)
 VALVE DRAINAGE
 SURPRESSEUR (WATER VENT)
 VALVE APLIQUATION PRESSION
 UNITÉ HYDRAULIQUE
 VALVE DECOMPRESSION
 (DECOMPRESS)
 VALVE PRE-REMPLISSAGE
 (PREFILL PILOT)
 REARMEMENT RIDEAU
 COMMUN

VALVE REMPLISSAGE GAZ
 TEMOIN L1 AMBRE
 TEMOIN L2 VERT
 TEMOIN L3 ROUGE
 DÉPART POMPE PUISARD
 SYSTEME PAS EN ARRÊT D'URGENCE

ALARME SONORE SECURITÉ MACHINE



NE PAS MESURER - S'IL Y A DOUTE DEMANDER

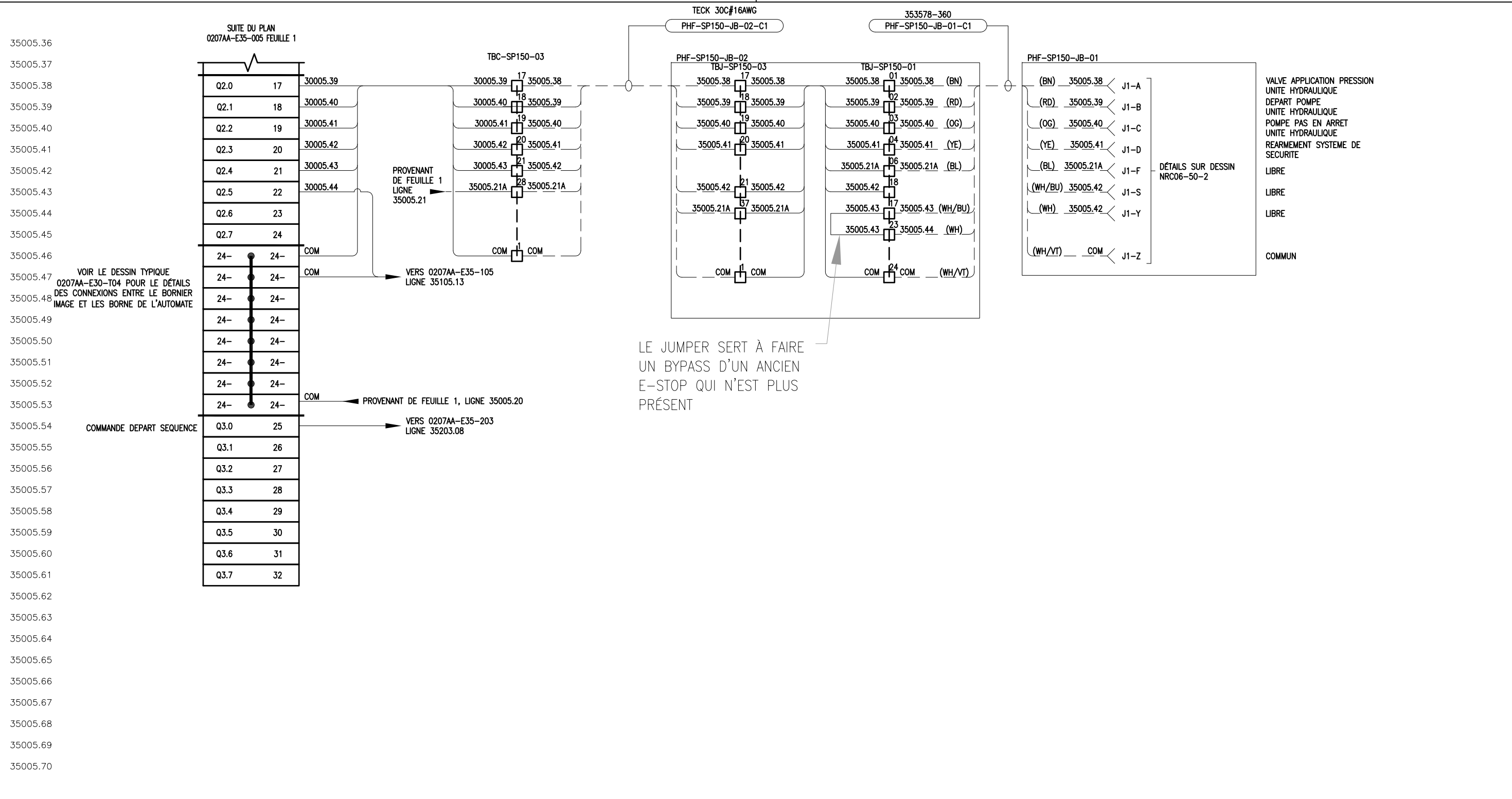
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
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1	TEL QUE CONSTRUIT	2014-05-08	DC		
0	CONCEPTION INITIALE	-	-	-	-

REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
2	AJOUT ALARME SONORE + TQC	2017-06-29	PT		
1	TEL QUE CONSTRUIT	2014-05-08	DC		
0	CONCEPTION INITIALE	-	-	-	-

RÉVISIONS					
SCEAU					

CONFIDENTIALITE	
LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.	
DESSINÉ:	DATE:
MARC-ANDRÉ ALLARD	2014-01-06
VÉRIFIÉ:	DATE:
JEAN-BENOIT NÉRON	
INGÉNIEUR:	DATE:
DARRYL TREMBLAY	

DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA	
TITRE: PRESSES HYDROFORMAGE - CRNC CTA SORTIES 24V CC TOR 1/2	
NO. DESSIN:	REVISION
0207AA-E35-005 FEUILLE 1	0
FORMAT	
A3	



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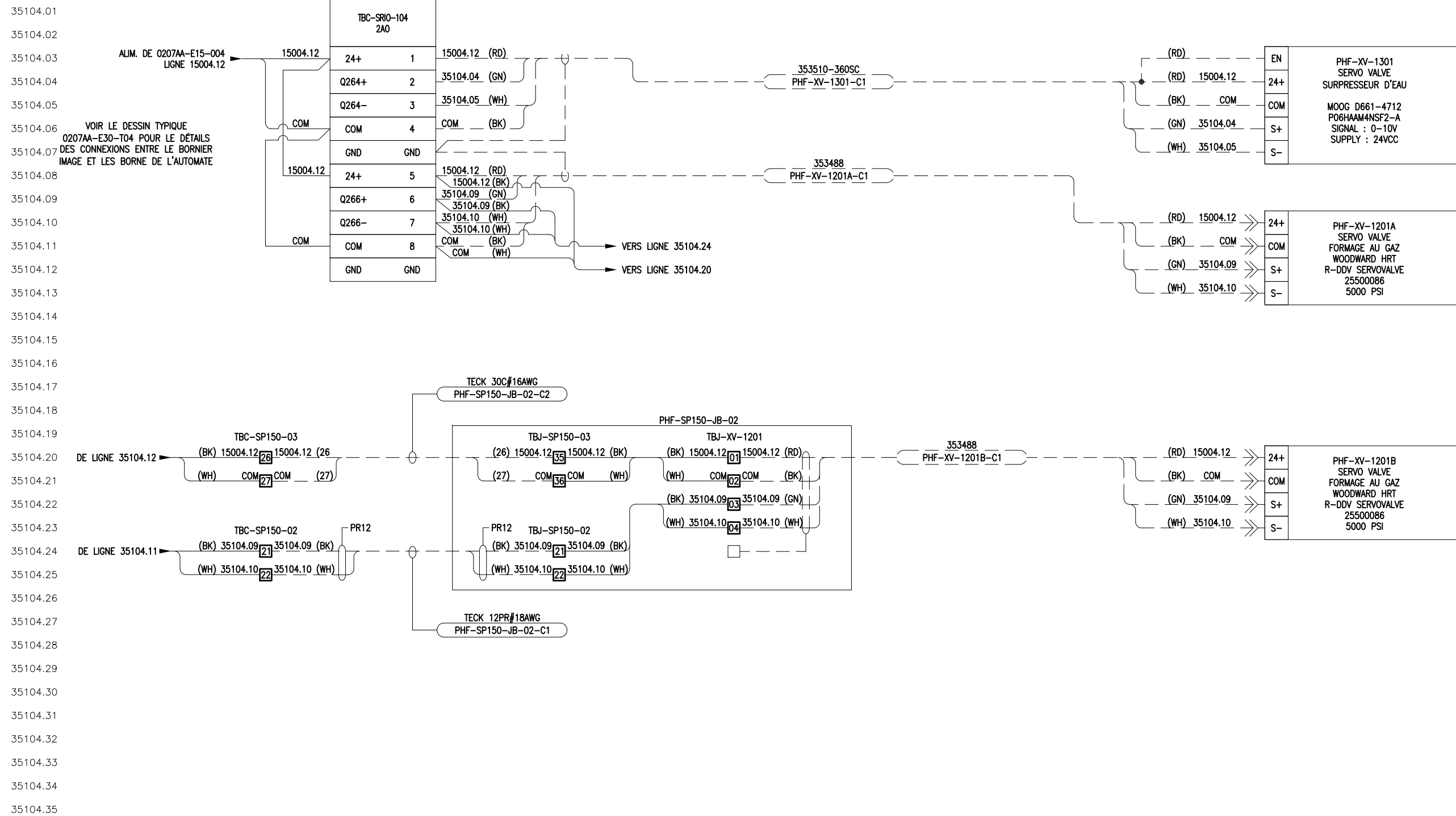
VOIR LE DESSIN TYPIQUE
0207AA-E30-T04 POUR LE DÉTAILS
DES CONNEXIONS ENTRE LE BORNIER
IMAGE ET LES BORNE DE L'AUTOMATE

LE JUMPER SERT À FAIRE
UN BYPASS D'UN ANCIEN
E-STOP QUI N'EST PLUS
PRÉSENT

NE PAS MESURER - S'IL Y A DOUTE DEMANDER

REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
3	TEL QUE CONSTRUIT	2017-06-29	PT		
2	AJOUT MODE SUIVEUR PRESSE SP150	2016-03-14	STE	DAT	
1	TEL QUE CONSTRUIT	2014-05-08	DC		
0	CONCEPTION INITIALE	-	-	-	-
RÉVISIONS					

CONFIDENTIALITE		<p>DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA</p>
LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.		
DESSINÉ:	DATE:	
MARC-ANDRÉ ALLARD	2014-01-06	
VÉRIFIÉ:	DATE:	TITRE: PRESSES HYDROFORMAGE - CRNC CTA SORTIES 24V CC TOR 2/2
JEAN-BENOIT NÉRON		
INGÉNIEUR:	DATE:	NO. DESSIN:
DARRYL TREMBLAY		0207AA-E35-005 FEUILLE 2
SCEAU		REVISION: 2
		FORMAT: A3

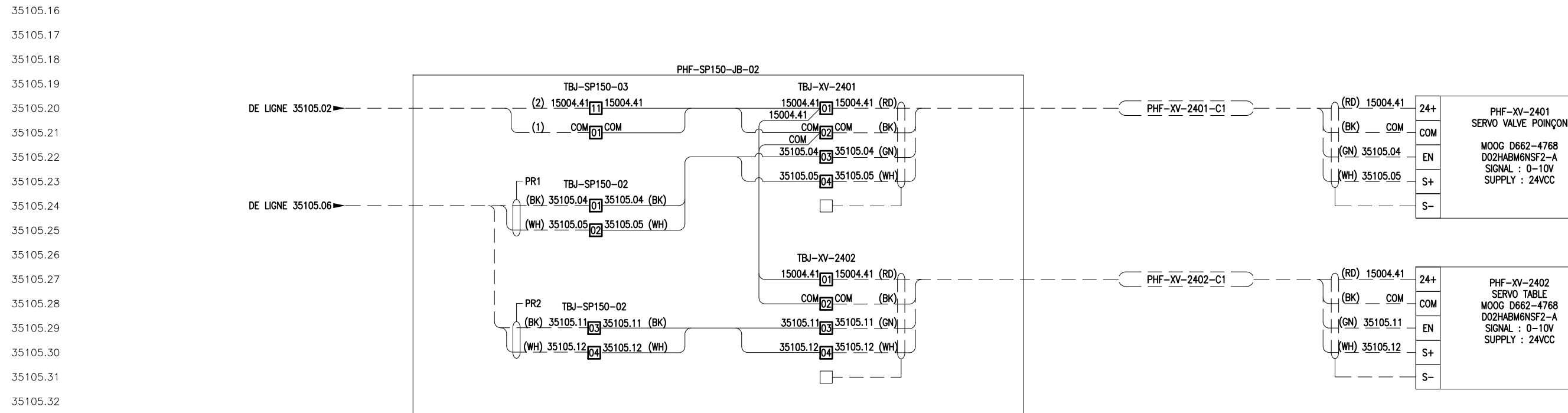
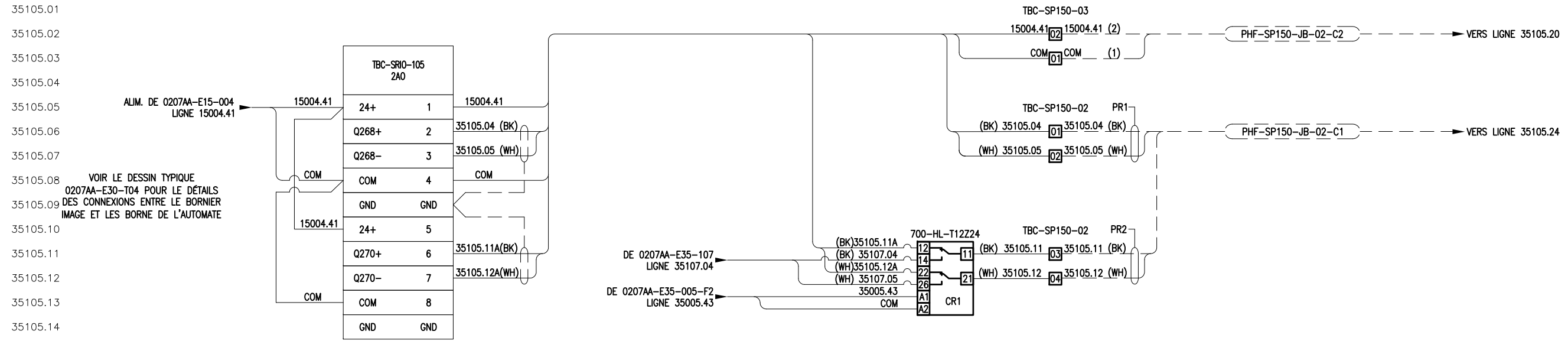


NE PAS MESURER - S'IL Y A DOUTE DEMANDER

						CONFIDENTIALITE		 DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA	
						LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.			
1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	MARC-ANDRÉ ALLARD	DATE:	2014-01-06
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	JEAN-BENOIT NÉRON	DATE:	
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DARRYL TREMBLAY	DATE:	
RÉVISIONS						SCEAU		TITRE: PRESSES HYDROFORMAGE - CRNC CTA SORTIES ANALOGIQUE 104	
								NO. DESSIN:	0207AA-E35-104
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BORNIER IMAGE

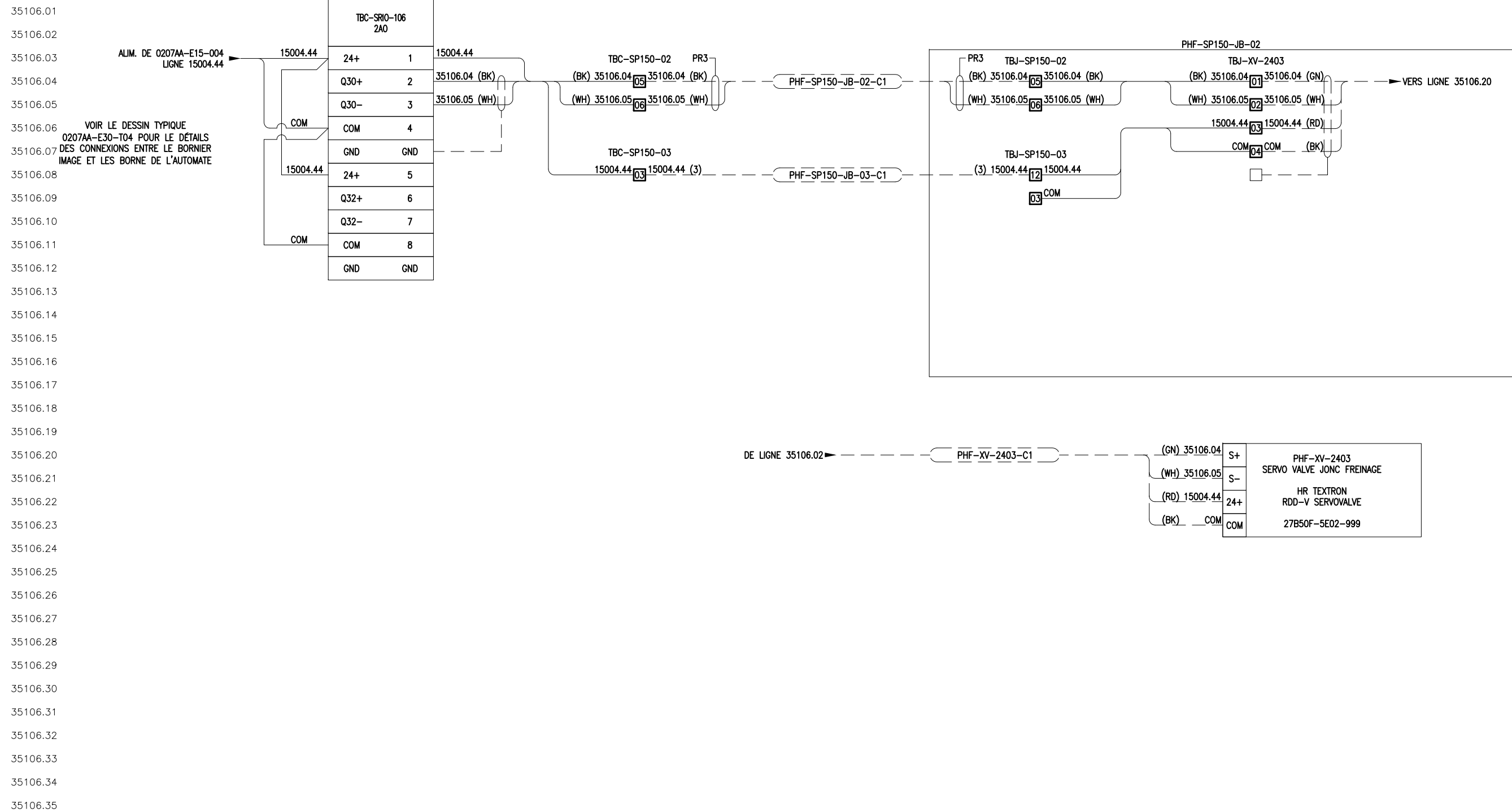
CHAMP




NE PAS MESURER - S'IL Y A DOUTE DEMANDER

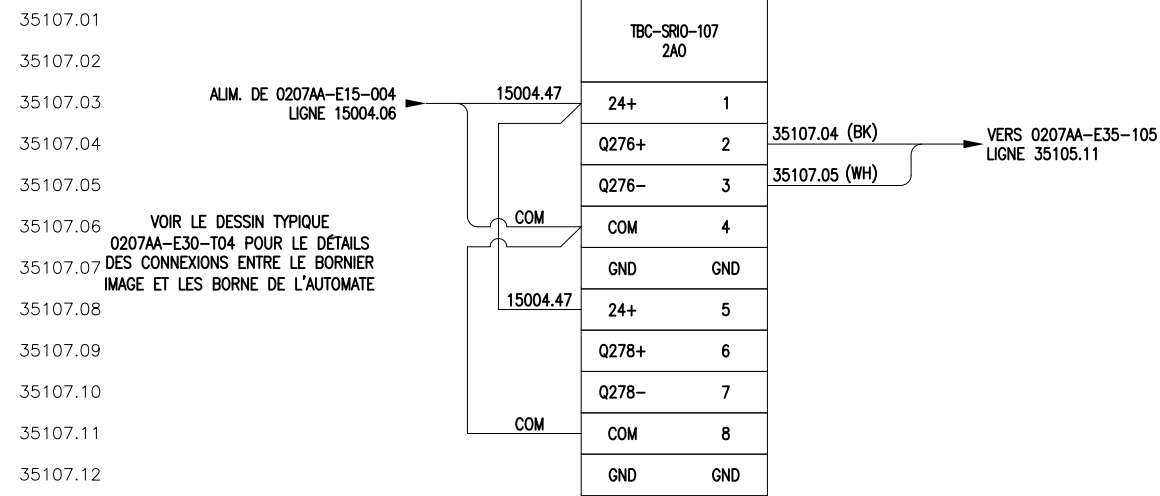
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
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RÉVISIONS					
SCEAU					

CONFIDENTIALITE		 DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA
LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.		
DESSINÉ:	DATE:	
MARC-ANDRÉ ALLARD	2014-01-06	
VÉRIFIÉ:	DATE:	TITRE: PRESSES HYDROFORMAGE - CRNC CTA SORTIES ANALOGIQUE 105
JEAN-BENOIT NÉRON		
INGÉNIEUR:	DATE:	NO. DESSIN: 0207AA-E35-105
DARRYL TREMBLAY		
		REVISION: 0
		FORMAT: A3



NE PAS MESURER - S'IL Y A DOUTE DEMANDER

						CONFIDENTIALITE		 DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA	
						LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.		TITRE: PRESSES HYDROFORMAGE - CRNC CTA SORTIES ANALOGIQUE 106	
1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	DATE:	NO. DESSIN: 0207AA-E35-106	
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	DATE:	REVISION 0	
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DATE:	FORMAT A3	
RÉVISIONS						SCEAU			



NE PAS MESURER - S'IL Y A DOUTE DEMANDER

REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
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RÉVISIONS					

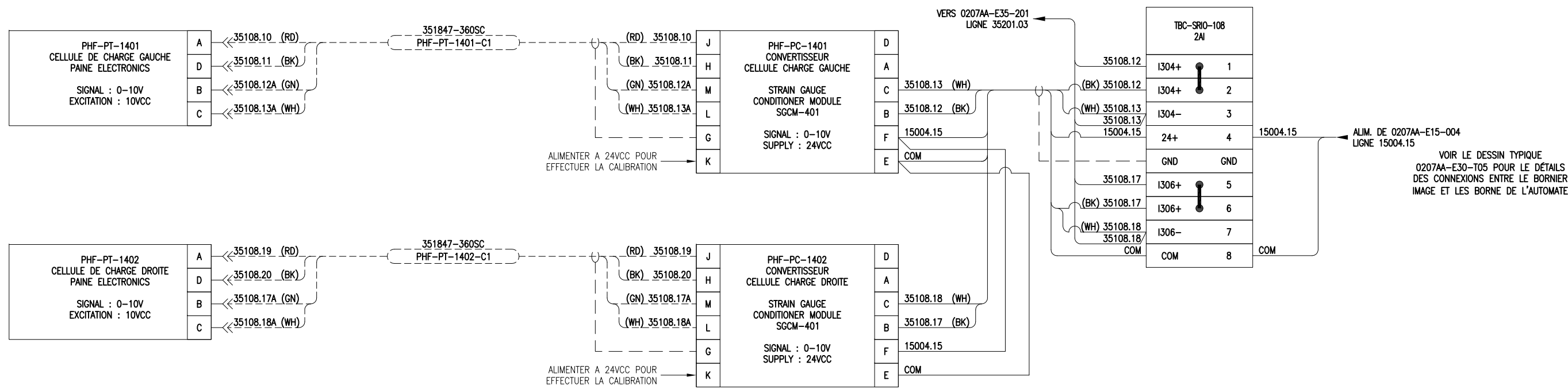
SCEAU

CONFIDENTIALITE	
LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.	
DESSINÉ: MARC-ANDRÉ ALLARD	DATE: 2014-01-06
VÉRIFIÉ: JEAN-BENOIT NÉRON	DATE:
INGÉNIEUR: DARRYL TREMBLAY	DATE:

DYNAMIC CONCEPT
Saguenay (QC)
Canada
418.542.6164
[WWW.DYNAMIC-CONCEPT.CA](http://www.dynamic-concept.ca)


TITRE: PRESSES HYDROFORMAGE - CRNC CTA SORTIES ANALOGIQUE 107	
NO. DESSIN: 0207AA-E35-107	REVISION: 0 FORMAT: A3

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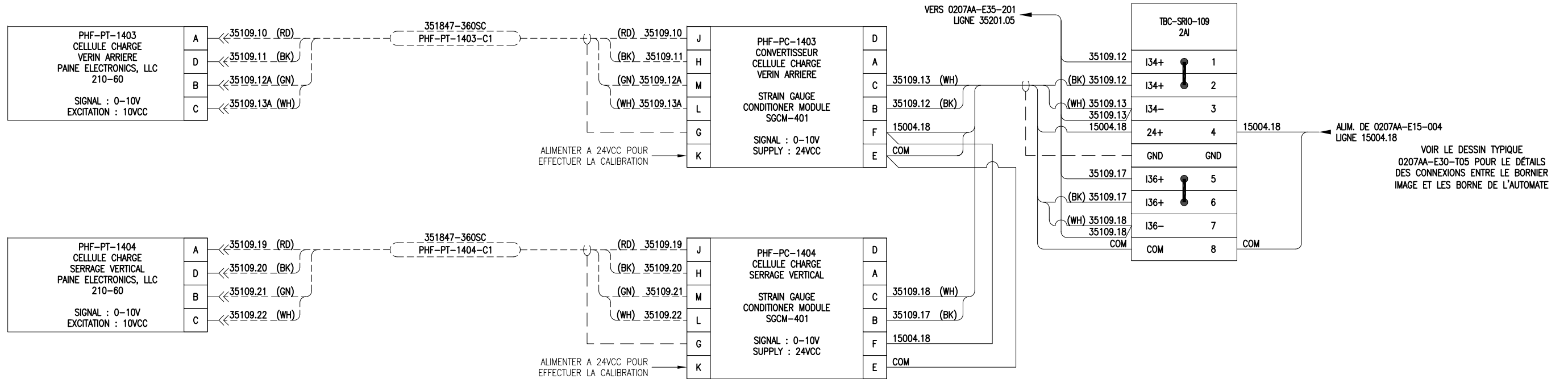


VOIR LE DESSIN TYPIQUE
0207AA-E30-T05 POUR LE DÉTAILS
DES CONNEXIONS ENTRE LE BORNIER
IMAGE ET LES BORNE DE L'AUTOMATE

NE PAS MESURER – S'IL Y A DOUTE DEMANDER

						CONFIDENTIALITE		 DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA	
						LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.			
1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	MARC-ANDRÉ ALLARD	DATE:	2013-12-06
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	JEAN-BENOIT NÉRON	DATE:	
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DARRYL TREMBLAY	DATE:	
RÉVISIONS						SCEAU		TITRE: PRESSES HYDROFORMAGE – CRNC CTA ENTRÉES ANALOGIQUE 108	
								NO. DESSIN:	0207AA-E35-108
								REVISION	0
								FORMAT	A3

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NE PAS MESURER - S'IL Y A DOUTE DEMANDER

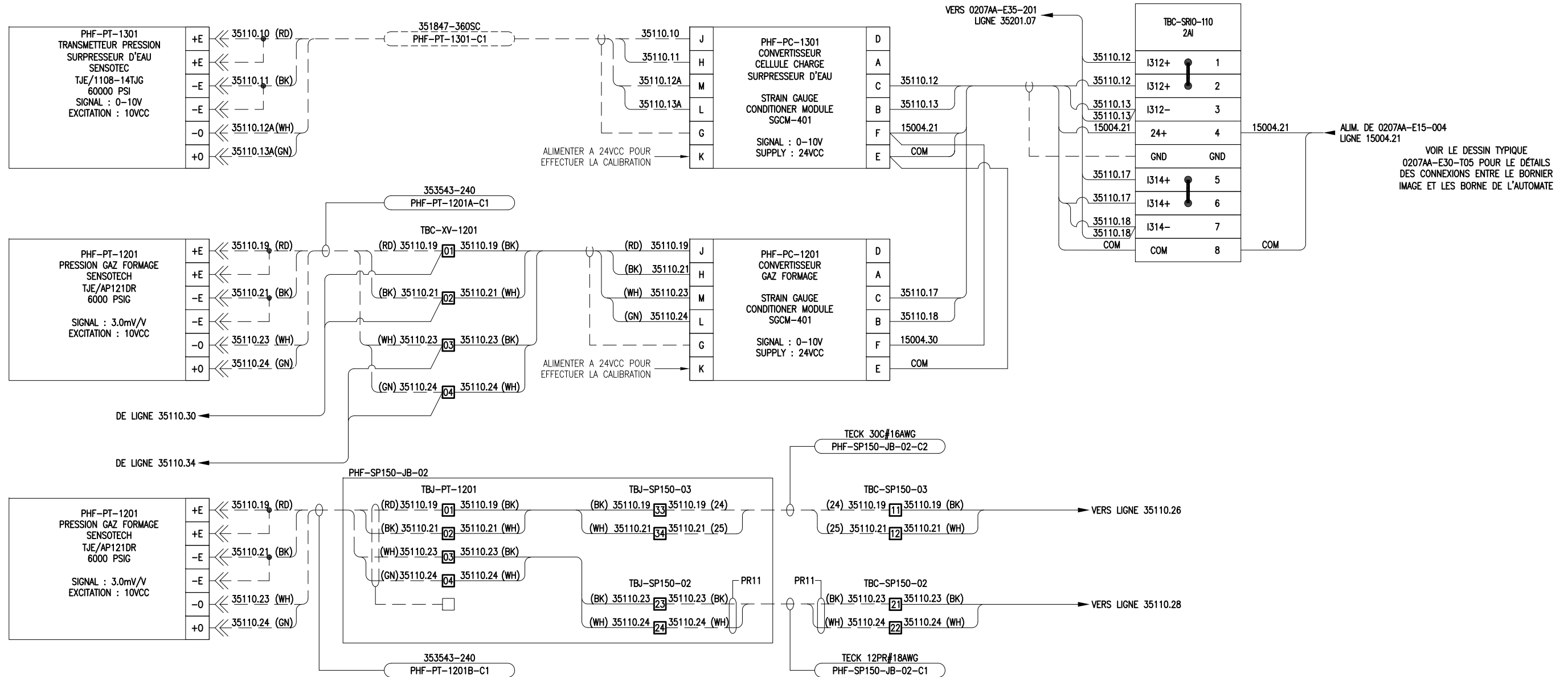
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REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ															
RÉVISIONS						SCEAU		CONFIDENTIALITE LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.				DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA		TITRE: PRESSES HYDROFORMAGE - CRNC CTA ENTRÉES ANALOGIQUE 109 NO. DESSIN: 0207AA-E35-109 REVISION: 0 FORMAT: A3						

CHAMP

CONVERTISSEURS

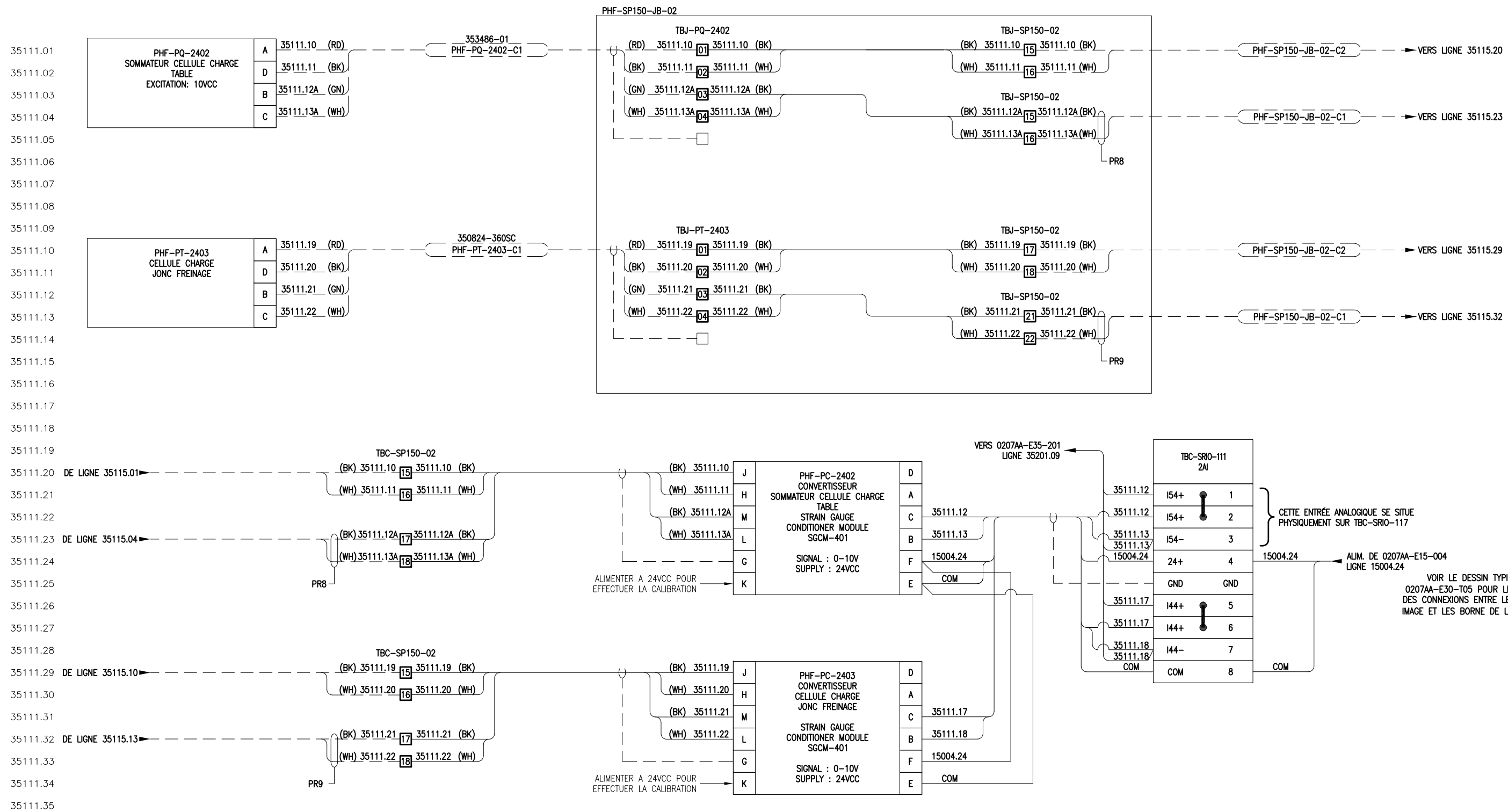
BORNIER IMAGE

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NE PAS MESURER - S'IL Y A DOUTE DEMANDER

						<p>CONFIDENTIALITE</p> <p>LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.</p>		<p>DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA</p>					
1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	MARC-ANDRÉ ALLARD	DATE:	2013-12-06	TITRE:	PRESSES HYDROFORMAGE - CRNC CTA		
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	JEAN-BENOIT NÉRON	DATE:		ENTRÉES ANALOGIQUE 110			
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DARRYL TREMBLAY	DATE:		NO. DESSIN:	0207AA-E35-110	REVISION	0
RÉVISIONS						SCEAU				FORMAT		A3	



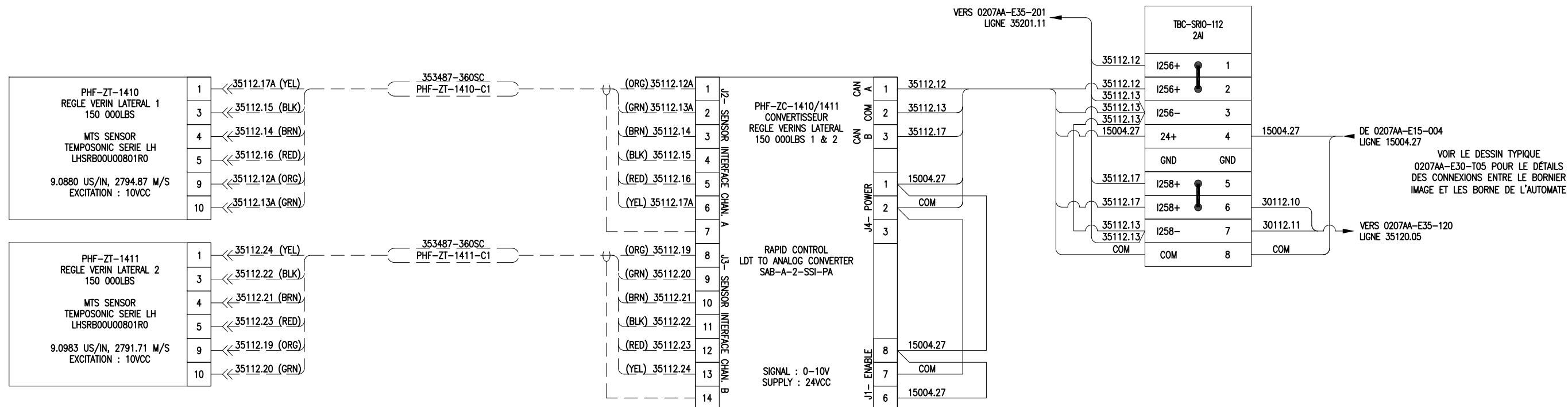
NE PAS MESURER - S'IL Y A DOUTE DEMANDER

REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
1	TEL QUE CONSTRUIT	2014-05-08	DC		
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RÉVISIONS					

SCEAU		CONFIDENTIALITE	
DESSINÉ: MARC-ANDRÉ ALLARD		DATE: 2013-12-06	
VÉRIFIÉ: JEAN-BENOIT NÉRON		DATE:	
INGÉNIEUR: DARRYL TREMBLAY		DATE:	

DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA		TITRE: PRESSES HYDROFORMAGE - CRNC CTA ENTRÉES ANALOGIQUE 111	
NO. DESSIN: 0207AA-E35-111		REVISION: 0	FORMAT: A3

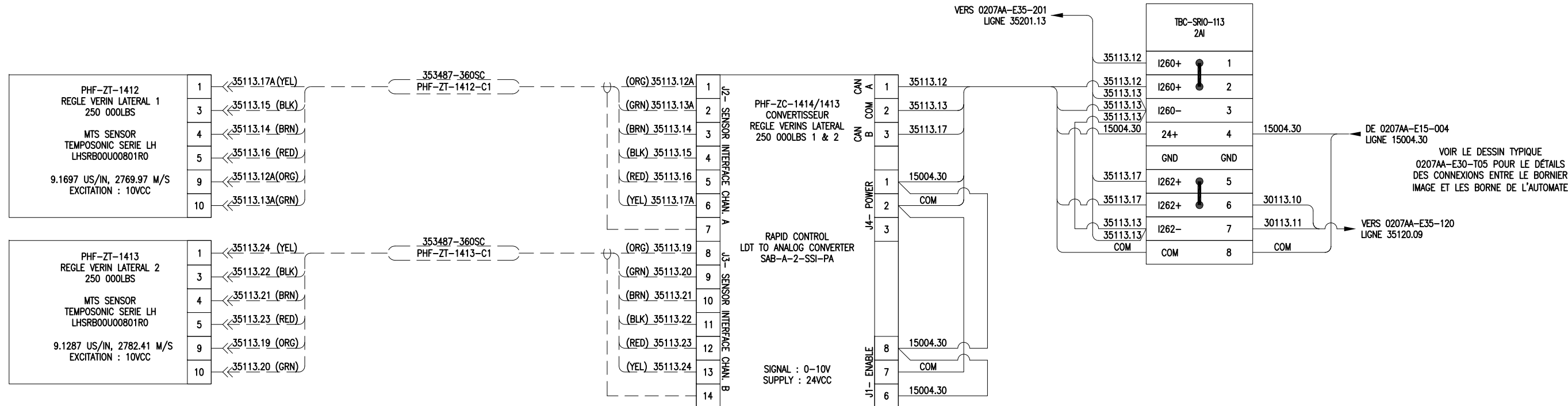
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NE PAS MESURER - S'IL Y A DOUTE DEMANDER

						<p>CONFIDENTIALITE</p> <p>LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.</p>		<p>DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA</p>							
1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	MARC-ANDRÉ ALLARD	DATE:	2013-12-06	TITRE:	PRESSES HYDROFORMAGE - CRNC CTA				
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	JEAN-BENOIT NÉRON	DATE:			ENTRÉES ANALOGIQUE 112				
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DARRYL TREMBLAY	DATE:		NO. DESSIN:	0207AA-E35-112	REVISION	0	FORMAT	A3
RÉVISIONS						SCEAU									

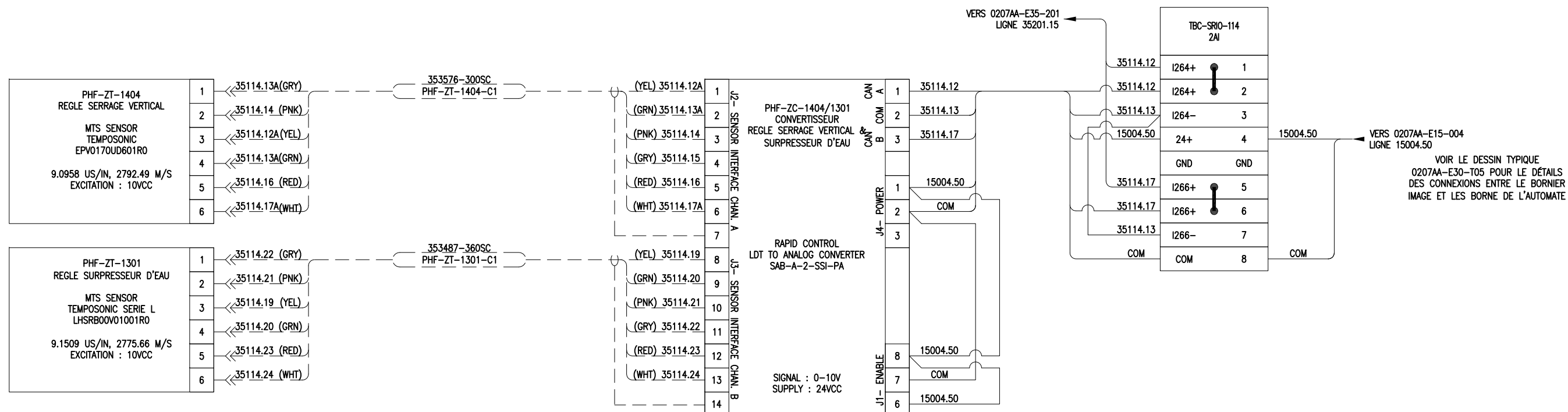
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NE PAS MESURER - S'IL Y A DOUTE DEMANDER

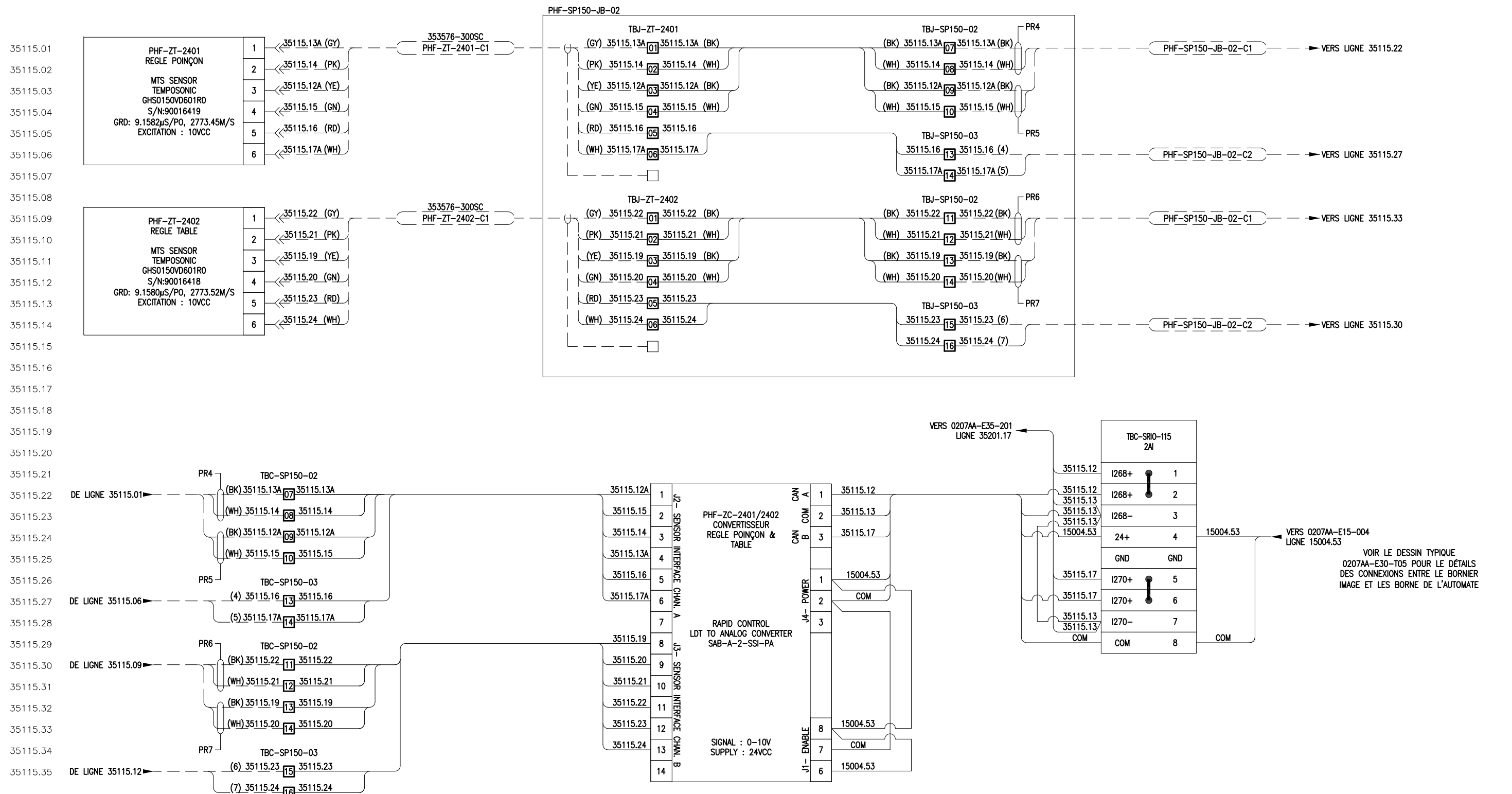
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1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	MARC-ANDRÉ ALLARD	DATE:	2013-12-06
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	JEAN-BENOIT NÉRON	DATE:	
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DARRYL TREMBLAY	DATE:	
RÉVISIONS						SCEAU		NO. DESSIN:	0207AA-E35-113
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								FORMAT	A3

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NE PAS MESURER - S'IL Y A DOUTE DEMANDER

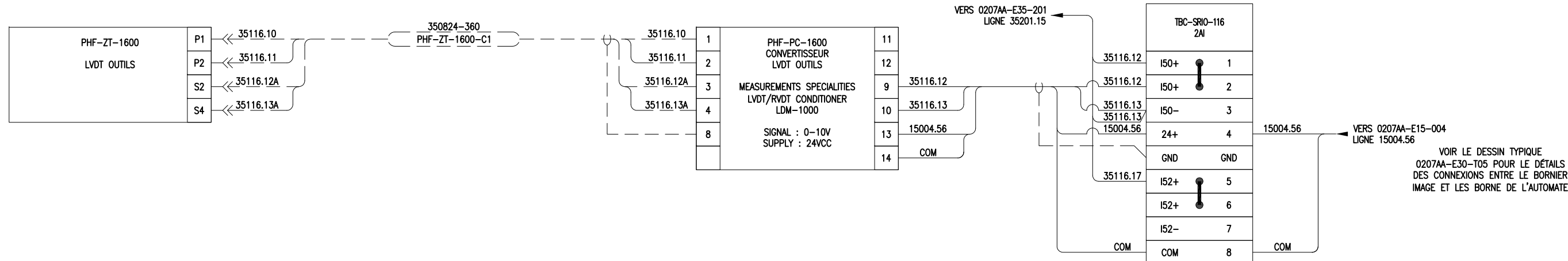
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1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	MARC-ANDRÉ ALLARD	DATE:	2013-12-06	TITRE:	PRESSES HYDROFORMAGE - CRNC CTA				
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	JEAN-BENOIT NÉRON	DATE:			ENTRÉES ANALOGIQUE 114				
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DARRYL TREMBLAY	DATE:		NO. DESSIN:	0207AA-E35-114	REVISION	0	FORMAT	A3
RÉVISIONS						SCEAU									




NE PAS MESURER - S'IL Y A DOUTE DEMANDER

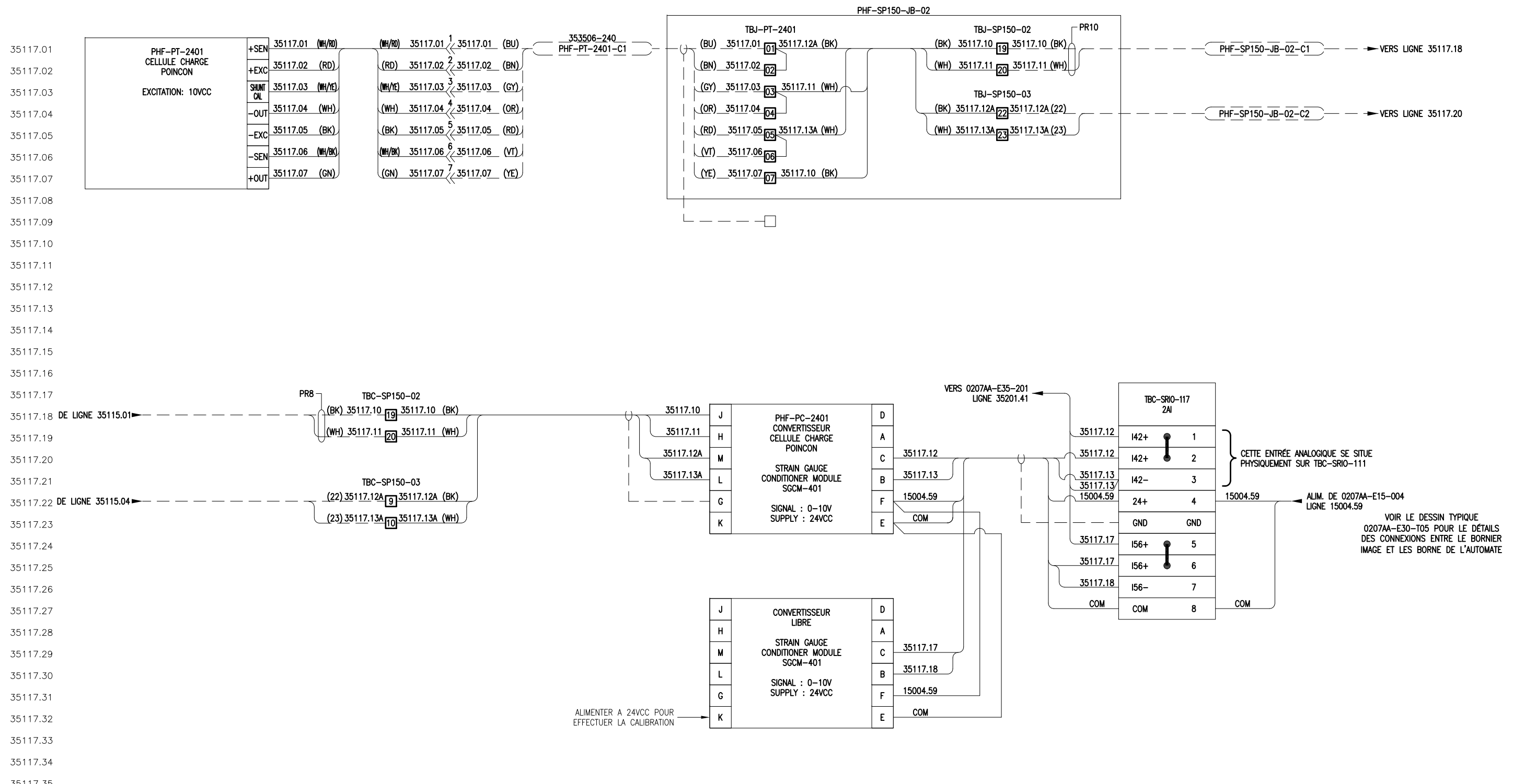
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					DESSINE: MARC-ANDRE ALLARD		DATE: 2013-12-06	
					VERIFIE: JEAN-BENOIT NERON		DATE:	
					INGENIEUR: DARRYL TREMBLAY		DATE:	
					TITRE: PRESSES HYDROFORMAGE - CRNC CTA		ENTREES ANALOGIQUE 115	
					NO. DESSIN: 0207AA-E35-115		REVISION: 0	
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1	TEL QUE CONSTRUIT	2014-05-08	DC					
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REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ			
REVISIONS					SCEAU			

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NE PAS MESURER - S'IL Y A DOUTE DEMANDER

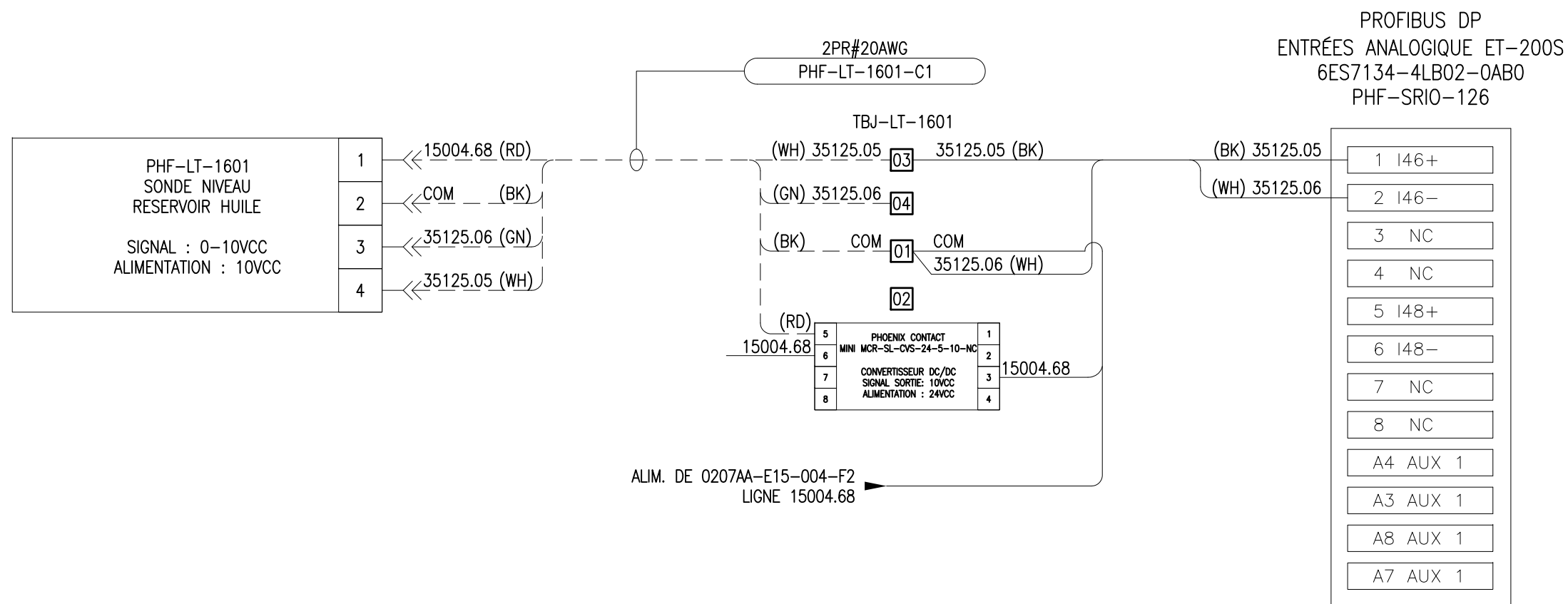
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1	TEL QUE CONSTRUIT	2014-05-08	DC						
0	CONCEPTION INITIALE	-	-	-	-				
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ				
RÉVISIONS									
SCEAU						NO. DESSIN: 0207AA-E35-116	REVISION: 0	FORMAT: A3	



NE PAS MESURER - S'IL Y A DOUTE DEMANDER

						CONFIDENTIALITE		 DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA	
						LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.			
1	TEL QUE CONSTRUIT	2014-05-08	DC			DESSINÉ:	MARC-ANDRÉ ALLARD	DATE:	2013-12-06
0	CONCEPTION INITIALE	-	-	-	-	VÉRIFIÉ:	JEAN-BENOIT NÉRON	DATE:	
REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ	INGÉNIEUR:	DARRYL TREMBLAY	DATE:	
RÉVISIONS						SCEAU		TITRE: PRESSES HYDROFORMAGE - CRNC CTA ENTRÉES ANALOGIQUE 117	
								NO. DESSIN:	0207AA-E35-117
								REVISION	0
								FORMAT	A3


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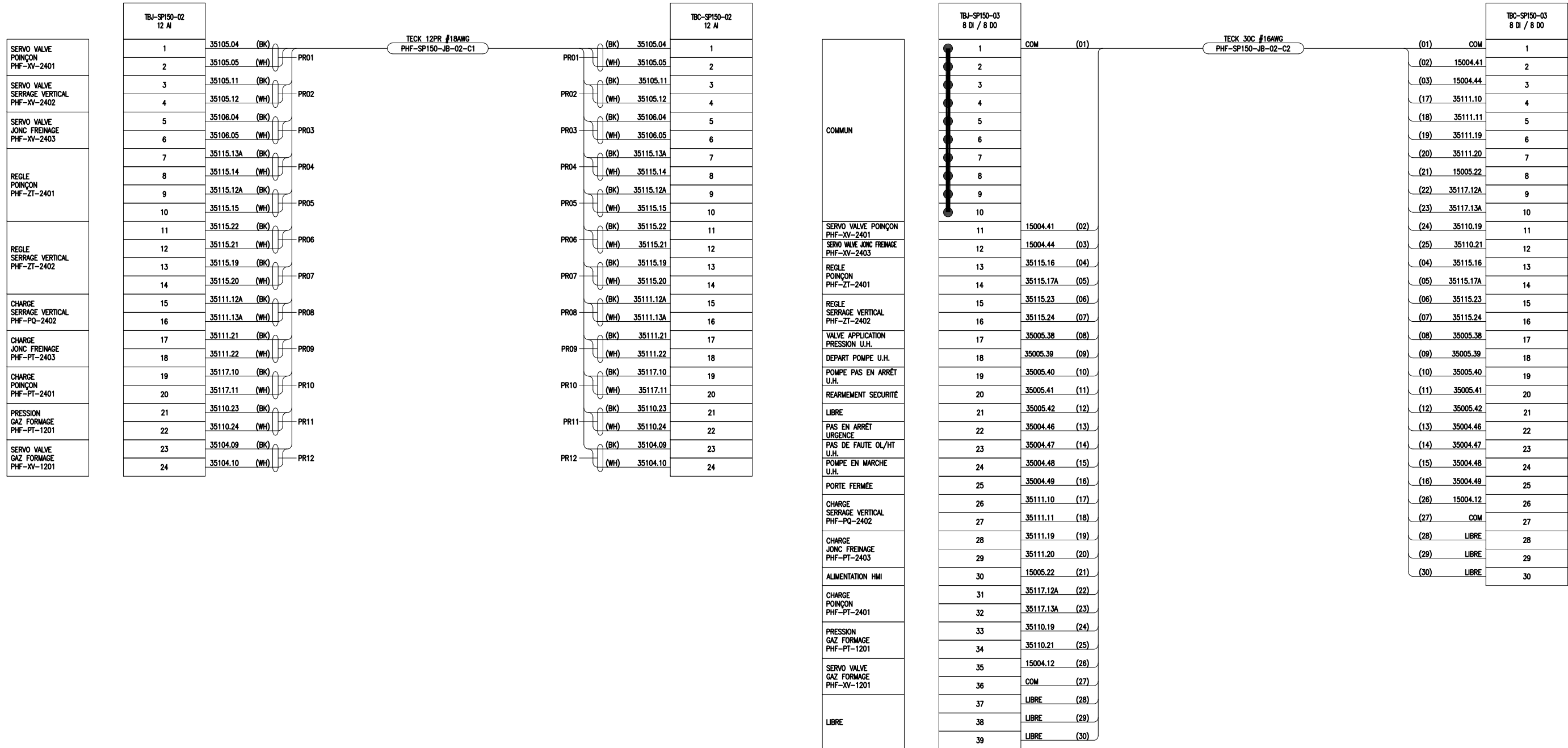


2

NE PAS MESURER - S'IL Y A DOUTE DEMANDER

REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
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1	TEL QUE CONSTRUIT	2014-05-08	DC		
0	CONCEPTION INITIALE	-	-	-	-
RÉVISIONS					

SCEAU	CONFIDENTIALITE LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.	 DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA
	DESSINÉ: MARC-ANDRÉ ALLARD DATE: 2014-01-07 VÉRIFIÉ: JEAN-BENOIT NÉRON DATE: INGÉNIEUR: DARRYL TREMBLAY DATE:	TITRE: PRESSES HYDROFORMAGE - CRNC CTA ENTRÉES ANALOGIQUE 126 NO. DESSIN: 0207AA-E35-126 REVISION: 0 FORMAT: A3



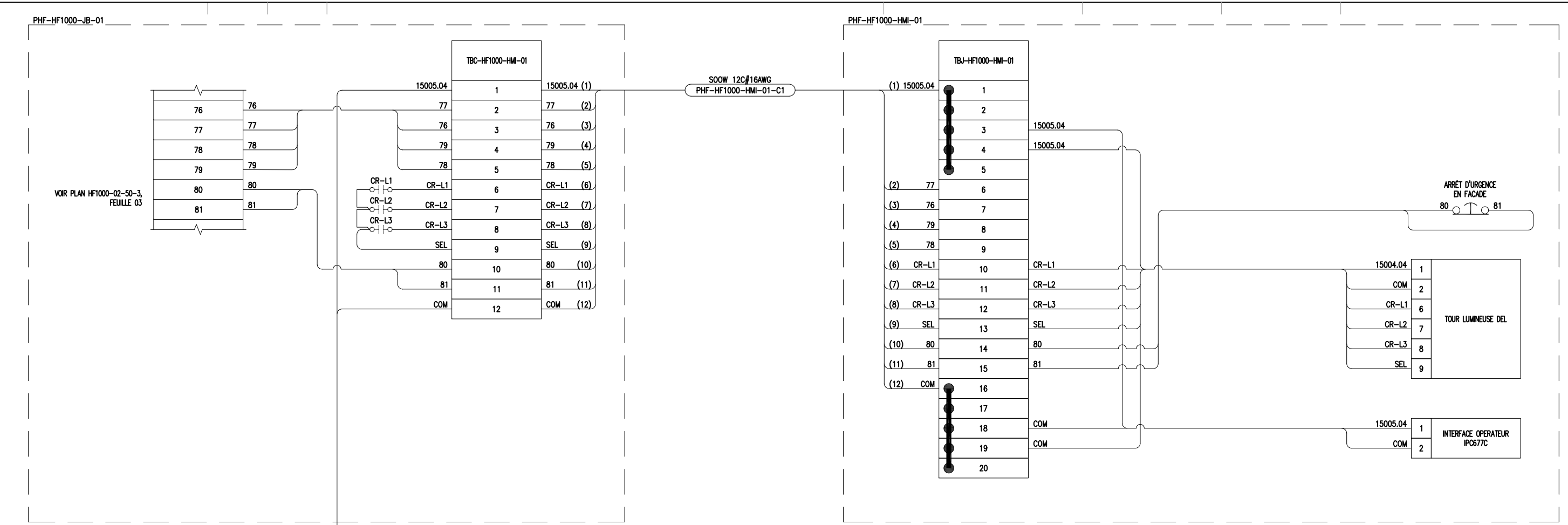
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NO.	DATE	REV.	ÉMIS POUR	ÉMETTEUR
RÉGISTRE D'ÉMISSION				

DIMENSIONS EN MILLIMÈTRES, SAUF SI INDICÉ

TOLERANCES GÉNÉRALES SI NON INDICÉES			
PRÉPARATION ET ASSEMBLAGE	USINAGE	FIN	FIN
±0.25	±0.10	±0.05	±0.05
±0.10	±0.05	±0.02	±0.02
±0.05	±0.02	±0.01	±0.01

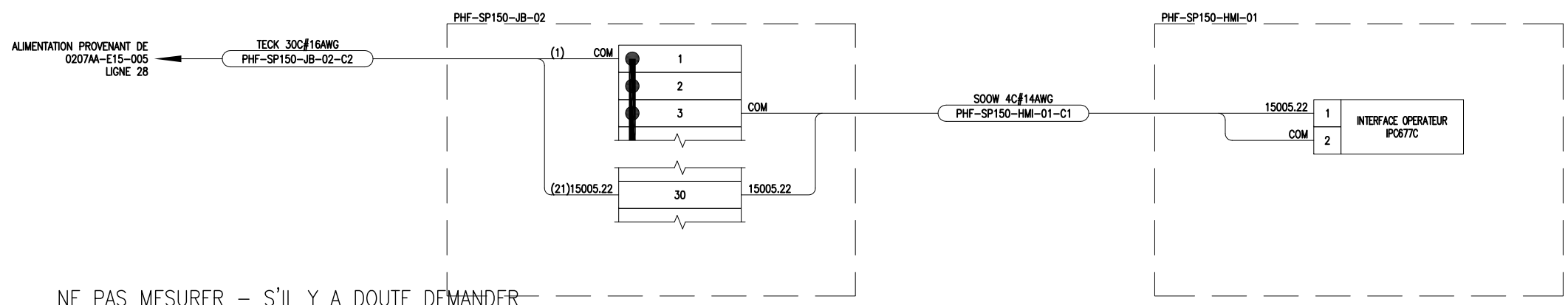
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REV.	DESCRIPTION	DATE	PAR	APPR.	NO.	OIQ	
RÉVISIONS							

SCEAU RÉVISEUR		SCEAU ORIGINAL	
CONFIDENTIALITÉ			
LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFILIÉES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT RESPONSABLES SOUS RÉSERVE EXPRESSÉ DE NON-QUALIFICATION ET D'USAGE RESTRICTIF. ELLES NE DOIVENT ÊTRE REPRODUITES, COPIÉES, NI COMMUNIQUÉES À TROISIÈME PARTI SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT NE DOIT ÊTRE RÉVISÉ NI CORRIGÉ.			
DYNAMIC CONCEPT		DYNAMIC CONCEPT	
Saguenay (QC) Canada 418.542.6164		Saguenay (QC) Canada 418.542.6164	
DYNAMIC CONCEPT		DYNAMIC CONCEPT	
MARC-ANDRÉ ALLARD		2013-12-19	
JEAN-BENOIT NERON			
DARRYL TREMBLAY			
0207AA-E50-001		0 A1	



ALIMENTATION PROVENANT DE 0207AA-E15-005 LIGNE 04

35378-240 REV. B PHF-HF1000-HMI-01-C4



NE PAS MESURER - S'IL Y A DOUTE DEMANDER

REV	DESCRIPTION	DATE	PAR	APPR.	NO. OIQ
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0	CONCEPTION INITIALE	-	-	-	-
RÉVISIONS					

CONFIDENTIALITE

LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.

DESSINÉ: MARC-ANDRÉ ALLARD DATE: 2014-04-04

VÉRIFIÉ: JEAN-BENOIT NÉRON DATE:

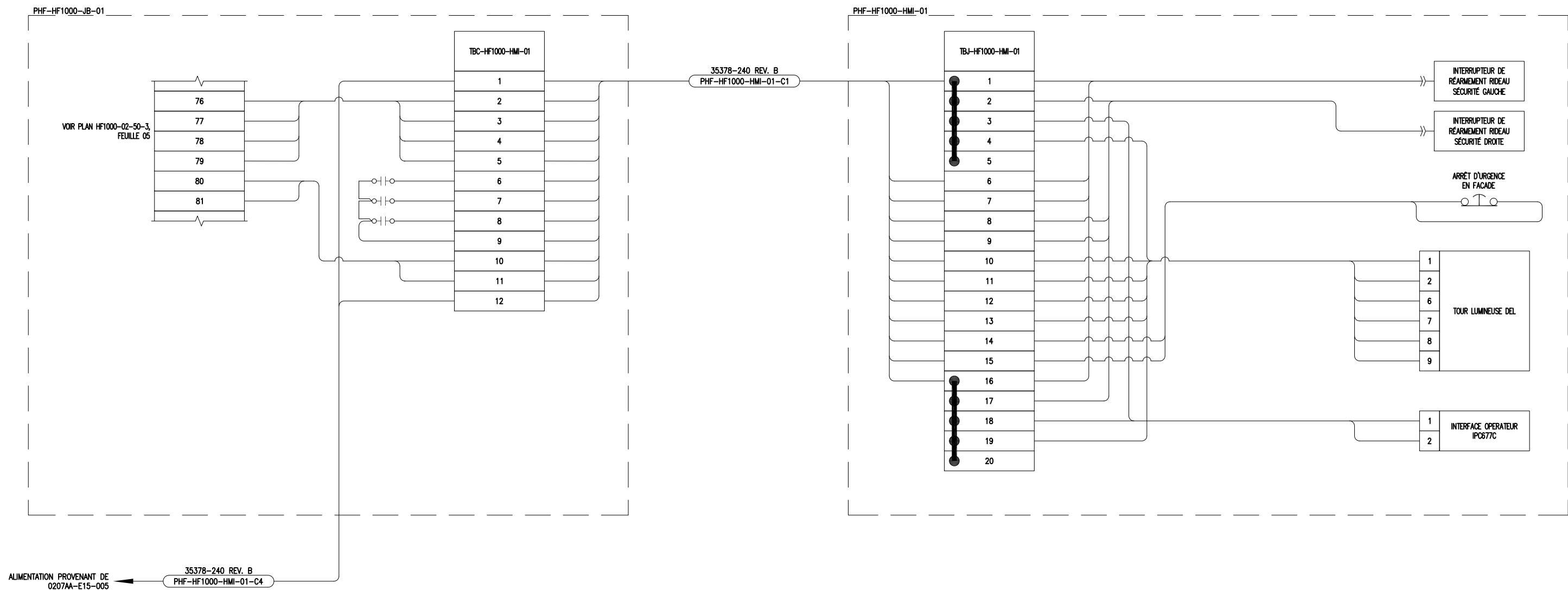
INGÉNIEUR: DARRYL TREMBLAY DATE:

SCEAU

DYNAMIC CONCEPT
Saguenay (QC)
Canada
418.542.6164
WWW.DYNAMIC-CONCEPT.CA

TITRE: CRNC - PRESSE 1000T
SCHÉMA RACCORDEMENT INTERFACES OPÉRATEUR

NO. DESSIN: 0207AA-E50-002 REVISION: 0 FORMAT: A3




NE PAS MESURER - S'IL Y A DOUTE DEMANDER

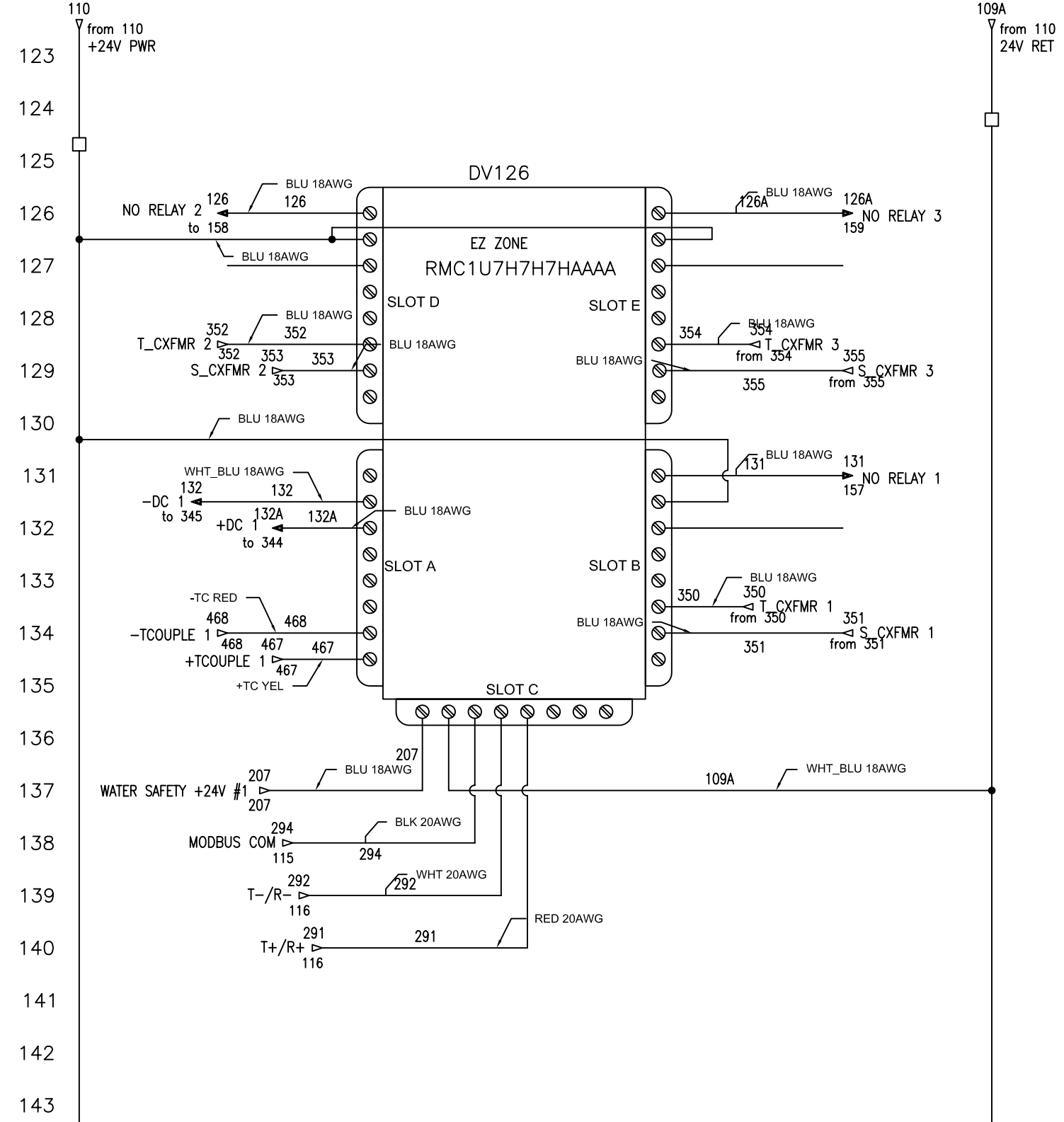
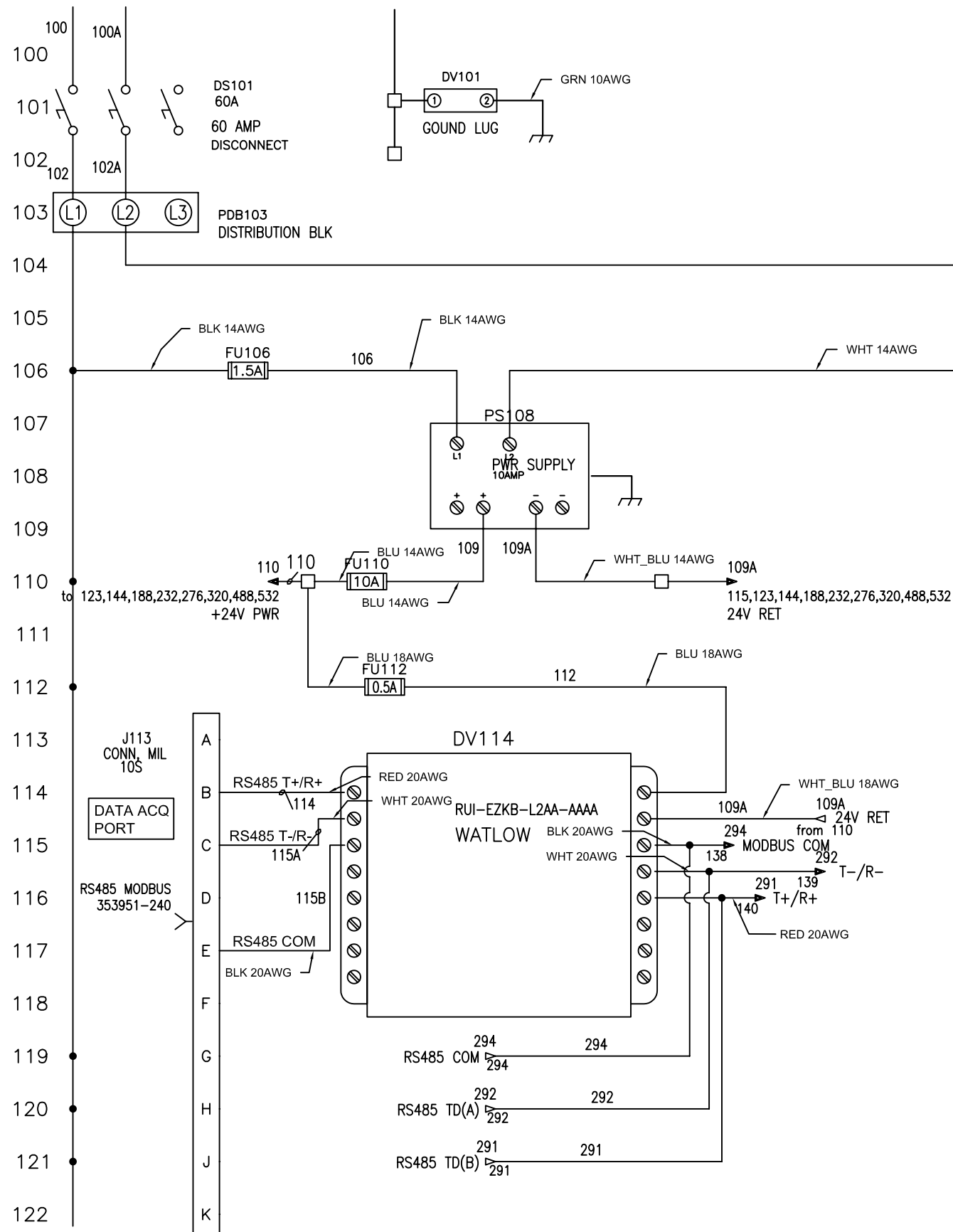
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RÉVISIONS					

SCEAU

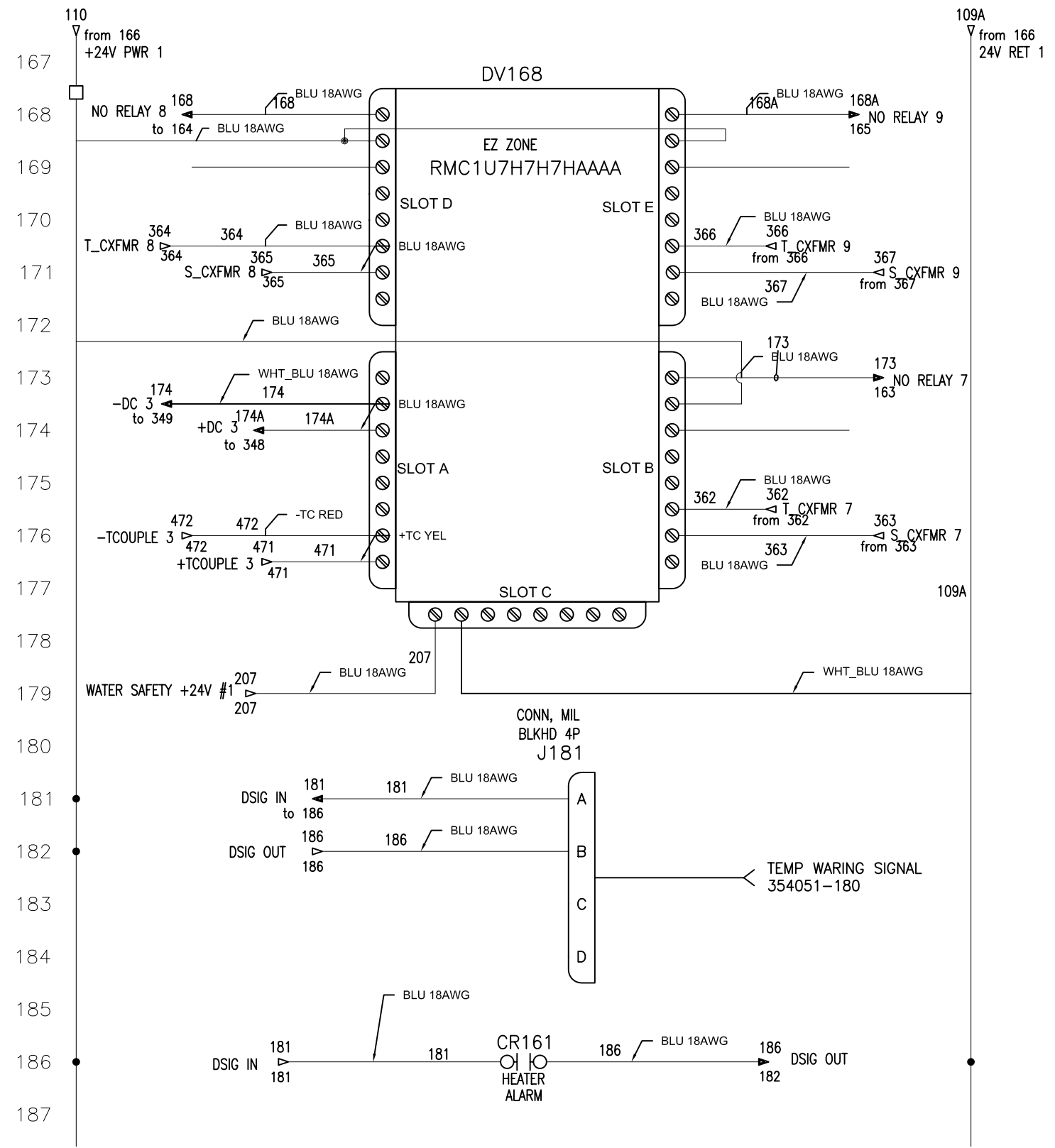
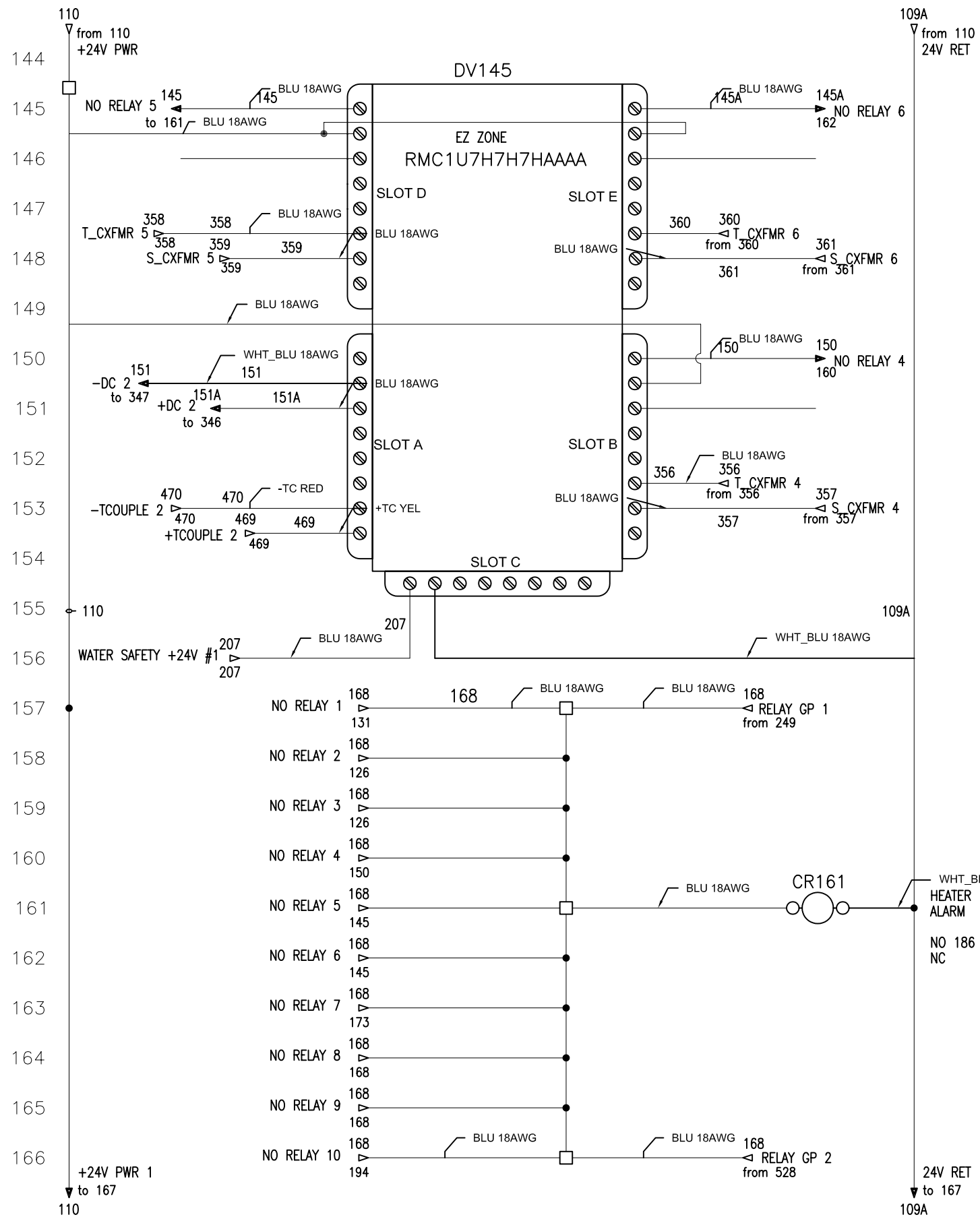
CONFIDENTIALITE	
LE PRÉSENT DOCUMENT ET TOUTES INFORMATIONS AFFÉRENTES SONT LA PROPRIÉTÉ DE DYNAMIC CONCEPT OU LUI SONT DISPONIBLES SOUS RÉSERVE EXPRESSE DE NON-DIVULGATION ET D'USAGE RESTRICTIF. ELLES DEVRONT DEMEURER CONFIDENTIELLES ET ELLES NE POURRONT ÊTRE UTILISÉES DE QUELQUE FAÇON QUE CE SOIT SANS LE CONSENTEMENT ÉCRIT DE DYNAMIC CONCEPT. CE DOCUMENT DEVRA ÊTRE RETOURNÉ SUR DEMANDE.	
DESSINÉ: MARC-ANDRÉ ALLARD	DATE: 2014-04-04
VÉRIFIÉ: JEAN-BENOIT NÉRON	DATE:
INGÉNIEUR: DARRYL TREMBLAY	DATE:

 DYNAMIC CONCEPT	DYNAMIC CONCEPT Saguenay (QC) Canada 418.542.6164 WWW.DYNAMIC-CONCEPT.CA				
	TITRE: CRNC - PRESSE 1000T SCHÉMA RACCORDEMENT PHF-HF1000-HMI-01				
NO. DESSIN:	0207AA-E50-003	REVISION	0	FORMAT	A3

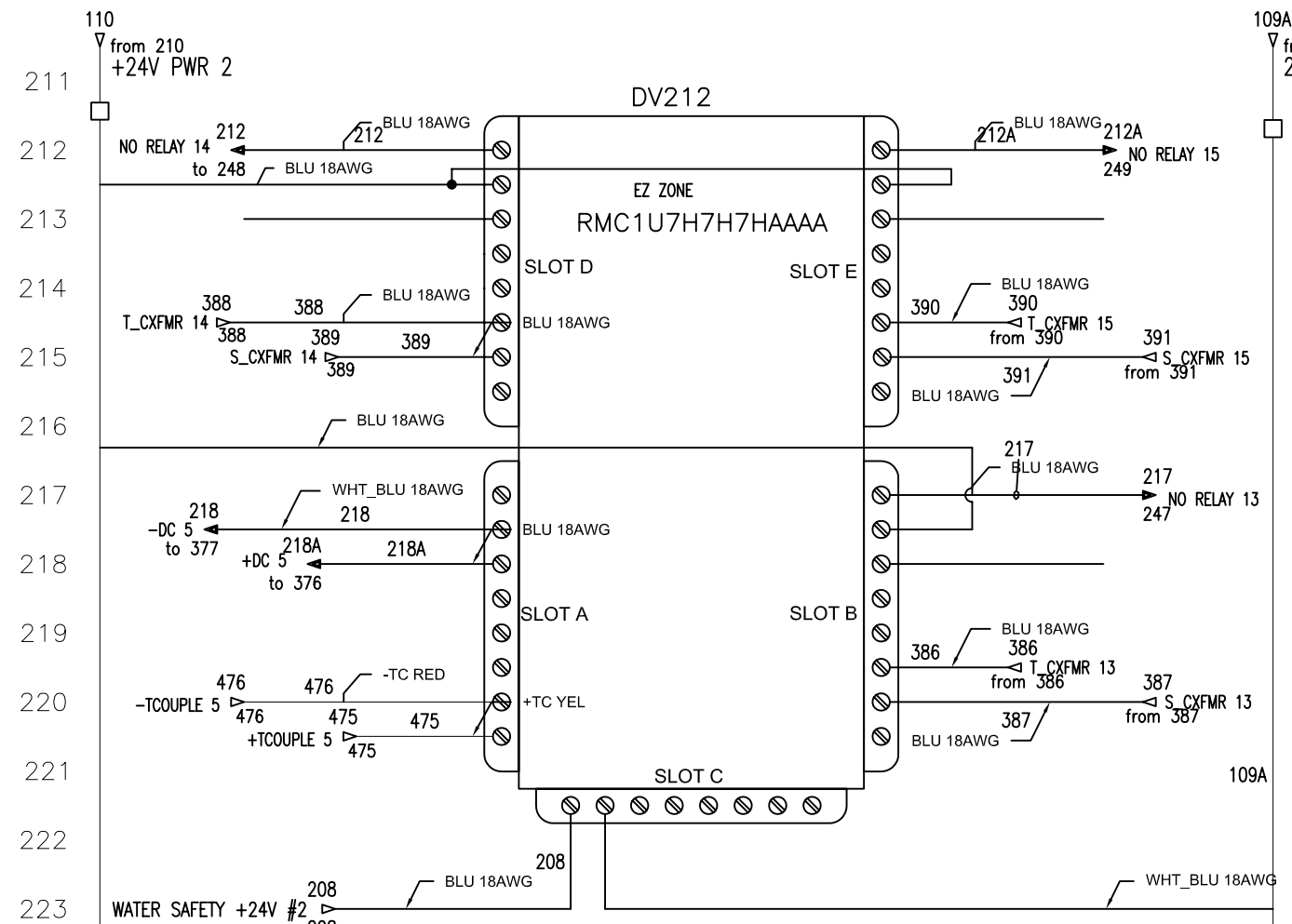
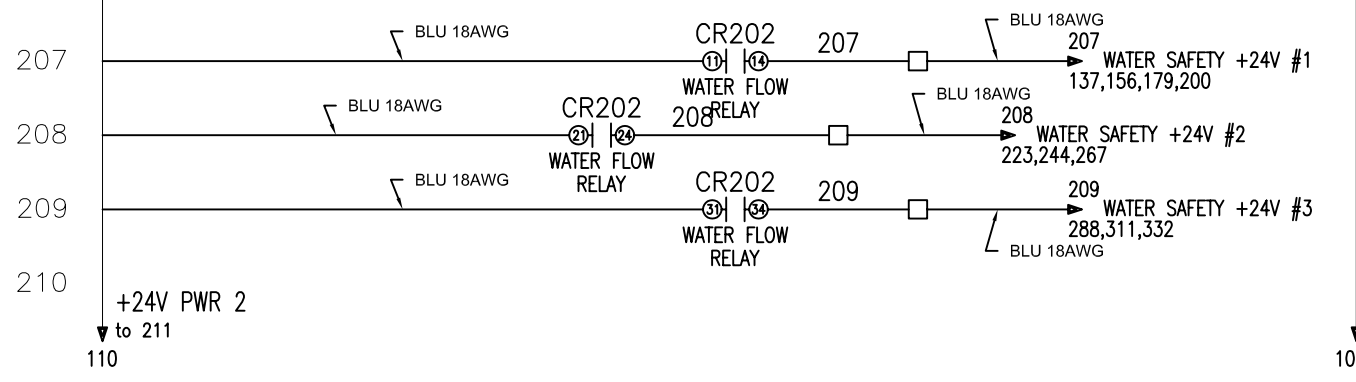
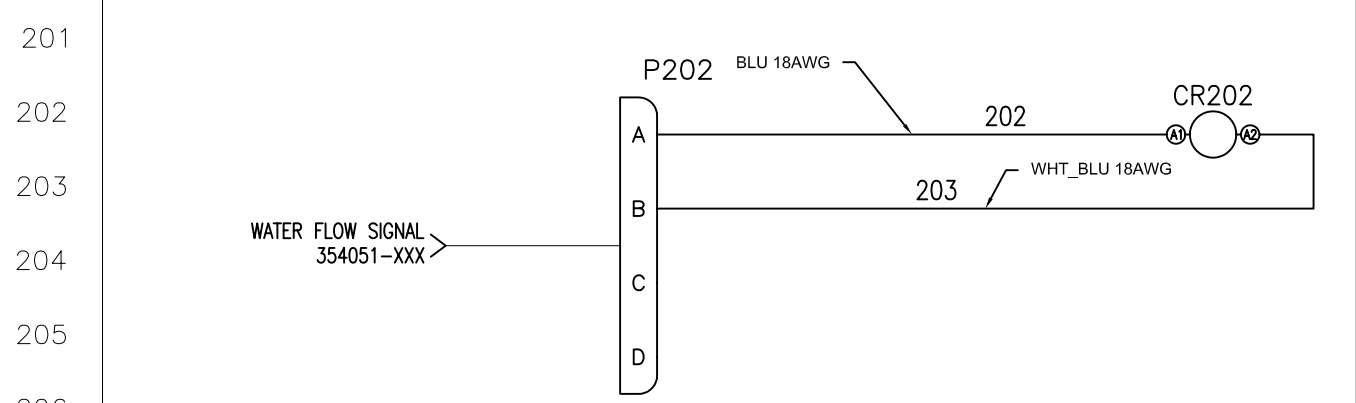
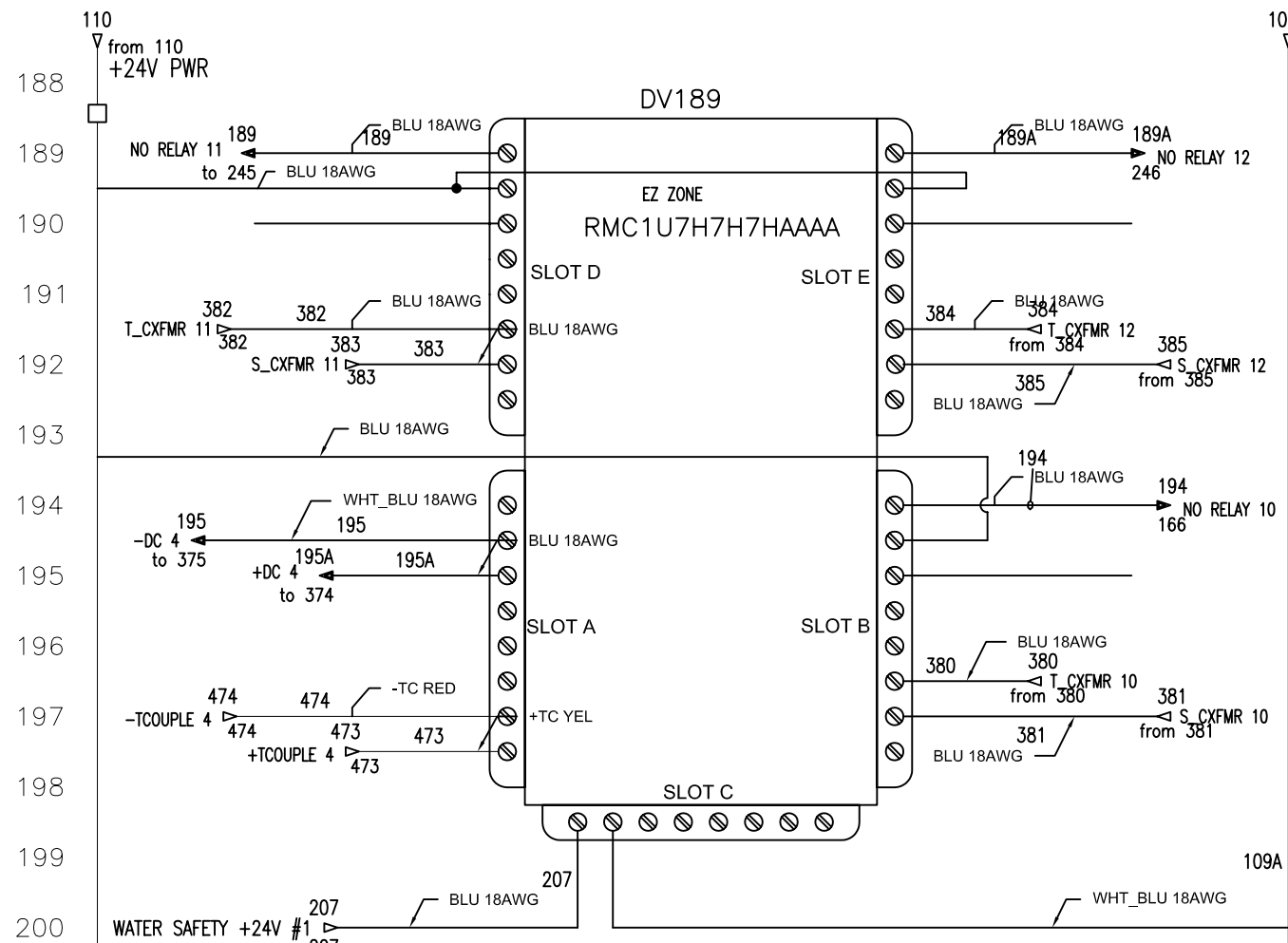
NOTE: CUSTOMER MUST PROVIDE 240 VAC
3-PHASE FUSED DISCONNECT AT 30 AMPS



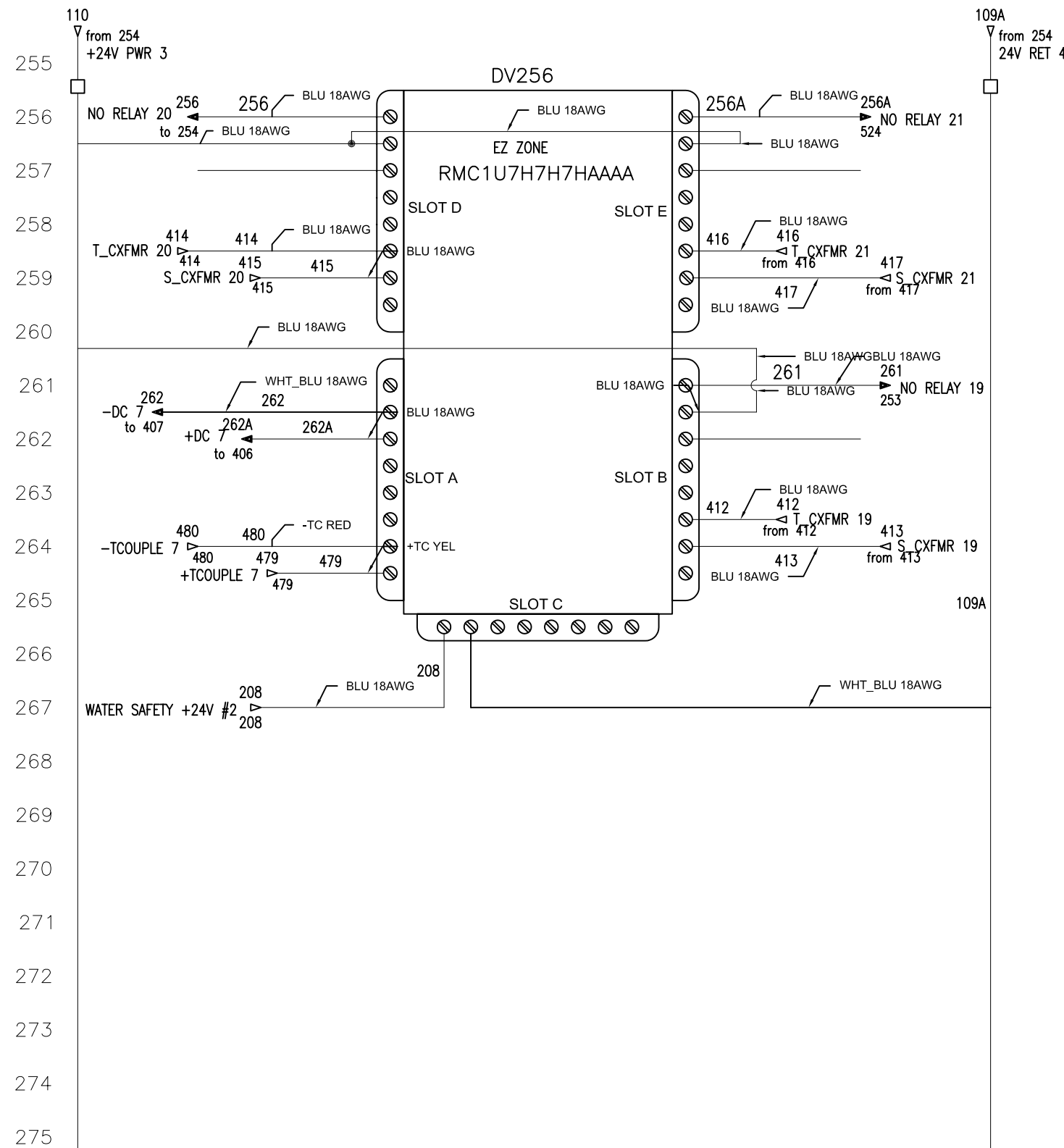
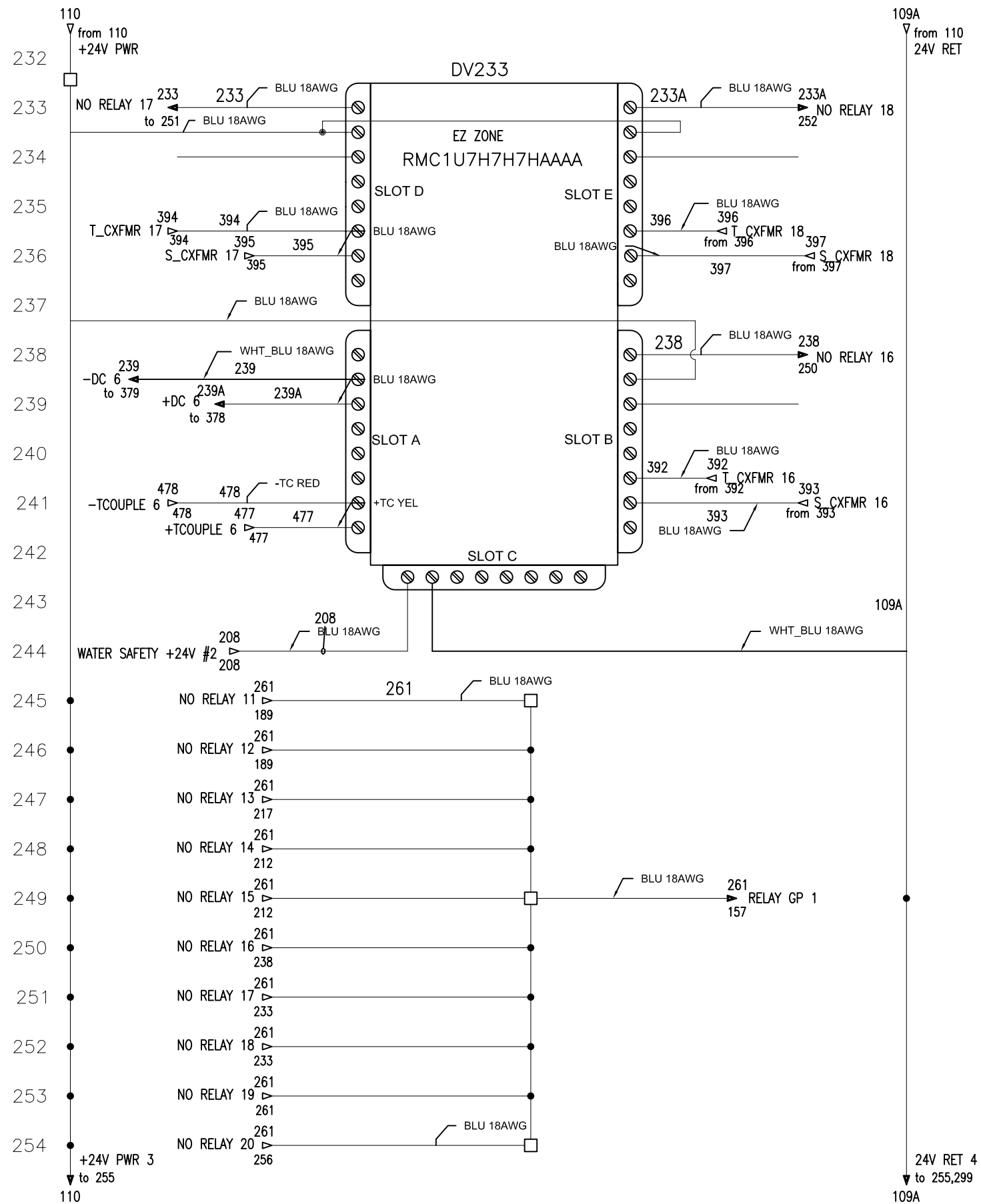
REVISIONS		-TOLERANCES- UNLESS OTHERWISE NOTED		ITC Interlaken TECHNOLOGY CORP	
ADDED WATER SENSOR SAFETY SHUTOFF		.XX	±.03	TITLE: CNRC CONTROLLER BOX SYSTEM CONTROLS	
		.XXX	±.005		
		.XXXX	±.0010		
		ANGLES	±1 deg		
		SURFACE FINISH 125µIN		DFT: DJW	
		REMOVE ALL BURRS AND SHARP EDGES		DATE: 12/10	SIZE: B
MATERIAL: *	STOCK SIZE: *	ENGR: DJW	P/N: 354248-01	REV: B	
FINISH: *		DATE: 12/10	SCALE: 00=00	SHEET 1 OF 10	



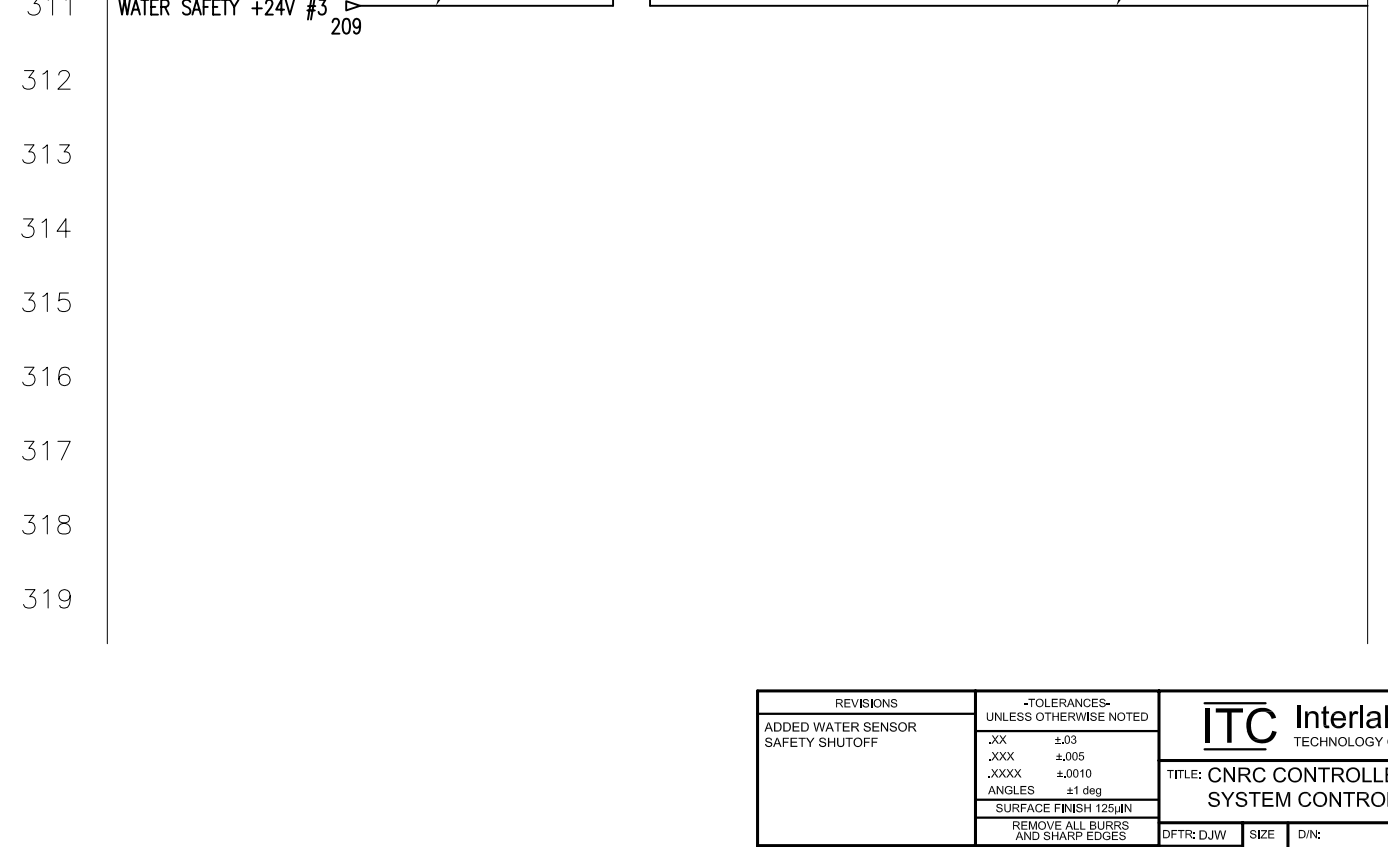
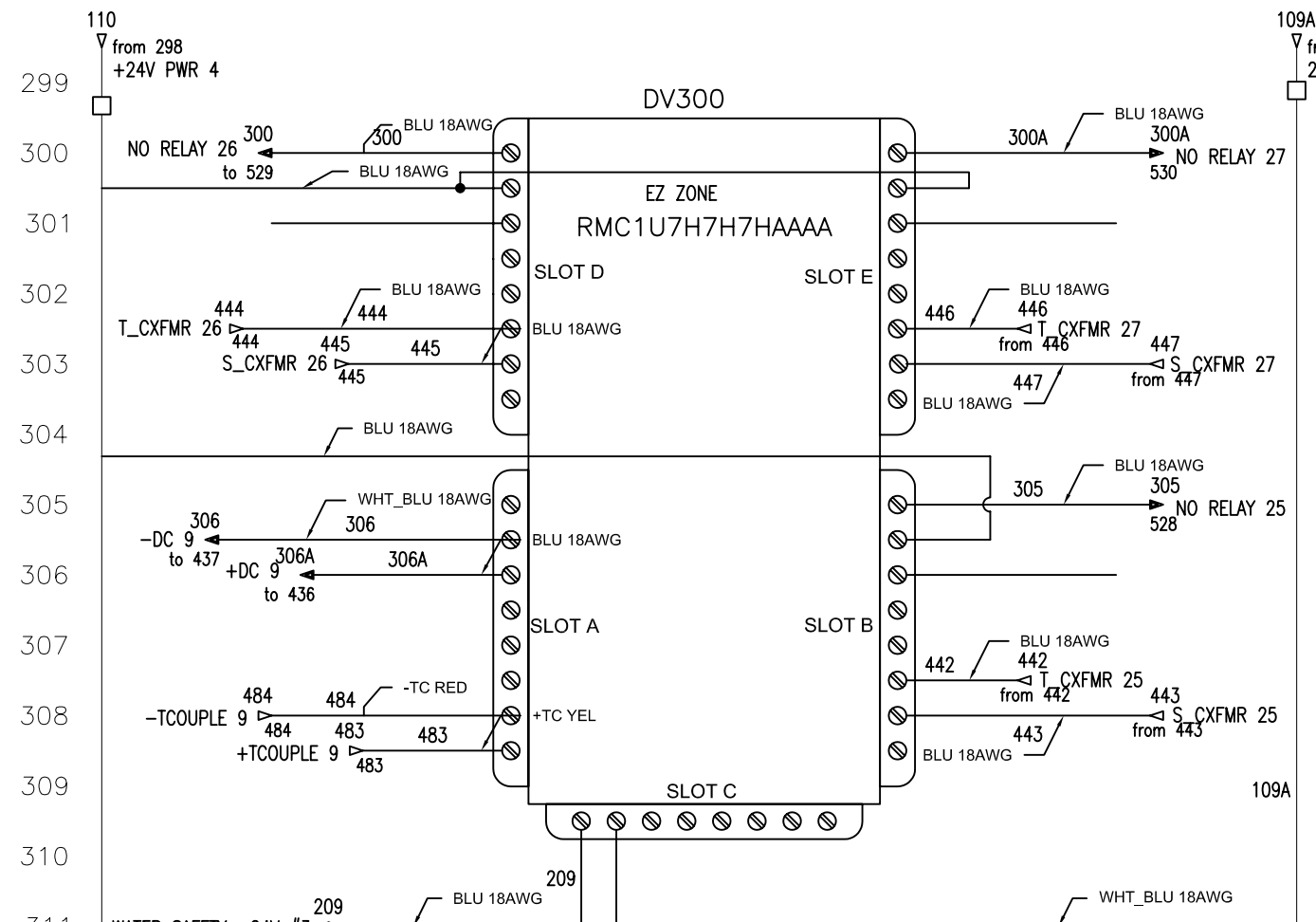
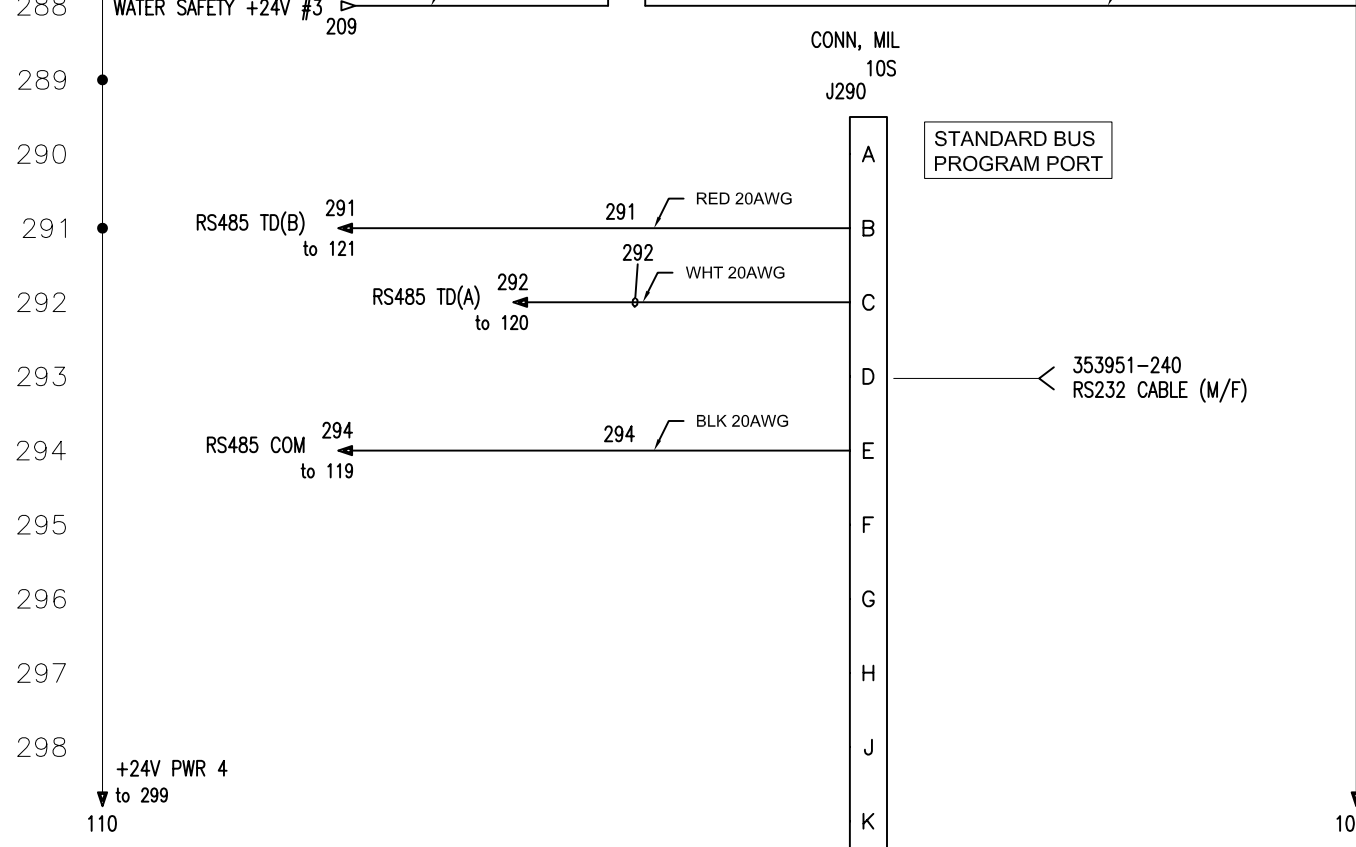
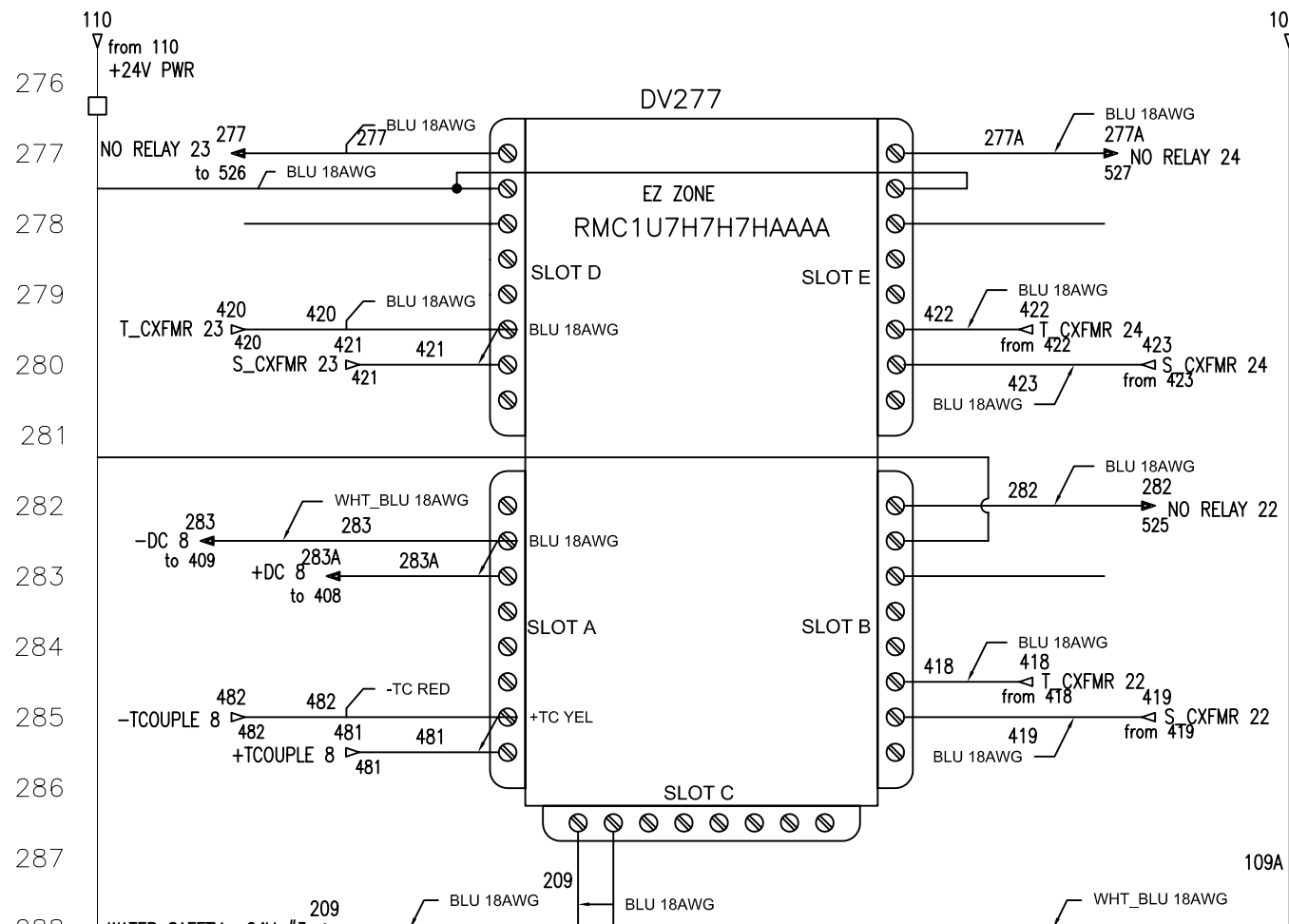
REVISIONS		-TOLERANCES- UNLESS OTHERWISE NOTED		ITC Interlaken TECHNOLOGY CORP	
ADDED WATER SENSOR SAFETY SHUTOFF		.XX ±.03	.XXX ±.005	TITLE: CNRC CONTROLLER BOX SYSTEM CONTROLS	
		.XXX ±.0010	ANGLES ±1 deg	DFTR: DJW	SIZE: B
		SURFACE FINISH 125µIN		DIN: 354248-01	REV: B
		REMOVE ALL BURRS AND SHARP EDGES		DATE: 12/10	
MATERIAL: *	STOCK SIZE: *	ENGR: DJW	PIN: 354248-01	SCALE: 00=00	SHEET 2 OF 10
FINISH: *		DATE: 12/10			



REVISIONS ADDED WATER SENSOR SAFETY SHUTOFF		-TOLERANCES- UNLESS OTHERWISE NOTED .XX ±.03 .XXX ±.005 .XXXX ±.0010 ANGLES ±1 deg SURFACE FINISH 125μIN REMOVE ALL BURRS AND SHARP EDGES		ITC Interlaken TECHNOLOGY CORP	
MATERIAL: * FINISH: *		STOCK SIZE: *		TITLE: CNRC CONTROLLER BOX SYSTEM CONTROLS	
DATE: 12/10		DFTR: DJW	SIZE: B	DIN: 354248-01	REV: B
DATE: 12/10		ENGR: DJW	P/N: 354248-01	SCALE: 00=00	SHEET 3 OF 10



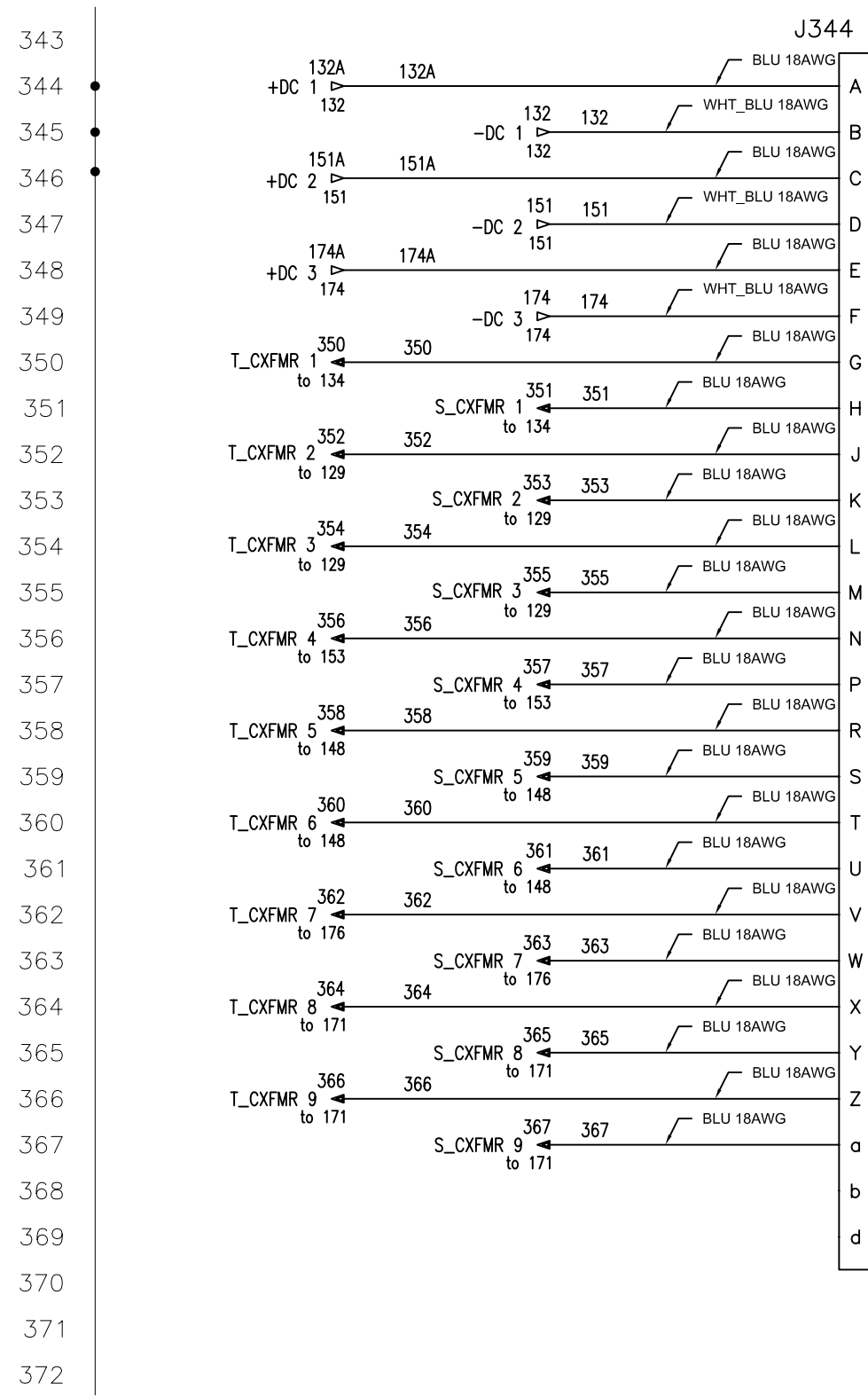
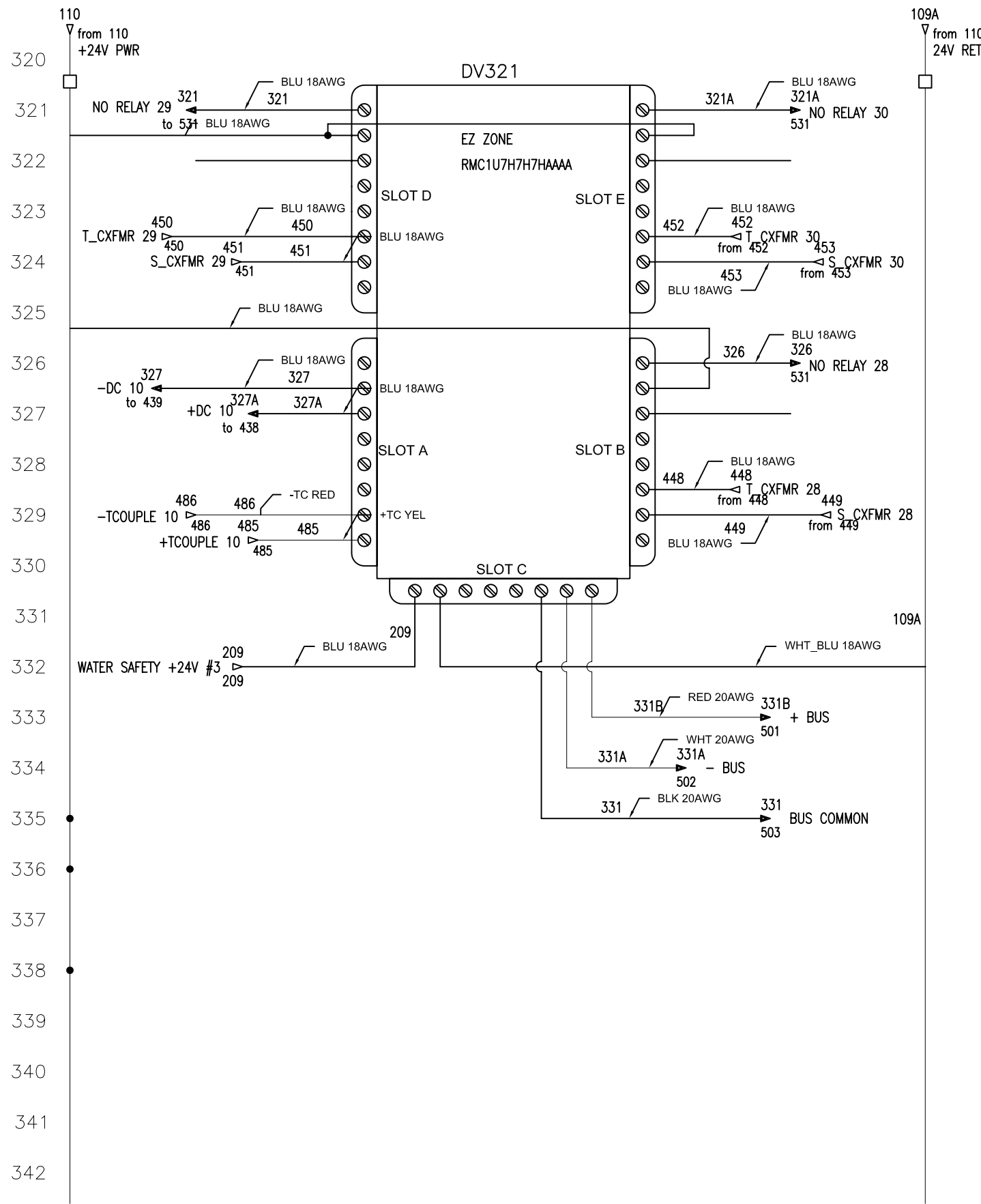
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REVISIONS		-TOLERANCES- UNLESS OTHERWISE NOTED		ITC Interlaken TECHNOLOGY CORP	
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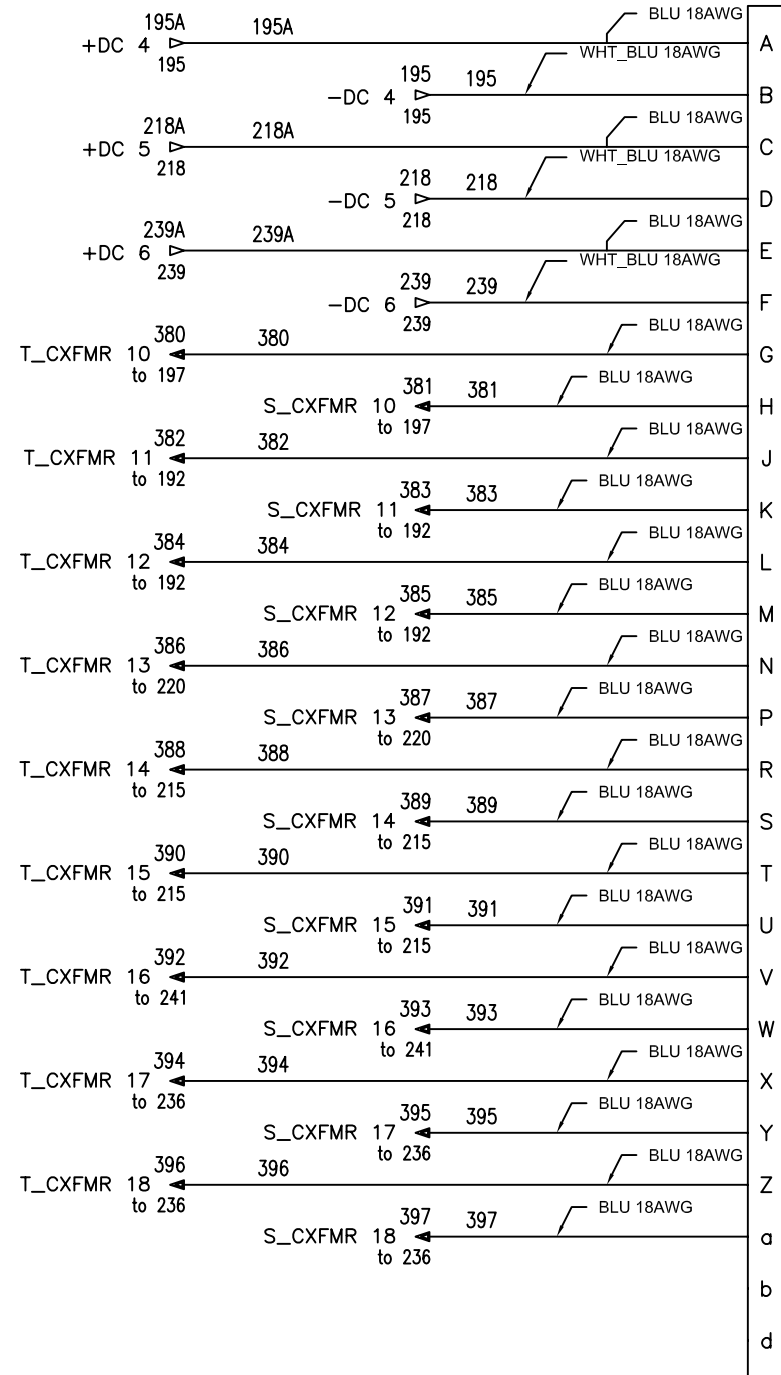


354251-360
UPPER HEATER BOX

REVISIONS		-TOLERANCES- UNLESS OTHERWISE NOTED		ITC Interlaken TECHNOLOGY CORP	
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MATERIAL: *		STOCK SIZE: *		ENGR: DJW	P/N: 354248-01
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CONN, MIL
BLKHD 26S

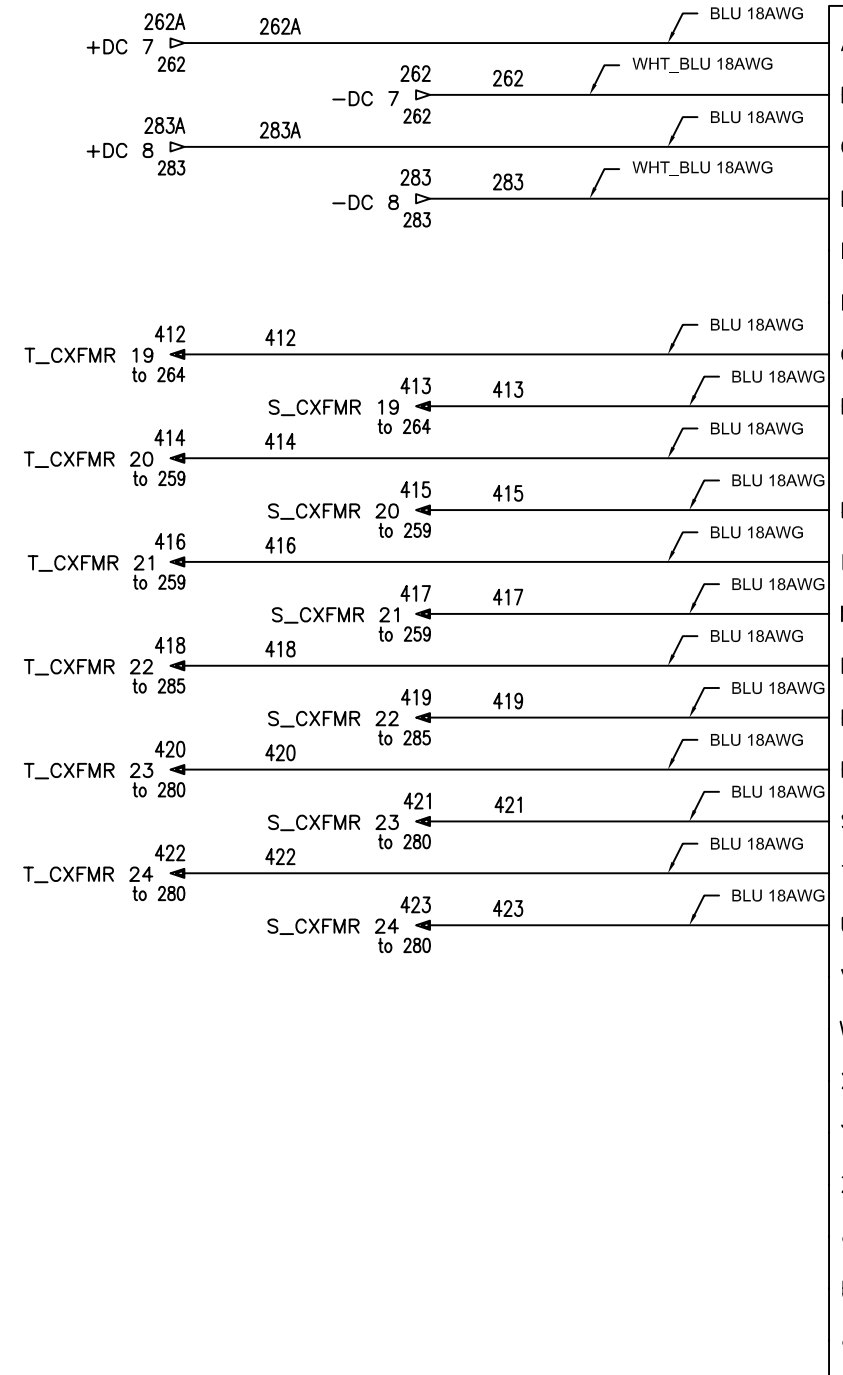
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354251-360
LOWER HEATER BOX

CONN, MIL
BLKHD 26S

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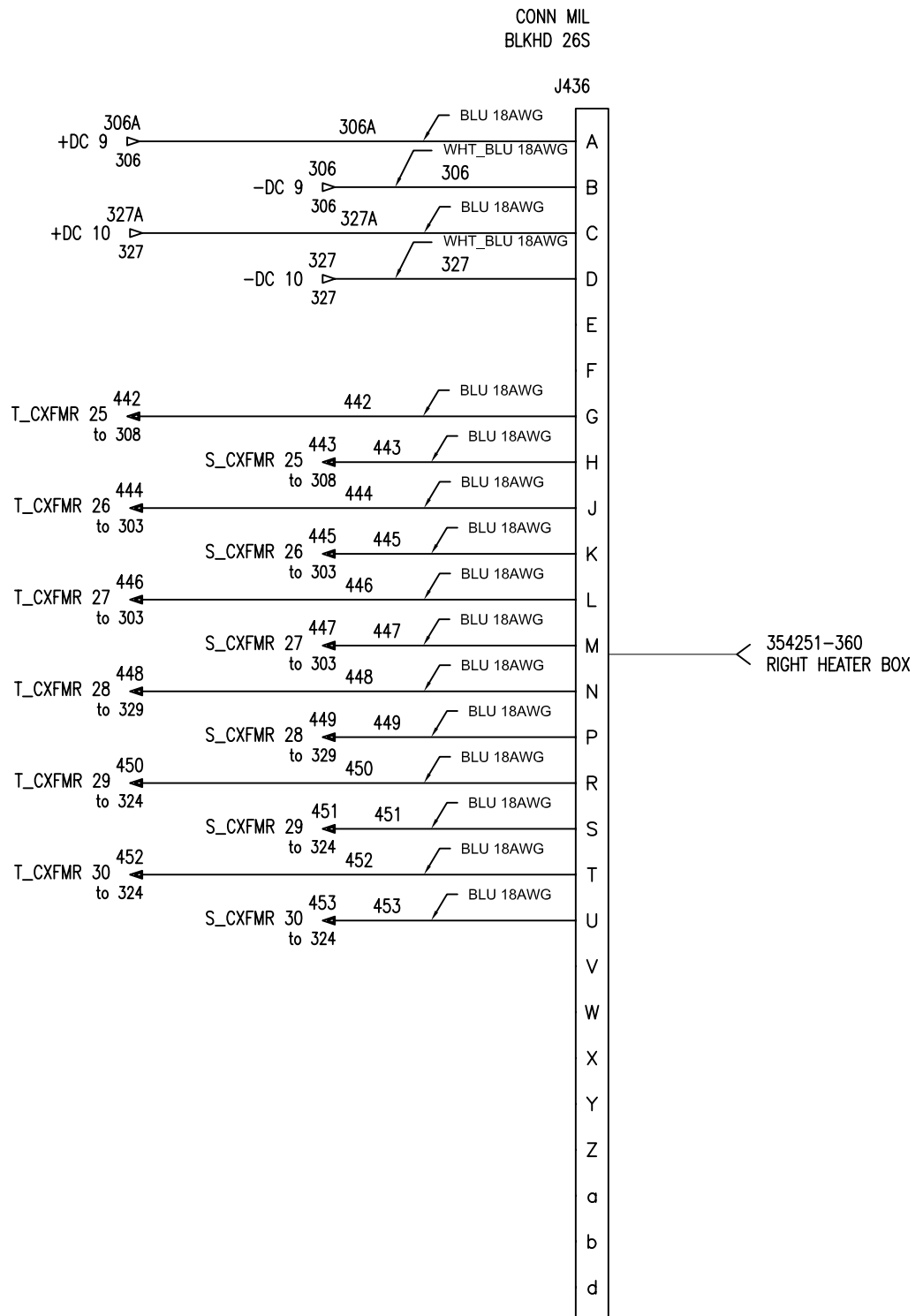
354251-360
LEFT HEATER BOX

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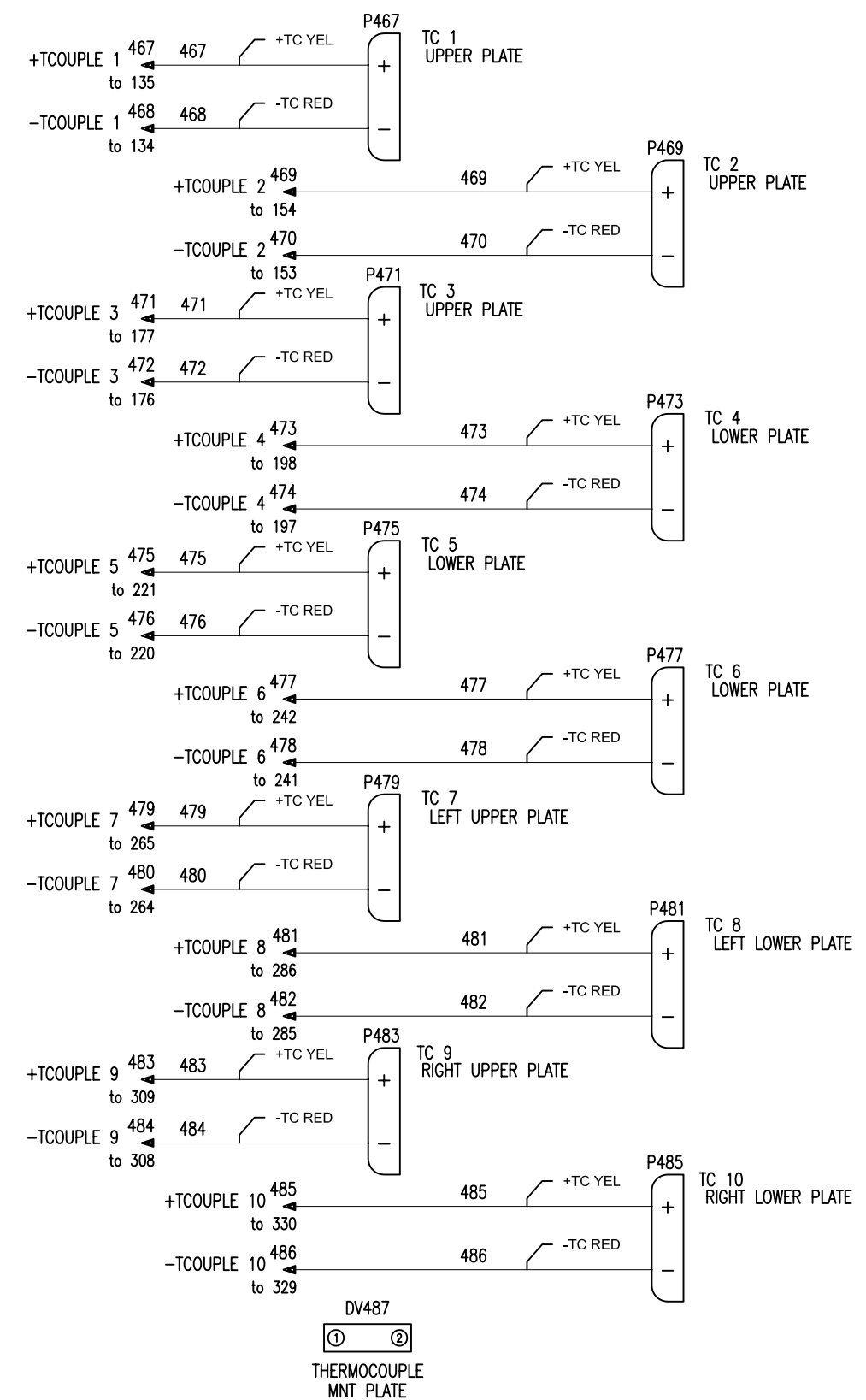
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REVISIONS ADDED WATER SENSOR SAFETY SHUTOFF		-TOLERANCES- UNLESS OTHERWISE NOTED .XX ±.03 .XXX ±.005 .XXXX ±.0010 ANGLES ±1 deg SURFACE FINISH 125µIN		ITC Interlaken TECHNOLOGY CORP	
MATERIAL: *		STOCK SIZE: *		TITLE: CNRC CONTROLLER BOX SYSTEM CONTROLS	
FINISH: *		DFTR: DJW DATE: 12/10	SIZE: B D/N: 354248-01	REV: B	ENGR: DJW DATE: 12/10
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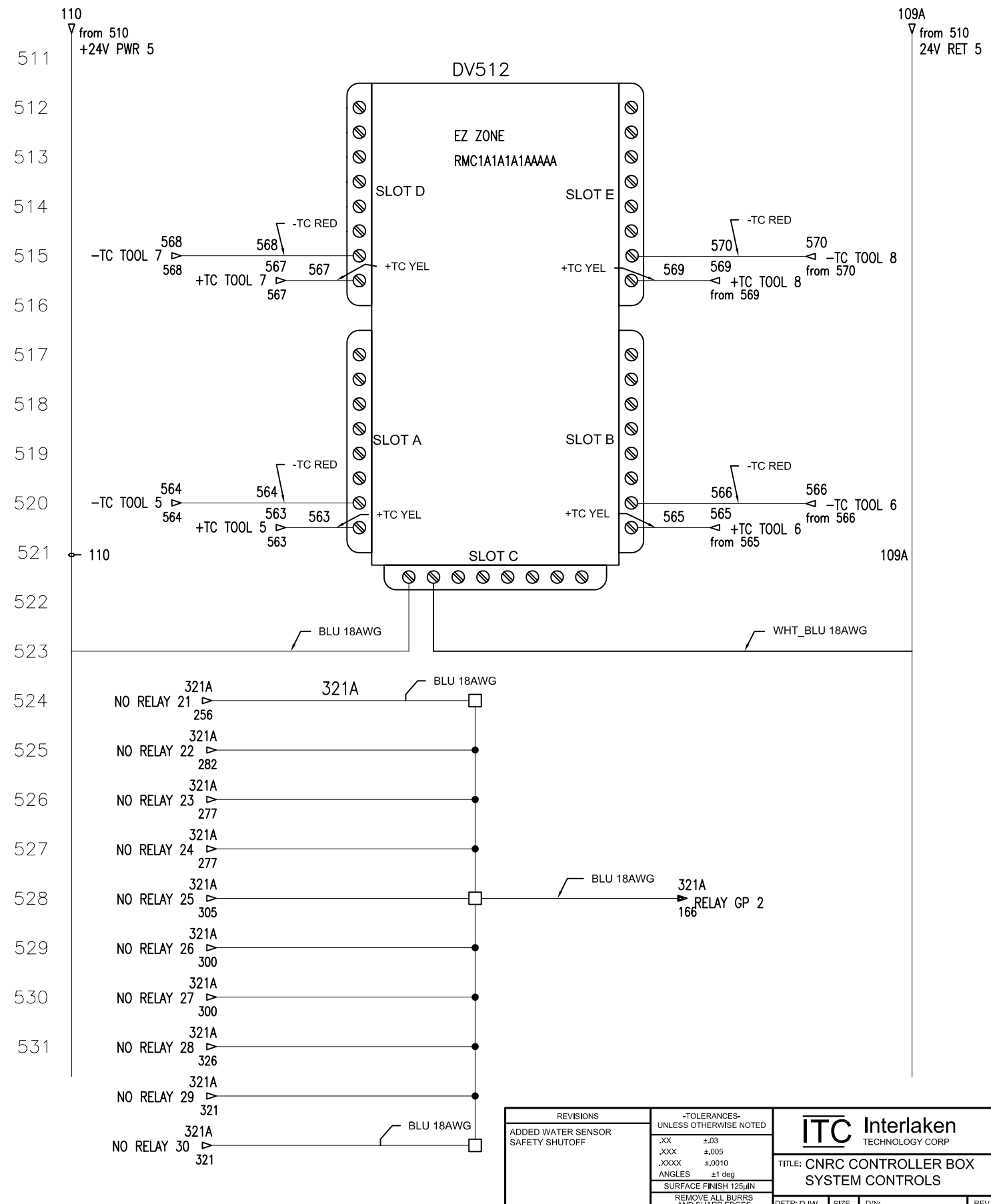
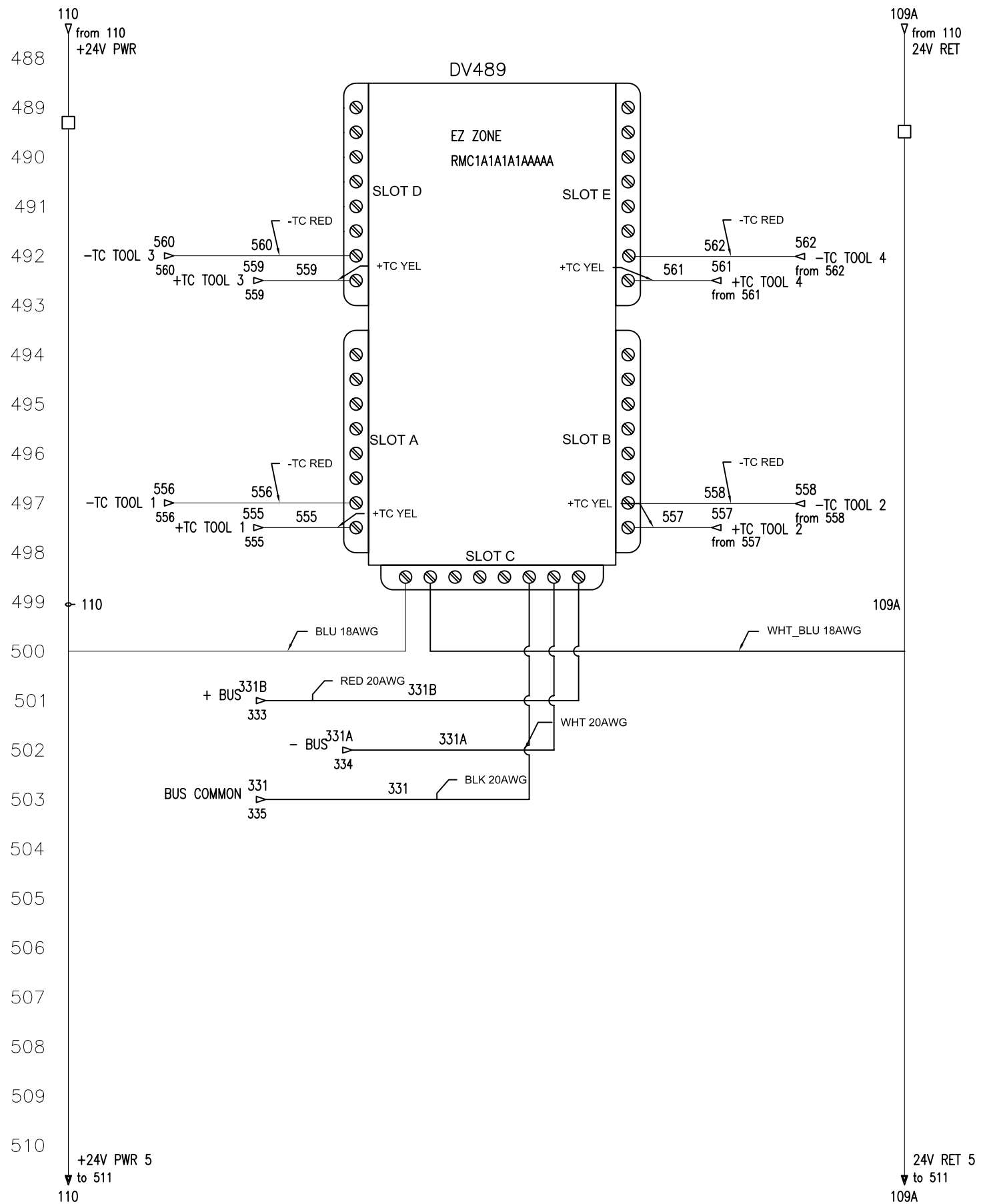
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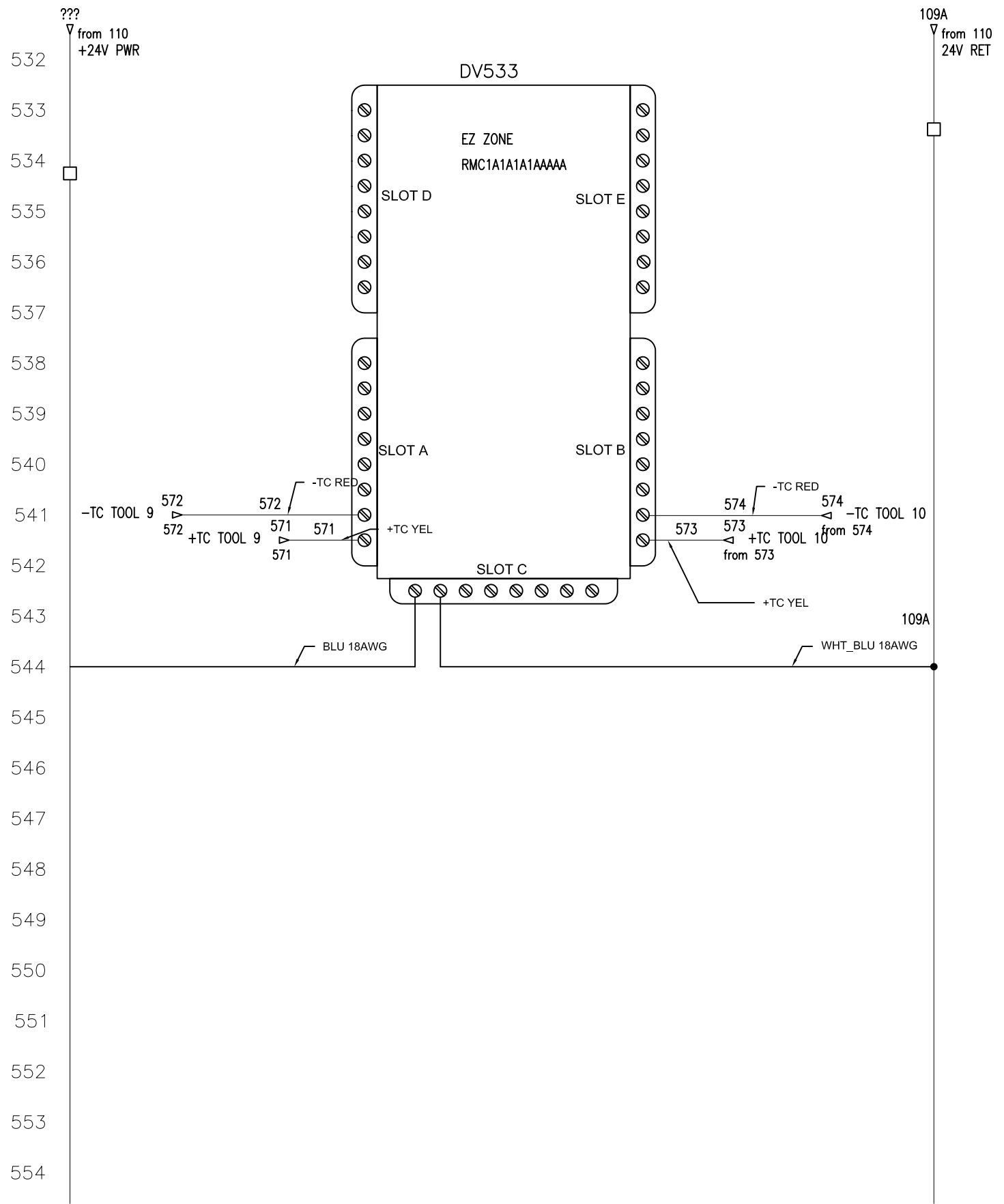
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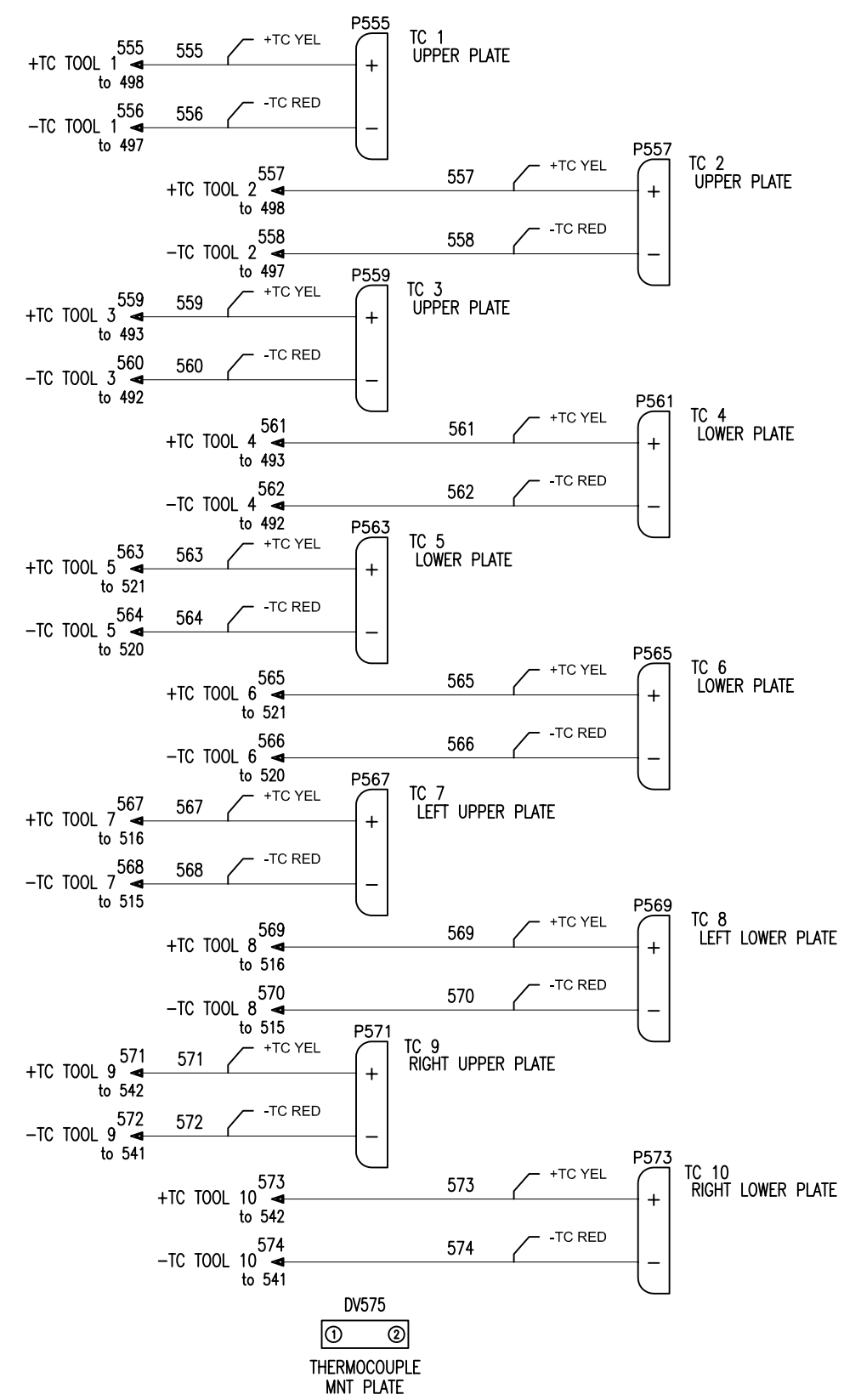
REVISIONS ADDED WATER SENSOR SAFETY SHUTOFF		-TOLERANCES- UNLESS OTHERWISE NOTED .XX ±.03 .XXX ±.005 .XXXX ±.0010 ANGLES ±1 deg SURFACE FINISH 125µIN REMOVE ALL BURRS AND SHARP EDGES		ITC Interlaken TECHNOLOGY CORP	
		TITLE: CNRC CONTROLLER BOX SYSTEM CONTROLS			
MATERIAL: *		STOCK SIZE: *		DFTR: DJW DATE: 12/10	SIZE: B D/N: 354248-01
FINISH: *				ENGR: DJW DATE: 12/10	P/N: 354248-01 SCALE: 00=00 SHEET 8 OF 10



REVISIONS ADDED WATER SENSOR SAFETY SHUTOFF		-TOLERANCES- UNLESS OTHERWISE NOTED .XX ±.03 .XXX ±.005 .XXXX ±.0010 ANGLES ±1 deg SURFACE FINISH 125µIN REMOVE ALL BURRS AND SHARP EDGES		ITC Interlaken TECHNOLOGY CORP	
MATERIAL: * FINISH: *		STOCK SIZE: *		TITLE: CNRC CONTROLLER BOX SYSTEM CONTROLS DFTR: DJW SIZE: B D/N: 354248-01 REV: B ENGR: DJW P/N: 354248-01 DATE: 12/10 SCALE: 00=00 SHEET 9 OF 10	



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DV575
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THERMOCOUPLE
MNT PLATE

REVISIONS ADDED WATER SENSOR SAFETY SHUTOFF		-TOLERANCES- UNLESS OTHERWISE NOTED .XX ±.03 .XXX ±.005 .XXXX ±.0010 ANGLES ±1 deg SURFACE FINISH 125µIN REMOVE ALL BURRS AND SHARP EDGES		ITC Interlaken TECHNOLOGY CORP	
		TITLE: CNRC CONTROLLER BOX SYSTEM CONTROLS			
MATERIAL: *		STOCK SIZE: *		DFTR: DJW DATE: 12/10	SIZE: B D/N: 354248-01
FINISH: *				ENGR: DJW DATE: 12/10	P/N: 354248-01 SCALE: 00=00 SHEET 10 OF 10

Annex F3

Plans and Specifications (A)

Plans (A2)

Insert the document here

The following drawings illustrate the work and form part of the contract documents:

94410-101	Aménagement, Démolition
94410-102	Aménagement, Nouveau
94410-201	Structure, Mezzanine, Vue en plan et détails
94410-202	Structure, Mezzanine, Vue en plan coupes et détails
94410-401	Mécanique, Devis
94410-402	Mécanique, Plomberie et eau refroidie, Démolition
94410-403	Mécanique, Plomberie et eau refroidie, Nouveau
94410-403	Mécanique, Ventilation, Démolition
94410-405	Mécanique, Ventilation, Nouveau
94410-501	Électricité, Démolition et relocalisation
94410-502	Électricité, Nouvel aménagement
94410-503	Électricité, Démolition et schéma unifilaire
94410-504	Électricité, Démolition et schéma bloc contrôles

CENTRE DE TECHNOLOGIE DE L'ALUMINIUM

OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1



National Research
Council Canada

Conseil national
de recherches Canada

Administrative Services
and Property Management
Branch

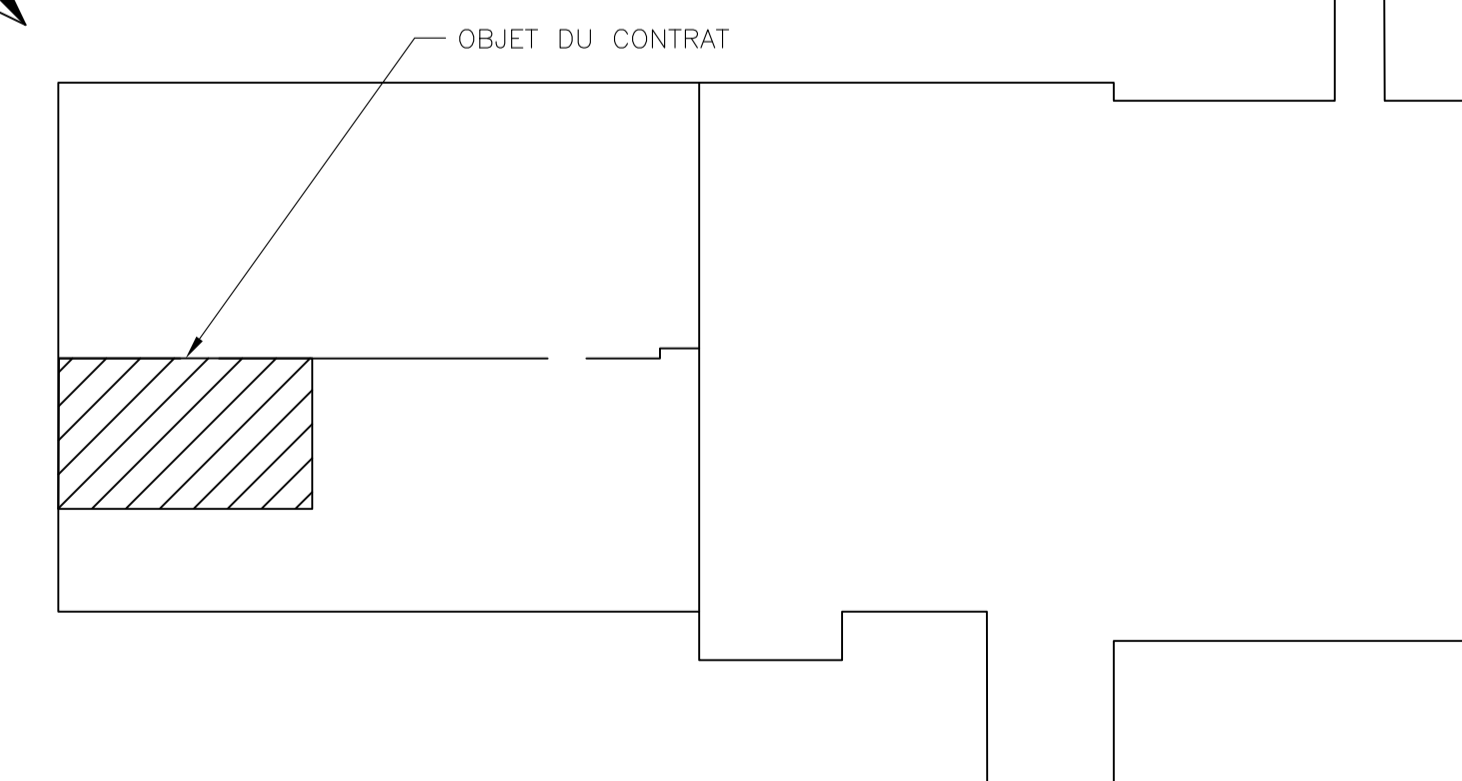
Division des services
administratifs et gestion
de l'immobilier

NRC · CNRC

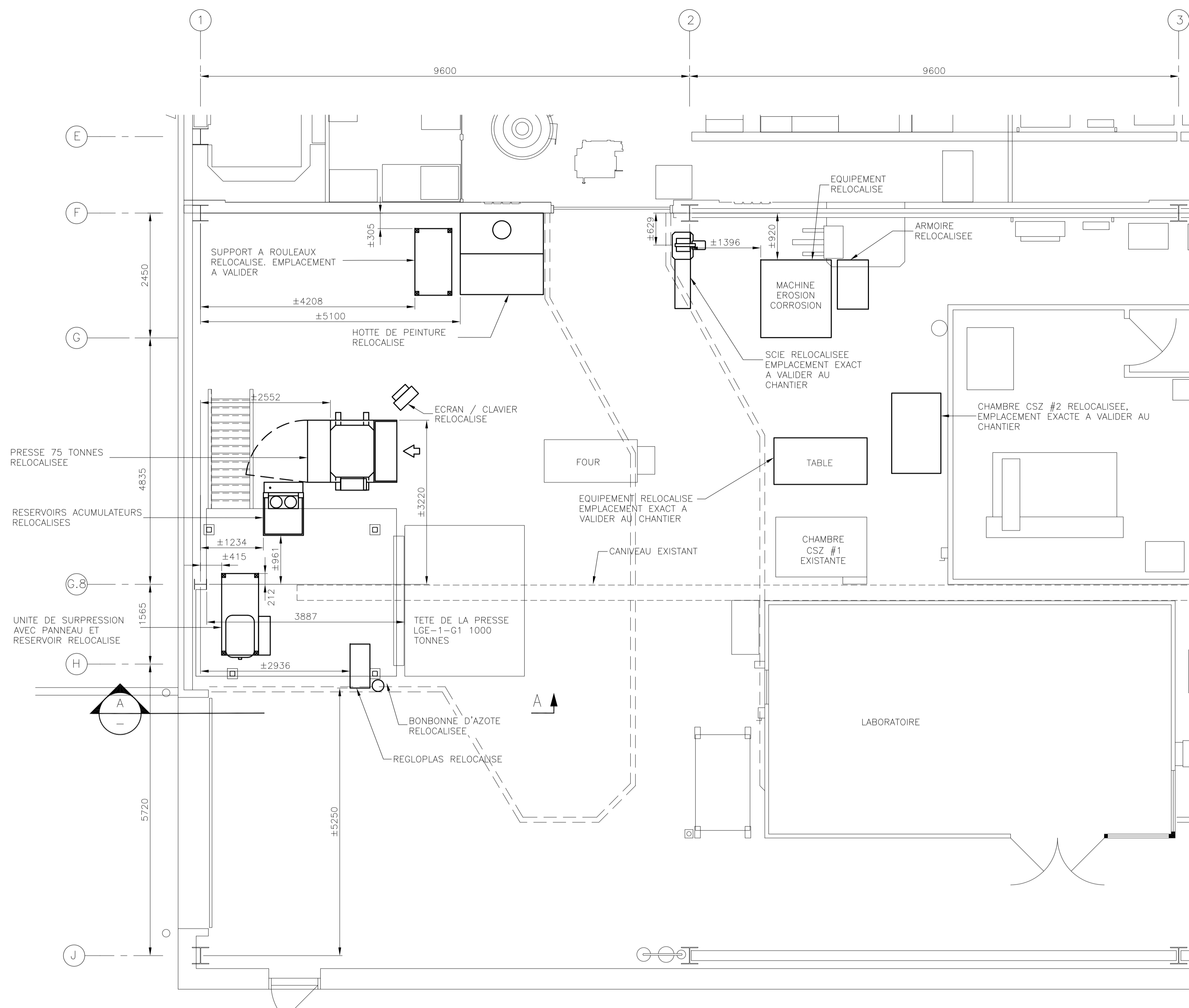
AMENAGEMENT / STRUCTURE
MECANIQUE / ELECTRICITE
POUR SOUMISSION

LISTE DE PLANS

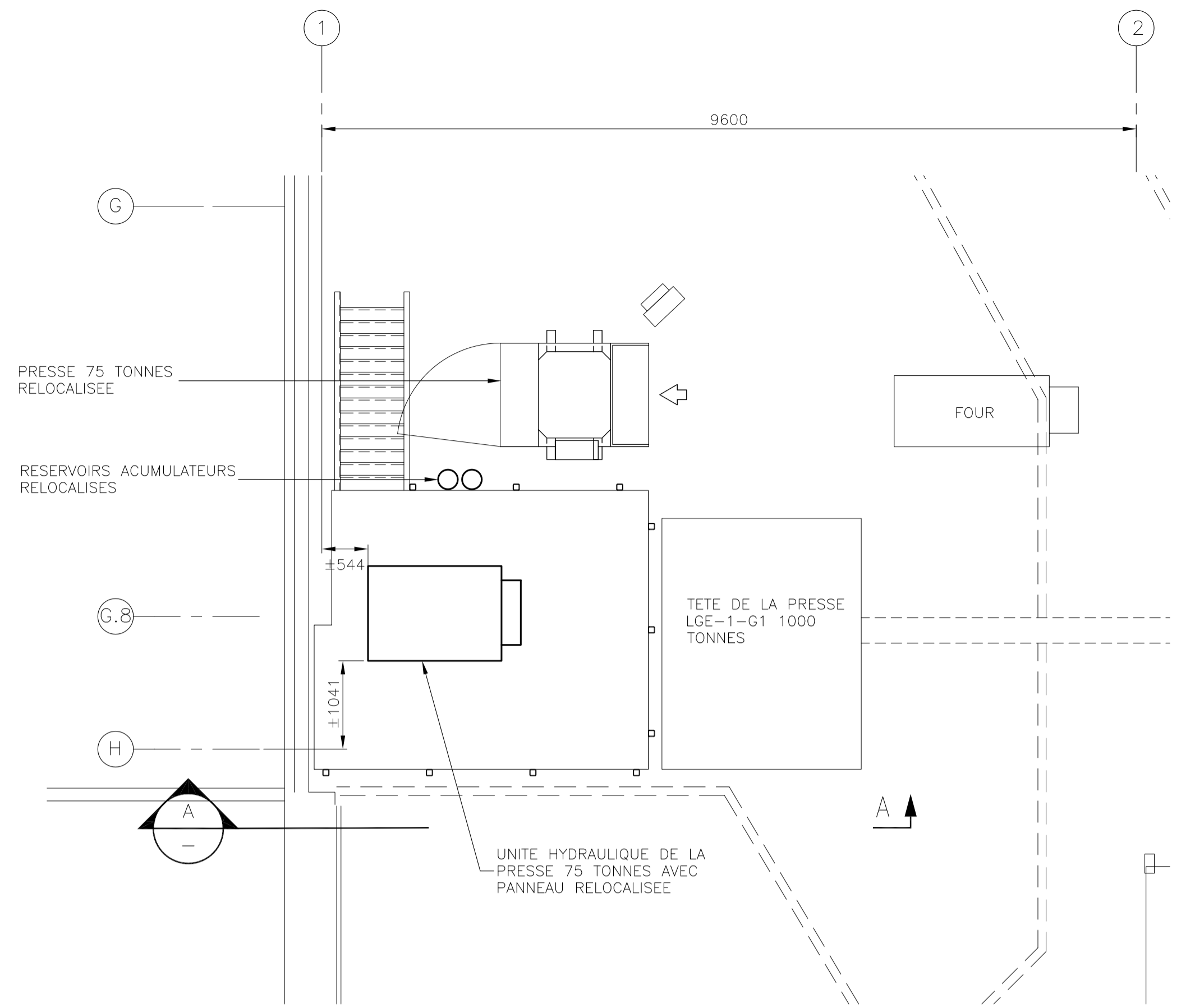
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100	AMENAGEMENT-STRUCTURE MECANIQUE-ELECTRIQUE	-	-	LISTE DE PLANS
AMENAGEMENT				
101	AMENAGEMENT	DEMOLITION	REZ-DE-CHAUSSEE	VUE EN PLAN
102	AMENAGEMENT	NOUVEAU	REZ-DE-CHAUSSEE ET MEZZANINE	VUES EN PLAN ET COUPE
STRUCTURE				
201	ACIER	NOUVEAU	MEZZANINE	VUE EN PLAN & DETAIL
202	ACIER	NOUVEAU	MEZZANINE	VUE EN PLAN, COUPES & DETAIL
MECANIQUE				
401	MECANIQUE	-	-	DEVIS
402	PLOMBERIE - EAU REFROIDIE	DEMOLITION	REZ-DE-CHAUSSEE	VUE EN PLAN
403	PLOMBERIE - EAU REFROIDIE	NOUVEAU	REZ-DE-CHAUSSEE ET MEZZANINE	VUES EN PLAN
404	VENTILATION	DEMOLITION	REZ-DE-CHAUSSEE	VUE EN PLAN
405	VENTILATION	NOUVEAU	REZ-DE-CHAUSSEE	VUE EN PLAN
ELECTRICITE				
501	DISTR. ELECTRIQUE ET CONTROLE	DEMOLITION & RELOC.	REZ-DE-CHAUSSEE	VUE EN PLAN
502	DISTR. ELECTRIQUE ET CONTROLE	NOUVEL AMENAGEMENT	RDC ET MEZZANINE	VUES EN PLAN
503	-	DEMOLITION ET NOUVEAU	-	SCHEMAS UNIFILAIRES
504	CONTROLE DES PRESSES	DEMOLITION ET NOUVEAU	-	SCHEMAS BLOC



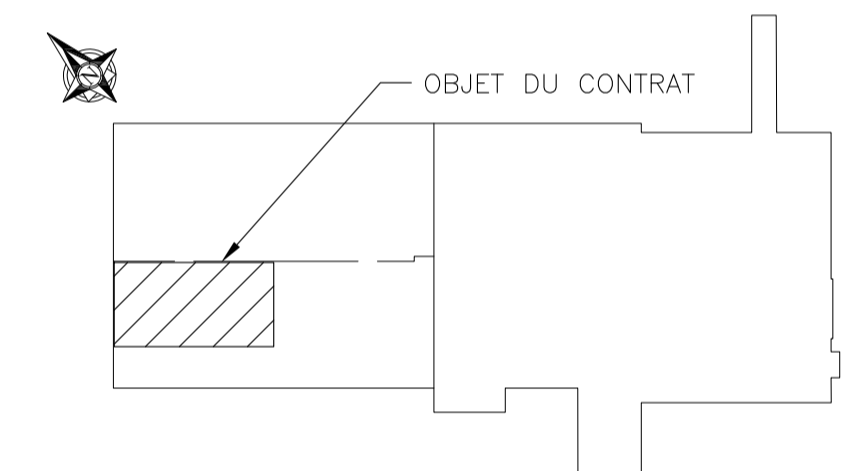
PLAN GUIDE
ECH. : AUCUNE



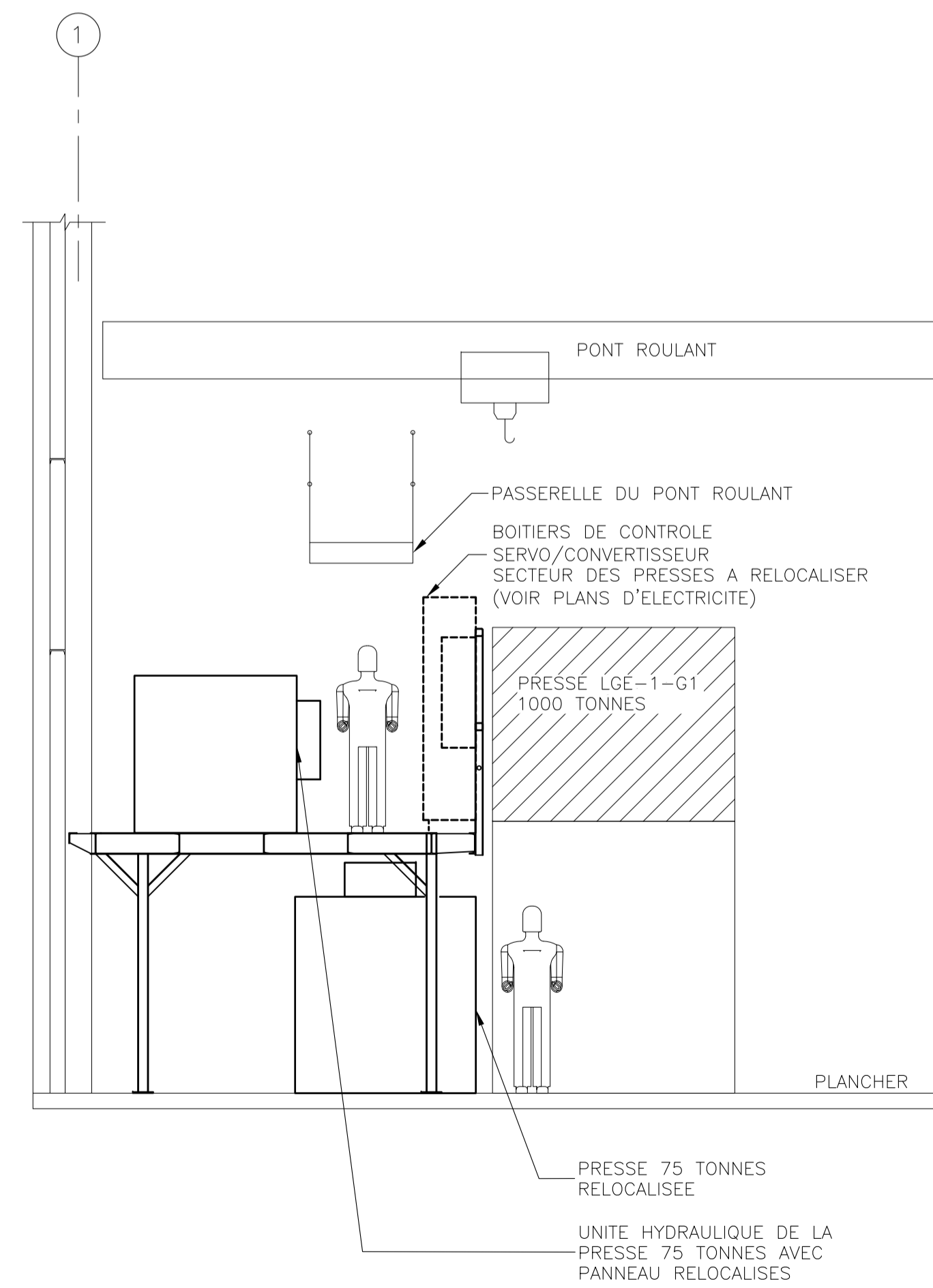
VUE EN PLAN - REZ-DE-CHAUSSÉE
ECHELLE: 1:50



VUE EN PLAN - MEZZANINE
ECHELLE: 1:50



PLAN GUIDE
ECH. : AUCUNE

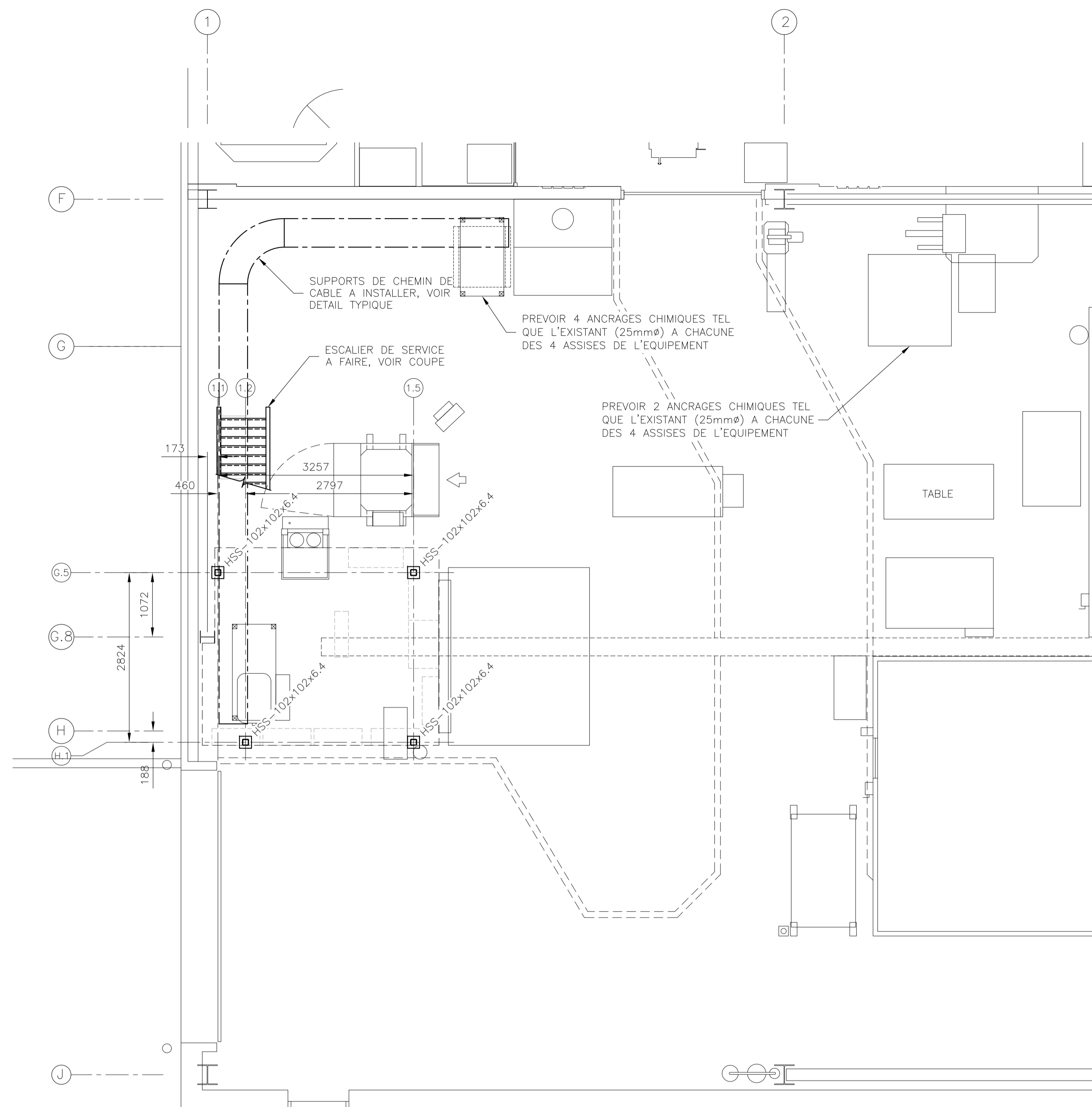


COUPE
ECHELLE 1:50

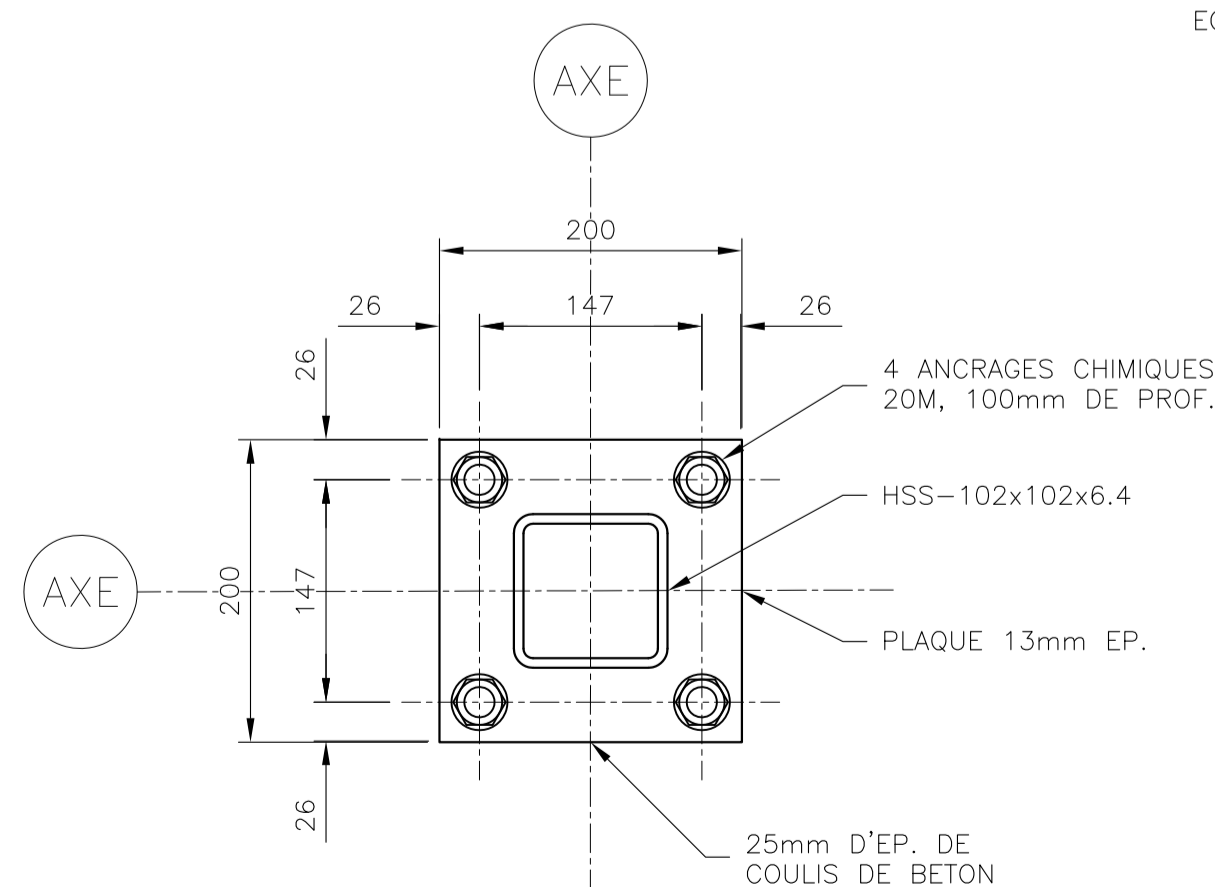
IMPORTANT:
 AVANT DE DEBUTER LES TRAVAUX DE DEMANTELEMENT, LE PROPRIETAIRE DOIT EFFECTUER UNE DEMONSTRATION EN PRESENCE DE L'ENTREPRENEUR ET DE SES SOUS-TRAITANTS DU BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS TOUCHES AU PROJET. SOULIGNER TOUTES DEFICIENCES EXISTANTES SUR LES EQUIPEMENTS AVANT LE DEBUT DES TRAVAUX.
 A LA FIN DES TRAVAUX, LE PROPRIETAIRE DOIT EFFECTUER DES ESSAIS SIMILAIRES AFIN DE CONFIRMER LE BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS. L'ENTREPRENEUR DOIT PREVOIR DANS SA SOUMISSION D'ETRE PRESENT LORS DE CES PERIODES.
 LES EQUIPEMENTS TOUCHES PAR LE PROJET DOIVENT FONCTIONNER DE MANIERE OPTIMALE TEL QUE DEMONTRE LORS DE L'ESSAI INITIAL. L'ENTREPRENEUR ET SES SOUS-TRAITANTS SONT TENUS DE CORRIGER TOUTES DEFICIENCES AYANT PU SURVENIR SUR LES EQUIPEMENTS PENDANT LES TRAVAUX. ASSUMER TOUS LES FRAIS REQUIS.

- NOTES:**
1. INSTALLER LES EQUIPEMENTS SELON LES INSTRUCTIONS DU MANUFACTURIER.
 2. L'EMPLACEMENT EXACTE DES EQUIPEMENTS EST A VALIDER AU CHANTIER AVEC LE CLIENT.

OO	2018/07/20	POUR SOUMISSION	MRB
NO.	DATE	DESCRIPTION	PAR
REVISIONS			
POUR :		Sceau:	
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<input type="checkbox"/> DÉFINITIFS	<input checked="" type="checkbox"/> SOUMISSION		
<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> TEL QUE CONSTRUIT	Date:	
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EXPERTS-CONSEILS / CONSULTANTS			
1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574 927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574			
Client	CENTRE DE TECHNOLOGIE DE L'ALUMINIUM		
Projet	OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1		
Titre	AMENAGEMENT NOUVEAU REZ-DE-CHAUSSÉE ET MEZZANINE VUES EN PLAN ET COUPE		
Dessiné par	Chargé de projet	Ing. responsable	
M. BELLEY	A. PILOTE	M-A TREMBLAY	
Vérifié par	Chef de discipline	Date de réalisation	
M-A TREMBLAY	P. MORIN	AOÛT 2017	
Echelle	A1 - 94410 - 102		Rev: 00
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REZ-DE-CHAUSSEE
VUE EN PLAN
ECHELLE: 1:50



PLAQUE DE BASE
DETAIL TYPIQUE
ECHELLE: 1:5

NOTES POUR LE BETON

CARACTERISTIQUES DU BETON:

- COULIS SANS RETRAIT: PRODUIT PRE MELANGE CONTENANT UN GRANULAT NATUREL NON OXYDABLE, DU CIMENT, UN PLASTIFIANT ET UN REDUCTEUR D'EAU. LA RESISTANCE DU COULIS A 28 JOURS DOIT EXCEDER 50 MPA.

NOTES POUR L'ACIER:

- LES DIMENSIONS SONT DONNEES AU CENTRE DES PROFILES W, WT, S ET HSS ET AU DOS DES PROFILES C ET L (S.I.C.).
- A MOINS D'ETRE REQUIS SUR LES DESSINS, LES ASSEMBLAGES SOUDES AU CHANTIER SONT PROSCRITS.
- TOUTS LES ASSEMBLAGES BOULONNES DE LA CHARPENTE DOIVENT COMPORTER AU MOINS 2 BOULONS M20, S.I.C.
- LES ASSEMBLAGES DES CONTREVENTEMENTS DOIVENT ETRE DE TYPE CONTACT «BEARING».
- LES EXTREMITES DES PROFILES HSS SONT SCHELLES A L'AIDE DE PLAQUES 6mm D'EPaisseur MINIMALE. PREVOIR UN TROU DE DRAINAGE AU POINT BAS.
- LES GOUSSETS ET CORNIERES DE CONNEXION DOIVENT AVOIR UNE EPAISSEUR MINIMALE DE 10mm.
- LES TRAVAUX DE SOUDAGE DOIVENT ETRE CONFORMES AUX NORMES W48.1 ET W59. CEUX-CI DOIVENT ETRE REALISES PAR UN ENTREPRENEUR CERTIFIE W47.1.
- TOUT JOINT DE SOUDURE EXPOSE A L'EXTERIEUR DOIT ETRE SCHELLE SUR TOUTE LA LONGUEUR.
- LES MEMBRURES DES CONTREVENTEMENTS SONT DANS UN MEME PLAN ET ATTACHEES AU CENTRE.
- POSER DES CALES D'AJUSTEMENT EN ACIER AFIN DE NIVELER LORS DE LA POSE D'ELEMENTS DE STRUCTURE D'ACIER SUR DES SURFACES DE BETON INEGALES. UN COULIS SANS RETRAIT SERA A POSER AU BESOIN.
- LES FILETS DES BOULONS D'ANCRAGE DOIVENT ETRE DE TYPE UNC ET LES DIMENSIONS DOIVENT SUIVRE LA NORME ANSI B1.1.
- UN GABARIT DE POSE SUPERIEUR OU INFERIEUR POUR LES BOULONS D'ANCRAGE EST OBLIGATOIRE. FOURNIR LES GABARITS ET LES BOULONS D'ANCRAGE POUR LA POSE DANS LES COFFRAGES PAR L'ENTREPRENEUR RESPONSABLE DU BETONNAGE.

EFFORTS A UTILISER DANS LE CALCUL DES ASSEMBLAGES:

- POUTRES: 65 % DE LA CHARGE REPARTIE CORRESPONDANT AU MOMENT MAXIMAL POUVANT ETRE REPRIS PAR LA SECTION LORSQUE PLEINEMENT RETENUE.
- COLONNES: CHARGE CORRESPONDANT A AG*FY DE LA MEMBRURE.
- CONTREVENTEMENT EN TRACTION SEULEMENT: 110 % DE LA RESISTANCE EN COMPRESSION ON DE LA MEMBRURE.
- CONTREVENTEMENT EN TRACTION-COMPRESSION: 110 % DE LA RESISTANCE EN COMPRESSION DE LA MEMBRURE.
- POUR LES CONFIGURATIONS EN X, LA LONGUEUR DE FLAMBEMENT DE LA PIECE COMPRIMEE PEUT ETRE DE PRISE EGALE A L/2 (K=0,5).

NUANCES D'ACIER:

- PROFILES «C» ET «L»: CAN/CSA-G40.21, NUANCE 300W.
- SECTIONS «W» ET «WT»: CAN/CSA-G40.21, NUANCE 350W OU ASTM A992 GRADE 50.
- SECTION «HSS»: CAN/CSA-G40.21, NUANCE 350W CATEGORIE C.
- TUYAU: ASTM A53.
- PLAQUES: CAN/CSA-G40.21, NUANCE 300W.
- BOULONS, ECROUS ET RONDELLES: ASTM A325.

POUTRES ET COLONNES D'ACIER:

- SOUMETTRE POUR REVUE LES DESSINS D'ATELIER ET LES CALCULS DES POUTRES AVANT FABRICATION. CES DERNIERS DOIVENT ETRE SIGNES ET SCHELLES PAR UN MEMBRE EN REGLE DE L'O.I.Q.

PEINTURE:

- 1 COUCHE D'APPRET
- 2 COUCHES DE PEINTURE DE TYPE "COROSTOP" JAUNE SECURITE LUSTRE, 6 MILS EP.

CORNIERES:

- ATTACHER LES CORNIERES EN ETOILE A UN ESPACEMENT CORRESPONDANT AU TIERS DE LA PORTEE DE LA MEMBRURE.
- LES EFFORTS AXIAUX SONT INDICES (+) TENSION ET (-) COMPRESSION.

EPAISSEURS MINIMALES:

- PLAQUES DE GOUSSET: 10mm EP.
- AUTRES ACIERS: 6mm EP.

POSE DES PLAQUES ET CONTREVENTEMENTS:

- POSER LES PLAQUES DE BASE DES COLONNES SUR LES CALES D'ACIER DE FAÇON A PERMETTRE LA POSE DU COULIS SANS RETRAIT. L'USAGE DE COINS DE BOIS N'EST PAS PERMIS.
- ENLEVER LES ASPERITES SUR LES SURFACES DE BETON AUX ENDROITS PREVUS POUR LA POSE DE PLAQUES D'ASSEMBLAGE, CALER LES PLAQUES DANS UNE COUCHE DE COULIS SANS RETRAIT POUR ASSURER UN CONTACT UNIFORME SUR LA PAROI DE BETON. AUCUNE PLAQUE D'ACIER NE DOIT ETRE BOULONNEE DIRECTEMENT SUR DU BETON DURCI.
- INFORMER L'INGENIEUR DE TOUTE DIFFICULTE DANS LA REALISATION DES ASSEMBLAGES ET SUIVRE SES DIRECTIVES DIRECTEMENT SUR DU BETON DURCI.
- LES CONTREVENTEMENTS VERTICAUX SONT LOCALISES DANS L'AXE DES COLONNES.

FLECHES:

- TOIT: L/360.
- H/200 AU CENTRE DES COLONNES.

DESSINS POUR FABRICATION:

- LES DESSINS D'ATELIER DOIVENT ETRE PREPARES ET SCHELLES PAR UN INGENIEUR SPECIALISE EN STRUCTURE, EN PLUS, LES DESSINS DOIVENT ETRE SOUMIS POUR REVUE AVANT LE DEBUT DE LA FABRICATION.

NOTES GENERALES:

- TOUTES LES NOTES DE CE PLAN S'APPLIQUENT A TOUS LES PLANS DE STRUCTURE.
- L'ENTREPRENEUR DOIT UTILISER LES COTES INDIQUEES AUX PLANS; IL NE DOIT PAS MESURER A L'ECHELLE SUR LES PLANS, ET NE DOIT PAS SE BASER SUR CETTE FAÇON DE FAIRE POUR DEMANDER DES COUTS SUPPLEMENTAIRES.
- L'ENTREPRENEUR DOIT EGALEMENT AVOIR VISITE AU PREALABLE LE SITE DES TRAVAUX ET AVOIR PRIS CONNAISSANCE DES CONDITIONS ACTUELLES DES LIEUX AVANT DE SOUMISSIIONNER.
- AU DEBUT DES TRAVAUX, L'ENTREPRENEUR DOIT VERIFIER AU CHANTIER TOUT ENCOMBREMENT NON PREVU AUX DESSINS ET POUVANT AFFECTER LES TRAVAUX. AVISER LE CLIENT, LE CAS ECHEANT.
- L'ENTREPRENEUR DOIT COORDONNER TOUS SES TRAVAUX AVEC CEUX DES DIFFERENTES DISCIPLINES (MECANIQUE ET ELECTRIQUE). S'IL Y AVAIT NON CONCORDANCE ENTRE DEUX SERIES DE DESSINS, L'ENTREPRENEUR SE DOIT D'EN AVISER PAR ECRIT LES INGENIEURS CONCERNES AVANT DE CONSTRUIRE.
- TOUTE AU LONG DES TRAVAUX, L'ENTREPRENEUR DOIT TENIR A JOUR UNE COPIE COMPLETE DES PLANS AVEC TOUTES LES MODIFICATIONS EMISES AU PROJET. A LA FIN DES TRAVAUX, L'ENTREPRENEUR DOIT FOURNIR UNE COPIE COMPLETE DE CES PLANS REMIS AU PROPRE. (TQC REVISES)

COORDINATION DES PLANS ET AJUSTEMENTS AU CHANTIER:

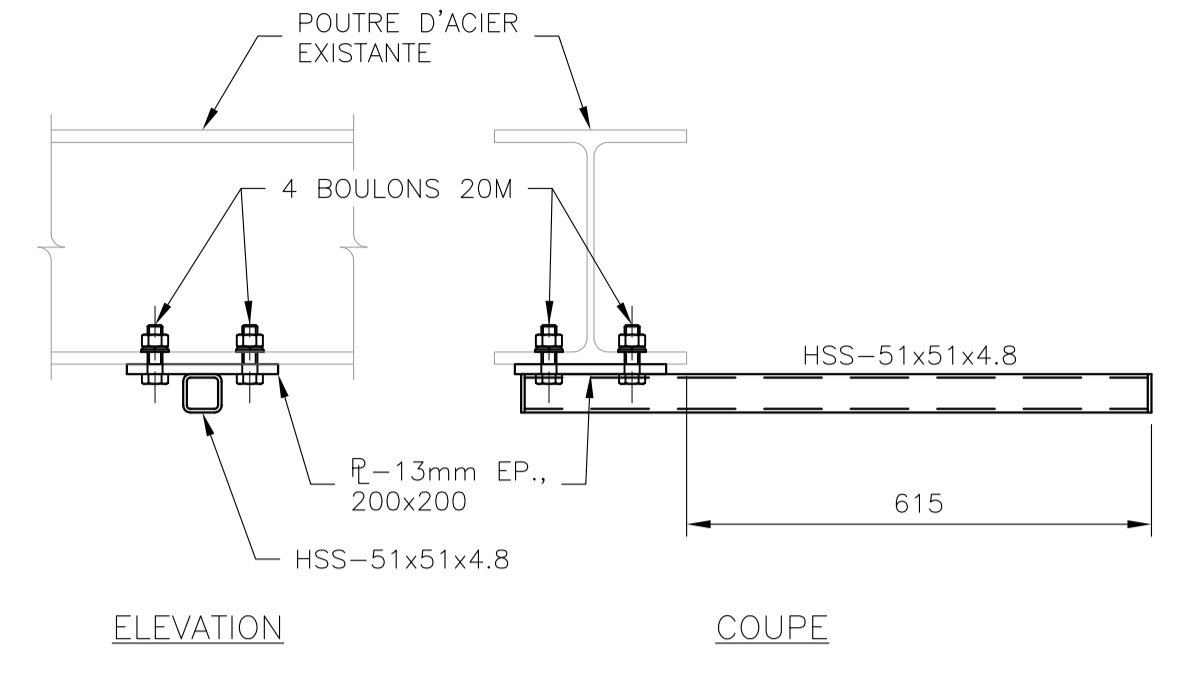
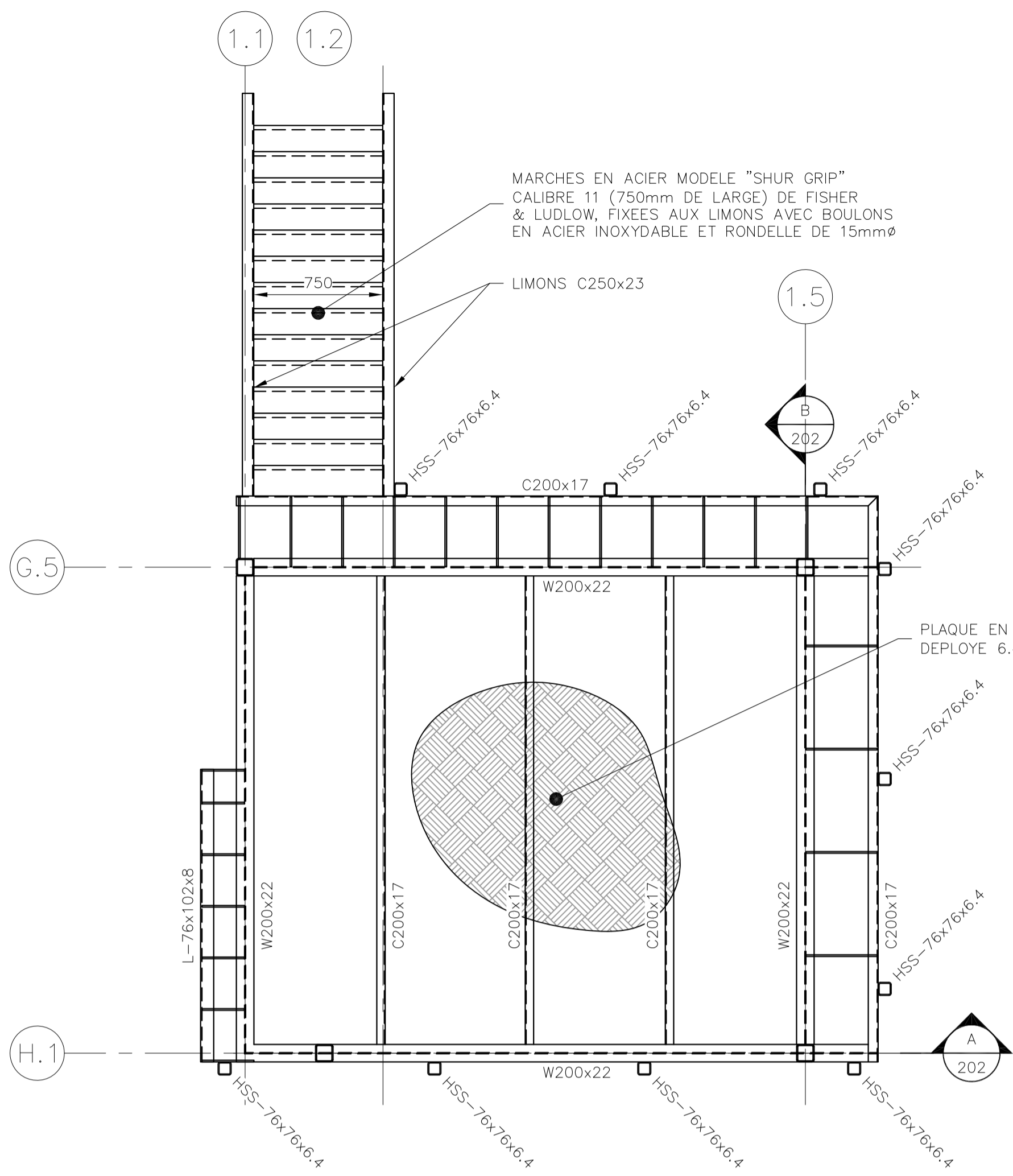
L'ENTREPRENEUR, SES SOUS-TRAITANTS ET LES FOURNISSEURS DOIVENT CONSIDERER DANS LEUR SOUMISSIION LES EXIGENCES SUIVANTES:

- LORSQUE DES SPECIFICATIONS, DIMENSIONS, ELEVATIONS ET COTES SONT DIVERGENTES P/R A UN ARRANGEMENT GENERAL, UNE VUE EN PLAN OU EN ELEVATION, UNE COUPE OU UN DETAIL SUR LES PLANS D'UNE SEULE SPECIALITE OU DE PLUSIEURS SPECIALITES, CE SERA CELLE OU CELUI QUI EST LE (LA) PLUS EXIGEANT (E) SUR L'ASPECT TECHNIQUE AINSI QUE SUR L'ASPECT DES COUTS QUI S'APPLIQUERA, ET CE, SANS COUT SUPPLEMENTAIRE.
- DES AJUSTEMENTS SERONT EFFECTUES AU CHANTIER; LORSQUE DES DETAILS ET/OU PRECISIONS SONT FOURNIS SOUS FORME DE DIRECTIVE DE CHANTIER LORS DE LA REALISATION DES TRAVAUX, CEUX-CI SONT COMPLEMENTAIRES AUX PLANS, ET CE, SANS COUT SUPPLEMENTAIRE.
- AUCUN FRAIS SUPPLEMENTAIRE NE SERA ADMISSIBLE POUR COMPLETER DES DESSINS DE FABRICATION, D'EXECUTION OU D'ATELIER SUITE A L'EMISSIION DE DIRECTIVES DE CHANTIER.
- LORS DES TRAVAUX, L'ENTREPRENEUR DOIT UTILISER DES METHODES ET DES EQUIPEMENTS APPROPRIES AFIN DE NE PAS ENDOMMAGER LES OUVRAGES EXISTANTS.
- L'ENTREPRENEUR EST RESPONSABLE DE CONTREVENTER TEMPORAIREMENT LA CHARPENTE PENDANT LA CONSTRUCTION.
- L'ENTREPRENEUR DOIT GARDER LES LIEUX PROPRES ET LIBRES DE TOUS DEBRIS.
- TOUTES LES OUVERTURES AUTOUR DES OUVRAGES SUITE AUX PERCEMENTS DE MECANIQUE ET D'ELECTRICITE DOIVENT ETRE SCHELLES, IGNIFUGES ET ETANCHES A L'EAU; L'ENTREPRENEUR DOIT S'ASSURER QUE CES TRAVAUX SONT COUVERTS PAS LES SOUS-TRAITANTS CONCERNES; AUTREMENT IL DEVRA EFFECTUER LE SCHELLEMENT SANS FRAIS SUPPLEMENTAIRE.
- TOUTS LES PRODUITS (ANCRES, GOIJONS, COULIS, ETC.) DOIVENT ETRE POSES SELON LES RECOMMANDATIONS DU FABRICANT.

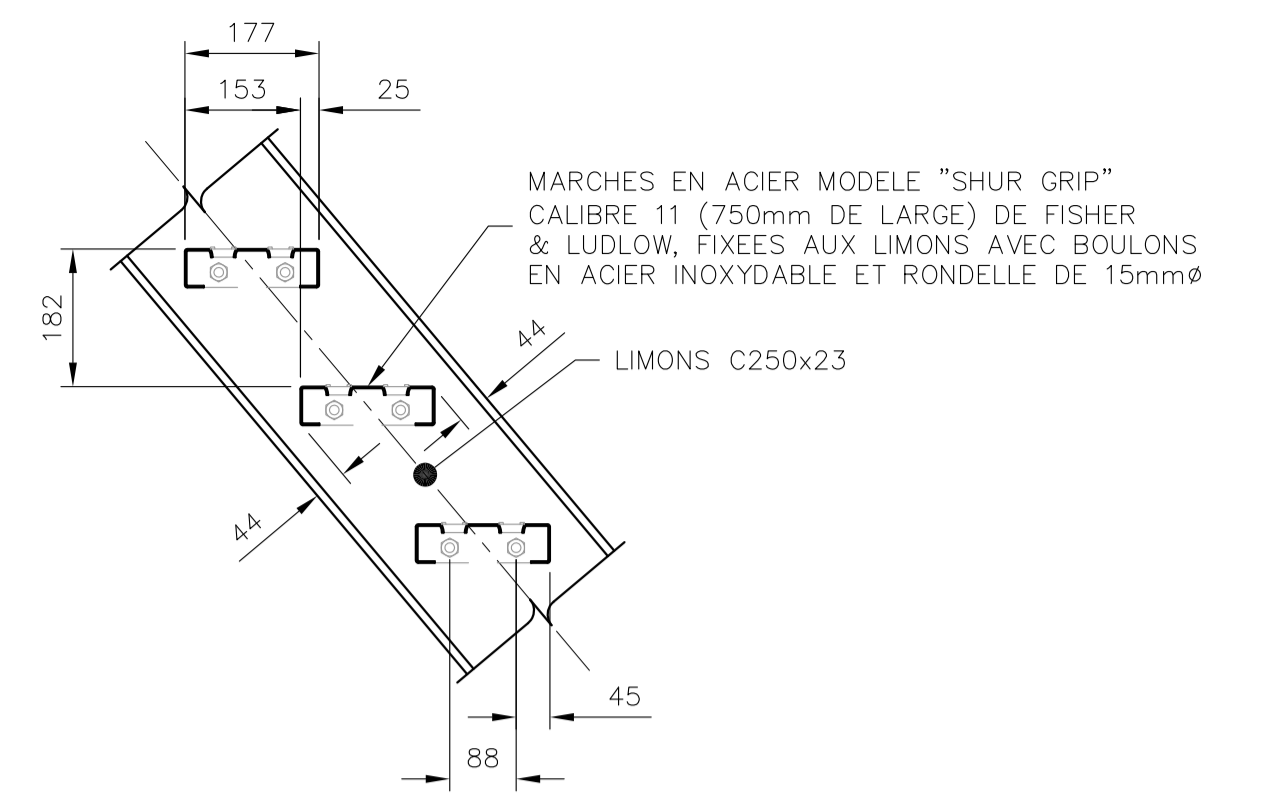
CODES ET NORMES CONTRACTUELS:

- CODE DE CONSTRUCTION DU QUEBEC ET CODE NATIONAL DU BATIMENT;
- CODE NATIONAL DE PREVENTION DES INCENDIES; POUR LES TRAVAUX DE DEMOLITION ET DE COUPAGE. VOIR SECTION 5.2 _ TRAVAUX PAR POINTS CHAUDS.
- CAN/CSA S16.01, REGLES DE CALCUL AUX ETATS LIMITES DES CHARPENTES EN ACIER, INCLUANT SON SUPPLEMENT S16S1;
- L'ENTREPRENEUR DOIT ETABLIR SON IMPLANTATION AU DEBUT DES TRAVAUX; VERIFIER SUR PLACE EN UTILISANT LES COTES DE REFERENCE SUR LES PLANS; EN CAS DE DIVERGENCE, CONTACTER L'INGENIEUR.

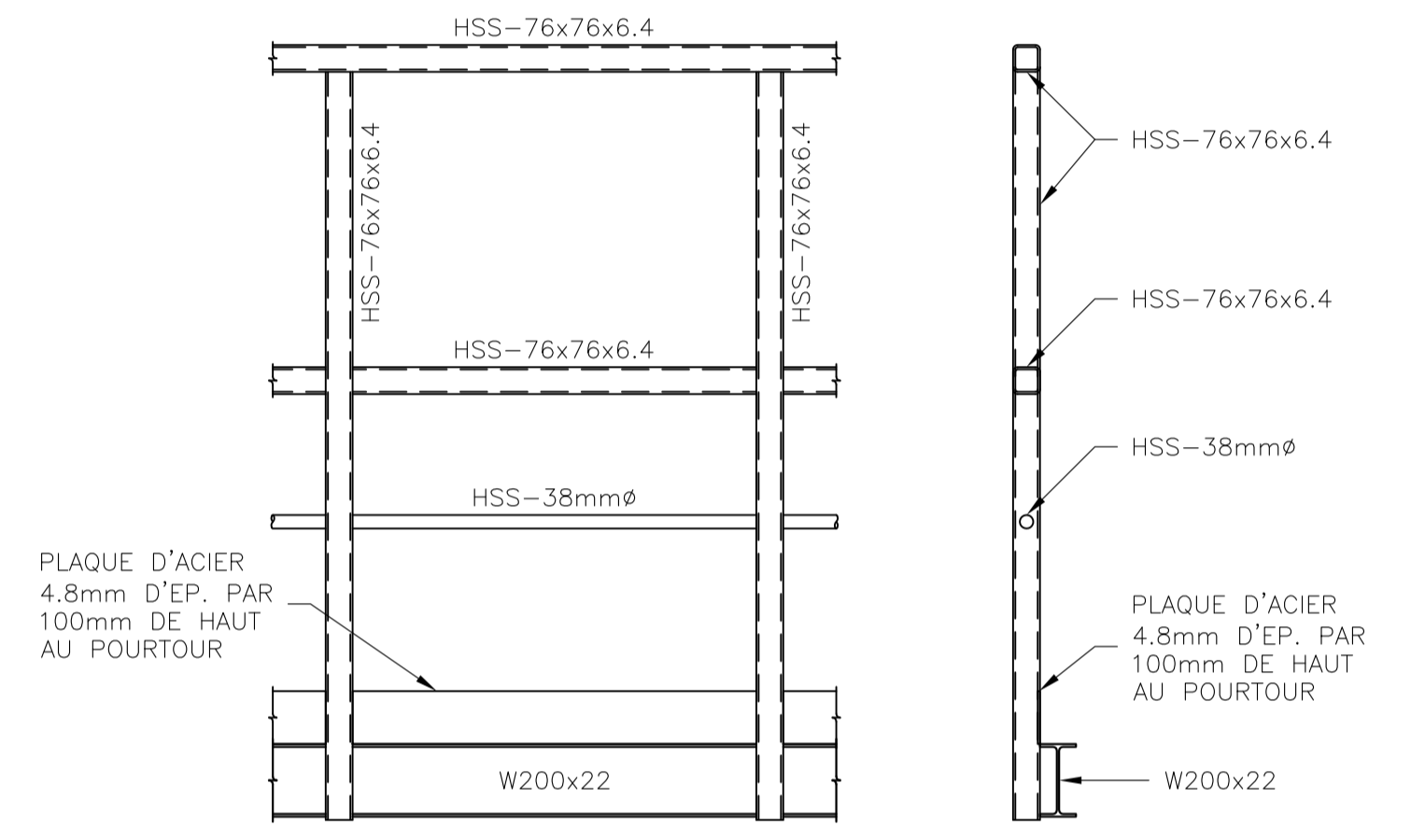
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1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574 927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574			
Client	CENTRE DE TECHNOLOGIE DE L'ALUMINIUM		
Projet	OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1		
Titre	STRUCTURE ACIER - NOUVEAU MEZZANINE VUE EN PLAN & DETAIL		
Dessiné par P.L. SERGERIE	Chargé de projet A. PILOTE	Ing. responsable J.M. GAUTHIER	
Vérifié par J.M. GAUTHIER	Chef de discipline G. MORIN	Date de réalisation AOUT 2017	
Echelle INDIQUEE	A1 - 94410 - 201		Rev: 00



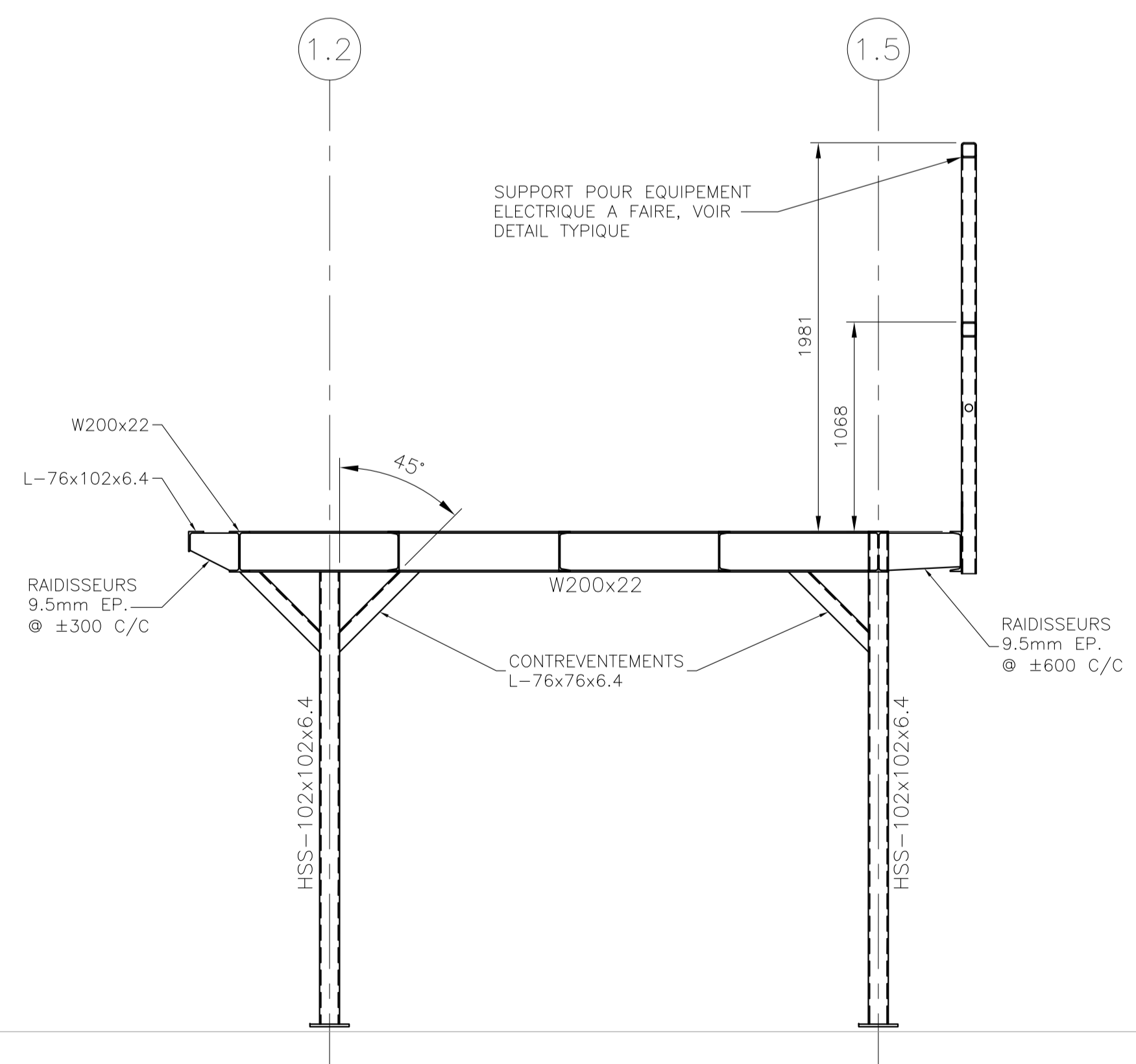
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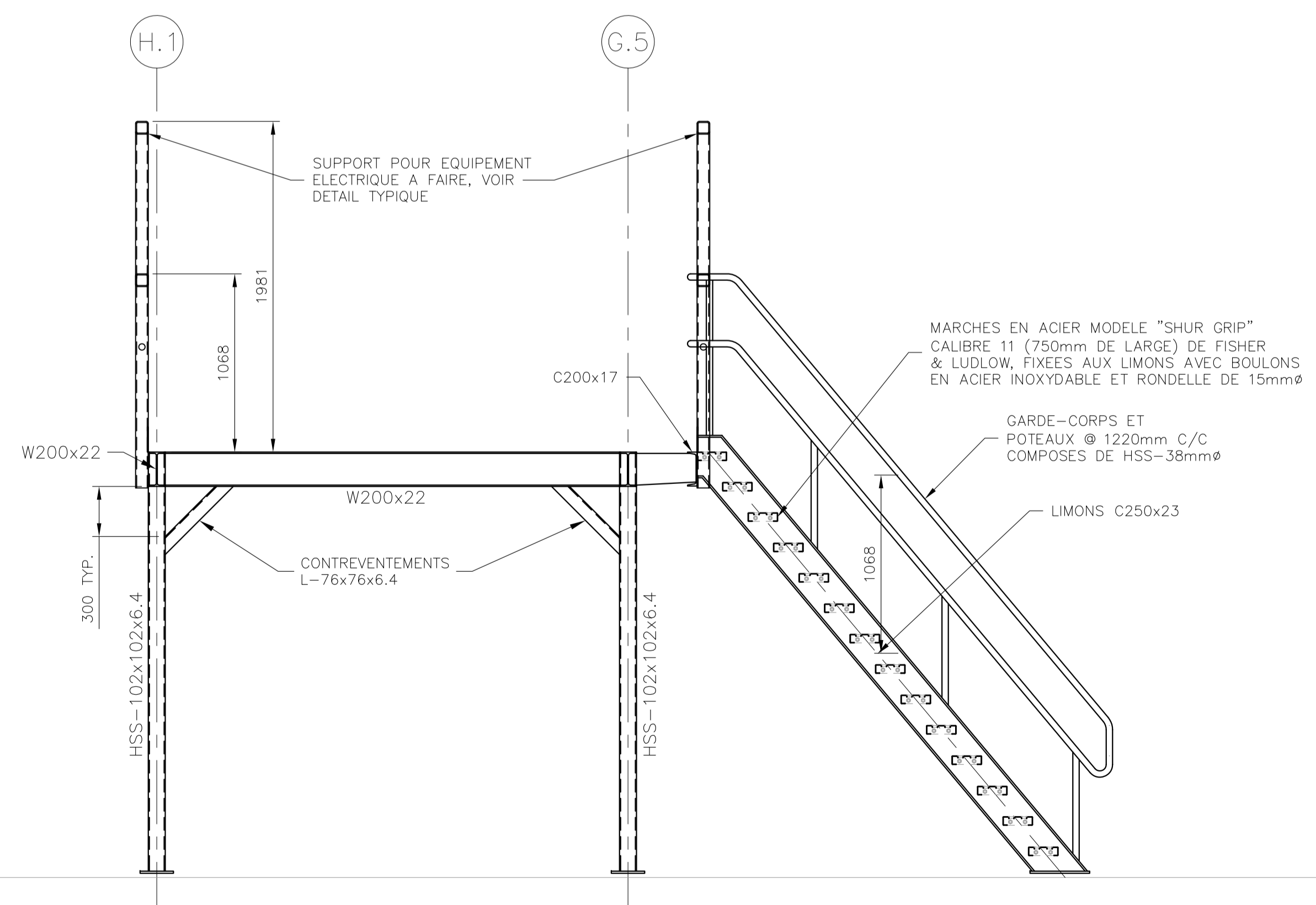
MARCHE EN ACIER
 DETAIL TYPIQUE
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SUPPORT POUR EQUIPEMENT ELECTRIQUE
 DETAIL TYPIQUE
 ECHELLE: 1:20



COUPE A
 ECHELLE: 1:25



COUPE B
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1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574 927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574			
Client		CENTRE DE TECHNOLOGIE DE L'ALUMINIUM	
Projet		OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1	
Titre		STRUCTURE ACIER - NOUVEAU MEZZANINE	
VUE EN PLAN, COUPES & DETAIL			
Dessiné par P.L. SERGERIE	Chargé de projet A. PILOTE	Ing. responsable J.M. GAUTHIER	
Vérifié par J.M. GAUTHIER	Chef de discipline G. MORIN	Date de réalisation AOUT 2017	
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DEVIS

1--TOUS LES EQUIPEMENTS, ISOLANTS ET AUTRES MATERIAUX DOIVENT ETRE INSTALLES SELON LES RECOMMANDATIONS DES MANUFACTURIERS, EN PLUS DES PRECISIONS D'INSTALLATION QUI PEUVENT ETRE INCLUSES AUX PRESENTS PLANS ET DEVIS.

2--NETTOYAGE: LIBERER LE CHANTIER DE TOUS LES DEBRIS DE CONSTRUCTION RELATIFS AUX TRAVAUX DE MECANIQUE. FAIRE UN NETTOYAGE DES LIEUX DE FACON REGULIERE.

3--CHANGEMENT AUX DESSINS ET DEVIS: AUCUN CHANGEMENT AUX PLANS ET DEVIS N'EST ACCEPTE, A MOINS D'AVOIR ETE AUTORISE PAR L'INGENIEUR.

4--DESSINS D'ATELIER ET MANUEL D'ENTRETIEN

1--SOUMETTRE A L'INGENIEUR POUR EXAMEN DES DESSINS D'ATELIER DETAILLES DE CHAQUE PIECE D'EQUIPEMENT A FOURNIR, AVEC TOUTES LES CARACTERISTIQUES MENTIONNEES AUX PLANS ET DEVIS ET CELLES REQUISES POUR UNE ANALYSE COMPLETE DE L'APPAREIL. MENTIONNER LE NOM DU PROJET ET LA REFERENCE INDIQUEE AUX PLANS (EX.: VENTILATEUR, SYSTEME 1A).

2--FOURNIR A L'INGENIEUR UNE COPIE INFORMATIQUE DU MANUEL D'OPERATION ET D'ENTRETIEN DE TOUS LES EQUIPEMENTS. CE MANUEL DOIT INCLURE EGALEMENT: DESSINS D'ATELIER, LIVRETS D'INSTRUCTION, RAPPORT DE BALANCEMENT, CERTIFICATS DE CONFORMITES ET DE GARANTIE; ETC.

5--EQUIVALENCES:

- 1-- LES DESSINS ET DEVIS FONT MENTION DE NOMS DE MANUFACTURIERS D'EQUIPEMENTS ET DE NUMEROS DE CATALOGUE CORRESPONDANT AUX PRODUITS SPECIFIES. LE SOUMISSIONNAIRE EST TENU DE PRESENTER SA SOUMISSION AVEC LES MATERIAUX ET EQUIPEMENTS SPECIFIES.
- 2-- SI L'ENTREPRENEUR PRESENTE DES EQUIVALENT, IL SERA TENU DE FAIRE APPROUVER CES EQUIVALENCES PAR L'INGENIEUR QUI SERA SEUL JUGE POUR ACCEPTEUR OU REFUSER LES EQUIVALENCES PROPOSEES. EN CAS DE REFUS DE L'INGENIEUR, L'ENTREPRENEUR SERA TENU DE FOURNIR LES MATERIAUX SPECIFIES SANS REMUNERATION SUPPLEMENTAIRE, Y COMPRIS LES FRAIS ENCOURUS. CEI PEUT ALLER JUSQU'A DEFRAYER LE COÛT DE L'ANALYSE PAR L'INGENIEUR DE CES DEMANDES D'EQUIVALENCES.
- 3-- SI LA DEMANDE D'EQUIVALENCE DEVAIT ETRE RETENUE AVEC UN CREDIT APPLICABLE, L'ENTREPRENEUR DEVRA AUSSI TENIR COMPTE DE TOUS CHANGEMENTS AUX AUTRES SOUS--TRAITANTS AINSI QU'A L'ENTREPRENEUR GENERAL, ET CE, A SES FRAIS.

6--INSTRUCTIONS AU PROPRIETAIRE

1--DONNER AU PROPRIETAIRE LES INSTRUCTIONS D'ENTRETIEN ET D'OPERATION NECESSAIRES CONCERNANT TOUS LES APPAREILS ET SYSTEMES MONTRES AUX PLANS. LES INSTRUCTIONS COMPRENDRONT UNE SEANCE DE FORMATION AUPRES DU PREPOSE NOMME PAR LE PROPRIETAIRE.

7--DESSINS APRES CONSTRUCTION

1--FOURNIR SUR UNE COPIE, NOTES EN ROUGE, TOUS LES CHANGEMENTS APPORTES AUX PLANS ET DEVIS.

8--SUPPORT DE TUYAUTERIE

1--SAUF INDICATION CONTRAIRE, TOUS LES SUPPORTS DOIVENT ETRE ATTACHES DIRECTEMENT A LA STRUCTURE. IL N'EST PAS PERMIS DE SUSPENDRE UNE PIECE D'EQUIPEMENT A UNE AUTRE PIECE D'EQUIPEMENT, IL N'EST PAS PERMIS D'UTILISER DU RUBAN METALLIQUE PERFORE EN GUISE DE COLLIER OU SUPPORT DE TUYAUTERIE. LES SUPPORTS DOIVENT ETRE ATTACHES A LA STRUCTURE AU MOYEN D'ATTACHES MECANIQUES.

2--LES SUPPORTS DE TUYAUTERIE SONT ESPACES SELON LES CODES APPLICABLES.

9--PORTEE DES TRAVAUX

1--CE DEVIS POURVOIT LA FOURNITURE, L'INSTALLATION ET LA MISE EN MARCHÉ COMPLETE D'AMENAGEMENT, DE PLOMBERIE, D'HYDRAULIQUE, D'EAU REFROIDIE ET VENTILATION TELLES QUE DECRITES ET MONTREES AUX PLANS, Y COMPRIS LES ACCESSOIRES ET TOUT CE QUI EST REQUIS POUR LEUR BONNE MISE EN MARCHÉ ET FONCTIONNEMENT, SAUF S'IL Y A DES INDICATIONS CONTRAIRES AILLEURS.

10--CODES ET REGLEMENTS

1--LES ENTREPRENEUR DOIVENT SE CONFORMER AUX EDITIONS LES PLUS RECENTES DE TOUS LES REGLEMENTS, CODES EN VIGUEUR DANS LA PROVINCE DE QUEBEC POUR CE GENRE D'ETABLISSEMENT TELS LE CODE DE PLOMBERIE DU CANADA (CNP), LE CODE DE CONSTRUCTION DU QUEBEC -- CHAPITRE I, BATIMENT, LES STANDARDS NATIONAUX D'ISOLATION DE L'ASSOCIATION CANADIENNE DE L'ISOLATION THERMIQUE (ACTI) ET A TOUTES LES LOIS, CODES ET REGLEMENTS EN VIGUEUR.

2--DISPOSITIFS DE PROTECTION SISMIQUE:
INSTALLER LES DISPOSITIFS DE PROTECTION POUR SE CONFORMER AUX PRESCRIPTIONS PARASISMIQUES DU CODE NATIONAL DU BATIMENT. LES DISPOSITIFS DEVRONT ETRE CONFORMES AUX CODES ET NORMES EN VIGUEUR TELS QUE SMACNA SEISMIC RESTRAINT MANUAL, DERNIERE EDITION.

11--GARANTIE

1--L'ENTREPRENEUR DEMEURE RESPONSABLE ET GARANT DU BON FONCTIONNEMENT DE L'OUVRAGE QU'IL A EXECUTE POUR UNE PERIODE DE 12 MOIS OU SELON LES GARANTIES SUPPLEMENTAIRES EXIGEEES A COMPTER DE LA RECEPTION DEFINITIVE DES TRAVAUX.

12--COORDINATION

1--LES ENTREPRENEURS DOIVENT SE COORDONNER POUR LES MISES EN MARCHÉ AVEC LES ENTREPRENEURS ELECTRICITE.

13--DEMOLITION

1--EVACUER DU CHANTIER TOUS LES MATERIAUX NON REUTILISES.

14--TUYAUTERIE -- ISOLATION

14--TUYAUTERIE -- ISOLATION

1--TUYAUTERIE D'EAU FROIDE : EN CUIVRE DU TYPE L, CONFORME A LA NORME ASTM B88M. RACCORDS EN CUIVRE COULE A SOUDER: CONFORMES A LA NORME ANSI B16.18. RACCORDS EN CUIVRE ET EN ALLIAGE DE CUIVRE CORROYES A SOUDE : CONFORMES A LA NORME ANSI/ASME B16.22 SOUDURE TENDRE ; ALLIAGE ETAIN/CUIVRE 97/3 (ECONOSOL). ISOLE EN FIBRE DE LAINE MINERALE 25mm EPAIS AVEC CHEMISAGE EN PVC BLANC.

2--TUYAUTERIE D'EAU REFROIDIE RIGIDE EN ACIER INOXYDABLE TYPE 316 13ø A 51ø A VISSER AVEC RUBAN EN PTFE OU PATE A JOINT SANS PLOMB, CEDULE 40, 64ø ET PLUS A SOUDER, CEDULE 10. TUBE FLEXIBLE EN PVC, NSF--51 25ømm. LA TUYAUTERIE RIGIDE DOIT ETRE ISOLE EN FIBRE DE LAINE MINERALE 25mm EPAIS AVEC CHEMISAGE EN PVC BLANC.

3--BOYAU D'EAU FROIDE DOMESTIQUE, PARKER, PUSH--LOK--PLUS 801--12 WP, 2.1 MPA (300 PSI) MSHA C--40/22, 19ø. RACCORD DE BRANCHEMENT VISSÉ FEMELLE 19ø A JOINT A PIVOT CONNECTEUR A QUEUE BORDEE ET COLLIER DE SERRAGE EN ACIER INOXYDABLE.

4--TUYAU FLEXIBLE D'HUILE (PRESSE 1000 TONNES), AEROQUIP GH493 MATCHMATE GLOBAL, 25ømm, PRESSION MAX. 5100 PSI.

5--TUYAU FLEXIBLE D'HUILE (PRESSE 75 TONNES), VOIR IDENTIFICATIONS AUX PLANS.

15--ROBINETS D'EAU FROIDE DOMESTIQUE

1--ROBINET A BILLES A LEVIER VERROUILLABLE CORPS ET TIGE EN ACIER INOXYDABLE. BALLE EN LAITON CHROME A VISSER JUSQU'A 51ømm; MAS MODELE G2E. EN ACIER INOXYDABLE TIGE EN ACIER INOXYDABLE SIEGE EN TEFLON 64ø ET PLUS; WATTS MODELE G4000.

16--PENTE POUR TUYAUTERIE

1--LA TUYAUTERIE DE PLOMBERIE DOIT AVOIR LA PENTE MINIMALE SELON LE CODE DE PLOMBERIE.

17--CONDUITS D'AIR

1--SAUF SI AUTREMENT INDIQUE, TOUS LES CONDUITS ET ACCESSOIRES SONT EN ACIER GALVANISE ET LEUR CONSTRUCTION ET CALIBRES SONT SUIVANT LES STANDARDS DE SMACNA.

2--LES SCCELLANTS POUR CONDUITS (RUBANS, TOUS TYPES DE PRODUITS DE SCCELLEMENT, ETC.) DOIVENT POSSEDER DES INDICES DE PROPAGATION MAXIMUM DE 25 POUR LA FLAMME ET DE 50 POUR LA FUMEE.

3--TOUS LES CONDUITS CIRCULAIRES SONT DU TYPE SPIRALE. AVANT LE SCCELLEMENT, MUNIR LES JOINTS DES CONDUITS CIRCULAIRES (ET LEURS RACCORDS) DE VIS A METAL A RAISON D'UNE VIS A TOUS LES 150 MM DE CIRCONFERENCE, ET AVEC UN MINIMUM DE 3 VIS POUR LES PETITS DIAMETRES.

4--CONDUITS FLEXIBLES D'ALIMENTATION D'AIR ISOLEES (GAINÉ CHAUDE ET FROIDE): ISOLEES SUR MAXIMUM 1829mm. CONDUIT POUVANT SUPPORTER 6" D'EAU JUSQU'A 140°F. PRODUIT ACCEPTABLE: BOFLEX MEA OU EQUIVALENT APPROUVE.

5--APRES INSTALLATION, LES PAROIS INTERIEURES DES CONDUITS DOIVENT ETRE LAISSEES PROPRES ET EXEMPTES DE POUSSIERES ET DEBRIS.

18--IDENTIFICATIONS -- GENERALITES

1--TOUS LES RESEAUX DE TUYAUTERIE DOIVENT ETRE CLAIREMENT IDENTIFIES.

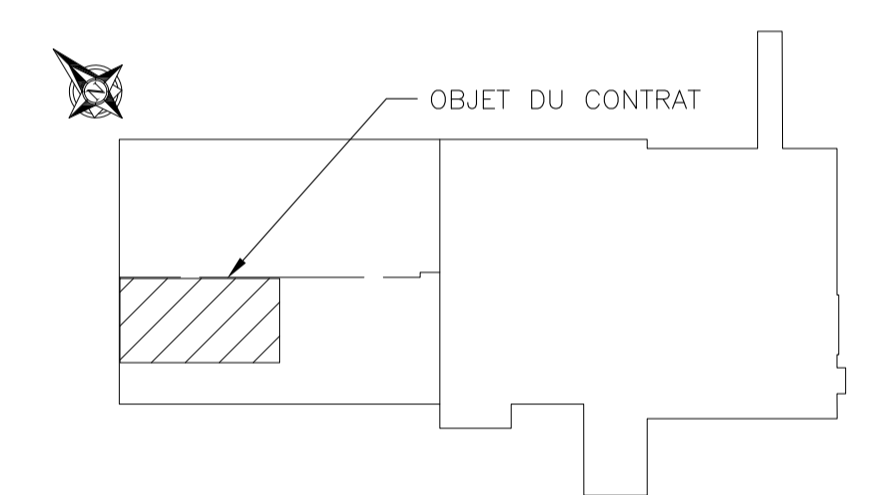
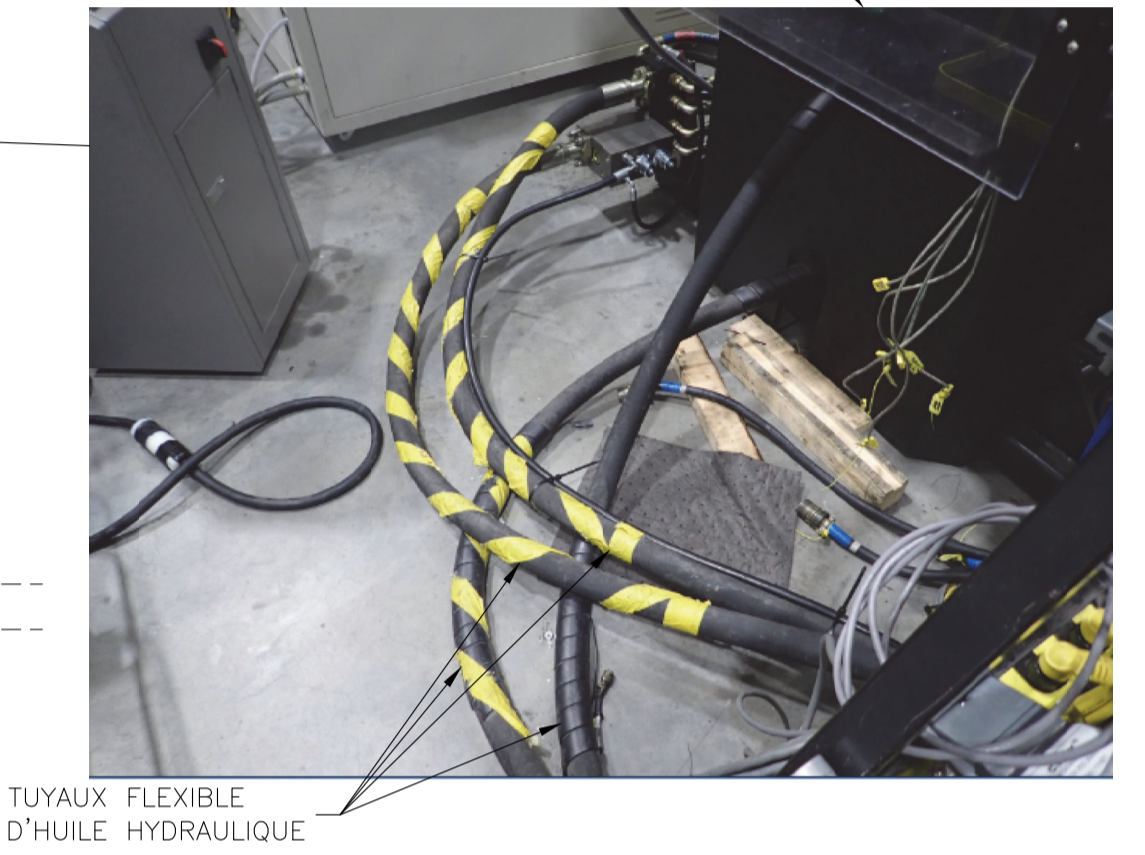
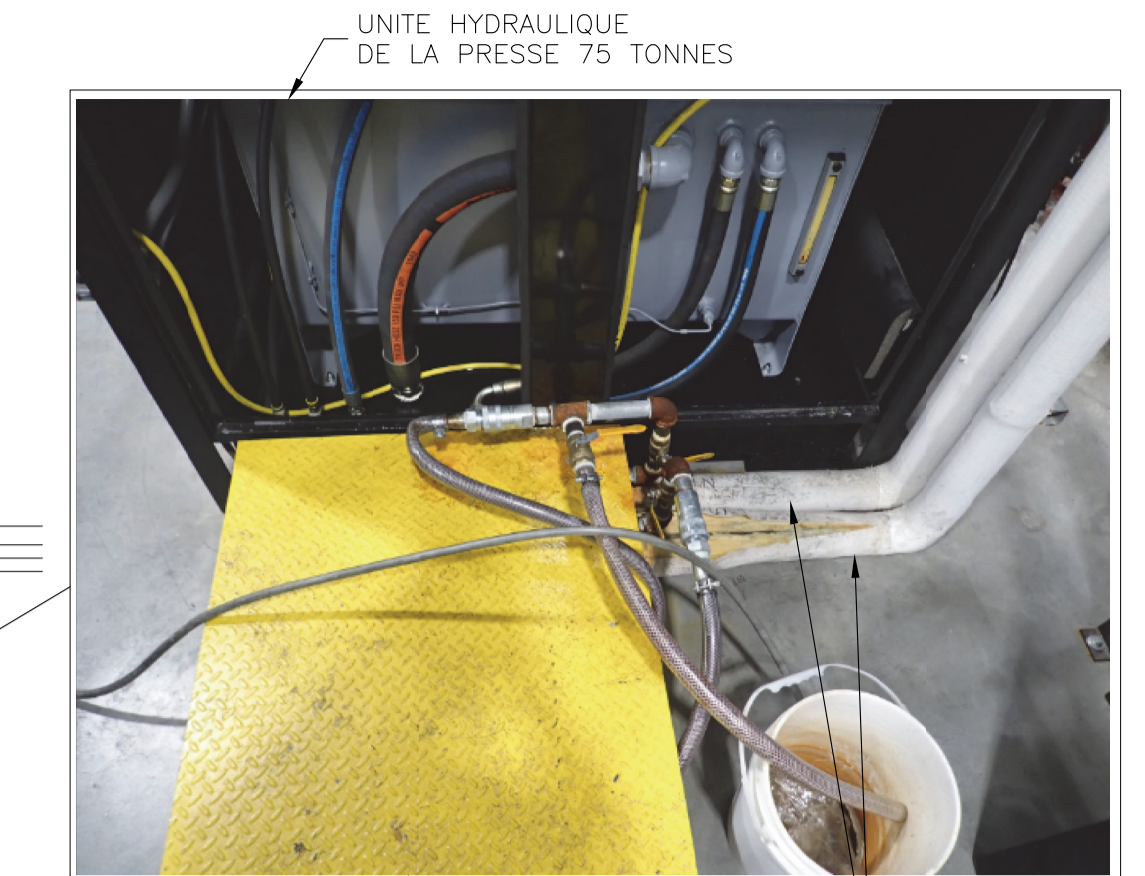
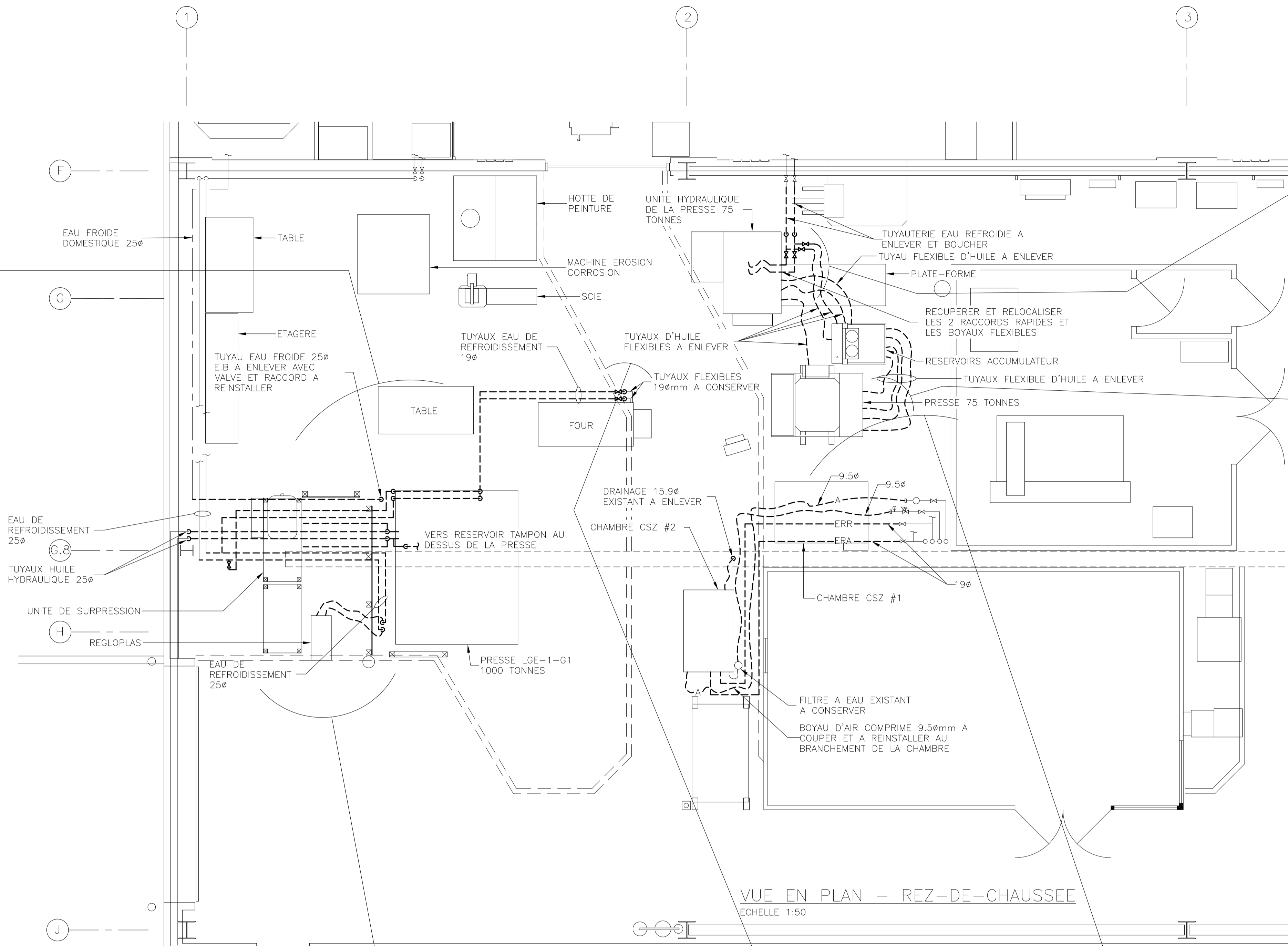
2--L'IDENTIFICATION DOIT ETRE CONFORME AUX NORMES L'ASSOCIATION CANADIENNE DES STANDARDS OU CSA CODE B--53, REVISE A JOUR.

3--L'IDENTIFICATION SONT EN VINYLE AVEC UNE FLECHE DE DIRECTION APRES L'IDENTIFICATION.

19--ESSAI

REALISER LES ESSAIS REQUIS AUX DIFFERENTS SYSTEMES.

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1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574 927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574			
Client		CENTRE DE TECHNOLOGIE DE L'ALUMINIUM	
Projet		OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1	
Titre		MECANIQUE DEVIS	
Dessiné par M. BELLEY	Chargé de projet A. PILOTE	Ing. responsable M--A TREMBLAY	
Vérifié par M--A TREMBLAY	Chef de discipline P. MORIN	Date de réalisation AOÛT 2017	
Echelle AUCUNE		A1 - 94410 - 401	Rev: 00



PLAN GUIDE
ECH. : AUCUNE

LEGENDE

- DEMOLITION
- EXISTANT

NOTES DE DEMOLITION:

1. LES NOTES SUR CE PLAN SONT TYPIQUES ET S'APPLIQUENT A TOUS LES PLANS D'UNE MEME SPECIALITE.
2. LES TRAVAUX DE DEMOLITION INDIQUES AUX PLANS NE SONT QU'INDICATIFS. PREVOIR TOUS LES TRAVAUX NECESSAIRES SANS FRAIS SUPPLEMENTAIRES.
3. POUR LA DEMOLITION, L'ENLEVEMENT D'UN APPAREIL COMPREND AUSSI L'ENLEVEMENT DU CONDUIT OU DE LA TUYAUTERIE CORRESPONDANTE ET CE, LE PLUS PRES POSSIBLE DE LA SOURCE. BOUCHER SELON LES REGLES DE L'ART. ENLEVER AUSSI LES SUPPORTS. TRAVAUX INDIQUES NON LIMITATIFS POUR UNE DEMOLITION COMPLETE A LA SATISFACTION DE L'INGENIEUR. (TOUT ITEM NON UTILE).
4. POUR TOUS TUYAUX ENLEVES, PREVOIR UN BOUCHON POUR ASSURER LA CONTINUTE DU RESEAU AUX AUTRES ETAGES DURANT LES TRAVAUX.
5. LES DIAMETRES INDIQUES EN DEMOLITION SONT APPROXIMATIFS. AUCUNS FRAIS SUPPLEMENTAIRES N'EST ACCORDES POUR LA DEMOLITION SI LES DIAMETRES SONT DIFFERENTS.
6. IDENTIFIER SUR DESSIN ET SUR LES EQUIPEMENTS TOUS LES BRANCHEMENTS AVANT LE DEMANTELEMENT.

IMPORTANT:

AVANT DE DEBUTER LES TRAVAUX DE DEMANTELEMENT, LE PROPRIETAIRE DOIT EFFECTUER UNE DEMONSTRATION EN PRESENCE DE L'ENTREPRENEUR ET DE SES SOUS-TRAITANTS DU BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS TOUCHES AU PROJET. SOULIGNER TOUTES DEFICIENCES EXISTANTES SUR LES EQUIPEMENTS AVANT LE DEBUT DES TRAVAUX.

A LA FIN DES TRAVAUX, LE PROPRIETAIRE DOIT EFFECTUER DES ESSAIS SIMILAIRES AFIN DE CONFIRMER LE BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS. L'ENTREPRENEUR DOIT PREVOIR DANS SA SOUMISSION D'ETRE PRESENT LORS DE CES PERIODES.

LES EQUIPEMENTS TOUCHES PAR LE PROJET DOIVENT FONCTIONNER DE MANIERE OPTIMALE TEL QUE DEMONTRE LORS DE L'ESSAI INITIAL. L'ENTREPRENEUR ET SES SOUS-TRAITANTS SONT TENUS DE CORRIGER TOUTES DEFICIENCES AYANT PU SURVENIR SUR LES EQUIPEMENTS PENDANT LES TRAVAUX. ASSUMER TOUS LES FRAIS REQUIS.



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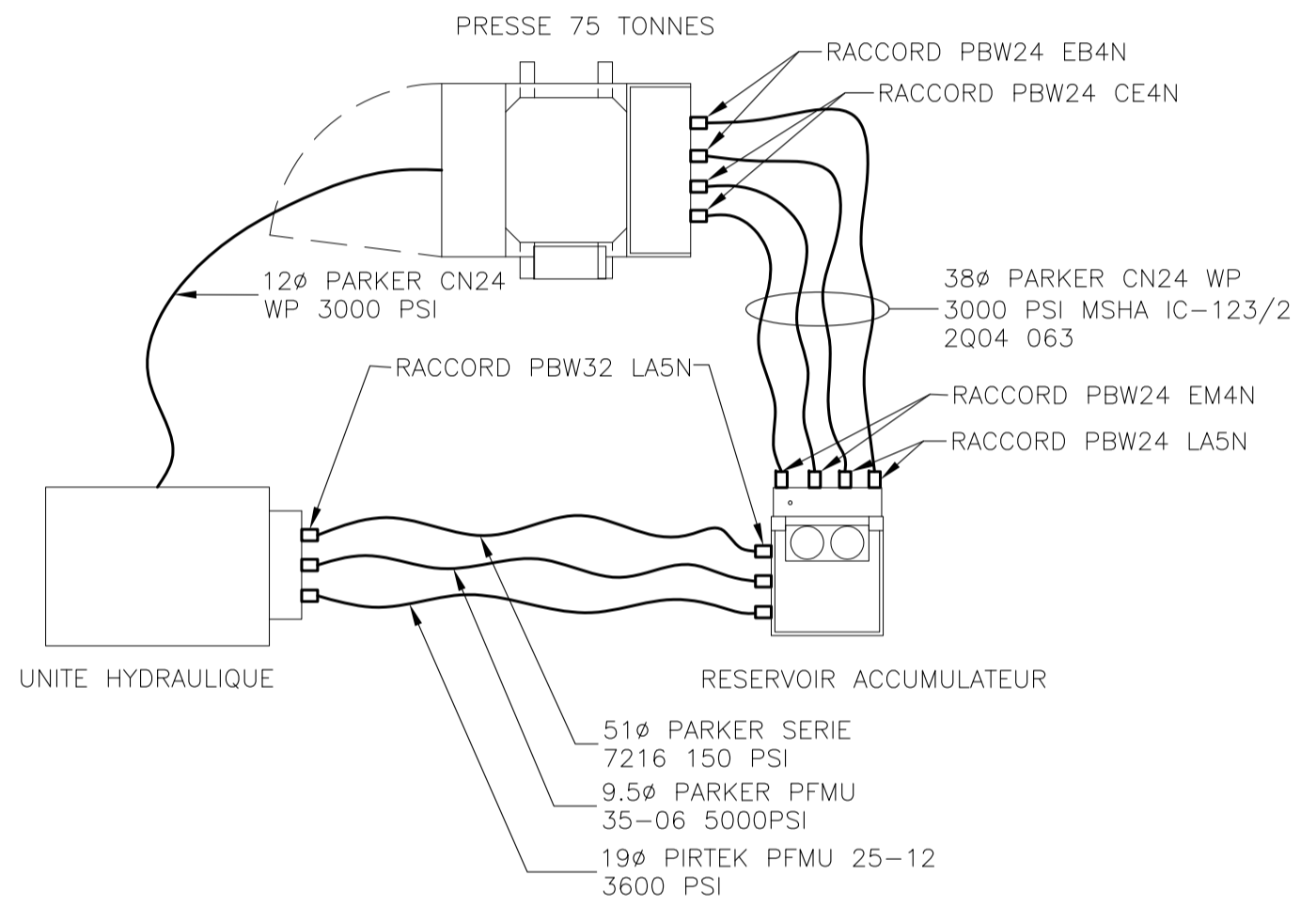
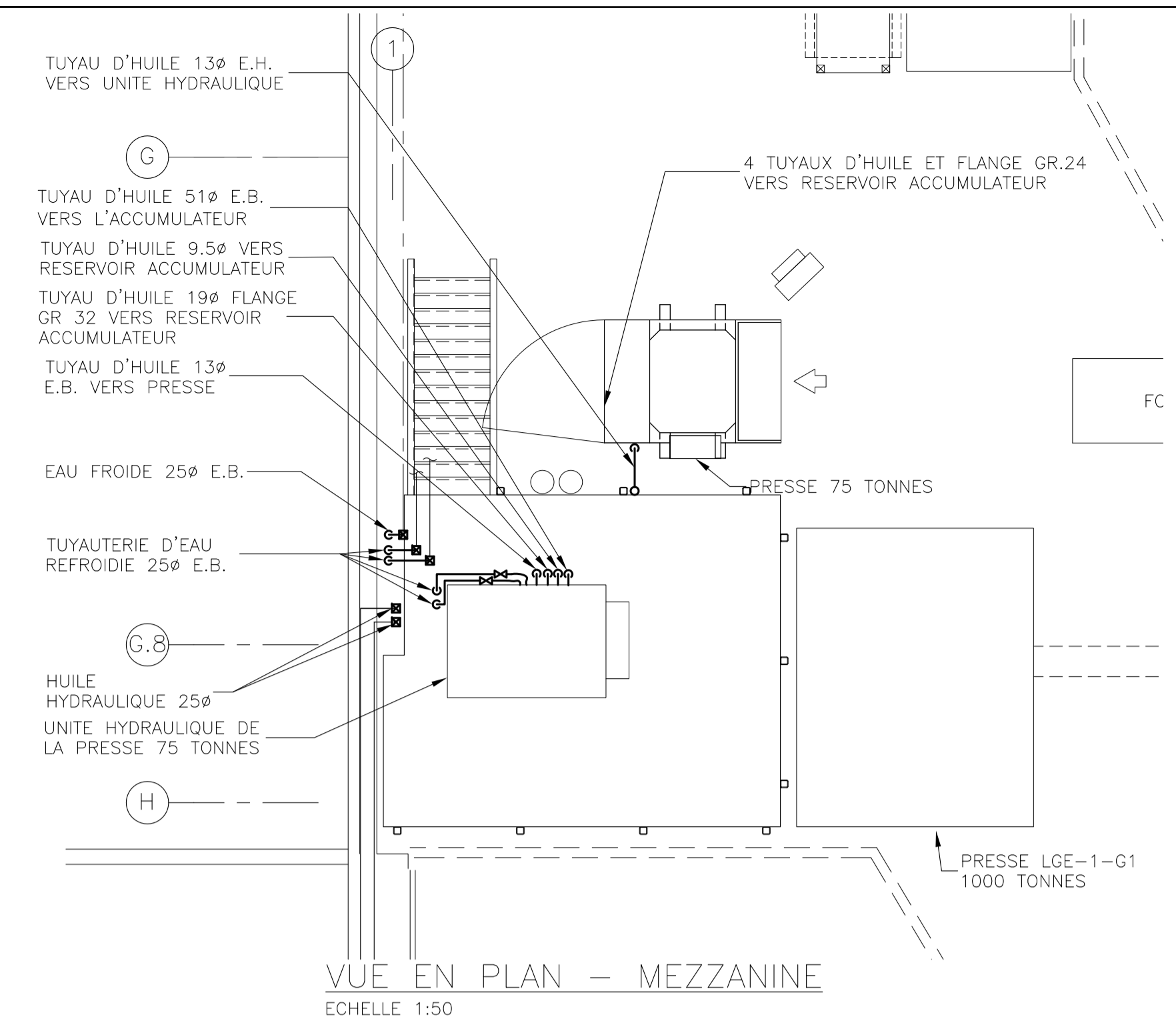
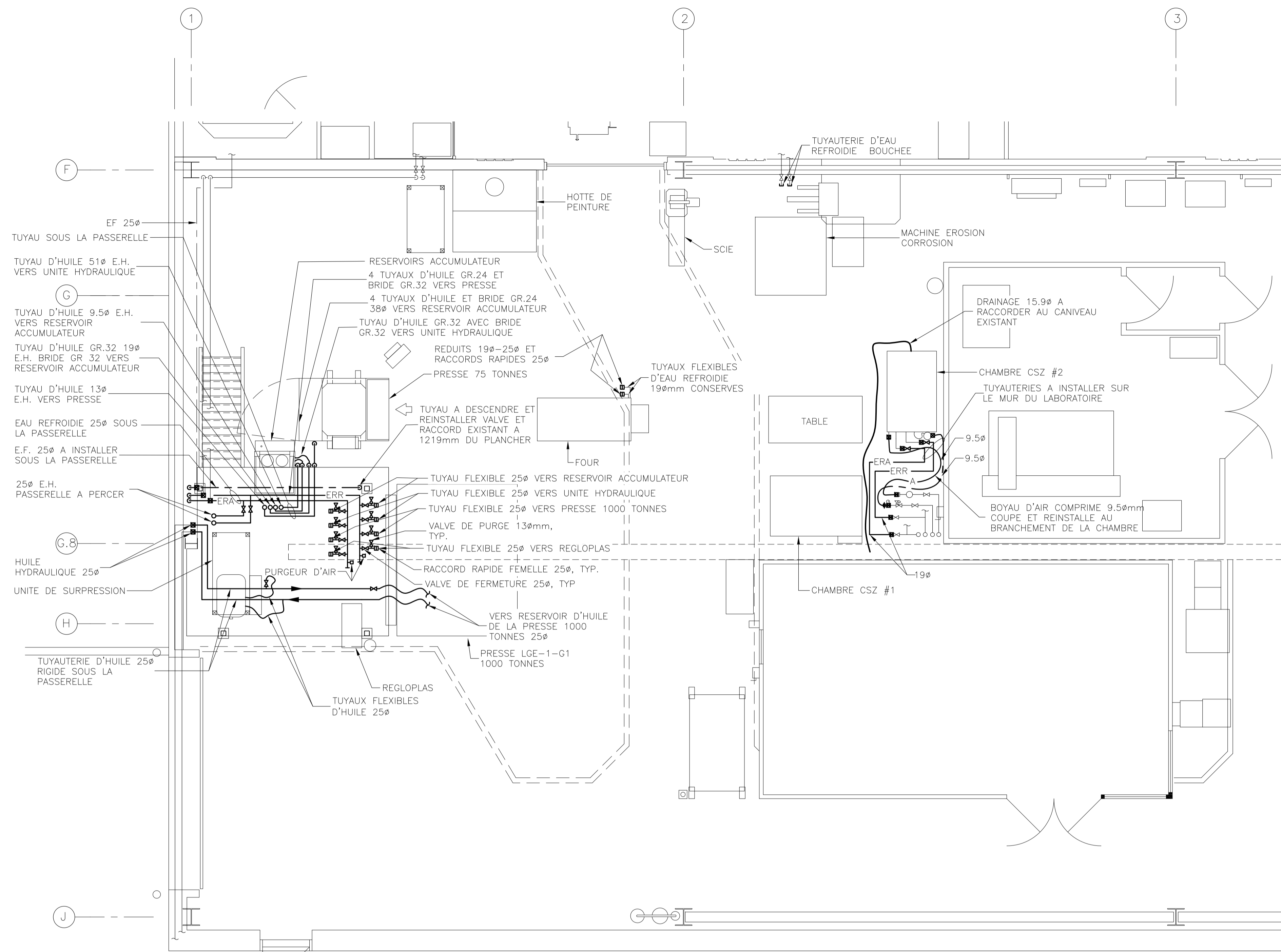
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1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574
927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574

Client: **CENTRE DE TECHNOLOGIE DE L'ALUMINIUM**

Projet: **OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1**

Titre: **MECANIQUE PLOMBERIE - EAU REFROIDIE DEMOLITION - REZ-DE-CHAUSSEE VUE EN PLAN**

Dessiné par M. BELLEY	Chargé de projet A. PILOTE	Ing. responsable M-A TREMBLAY
Vérifié par M-A TREMBLAY	Chef de discipline P. MORIN	Date de réalisation AOUT 2017
Echelle 1:50	A1 - 94410 - 402	Rev: 00



LEGENDE PLOMBERIE

- DEMOLITION
- EXISTANT
- DRAINAGE SANITAIRE EN BOYAU FLEXIBLE
- TUYAU D'EAU FROIDE DOMESTIQUE
- A — TUYAU D'AIR COMPRIME
- ERR — TUYAU D'EAU REFROIDIE RETOUR
- ERA — TUYAU D'EAU REFROIDIE ALIMENTATION
- SENS D'ECOULEMENT
- ~ BOYAU FLEXIBLE
- ⌋ MONTEE
- ⌋ DESCENTE
- ⌋ ROBINET
- ⌋ REGULATEUR DE PRESSION
- ⌋ RACCORD A L'EXISTANT
- E.F. EAU FROIDE
- E.H. TUYAUTERIE VERS LE HAUT
- E.B. TUYAUTERIE VERS LE BAS
- RACCORD RAPIDE
- PURGEUR D'AIR

NOTES:

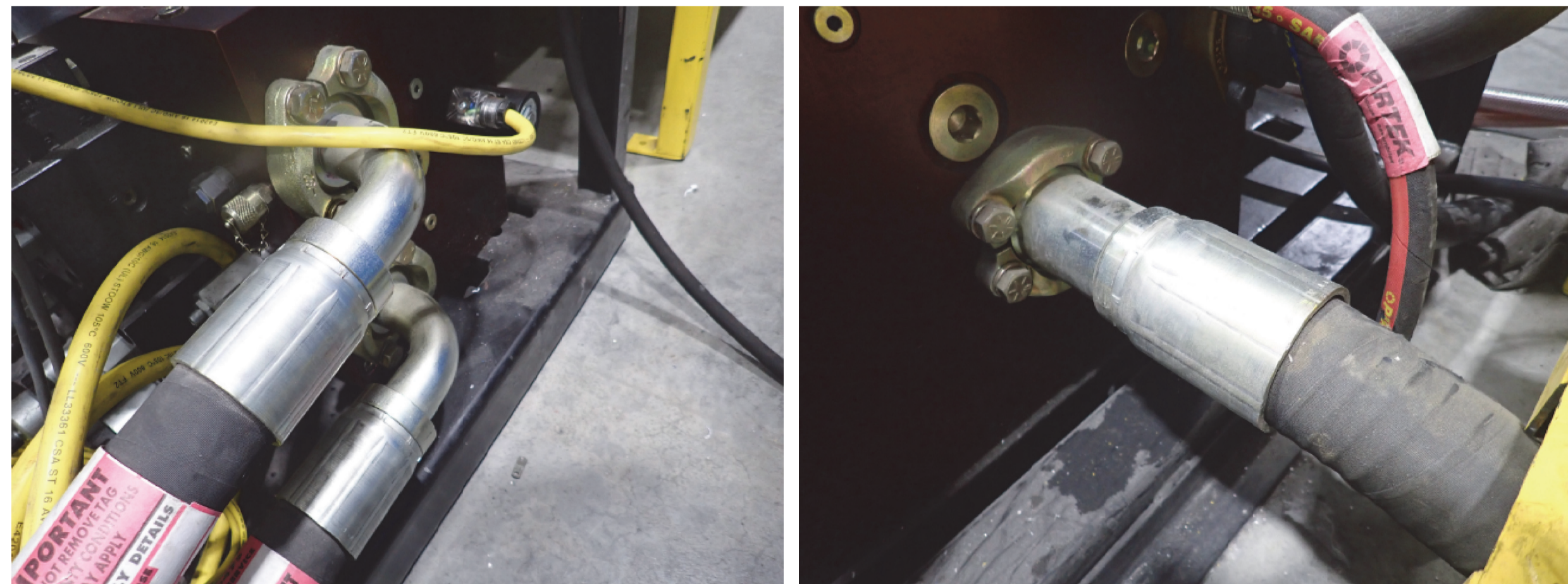
1. LES NOTES ET LA LEGENDE SONT TYPIQUES A TOUS LES PLANS D'UNE MEME SPECIALITE.
2. AVANT DE COMMENCER A EXECUTER TOUS TRAVAUX, PRENDRE ET VERIFIER SUR PLACE TOUTES LES MESURES ET DIMENSIONS, ET CELA SOUS LA SEULE RESPONSABILITE DE L'ENTREPRENEUR.
3. TOUS LES TRAVAUX SONT FAITS EN CONFORMITE AVEC LES CODES ET NORMES EN VIGUEUR, SELON LES REGLES DU SERVICE D'INSPECTION (CODE DE PLOMBERIE, C.C.Q., ETC.).
4. TOUS LES TUYAUX FLEXIBLES SONT FOURNIS ET INSTALLES PAR L'ENTREPRENEUR SELON LES IDENTIFICATIONS PRIS LORS DU DEMANTELEMENT.
5. L'ENTREPRENEUR DOIT PREVOIR RECUPEREE L'HUILE DES EQUIPEMENTS POUR FAIRE LA MISE EN MARCHE A LA SUITE DES TRAVAUX.
6. L'EAU EST LE MEDIUM CALORPORTEUR DU RESEAU D'EAU REFROIDIE.

IMPORTANT:

AVANT DE DEBUTER LES TRAVAUX DE DEMANTELEMENT, LE PROPRIETAIRE DOIT EFFECTUER UNE DEMONSTRATION EN PRESENCE DE L'ENTREPRENEUR ET DE SES SOUS-TRAITANTS DU BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS TOUCHES AU PROJET. SOULIGNER TOUTES DEFICIENCES EXISTANTES SUR LES EQUIPEMENTS AVANT LE DEBUT DES TRAVAUX.

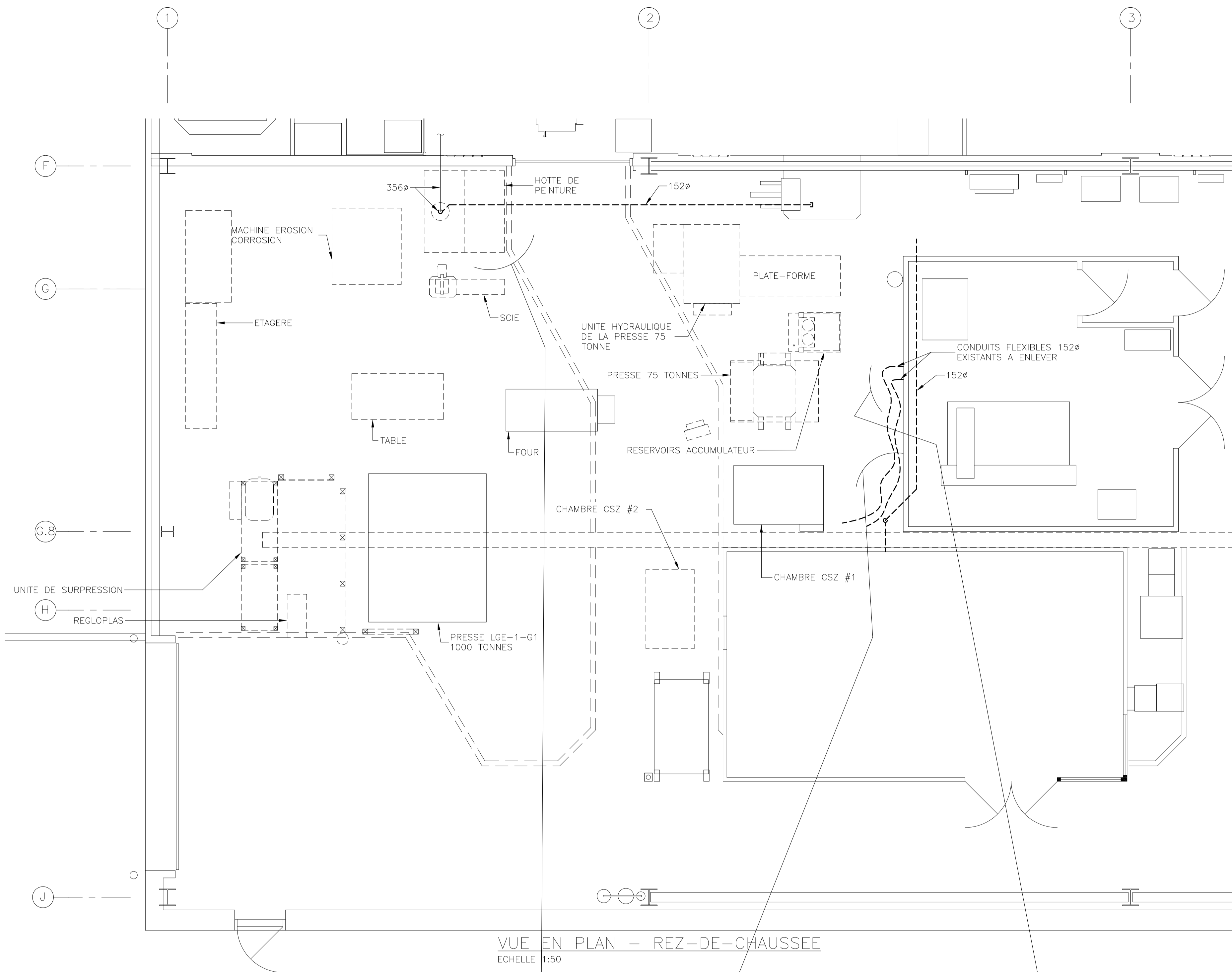
A LA FIN DES TRAVAUX, LE PROPRIETAIRE DOIT EFFECTUER DES ESSAIS SIMILAIRES AFIN DE CONFIRMER LE BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS. L'ENTREPRENEUR DOIT PREVOIR DANS SA SOUMISSION D'ETRE PRESENT LORS DE CES PERIODES.

LES EQUIPEMENTS TOUCHES PAR LE PROJET DOIVENT FONCTIONNER DE MANIERE OPTIMALE TEL QUE DEMONTRE LORS DE L'ESSAI INITIAL. L'ENTREPRENEUR ET SES SOUS-TRAITANTS SONT TENUS DE CORRIGER TOUTES DEFICIENCES AYANT PU SURVENIR SUR LES EQUIPEMENTS PENDANT LES TRAVAUX. ASSUMER TOUS LES FRAIS REQUIS.



RACCORDS EXISTANTS PRESSE 75 TONNES

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1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574 927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574			
Client	CENTRE DE TECHNOLOGIE DE L'ALUMINIUM		
Projet	OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1		
Titre	MECANIQUE - PLOMBERIE EAU REFROIDIE - NOUVEAU REZ-DE-CHAUSSEE ET MEZZANINE VUES EN PLAN		
Dessiné par	Chargé de projet	Ing. responsable	
M. BELLEY	A. PILOTE	M-A TREMBLAY	
Vérifié par	Chef de discipline	Date de réalisation	
M-A TREMBLAY	P. MORIN	AOUT 2017	
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1:50			



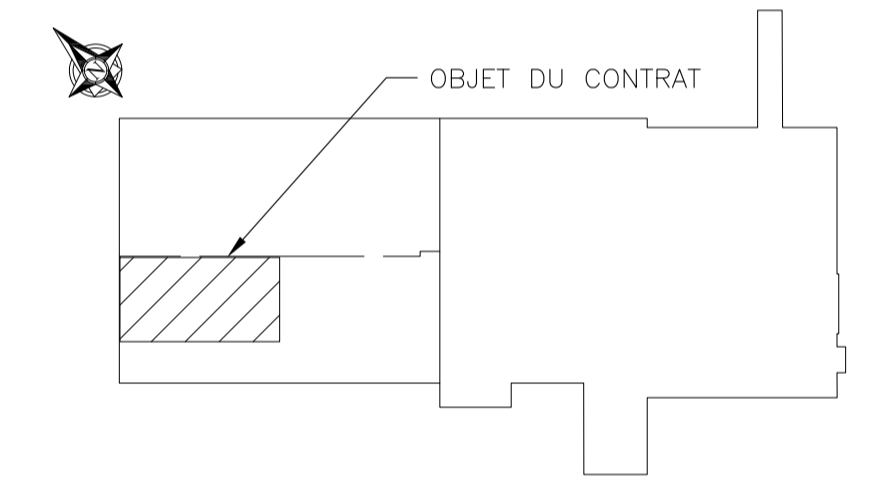
VUE EN PLAN - REZ-DE-CHAUSSEE
ECHELLE 1:50

LEGENDE

- - - - - DEMOLITION
- EXISTANT

NOTES DE DEMOLITION:

1. LES NOTES SUR CE PLAN SONT TYPIQUES ET S'APPLIQUENT A TOUS LES PLANS D'UNE MEME SPECIALITE.
2. LES TRAVAUX DE DEMOLITION INDICUES AUX PLANS NE SONT QU'INDICATIFS. PREVOIR TOUS LES TRAVAUX NECESSAIRES SANS FRAIS SUPPLEMENTAIRES.
3. POUR LA DEMOLITION, L'ENLEVEMENT D'UN APPAREIL COMPREND AUSSI L'ENLEVEMENT DU CONDUIT OU DE LA TUYAUTERIE CORRESPONDANTE ET CE, LE PLUS PRES POSSIBLE DE LA SOURCE. BOUCHER SELON LES REGLES DE L'ART. ENLEVER AUSSI LES SUPPORTS. TRAVAUX INDICUES NON LIMITATIFS POUR UNE DEMOLITION COMPLETE A LA SATISFACTION DE L'INGENIEUR. (TOUT ITEM NON UTILE).
4. POUR TOUS TUYAUX ENLEVES, PREVOIR UN BOUCHON POUR ASSURER LA CONTINUTE DU RESEAU AUX AUTRES ETAGES DURANT LES TRAVAUX.
5. LES DIAMETRES INDICUES EN DEMOLITION SONT APPROXIMATIFS. AUCUNS FRAIS SUPPLEMENTAIRES N'EST ACCORDES POUR LA DEMOLITION SI LES DIAMETRES SONT DIFFERENTS.



PLAN GUIDE
ECH. : AUCUNE

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	CONSTRUCTION	TEL QUE CONSTRUIT	Date:

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927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574

Cliant **CENTRE DE TECHNOLOGIE DE L'ALUMINIUM**

Projet **OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1**

Titre **MECANIQUE - VENTILATION DEMOLITION REZ-DE-CHAUSSEE VUE EN PLAN**

Dessiné par M. BELLEY	Chargé de projet A. PILOTE	Ing. responsable M-A TREMBLAY
Vérifié par M-A TREMBLAY	Chef de discipline P. MORIN	Date de réalisation AOUT 2017
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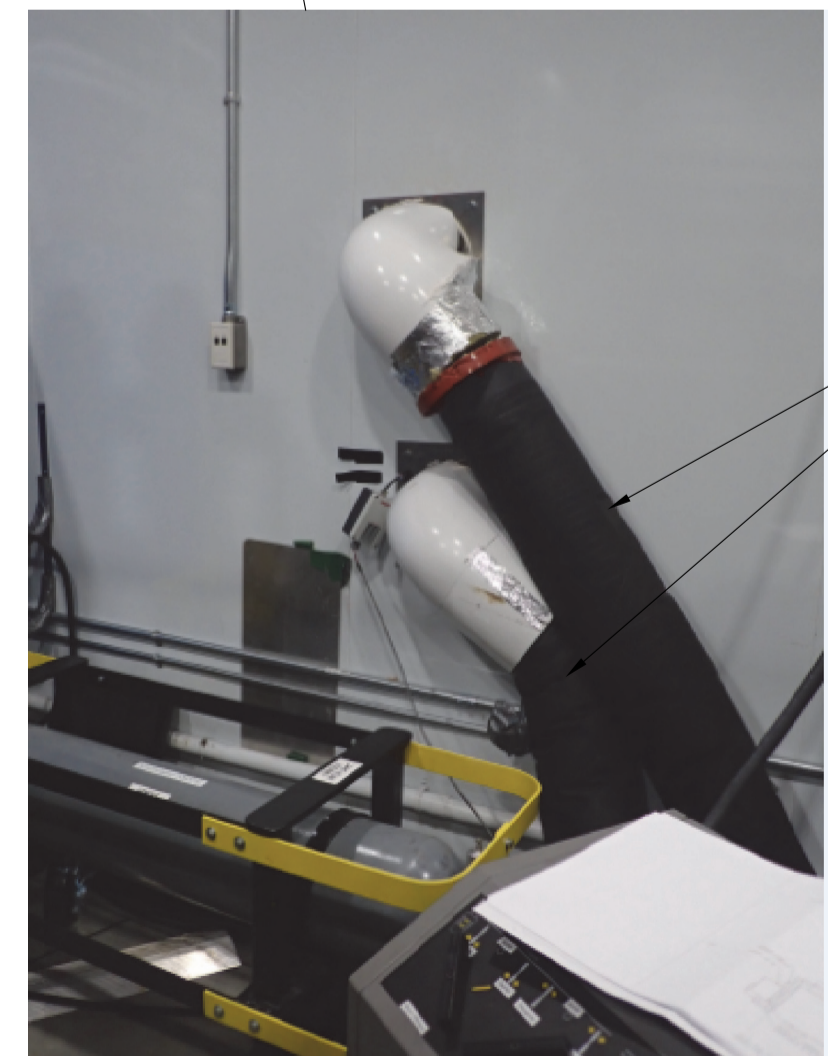


CONDUIT 356ø

HOTTE



CONDUIT 152ø



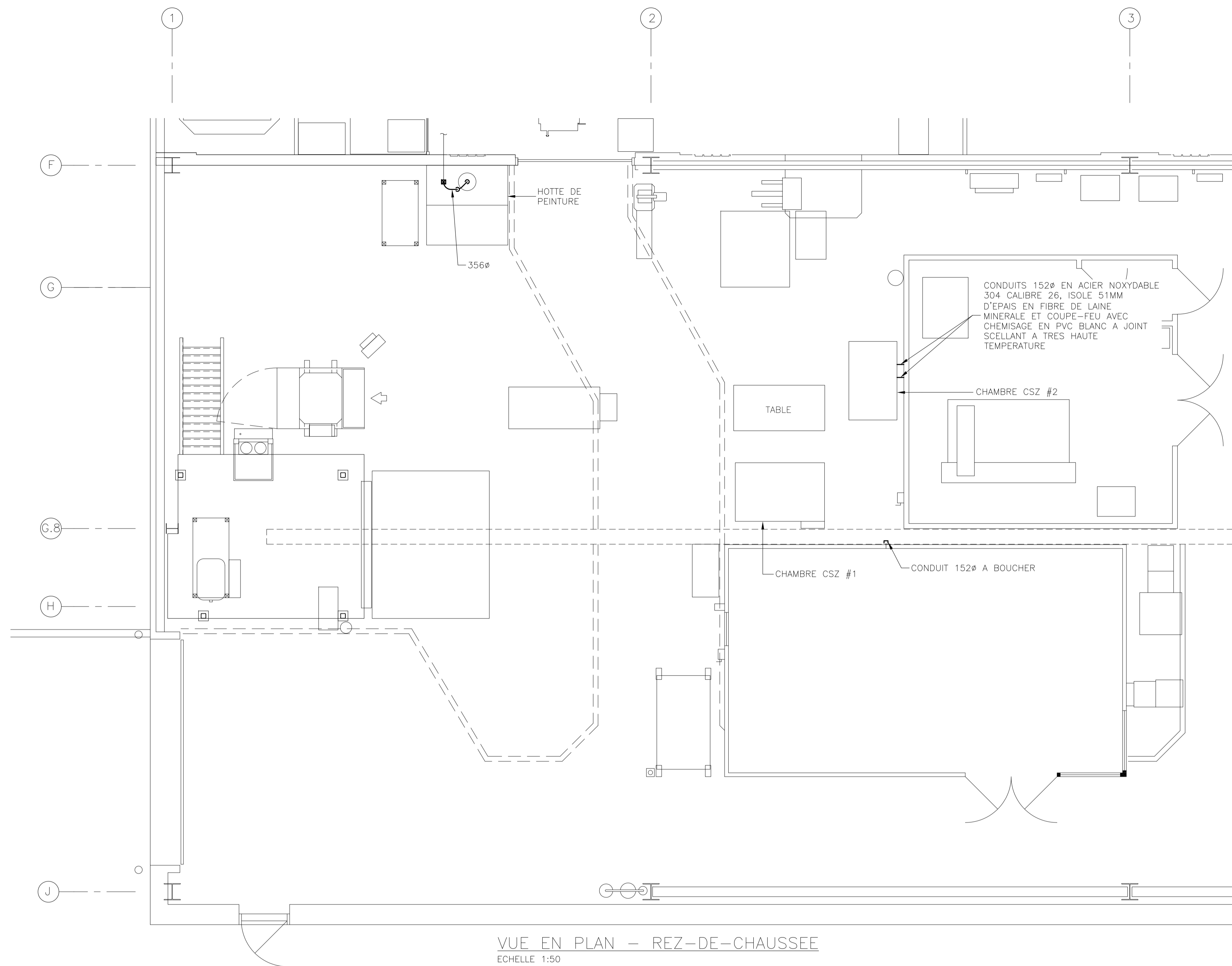
CONDUITS 152ø EXISTANTS

IMPORTANT:

AVANT DE DEBUTER LES TRAVAUX DE DEMANTELEMENT, LE PROPRIETAIRE DOIT EFFECTUER UNE DEMONSTRATION EN PRESENCE DE L'ENTREPRENEUR ET DE SES SOUS-TRAITANTS DU BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS TOUCHES AU PROJET. SOULIGNER TOUTES DEFICIENCES EXISTANTES SUR LES EQUIPEMENTS AVANT LE DEBUT DES TRAVAUX.

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VUE EN PLAN - REZ-DE-CHAUSSEE
ECHELLE 1:50

LEGENDE VENTILATION

- CONDUIT EXISTANT
- CONDUIT ROND OU RECTANGULAIRE DE VENTILATION ET CLIMATISATION
- - - DEMOLITION
- ⊠ RACCORD A L'EXISTANT

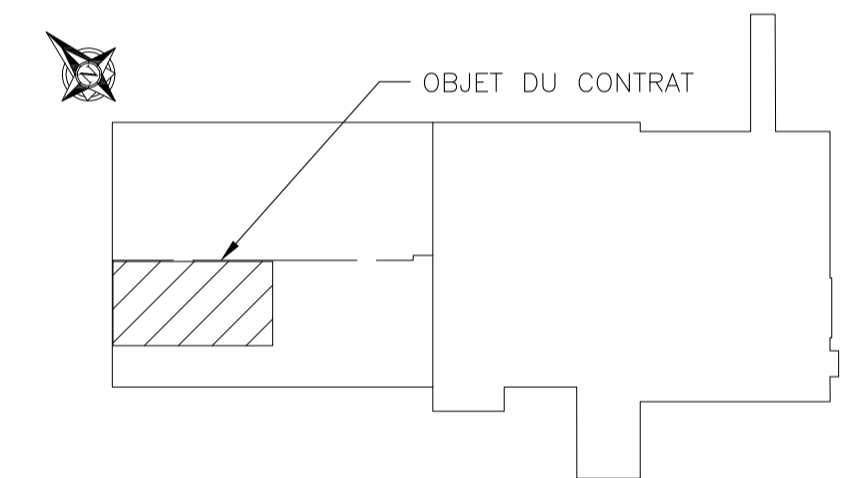
CONDUITS 152ø EN ACIER NOXYDABLE
304 CALIBRE 26. ISOLE 51MM
D'EPAIS EN FIBRE DE LAINE
MINERALE ET COUPE-FEU AVEC
CHEMISAGE EN PVC BLANC A JOINT
SCCELLANT A TRES HAUTE
TEMPERATURE

TABLE

CHAMBRE CSZ #2

CHAMBRE CSZ #1

CONDUIT 152ø A BOUCHER



PLAN GUIDE
ECH. : AUCUNE

IMPORTANT:

AVANT DE DEBUTER LES TRAVAUX DE DEMANTELEMENT, LE PROPRIETAIRE DOIT EFFECTUER UNE DEMONSTRATION EN PRESENCE DE L'ENTREPRENEUR ET DE SES SOUS-TRAITANTS DU BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS TOUCHES AU PROJET. SOULIGNER TOUTES DEFICIENCES EXISTANTES SUR LES EQUIPEMENTS AVANT LE DEBUT DES TRAVAUX.

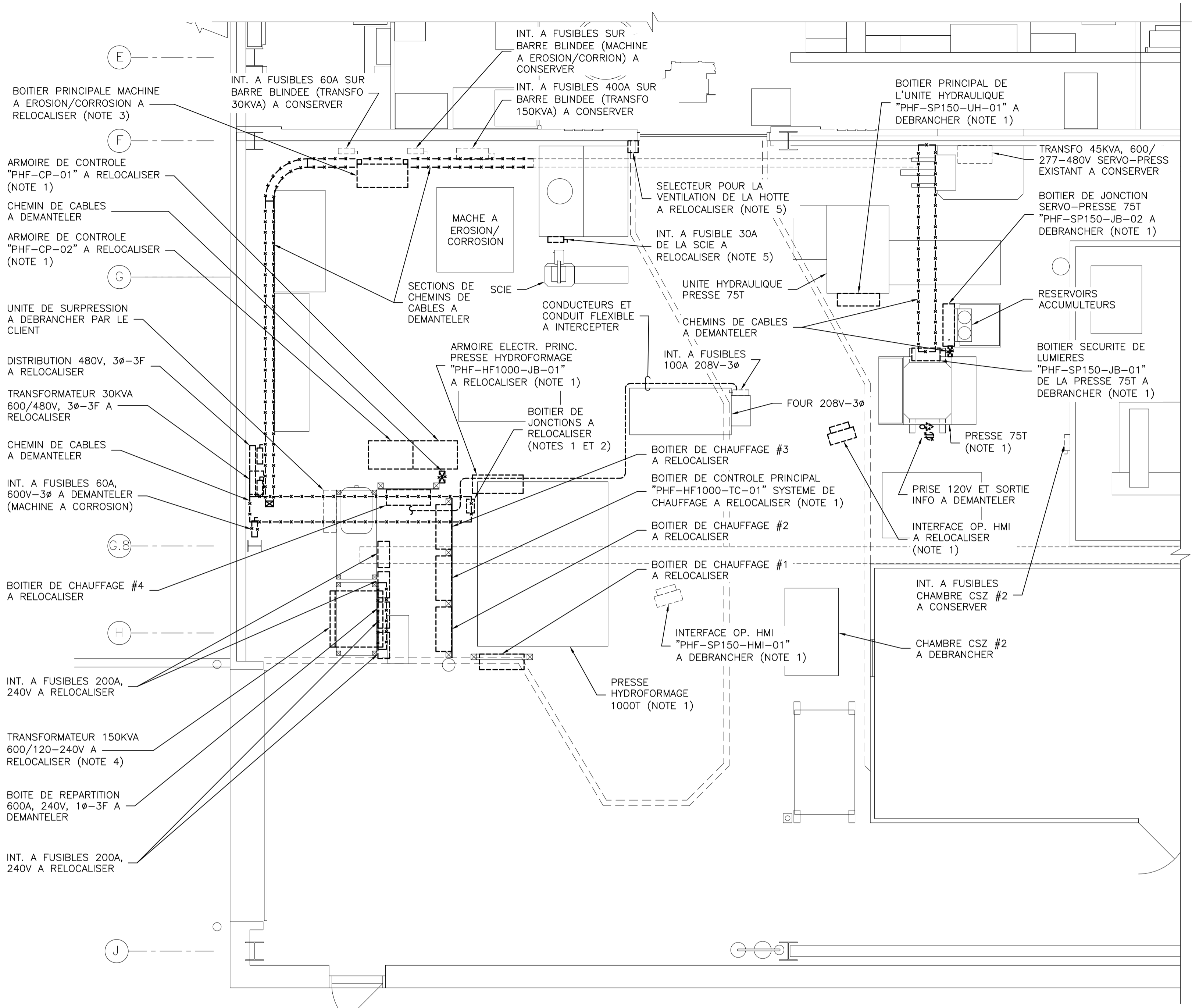
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NOTES DE VENTILATION

- 1- LES NOTES SONT TYPIQUES A TOUS LES PLANS D'UNE MEME SPECIALITE.
- 2- TOUT CHANGEMENT DE DIMENSIONS DES CONDUITS DE SURFACE EQUIVALENTE EST FAITE SANS FRAIS SUPPLEMENTAIRES AINSI QUE TOUT CHANGEMENT DE NIVEAU MEME SI NON INDIQUE AUX PLANS.
- 3- AVANT DE COMMENCER A EXECUTER TOUS TRAVAUX, PRENDRE ET VERIFIER SUR PLACE LES MESURES ET LES DIMENSIONS, ET CELA SOUS LA SEULE RESPONSABILITE DE L'ENTREPRENEUR.
- 4- TOUTS LES TRAVAUX SONT FAITS EN CONFORMITE AVEC LES CODES ET NORMES EN VIGUEUR SELON LES REGLES DU SERVICE D'INSPECTION (CNP, CCO, SMACNA, ETC.).
- 5- TOUTS LES CONDUITS ROUNDS RIGIDES SONT DE TYPE "SPIRALE" SANS EXCEPTION.
- 6- LES DIMENSIONS DES CONDUITS PEUVENT ETRE CHANGES SELON LES OBSTACLES ET BESOINS AVEC L'AUTORISATION DE L'INGENIEUR, ET CE, SANS FRAIS SUPPLEMENTAIRES.
- 7- CHAQUE SOUS-TRAITANT EST RESPONSABLE D'EFFECTUER TOUS LES PERCEMENTS ET LE COLMATAGE DE TOUTES LES OUVERTURES.

<table border="1"> <tr> <td>OO</td> <td>2018/07/20</td> <td>POUR SOUMISSION</td> <td>MRB</td> </tr> <tr> <td>NO.</td> <td>DATE</td> <td>DESCRIPTION</td> <td>PAR</td> </tr> </table>				OO	2018/07/20	POUR SOUMISSION	MRB	NO.	DATE	DESCRIPTION	PAR
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EXPERTS-CONSEILS / CONSULTANTS 1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574 927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574											
Client		CENTRE DE TECHNOLOGIE DE L'ALUMINIUM									
Projet		OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1									
Titre		MECANIQUE - VENTILATION NOUVEAU REZ-DE-CHAUSSEE VUE EN PLAN									
Dessiné par	Chargé de projet	Ing. responsable									
M. BELLEY	A. PILOTE	M-A TREMBLAY									
Vérifié par	Chef de discipline	Date de réalisation									
M-A TREMBLAY	P. MORIN	AOUT 2017									
Echelle	A1 - 94410 - 405		Rev: 00								
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VUE EN PLAN – RDC
ECH.: 1:50

NOTES:

- 1- SE REFERER AU SCHEMA BLOC DESSIN 504 POUR LA PARTIE CONTROLE DE L'EQUIPEMENT.
- 2- LA BOITE DOIT ETRE DEPLACEE VERS LE BAS AFIN D'ETRE ACCESSIBLE A PARTIR DE SOUS LA NOUVELLE MEZZANINE ET DE CONSERVER LE CABLAGE EXISTANT. COORDONNER L'EMPLACEMENT EXACT AVEC LE REPRESENTANT DU CLIENT. LE CABLAGE DE CETTE BOITE SE DIRIGE VERS L'UNITE HYDRAULIQUE EXISTANTE SITUÉE DANS UN BATIMENT A L'EXTERIEUR.
- 3- DEBRANCHER LE CABLE DE CONTROLE (TECK BLEU 20C #14AWG). AVANT LE DEBRANCHEMENT, EFFECTUER LE RELEVÉ DANS LE BOITIER DE CONTROLE.
- 4- LE TRANSFORMATEUR EST INSTALLE ACTUELLEMENT EN HAUTEUR SUR UN SUPPORT A ROULEAU. PREVOIR LA MACHINERIE NECESSAIRE POUR LA RELOCALISATION DU TRANSFORMATEUR VERS SON NOUVEL EMBLACEMENT.
- 5- POUR TOUTS LES APPAREILS DEPLACES, ALLONGER LE CIRCUIT EXISTANT. PREVOIR LES BOITES DE JONCTIONS REQUISES, LE FILAGE DOIT AVOIR LA CAPACITE ADEQUATE (SELON LA PROTECTION EXIGEE ET INSTALLEE) ET LES CONDUITS DOIVENT ETRE DE GROSSEUR REQUISE PAR LE CODE.
- 6- PRECAUTIONS A PRENDRE POUR LES TRAVAUX DE DEMOLITION: LORS DES TRAVAUX DE DEMOLITION, IL EST FORMELLEMENT INTERDIT D'UTILISER DES OUTILS DE COUPE ROTATIFS POUVANT PRODUIRE DES ETINCELLES, D'UTILISER L'OXYCOUPAGE OU D'EFFECTUER DES TRAVAUX DE SOUDURE EN PRESENCE DE MATERIAUX COMBUSTIBLES. L'ENTREPRENEUR DOIT OBLIGATOIREMENT S'ASSURER QUE SES TRAVAILLEURS OU CEUX DE SES SOUS-TRAITANTS S'ASSURENT D'ENLEVER AU PREALABLE TOUTS MATERIAUX COMBUSTIBLES EN PRESENCE; AUTREMENT LES TRAVAILLEURS DOIVENT UTILISER DES OUTILS APPROPRIES TELS QUE CISAILLES, SCIE A LA MAIN, ETC... ET/OU DE PROTEGER TOUT MATERIAU COMBUSTIBLE A L'AIDE DE TOILES DE PROTECTION RESISTANCES AU FEU AFIN D'EVITER TOUTE COMBUSTION DES MATERIAUX EN PRESENCE. L'ENTREPRENEUR DEVRA S'ASSURER DE RESPECTER EN TOUT POINT LES EXIGENCES EN MATIERE DE SECURITE INCENDIE AINSI QUE LES EXIGENCES DU CODE NATIONAL DE PREVENTION DES INCENDIES 2005 POUR LES TRAVAUX. VEUILLEZ VOUS REFERER A LA SECTION 5 – TRAVAUX PAR POINTS CHAUDS ET A LA SECTION 5.6 – CHANTIER DE CONSTRUCTION ET DE DEMOLITION.

LEGENDE

- EXISTANT
- DEMOLITION
- A RELOCALISER

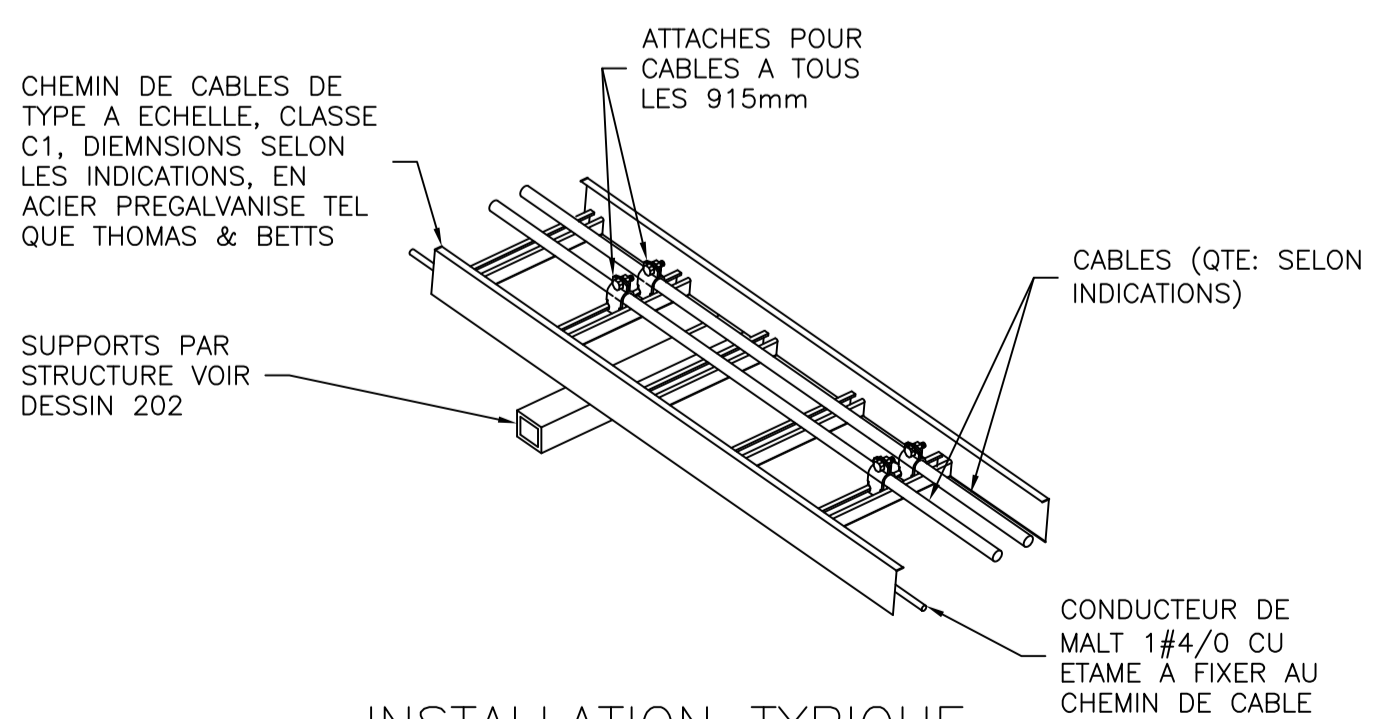
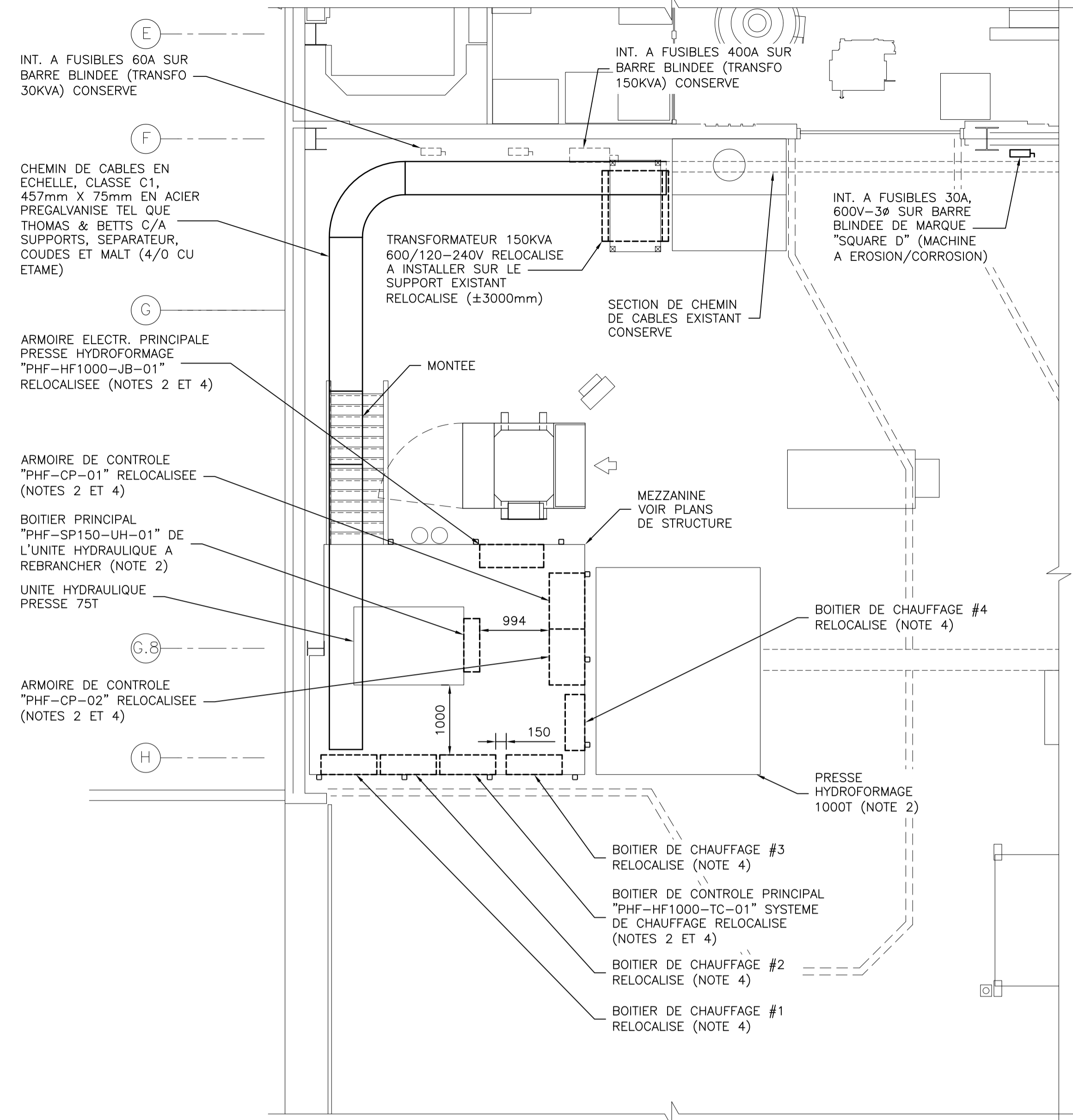
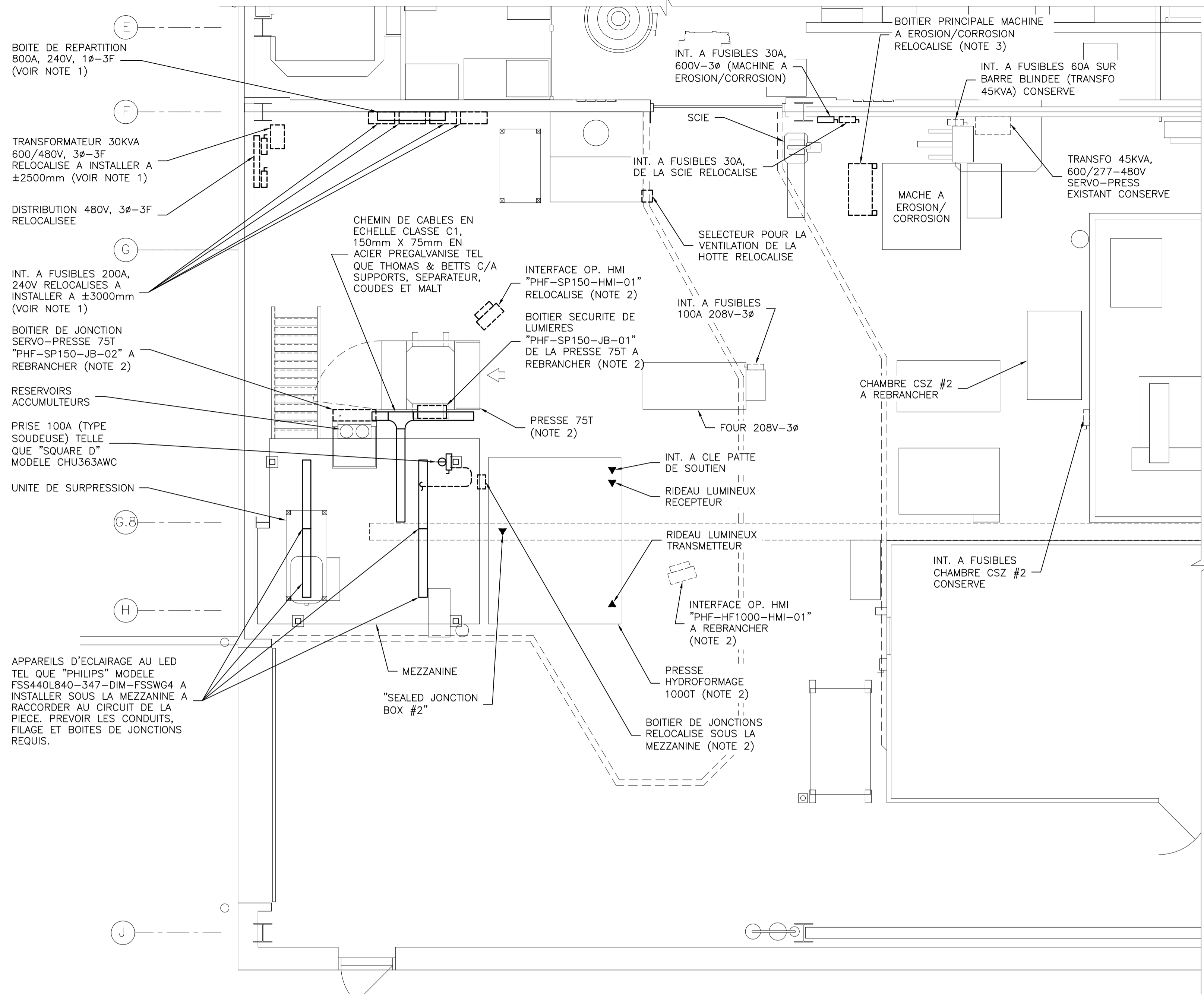
IMPORTANT:

AVANT DE DEBUTER LES TRAVAUX DE DEMANTELEMENT, LE PROPRIETAIRE DOIT EFFECTUER UNE DEMONSTRATION EN PRESENCE DE L'ENTREPRENEUR ET DE SES SOUS-TRAITANTS DU BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS TOUCHES AU PROJET, SOULIGNER TOUTES DEFICIENCES EXISTANTES SUR LES EQUIPEMENTS AVANT LE DEBUT DES TRAVAUX.

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Client		CENTRE DE TECHNOLOGIE DE L'ALUMINIUM	
Projet		OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1	
Titre		ELECTRICITE DEMOLITION & RELOCALISATION DISTR. ELECTRIQUE ET CONTROLE - RDC VUE EN PLAN	
Dessiné par J. GIRARD	Chargé de projet A. PILOTE	Ing. responsable M. GIRARD	
Vérifié par M. GIRARD	Chef de discipline M. GIRARD	Date de réalisation JUILLET 2018	
Echelle INDIQUEE		A1 - 94410 - 501	Rev: 00



NOTES:

- 1- FOURNIR ET INSTALLER UN SUPPORT REQUIS. UTILISER LA STRUCTURE EXISTANTE POUR SE FIXER ADEQUATEMENT.
- 2- SE REFERER AU SCHEMA BLOC DESSIN 504 POUR LA PARTIE CONTROLE DE L'EQUIPEMENT.
- 3- REBRANCHER LE CABLE DE CONTROLE (TECK BLEU 20C #14AWG) SELON LES RELEVES EFFECTUES AVANT LE DEPLACEMENT.
- 4- FIXER LE BOITIER AU SUPPORT PREVU A CET EFFET SUR LA NOUVELLE MEZZANINE. COORDONNER AVEC LA STRUCTURE.
- 5- LE FILAGE POUR L'ECLAIRAGE SERA DE #12CU AWG RW-90° MINIMUM SOUS CONDUIT EMT.
- 6- INSTALLER UN FIL VERT DE CALIBRE #12 CU MINIMUM POUR LA M.A.L.T. DANS TOUS LES CONDUITS.
- 7- TOUTES LES OUVERTURES PRATIQUEES DANS LES MURS OU LES PLANCHERS DOIVENT ETRE OBSTRUEES AVEC DU MATERIEL IGNIFUGE OU TOUT AUTRE MATERIEL APPROUVE PAR LE SURVEILLANT DES TRAVAUX.

IMPORTANT:

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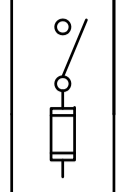
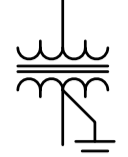


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LEGENDE

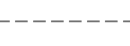
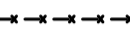
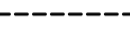
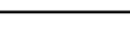
- EXISTANT
- DEMOLITION
- A RELOCALISER
- NOUVEAU

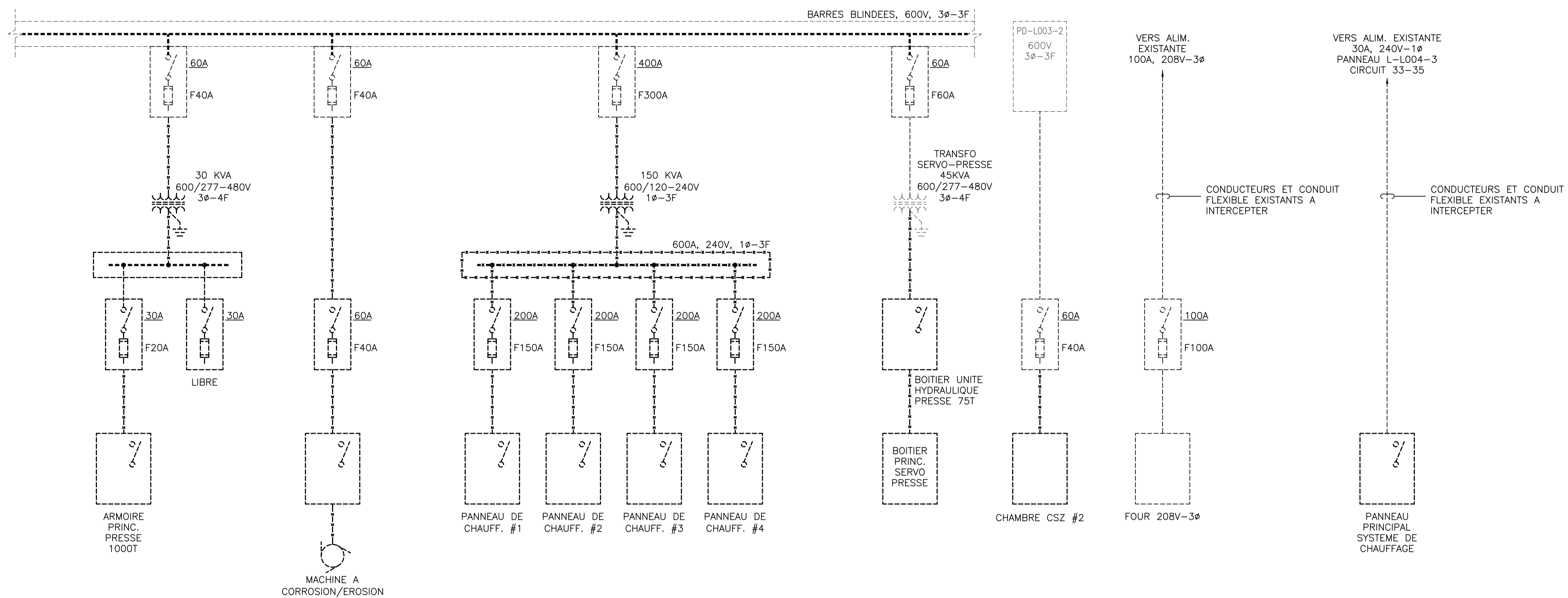
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Titre	ELECTRICITE NOUVEL AMENAGEMENT DISTRIBUTION ELECTR. ET CONTROLE RDC ET MEZZANINE - VUES EN PLAN		
Dessiné par	Chargé de projet	Ing. responsable	
J. GIRARD	A. PILOTE	M. GIRARD	
Vérifié par	Chef de discipline	Date de réalisation	
M. GIRARD	M. GIRARD	JUILLET 2018	
Echelle	INDIQUEE		Rev: 00
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LEGENDE UNIFILAIRE

-  INTERRUPTEUR A FUSIBLES
-  TRANSFORMATEUR
-  MOTEUR TRIPHASE
-  POUR EXTERIEUR, NEMA 3R

LEGENDE AUTRES

-  EXISTANT
-  DEMOLITION
-  A RELOCALISER
-  NOUVEAU



SCHEMA UNIFILAIRE – DEMOLITION

ECH.: AUCUNE

NOTES:

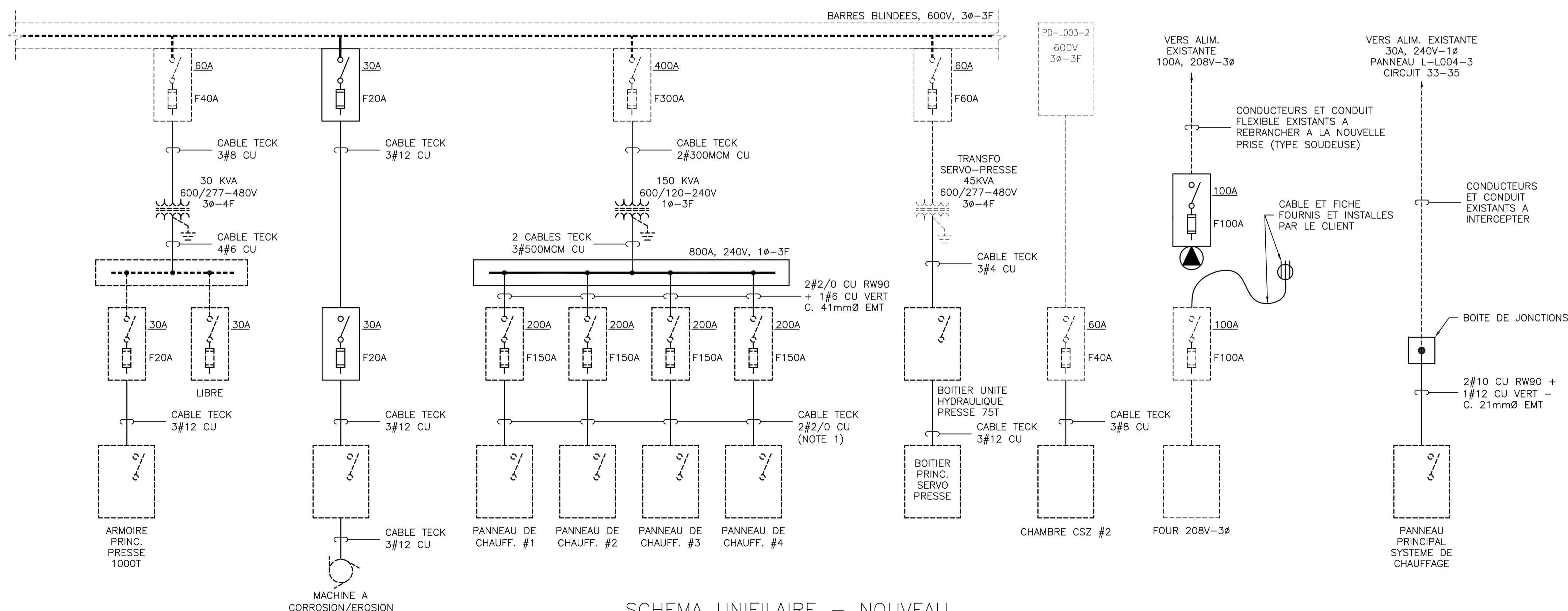
1- LES CABLES DOIVENT ETRE INSTALLES ET FIXES DANS LE CHEMIN DE CABLES. IL DOIVENT ETRE ESPACES DE 100% DU DIAMETRE DU CABLE DU PLUS GROS CABLES.

IMPORTANT:

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SCHEMA UNIFILAIRE – NOUVEAU

ECH.: AUCUNE

00	2018-07-20	POUR SOUMISSION	JIG
NO.	DATE	DESCRIPTION	PAR

REVISIONS

POUR :			
<input type="checkbox"/> INFORMATION	<input type="checkbox"/> DEFINITIFS	<input type="checkbox"/> SOUMISSION	<input type="checkbox"/> TEL QUE CONSTRUIT
<input type="checkbox"/> PRELIMINAIRES	<input type="checkbox"/> SOUMISSION	<input type="checkbox"/> TEL QUE CONSTRUIT	
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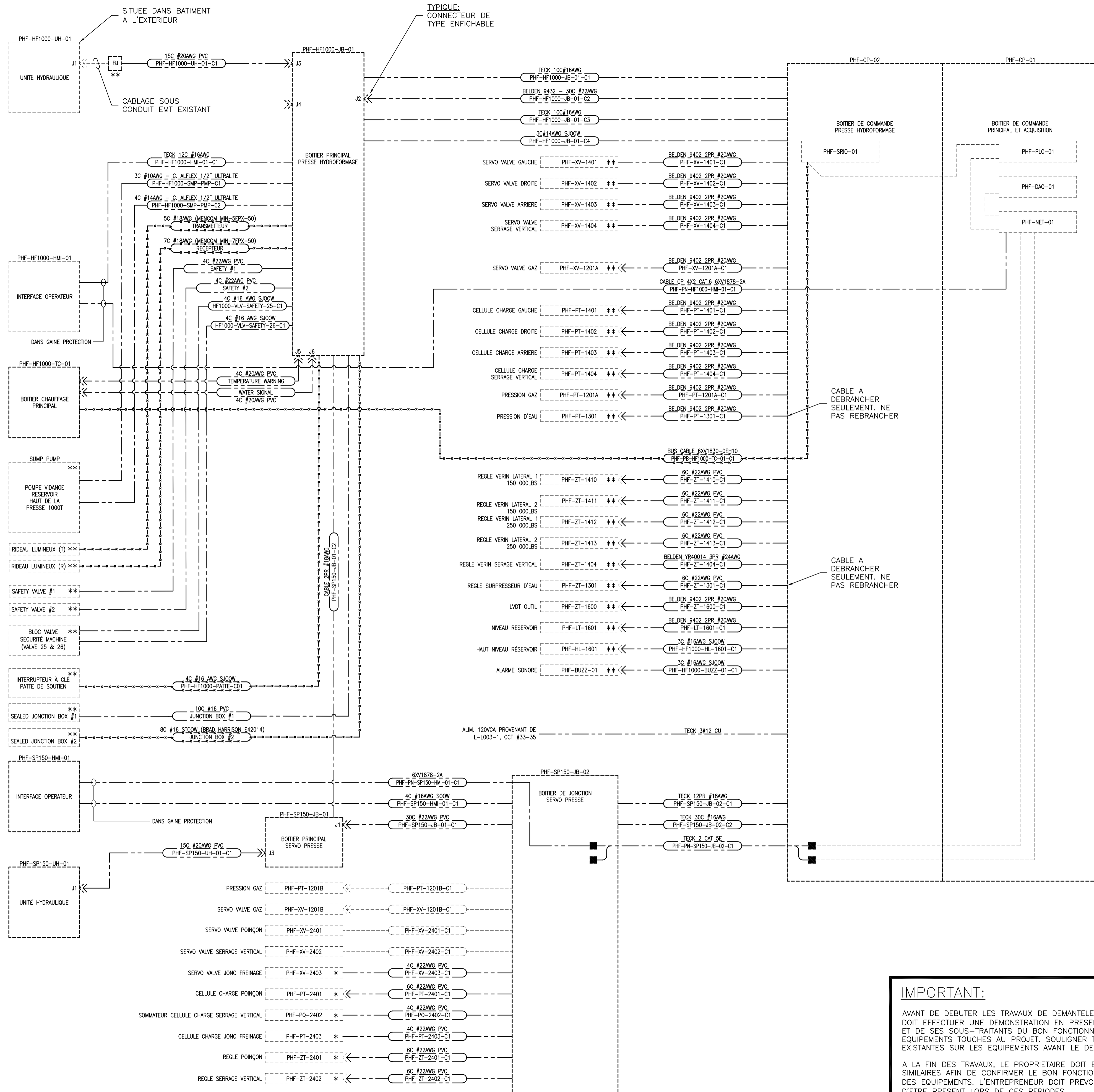
1846 Rue des Outardes, Chicoutimi, QC G7K 1H1 tel: 418-545-6574
927 Avenue du Pont Nord, Alma, QC G8B 7B6 tel: 418-545-6574

Client: **CENTRE DE TECHNOLOGIE DE L'ALUMINIUM**

Projet: **OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1**

Titre: **ELECTRICITE DEMOLITION ET NOUVEAU SCHEMAS UNIFILAIRES**

Dessiné par J. GIRARD	Chargé de projet A. PILOTE	Ing. responsable M. GIRARD
Vérifié par M. GIRARD	Chef de discipline M. GIRARD	Date de réalisation JUILLET 2018
Echelle INDIQUEE	A1 - 94410 - 503	Rev: 00



LEGENDE:

- EQUIPEMENT OU CABLAGE EXISTANT
- EQUIPEMENT RELOCALISE
- CABLAGE EXISTANT A REMPLACER PAR LE MEME TYPE (ACTUELLEMENT TROP COURT). FOURNIR ET INSTALLER DES CABLES DE LONGUEUR SUFFISANTE POUR EFFECTUER LE RACCORDEMENT SELON LE NOUVEL AMENAGEMENT DES EQUIPEMENTS (NOTE 1)
- CABLAGE EXISTANT A DEBRANCHER, A REINSTALLER ET A REBRANCHER SUITE AU TRAVAUX DE REAMENAGEMENT (NOTE 2)
- * EQUIPEMENT LOCALISE SUR LA PRESSE 75T
- ** EQUIPEMENT LOCALISE SUR LA PRESSE 1000T

NOTES:

- 1- DANS UNE PREMIERE ETAPE, L'ENTREPRENEUR ELECTRIQUE DOIT DEBRANCHER LE CABLAGE EXISTANT ENTRE LES DIVERS ELEMENTS MONTRES AU SCHEMA BLOC AFIN DE PERMETTRE LA RELOCALISATION DES EQUIPEMENTS IDENTIFIES AUX PLANS DE REAMENAGEMENT (VOIR DESSINS 101, 102, 501 ET 502). AVANT LE DEBRANCHEMENT, IL DOIT EFFECTUER UN RELEVÉ DES INSTALLATIONS EXISTANTES AFIN DE POUVOIR REBRANCHER ET REMETTRE EN FONCTION L'ENSEMBLE DES INSTALLATIONS A LEUR NOUVEL EMPLACEMENT. DANS UNE DEUXIEME ETAPE, L'ENTREPRENEUR ELECTRIQUE DOIT REINSTALLER ET REBRANCHER TOUS LES CABLES. FIXER LES CABLES ADEQUATEMENT A LA STRUCTURE OU A L'EQUIPEMENT SANS TOUTE FOIS NUIRE AU PROCÉDE. TOUS LES RACCORDEMENTS DANS LES BOITERS, ELEMENTS DE CHAMPS, ETC SONT DE LA RESPONSABILITE DE L'ENTREPRENEUR ELECTRIQUE. SE REFERER AUX DESSINS REFERENCE EN ANNEXE DU DEVIS.
- 2- DANS UNE PREMIERE ETAPE, L'ENTREPRENEUR ELECTRIQUE DOIT DEBRANCHER LE CABLAGE EXISTANT ENTRE LES DIVERS ELEMENTS MONTRES AU SCHEMA BLOC AFIN DE PERMETTRE LA RELOCALISATION DES EQUIPEMENTS IDENTIFIES AUX PLANS DE REAMENAGEMENT (VOIR DESSINS 101, 102, 501 ET 502). AVANT LE DEBRANCHEMENT, IL DOIT EFFECTUER UN RELEVÉ DES INSTALLATIONS EXISTANTES AFIN DE POUVOIR REBRANCHER ET REMETTRE EN FONCTION L'ENSEMBLE DES INSTALLATIONS A LEUR NOUVEL EMPLACEMENT. DANS UNE DEUXIEME ETAPE, L'ENTREPRENEUR ELECTRIQUE DOIT REINSTALLER ET REBRANCHER TOUS LES CABLES. DANS CERTAINS CAS, LORSQUE LES CABLES SONT TROP LONGS, IL DOIT COUPER CES DERNIERS ET FIXER LES CABLES ADEQUATEMENT A LA STRUCTURE OU A L'EQUIPEMENT SANS TOUTE FOIS NUIRE AU PROCÉDE. AVANT DE COUPER LES CABLES, COORDONNER AVEC LE RESPONSABLE CLIENT. TOUS LES RACCORDEMENTS DANS LES BOITERS, ELEMENTS DE CHAMPS, ETC SONT DE LA RESPONSABILITE DE L'ENTREPRENEUR ELECTRIQUE. SE REFERER AUX DESSINS REFERENCE EN ANNEXE DU DEVIS.

OO	2018-07-20	POUR SOUMISSION	JIG
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REVISIONS		Scieur:
<input type="checkbox"/> INFORMATION	<input type="checkbox"/> DÉFINITIFS	
<input type="checkbox"/> PRÉLIMINAIRES	<input checked="" type="checkbox"/> SOUMISSION	
<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> TEL QUE CONSTRUIT	Date:

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Client: **CENTRE DE TECHNOLOGIE DE L'ALUMINIUM**

Projet: **OPTIMISATION DE L'AIRE DE FORMAGE AU LGE1**

Titre: **ELECTRICITE DEMOLITION ET NOUVEAU SCHEMAS BLOC - CONTROLE DES PRESSES**

IMPORTANT:

AVANT DE DEBUTER LES TRAVAUX DE DEMANTELEMENT, LE PROPRIETAIRE DOIT EFFECTUER UNE DEMONSTRATION EN PRESENCE DE L'ENTREPRENEUR ET DE SES SOUS-TRAITANTS AFIN DE CONFIRMER LE BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS TOUCHES AU PROJET, SOULIGNER TOUTES DEFICIENCES EXISTANTES SUR LES EQUIPEMENTS AVANT LE DEBUT DES TRAVAUX.

A LA FIN DES TRAVAUX, LE PROPRIETAIRE DOIT EFFECTUER DES ESSAIS SIMILAIRES AFIN DE CONFIRMER LE BON FONCTIONNEMENT DE CHACUN DES EQUIPEMENTS. L'ENTREPRENEUR DOIT PREVOIR DANS SA SOUMISSION D'ETRE PRESENT LORS DE CES PERIODES.

LES EQUIPEMENTS TOUCHES PAR LE PROJET DOIVENT FONCTIONNER DE MANIERE OPTIMALE TEL QUE DEMONTRE LORS DE L'ESSAI INITIAL. L'ENTREPRENEUR ET SES SOUS-TRAITANTS SONT TENUS DE CORRIGER TOUTES DEFICIENCES AYANT PU SURVENIR SUR LES EQUIPEMENTS PENDANT LES TRAVAUX. ASSUMER TOUS LES FRAIS REQUIS.

Dessiné par J. GIRARD	Chargé de projet A. PILOTE	Ing. responsable M. GIRARD
Vérifié par M. GIRARD	Chef de discipline M. GIRARD	Date de réalisation JUILLET 2018
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National Research Council
Canada

Conseil national de recherches
Canada

Administrative Services & Property management
Branch (ASPM)

Direction des services administratifs et de la gestion
de l'immobilier (SAGI)

Annex G

Terms of Payment (B)

[Insert the document here](#)



TP1 Amount Payable – General

1.1 Subject to any other provisions of the contract, Her Majesty shall pay the Contractor, at the times and in the manner hereinafter set out, the amount by which

1.1.1 the aggregate of the amounts described in TP2 exceeds

1.1.2 the aggregate of the amounts described in TP3

and the Contractor shall accept that amount as payment in full satisfaction for everything furnished and done by him in respect of the work to which the payment relates.

TP2 Amounts Payable to the Contractor

2.1 The amounts referred to in TP1.1.1 are the aggregate of

2.1.1 the amounts referred to in the Articles of Agreement, and

2.1.2 the amounts, if any, that are payable to the Contractor pursuant to the General Conditions.

TP3 Amounts Payable to Her Majesty

3.1 The amounts referred to in TP1.1.2 are the aggregate of the amounts, in any, that the Contractor is liable to pay Her Majesty pursuant to the contract.

3.2 When making any payments to the Contractor, the failure of Her Majesty to deduct an amount referred to in TP3.1 from an amount referred to in TP2 shall not constitute a waiver of the right to do so, or an admission of lack of entitlement to do so in any subsequent payment to the Contractor.

TP4 Time of Payment

4.1 In these Terms of Payment

4.1.1 The “payment period” means a period of 30 consecutive days or such other longer period as is agreed between the Contractor and the Departmental Representative.

4.1.2 An amount is “due and payable” when it is due and payable by Her Majesty to the Contractor according to TP4.4, TP4.7 or TP4.10.

4.1.3 An amount is overdue when it is unpaid on the first day following the day upon which it is due and payable.

4.1.4 The “date of payment” means the date of the negotiable instrument of an amount due and payable by the Receiver General for Canada and given for payment.

4.1.5 The “Bank Rate” means the discount rate of interest set by the Bank of Canada in effect at the opening of business on the date of payment.



- 4.2 The Contractor shall, on the expiration of a payment period, deliver to the Departmental Representative in respect of that payment period a written progress claim that fully describes any part of the work that has been completed, and any material that was delivered to the work site but not incorporated into the work during that payment period.
- 4.3 The Departmental Representative shall, not later than ten days after receipt by him of a progress claim referred to in TP4.2,
- 4.3.1 inspect the part of the work and the material described in the progress claim; and
- 4.3.2 issue a progress report, a copy of which the Departmental Representative will give to the Contractor, that indicates the value of the part of the work and the material described in the progress claim that, in the opinion of the Departmental Representative,
- 4.3.2.1 is in accordance with the contract, and
- 4.3.2.2 was not included in any other progress report relating to the contract.
- 4.4 Subject to TP1 and TP4.5 Her Majesty shall, not later than 30 days after receipt by the Departmental Representative of a progress claim referred to in TP4.2, pay the Contractor
- 4.4.1 an amount that is equal to 95% of the value that is indicated in the progress report referred to in TP4.3.2 if a labour and material payment bond has been furnished by the Contractor, or
- 4.4.2 an amount that is equal to 90% of the value that is indicated in the progress report referred to in TP4.3.2 if a labour and material payment bond has not been furnished by the Contractor.
- 4.5 It is a condition precedent to Her Majesty's obligation under TP4.4 that the Contractor has made and delivered to the Departmental Representative,
- 4.5.1 a statutory declaration described in TP4.6 in respect of a progress claim referred to in TP4.2,
- 4.5.2 in the case of the Contractor's first progress claim, a construction schedule in accordance with the relevant sections of the Specifications, and
- 4.5.3 if the requirement for a schedule is specified, an update of the said schedule at the times identified in the relevant sections of the Specifications.
- 4.6 A statutory declaration referred to in TP4.5 shall contain a deposition by the Contractor that
- 4.6.1 up to the date of the Contractor's progress claim, the Contractor has complied with all his lawful obligations with respect to the Labour Conditions; and
- 4.6.2 up to the date of the Contractor's immediately preceding progress claim, all lawful obligations of the Contractor to subcontractors and suppliers of material in respect of the



work under the contract have been fully discharged.

- 4.7 Subject to TP1 and TP4.8, Her Majesty shall, not later than 30 days after the date of issue of an Interim Certificate of Completion referred to in GC44.2, pay the Contractor the amount referred to in TP1 less the aggregate of
- 4.7.1 the sum of all payments that were made pursuant to TP4.4;
 - 4.7.2 an amount that is equal to the Departmental Representative's estimate of the cost to Her Majesty or rectifying defects described in the Interim Certificate of Completion; and
 - 4.7.3 an amount that is equal to the Departmental Representative's estimate of the cost to Her Majesty of completing the parts of the work described in the Interim Certificate of Completion other than the defects referred to in TP4.7.2.
- 4.8 It is a condition precedent to Her Majesty's obligation under TP4.7 that the Contractor has made and delivered to the Departmental Representative,
- 4.8.1 a statutory declaration described in TP4.9 in respect of an Interim Certificate of Completion referred to in GC44.2, and
 - 4.8.2 if so specified in the relevant sections of the Specifications, and update of the construction schedule referred to in TP4.5.2 and the updated schedule shall, in addition to the specified requirements, clearly show a detailed timetable that is acceptable to the Departmental Representative for the completion of any unfinished work and the correction of all defects.
- 4.9 A statutory declaration referred to in TP4.8 shall contain a deposition by the contractor that up to the date of the Interim Certificate of Completion the Contractor has
- 4.9.1 complied with all of the Contractor's lawful obligations with respect to the Labour Conditions;
 - 4.9.2 discharged all of the Contractor's lawful obligations to the subcontractors and suppliers of material in respect of the work under the contract; and
 - 4.9.3 discharged the Contractor's lawful obligations referred to in GC14.6.
- 4.10 Subject to TP1 and TP4.11, Her Majesty shall, not later than 60 days after the date of issue of a Final Certificate of Completion referred to in GC44.1, pay the Contractor the amount referred to in TP1 less the aggregate of
- 4.10.1 the sum of all payments that were made pursuant to TP4.4; and
 - 4.10.2 the sum of all payments that were made pursuant to TP4.7.
- 4.11 It is a condition precedent to Her Majesty's obligation under TP4.10 that the Contractor has made and delivered a statutory declaration described in TP4.12 to the Departmental Representative.



- 4.12 A statutory declaration referred to in TP4.11 shall, in addition to the depositions described in TP4.9, contain a deposition by the Contractor that all of the Contractor's lawful obligations and any lawful claims against the Contractor that arose out of the performance of the contract have been discharged and satisfied.

TP5 Progress Report and Payment Thereunder Not Binding on Her Majesty

- 5.1 Neither a progress report referred to in TP4.3 nor any payment made by Her Majesty pursuant to these Terms of Payment shall be construed as an admission by Her Majesty that the work, material or any part thereof is complete, is satisfactory or is in accordance with the contract.

TP6 Delay in Making Payment

- 6.1 Notwithstanding GC7 any delay by Her Majesty in making any payment when it is due pursuant to these Terms of Payment shall not be a breach of the contract by Her Majesty.

- 6.2 Her Majesty shall pay, without demand from the Contractor, simple interest at the Bank Rate plus 1 -1/4 per centum on any amount which is overdue pursuant to TP4.1.3, and the interest shall apply from and include the day such amount became overdue until the day prior to the date of payment except that

- 6.2.1 interest shall not be payable or paid unless the amount referred to in TP6.2 has been overdue for more than 15 days following

6.2.1.1 the date the said amount became due and payable, or

6.2.1.2 the receipt by the Departmental Representative of the Statutory Declaration referred to in TP4.5, TP4.8 or TP4.11,

whichever is the later, and

- 6.6.2 interest shall not be payable or paid on overdue advance payments if any.

TP7 Right of Set-off

- 7.1 Without limiting any right of set-off or deduction given or implied by law or elsewhere in the contract, Her Majesty may set off any amount payable to Her Majesty by the Contractor under this contract or under any current contract against any amount payable to the Contractor under this contract.

- 7.2 For the purposes of TP7.1, "current contract" means a contract between Her Majesty and the Contractor

7.2.1 under which the Contractor has an undischarged obligation to perform or supply work, labour or material, or

7.2.2 in respect of which Her Majesty has, since the date of which the Articles of Agreement were made, exercised any right to take the work that is the subject of the contract out of the Contractor's hands.



TP8 Payment in Event of Termination

- 8.1 If the contract is terminated pursuant to GC41, Her Majesty shall pay the Contractor any amount that is lawfully due and payable to the Contractor as soon as is practicable under the circumstances.

TP9 Interest on Settled Claims

- 9.1 Her Majesty shall pay to the Contractor simple interest on the amount of a settled claim at an average Bank Rate plus 1 ¼ per centum from the date the settled claim was outstanding until the day prior to the date of payment.
- 9.2 For the purposes of TP9.1,
- 9.2.1 a claim is deemed to have been settled when an agreement in writing is signed by the Departmental Representative and the Contractor setting out the amount of the claim to be paid by Her Majesty and the items or work for which the said amount is to be paid.
- 9.2.2 an "average Bank Rate" means the discount rate of interest set by the Bank of Canada in effect at the end of each calendar month averaged over the period the settled claim was outstanding.
- 9.2.3 a settled claim is deemed to be outstanding from the day immediately following the date the said claim would have been due and payable under the contract had it not been disputed.
- 9.3 For the purposes of TP9 a claim means a disputed amount subject to negotiation between Her Majesty and the Contractor under the contract.

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Annex H

General Conditions (C)

[Insert the document here](#)



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GC12	4	Material, Plant and Real Property Supplied by Her Majesty
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GC1 Interpretation

1.1 In the contract

- 1.1.1 where reference is made to a part of the contract by means of numbers preceded by letters, the reference shall be construed to be a reference to the particular part of the contract that is identified by that combination of letters and numbers and to any other part of the contract referred to therein;
- 1.1.2 “contract” means the contract document referred to in the Articles of Agreement;
- 1.1.3 “contract security” means any security given by the Contractor to Her Majesty in accordance with the contract;
- 1.1.4 “Departmental Representative” means the officer or employee of Her Majesty who is designated pursuant to the Articles of Agreement and includes a person specially authorized by him to perform, on his behalf, any of his functions under the contract and is so designated in writing to the Contractor;
- 1.1.5 “material” includes all commodities, articles and things required to be furnished by or for the Contractor under the contract for incorporation into the work;
- 1.1.6 “Minister” includes a person acting for, or if the office is vacant, in place of the Minister and his successors in the office, and his or their lawful deputy and any of his or their representatives appointed for the purposes of the contract;
- 1.1.7 “person” includes, unless the context otherwise requires, a partnership, proprietorship, firm, joint venture, consortium and a corporation;
- 1.1.8 “plant” includes all animals, tools, implements, machinery, vehicles, buildings, structures, equipment and commodities, articles and things other than material, that are necessary for the due performance of the contract;
- 1.1.9 “subcontractor” means a person to whom the Contractor has, subject to GC4, subcontracted the whole or any part of the work;
- 1.1.10 “superintendent” means the employee of the Contractor who is designated by the Contractor to act pursuant to GC19;
- 1.1.11 “work includes, subject only to any express stipulation in the contract to the contrary, everything that is necessary to be done, furnished or delivered by the Contractor to perform the contract.

1.2 The headings in the contract documents, other than in the Plans and Specifications, form no part of the contract but are inserted for convenience of reference only.

1.3 In interpreting the contract, in the event of discrepancies or conflicts between anything in the Plans and Specifications and the General Conditions, the General Conditions govern.



- 1.4 In interpreting the Plans and Specifications, in the event of discrepancies or conflicts between
- 1.4.1 the Plans and Specifications, the Specifications govern;
 - 1.4.2 the Plans, the Plans drawn with the largest scale govern; and
 - 1.4.3 figured dimensions and scaled dimensions, the figured dimensions govern.

GC2 Successors and Assigns

- 2.1 The contract shall inure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and assigns.

GC3 Assignment of Contract

- 3.1 The contract may not be assigned by the Contractor, either in whole or in part, without the written consent of the Minister.

GC4 Subcontracting by Contractor

- 4.1 Subject to this General Condition, the Contractor may subcontract any part of the work.
- 4.2 The Contractor shall notify the Departmental Representative in writing of his intention to subcontract.
- 4.3 A notification referred to in GC4.2 shall identify the part of the work, and the subcontractor with whom it is intended to subcontract.
- 4.4 The Departmental Representative may object to the intended subcontracting by notifying the Contractor in writing within six days of receipt by the Departmental Representative of a notification referred to in GC4.2.
- 4.5 If the Departmental Representative objects to a subcontracting pursuant to GC4.4, the Contractor shall not enter into the intended subcontract.
- 4.6 The contractor shall not, without the written consent of the Departmental Representative, change a subcontractor who has been engaged by him in accordance with this General Condition.
- 4.7 Every subcontract entered into by the Contractor shall adopt all of the terms and conditions of this contract that are of general application.
- 4.8 Neither a subcontracting nor the Departmental Representative's consent to a subcontracting by the Contractor shall be construed to relieve the Contractor from any obligation under the contract or to impose any liability upon Her Majesty.

GC5 Amendments



- 5.1 No amendment or change in any of the provisions of the contract shall have any force or effect until it is reduced to writing.

GC6 No Implied Obligations

- 6.1 No implied terms or obligations of any kind by or on behalf of Her Majesty shall arise from anything in the contract and the express covenants and agreements therein contained and made by Her Majesty are the only covenants and agreements upon which any rights against Her Majesty are to be founded.
- 6.2 The contract supersedes all communications, negotiations and agreements, either written or oral, relating to the work that were made prior to the date of the contract.

GC7 Time of Essence

- 7.1 Time is of the essence of the contract.

GC8 Indemnification by Contractor

- 8.1 The Contractor shall indemnify and save Her Majesty harmless from and against all claims, demand, losses, costs, damages, actions, suits, or proceedings by whomever made, brought or prosecuted and in any manner based upon, arising out of, related to, occasioned by or attributable to the activities of the Contractor, his servants, agents, subcontractors and sub-subcontractors in performing the work including an infringement or an alleged infringement of a patent of invention or any other kind of intellectual property.
- 8.2 For the purpose of GC8.1, "activities" includes any act improperly carried out, any omission to carry out an act and any delay in carrying out an act.

GC9 Indemnification by Her Majesty

- 9.1 Her Majesty shall, subject to the Crown Liability Act, the Patent Act, and any other law that affects Her Majesty's rights, powers, privileges or obligations, indemnify and save the Contractor harmless from and against all claims, demands, losses, costs, damage, actions, suits or proceedings arising out of his activities under the contract that are directly attributable to
- 9.1.1 lack of or a defect in Her Majesty's title to the work site whether real or alleged; or
- 9.1.2 an infringement or an alleged infringement by the Contractor of any patent of invention or any other kind of intellectual property occurring while the Contractor was performing any act for the purposes of the contract employing a model, plan or design or any other thing related to the work that was supplied by Her Majesty to the Contractor.

GC10 Members of House of Commons Not to Benefit



- 10.1 As required by the Parliament of Canada Act, it is an express condition of the contract that no member of the House of Commons shall be admitted to any share of part of the contract or to any benefit arising therefrom.

GC11 Notices

- 11.1 Any notice, consent, order, decision, direction or other communication, other than a notice referred to in GC11.4, that may be given to the Contractor pursuant to the contract may be given in any manner.
- 11.2 Any notice, consent, order, decision, direction or other communication required to be given in writing, to any party pursuant to the contract shall, subject to GC11.4, be deemed to have been effectively given
- 11.2.1 to the Contractor, if delivered personally to the Contractor or the Contractor's superintendent, or forwarded by mail, telex or facsimile to the Contractor at the address set out in A4.1, or
- 11.2.2 to Her Majesty, if delivered personally to the Departmental Representative, or forwarded by mail, telex or facsimile to the Departmental Representative at the address set out in A1.2.1.
- 11.3 Any such notice, consent, order, decision, direction or other communication given in accordance with GC11.2 shall be deemed to have been received by either party
- 11.3.1 if delivered personally, on the day that it was delivered,
- 11.3.2 if forwarded by mail, on the earlier of the day it was received and the sixth day after it was mailed, and
- 11.3.3 if forwarded by telex or facsimile, 24 hours after it was transmitted.
- 11.4 A notice given under GC38.1.1, GC40 and GC41, if delivered personally, shall be delivered to the Contractor if the Contractor is doing business as sole proprietor or, if the Contractor is a partnership or corporation, to an officer thereof.

GC12 Material, Plant and Real Property Supplied by Her Majesty

- 12.1 Subject to GC12.2, the Contractor is liable to Her Majesty for any loss of or damage to material, plant or real property that is supplied or placed in the care, custody and control of the Contractor by Her Majesty for use in connection with the contract, whether or not that loss or damage is attributable to causes beyond the Contractor's control.
- 12.2 The Contractor is not liable to Her Majesty for any loss or damage to material, plant or real property referred to in GC12.1 if that loss or damage results from and is directly attributable to reasonable wear and tear.
- 12.3 The Contractor shall not use any material, plant or real property referred to in GC12.1 except for



the purpose of performing this contract.

- 12.4 When the Contractor fails to make good any loss or damage for which he is liable under GC12.1 within a reasonable time after being required to do so by the Departmental Representative, the Departmental Representative may cause the loss or damage to be made good at the Contractor's expense, and the Contractor shall thereupon be liable to Her Majesty for the cost thereof and shall, on demand, pay to Her Majesty an amount equal to that cost.
- 12.5 The Contractor shall keep such records of all material, plant and real property referred to in GC12.1 as the Departmental Representative from time to time requires and shall satisfy the Departmental Representative, when requested, that such material, plant and real property are at the place and in the condition which they ought to be.

GC13 Material, Plant and Real Property Become Property of Her Majesty

- 13.1 Subject to GC14.7 all material and plant and the interest of the Contractor in all real property, licenses, powers and privileges purchased, used or consumed by the Contractor for the contract shall, after the time of their purchase, use or consumption be the property of Her Majesty for the purposes of the work and they shall continue to be the property of Her Majesty.
- 13.1.1 in the case of material, until the Departmental Representative indicates that he is satisfied that it will not be required for the work, and
- 13.1.2 in the case of plant, real property, licenses, powers and privileges, until the Departmental Representative indicates that he is satisfied that the interest vested in Her Majesty therein is no longer required for the purposes of the work.
- 13.2 Material or plant that is the property of Her Majesty by virtue of GC13.1 shall not be taken away from the work site or used or disposed of except for the purposes of the work without the written consent of the Departmental Representative.
- 13.3 Her Majesty is not liable for loss of or damage from any cause to the material or plant referred to in GC13.1 and the Contractor is liable for such loss or damage notwithstanding that the material or plant is the property of Her Majesty.

GC14 Permits and Taxes Payable

- 14.1 The Contractor shall, within 30 days after the date of the contract, tender to a municipal authority an amount equal to all fees and charges that would be lawfully payable to that municipal authority in respect of building permits as if the work were being performed for a person other than Her Majesty.
- 14.2 Within 10 days of making a tender pursuant to GC14.1, the Contractor shall notify the Departmental Representative of his action and of the amount tendered and whether or not the municipal authority has accepted that amount.
- 14.3 If the municipal authority does not accept the amount tendered pursuant to GC14.1 the Contractor shall pay that amount to Her Majesty within 6 days after the time stipulated in GC14.2.



- 14.4 For the purposes of GC14.1 to GC14.3 “municipal authority” means any authority that would have jurisdiction respecting permission to perform the work if the owner were not Her Majesty.
- 14.5 Notwithstanding the residency of the Contractor, the Contractor shall pay any applicable tax arising from or related to the performance of the work under the contract.
- 14.6 In accordance with the Statutory Declaration referred to in TP4.9, a Contractor who has neither residence nor place of business in the province in which work under the contract is being performed shall provide Her Majesty with proof of registration with the provincial sales tax authorities in the said province.
- 14.7 For the purpose of the payment of any applicable tax or the furnishing of security for the payment of any applicable tax arising from or related to the performance of the work under the contract, the Contractor shall, notwithstanding the fact that all material, plant and interest of the Contractor in all real property, licenses, powers and privileges, have become the property of Her Majesty after the time of purchase, be liable, as a user or consumer, for the payment or for the furnishing of security for the payment of any applicable tax payable, at the time of the use or consumption of that material, plant or interest of the Contractor in accordance with the relevant legislation.

GC15 Performance of Work under Direction of Departmental Representative

- 15.1 The Contractor shall
- 15.1.1 permit the Departmental Representative to have access to the work and its site at all times during the performance of the contract;
 - 15.1.2 furnish the Departmental Representative with such information respecting the performance of the contract as he may require; and
 - 15.1.3 give the Departmental Representative every possible assistance to enable the Departmental Representative to carry out his duty to see that the work is performed in accordance with the contract and to carry out any other duties and exercise any powers specially imposed or conferred on the Departmental Representative under the contract.

CG16 Cooperation with Other Contractors

- 16.1 Where, in the opinion of the Departmental Representative, it is necessary that other contractors or workers with or without plant and material, be sent onto the work or its site, the Contractor shall, to the satisfaction of the Departmental Representative, allow them access and cooperate with them in the carrying out of their duties and obligation.
- 16.2 If
- 16.2.1 the sending onto the work or its site of other contractors or workers pursuant to GC16.1 could not have been reasonably foreseen or anticipated by the Contractor when entering into the contract, and



16.2.2 the Contractor incurs, in the opinion of the Departmental Representative, extra expense in complying with GC16.1, and

16.2.3 The Contractor has given the Departmental Representative written notice of his claim for the extra expense referred to in GC16.2.2 within 30 days of the date that the other contractors or workers were sent onto the work or its site,

Her Majesty shall pay the Contractor the cost, calculated in accordance with GC48 to GC50, of the extra labour, plant and material that was necessarily incurred.

GC17 Examination of Work

17.1 If, at any time after the commencement of the work but prior to the expiry of the warranty or guarantee period, the Departmental Representative has reason to believe that the work or any part thereof has not been performed in accordance with the contract, the Departmental Representative may have that work examined by an expert of his choice.

17.2 If, as a result of an examination of the work referred to in GC17.1, it is established that the work was not performed in accordance with the contract, then, in addition to and without limiting or otherwise affecting any of Her Majesty's rights and remedies under the contract either at law or in equity, the Contractor shall pay Her Majesty, on demand, all reasonable costs and expenses that were incurred by Her Majesty in having that examination performed.

GC18 Clearing of Site

18.1 The Contractor shall maintain the work and its site in a tidy condition and free from the accumulation of waste material and debris, in accordance with any directions of the Departmental Representative.

18.2 Before the issue of an interim certificate referred to in GC44.2, the Contractor shall remove all the plant and material not required for the performance of the remaining work, and all waste material and other debris, and shall cause the work and its site to be clean and suitable for occupancy by Her Majesty's servants, unless otherwise stipulated in the contract.

18.3 Before the issue of a final certificate referred to in GC44.1, the Contractor, shall remove from the work and its site all of the surplus plant and material and any waste material and other debris.

18.4 The Contractor's obligations described in GC18.1 to GC18.3 do not extend to waste material and other debris caused by Her Majesty's servants or contractors and workers referred to in GC16.1.

GC19 Contractor's Superintendent

19.1 The Contractor shall, forthwith upon the award of the contract, designate a superintendent.

19.2 The Contractor shall forthwith notify the Departmental Representative of the name, address and telephone number of a superintendent designate pursuant to GC19.1.



- 19.3 A superintendent designated pursuant to GC19.1 shall be in full charge of the operations of the Contractor in the performance of the work and is authorized to accept any notice, consent, order, direction, decision or other communication on behalf of the Contractor that may be given to the superintendent under the contract.
- 19.4 The Contractor shall, until the work has been completed, keep a competent superintendent at the work site during working hours.
- 19.5 The Contractor shall, upon the request of the Departmental Representative, remove any superintendent who, in the opinion of the Departmental Representative, is incompetent or has been conducting himself improperly and shall forthwith designate another superintendent who is acceptable to the Departmental Representative.
- 19.6 Subject to GC19.5, the Contractor shall not substitute a superintendent without the written consent of the Departmental Representative.
- 19.7 A breach by the Contractor of GC19.6 entitles the Departmental Representative to refuse to issue any certificate referred to in GC44 until the superintendent has returned to the work site or another superintendent who is acceptable to the Departmental Representative has been substituted.

GC20 National Security

- 20.1 If the Minister is of the opinion that the work is of a class or kind that involves the national security, he may order the Contractor
- 20.1.1 to provide him with any information concerning persons employed or to be employed by him for purposes of the contract; and
 - 20.1.2 to remove any person from the work and its site if, in the opinion of the Minister, that person may be a risk to the national security.
- 20.2 The Contractor shall, in all contracts with persons who are to be employed in the performance of the contract, make provision for his performance of any obligation that may be imposed upon him under GC19 to GC21.
- 20.3 The Contractor shall comply with an order of the Minister under GC20.1

GC21 Unsuitable Workers

- 21.1 The Contractor shall, upon the request of the Departmental Representative, remove any person employed by him for purposes of the contract who, in the opinion of the Departmental Representative, is incompetent or has conducted himself improperly, and the Contractor shall not permit a person who has been removed to return to the work site.

GC22 Increased or Decreased Costs



- 22.1 The amount set out in the Articles of Agreement shall not be increased or decreased by reason of any increase or decrease in the cost of the work that is brought about by an increase or decrease in the cost of labour, plant or material or any wage adjustment arising pursuant to the Labour Conditions.
- 22.2 Notwithstanding GC22.1 and GC35, an amount set out in the Articles of Agreement shall be adjusted in the manner provided in GC22.3, if any change in a tax imposed under the Excise Act, the Excise Tax Act, the Old Age Security Act, the Customs Act, the Customs Tariff or any provincial sales tax legislation imposing a retail sales tax on the purchase of tangible personal property incorporated into Real Property
- 22.2.1 occurs after the date of the submission by the Contractor of his tender for the contract,
- 22.2.2 applies to material, and
- 22.2.3 affects the cost to the Contractor of that material.
- 22.3 If a change referred to in GC22.2 occurs, the appropriate amount set out in the Articles of Agreement shall be increased or decreased by an amount equal to the amount that is established by an examination of the relevant records of the Contractor referred to in GC51 to be the increase or decrease in the cost incurred that is directly attributable to that change.
- 22.4 For the purpose of GC22.2, where a tax is changed after the date of submission of the tender but public notice of the change has been given by the Minister of Finance before that date, the change shall be deemed to have occurred before the date of submission of the tender.

GC23 Canadian Labour and Material

- 23.1 The Contractor shall use Canadian labour and material in the performance of the work to the full extent to which they are procurable, consistent with proper economy and expeditious carrying out of the work.
- 23.2 Subject to GC23.1, the Contractor shall, in the performance of the work, employ labour from the locality where the work is being performed to the extent to which it is available, and shall use the offices of the Canada Employment Centres for the recruitment of workers wherever practicable.
- 23.3 Subject to GC23.1 and GC23.2, the Contractor shall, in the performance of the work, employ a reasonable proportion of persons who have been on active service with the armed forces of Canada and have been honourably discharged therefrom.

GC24 Protection of Work and Documents

- 24.1 The Contractor shall guard or otherwise protect the work and its site, and protect the contract, specifications, plans, drawings, information, material, plant and real property, whether or not they are supplied by Her Majesty to the Contractor, against loss or damage from any cause, and he shall not use, issue, disclose or dispose of them without the written consent of the Minister, except as may be essential for the performance of the work.



- 24.2 If any document or information given or disclosed to the Contractor is assigned a security rating by the person who gave or disclosed it, the Contractor shall take all measures directed by the Departmental Representative to be taken to ensure the maintenance of the degree of security that is ascribed to that rating.
- 24.3 The Contractor shall provide all facilities necessary for the purpose of maintaining security, and shall assist any person authorized by the Minister to inspect or to take security measures in respect of the work and its site.
- 24.4 The Departmental Representative may direct the Contractor to do such things and to perform such additional work as the Departmental Representative considers reasonable and necessary to ensure compliance with or to remedy a breach of GC24.1 to GC24.3.

GC25 Public Ceremonies and Signs

- 25.1 The Contractor shall not permit any public ceremony in connection with the work without the prior consent of the Minister.
- 25.2 The Contractor shall not erect or permit the erection of any sign or advertising on the work or its site without the prior consent of the Departmental Representative.

GC26 Precautions against Damage, Infringement of Rights, Fire, and Other Hazards

- 26.1 The Contractor shall, at his own expense, do whatever is necessary to ensure that
- 26.1.1 no person, property, right, easement or privilege is injured, damaged or infringed by reasons of the Contractor's activities in performing the contract;
 - 26.1.2 pedestrian and other traffic on any public or private road or waterway is not unduly impeded, interrupted or endangered by the performance or existence of the work or plant;
 - 26.1.3 fire hazards in or about the work or its site are eliminated and, subject to any direction that may be given by the Departmental Representative, any fire is promptly extinguished;
 - 26.1.4 the health and safety of all persons employed in the performance of the work is not endangered by the method or means of its performance;
 - 26.1.5 adequate medical services are available to all persons employed on the work or its site at all times during the performance of the work;
 - 26.1.6 adequate sanitation measures are taken in respect of the work and its site; and
 - 26.1.7 all stakes, buoys and marks placed on the work or its site by or under the authority of the Departmental Representative are protected and are not removed, defaced, altered or destroyed.
- 26.2 The Departmental Representative may direct the Contractor to do such things and to perform such additional work as the Departmental Representative considers reasonable and necessary to ensure



compliance with or to remedy a breach of GC26.1.

- 26.3 The Contractor shall, at his own expense, comply with a direction of the Departmental Representative made under GC26.2.

GC27 Insurance

- 27.1 The Contractor shall, at his own expense, obtain and maintain insurance contracts in respect of the work and shall provide evidence thereof to the Departmental Representative in accordance with the requirements of the Insurance Conditions "E".

- 27.2 The insurance contracts referred to in GC27.1 shall

27.2.1 be in a form, of the nature, in the amounts, for the periods and containing the terms and conditions specified in Insurance Conditions "E", and

27.2.2 provide for the payment of claims under such insurance contracts in accordance with GC28.

GC28 Insurance Proceeds

- 28.1 In the case of a claim payable under a Builders Risk/Installation (All Risks) insurance contract maintained by the Contractor pursuant to GC27, the proceeds of the claim shall be paid directly to Her Majesty, and

28.1.1 the monies so paid shall be held by Her Majesty for the purposes of the contract, or

28.1.2 if Her Majesty elects, shall be retained by Her Majesty, in which event they vest in Her Majesty absolutely.

- 28.2 In the case of a claim payable under a General Liability insurance contract maintained by the Contractor pursuant to GC27, the proceeds of the claim shall be paid by the insurer directly to the claimant.

- 28.3 If an election is made pursuant to GC28.1, the Minister may cause an audit to be made of the accounts of the Contractor and of Her Majesty in respect of the part of the work that was lost, damaged or destroyed for the purpose of establishing the difference, if any, between

28.3.1 the aggregate of the amount of the loss or damage suffered or sustained by Her Majesty, including any cost incurred in respect of the clearing and cleaning of the work and its site and any other amount that is payable by the Contractor to Her Majesty under the contract, minus any monies retained pursuant to GC28.12, and

28.3.2 the aggregate of the amounts payable by Her Majesty to the Contractor pursuant to the contract up to the date of the loss or damage.

- 28.4 A difference that is established pursuant to GC28.3 shall be paid forthwith by the party who is determined by the audit to be the debtor to the party who is determined by the audit to be the



creditor.

- 28.5 When payment of a deficiency has been made pursuant to GC28.4, all rights and obligations of Her Majesty and the Contractor under the contract shall, with respect only to the part of the work that was the subject of the audit referred to in GC28.3, be deemed to have been expended and discharged.
- 28.6 If an election is not made pursuant to GC28.1.2 the Contractor shall, subject to GC28.7, clear and clean the work and its site and restore and replace the part of the work that was lost, damaged or destroyed at his own expense as if that part of the work had not yet been performed.
- 28.7 When the Contractor clears and cleans the work and its site and restores and replaces the work referred to in GC 28.6, Her Majesty shall pay him out of the monies referred to in GC28.1 so far as they will thereunto extend.
- 28.8 Subject to GC28.7, payment by Her Majesty pursuant to GC28.7 shall be made in accordance with the contract but the amount of each payment shall be 100% of the amount claimed notwithstanding TP4.4.1 and TP4.4.2.

GC29 Contract Security

- 29.1 The Contractor shall obtain and deliver contract security to the Departmental Representative in accordance with the provisions of the Contract Security Conditions.
- 29.2 If the whole or a part of the contract security referred to in GC29.1 is in the form of a security deposit, it shall be held and disposed of in accordance with GC43 and GC45.
- 29.3 If a part of the contract security referred to in GC29.1 is in the form of a labour and material payment bond, the Contractor shall post a copy of that bond on the work site.

GC30 Changes in the Work

- 30.1 Subject to GC5, the Departmental Representative may, at any time before he issues his Final Certificate of Completion,
- 30.1.1 order work or material in addition to that provided for in the Plans and Specifications;
and
- 30.1.2 delete or change the dimensions, character, quantity, quality, description, location or position of the whole or any part of the work or material provided for in the Plans and Specifications or in any order made pursuant to GC30.1.1,
- if that additional work or material, deletion, or change is, in his opinion, consistent with the general intent of the original contract.
- 30.2 The Contractor shall perform the work in accordance with such orders, deletions and changes that are made by the Departmental Representative pursuant to GC30.1 from time to time as if they had appeared in and been part of the Plans and Specifications.



- 30.3 The Departmental Representative shall determine whether or not anything done or omitted by the Contractor pursuant to an order, deletion or change referred to in GC30.1 increased or decreased the cost of the work to the Contractor.
- 30.4 If the Departmental Representative determines pursuant to GC30.3 that the cost of the work to the Contractor has been increased, Her Majesty shall pay the Contractor the increased cost that the Contractor necessarily incurred for the additional work calculated in accordance with GC49 or GC50.
- 30.5 If the Departmental Representative determines pursuant to GC30.3 that the cost of the work to the Contractor has been decreased, Her Majesty shall reduce the amount payable to the Contractor under the contract by an amount equal to the decrease in the cost caused by the deletion or change referred to in GC30.1.2 and calculated in accordance with GC49.
- 30.6 GC30.3 to GC30.5 are applicable only to a contract or a portion of a contract for which a Fixed Price Arrangement is stipulated in the contract.
- 30.7 An order, deletion or change referred to in GC30.1 shall be in writing, signed by the Departmental Representative and given to the Contractor in accordance with GC11.

GC31 Interpretation of Contract by Departmental Representative

- 31.1 If, at any time before the Departmental Representative has issued a Final Certificate of Completion referred to in GC44.1, any question arises between the parties about whether anything has been done as required by the contract or about what the Contractor is required by the contract to do, and, in particular but without limiting the generality of the foregoing, about
- 31.1.1 the meaning of anything in the Plans and Specification,
 - 31.1.2 the meaning to be given to the Plans and Specifications in case of any error therein, omission therefrom, or obscurity or discrepancy in their working or intention,
 - 31.1.3 whether or not the quality or quantity of any material or workmanship supplied or proposed to be supplied by the Contractor meets the requirements of the contract,
 - 31.1.4 whether or not the labour, plant or material provided by the Contractor for performing the work and carrying out the contract are adequate to ensure that the work will be performed in accordance with the contract and that the contract will be carried out in accordance with its terms,
 - 31.1.5 what quantity of any kind of work has been completed by the Contractor, or
 - 31.1.6 the timing and scheduling of the various phases of the performance of the work,
- the question shall be decided by the Departmental Representative whose decision shall be final and conclusive in respect of the work.
- 31.2 The Contractor shall perform the work in accordance with any decisions of the Departmental



Representative that are made under GC31.1 and in accordance with any consequential directions given by the Departmental Representative.

GC32 Warranty and Rectification of Defects in Work

- 32.1 Without restricting any warranty or guarantee implied or imposed by law or contained in the contract documents, the Contractor shall, at his own expense,
- 32.1.1 rectify and make good any defect or fault that appears in the work or comes to the attention of the Minister with respect to those parts of the work accepted in connection with the Interim Certificate of Completion referred to GC44.2 within 12 months from the date of the Interim Certificate of Completion;
- 32.1.2 rectify and make good any defect or fault that appears in or comes to the attention of the Minister in connection with those parts of the work described in the Interim Certificate of Completion referred to in GC44.2 within 12 months from the date of the Final Certificate of Completion referred to in GC44.1.
- 32.2 The Departmental Representative may direct the Contractor to rectify and make good any defect or fault referred to in GC32.1 or covered by any other expressed or implied warranty or guarantee.
- 32.3 A direction referred to in GC32.2 shall be in writing, may include a stipulation in respect of the time within which a defect or fault is required to be rectified and made good by the Contractor, and shall be given to the Contractor in accordance with GC11.
- 32.4 The Contractor shall rectify and make good any defect or fault described in a direction given pursuant to GC32.2 within the time stipulated therein.

GC33 Non-Compliance by Contractor

- 33.1 If the Contractor fails to comply with any decision or direction given by the Departmental Representative pursuant to GC18, GC24, GC26, GC31 or GC32, the Departmental Representative may employ such methods as he deems advisable to do that which the Contractor failed to do.
- 33.2 The Contractor shall, on demand, pay Her Majesty an amount that is equal to the aggregate of all cost, expenses and damage incurred or sustained by Her Majesty by reason of the Contractor's failure to comply with any decision or direction referred to in GC33.1, including the cost of any methods employed by the Departmental Representative pursuant to GC33.1.

GC34 Protesting Departmental Representative's Decisions

- 34.1 The Contractor may, within ten days after the communication to him of any decision or direction referred to in GC30.3 or GC33.1, protest that decision or direction.
- 34.2 A protest referred to in GC34.1 shall be in writing, contain full reasons for the protest, be signed



by the Contractor and be given to Her Majesty by delivery to the Departmental Representative.

- 34.3 If the Contractor gives a protest pursuant to GC34.2, any compliance by the Contractor with the decision or direction that was protested shall not be construed as an admission by the Contractor of the correctness of that decision or direction, or prevent the Contractor from taking whatever action he considers appropriate in the circumstances.
- 34.4 The giving of a protest by the Contractor pursuant to GC34.2 shall not relieve him from complying with the decision or direction that is the subject of the protest.
- 34.5 Subject to GC34.6, the Contractor shall take any action referred to in GC34.3 within three months after the date that a Final Certificate of Completion is issued under GC44.1 and not afterwards.
- 34.6 The Contractor shall take any action referred to in GC34.3 resulting from a direction under GC32 within three months after the expiry of a warranty or guarantee period and not afterwards.
- 34.7 Subject to GC34.8, if Her Majesty determines that the Contractor's protest is justified, Her Majesty shall pay the Contractor the cost of the additional labour, plant and material necessarily incurred by the Contractor in carrying out the protested decision or direction.
- 34.8 Costs referred to in GC34.7 shall be calculated in accordance with GC48 to GC50.

GC35 Changes in Soil Conditions and Neglect or Delay by Her Majesty

35.1 Subject to GC35.2 no payment, other than a payment that is expressly stipulated in the contract, shall be made by Her Majesty to the Contractor for any extra expense or any loss or damage incurred or sustained by the Contractor.

35.2 If the Contractor incurs or sustains any extra expense or any loss or damage that is directly attributable to

35.2.1 a substantial difference between the information relating to soil conditions at the work site that is contained in the Plans and Specifications or other documents supplied to the Contractor for his use in preparing his tender or a reasonable assumption of fact based thereon made by the Contractor, and the actual soil conditions encountered by the Contractor at the work site during the performance of the contract, or

35.2.2 any neglect or delay that occurs after the date of the contract on the part of Her Majesty in providing any information or in doing any act that the contract either expressly requires Her Majesty to do or that would ordinarily be done by an owner in accordance with the usage of the trade,

he shall, within ten days of the date the actual soil conditions described in GC35.2.1 were encountered or the neglect or delay described in GC35.2.2 occurred, give the Departmental Representative written notice of his intention to claim for that extra expense or that loss or damage.

35.3 When the Contractor has given a notice referred to in GC35.2, he shall give the Departmental Representative a written claim for extra expense or loss or damage within 30 days of the date that



a Final Certificate of Completion referred to in GC44.1 is issued and not afterwards.

- 35.4 A written claim referred to in GC35.3 shall contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable the Departmental Representative to determine whether or not the claim is justified and the Contractor shall supply such further and other information for that purpose as the Departmental Representative requires from time to time.
- 35.5 If the Departmental Representative determines that a claim referred to in GC35.3 is justified, Her Majesty shall make an extra payment to the Contractor in an amount that is calculated in accordance with GC47 to GC50.
- 35.6 If, in the opinion of the Departmental Representative, an occurrence described in GC35.2.1 results in a savings of expenditure by the Contractor in performing the contract, the amount set out in the Articles of Agreement shall, subject to GC35.7, be reduced by an amount that is equal to the saving.
- 35.7 The amount of the saving referred to in GC35.6 shall be determined in accordance with GC47 to GC49.
- 35.8 If the Contractor fails to give a notice referred to in GC35.2 and a claim referred to in GC35.3 within the times stipulated, an extra payment shall not be made to him in respect of the occurrence.

GC36 Extension of Time

- 36.1 Subject to GC36.2, the Departmental Representative may, on the application of the Contractor made before the day fixed by the Articles of Agreement for completion of the work or before any other date previously fixed under this General Condition, extend the time for its completion by fixing a new date if, in the opinion of the Departmental Representative, causes beyond the control of the Contractor have delayed its completion.
- 36.2 An application referred to in GC36.1 shall be accompanied by the written consent of the bonding company whose bond forms part of the contract security.

GC37 Assessments and Damages for Late Completion

- 37.1 For the purposes of this General Condition
- 37.1.1 the work shall be deemed to be completed on the date that an Interim Certificate of Completion referred to in GC44.2 is issued, and
- 37.1.2 "period of delay" means the number of days commencing on the day fixed by the Articles of Agreement for completion of the work and ending on the day immediately preceding the day on which the work is completed but does not include any day within a period of extension granted pursuant to GC36.1, and any other day on which, in the opinion of the Departmental Representative, completion of the work was delayed for reasons beyond the control of the Contractor.



- 37.2 If the Contractor does not complete the work by the day fixed for its completion by the Articles of Agreement but completes it thereafter, the Contractor shall pay Her Majesty an amount equal to the aggregate of
- 37.2.1 all salaries, wages and travelling expenses incurred by Her Majesty in respect of persons overseeing the performance of the work during the period of delay;
 - 37.2.2 the cost incurred by Her Majesty as a result of the inability to use the completed work for the period of delay; and
 - 37.2.3 all other expenses and damages incurred or sustained by Her Majesty during the period of delay as a result of the work not being completed by the day fixed for its completion.
- 37.3 The Minister may waive the right of Her Majesty to the whole or any part of the amount payable by the Contractor pursuant to GC37.2 I, in the opinion of the Minister, it is in the public interest to do so.

GC38 Taking the Work Out of the Contractor's Hands

- 38.1 The Minister may, at his sole discretion, by giving a notice in writing to the Contractor in accordance with GC11, take all or any part of the work out of the Contractor's hands, and may employ such means as he sees fit to have the work completed if the Contractor
- 38.1.1 Has not, within six days of the Minister or the Departmental Representative giving notice to the Contractor in writing in accordance with GC11, remedied any delay in the commencement or any default in the diligent performance of the work to the satisfaction of the Departmental Representative;
 - 38.1.2 has defaulted in the completion of any part of the work within the time fixed for its completion by the contract;
 - 38.1.3 has become insolvent;
 - 38.1.4 has committed an act of bankruptcy;
 - 38.1.5 has abandoned the work;
 - 38.1.6 has made an assignment of the contract without the consent required by GC3.1; or
 - 38.1.7 has otherwise failed to observe or perform any of the provisions of the contract.
- 38.2 If the whole or any part of the work is taken out of the Contractor's hands pursuant to GC38.1,
- 38.2.1 the Contractor's right to any further payment that is due or accruing due under the contract is, subject only to GC38.4, extinguished, and
 - 38.2.2 the Contractor is liable to pay Her Majesty, upon demand, an amount that is equal to the amount of all loss and damage incurred or sustained by Her Majesty in respect of the



Contractor's failure to complete the work.

- 38.3 If the whole or any part of the work that is taken out of the Contractor's hands pursuant to GC38.1 is completed by Her Majesty, the Departmental Representative shall determine the amount, if any, of the holdback or a progress claim that had accrued and was due prior to the date on which the work was taken out of the Contractor's hands and that is not required for the purposes of having the work performed or of compensating Her Majesty for any other loss or damage incurred or sustained by reason of the Contractor's default.
- 38.4 Her Majesty may pay the Contractor the amount determined not to be required pursuant to GC38.3.

GC39 Effect of Taking the Work Out of the Contractor's Hands

- 39.1 The taking of the work or any part thereof out of the Contractor's hands pursuant to GC38 does not operate so as to relieve or discharge him from any obligation under the contract or imposed upon him by law except the obligation to complete the performance of that part of the work that was taken out of his hands.
- 39.2 If the work or any part thereof is taken out of the Contractor's hands pursuant to GC38, all plant and material and the interest of the Contractor is all real property, licenses, powers and privileges acquired, used or provided by the Contractor under the contract shall continue to be the property of Her Majesty without compensation to the Contractor.
- 39.3 When the Departmental Representative certifies that any plant, material, or any interest of the Contractor referred to in GC39.2 is no longer required for the purposes of the work, or that it is not in the interest of Her Majesty to retain that plant, material or interest, it shall revert to the Contractor.

G40 Suspension of Work by Minister

- 40.1 The Minister may, when in his opinion it is in the public interest to do so, require the Contractor to suspend performance of the work either for a specified or an unspecified period by giving a notice of suspension in writing to the Contractor in accordance with GC11.
- 40.2 When a notice referred to in GC40.1 is received by the Contractor in accordance with GC11, he shall suspend all operations in respect of the work except those that, in the opinion of the Departmental Representative, are necessary for the care and preservation of the work, plant and material.
- 40.3 The Contractor shall not, during a period of suspension, remove any part of the work, plant or material from its site without the consent of the Departmental Representative.
- 40.4 If a period of suspension is 30 days or less, the Contractor shall, upon the expiration of that period, resume the performance of the work and he is entitled to be paid the extra cost, calculated in accordance with GC48 to GC50, of any labour, plant and material necessarily incurred by him as a result of the suspension.



- 40.5 If, upon the expiration of a period of suspension of more than 30 days, the Minister and the Contractor agree that the performance of the work will be continued by the Contractor, the Contractor shall resume performance of the work subject to any terms and conditions agreed upon by the Minister and the Contractor.
- 40.6 If, upon the expiration of a period of suspension of more than 30 days, the Minister and the Contractor do not agree that performance of the work will be continued by the Contractor or upon the terms and conditions under which the Contractor will continue the work, the notice of suspension shall be deemed to be a notice of termination pursuant to GC41.

GC41 Termination of Contract

- 41.1 The Minister may terminate the contract at any time by giving a notice of termination in writing to the Contractor in accordance with GC11.
- 41.2 When a notice referred to in GC41.1 is received by the Contractor in accordance with GC11, he shall, subject to any conditions stipulated in the notice, forthwith cease all operations in performance of the contract.
- 41.3 If the contract is terminated pursuant to GC41.1, Her Majesty shall pay the Contractor, subject to GC41.4, an amount equal to
- 41.3.1 the cost to the contractor of all labour, plant and material supplied by him under the contract up to the date of termination in respect of a contract or part thereof for which a Unit Price Arrangement is stipulated in the contract, or
 - 41.3.2 the lesser of
 - 41.3.2.1 an amount, calculated in accordance with the Terms and Payment, that would have been payable to the Contractor had he completed the work, and
 - 41.3.2.2 an amount that is determined to be due to the Contractor pursuant to GC49 in respect of a contract or part thereof for which a Fixed Price Arrangement is stipulated in the contract
- less the aggregate of all amounts that were paid to the Contractor by Her Majesty and all amounts that are due to Her Majesty from the Contractor pursuant to the contract.
- 41.4 If Her Majesty and the Contractor are unable to agree about an amount referred to in GC41.3 that amount shall be determined by the method referred to in GC50.

GC42 Claims Against and Obligations of the Contractor or Subcontractor

- 42.1 Her Majesty may, in order to discharge lawful obligations of and satisfy claims against the Contractor or a subcontractor arising out of the performance of the contract, pay any amount that is due and payable to the Contractor pursuant to the contract directly to the obligees of and the claimants against the Contractor or the subcontractor but such amount if any, as is paid by Her Majesty, shall not exceed that amount which the Contractor would have been obliged to pay to



such claimant had the provisions of the Provincial or Territorial lien legislation, or, in the Province of Quebec, the law relating to privileges, been applicable to the work. Any such claimant need not comply with the provisions of such legislation setting out the steps by way of notice, registration or otherwise as might have been necessary to preserve or perfect any claim for lien or privilege which claimant might have had;

- 42.2 Her Majesty will not make any payment as described in GC42.1 unless and until that claimant shall have delivered to Her Majesty:
- 42.2.1 a binding and enforceable Judgment or Order of a court of competent jurisdiction setting forth such amount as would have been payable by the Contractor to the claimant pursuant to the provisions of the applicable Provincial or Territorial lien legislation, or, in the Province of Quebec, the law relating to privileges, had such legislation been applicable to the work; or
 - 42.2.2 a final and enforceable award of an arbitrator setting forth such amount as would have been payable by the Contractor to the claimant pursuant to the provisions of the applicable Provincial or Territorial lien legislation, or, in the Province of Quebec, the law relating to privileges, had such legislation been applicable to the work; or
 - 42.2.3 the consent of the Contractor authorizing a payment.
- For the purposes of determining the entitlement of a claimant pursuant to GC42.2.1 and GC42.2.2, the notice required by GC42.8 shall be deemed to replace the registration or provision of notice after the performance of work as required by any applicable legislation and no claim shall be deemed to have expired, become void or unenforceable by reason of the claimant not commencing any action within the time prescribed by any applicable legislation.
- 42.3 The Contractor shall, by the execution of his contract, be deemed to have consented to submit to binding arbitration at the request of any claimant those questions that need be answered to establish the entitlement of the claimant to payment pursuant to the provisions of GC42.1 and such arbitration shall have as parties to it any subcontractor to whom the claimant supplied material, performed work or rented equipment should such subcontractor wish to be adjoined and the Crown shall not be a party to such arbitration and, subject to any agreement between the Contractor and the claimant to the contrary, the arbitration shall be conducted in accordance with the Provincial or Territorial legislation governing arbitration applicable in the Province or Territory in which the work is located.
- 42.4 A payment made pursuant to GC42.1 is, to the extent of the payment, a discharge of Her Majesty's liability to the Contractor under the contract and may be deducted from any amount payable to the Contractor under the contract.
- 42.5 To the extent that the circumstances of the work being performed for Her Majesty permit, the Contractor shall comply with all laws in force in the Province or Territory where the work is being performed relating to payment period, mandatory holdbacks, and creation and enforcement of mechanics' liens, builders' liens or similar legislation or in the Province of Quebec, the law relating to privileges.
- 42.6 The Contractor shall discharge all his lawful obligations and shall satisfy all lawful claims against him arising out of the performance of the work at least as often as the contract requires Her



Majesty to pay the Contractor.

- 42.7 The Contractor shall, whenever requested to do so by the Departmental Representative, make a statutory declaration deposing to the existence and condition of any obligations and claims referred to in GC42.6.
- 42.8 GC42.1 shall only apply to claims and obligations
- 42.8.1 the notification of which has been received by the Departmental Representative in writing before payment is made to the Contractor pursuant to TP4.10 and within 120 days of the date on which the claimant
- 42.8.1.1 should have been paid in full under the claimant's contract with the Contractor or subcontractor where the claim is for money that was lawfully required to be held back from the claimant; or
- 42.8.1.2 performed the last of the services, work or labour, or furnished the last of the material pursuant to the claimant's contract with the Contractor or subcontractor where the claim is not for money referred to in GC42.8.1.1, and
- 42.8.2 the proceedings to determine the right to payment of which, pursuant to GC42.2. shall have commenced within one year from the date that the notice referred to in GC42.8.1 was received by the Departmental Representative, and
- the notification required by GC42.8.1 shall set forth the amount claimed to be owing and the person who by contract is primarily liable.
- 42.9 Her Majesty may, upon receipt of a notice of claim under GC42.8.1, withhold from any amount that is due and payable to the Contractor pursuant to the contract the full amount of the claim or any portion thereof.
- 42.10 The Departmental Representative shall notify the Contractor in writing of receipt of any claim referred to in GC42.8.1 and of the intention of Her Majesty to withhold funds pursuant to GC42.9 and the Contractor may, at any time thereafter and until payment is made to the claimant, be entitled to post, with Her Majesty, security in a form acceptable to Her Majesty in an amount equal to the value of the claim, the notice of which is received by the Departmental Representative and upon receipt of such security Her Majesty shall release to the Contractor any funds which would be otherwise payable to the Contractor, that were withheld pursuant to the provisions of GC42.9 in respect of the claim of any claimant for whom the security stands.

GC43 Security Deposit – Forfeiture or Return

- 43.1 If
- 43.1.1 the work is taken out of the Contractor's hands pursuant to GC38,
- 43.1.2 the contract is terminated pursuant to GC41, or
- 43.1.3 the Contractor is in breach of or in default under the contract,



Her Majesty may convert the security deposit, if any, to Her own use.

- 43.2 If Her Majesty converts the contract security pursuant to GC43.1, the amount realized shall be deemed to be an amount due from Her Majesty to the Contractor under the contract.
- 43.3 Any balance of an amount referred to in GC43.2 that remains after payment of all losses, damage and claims of Her Majesty and others shall be paid by Her Majesty to the Contractor if, in the opinion of the Departmental Representative, it is not required for the purposes of the contract.

GC44 Departmental Representative's Certificates

44.1 On the date that

44.1.1 the work has been completed, and

44.1.2 the Contractor has complied with the contract and all orders and directions made pursuant thereto,

both to the satisfaction of the Departmental Representative, the Departmental Representative shall issue a Final Certificate of Completion to the Contractor.

44.2 If the Departmental Representative is satisfied that the work is substantially complete he shall, at any time before he issues a certificate referred to in GC44.1, issue an Interim Certificate of Completion to the Contractor, and

44.2.1 for the purposes of GC44.2 the work will be considered to be substantially complete,

44.2.1.1 when the work under the contract or a substantial part thereof is, in the opinion of the Departmental Representative, ready for use by Her Majesty or is being used for the purpose intended; and

44.2.1.2 when the work remaining to be done under the contract is, in the opinion of the Departmental Representative, capable of completion or correction at accost of not more than

44.2.1.2.1 -3% of the first \$500,000, and

44.2.1.2.2 -2% of the next \$500,000, and

44.2.1.2.3 -1% of the balance

of the value of the contract at the time this cost is calculated.

44.3 For the sole purpose of GC44.2.1.2, where the work or a substantial part thereof is ready for use or is being used for the purposes intended and the remainder of the work or a part thereof cannot be completed by the time specified in A2.1, or as amended pursuant to GC36, for reasons beyond the control of the Contractor or where the Departmental Representative and the Contractor agree not to complete a part of the work within the specified time, the cost of that part of the work



which was either beyond the control of the Contractor to complete or the Departmental Representative and the Contractor have agreed not to complete by the time specified shall be deducted from the value of the contract referred to GC44.2.1.2 and the said cost shall not form part of the cost of the work remaining to be done in determining substantial completion.

44.4 An Interim Certificate of Completion referred to in GC44.2 shall describe the parts of the work not completed to the satisfaction of the Departmental Representative and all things that must be done by the Contractor

44.4.1 before a Final Certificate of Completion referred to in GC44.1 will be issued, and

44.4.2 before the 12-month period referred to in GC32.1.2 shall commence for the said parts and all the said things.

44.5 The Departmental Representative may, in addition to the parts of the work described in an Interim Certificate of Completion referred to in GC44.2, require the Contractor to rectify any other parts of the work not completed to his satisfaction and to do any other things that are necessary for the satisfactory completion of the work.

44.6 If the contract or a part thereof is subject to a Unit Price Arrangement, the Departmental Representative shall measure and record the quantities of labour, plant and material, performed, used and supplied by the Contractor in performing the work and shall, at the request of the Contractor, inform him of those measurements.

44.7 The Contractor shall assist and co-operate with the Departmental Representative in the performance of his duties referred to in GC44.6 and shall be entitled to inspect any record made by the Departmental Representative pursuant to GC44.6.

44.8 After the Departmental Representative has issued a Final Certificate of Completion referred to in GC44.1, he shall, if GC44.6 applies, issue a Final Certificate of Measurement.

44.9 A Final Certificate of Measurement referred to in GC44.8 shall

44.9.1 contain the aggregate of all measurements of quantities referred to in GC44.6, and

44.9.2 be binding upon and conclusive between Her Majesty and the Contractor as to the quantities referred to therein.

GC45 Return of Security Deposit

45.1 After an Interim Certificate of Completion referred to in GC44.2 has been issued, Her Majesty shall, if the Contractor is not in breach of or in default under the contract, return to the Contractor all or any part of the security deposit that, in the opinion of the Departmental Representative, is not required for the purposes of the contract.

45.2 After a Final Certificate of Completion referred to in GC44.1 has been issued, Her Majesty shall return to the Contractor the remainder of any security deposit unless the contract stipulates otherwise.



- 45.3 If the security deposit was paid into the Consolidated Revenue Fund of Canada, Her Majesty shall pay interest thereon to the Contractor at a rate established from time to time pursuant to section 21(2) of the Financial Administration Act.

GC46 Clarification of Terms in GC47 to GC50

- 46.1 For the purposes of GC47 to GC50,
- 46.1.1 "Unit Price Table" means the table set out in the Articles of Agreement, and
- 46.1.2 "plant" does not include tools customarily provided by a tradesman in practicing his trade.

GC47 Additions or Amendments to Unit Price Table

- 47.1 Where a Unit Price Arrangement applies to the contract or a part thereof the Departmental Representative and the Contractor may, by an agreement in writing,
- 47.1.1 add classes of labour or material, and units of measurement, prices per unit and estimated quantities to the Unit Price Table if any labour, plant or material that is to be included in the Final Certificate of Measurement referred to in GC44.8 is not included in any class of labour, plant or material set out in the Unit Price Table; or
- 47.1.2 subject to GC47.2 and GC47.3, amend a price set out in the Unit Price Table for any class of labour, plant or material included therein if the Final Certificate of Measurement referred to in GC44.8 shows or is expected to show that the total quantity of that class of labour, plant or material actually performed, used or supplied by the Contractor in performing the work is
- 47.1.2.1 less than 85% of that estimated total quantity, or
- 47.1.2.2 in excess of 115% of that estimated total quantity.
- 47.2 In no event shall the total cost of an item set out in the Unit Price Table that has been amended pursuant to GC47.1.2.1 exceed the amount that would have been payable to the Contractor had the estimated total quantity actually been performed, used or supplied.
- 47.3 An amendment that is made necessary by GC47.1.2.2 shall apply only to the quantities that are in excess of 115%.
- 47.4 If the Departmental Representative and the Contractor do not agree as contemplated in GC47.1, the Departmental Representative shall determine the class and the unit of measurement of the labour, plant or material and, subject to GC47.2 and GC47.3, the price per unit therefore shall be determined in accordance with GC50.

GC48 Determination of Cost – Unit Price Table



- 48.1 Whenever, for the purposes of the contract, it is necessary to determine the cost of labour, plant or material, it shall be determined by multiplying the quantity of that labour, plant or material expressed in the unit set out in column 3 of the Unit Price Table by the price of that unit set out in column 5 of the Unit Price Table.

GC49 Determination of Cost – Negotiation

- 49.1 If the method described in GC48 cannot be used because the labour, plant or material is of a kind or class that is not set out in the Unit Price Table, the cost of that labour, plant or material for the purposes of the contract shall be the amount agreed upon from time to time by the Contractor and the Departmental Representative.
- 49.2 For the purposes of GC49.1, the Contractor shall submit to the Departmental Representative any necessary cost information requested by the Departmental Representative in respect of the labour, plant and material referred to in GC49.1

GC50 Determination of Cost – Failing Negotiation

- 50.1 If the methods described in GC47, GC48 or GC49 fail for any reason to achieve a determination of the cost of labour, plant and material for the purposes referred to therein, that cost shall be equal to the aggregate of
- 50.1.1 all reasonable and proper amounts actually expended or legally payable by the Contractor in respect of the labour, plant and material that falls within one of the classes of expenditure described in GC50.2 that are directly attributable to the performance of the contract,
 - 50.1.2 an allowance for profit and all other expenditures or costs, including overhead, general administration cost, financing and interest charges, and every other cost, charge and expenses, but not including those referred to in GC50.1.1 or GC50.1.3 or a class referred to in GC50.2, in an amount that is equal to 10% of the sum of the expenses referred to in GC50.1.1, and
 - 50.1.3 interest on the cost determined under GC50.1.1 and GC50.1.2, which interest shall be calculated in accordance with TP9,

provide that the total cost of an item set out in the Unit Price Table that is subject to the provisions of GC47.1.2.1 does not exceed the amount that would have been payable to the Contractor had the estimated total quantity of the said item actually be performed, used or supplied.

- 50.2 For purposes of GC50.1.1 the classes of expenditure that may be taken into account in determining the cost of labour, plant and material are,
- 50.2.1 payments to subcontractors;
 - 50.2.2 wages, salaries and travelling expenses of employees of the Contractor while they are actually and properly engaged on the work, other than wages, salaries, bonuses, living



and travelling expenses of personnel of the Contractor generally employed at the head office or at a general office of the Contractor unless they are engaged at the work site with the approval of the Departmental Representative,

- 50.2.3 assessments payable under any statutory authority relating to workmen's compensation, unemployment insurance, pension plan or holidays with pay;
- 50.2.4 rent that is paid for plant or an amount equivalent of the said rent if the plant is owned by the Contractor that is necessary for and used in the performance of the work, if the rent of the equivalent amount is reasonable and use of that plant has been approved by the Departmental Representative;
- 50.2.5 payments for maintaining and operating plant necessary for and used in the performance of the work, and payments for effecting such repairs thereto as, in the opinion of the Departmental Representative, are necessary to the proper performance of the contract other than payments for any repairs to the plant arising out of defects existing before its allocation to the work;
- 50.2.6 payments for material that is necessary for and incorporated in the work, or that is necessary for and consumed in the performance of the contract;
- 50.2.7 payments for preparation, delivery, handling, erection, installation, inspection protection and removal of the plant and material necessary for and used in the performance of the contract; and
- 50.2.8 any other payments made by the Contractor with the approval of the Departmental Representative that are necessary for the performance of the contract.

GC51 Records to be kept by Contractor

51.1 The Contractor shall

- 51.1.1 maintain full records of his estimated and actual cost of the work together with all tender calls, quotations, contracts, correspondence, invoices, receipts and vouchers relating thereto.
- 51.1.2 make all records and material referred to in GC5.1.1 available to audit and inspection by the Minister and the Deputy Receiver General for Canada or by persons acting on behalf of either of both of them, when requested;
- 51.1.3 allow any of the person referred to in GC51.1.2 to make copies of and to take extracts from any of the records and material referred to in GC51.1.1; and
- 51.1.4 furnish any person referred to in GC51.1.2 with any information he may require from time to time in connection with such records and material.

- 51.2 The records maintained by the Contractor pursuant to GC51.1.1 shall be kept intact by the Contractor until the expiration of two years after the date that a Final Certificate of Completion referred to in GC44.1 was issued or until the expiration of such other period of time as the



Minister may direct.

- 51.3 The Contractor shall cause all subcontractors and all other persons directly or indirectly controlled by or affiliated with the Contractor and all persons directly or indirectly having control of the Contractor to comply with GC51.1 and GC51.2 as if they were the Contractor.

GC52 Conflict of Interest

- 52.1 It is a term of this contract that no former public office holder who is not in compliance with the Conflict of Interest and Post-Employment Code for Public Office Holders shall derive a direct benefit from this contract.

GC53 Contractor Status

- 53.1 The Contractor shall be engaged under the contract as an independent contractor.
- 53.2 The Contractor and any employee of the said Contractor is not engaged by the contract as an employee, servant or agent of Her Majesty.
- 53.3 For the purposes of GC53.1 and GC53.2 the Contractor shall be solely responsible for any and all payments and deductions required to be made by law including those required for Canada or Quebec Pension Plans, Unemployment Insurance, Worker's Compensation or Income Tax.



Fair Wages and Hours of Labour

Justes Salaires et Heures de Travail

Labour Conditions

Conditions de Travail

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1 Interpretation

In these Conditions

- (a) "Act" means the Fair Wages and Hours of Labour Act;
- (b) "Regulations" means the Fair Wages and Hours of Labour Regulations made pursuant to the Act;
- (c) "contract" means the contract of which these Labour Conditions are part;
- (d) "contracting authority" means the department of Government or a crown corporation with whom the contract is made;
- (e) "contractor" means the person who has entered into the contract with the contracting authority;
- (f) "regional director" means the director of a regional office of the Department of Human Resources Development or the director's designated representative;
- (g) "inspector" has the meaning assigned to the term by Part III of the Canada Labour Code.
- (h) "Minister" means the Minister of Labour of Canada;
- (i) "persons" means those workers employed by the contractor, subcontractor or any other person doing or contracting to do the whole or any part of the work contemplated by the contract;

01 Interprétation

Dans ces conditions

- a) «Loi» désigne la Loi sur les justes salaires et les heures de travail;
- b) «Règlement» désigne le Règlement sur les justes salaires et les heures de travail établi en application de la Loi;
- c) «contrat» désigne le contrat auquel sont annexées les présentes Conditions de travail;
- d) «adjudicateur» désigne le ministère du gouvernement ou la société d'État avec lequel le contrat a été passé;
- e) «entrepreneur» désigne la personne qui a passé le contrat avec l'adjudicateur;
- f) «directeur régional» le responsable d'un bureau régional du ministère du Développement des ressources humaines ou son représentant désigné;
- g) «inspecteur» s'entend au sens de la partie III du Code canadien du travail;
- h) «Ministre» désigne le ministre du Travail du Canada;
- i) «personnes» désigne les travailleurs employés par l'entrepreneur, le sous-traitant ou toute autre personne exécutant ou s'engageant par contrat à exécuter la totalité ou une partie quelconque des travaux prévus dans le contrat;

02 General Fair Wage Clause

(a) All persons in the employ of the contractor, subcontractor, or any other person doing or contracting to do the whole or any part of the work contemplated by the contract, shall during the continuance of the work:

i) be paid fair wages that is, such wages as are generally accepted as current for competent workers in the district in which the work is being performed for the character or class of work in which such workers are respectively engaged; and

ii) in all cases, be paid no less than the minimum hourly rate of pay established by the Labour Program of the Department of Human Resources Development in the Fair Wage Schedules which form a part of this contract as Appendix A to these Labour Conditions; and

iii) for contracts covering work performed in the province of Quebec, be paid at least the wage rates established by that province for the purposes of the Quebec "Construction Decree".

(b) Where there is no wage rate in the schedules referred to in (a) for a particular character or class of work, the contractor shall pay wages for that character or class of work at a rate not less than the rate for an equivalent character or class of work.

(c) Where during the term of the contract, the contractor receives notice from the contracting authority of any change in wage rates, the contractor shall pay not less than the changed wage rate beginning on the first day after receipt, by the contractor, of the notice of the change in wage rates.

03 Hours of Work

(a) The hours of work in a day and in a week of persons employed in the execution of the contract, including the hours of work in excess of which a person shall be paid overtime at a rate at least equal to one and one half times the fair wage, are the hours of work for the province in which the work is being performed as set out from time to time in an Act of that province.

(b) The daily or weekly hours of work referred to in paragraph (a) may be exceeded in accordance with the applicable provincial law.

02 Clause générale de justes salaires

(a) Toutes les personnes employées par l'entrepreneur, le sous-traitant ou toute autre personne exécutant ou s'engageant par contrat à exécuter la totalité ou une partie quelconque des travaux prévus dans le contrat seront payées :

i) des justes salaires tant que dureront les travaux, c'est-à-dire les salaires généralement reconnus comme salaires courants pour les travailleurs qualifiés dans la région où les travaux sont exécutés, selon la nature ou la catégorie du travail auquel ces travailleurs sont respectivement affectés; et

ii) dans tous les cas, pas moins que les taux horaires minima fixés par le Programme du travail du ministère du Développement des ressources humaines dans les échelles de justes salaires qui deviennent partie de ce contrat en tant qu'Annexe A de ces Conditions de travail; et

iii) pour les contrats concernant les travaux effectués dans la province de Québec, pas moins que les taux de salaires qui sont établis par cette province pour les fins du "Décret de la construction" du Québec.

(b) Lorsqu'il n'y a aucun taux prévu dans l'échelle des taux de salaires à l'égard d'un travail d'une nature ou d'une catégorie données, l'entrepreneur verse à l'employé un taux de salaire qui n'est pas inférieur à celui établi pour un travail de nature ou de catégorie équivalente.

(c) Lorsque pendant la durée du contrat, l'entrepreneur reçoit de l'adjudicateur un avis de modification à l'échelle de salaires, l'entrepreneur rémunère les employés touchés par cette modification à des taux qui ne sont pas inférieurs aux taux modifiés à compter de la journée qui suit la réception par lui, de l'avis.

03 Durée du travail

(a) Les heures de travail quotidiennes et hebdomadaires des personnes employées à l'exécution du contrat, notamment les heures au-delà desquelles une personne doit être rétribuée selon le tarif pour heures supplémentaires, soit au moins le juste salaire majoré de 50 pour cent, sont celles fixées et éventuellement modifiées par la législation de la province dans laquelle le travail est effectué.

(b) Les heures de travail quotidiennes ou hebdomadaires mentionnées à l'alinéa (a) peuvent être dépassées conformément à la législation provinciale applicable.

<p>04 Labour Conditions to be Posted</p> <p>For the information and the protection of all persons, the contractor agrees to post and keep posted, in a conspicuous place on the premises where work contemplated by the contract is being carried out or on premises occupied or used by persons engaged in carrying out such work, a copy of these Labour Conditions, and a copy of the applicable Fair Wage Schedules along with any subsequent changes.</p>	<p>04 Affichage des conditions de travail</p> <p>Pour l'information et la protection de toutes les personnes, l'entrepreneur convient d'afficher et de tenir affichés, bien à la vue, à l'endroit où les travaux prévus dans le contrat sont exécutés, ou dans les locaux occupés ou fréquentés par les personnes employées à l'exécution desdits travaux, un exemplaire des présentes Conditions de travail, un exemplaire de l'échelle de justes salaires applicable et toutes modifications subséquentes.</p>
<p>05 The Contractor to Keep Records which are to be Kept Open for Inspection</p> <p>(a) The contractor agrees to keep books and records showing the names, addresses, classifications of employment and work of all workers employed under the contract, the rate of wages to be paid, the wages paid and the daily hours worked by the workers.</p> <p>(b) The contractor also agrees that the contractor's books, records and premises will be open at all reasonable times for inspection by an inspector.</p> <p>(c) The contractor also agrees to furnish the inspector and the contracting authority, on request, with such further information as is required to ascertain that the requirements of the Act, the Regulations and the contract with respect to wages, hours of work and other labour conditions have been complied with.</p>	<p>05 L'entrepreneur tient des dossiers pour fins d'inspection</p> <p>(a) L'entrepreneur convient de tenir les registres et dossiers où sont consignés le nom, l'adresse et la catégorie d'emploi et de travail de tous les travailleurs employés à des travaux exécutés en vertu du contrat, de même que le taux de salaire, le salaire payé et la durée journalière du travail pour chacun de ces travailleurs.</p> <p>(b) L'entrepreneur convient également à faire en sorte que ses registres, ses dossiers et ses locaux soient accessibles en tout temps opportun, pour fins d'inspection par un inspecteur.</p> <p>(c) L'entrepreneur convient en outre de fournir, sur demande, à l'inspecteur et à l'adjudicateur tous les autres renseignements requis pour permettre de constater qu'on a satisfait aux exigences de la Loi, des règlements et du contrat en ce qui concerne les salaires, la durée du travail et les autres conditions de travail.</p>
<p>06 Departmental Requirements before Payment made to Contractor</p> <p>(a) The contractor agrees that the contractor will not be entitled to payment of any money otherwise payable under the contract until the contractor has filed with the contracting authority in support of a claim for payment a sworn statement:</p> <p>(i) that the contractor has kept the books and records required by these Regulations,</p> <p>(ii) that there are no wages in arrears in respect of work performed under the contract, and</p> <p>(iii) that to the contractor's knowledge, all the conditions in the contract required by the Act and the Regulations have been complied with.</p> <p>(b) The contractor also agrees that, where fair wages have not been paid by the contractor to persons employed under the contract, the contracting authority shall withhold from any money otherwise payable under the contract to the contractor the amount necessary to ensure that fair wages are paid to all employees until fair wages are paid.</p>	<p>06 Exigences du ministère avant le versement des sommes dues à l'entrepreneur</p> <p>(a) L'entrepreneur convient qu'il n'aura droit au paiement d'aucune somme qui autrement devrait lui être versée en vertu du contrat tant qu'il n'aura pas déposé auprès de l'adjudicateur, à l'appui de sa réclamation de paiement, une déclaration sous serment indiquant:</p> <p>(i) qu'il a tenu les registres et dossiers requis par les présents règlements,</p> <p>(ii) qu'il n'y a pas d'arriérés de salaires à l'égard des travaux exécutés en vertu du contrat, et</p> <p>(iii) qu'à sa connaissance, toutes les conditions du contrat exigées par la Loi et les règlements ont été observées.</p> <p>(b) L'entrepreneur convient en outre que lorsqu'il n'a pas versé un juste salaire à une personne employée en vertu du contrat, l'adjudicateur sera autorisé à retenir de toute somme autrement payable à l'entrepreneur en vertu du contrat la somme requise pour assurer le paiement de justes salaires à tous les employés jusqu'à ce qu'ils aient touché leur juste salaire.</p>

<p>07 Authority to pay Wages in the Event of Default by the Contractor</p> <p>(a) The contractor agrees that where the contractor is in default of payment of fair wages to an employee, the contractor will pay the Minister the amount the contractor is in default.</p> <p>(b) The contractor agrees that where the contractor fails to comply with paragraph (a), the contracting authority will pay to the Receiver General, out of any money otherwise payable to the contractor, the amount for which the contractor is in default.</p>	<p>07 Paiement des salaires par l'adjudicateur si l'entrepreneur omet de le faire</p> <p>(a) L'entrepreneur convient qu'à défaut du paiement par ce dernier d'un juste salaire à un travailleur, l'entrepreneur devra verser au ministre le montant qu'il a omis de payer.</p> <p>(b) L'entrepreneur convient que s'il omet de se conformer au paragraphe (a), l'adjudicateur paiera au Receveur général, à même les sommes autrement payables à l'entrepreneur, le montant qu'il a omis de payer.</p>
<p>08 Conditions of Subcontracting</p> <p>The contractor and the subcontractor agree that in subcontracting any part of the work contemplated by the contract, they will place in the subcontract the conditions respecting fair wages, hours of work and other labour conditions set out in the contract and the requirements set out in Section 4. The contractor further agrees that the contractor will be responsible for carrying out these conditions in the event the subcontractor fails to carry them out.</p>	<p>08 Conditions imposées à un sous-traitant</p> <p>L'entrepreneur et le sous-traitant conviennent, dans l'adjudication à un sous-traitant de toute partie des travaux prévus par le contrat, d'insérer dans le sous-contrat les conditions relatives aux justes salaires, à la durée du travail et autres conditions de travail indiquées dans le contrat ainsi que les obligations énoncées à l'article 4. L'entrepreneur convient en outre qu'il sera responsable du respect de ces conditions si elles ne sont pas respectées par le sous-traitant.</p>
<p>09 Non-discrimination in Hiring and Employment of Labour</p> <p>The contractor agrees that in the hiring and employment of workers to perform any work under the contract, the contractor will not refuse to employ and will not discriminate in any manner against any person because</p> <p>(a) of that person's race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status;</p> <p>(b) of the race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status of any person having a relationship or association with that person, or</p> <p>(c) a complaint has been made or information has been given in respect of that person relating to an alleged failure by the contractor to comply with subparagraph (a) or (b).</p>	<p>09 Non-discrimination dans l'embauchage et l'emploi de main-d'œuvre</p> <p>L'entrepreneur convient que dans l'embauchage et l'emploi des travailleurs aux fins de l'exécution de tout travail en vertu du contrat, l'entrepreneur ne refusera pas d'employer une personne ou d'exercer de quelque façon que ce soit des distinctions injustes à l'endroit d'une personne en raison</p> <p>(a) de la race, de l'origine nationale ou ethnique, de la couleur, de la religion, de l'âge, du sexe, de l'orientation sexuelle, de l'état matrimonial, de la situation de famille, de l'état de personne graciée ou d'une déficience de la personne;</p> <p>(b) de la race, de l'origine nationale ou ethnique, de la couleur, de la religion, de l'âge, du sexe, de l'orientation sexuelle, de l'état matrimonial, de la situation de famille, de l'état de personne graciée ou d'une déficience de toute personne ayant un lien avec elle;</p> <p>(c) du fait que cette personne a porté plainte ou a fourni des renseignements ou parce qu'une plainte a été portée ou des renseignements ont été fournis en son nom relativement à toute prétendue omission de la part de l'entrepreneur de se conformer aux sous-alinéas (a) ou (b).</p>

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Annex J

Insurance Conditions - Construction (E)

Insert the document here



GENERAL CONDITONS

- IC 1 Proof of Insurance**
- IC 2 Risk Management**
- IC 3 Payment of Deductible**
- IC 4 Insurance Coverage**

GENERAL INSUANCE COVERAGES

- GCI 1 Insured**
- GIC 2 Period of Insurance**
- GIC 3 Proof of Insurance**
- GIC 4 Notification**

COMMERCIAL GENERAL LIABILITY

- CGL 1 Scope of Policy**
- CGL 2 Coverages/Provisions**
- CGL 3 Additional Exposures**
- CGL 4 Insurance Proceeds**
- CGL 5 Deductible**

BUILDER'S RISK – INSTALLATION FLOATER – ALL RISKS

- BR 1 Scope of Policy**
- BR 2 Property Insured**
- BR 3 Insurance Proceeds**
- BR 4 Amount of Insurance**
- BR 5 Deductible**
- BR 6 Subrogation**
- BR 7 Exclusion Qualifications**

INSURER'S CERTIFICATE OF INSURANCE



General Conditions

IC 1 Proof of Insurance (02/12/03)

Within thirty (30) days after acceptance of the Contractor's tender, the Contractor shall, unless otherwise directed in writing by the Contracting Officer, deposit with the Contracting Officer an Insurer's Certificate of Insurance in the form displayed in this document and, if requested by the Contracting Officer, the originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Insurance Coverage Requirements shown hereunder.

IC 2 Risk Management (01/10/94)

The provisions of the Insurance Coverage Requirements contained hereunder are not intended to cover all of the Contractor's obligations under GC8 of the General Conditions "C" of the contract. Any additional risk management measures or additional insurance coverages the Contractor may deem necessary to fulfill its obligations under GC8 shall be at its own discretion and expense.

IC 3 Payment of Deductible (01/10/94)

The payment of monies up to the deductible amount made in satisfaction of a claim shall be borne by the Contractor.

IC 4 Insurance Coverage (02/12/03)

The Contractor has represented that it has in place and effect the appropriate and usual liability insurance coverage as required by these Insurance Conditions and the Contractor has warranted that it shall obtain, in a timely manner and prior to commencement of the Work, the appropriate and usual property insurance coverage as required by these Insurance Conditions and, further, that it shall maintain all required insurance policies in place and effect as required by these Insurance Conditions.



INSURANCE COVERAGE REQUIREMENTS

PART I GENERAL INSURANCE COVERAGES (GIC)

GCI 1 Insured (02/12/03)

Each insurance policy shall insure the Contractor, and shall include, as an Additional Named Insured, Her Majesty the Queen in right of Canada, represented by the National Research Council Canada.

GIC 2 Period of Insurance (02/12/03)

Unless otherwise directed in writing by the Contracting Officer or otherwise stipulated elsewhere in these Insurance Conditions, the policies required hereunder shall be in force and be maintained from the date of the contract award until the day of issue of the Departmental Representative's Final Certificate of Completion.

GIC 3 Proof of Insurance (01/10/94)

Within twenty five (25) days after acceptance of the Contractor's tender, the Insurer shall, unless otherwise directed by the Contractor, deposit with the Contractor an Insurer's Certificate of Insurance in the form displayed in the document and, if requested, the originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the requirements of these Insurance Coverages.

GIC 4 Notification (01/10/94)

Each Insurance policy shall contain a provision that (30) days prior written notice shall be given by the Insurer to Her Majesty in the event of any material change in or cancellation of coverage. Any such notice received by the Contractor shall be transmitted forthwith to Her Majesty.

PART II COMMERCIAL GENERAL LIABILITY

CGL 1 Scope of Policy (01/10/94)

The policy shall be written on a form similar to that known and referred to in the insurance industry as IBC 2100 – Commercial General Liability policy (Occurrence form) and shall provide for limit of liability of not less than \$2,000,000 inclusive for Bodily Injury and Property Damage for any one occurrence or series of occurrences arising out of one cause. Legal or defence cost incurred in respect of a claim or claims shall not operate to decrease the limit of liability.

CGL 2 Coverages/Provisions (01/10/94)



The policy shall include but not necessarily be limited to the following coverages/provisions.

- 2.1 Liability arising out of or resulting from the ownership, existence, maintenance or use of premises by the Contractor and operations necessary or incidental to the performance of this contract.
- 2.2 "Broad Form" Property Damage including the loss of use of property.
- 2.3 Removal or weakening of support of any building or land whether such support be natural or otherwise.
- 2.4 Elevator liability (including escalators, hoists and similar devices).
- 2.5 Contractor's Protective Liability
- 2.6 Contractual and Assumed Liabilities un this contact.
- 2.7 Completed Operations Liability – The insurance, including all aspects of this Part II of these Insurance Conditions shall continue for a period of at least one (1) year beyond the date of the Departmental Representative's Final Certificate of Completion for the Completed Operations.
- 2.8 Cross Liability – The Clause shall be written as follows:

Cross Liability – The insurance as is afforded by this policy shall apply in respect to any claim or action brought against any one Insured by any other Insured. The coverage shall apply in the same manner and to the same extent as though a separate policy had been issued to each Insured. The inclusion herein of more than one Insured shall not increase the limit of the Insurer's liability.

- 2.9 Severability of Interests – The Clause shall be written as follows:

Severability of Interests – This policy, subject to the limits of liability stated herein, shall apply separately to each Insured in the same manner and to the same extent as if a separate policy had been issued to each. The inclusion herein of more than one insured shall not increase the limit of the Insurer's liability.

CGL 3 Additional Exposures (02/12/03)

The policy shall either include or be endorsed to include the following exposures of hazards if the Work is subject thereto:

- 3.1 Blasting
- 3.2 Pile driving and calsson work
- 3.3 Underpinning
- 3.4 Risks associated with the activities of the Contractor on an active airport



- 3.5 Radioactive contamination resulting from the use of commercial isotopes
- 3.6 Damage to the portion of an existing building beyond that directly associated with an addition, renovation or installation contract.
- 3.7 Marine risks associated with the contraction of piers, wharves and docks.

**CGL 4 Insurance Proceeds
(01/10/94)**

Insurance Proceeds from this policy are usually payable directly to a Claimant/Third Party.

**CGL 5 Deductible
(02/12/03)**

This policy shall be issued with a deductible amount of not more than \$10,000 per occurrence applying to Property Damage claims only.

**PART III
BUILDER'S RISK – INSTALLATION FLOATER – ALL RISKS**

**BR 1 Scope of Policy
(01/10/94)**

The policy shall be written on an "All Risks" basis granting coverages similar to those provided by the forms known and referred to in the insurance industry as "Builder's Risk Comprehensive Form" or "Installation Floater – All Risks".

**BR 2 Property Insured
(01/10/94)**

The property insured shall include:

- 2.1 The Work and all property, equipment and materials intended to become part of the finished Work at the site of the project while awaiting, during and after installation, erection or construction including testing.
- 2.2 Expenses incurred in the removal from the construction site of debris of the property insured, including demolition of damaged property, de-icing and dewatering, occasioned by loss, destruction or damage to such property and in respect of which insurance is provided by this policy.

**BR 3 Insurance Proceeds
(01/10/94)**

- 3.1 Insurance proceeds from this policy are payable in accordance with GC28 of the General Conditions "C" of the contract.
- 3.2 This policy shall provide that the proceeds thereof are payable to Her Majesty or as the Minister may direct.



- 3.3 The Contractor shall do such things and execute such documents as are necessary to effect payment of the proceeds.

BR 4 Amount of Insurance
(01/10/94)

The amount of insurance shall not be less than the sum of the contract value plus the declared value (if any) set forth in the contract documents of all material and equipment supplied by Her Majesty at the site of the project to be incorporated into and form part of the finished Work.

BR 5 Deductible
(02/12/03)

The Policy shall be issued with a deductible amount of not more than \$10,000.

BR 6 Subrogation
(01/10/94)

The following Clause shall be included in the policy:

"All rights of subrogation or transfer of rights are hereby waived against any corporation, firm, individual or other interest, with respect to which, insurance is provided by this policy".

BR 7 Exclusion Qualifications
(01/10/94)

The policy may be subject to the standard exclusions but the following qualifications shall apply:

- 7.1 Faulty materials, workmanship or design may be excluded only to the extent of the cost of making good thereof and shall not apply to loss or damage resulting therefrom.
- 7.2 Loss or damage caused by contamination by radioactive material may be excluded except for loss or damage resulting from commercial isotopes used for industrial measurements, inspection, quality control radiographic or photographic use.
- 7.3 Use and occupancy of the project or any part of section thereof shall be permitted where such use and occupancy is for the purpose for which the project is intended upon completion.



INSURER'S CERTIFICATE OF INSURANCE

(TO BE COMPLETED BY INSURER (NOT BOKER) AND DELIVERD TO NATIONAL RESEARCH COUNCIL CANADA WITH 30 DAYS FOLLOWING ACCEPTANCE OF TENDER)

CONTRACT

DESCRIPTION OF WORK	CONTRACT NUMBER	AWARD DATE
LOCATION		

INSURER

NAME
ADDRESS

BROKER

NAME
ADDRESS

INSURED

NAME OF CONTRACTOR
ADDRESS

ADDITIONAL INSURED

HER MAJESTY THE QUEEN IN RIGHT OF CANADA AS REPRESENTED BY THE NATIONAL RESEARCH COUNCIL CANADA

THIS DOCUENT CERTIFIES THAT THE FOLLOWING POLICES OF INSURANCE ARE AT PRESENT IN FORCE COVERING ALL OPERATIONS OF THE INSURE IN CONNECTION WITH THE CONTRACT MADE BETWEEN THE NAMED INSURED AND THE NATIONAL RESEARCH COUNCIL CANADA AND IN ACCORDANCE WITH THE INSURANCE CONDITIONS "E"

POLICY					
TYPE	NUMBER	INCEPTION DATE	EXPIRY DATE	LIMITS OF LIABILITY	DEDUCTIBLE
COMMERCIAL GENERAL LIABILITY					
BUILDERS RISK "AL RISKS"					
INSTALLATION FLOATER "ALL RISKS"					

THE INSURER AGREES TO NOTIFY THE NATIONAL RESEARCH COUNCIL CANADA IN WRITING 30 DAYS PRIOR TO ANY MATERIAL CHANGE IN OR CANCELLATION OF ANY POLICY OR COVERAGE SPECIFICALLY RELATED TO THE CONTRACT

NAME OF INSURER'S OFFICER OR AUTHORIZED EMPLOYEE	SIGNATURE	DATE:
		TELEPHONE NUMBER:

ISSUANCE OF THIS CERTIFIATE SHALL NOT LIMIT OR RESTRICT THE RIGHT OF THE NATIONAL RESEARCH COUNCIL CANADA TO REQUEST AT ANY TIME DUPLICATE COPIES OF SAID INSURANCE POLICIES

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Direction des services administratifs et de la gestion
de l'immobilier (SAGI)

Annex K

Contract Security Conditions (F)

Insert the document here



CS1 Obligation to provide Contract Security

- 1.1 The Contractor shall, at the Contractor's own expense, provide one or more of the forms of contract security prescribed in CS2.
- 1.2 The Contractor shall deliver to the Departmental Representative the contract security referred to in CS1.1 within 14 days after the date that the Contractor receives notice that the Contractor's tender or offer was accepted by Her Majesty.

CS2 Prescribed Types and Amounts of Contract Security

- 2.1 The Contractor shall deliver to the Departmental Representative pursuant to CS1
 - 2.1.1 a performance bond and a labour and material payment bond each in an amount that is equal to not less than 50% of the contract amount referred to in the Articles of Agreement, or
 - 2.1.2 a labour and material payment bond in an amount that is equal to not less than 50% of the contract amount referred to in the Articles of Agreement, and a security deposit in an amount that is equal to
 - 2.1.2.1 not less than 10% of the contract amount referred to in the Articles of Agreement where that amount does not exceed \$250,000, or
 - 2.1.2.2 \$25,000 plus 5% of the part of the contract amount referred to in the Articles of Agreement that exceeds \$250,000, or
 - 2.1.3 a security deposit in an amount prescribed by CS2.1.2 plus an additional amount that is equal to 10% of the contract amount referred to in the Articles of Agreement.
- 2.2 A performance bond and a labour and material payment bond referred to in CS2.1 shall be in a form and be issued by a bonding or surety company that is approved by Her Majesty.
- 2.3 The amount of a security deposit referred to in CS2.1.2 shall not exceed \$250,000 regardless of the contract amount referred to in the Articles of Agreement.
- 2.4 A security deposit referred to in CS2.1.2 and CS2.1.3 shall be in the form of
 - 2.4.1 a bill of exchange made payable to the Receiver General of Canada and certified by an approved financial institution or drawn by an approved financial institution on itself, or
 - 2.4.2 bonds of or unconditionally guaranteed as to principal and interest by the Government of Canada.
- 2.5 For the purposes of CS2.4
 - 2.5.1 a bill of exchange is an unconditional order in writing signed by the Contractor and addressed to an approved financial institution, requiring the said institution to pay, on demand, at a fixed or determinable future time a sum certain of money to, or to the order



of, the Receiver General for Canada, and

- 2.5.2 If a bill of exchange is certified by a financial institution other than a chartered bank then it must be accompanied by a letter or stamped certification confirming that the financial institution is in at least one of the categories referred to in CS2.5.3
- 2.5.3 an approved financial institution is
 - 2.5.3.1 any corporation or institution that is a member of the Canadian Payments Association,
 - 2.5.3.2 a corporation that accepts deposits that are insured by the Canada Deposit Insurance Corporation or the Régie de l'assurance-dépôts du Québec to the maximum permitted by law,
 - 2.5.3.3 a credit union as defined in paragraph 137(6)(b) of the *Income Tax Act*,
 - 2.5.3.4 a corporation that accepts deposits from the public, if repayment of the deposit is guaranteed by Her Majesty in right of a province, or
 - 2.5.3.5 The Canada Post Corporation.
- 2.5.4 the bonds referred to in CS2.4.2 shall be
 - 2.5.4.1 made payable to bearer, or
 - 2.5.4.2 accompanied by a duly executed instrument of transfer of the bonds to the Receiver General for Canada in the form prescribed by the Domestic Bonds of Canada Regulations, or
 - 2.5.4.3 registered, as to principal or as to principal and interest in the name of the Receiver General for Canada pursuant to the Domestic Bonds of Canada Regulations, and
 - 2.5.4.4 provided on the basis of their market value current at the date of the contract.

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Annex L

Security Requirement Check List (SRCL) (G)

Insert the document here



Contract Number / Numéro du contrat R797561
Security Classification / Classification de sécurité NON-CLASSIFIÉ

**SECURITY REQUIREMENTS CHECK LIST (SRCL)
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)**

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE		
1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine CNRC-NRC		2. Branch or Directorate / Direction générale ou Direction Site Saguenay - CTA / PORTEFEUILLE
3. a) Subcontract Number / Numéro du contrat de sous-traitance S/O	3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant A CONFIRMER - SELON L'APPEL D'OFFRES	
4. Brief Description of Work / Brève description du travail Construction et installation d'une mezzanine ainsi que la réorganisation de l'aire de formage au niveau du laboratoire LGE-1. Incluant déménagement d'équipements, branchement/débranchement de service (eau, hydraulique, électricité, ventilation).		
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?		<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?		<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui
6. Indicate the type of access required / Indiquer le type d'accès requis		
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)		<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.		<input type="checkbox"/> No / Non <input checked="" type="checkbox"/> Yes / Oui
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?		<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès		
Canada <input checked="" type="checkbox"/>	NATO / OTAN <input type="checkbox"/>	Foreign / Étranger <input type="checkbox"/>
7. b) Release restrictions / Restrictions relatives à la diffusion		
No release restrictions Aucune restriction relative à la diffusion <input checked="" type="checkbox"/>	All NATO countries Tous les pays de l'OTAN <input type="checkbox"/>	No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>
Not releasable À ne pas diffuser <input type="checkbox"/>		
Restricted to: / Limité à: <input type="checkbox"/>	Restricted to: / Limité à: <input type="checkbox"/>	Restricted to: / Limité à: <input type="checkbox"/>
Specify country(ies): / Préciser le(s) pays:	Specify country(ies): / Préciser le(s) pays:	Specify country(ies): / Préciser le(s) pays:
7. c) Level of information / Niveau d'information		
PROTECTED A PROTÉGÉ A <input type="checkbox"/>	NATO UNCLASSIFIED NATO NON CLASSIFIÉ <input type="checkbox"/>	PROTECTED A PROTÉGÉ A <input type="checkbox"/>
PROTECTED B PROTÉGÉ B <input type="checkbox"/>	NATO RESTRICTED NATO DIFFUSION RESTREINTE <input type="checkbox"/>	PROTECTED B PROTÉGÉ B <input type="checkbox"/>
PROTECTED C PROTÉGÉ C <input type="checkbox"/>	NATO CONFIDENTIAL NATO CONFIDENTIEL <input type="checkbox"/>	PROTECTED C PROTÉGÉ C <input type="checkbox"/>
CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>	NATO SECRET NATO SECRET <input type="checkbox"/>	CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>
SECRET SECRET <input type="checkbox"/>	COSMIC TOP SECRET COSMIC TRÈS SECRET <input type="checkbox"/>	SECRET SECRET <input type="checkbox"/>
TOP SECRET TRÈS SECRET <input type="checkbox"/>		TOP SECRET TRÈS SECRET <input type="checkbox"/>
TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>		TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>



PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui
If Yes, indicate the level of sensitivity:
Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? No / Non Yes / Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :
Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIÉ) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> RELIABILITY STATUS
COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL
CONFIDENTIEL | <input type="checkbox"/> SECRET
SECRET | <input type="checkbox"/> TOP SECRET
TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET-SIGINT
TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL
NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET
NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET
COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS
ACCÈS AUX EMPLACEMENTS | | | |

Special comments:

Commentaires spéciaux :

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.

REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? No / Non Yes / Oui
If Yes, will unscreened personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? No / Non Yes / Oui

PART C - SAFEGUARDS (SUPPLIÉ) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? No / Non Yes / Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? No / Non Yes / Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? No / Non Yes / Oui



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Security Classification / Classification de sécurité NON-CLASSIFIÉ

PART C - (continued) / PARTIE C - (suite)

For users completing the form manually use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire manuellement doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form online (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire en ligne (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category / Catégorie	PROTECTED / PROTÉGÉ			CLASSIFIED / CLASSIFIÉ		NATO				COMSEC						
	A	B	C	CONFIDENTIAL / CONFIDENTIEL	SECRET / TRÈS SECRET	NATO RESTRICTED / NATO DIFFUSION RESTREINTE	NATO CONFIDENTIAL / NATO CONFIDENTIEL	NATO SECRET	COSMIC TOP SECRET / COSMIC TRÈS SECRET	PROTECTED / PROTÉGÉ			CONFIDENTIAL / CONFIDENTIEL	SECRET	TOP SECRET / TRÈS SECRET	
										A	B	C				
Information / Assets / Renseignements / Biens / Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED? / La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE? No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification". / Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED? / La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE? No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments). / Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquez qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).



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Security Classification / Classification de sécurité NON-CLASSIFIÉ

PART D - AUTHORIZATION / PARTIE D - AUTORISATION			
13. Organization Project Authority / Chargé de projet de l'organisme			
Name (print) - Nom (en lettres moulées) PHILIPPE TREMBLAY		Title - Titre AGENT TECHNIQUE	Signature
Telephone No. - N° de téléphone (418) 545-5080	Facsimile No. - N° de télécopieur (418) 545-5345	E-mail address - Adresse courriel Philippe.tremblay@nrc-cnrc.gc.ca	Date 2018-07-31
14. Organization Security Authority / Responsable de la sécurité de l'organisme			
Name (print) - Nom (en lettres moulées) RICHARD BRAMUCCI		Title - Titre ANALYSTE DE SÉCURITÉ	Signature
Telephone No. - N° de téléphone (613) 991-1093	Facsimile No. - N° de télécopieur (613) 990-0946	E-mail address - Adresse courriel nrc.SB-Security-in-Contracting-DS-Secu	Date 2018.07.31
15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached? Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?			<input type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui
16. Procurement Officer / Agent d'approvisionnement			
Name (print) - Nom (en lettres moulées) R-Michel Simard, Adm.A.		Title - Titre Agent d'approvisionnement, Région Qc	Signature
Telephone No. - N° de téléphone (418) 545-5250	Facsimile No. - N° de télécopieur (418) 545-5254	E-mail address - Adresse courriel R-Michel.Simard@cnrc.gc.ca	Date 2018/08/11
17. Contracting Security Authority / Autorité contractante en matière de sécurité			
Name (print) - Nom (en lettres moulées)		Title - Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date