Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Bid Receiving - PWGSC / Réception des soumissions - TPSGC
11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION

Proposal To: Public Works and Government Services Canada

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

Proposition aux: Travaux Publics et Services Gouvernementaux Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Electrical & Electronics Products Division
11 Laurier St./11, rue Laurier
7B3, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

Title - Sujet
ATF-2 Absorber

Solicitation No. - N° de l'invitation	**Date**
9F010-160791/B	2017-07-18

Client Reference No. - N° de référence du client
20160791

GETS Reference No. - N° de référence de SEAG
PW-$$HN-331-73148

File No. - N° de dossier	**CCC No./N° CCC - FMS No./N° VME**
hn331.9F010-160791	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2017-08-08

Time Zone
Fuseau horaire
Eastern Daylight Saving Time EDT

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☑ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à:	**Buyer Id - Id de l'acheteur**
Turner, Louie	hn331

Telephone No. - N° de téléphone	**FAX No. - N° de FAX**
(873) 469-3342 ( )	( ) -

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:
CANADIAN SPACE AGENCY
David Florida Laboratory
3701 CARLING AVE C.P. 11490 Succ. H
facturationASC.CSAinvoicing@
@asc-csa.gc.ca
OTTAWA
Ontario
K2H8S2
Canada

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	**Delivery Offered - Livraison proposée**
See Herein	

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Telephone No. - N° de téléphone
Facsimile No. - N° de télécopieur

Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)
Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)

Signature **Date**

Canada

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PART 1 - GENERAL INFORMATION

1.1 Security Requirements

There is no security requirement associated with the requirement.

1.2 Statement of Work

The contractor must provide the goods and services in accordance with the requirements stated in Annex A - Statement of Work; Annex C - Reference Pictures and Drawings; Annex D - Mechanical Drawings; Annex E - Basis of Payment.

1.2.1 Delivery Requirement

Delivery and installation of the goods and the re-commissioning for service of the ATF2 chamber is requested to be completed by March 31, 2018.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Trade Agreements

This procurement is exempt from trade agreements.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days
Insert: 90 days

2.1.1 *SACC Manual* Clauses

SACC Reference	Section	Date
A9033T	Financial Capability	2012-07-16
B1000T	Condition of Material	2014-06-26

2.2 Submission of Bids

Bids must be submitted ONLY TO THE BID RECEIVING UNIT by the date, time and place indicated on page 1 of the bid solicitation. Do not send proposal directly to the Contracting Officer. Email proposal will not be accepted.

PWGSC Bids Receiving Unit
11 Laurier Street
Place du Portage, Phase 3, Core 0B2
Gatineau, Québec, K1A 0S5
Tel.: 819-956-3366
Fax: 819-997-9776

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.3.1 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least 10 days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.
Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (3 hard copies) and 2 soft copies
Section II: Financial Bid (1 hard copy)
Section III: Certifications (1 hard copy)
Section IV: Additional Information (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

(a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
(b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html). To assist Canada in reaching its objectives, Bidders should:

1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and

2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should demonstrate their capability to handle projects of similar magnitude and with similar objectives. Bidder should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work as indicated in Annex A - Statement of Work; Annex B - Evaluation Criteria; Annex C - Reference Pictures and Drawings; Annex D - Mechanical Drawings; Annex E - Basis of Payment.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

3.1.1 Exchange Rate Fluctuation Risk Mitigation

1. The Bidder may request Canada to assume the risks and benefits of exchange rate fluctuations. If the Bidder claims for an exchange rate adjustment, this request must be clearly indicated in the bid at time of bidding. The Bidder must submit form PWGSC-TPSGC 450, Claim for Exchange Rate Adjustments with its bid, indicating the Foreign Currency Component (FCC) in Canadian dollars for each line item for which an exchange rate adjustment is required.
2. The FCC is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuations. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.
3. The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provision in the contract. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease).
4. At time of bidding, the Bidder must complete columns (1) to (4) on form PWGSC-TPSGC 450, for each line item where they want to invoke the exchange rate fluctuation provision. Where bids are evaluated in Canadian dollars, the dollar values provided in column (3) should also be in Canadian dollars, so that the adjustment amount is in the same currency as the payment.
5. Alternate rates or calculations proposed by the Bidder will not be accepted for the purposes of this exchange rate fluctuation provision.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

Section IV: Additional Information

3.1.2 Delivery Offered

While delivery and installation is requested as indicated above, the best delivery that could be offered is_____.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

You are reminded that this solicitation requires the compliance and/or completion of requirements attached as an Annex and forming part of this document.

4.1 Evaluation Procedures

a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.

b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

The Technical Bid should be concise and address, but not necessarily be limited to, the points that are subject to the evaluation criteria against which the Bid will be evaluated. Bidders should address the evaluation criteria in sufficient depth in their bid. Simply repeating the statement contained in the solicitation document is not sufficient. Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

In order to facilitate the evaluation of the Bid, Canada requests:
- Bidders to address and present topics in the order of the Statement of Work (SOW) under the same headings.
- Bidders to avoid duplication by identifying the specific paragraph and page number where the subject topic has already been addressed in the Bid.

4.1.1.1 Mandatory Technical Criteria

Simply stating a compliancy to a criteria is insufficient. Bidders must present a clearly organized, printed (i.e., not handwritten) proposal that includes all necessary technical and descriptive information, in order to clearly demonstrate their compliancy to all items presented in the Statement of Work (SOW) at Annex A.

Responses will be evaluated on a simple, stringent pass/fail basis. Proposals not meeting each mandatory requirement will be considered non-responsive (non-compliant) and given no further consideration.

- Address, as described, Annex A, Statement of Work (SOW)
- Bidders must obtain the required minimum points for each of the evaluation criteria, which are subject to point rating.

The technical bid should be structured in the same format as the Statement of Work presented at Annex A, through which the bidder will clearly explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

4.1.1.2 Point Rated Technical Criteria

The Technical Bid will be evaluated and rated as per Annex B - Evaluation Criteria

4.1.2. Pricing Basis

All prices must be firm in Canadian dollars, Delivery Duty Paid (Ottawa, ON), Goods and Services Tax or the Harmonized Sales Tax extra, transportation costs to destination and all applicable Custom Duties and Excise Taxes included.

4.2. Basis of Selection - Price-per-Point

To be declared responsive, a bid must:

a. comply with all the requirements of the bid solicitation;
b. meet all mandatory technical evaluation criteria.

Bids not meeting (a) or (b) will be declared non-responsive. Neither the responsive bid that receives the highest number of points nor the one that proposed the lowest price will necessarily be accepted.

The responsive bid with the lowest calculated price per point will be recommended for award of a contract.

Price-per-Point: Total bid price is divided by the corresponding total technical score achieved by the bidder for its technical proposal, to determine each bidder's cost-per-point.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the *Ineligibility and Suspension Policy (*http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the *Ineligibility and Suspension Policy (*http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 General Environmental Criteria Certification

The Bidder must select and complete one of the following two certification statements.

A) The Bidder certifies that the Bidder is registered or meets ISO 14001.

_____ _____

Bidders' Authorized Representative Signature Date

or

B) The Bidder certifies that the Bidder meets and will continue to meet throughout the duration of the contract, a minimum of four (4) out of six (6) criteria identified in the table below.

The Bidder must indicate which four (4) criteria, as a minimum, are met.

Green Practices within the Bidders' organization	**Insert a checkmark for each criterion that is met**
Promotes a paperless environment through directives, procedures and/or programs	
All documents are printed double sided and in black and white for day to day business activity unless otherwise specified by your client	
Paper used for day to day business activity has a minimum of 30% recycled content and has a sustainable forestry management certification	
Utilizes environmentally preferable inks and purchase remanufactured ink cartridges or ink cartridges that can be returned to the manufacturer for reuse and recycling for day to day business activity.	
Recycling bins for paper, newsprint, plastic and aluminum containers available and emptied regularly in accordance with local recycling program.	
A minimum of 50% of office equipment has an energy efficient certification.	

_____ _____

Bidders' Authorized Representative Signature Date

5.2.3 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) - Labour's website (http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the “FCP Limited Eligibility to Bid“ list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the “FCP Limited Eligibility to Bid” list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

There is no security requirement applicable to this Contract.

6.2 Statement of Work

The contractor must provide the goods and services in accordance with the technical requirements stated in Annex A - Statement of Work; Annex C - Reference Pictures and Drawings; Annex D - Mechanical Drawings; Annex E - Basis of Payment.

6.2.1 SACC Manual Clauses

SACC Reference	Section	Date
B7500C	Excess Goods	2006-06-16

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

2010A (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

and

Clause 2010C - 16 and Clause 2010 - 17 of 2010C (2016-04-04), General Conditions - Services (Medium Complexity) apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Delivery Date

All the deliverables must be received on or before _____

6.4.2.1 Inspection and Final Acceptance

1) Inspection

Inspection shall be carried out by the Project Authority or the authorized representative at destination.

2) Final Acceptance

a) The Contractor shall be required to present the work, for final acceptance, when such work has been designed, manufactured, delivered to site and installed and has successfully passed all tests in strict accordance with the specification and terms and conditions, and the Contractor has performed all other work and complied with all the terms and conditions of the contract.

b) Upon verification of the above, the Project Authority will by written notice to the Contractor so acknowledge, and such notice shall constitute final acceptance.

Final Inspection and acceptance will take place at destination when all goods are delivered / services rendered, and after all deficiencies identified by the Project Authority are rectified and accepted.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:
Louie Turner, Supply Specialist
Public Works and Government Services Canada - Acquisitions Branch
Logistics, Electrical, Fuel and Transportation Directorate - "HN" Division
7B3, Place du Portage, Phase III, 11 Laurier Street, Gatineau, QC, K1A 0S5
Telephone: (873) 469-3342
E-mail address: louie.turner@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Project Authority

The Project Authority for the Contract is: (will be inserted at contract)
Name:
Title:
Telephone: (xxx) xxx-xxxx Facsimile: (xxx) xxx-xxxx
E-mail:

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.3 Technical Authority

The Technical Authority for the Contract is: (will be inserted at contract)
Name:
Title:
Telephone: (xxx) xxx-xxxx Facsimile: (xxx) xxx-xxxx
E-mail:

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority; however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.4 Contractor's Representative

Name and telephone number of the person responsible for: (will be inserted at contract)

General enquiries
Name: _____
Telephone: _____ Facsimile: _____
E-mail: _____

Delivery follow-up
Name: _____
Telephone: _____ Facsimile: _____
E-mail: _____

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm lot prices as specified in Annex E. Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2 Limitation of Price

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2.1 Travel and Living Expenses - No allowance for profit and overhead

The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the Treasury Board Travel Directive, and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".

Information on standard rates and allowances may be found at http://www.njc-cnm.gc.ca/s3/en

All travel must have the prior authorization of the Project Authority.
All payments are subject to government audit.

6.6.3 Milestone Payments – subject to holdback

1. Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract, up to 90% of the amount claimed and approved by Canada if:
    a. An accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
    b. The total amount for all milestone payments paid by Canada does not exceed 90% percent of the total amount to be paid under the Contract;
    c. All the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;
    d. All work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.

2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all Work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted

6.6.4 SACC Manual Clauses

SACC Reference	Section	Date
G1005C	Insurance	2016-01-28

6.6.5 Discretionary Audit

The Contractor's certification that the price or rate is not in excess of the lowest price or rate charged anyone else, including the Contractor's most favoured customer, for the like quality and quantity of the goods, services or both, is subject to verification by government audit, at the discretion of Canada, before or after payment is made to the Contractor.

If the audit demonstrates that the certification is in error after payment is made to the Contractor, the Contractor must, at the discretion of Canada, make repayment to Canada in the amount found to be in excess of the lowest price or rate or authorize the retention by Canada of that amount by way of deduction from any sum of money that may be due or payable to the Contractor pursuant to the Contract.

If the audit demonstrates that the certification is in error before payment is made, the Contractor agrees that any pending invoice will be adjusted by Canada in accordance with the results of the audit. It is further agreed that if the Contract is still in effect at the time of the verification, the price or rate will be lowered in accordance with the results of the audit.

6.6.6 Exchange Rate Fluctuation Adjustment

1. The foreign currency component (FCC) is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuation. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.

2. For each line item where a FCC is identified, Canada assumes the risks and benefits for exchange rate fluctuation, as shown in the Basis of Payment. For such items, the exchange rate fluctuation amount is determined in accordance with the provision of this clause.

3. The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provisions in the contract. The exchange rate adjustment amount will be calculated in accordance with the following formula:
   Adjustment = FCC x Qty x (i1 - i0) / i0
   where formula variables correspond to:
   FCC: Foreign Currency Component (per unit)
   i0: Initial exchange rate (CAN$ per unit of foreign currency [e.g. US$1])
   i1: exchange rate for adjustments (CAN$ per unit of foreign currency [e.g. US$1])
   Qty: quantity of units

4. The initial exchange rate is typically set as the noon rate as published by the Bank of Canada on the solicitation closing date.

5. For goods, the exchange rate for adjustment will be the noon rate as published by the Bank of Canada on the date the goods were delivered. For services, the exchange rate for adjustment will be the noon rate on the last business day of the month for which the services were performed. For advance payments, the exchange rate for adjustment will be the noon rate on the date the payment was due. The most recent noon rate will be used for non-business days.

6. The Contractor must indicate the total exchange rate adjustment amount (either upward, downward or no change) as a separate item on each invoice or claim for payment submitted under the Contract. Where an adjustment applies, the Contractor must submit with their invoice form PWGSC-TPSGC 450, Claim for Exchange Rate Adjustments.

7. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease), calculated in accordance with column 8 of form PWGSC-TPSGC 450 (i.e [i1 - i0) / i0]).

8. Canada reserves the right to audit any revision to costs and prices under this clause.

6.7 Invoicing Instructions

6.7.1 Progress Payment Claim (Including Task Authorization Payments)

The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment.

Each claim must show:

a. all information required on form PWGSC-TPSGC 1111;
b. all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
c. the description and value of the milestone claimed as detailed in the Contract.

Each claim must be supported by:

a. a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;
b. a copy of the monthly progress report.

Applicable Taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.

The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Project Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place. The Contractor must not submit claims until all work identified in the claim is completed.

6.7.2 Schedule of Milestones

Annex E - Basis of Payment provides the schedule of milestones for which payments will be made in accordance with the Contract.

6.8 Certifications

6.8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

6.8.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

6.9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____.

6.10 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

(a) the Articles of Agreement;
(b) the general conditions 2010A (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract ***and*** Clause 2010C - 16 and Clause 2010 - 17 of 2010C (2016-04-04), General Conditions - Services (Medium Complexity) apply to and form part of the Contract;
(c) Annex A - Statement of Work
(d) Annex B - Evaluation Criteria
(e) Annex C - Reference Pictures and Drawings
(f) Annex D - Mechanical Drawings
(g) Annex E - Basis of Payment
(h) the Contractor's bid dated _____, as clarified on _____" ***or*** ", as amended on_____"

6.11 SACC Manual Clauses (Delivery)

SACC Reference	Section	Date
D9002C	Incomplete Assemblies	2007-11-30

6.12 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered:
(a) Delivered Duty Paid (DDP) David Florida Lab, 3701 Carling Ave, Ottawa, Ontario Inco terms 2000 for shipments from a commercial contractor.

6.13 Shipping – Scheduling

The Contractor must deliver and install the goods to David Florida Lab, 3701 Carling Ave, Ottawa, Ontario in co-ordination with the Project Manager of this Contract (Project Manager or name of person that will co-ordinate the delivery and installation to be named at contract award)

Annex A – Statement of Work for Supply and Installation of Electromagnetic Absorber and Commissioning of the Antenna Test Facility 2 at David Florida Laboratory

1. Background

The David Florida Laboratory (DFL), part of Canadian Space Agency (CSA), is in the process of refurbishing its large anechoic chamber, also known as the Antenna Test Facility 2 (ATF2). The chamber is housed in the DFL Assembly, Integration & Test (AIT) facility, a temperature and humidity controlled environment, with ISO 14644 Class 8 cleanrooms. The size of ATF2 is approximately 24 x 12 x 20 m or 80 x 40 x 65 ft (L x W x H). It is used for a variety of radio frequency (RF) measurements, mainly for antenna characterization (near field and far field), but also for electromagnetic compatibility (EMC) and passive intermodulation (PIM) tests, all of which can be done at different levels: component, subsystem, system, or for a whole spacecraft. Test articles, in order of priority, include spacecraft, flight antenna and components, INMARSAT aeronautical antennas and components, wireless communications and radar antennas, any other RF component requiring an anechoic test environment.

The ATF2 refurbishment plan currently in place has two phases:

a) The first phase focuses on the chamber envelope and on its environmental control systems. The goal of this phase is to bring the facility up to the current Building codes and Health and Safety regulations by:
   - adding structural reinforcements and shield plating all walls, ceilings and floor
   - adding a new fire detection and suppression (FDS) system,
   - replacing the heating, ventilating and air conditioning (HVAC) system, and
   - replacing the lighting and video monitoring (LVM) system.

b) The second (current) phase focuses on the installation of new electromagnetic (EM) absorber material in the chamber and on the ATF2 commissioning for service.

When considering fire suppression, and health and safety accountabilities, the priorities, in order of importance, are:

- personal safety,
- high value object (flight hardware),
- the facility.

2. List of Abbreviations

AD	Applicable Document
ARO	After Receipt of Order (contract award date)
ATF2	Antenna Test Facility 2
CSA	Canadian Space Agency
DFL	David Florida Laboratory
EM	Electromagnetic
EMC	Electromagnetic Compatibility
FDS	Fire Detection and Suppression
HVAC	Heating, Ventilating and Air Conditioning
ISO	International Organization for Standardization
LVM	Lighting and Video Monitoring
PIM	Passive Intermodulation
RF	Radio Frequency
SOTR	Statement of Technical Requirements
SOW	Statement of Work

3. List of Applicable Documents

a) AD1: Annex C - ATF2 Reference Pictures and Drawings
b) AD2: Annex D - ATF2 Mechanical Drawing Package (includes chamber shield drawings and all environmental systems - FDS, HVAC, and LVM)
c) AD3: National Building Code of Canada,
d) AD4: National Fire Code of Canada,
e) AD5: National Plumbing Code of Canada,
f) AD6: National Energy Code of Canada,
g) AD7: Canada Labor Code – Part 2,
h) AD8: Ontario Building Code,
i) AD9: Ontario Fire Code,
j) AD10: Ontario Plumbing regulations,
k) AD11: Ontario Electric Safety Code,
l) AD12: Ontario Occupational Health and Safety Act,
m) AD13: ASHRAE Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality,
n) AD14: ISO 14644-1:2015 Cleanrooms and associated controlled environments. Classification of air cleanliness by particle concentration,
o) AD15: FM Global Property Loss Prevention Data Sheets for Anechoic Chambers 1-53 (latest edition).

4. Objectives

The goal of this project is to install new microwave absorber inside the ATF2 and to commission the facility for RF test services. The project is expected to be completed by the end of March 2018.

The DFL aims to maximize the accuracy of all RF tests that will be performed in the refurbished ATF2. This goal will be achieved with optimal design of the absorber layout, the appropriate selection of absorber products and reliable absorber material installation in the chamber.

5. Tasks

In order to achieve all project objectives the Contractor must fulfill the following tasks:

a) Design and provide to DFL for acceptance the layout of the absorber inside ATF2, considering the new chamber configuration and the new FDS, HVAC, and LVM systems, meeting the set of specifications established in section 6.
The absorber layout must include all walls, ceilings, doors, and floor, with detailed information at sprinkler head locations, air sampling detector locations, HVAC supply and return vents, floor interfaces for positioner hardware and overhead crane rail locations. The most up to date ATF2 mechanical drawings for shielding, walls, FDS, HVAC and LVM systems are provided in AD2, Annex D – ATF2 Mechanical Drawing Package.

b) Deliver to DFL the high performance absorber, related materials and supplies, tools, hardware and equipment required for chamber absorber installation.

c) Participate in the ATF2 shielding inspection to make sure that all surfaces (including environmental systems FDS, HVAC, and LVM) are properly prepared for absorber installation, in order to assure a solid, long lasting adhesion of all absorber material.

Note: The ATF2 chamber will be shield-plated entirely. The plate seams will not be welded, but covered with self-adhesive copper foil. No shield effectiveness test is planned, but all ATF2 interior surfaces will have to be inspected to confirm the surfaces are adequate for solid absorber adhesion. This step is required in order to guarantee the adhesion of the absorber in the entire chamber (ceilings, side walls, doors, flaps, HVAC ducts, etc.) for minimum five years.

d) Make sure that all materials used for installation (the absorber itself, glues, resins, paints, any others) do comply with every applicable code listed (see section 3, List of Applicable Documents).

e) Install all absorber as per the layout design, without damaging or negatively impacting functionality and performance of the environmental systems (FDS, HVAC, and LVM). The absorber should be installed directly onto the chamber shield, the HVAC ducts, the FDS, and the LVM systems using glues only. The perforation of the chamber shield and HVAC ducts should be reduced to a minimum.

f) Provide detailed ATF2 RF performance test plan for DFL review and acceptance. (This test plan must be included in the bid package.)

g) Execute ATF2 RF performance tests according to the accepted test plan for commissioning and provide final RF performance test report. The tests could employ both Contractor's and DFL's certified equipment and will be carried out under the supervision of DFL qualified operators.

h) During the bid solicitation period (refer to Part 2 Bidder Instructions section 2.3 of the Request for Proposal) the Bidder may propose alternative solutions on how to modify the chamber environmental systems (FDS, HVAC and LVM) in case one or more chamber RF performance specifications cannot be met. The proposed solutions must be supported by relevant EM simulation results, presenting the comparable performances of both configurations (existing and proposed).

Note: The fire detection and suppression system to be installed in ATF2 is a water based system. The system incorporates VESDA aspirating smoke detectors and the fire suppression network. DFL considered using telescopic sprinklers to help minimize the negative impact on the anechoic chamber performance. Unfortunately, there is not enough space available outside the ATF2 chamber to accommodate the telescopic sprinklers.

6. Technical Requirements

a) Physical properties of the absorber material

i. The absorber material must possess enhanced fire retardancy properties;

ii. The absorber material height: maximum absorber pyramid height shall be 48 inch.

iii. Absorber weight: At the present time the maximum calculated acceptable loading on the ATF2 ceilings, walls and doors is 5 (five) lbs per sq-ft. DFL will enhance the chamber structure to accommodate the loading from the absorber layout proposed by the future contractor, if the present loading limit is insufficient.

iv. The absorber to be installed on the walls and ceilings must be rated for ISO 14644-1 Class 8 cleanroom requirements;

v. The absorber to be installed on the floor must have their base coated to minimize absorber material crumbling and dusting. (Consideration should be given to employ ISO 14644-1 Class 7 cleanroom rated absorbers for the floor and for the heavy traffic areas (around access doors);

vi. The absorber material to be installed throughout the ATF2 chamber must be selected with the purpose to maintain long-term (minimum 20 years) ISO 14644-1 Class 8 cleanroom rating;

vii. The Contractor must guarantee the adhesion of all absorber material installed for five years;

viii. All custom-cut and pre-drilled absorbers must be paint coated at the factory to prevent crumbling and dusting; and

ix. The absorber material installed in the ATF2 must have a homogenous color coating throughout the entire chamber.

b) Electromagnetic properties of the absorber material

i. The absorber power rating must be: ≥ 75 mW/sq-cm (or ≥ 484 mW/sq-in);

ii. The absorber reflectivity specifications must be:

1. 250-500 MHz: ≤ -25dB
2. 500-1000 MHz: ≤ -30dB
3. 1-6 GHz: ≤ -40dB
4. 6-40 GHz: ≤ -50dB

c) ATF2 Chamber RF performance specifications

The design of the absorber layout must be optimized to minimize the RF signal peak-to-peak ripple amplitude within the ATF2 main test volume. The ATF2 main test volume is defined as a sphere of D = 4.88 m (16 ft) diameter, whose center is located at a height H = 6.10 m (20 ft) above the chamber floor, at L = 7.62 m (25 ft) distance from the rear shield wall, and half way between the shield sidewalls (see Fig. 9 in Annex C - ATF2 Reference Pictures and Drawings).

Future contractor shall optimize the absorber layout design with the goal to maximize the RF performance of the chamber (with all its environmental systems – FDS, HVAC and LVM) for the entire frequency band, 250 MHz to 40 GHz.

Preliminary simulated or calculated results shall be provided in the bid proposal for evaluation.

7. Deliverables

The following items must be delivered to DFL on the dates shown (all dates are relative to ARO). The target contract award date is August 18, 2017.

a) Detailed Project Management Plan (PMP). It must include information on coordination of absorber delivery to DFL, absorber installation schedule, and chamber commissioning. *- 2 weeks*

b) Design Document including:
   - Final absorber layout in ATF2. *- 5 weeks*
   - EM reflectivity simulations results showing expected ATF2 RF performance, particularly inside the test volume and in its close proximity (extended test volume). *- 5 weeks*
   - Proposed modifications to the environmental systems to mitigate RF performance non-compliances, supported by EM simulation results (for the current configuration as indicated in AD2, and for the proposed configuration). *- 2 weeks*

c) A preliminary absorber layout with solutions to minimize RF reflections from the FDS sprinkler heads and risers and from the HVAC supply and return vents should be provided for bid evaluation *- part of the bidding package*

d) Detailed RF test plan for ATF2 commissioning (procedures, equipment, and test setup). *- part of the bidding package*

e) All absorber, standard and customized. *- TBD*

f) Test proof of RF performance of each piece of absorber delivered, in electronic format. *- to accompany every batch of absorber delivered*

g) Signed note after ATF2 shielding inspection indicating readiness for absorber installation. *- prior to absorber installation start date*

h) Installation of all absorber, without damaging or negatively affecting the ATF2 environmental systems. *- TBD*

i) RF Performance tests of ATF2 commissioning based on the test plan provided. *- TBD*

8. Final report

The final report on the project, including the RF performance results of ATF2 commissioning must be delivered by March 31, 2018.

9. Work Location

Work location is the anechoic chamber ATF2 at DFL/CSA Shirleys Bay Campus, at 3701 Carling Avenue, Ottawa, Ontario, Canada.

Access to the DFL site will be provided to the Contractor and sub-contractor personnel, based on the agreed activity schedule.

Some work related to chamber absorber layout design, preparation of drawings, other required documentation and manufacturing or procurement of absorber, will be performed at the Contractor's facilities.

Additional information:

- The ATF2 maximum admissible floor loading is 250 lb/sq-ft. All equipment to be used during installation shall be electrical, not gas powered. The contractor shall propose in advance the type of equipment and ask DFL (Security and Facilities) for approval.
- Absorber storage: DFL will take care of unloading the absorber material delivered to DFL by common carriers and will make available 3500-4000 sq-ft of floor space for storage of packaged absorber material. Half of this space will be in clean room conditions, the other half in non-clean room conditions (the bay outside the ATF2 chamber, also usable for absorber staging).
- The contractor is responsible for removing and disposing in a legal manner of any recyclable materials, any leftover absorber material, and any other debris generated during the work (including hazardous materials, if any).

10. Project Organization

DFL will provide Technical Authority for this project. Technical Authority will overlook all aspects of this project including schedule as per internal DFL/CSA regulations.

11. Risk Mitigation

Risk mitigation of this project will be provided based on the standard approach for this type of the procurement project. The contractor must comply with all required Health Safety and Security regulations of the DFL/CSA. The personnel will be briefed on the regulations in an orientation session provided by the DFL Facility and Security group.

12. Main Milestones for the Project

- Start of absorber installation: Jan 03, 2018
- Project end date: Mar 31, 2018

13. Meetings

The work consists of off-site work and on-site installation and testing. The Contractor and DFL should hold weekly review meetings via teleconference or WebEx to monitor project progress. The meeting frequency could be modified if mutually agreed.

The kick-off meeting should be organized as teleconference or WebEx but the Final Review Meeting at the end of commissioning of the ATF2 will be arranged on DFL's premises.

14. Constraints

a) Make sure that all company employees or sub-contractors, while present on DFL premises for ATF2 shield inspection, absorber transportation, absorber installation, ATF2 testing for commissioning, or any other activities, do observe all appropriate DFL regulations. The personnel will be briefed on the regulations in an orientation session provided by the DFL Facility and Security group.

b) Effective communication between DFL and the Contractor is essential to meet ATF2 project schedules. DFL must inform the Contractor when the chamber is ready for inspection (see Tasks - c)). In cooperation with DFL, once the surface preparations are accepted, the Contractor will have 30-days to start the absorber installation.

Annex B - Evaluation Criteria of Bidder's Technical Proposal Antenna Test Facility 2 Commissioning at David Florida Laboratory

1. Technical Proposal Evaluation

The Technical Proposal must demonstrate the bidder is capable of meeting the obligations listed in Annex A - ATF2 Statement of Work (SOW). The proposal must address each SOW task requirements.

Bidder's Technical Proposal will be evaluated using the Mandatory Technical Criteria (MTC) in Section 2, and the Point Rated Technical Criteria (RTC) in Section 3.

A successful bid must meet all mandatory requirements and must obtain the minimum required score in every criterion listed in the RTC. The minimum acceptable cumulative total for RTC is 66 points. Proposals not meeting these requirements will be deemed non-responsive.

2. Mandatory Technical Criteria

The Bidder must meet the mandatory technical criteria specified below. The Bidder must provide the necessary documentation to support compliance with this requirement. Bids which fail to meet the mandatory technical criteria will be declared non-responsive. Each mandatory technical criterion should be addressed separately.

Bidders are advised that only listing experience without providing any supporting documentation relevant to the requirements will not be considered "demonstrated" for the purpose of this evaluation.

Mandatory Technical Criteria (MTC)			
Bidder's Experience			
No.	**Mandatory Technical Criterion**	**Bidder's Preparation Instructions**	
MTC1	**Bidder's Experience** The Bidder must demonstrate a minimum of eight (8) years' experience within the last ten (10) years, as of bid closing date, in the sector of large size (minimum 40x40x40 ft) anechoic chamber design for antenna characterization and in the design of at least two of the following types of anechoic chambers: • Near field; or • Electromagnetic Compatibility (EMC);or • Passive Intermodulation (PIM)	In their technical bid, the Bidder must provide the following for each project: i. Start and completion dates; ii. Name of the client for whom the work was done; and iii. Detailed description of the work performed;	
Resources' Qualifications & Experience			
MTC2	**Project Leader** The Bidder must propose one (1) Project Manager. As of bid closing date, the proposed Project Manager must have: A minimum of eight (8) years demonstrated experience in the last twelve (12) years, in project management of anechoic chamber implementation. Project which include: • A large size (minimum 40x40x40 ft) anechoic chamber implementation with environmental systems placed inside the chamber (Fire Detection and Suppression, Heating, Ventilating and Air Conditioning and Lighting and Video Monitoring)	In their Technical Bid, the Bidder must provide the following for the proposed resource: A detailed résumé outlining a list of responsibilities and experiences for the project(s) completed within the last twelve (12) years, which must include the following: i. a description of the individual's roles and responsibilities; ii. Detailed description of the work performed; iii. the start and completion dates of the jobs or projects; and the employer or client for whom the work was done.	
MTC3	**Technical Leader** The Bidder must propose two (2) Technical	In their Technical Bid, the Bidder	

	Leaders. As of bid closing date, the proposed Technical Leaders must each have: A minimum of five (5) years demonstrated experience in the last eight (8) years, in the following area: • Electromagnetic design; and • Absorber installation and commissioning of anechoic chamber for radio frequency measurement. Definition: radio frequency measurement includes near-field and far-field antenna pattern measurement, PIM and EMC/EMI testing.	must provide the following for the proposed resource(s): A detailed résumé outlining a list of responsibilities and experiences for the project(s) completed within the last eight (8) years, which must include the following: i. a description of the individual's roles and responsibilities; ii. Detailed description of the work performed; iii. the start and completion dates of the jobs or projects; and iv. the employer or client for whom the work was done.	

3. Point Rated Technical Criteria

Bids which meet all the mandatory technical criteria will be evaluated and scored as specified in the table below.

Any bid which does not pass all mandatory requirements or does not receive the minimum number of points on each of RTC1, RTC2, RTC3, RTC4, and RTC5 will be disqualified. Bids which fail to obtain the required minimum number of points specified below will be declared non-responsive. Each point rated technical criterion should be addressed separately.

Bidders are advised that only listing experience without providing any supporting documentation relevant to the requirements will not be considered "demonstrated" for the purpose of this evaluation.

Bidders are also advised that the months of experience listed for a project whose timeframe overlaps that of another reference project will only be counted once. For example: Project 1 timeframe is July 2011 to December 2011; Project 2 timeframe is October 2011 to January 2012; the total in months of experience for these two projects is seven months.

Point Rated Technical Criteria (RTC) and Scores		**Required Minimum Number of Points per Criterion**	**Maximum Number of Points per Criterion**
RTC1	Experience of the Bidder	15	20
RTC2	Experience of the Project Manager	3	5
RTC3	Experience of the Technical Leaders	3	5
RTC4	Work Implementation Plan	20	30
RTC5	Preliminary Design Document	25	40
Overall Score		**66**	**100**

Point Rated Technical Criteria (RTC)		
RTC1 Experience of the Bidder		
Number	**Criteria**	**Scoring**
RTC1	**Bidder** The Bidder's proposed corporate experience will be evaluated as follows: a) Eight (8) years of experience within the last ten (10) years; b) Three (3) previous projects of the same nature (large size, minimum 40x40x40 ft) anechoic chamber design for antenna characterization, in the last six (6) years (at bid closing) c) In at least two of the following: design of near-field, EMC or PIM specific anechoic chambers	The Bidder's proposed **corporate experience** will be evaluated as follows: **0 points:** The Bidder does not meet RTC1 a), or b), or c). **15 points:** The Bidder meets RTC1 a), and b), and c). **1 point:** for every additional year of experience or for every additional project within the last 10 years, up to a max of 5 points of combined

		excess experience. The maximum amount of points that can be achieved is 20 points (15 points + 5 additional points for experience). **The minimum acceptable score for RTC1 criterion is 15 points.**
RTC2 Experience of the Project Manager		
RTC2	**Project Manager** The resource proposed in MTC2 should have eight (8) years demonstrated experience within the last twelve (12) years, as of bid closing date, performing activities including: a) Managing anechoic chamber implementation projects; b) A large size, minimum 40x40x40ft, anechoic chamber implementation with environmental systems placed inside the chamber (FDS, HVAC, LVM)	The Bidder's proposed **Project Manager** will be evaluated as follows: **0 points:** The Bidder does not meet RTC2 **3 points:** The Bidder meets RTC2 **1 point:** for every two (2) years of additional experience up to a max of 2 points of combined excess experience The maximum amount of points that can be achieved is 5 points (3 points + 2 additional points for experience). **The minimum acceptable score for RTC2 criterion is 3 points.**
RTC3 Experience of the Technical Leaders		
RTC3	**Technical Leaders** The resources proposed in MTC3 should have five (5) years demonstrated experience within the last eight (8) years, as of bid closing date, performing activities including: a) Electromagnetic designing b) Installing absorber and commissioning of anechoic chamber for radio frequency measurement. Definition: radio frequency measurement includes near-field and far-field antenna pattern measurement, PIM and EMC/EMI testing.	The Bidder's proposed **Technical Leaders** will be evaluated as follows: **0 points:** The Bidder does not meet RTC3 **3 points:** The Bidder meets RTC3 **1 point:** for every two (2) years of additional experience up to a max of 2 points of combined excess experience The maximum amount of points that can be achieved is 5 points (3 points + 2 additional points for

<table>
<tr><td></td><td></td><td>experience).

The minimum acceptable score for RTC3 criterion is 3 points.</td></tr>
<tr><td colspan="3">RTC4 Work Implementation Plan</td></tr>
<tr><td>RTC4</td><td>Work Implementation Plan

The bidder must submit a comprehensive, logical and well defined Work Implementation Plan, with specific tasks to complete all aspects of the project, with a realistic schedule and with appropriate resource allocation. Sufficient detail should be provided to allow for a comprehensive understanding of the work undertaken. The plan should include the following elements:

a) Project phases
b) Work breakdown structure (WBS)
c) Team composition and responsibilities
d) Preliminary schedule
e) Risk management plan</td><td>The Bidder’s proposed Work Implementation Plan will be evaluated for each element according to the table below, using the following definitions:

- Excellent: The element is well defined, logical, and realistic.
- Good: The element is somewhat well defined, relatively logical, and relatively realistic
- Poor: The element is either not addressed, or not logical, or not realistic.

<table>
<tr><td rowspan="2">WIP Elements</td><td colspan="3">Points awarded</td></tr>
<tr><td>Excellent</td><td>Good</td><td>Poor</td></tr>
<tr><td></td><td>6</td><td>4</td><td>0</td></tr>
<tr><td>a)</td><td></td><td></td><td></td></tr>
<tr><td>b)</td><td></td><td></td><td></td></tr>
<tr><td>c)</td><td></td><td></td><td></td></tr>
<tr><td>d)</td><td></td><td></td><td></td></tr>
<tr><td>e)</td><td></td><td></td><td></td></tr>
</table>

The maximum amount of points that can be achieved is 30 points.

The minimum acceptable score for RTC4 criterion is 20 points.</td></tr>
</table>

Annex B - Evaluation Criteria

RTC5 Preliminary Design Document		
RTC5	**Preliminary Design Document** The bidder must submit a Preliminary Design Document (PDD) which should include:	The Bidder's proposed **Preliminary Design Document** will be evaluated as follows:
	a) Preliminary absorber layout (with maximum absorber size set at 48 in)	a1) Preliminary absorber layout is provided and the layout seems to have the potential to deliver a solid RF performance: 4 points a2) Preliminary absorber layout is not provided or the layout seems not to have the potential to deliver a solid RF performance: 0 points
	b) Proposed solution(s) on how to minimize the effects of the FDS sprinkler risers and heads on the chamber RF performance	b1) Solution provided has the potential to minimize the RF reflections from sprinkler risers and heads and does have the endorsement of the industry standards (see Annex A, AD15): 4 points b2) Solution provided has limited level of detail and does not demonstrate convincingly that it will minimize the RF reflections from sprinkler risers and heads, might have the endorsement of the industry standards: 2 points b3) No solution is provided, or the solution provided is not endorsed by the industry standards (see Annex A, AD15): 0 points
	c) Proposed solution(s) on absorber type and installation method required for the HVAC supply and return vents for a minimal negative impact on chamber RF performance	c1) Solution provided has the potential to minimize the RF reflections around the HVAC supply and return vents: 4 points c2) Solution provided has limited level of detail and does not demonstrate convincingly that it will minimize the RF reflections around the HVAC supply and return vents: 2 points c3) No solution is provided: 0 points
	d) Information on the absorber quality control processes, and on absorber installation method	d1) Strong absorber manufacturing quality control is demonstrated and information on absorber installation method is provided: 4 points d2) Information on absorber manufacturing quality control is limited or installation method is unclear: 2 points d3) Information on absorber manufacturing quality control is missing, and/or information on absorber installation method is missing: 0 points
	e) Detailed chamber commissioning RF test plan, and	e1) Detailed RF Test Plan for chamber commissioning is provided: 4 points e2) RF test plan is provided but with limited details:

	f) Results of simulation analysis or calculations indicating the best achievable ripple performance within the 16 ft diameter test volume. These results should be based on the ATF2 configuration which includes the preliminary absorber layout and all environmental systems (FDS, HVAC, LVM). The ripple performance should be indicated for the following frequency points: f1=250 MHz, f2=500 MHz, f3=1 GHz, f4=2 GHz, f5=4 GHz, f6=8 GHz, f7=18 GHz and f8=40 GHz.	2 points e3) No RF Test Plan provided: 0 points f) Peak-to-peak ripple rating scale (x in dB): Note: * = no points are awarded if no results are presented. - f1=250 MHz x ≤3.6 3 points - f1=250 MHz 3.6 < x ≤ 4.5 2 points - f1=250 MHz 4.5 < x ≤ 5.5 1 points - f1=250 MHz 5.5 < x* 0 points - f2=500 MHz x ≤1.5 3 points - f2=500 MHz 1.5 < x ≤ 2.2 2 points - f2=500 MHz 2.2 < x ≤ 3.0 1 points - f2=500 MHz 3.0 < x* 0 points - f3=1 GHz x ≤0.7 3 points - f3=1 GHz 0.7 < x ≤ 1.2 2 points - f3=1 GHz 1.2 < x ≤ 1.7 1 points - f3=1 GHz 1.7 < x* 0 points - f4=2 GHz x ≤0.2 3 points - f4=2 GHz 0.2 < x ≤ 0.5 2 points - f4=2 GHz 0.5 < x ≤ 0.8 1 points - f4=2 GHz 0.8 < x* 0 points - f5=4 GHz x ≤0.4 2 points - f5=4 GHz 0.4 < x ≤ 0.6 1 points - f5=4 GHz 0.6 < x* 0 points - f6=8 GHz x ≤0.2 2 points - f6=8 GHz 0.2 < x ≤ 0.3 1 points - f6=8 GHz 0.3 < x* 0 points - f7=18 GHz x ≤0.2 2 points - f7=18 GHz 0.2 < x ≤ 0.3 1 points - f7=18 GHz 0.3 < x* 0 points - f8=40 GHz x ≤0.2 2 points - f8=40 GHz 0.2 < x ≤ 0.3 1 points - f8=40 GHz 0.3 < x* 0 points The maximum achievable score is 40 points. **The minimum acceptable score for RTC5 criterion is 25 points.**

Annex C - Antenna Test Facility 2 Reference Pictures and Drawings

1. Reference pictures of the ATF2 chamber before dismantling

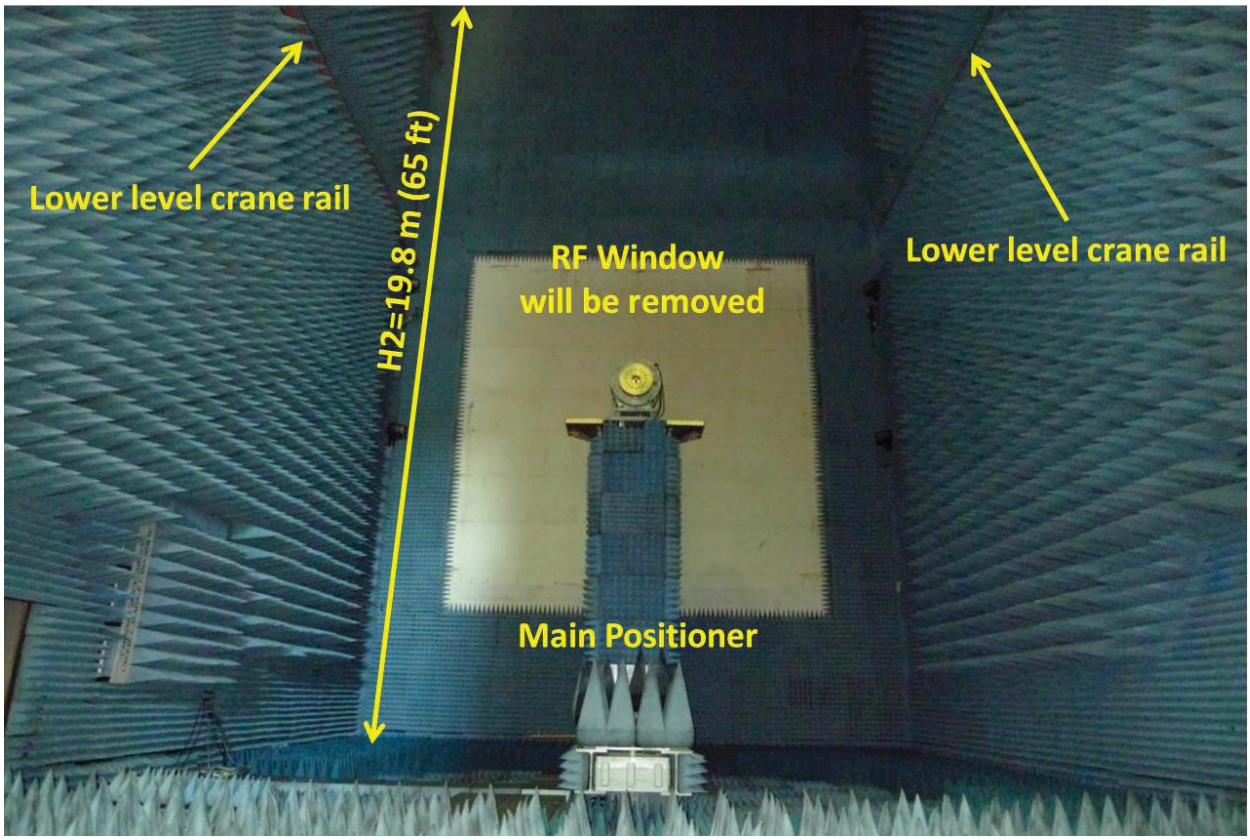


Fig. 1 ATF2 – Picture towards the rear wall

The picture shows the tall section of the ATF2, where the main positioner is located. The RF window on the rear wall will be removed. The opening will be fit with structural elements, shielded and populated with absorber.

The lower level crane travels the entire length of the chamber. During testing, the crane is parked outside of the ATF2.

The second crane available in the ATF2 is located in the tall area of the chamber. Its rails are positioned close to the 65 ft ceiling. During testing, the crane is parked in a compartment (covered with absorber) towards the center of the chamber.

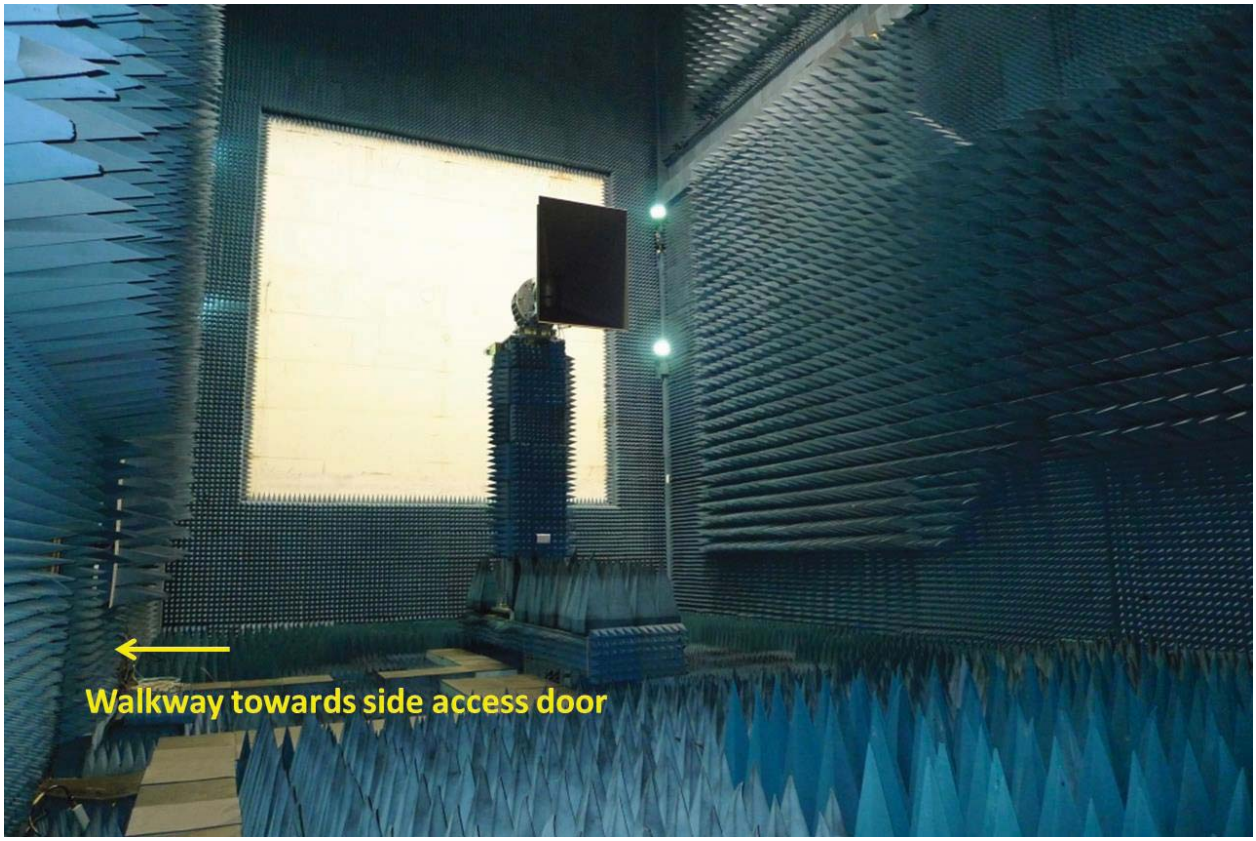


Fig. 2 ATF2 – Picture towards the rear wall

The picture shows the main positioner and surrounding area with the low profile absorbers and walkway. The low profile absorber area, around the azimuth positioner, shall be populated with 12 in absorber.

The arrow points to the side access door location.

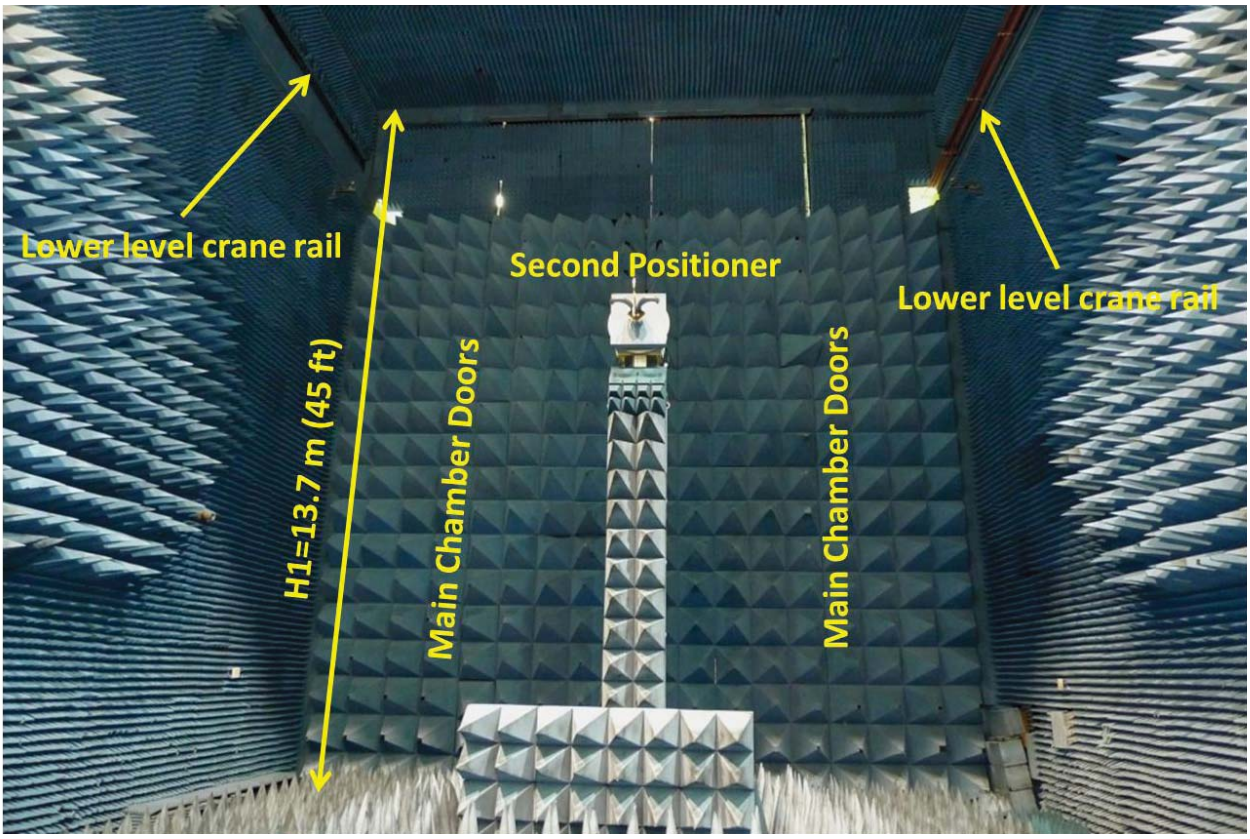


Fig. 3 ATF2 – Picture towards the chamber front

The picture shows the entrance to the chamber with the two large doors and the second positioner. The flaps above the main doors are hinged onto the ceiling to provide access for the crane.

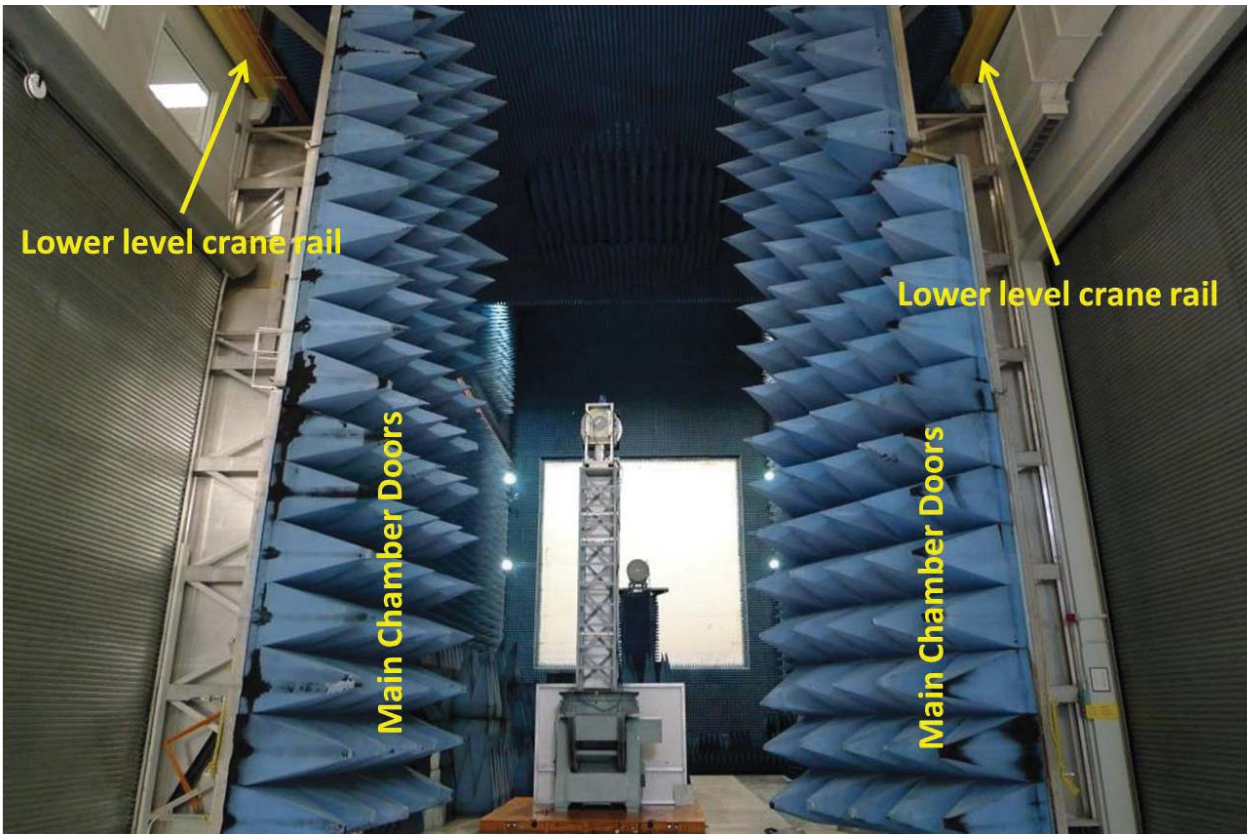


Fig. 4 ATF2 – Picture of the main entrance

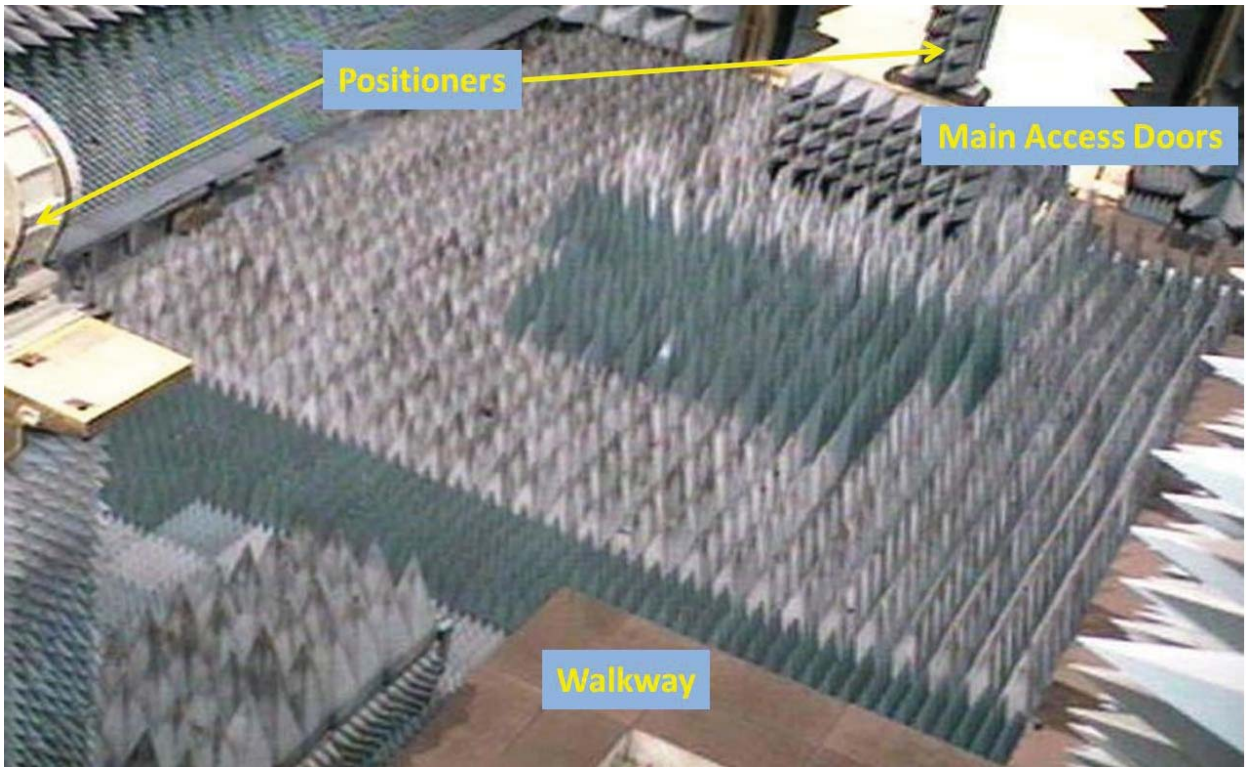


Fig. 5 ATF2 – Picture of the floor towards main entrance

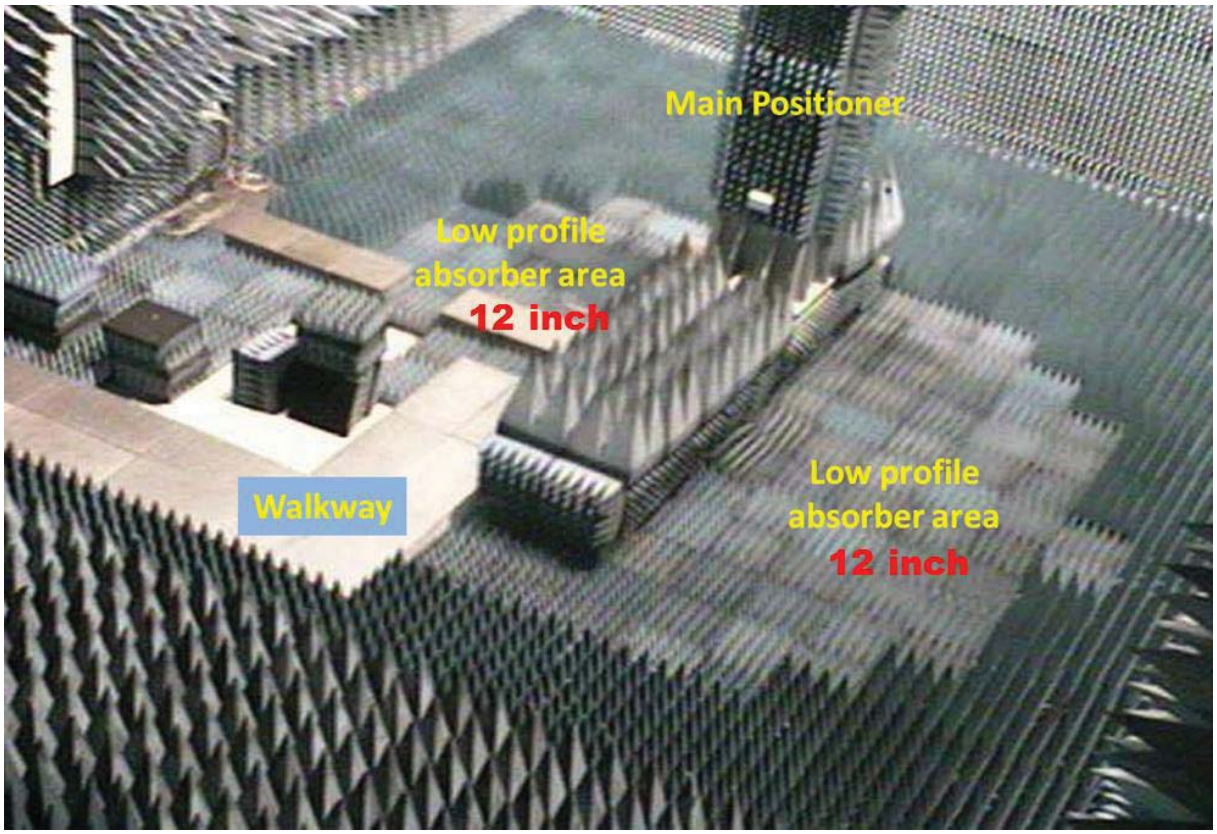


Fig. 6 ATF2 – Picture of the floor around the main positioner

The low profile absorber area, around the azimuth positioner, shall be populated with 12 in absorber.

Fig. 7 ATF2 Status

The picture in Fig.7 shows the current status of the ATF2, a view towards the main access doors. The chamber was stripped of the old absorber, the old HVAC system, and of all electrical connections.

Fig. 8 Large loading dock next to ATF2

Pictures in Fig. 8 show the large loading dock, located to the right (east) of the ATF2: The rolling door to the right is located just outside of the main access doors into ATF2. The ATF2 is located behind the right wall in these pictures.

2. Reference Drawings

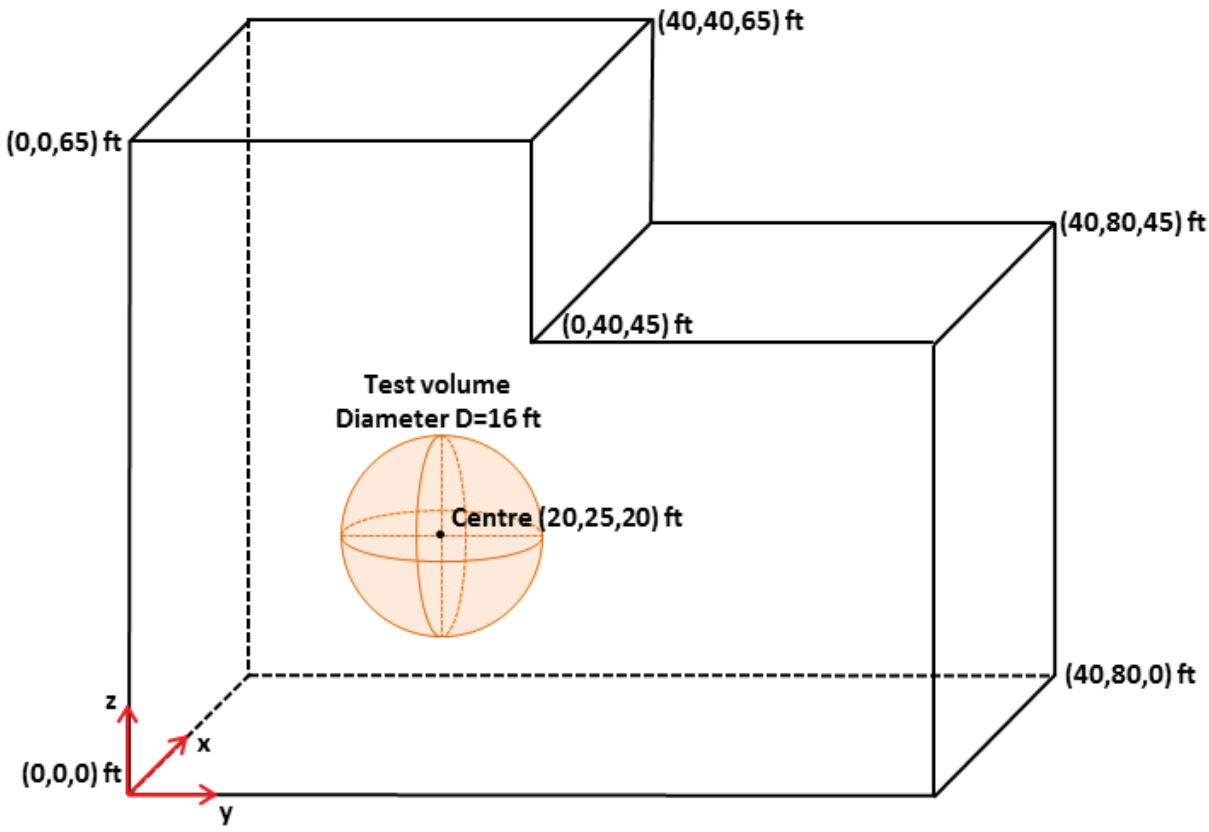


Fig. 9 ATF2 Sketch: dimensions and test volume location

Fig. 9 shows the ATF2 overall shape, its main dimensions, and the location of the test volume.

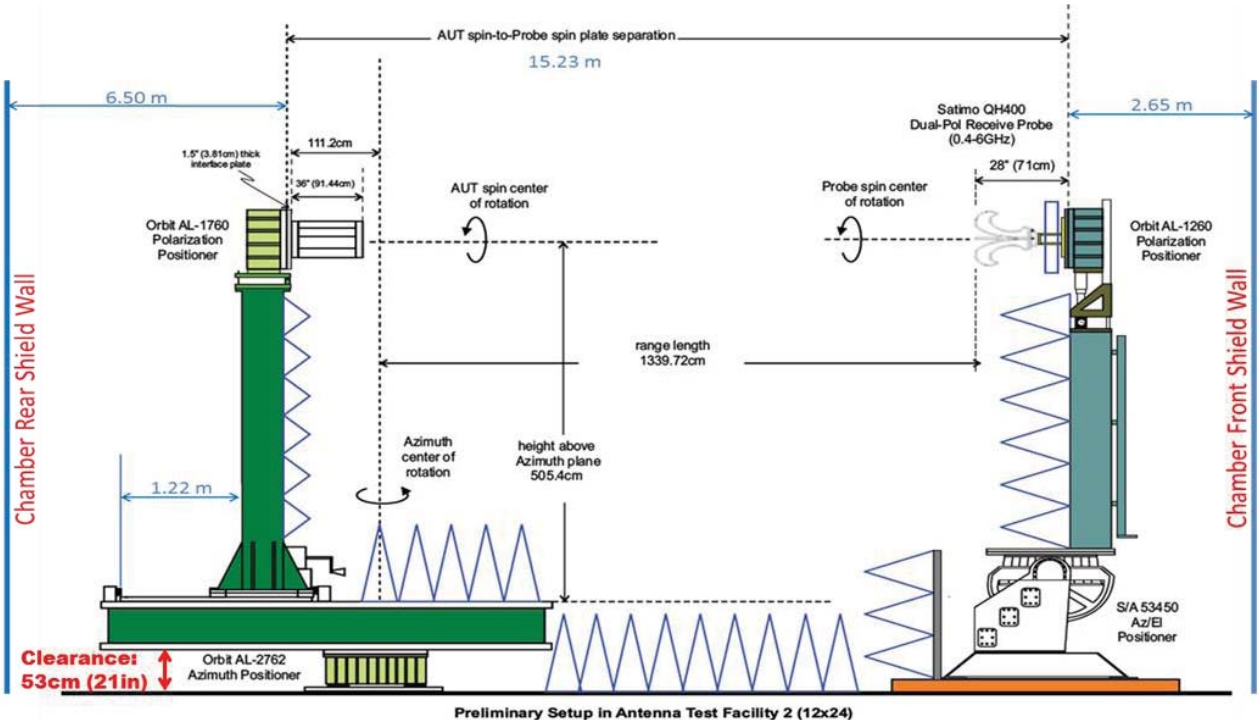


Fig. 10 Preliminary location of the positioners in the ATF2

From Fig.10, we calculate the maximum test range of approximatively 13 m (or 43 ft). The main positioner (to the left) can move backwards, towards the rear wall, up to 1.2 m (4 ft).

Note: Maximum clearance under the azimuth positioner (at the left) is 53 cm (21 in).

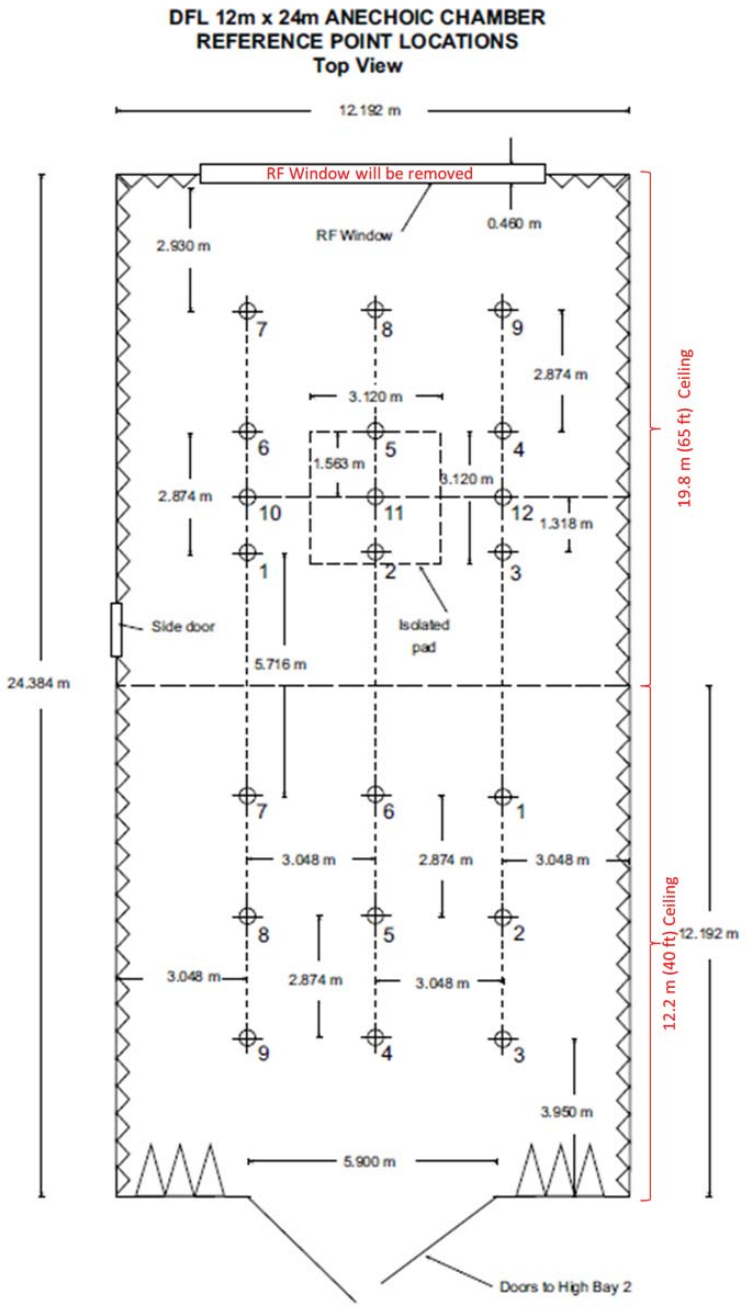
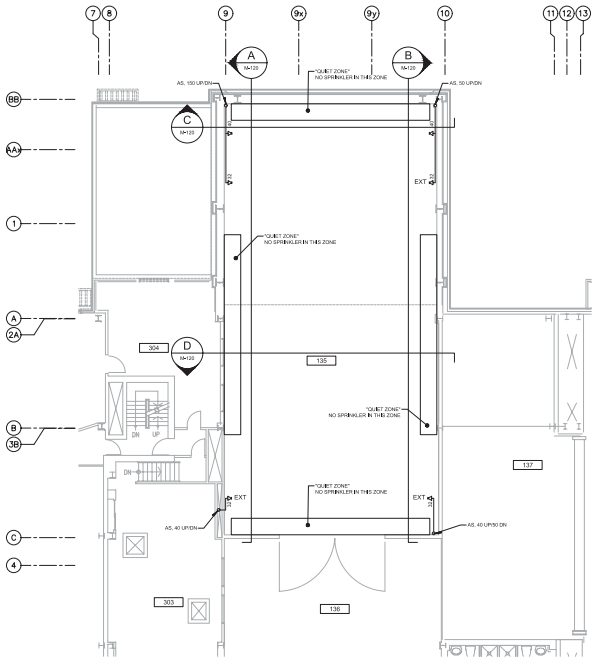
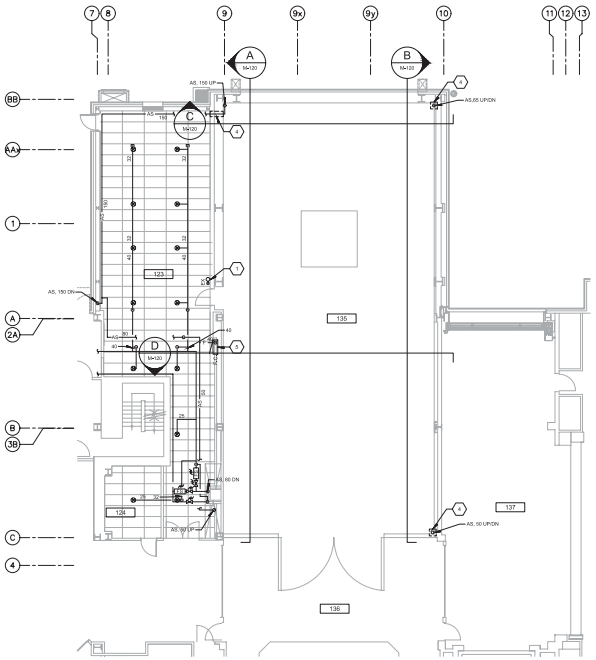


Fig. 11 ATF2 Floor with permanent reference point locations

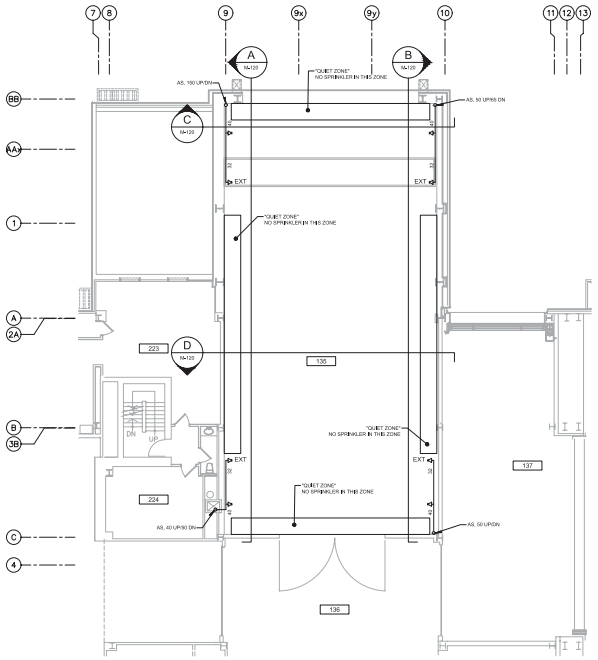
Fig. 11 is a top view drawing of the ATF2. It shows the main chamber dimensions, the location of the large seismic block (isolated pad) on which the main positioner is mounted, and the locations of all available permanent reference points.



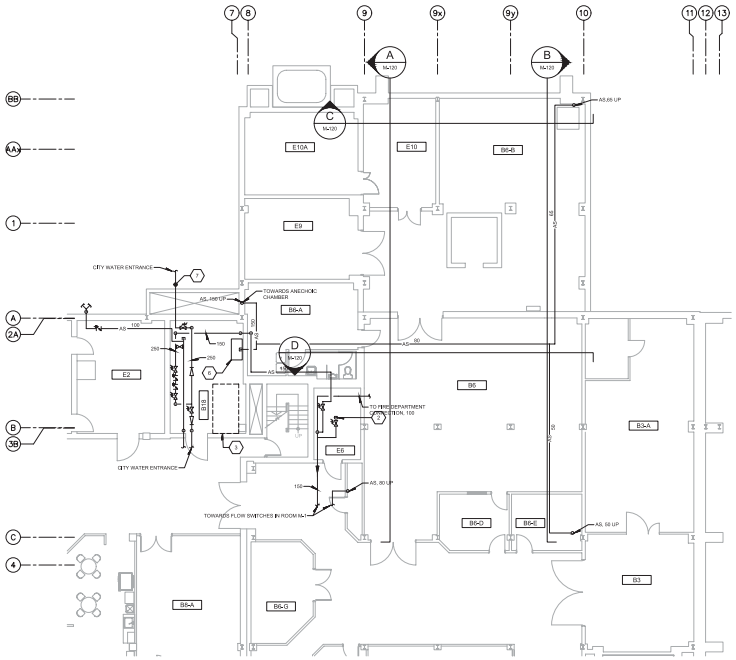
4 3rd FLOOR LEVEL 7544
SCALE = 1:100



2 GROUND FLOOR
SCALE = 1:100



3 2nd FLOOR LEVEL 4496
SCALE = 1:100

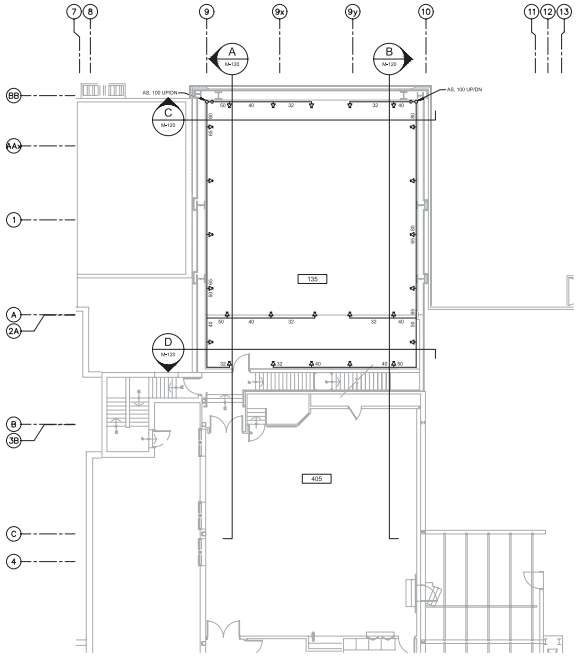


1 BASEMENT
SCALE = 1:100

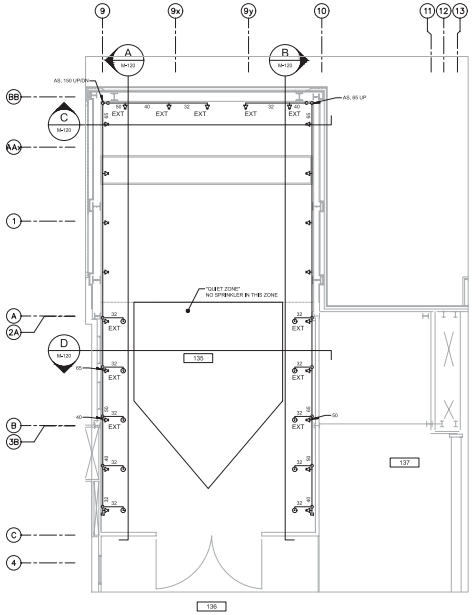
IDENTIFICATION(S):

1. NEW WALL MOUNTED FIRE EXTINGUISHER.
2. EXISTING FIRE PROTECTION PIPING TO BE CAPPED.
3. LOCATION OF FUTURE FIRE PUMP.
4. INSTALL A WAVEGUIDE FEED THROUGH FOR PIPE PENETRATION.
5. NEW FIRE HOSE CABINET C/W 40 HOSE OUTLET, FIRE HOSE AND NOZZLES.
6. NEW SINGLE INTERLOCK PRE-ACTION CABINET.
7. FLOW CONDITIONS AT THIS POINT ARE PROVIDED IN THE SPECIFICATIONS.

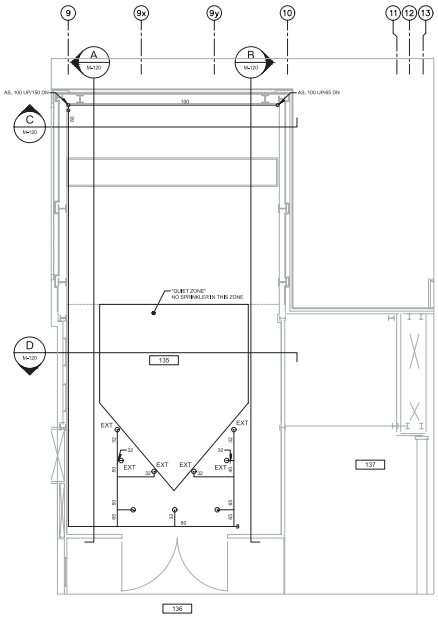
0 5000 1:100



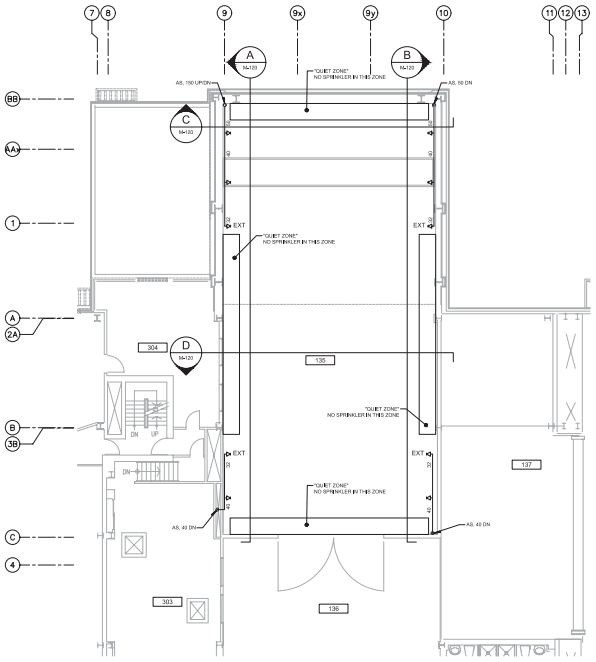
4 4th FLOOR LEVEL 15316
SCALE = 1:100



2 3rd FLOOR LEVEL 12421
SCALE = 1:100



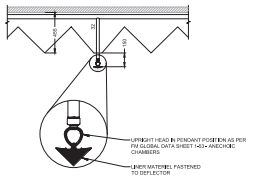
3 3rd FLOOR LEVEL 14097
SCALE = 1:100



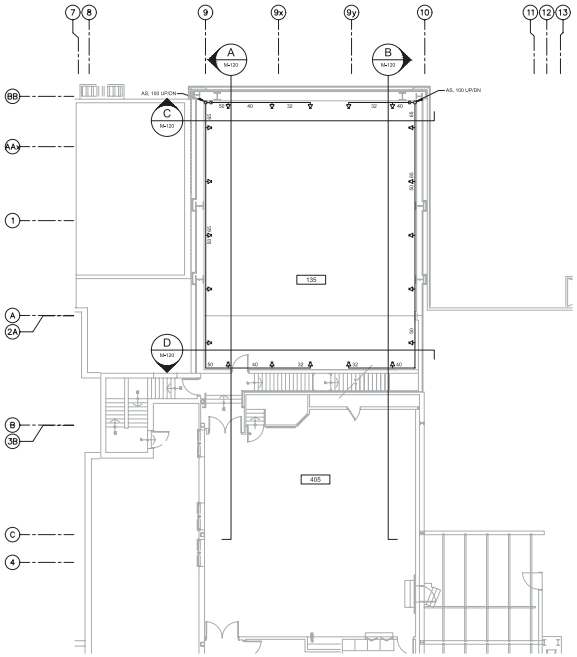
1 3rd FLOOR LEVEL 9982
SCALE = 1:100

M-111

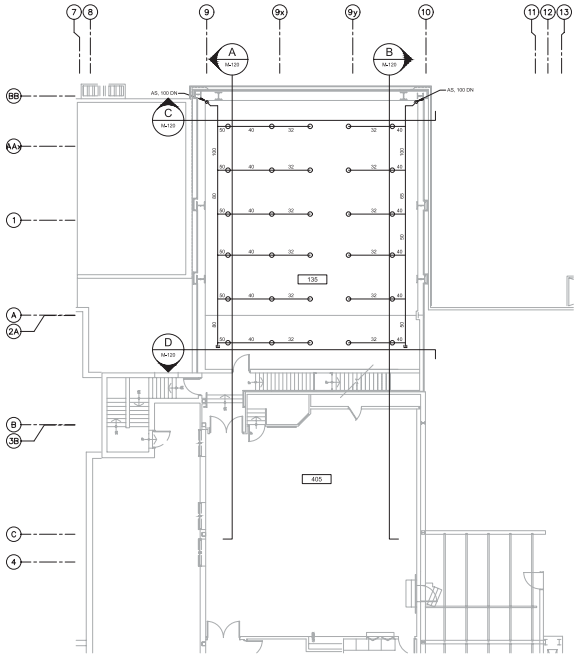
SYSTEM:	
• ANECHOIC CHAMBER FIRE PROTECTION SYSTEM IS A SINGLE INTERLOCK PRE-ACTION.	
SPRINKLER SYSTEM DATA:	
HYDRAULIC DESIGN DATA:	DENSITY: 0.41L/s AREA OF APPLICATION: 162m²
WATER SUPPLY INFORMATION:	SEE SECTION 21 13 16 IN THE SPECIFICATIONS
TOTAL SYSTEM REQUIREMENTS:	TO BE DETERMINED BY CONTRACTOR



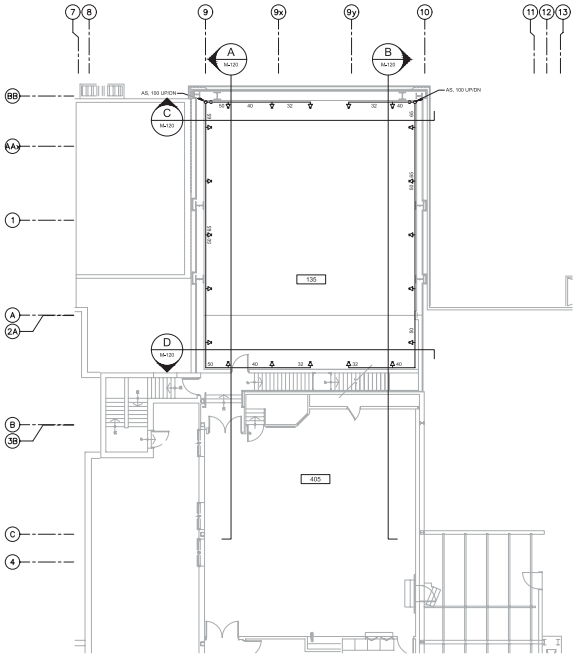
4 M-112 DETAIL INSTALLATION OF SPRINKLER
SCALE = 1:100



2 M-112 4th FLOOR LEVEL 19583
SCALE = 1:100



3 M-112 4th FLOOR LEVEL 20400
SCALE = 1:100

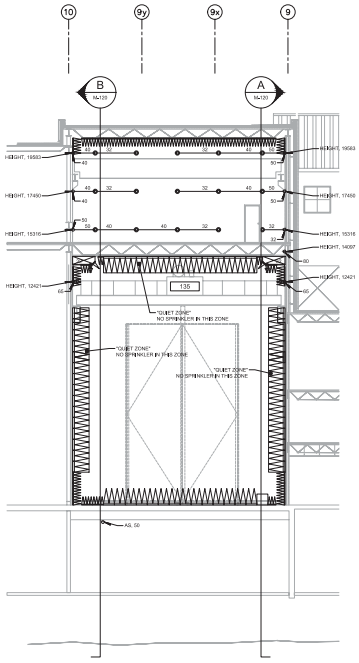


1 M-112 4th FLOOR LEVEL 17450
SCALE = 1:100

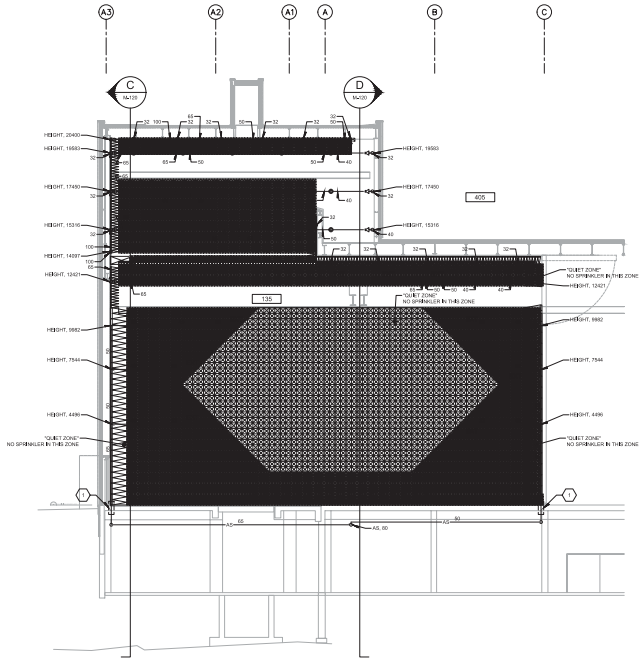
0 5000
1:100

IDENTIFICATION(S):

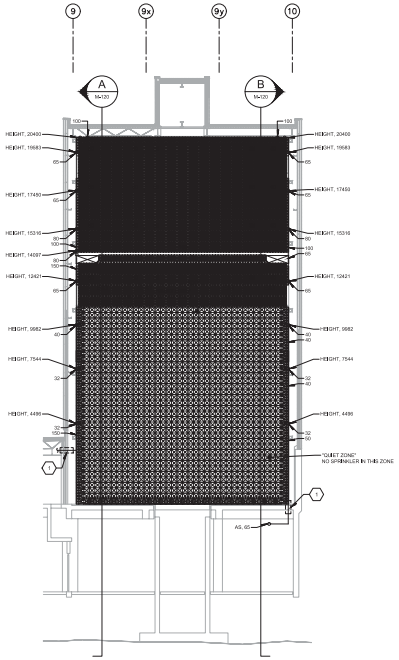
1 INSTALL A WAVEGUIDE FEED THROUGH FOR FIRE PENETRATION.



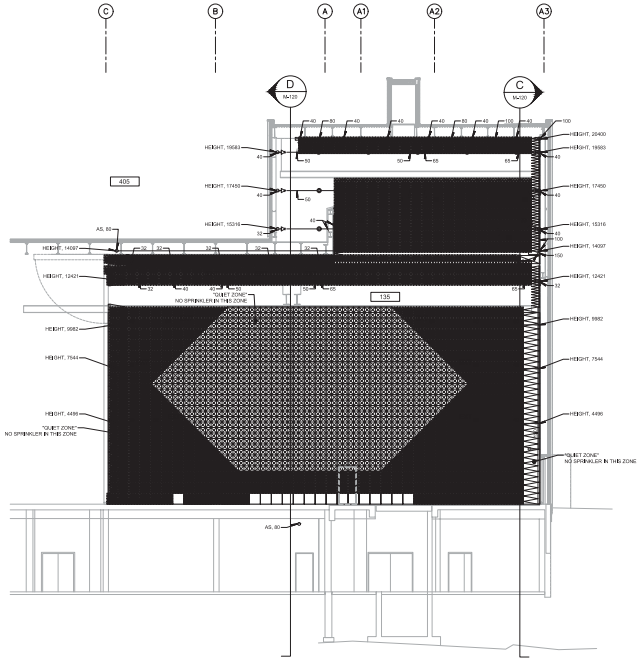
D SECTION
SCALE = 1:100



B SECTION
SCALE = 1:100

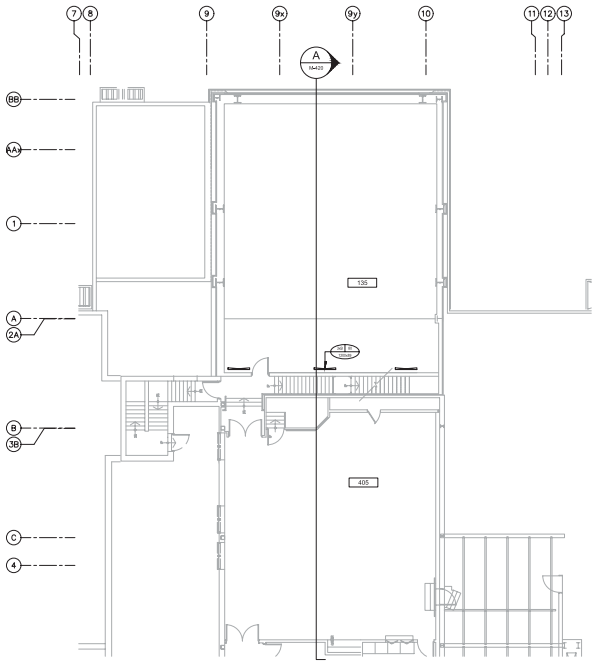


C SECTION
SCALE = 1:100

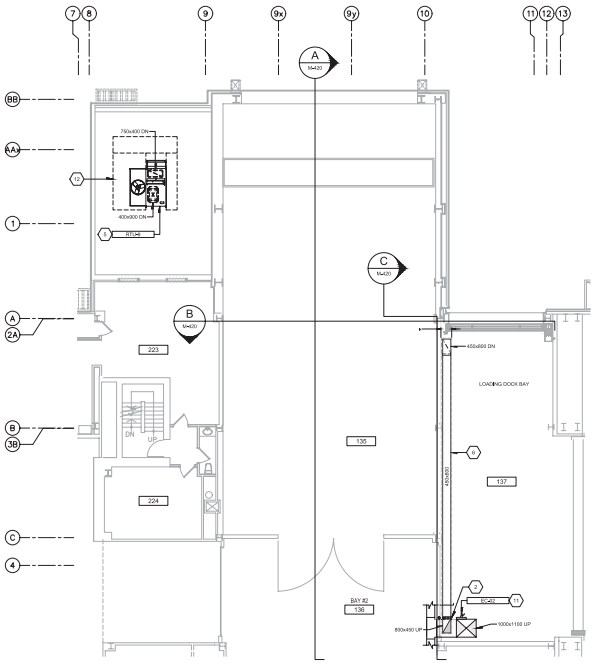


A SECTION
SCALE = 1:100

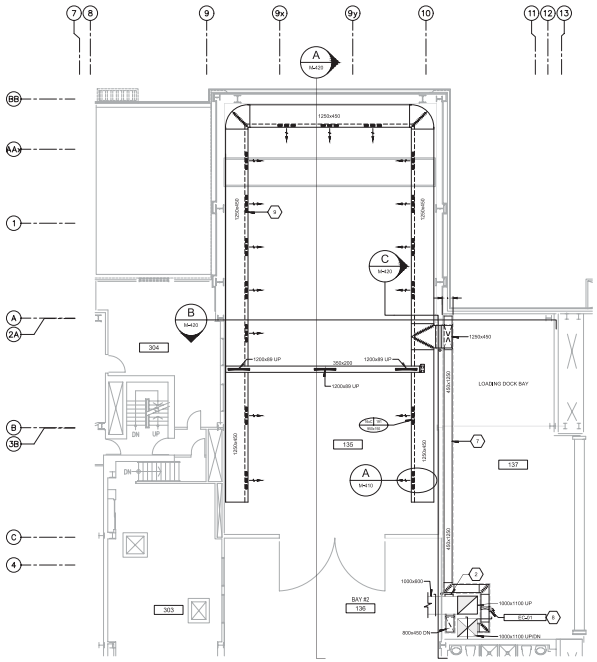
0 5000
1:100



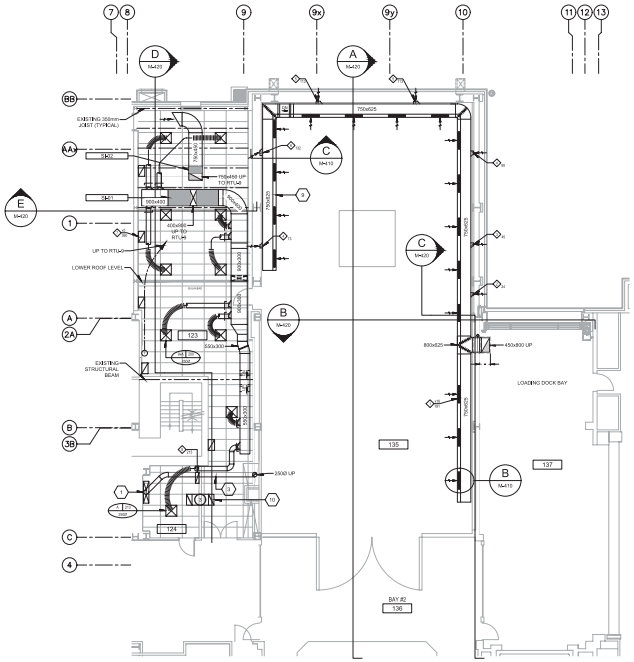
4 4th FLOOR
SCALE = 1:100



2 2nd FLOOR
SCALE = 1:100



3 3rd FLOOR
SCALE = 1:100



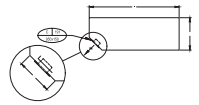
1 GROUND FLOOR
SCALE = 1:100

GENERAL NOTE(S):

1. ALL DUCTWORK IN THE ANECHOIC CHAMBER IS TO BE SUPPORTED BY STRUCTURAL BEAMS, REFER TO STRUCTURAL DRAWINGS FOR SUPPORT SPACING AND LOCATION.
2. COORDINATE GRILLES AND DIFFUSERS LOCATION WITH STRUCTURAL DRAWINGS IN ORDER TO NOT INTERFERE WITH STRUCTURAL SUPPORTS WITHOUT DISTURBING AIR FLOW DISTRIBUTION.

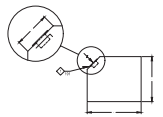
IDENTIFICATION(S):

1. EXISTING EXHAUST HOOD TO REMAIN.
2. EXISTING INSULATED RETURN DUCTWORK TO BE CAPPED.
3. EXISTING EXHAUST DUCTWORK TO REMAIN.
4. EXISTING INSULATED SUPPLY DUCT TO BE CAPPED.
5. NEW ROOFTOP UNIT INSTALLED ON NEW FILTER CURB C/W VIBRATION RAIL. REFER TO SPECIFICATIONS AND SECTIONS ON DRAWING M405, EXACT LOCATION OF UNIT TO BE COORDINATED WITH STRUCTURAL DRAWINGS.
6. RETURN DUCTWORK INSIDE LOADING DOCK BAY TO BE THERMALLY INSULATED, INSULATIONS TO BE INSTALLED THROUGH THE ANECHOIC CHAMBERS PENETRATION IN ORDER TO SHIELD AGAINST RF INTERFERENCE.
7. SUPPLY DUCTWORK INSIDE LOADING DOCK BAY TO BE THERMALLY INSULATED, INSULATIONS TO BE INSTALLED THROUGH THE ANECHOIC CHAMBERS PENETRATION IN ORDER TO SHIELD AGAINST RF INTERFERENCE.
8. NEW ELECTRIC HEATING COIL FOR TEMPERATURE CONTROL IN THE ANECHOIC CHAMBER.
9. DUCTWORK INSIDE ANECHOIC CHAMBER TO BE SUPPORTED BY STRUCTURAL BEAMS, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
10. TRANSFER DUCT, REFER TO DETAIL "C" ON DRAWING M-410 FOR DIMENSIONS AND DETAILS.
11. NEW ELECTRIC HEATING COIL FOR TEMPERATURE CONTROL IN BAY #2.
12. NEW CATWALK INTEGRAL TO NEW FILTER CURB.



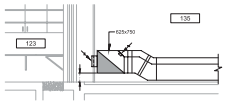
ANECHOIC CHAMBER SUPPLY DIFFUSERS

A M-410 DETAIL
SCALE = 1:25

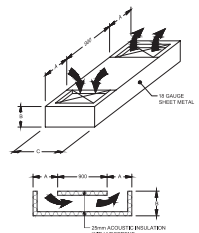


ANECHOIC CHAMBER RETURN GRILLES

B M-410 DETAIL
SCALE = 1:25



C M-410 ELEVATION
SCALE = 1:50



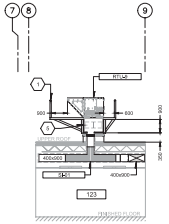
AIR TRANSFER WITH ACOUSTIC INSULATION

TYPE	L/N	A	B	C
1	0 @ 100	150	150	400
2	100 @ 200	250	250	500
3	200 @ 300	300	300	600
4	300 @ 400	300	300	900

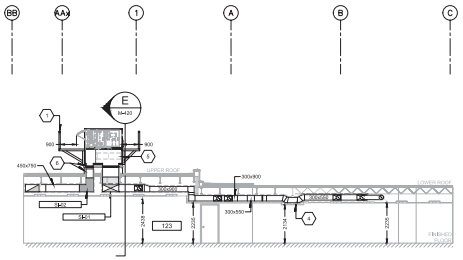
TRANSFER DUCT DETAIL

C M-410 DETAIL
SCALE = NONE

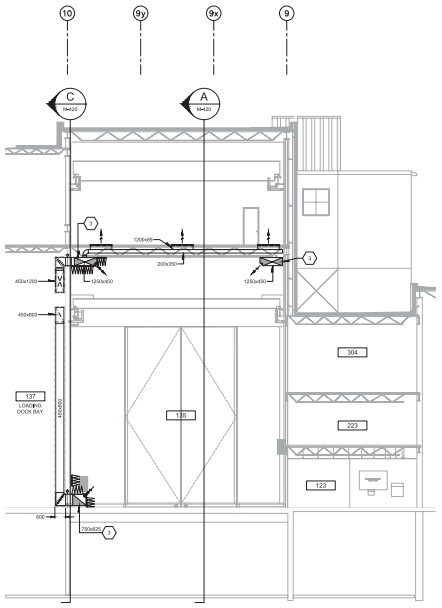
M-410



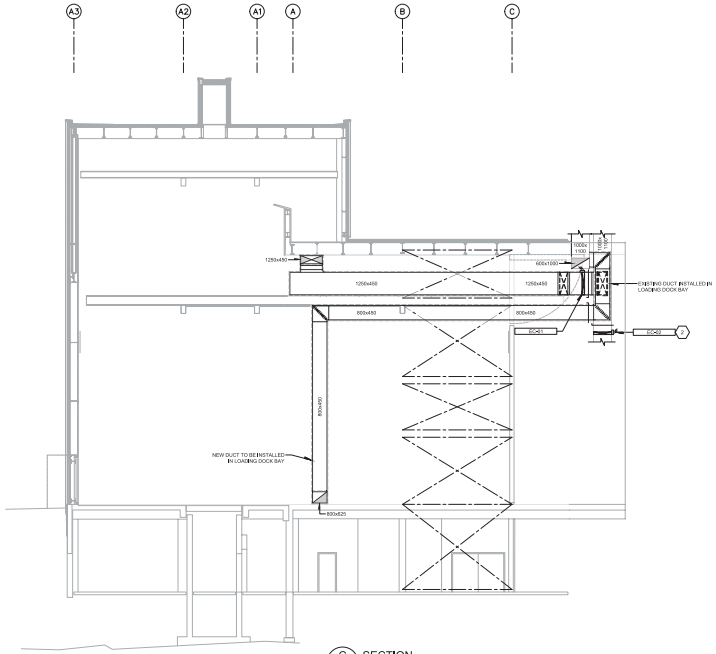
E SECTION
M-420 SCALE = 1:100



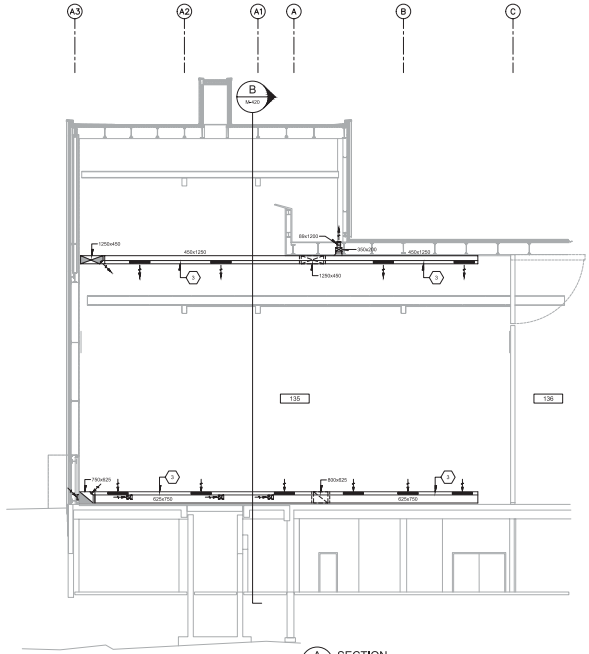
D SECTION
M-420 SCALE = 1:100



B SECTION
M-420 SCALE = 1:100



C SECTION
M-420 SCALE = 1:100



A SECTION
M-420 SCALE = 1:100

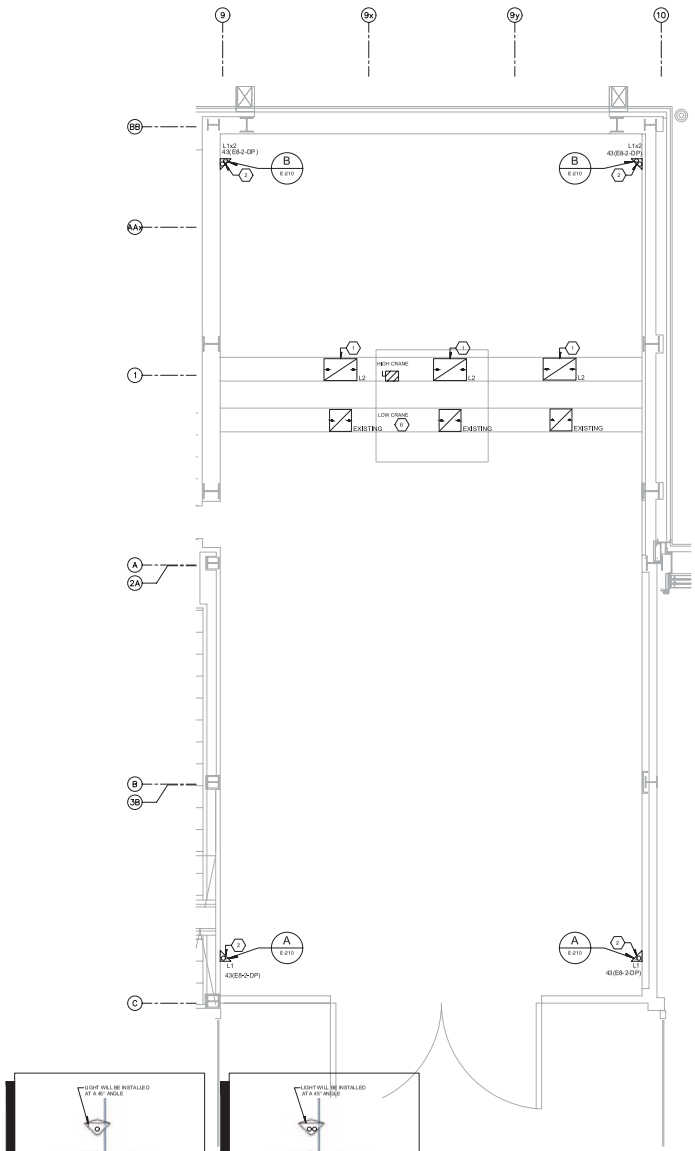
0 500 1:100

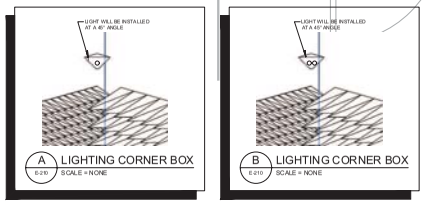
IDENTIFICATION(S):

1. NEW GUARDRAIL AROUND THE ROOFTOP UNIT C/W LADDER.
2. NEW ELECTRIC HEATING COIL FOR TEMPERATURE CONTROL IN BAY #2.
3. DUCTWORK INSIDE ANECHOIC CHAMBER TO BE SUPPORTED BY STRUCTURAL BEAMS, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
4. NEW BULKHEAD TO ALLOW PASSAGE OF INSULATED DUCTWORK BELOW THE STRUCTURAL BEAM, BULKHEAD LOCATION AND HEIGHT SHALL BE COORDINATED ON SITE, REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.
5. NEW FILTER CURB C/W VIBRATION RAIL, REFER TO SPECIFICATIONS FOR DETAILS.

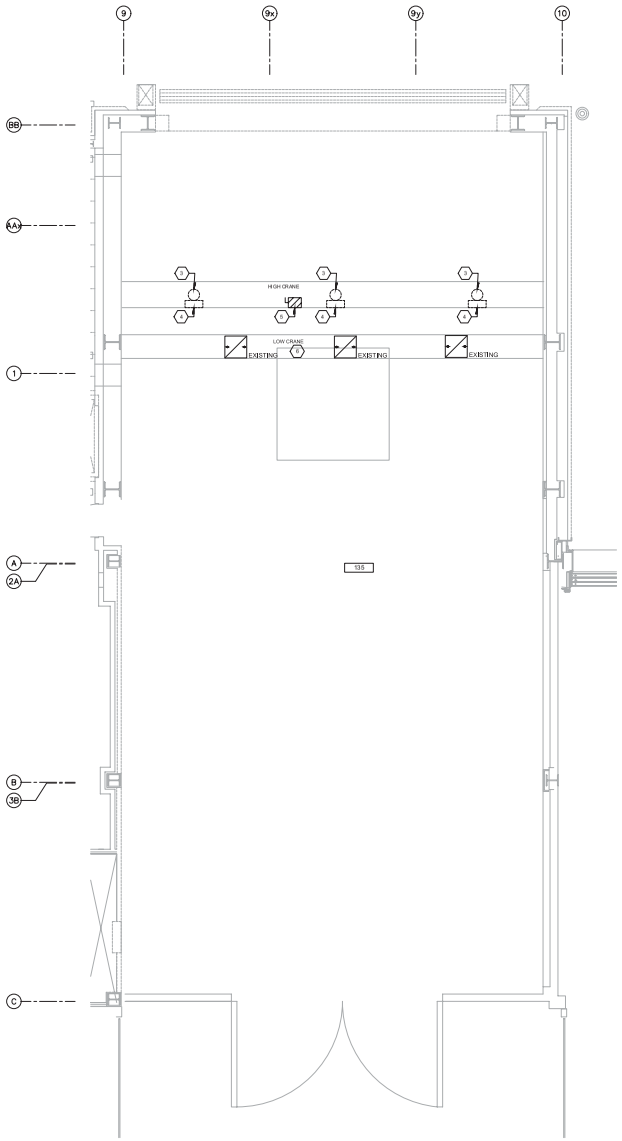
IDENTIFICATION(S):

1. CONNECT NEW LIGHTING FIXTURES ON HIGH CRANE LIGHTING DISCONNECT. PROVIDE AND INSTALL 600V-347V TRANSFORMER FOR THE LIGHTING CIRCUIT. PROVIDE INDIVIDUAL FUSING FOR EACH FIXTURE.
2. LIGHT FIXTURE TO BE CONTROLLED BY SWITCH IN ROOM 120. MOUNTING HEIGHT OF 12m. CONDUIT TO BE INSTALLED IN CORNER / OUTSIDE OF QUIET AREA. PROVIDE DISJUCTRE BREAK AT ROOM ENTRANCE.
3. LIGHT FIXTURE SUSPENDED ON HIGH CRANE TO BE REMOVED. LIGHTING CIRCUIT TO REMAIN FOR REUSE. NOTE: CRANE CAN BE ACCESSED FROM "PARKING AREA" ABOVE ROOM 135.
4. EXISTING 600V BALLAST TO BE REMOVED COMPLETE WITH WIRING UP TO DISCONNECT.
5. HIGH CRANE LIGHTING DISCONNECT TO REMAIN FOR REUSE.
6. EXISTING LOW CRANE MOVABLE FROM ANECHOIC CHAMBER TO INTEGRATION BAY No 2.





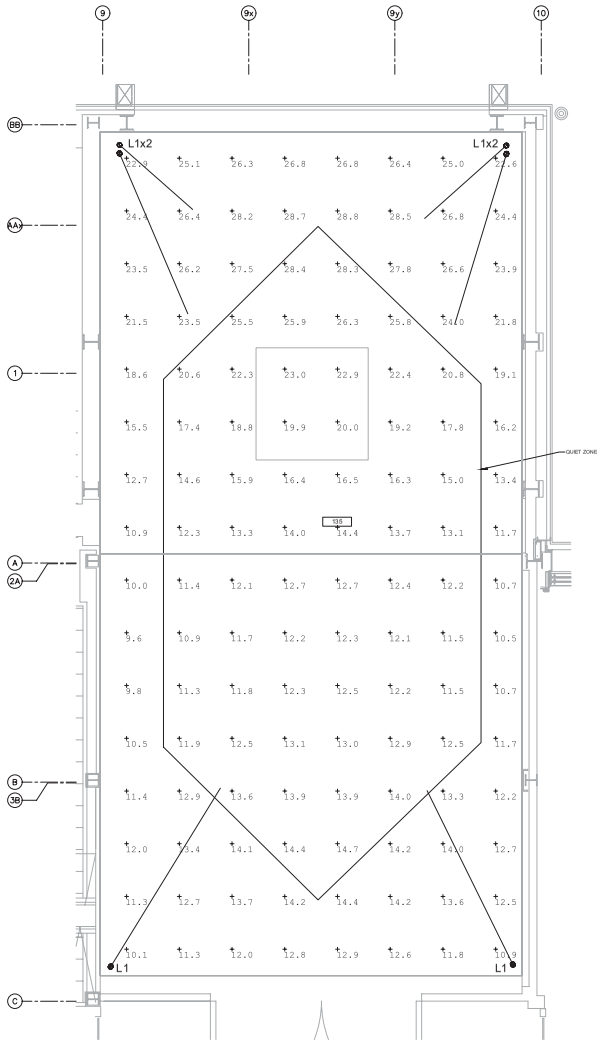
2 E-210 LIGHTING - NEW LAYOUT
SCALE = 1:50



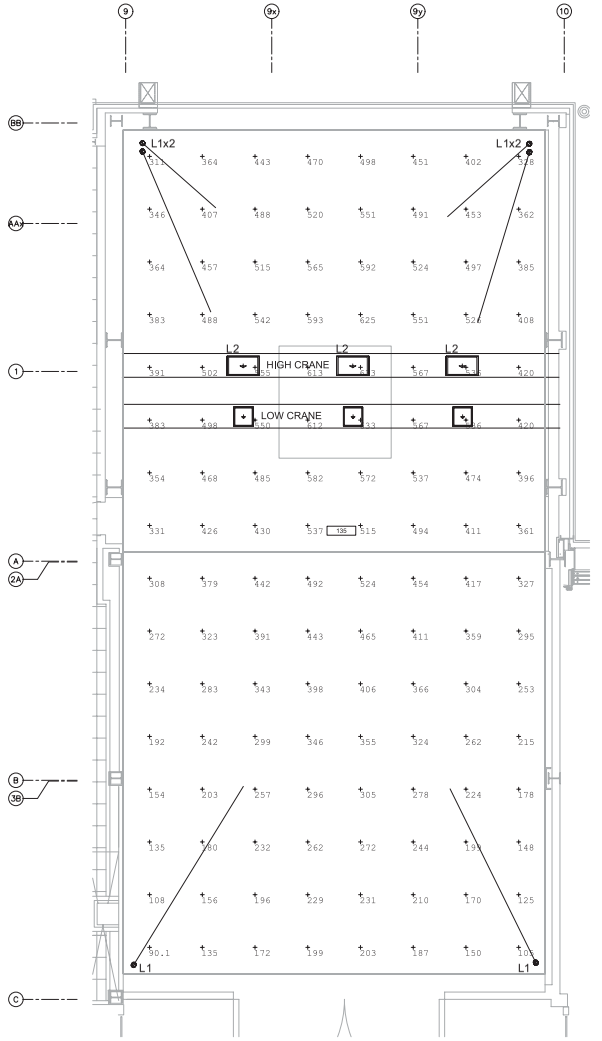
1 E-210 LIGHTING - DEMOLITION
SCALE = 1:50

GENERAL NOTE(S):

1- EXISTING LIGHT FIXTURES ON LOW CRANE: ALBEO HX-3W44HU240 FROM GE.



LIGHTING SIMULATION WITH L1 FIXTURES

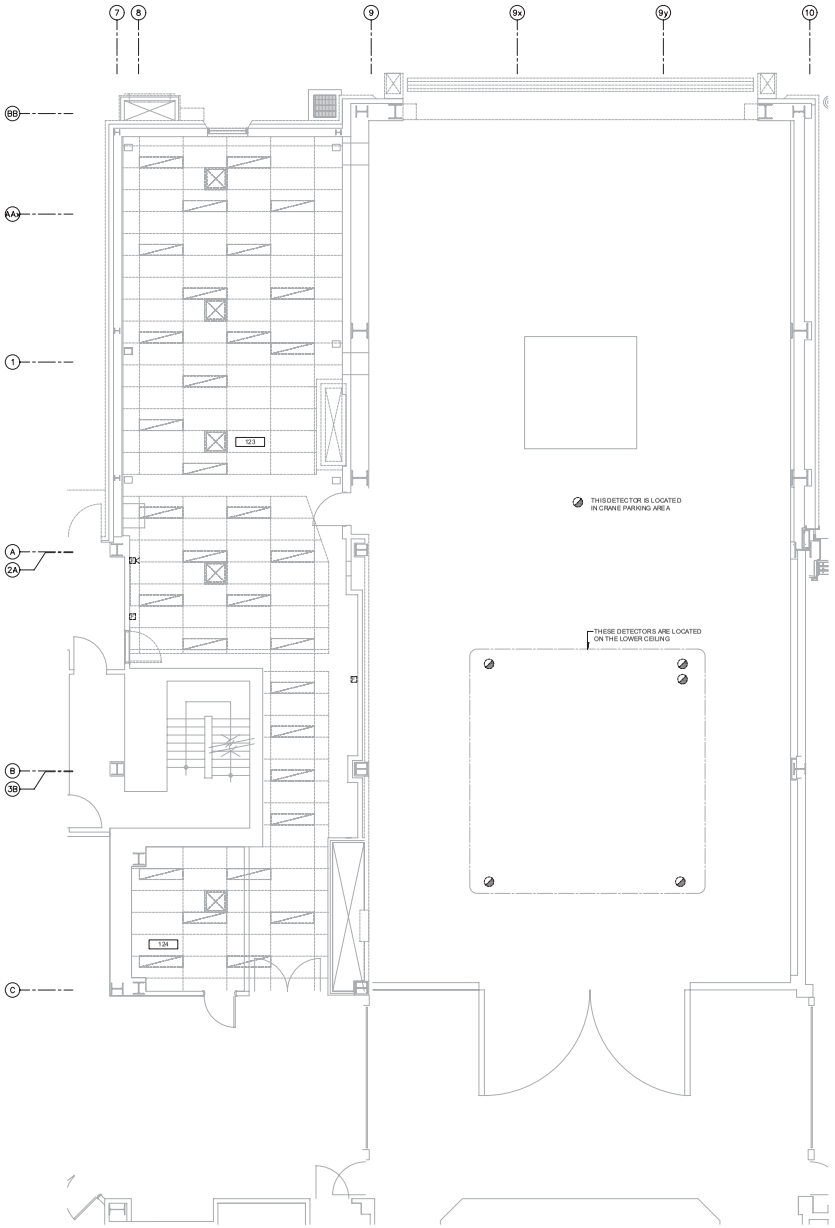


LIGHTING SIMULATION WITH L1 FIXTURES AND CRANE LIGHTS

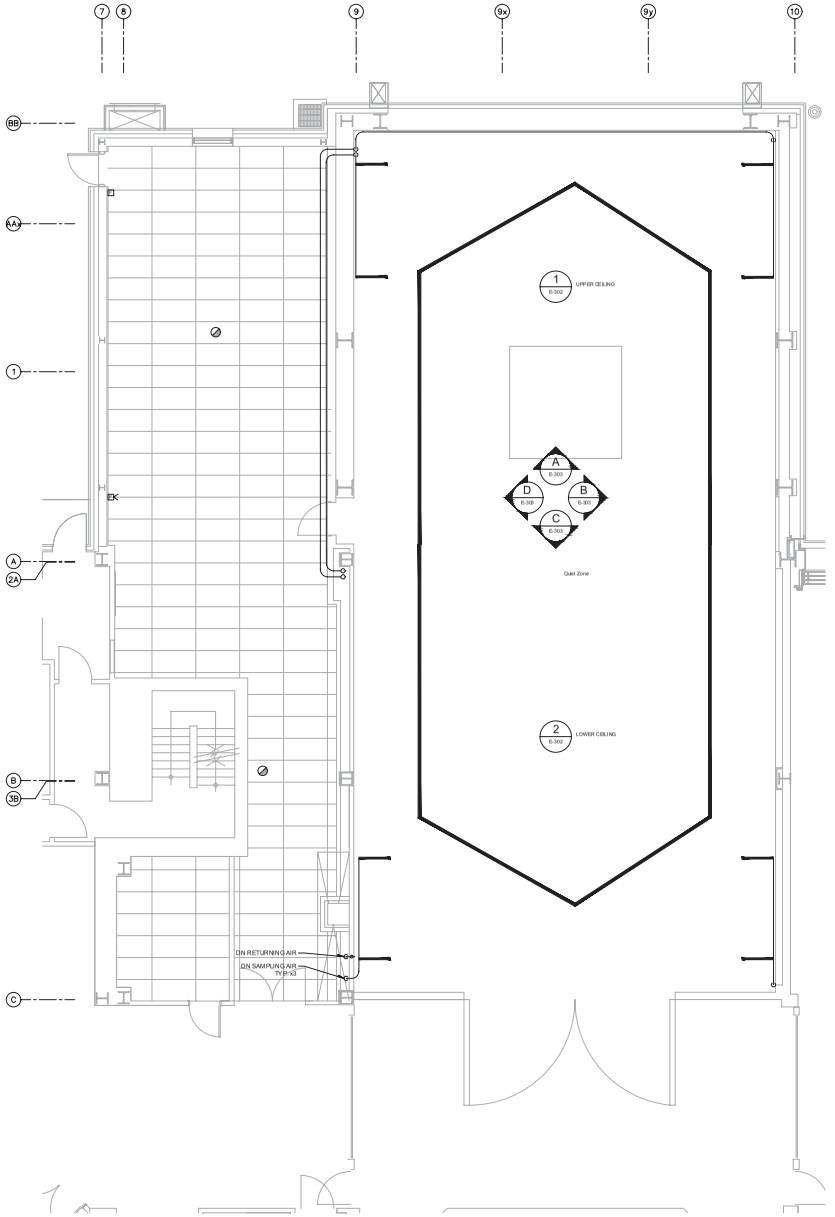
Calculation Summary							
Label	Units	Avg	Max	Min	Avg/Min	Max/Min	Reflectances
Anechoic Floor (With Cranes Lights)	Lux	375.32	833	90.1	4.17	7.03	Fl% W:6% C:6%
Anechoic Floor (Without Crane Lights)	Lux	16.83	28.8	9.6	1.75	3.00	Fl% W:6% C:6%

1 / E-211 LIGHTING PHOTOMETRIC SIMULATION

SCALE = 1:50



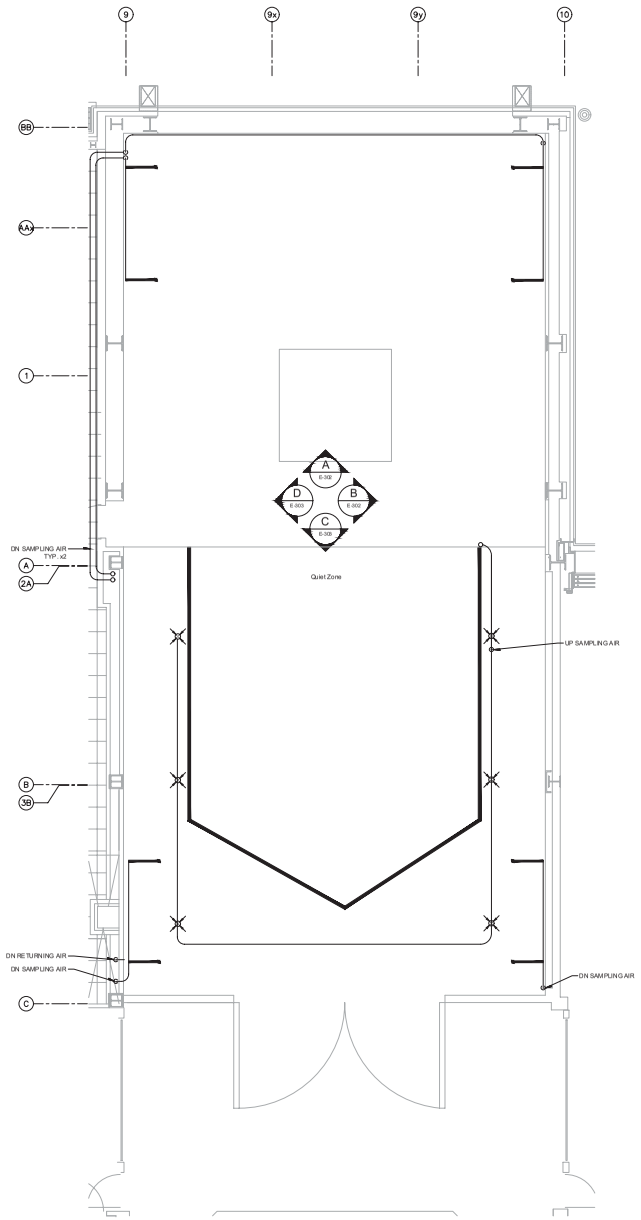
2 E-200 GROUND FLOOR - DEMOLITION
SCALE = 1:50



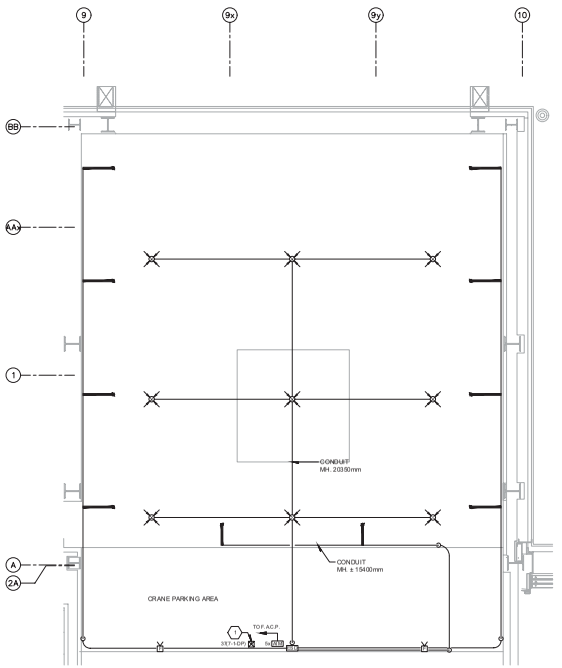
1 E-301 GROUND FLOOR - NEW LAYOUT
SCALE = 1:50

IDENTIFICATION(S):

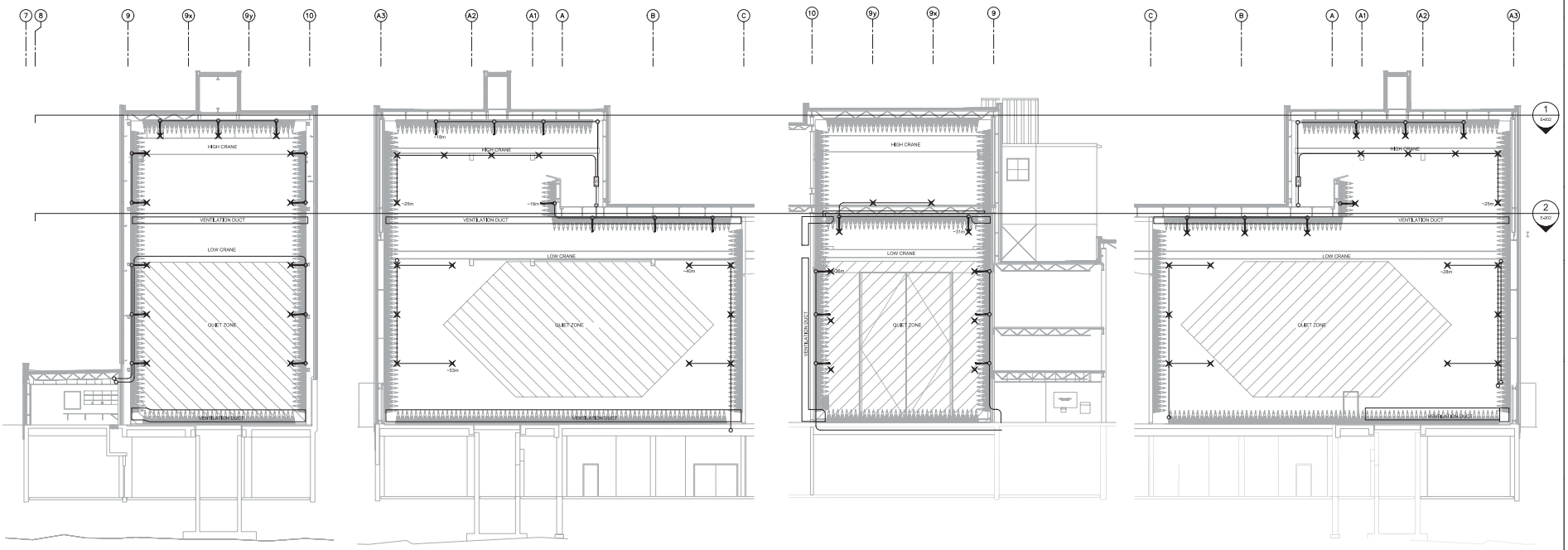
1 EARLY SMOKE DETECTION MODULE POWERED BY REMOTE POWER SUPPLY. POWER PROVIDED FROM 1-1DP. REFER TO E-111.



2 ANECHOIC CHAMBER LOWER CEILING
E-301 SCALE = 1:50



1 ANECHOIC CHAMBER UPPER CEILING
E-301 SCALE = 1:50



A NORTH ELEVATION
E-303 SCALE = 1:100

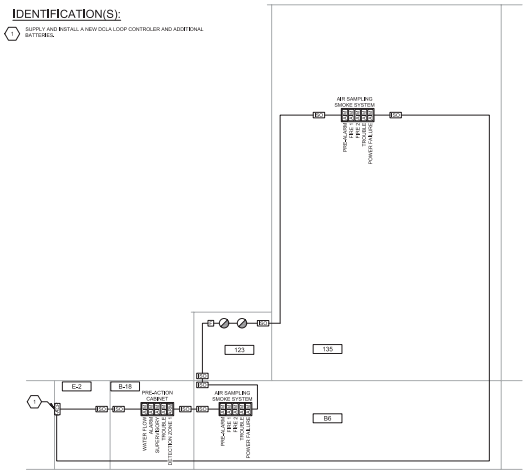
B EAST ELEVATION
E-303 SCALE = 1:100

C SOUTH ELEVATION
E-303 SCALE = 1:100

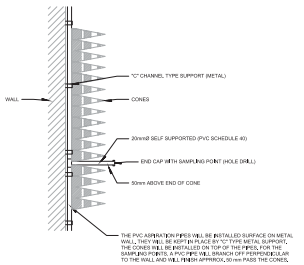
D WEST ELEVATION
E-303 SCALE = 1:100

IDENTIFICATION(S):

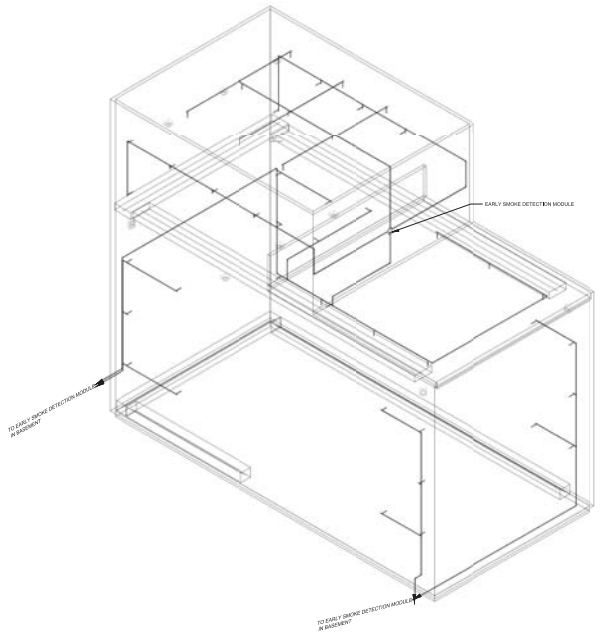
1 SUPPLY AND INSTALL A NEW DCLA LOOP CONTROLER AND ADDITIONAL BATTERIES.



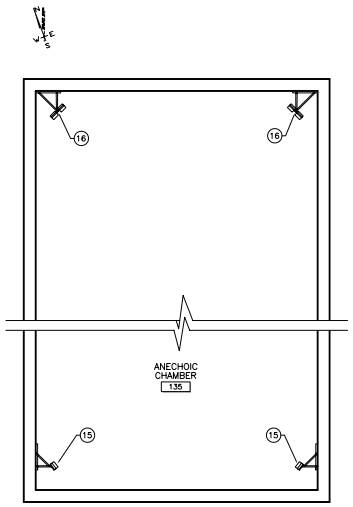
E PARTIAL SYSTEM SINGLE LINE DIAGRAM
E-303 SCALE NONE



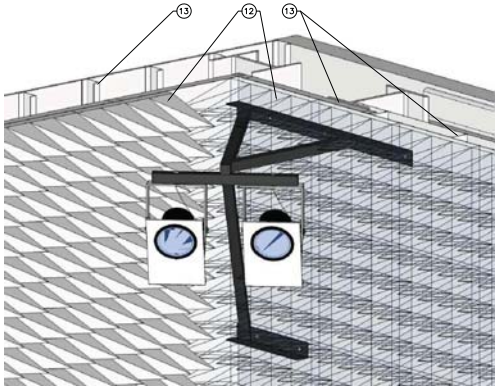
F ASPIRATION PIPE INSTALLATION DETAIL
E-303 SCALE NONE



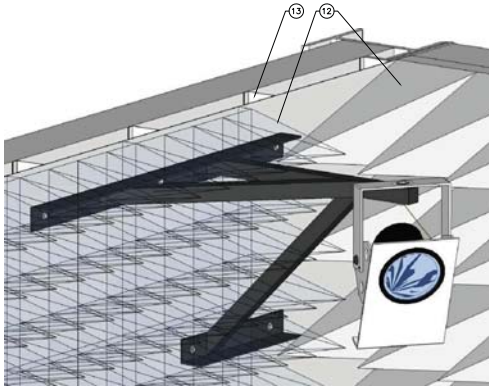
G SOUTH WEST ISOMETRIC VIEW
E-303 SCALE NONE



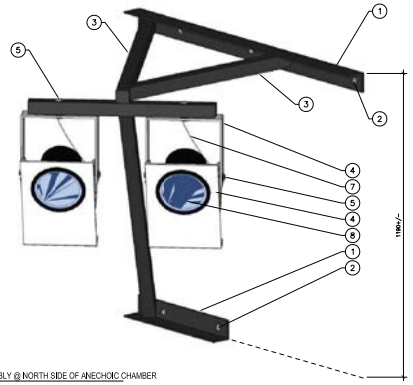
10 / A801 ANECHOIC CHAMBER LIGHT FIXTURE LOCATIONS
SCALE / ECHELLE - 1:25



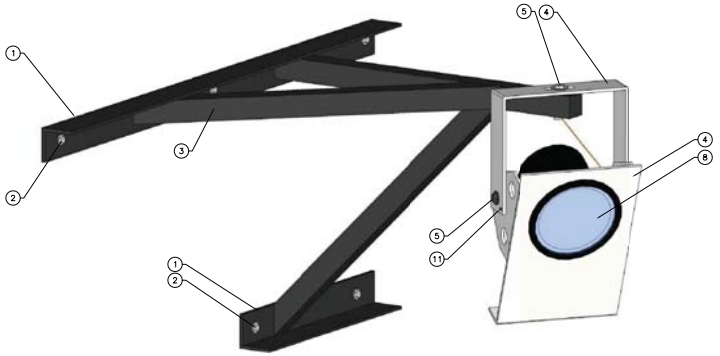
9 / A801 DOUBLE LIGHT FIXTURE ASSEMBLY @ NORTH SIDE OF ANECHOIC CHAMBER
SCALE / ECHELLE -



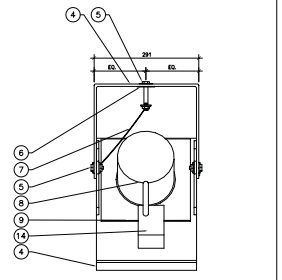
8 / A801 SINGLE LIGHT FIXTURE ASSEMBLY @ SOUTH SIDE OF ANECHOIC CHAMBER
SCALE / ECHELLE -



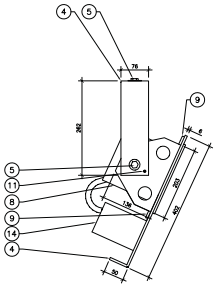
7 / A801 DOUBLE LIGHT FIXTURE ASSEMBLY @ NORTH SIDE OF ANECHOIC CHAMBER
SCALE / ECHELLE -



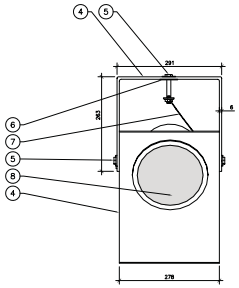
6 / A801 SINGLE LIGHT FIXTURE ASSEMBLY @ SOUTH SIDE OF ANECHOIC CHAMBER
SCALE / ECHELLE -



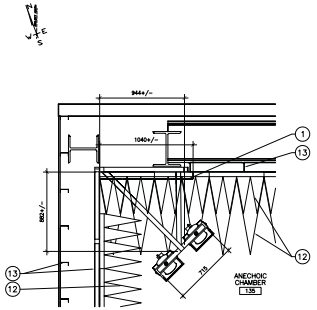
5 / A801 BACK SIDE OF LIGHT FIXTURE
SCALE / ECHELLE - 1:5



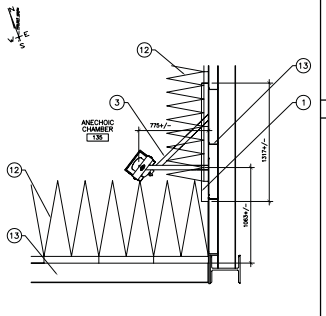
4 / A801 LEFT SIDE OF LIGHT FIXTURE
SCALE / ECHELLE - 1:5



3 / A801 FRONT FACE OF LIGHT FIXTURE
SCALE / ECHELLE - 1:5



2 / A801 DOUBLE LIGHT FIXTURE @ NORTH SIDE OF ANECHOIC CHAMBER
SCALE / ECHELLE - 1:5



1 / A801 SINGLE LIGHT FIXTURE @ SOUTH SIDE OF ANECHOIC CHAMBER
SCALE / ECHELLE - 1:5

DRAWING NOTES:

1. ALUMINUM ANGLE SUPPORT, LENGTH OF SUPPORT TO A MINIMUM ONLY. (COORDINATE LENGTH TO SUIT ANCHORAGE TO WALL STRUCTURE) C/W CONTINIOUS 3MM NEOPRENE GASKET.
2. MOUNTING HARDWARE TO WALL STRUCTURE.
3. WELDED ALUMINUM SQUARE TUBE FRAMING TO SUPPORT LIGHT FIXTURE(S).
4. PRE-FINISHED ALUMINUM 6mm THICK.
5. STAINLESS STEEL BOLT WITH WASHERS & NYLON-INSERT LOCK NUT.
6. NYLON SPACER.
7. SEISMIC RESTRAINT CABLE TO SUPPORT LIGHT FIXTURE ASSEMBLY, MIN 3mm AIRCRAFT CABLE.
8. LED LIGHT FIXTURES, REFER TO ELECTRICAL DRAWINGS SPECIFICATIONS - COORDINATE THE DIMENSIONS.
9. PRE-FINISHED ALUMINUM SPACER 6mm THICK (SPOT WELDED).
10. RESERVED.
11. STAINLESS STEEL SELF-TAPING SCREW.
12. ABSORBER CONES (BY OTHERS).
13. WALL STRUCTURE.
14. ELECTRICAL JUNCTION BOX OF LIGHT FIXTURE.
15. SINGLE LIGHT ASSEMBLY (TOP OF ASSEMBLY 13.35m A.F.F).
16. DOUBLE LIGHT ASSEMBLY (TOP OF ASSEMBLY 12.75m A.F.F).

NOTES

1) PROVIDE STAMPED ENGINEERED SHOP DRAWINGS FOR FULL SYSTEM, INCLUDING SEISMIC DESIGN. PREPARE AND SUBMIT AS PER. 05 50 00 "METAL FABRICATIONS".

2) TYPICAL THROUGHOUT: ALL SIZES AND DIMENSIONS ARE APPROXIMATE AND ARE TO ESTABLISH DESIGN INTENT. FINAL DIMENSIONS TO BE COORDINATED ON SITE AND CONFIRMED VIA SHOP DRAWINGS.

3) SUPPORT ANGLE TO BE ANCHORED TO STRUCTURAL WALL MEMBERS.

4) PROVIDE GALVANIC CORROSION PROTECTION WHERE GALVANIC CORROSION BETWEEN DISSIMILAR METALS WILL OCCUR.

5) DISRUPTION TO THE ABSORBER INTEGRITY BY THE FRAME ASSEMBLY SHOULD BE MINIMIZED TO PROVIDE MAXIMUM ABSORBER COVERAGE. COORDINATE FINAL PLACEMENT WITH DEPARTMENT REPRESENTATIVE.

6) FABRICATED ALUMINUM TO RECEIVE POWDER COAT FINISH. COLOUR FINISH TO BE MATT BLACK.

LEGEND:

ANNEX "E" - PRICING SHEET

All prices must be firm in Canadian dollars, Delivered Duty Paid (3701 Carling Ave, Ottawa, Ontario) Goods and Services Tax or the Harmonized Sales Tax extra, transportation costs to destination and all applicable Custom Duties and Excise Taxes included.

PART 1 – CONTRACTOR PROPOSED SOLUTION

1. DESIGN OF THE LAYOUT FOR THE ABSORBER INSIDE ATF-2

Firm Lot Price for the design.

DESIGN - ***FIRM LOT PRICE*** ***$_____***

2. DELIVERY OF ABSORBER (Multiple deliveries may occur)

Firm Lot Price for all related materials and supplies, tools, hardware and equipment required for chamber absorber installation.

MATERIALS - ***FIRM LOT PRICE*** ***$_____***

Submit a detailed cost breakdown to justify the total evaluated bid price.

3 . INSTALLATION OF ABSORBER

The price must include all costs related to the installation.

INSTALLATION - ***FIRM LOT PRICE*** ***$_____***

Submit a detailed cost breakdown to justify the total evaluated bid price.

4. TESTING OF ABSORBER AND FINAL RF PERFORMANCE TEST REPORT

Firm Lot Price for Testing and test report.

TESTING AND REPORT - ***FIRM LOT PRICE*** ***$_____***

Total evaluated Bid price,
excluding applicable taxes (total of items 1-4) **$_____**