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Gatineau, Québec K1A 0S5

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise
indicated, all other terms and conditions of the Solicitation
remain the same.

Ce document est par la présente révisé; sauf indication contraire,
les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Construction Services Division/Division des services de
construction

140 O'Connor Street

140, rue O'Connor

Ontario

Ottawa

K1A 0S5

Title - Sujet Fire Suppression System&Fire Alarm Fire Suppression System and Fire Alarm Replacement	
Solicitation No. - N° de l'invitation EP076-201304/A	Amendment No. - N° modif. 012
Client Reference No. - N° de référence du client 20201304	Date 2021-04-07
GETS Reference No. - N° de référence de SEAG PW-\$\$\$FG-374-79676	
File No. - N° de dossier fg374.EP076-201304	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Daylight Saving Time EDT on - le 2021-04-13 Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Vani-Machado, Alba	Buyer Id - Id de l'acheteur fg374
Telephone No. - N° de téléphone (873) 355-4048 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
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

The following changes to the tender documents are effective immediately. This amendment will form part of the contract documents.

Amendment 012 is issued for the following:

- (1) Issue Addendum 12

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME

Solicitation No. - N° de l'invitation
EP076-201304/A

Amd. No. - N° de la modif.
012

Buyer ID - Id de l'acheteur
FG374

Client Ref. No. - N° de réf. du client
R.038346.011

File No. - N° du dossier
FG374 EP076-201304

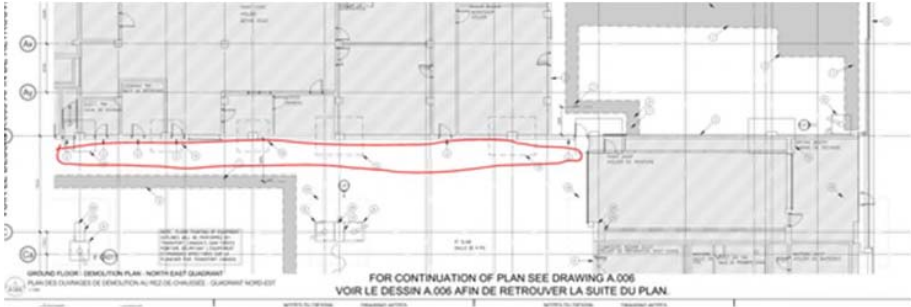
CCC No./N° CCC - FMS No./N° VME

Addendum 12

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Q1 - From drawing M.003 I see some phases to the work. Is there a document that explain the phases? From this drawing, it skip some phase #. I wan to make sure I am not missing any!	A1 – Refer to Drawing T.000 for work phasing key plan and proposed sequence of construction phasing.
Q2 – From the specification section 21, the foam tank size and Foam hose station are not the same as shown on the drawing. Shall we follow what is on the drawings or in the specification?	A2 – Refer to drawing schedule for tank sizes. Will be clarified in addendum.
Q3 - Regarding the testing of the foam system and the disposal, will a incineration certificate will be required for the disposable of the 2 type of foam?	A3 - Yes, proof of thermal destruction meeting foam manufacturer's recommended disposal requirements shall be provided.
Q4 - The deluge valve to be used, Viking F-1, it is rated to 175 PSI and the fire pump selected is rated to 175 PSI at 5000 gpm. This means that at Churn (O flow) the pressure will exceed the 175 psi of the deluge valve and other devices like the sprinkler heads. Shall Pressure reducing valve be supplied at the output of the new fire pumps?	A4 – Yes, the new pressure reducing valves are shown on the new work plans. Symbol shown on drawing M.001 (FP-PRV), new valves shown on schematic 1/M.003, plan 1/M1.05, and elevation 3/M.105. Pressure reducing valves are noted in fire pump schedule, and specification section 21 30 00.
Q5 - For the new Diesel Fuel Tank, there is no outside refill platform shown on the drawings. This is a requirement from TSSA. Will a Refill platform will be required? If yes please supply the details.	A5 – Agreed, a platform will be required and details will be provided in addendum.
Q 6 - We notice that the specification Fire Protection Specialties, is asking for ABC type Wheel unit. The ABC powder is corrosive to aluminum part that are present in Air Plane in big quantity. See the Tech-Tip see enclosed. We suggest to replace the ABC by Purple K type of firefighting powder. After checking the price, there is not a significative increase to change it.	A6 – This has been reviewed with Transport Canada and the new fire extinguishers in the Hangar shall be revised to CO ₂ instead of ABC or Purple K. Details will follow in addendum.
Q 7- Will free parking be available for the worker or do we need to pay for the parking at the airport Parking?	A 7 - Parking is allowed in designated staging area shown on Proposed Work Phasing Key Plan 1/T000.

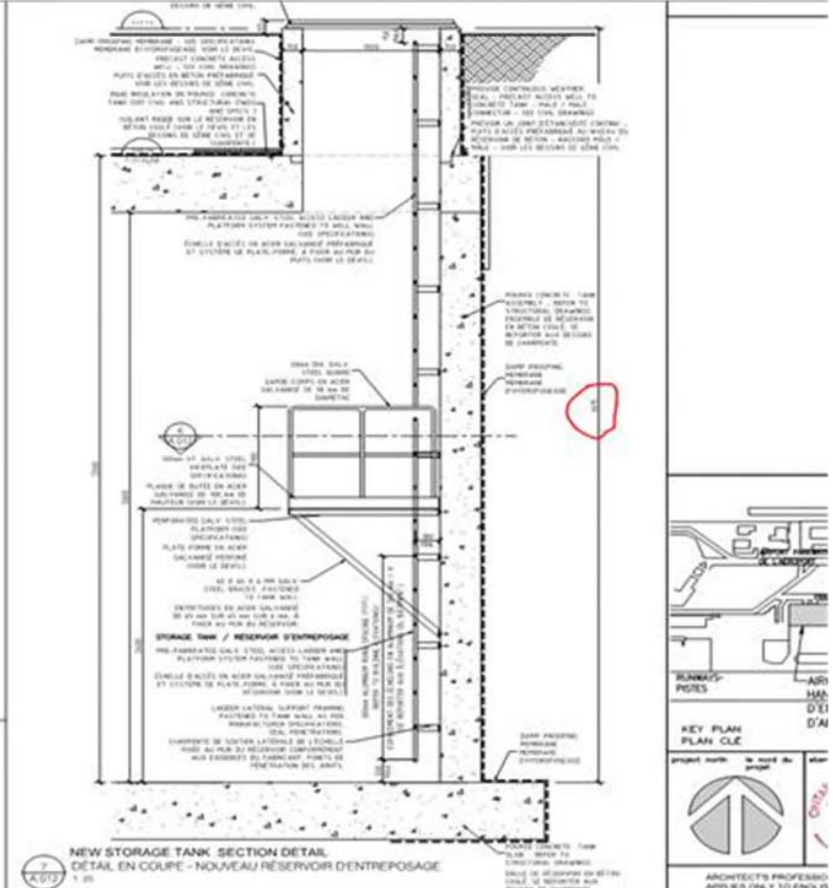
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	Parking elsewhere is at contractor's expense.
Q 8 - For the qualification of the General Contractor(G.C.), is the experience of the subcontractor they will use, can count for the Experience for the G.C. qualification?	A8 – "Bidder" means the person or entity (or, in the case of a joint venture, the persons or entities) submitting a bid to perform a contract for goods, services or both. It does not include the parent, subsidiaries or other affiliates of the Bidder, or its subcontractors.
Q 9 - Please provide geotechnical report required for this project.	A9 – Third party English only report cannot be provided.
Q 10 - Note#2 on drawing A.004 refers to cutting slab and excavation for new drains however note on drawing is located at door locations. Please review and update drawings.	A 10 – Notes at door locations to be removed. Refer to addendum.
 <p>Architectural drawing A.004 showing a plan view of a building. A red circle highlights a specific area. The drawing includes various annotations and a title block at the bottom.</p>	
Q 11 - Please provide missing specification section# 04 22 00 for Concrete Unit Masonry.	A 11 – Noted. Refer to Addendum
Q 12 - Detail 7/A0.12 shows damp-proofing membrane at walls of exterior storage tank. Please provide specification for this item as it's not provided in specifications	A 12 – Noted. Refer to Addendum
Q 13 - Section 3.3 under applied fireproofing spec section# 07 81 00 indicates that fireproofing to be applied to roof decks as shown in the below table from specs. Please confirm if fireproofing is to be applied to existing building roof deck or to new added room roof deck? Please clarify	A 13 - The spray fire proofing is for the existing structure where damaged as noted in the specification and on the detail drawings for the ceiling baffles. As per

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<div><div>5</div><div>Ensure that ducts, piping, equipment, or other items which would interfere with application of fireproofing are not positioned until fireproofing work is completed.</div></div> <div><div>3.3</div><div>APPLICATION</div></div> <div><div>1</div><div>Apply bonding adhesive or primer to substrate if recommended by manufacturer.</div></div> <div><div>2</div><div>Apply fireproofing to correspond with tested assemblies, or acceptable calculation procedures to provide following fire resistance ratings.</div><div><table><tr><td>Location</td><td>Rating</td><td>ULC Rating</td></tr><tr><td>Roof decks</td><td>2 hour</td><td>ULC BXUVC.F816</td></tr></table></div></div> <div><div>3</div><div>Apply fireproofing over substrate, building up to required thickness to cover substrate with monolithic blanket of uniform density and texture.</div></div> <div><div>4</div><div>Apply fireproofing directly to open web joists without use of expanded lath.</div></div>	Location	Rating	ULC Rating	Roof decks	2 hour	ULC BXUVC.F816	<div>3.3.8 of Section 07 81 00 apply where exiting fireproofing is disturbed. See addendum for fireproofing at new building.</div>
Location	Rating	ULC Rating					
Roof decks	2 hour	ULC BXUVC.F816					
<div>Q 14 - Please provide missing specification section# 03 35 10 for concrete floor finishing.</div>	<div>A 14 – Reference to Section 03 35 10 within section 09 67 23 will be deleted via addendum. Floor finishing requirements for epoxy flooring to be in accordance with 03 30 00 Cast in Place Concrete and manufacturers requirements.</div>						
<div><div>Q 15 - Section 3.6 in painting specification section# 09 91 23 indicates the requirement to paint finished area exposed conduits, piping, hangers, etc. as indicates in section below. Please confirm if this work is required? and if so please clarify extent?</div></div> <div><div>3.6</div><div>MECHANICAL/ELECTRICAL EQUIPMENT</div></div> <div><div>1</div><div>Paint finished area exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment with colour and finish to match adjacent surfaces, where indicated.</div></div> <div><div>2</div><div>Other unfinished areas: leave exposed conduits, piping, hangers, ductwork, and other mechanical and electrical equipment in original finish and touch up scratches and marks.</div></div> <div><div>3</div><div>Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.</div></div> <div><div>4</div><div>Do not paint over nameplates.</div></div> <div><div>5</div><div>Keep sprinkler heads free of paint.</div></div> <div><div>6</div><div>Paint fire protection piping.</div></div> <div><div>7</div><div>Paint disconnect switches for fire alarm system and exit light systems in red enamel.</div></div> <div><div>8</div><div>Paint natural gas piping.</div></div>	<div>A 15 - Refer to specific specification sections to determine extent of painting within hangar, such as, painting of foam and sprinkler piping within hangar, touch up of natural gas piping where project work affects. Addendum will be issued to clarify this specification section.</div>						
<div>Q 16 - What is the painting work to be carried out concerning the existing Part of the building? Also, please confirm if concrete walls and metal deck at new added valve room to be painted?</div>	<div>A 16 - Paint new concrete block at door infill to match adjacent walls. Clarification will be issued in addendum.</div>						
<div>Q 17 - Can you please confirm that the term Blastrac refers to a shot blaster Page A.001 from architectural drawing?</div>	<div>A 17 – All references to Blastrac may be read synonymously as shot blast. No addendum required.</div>						
<div>Q 18 - On the section A-A on the drawing S102, it shows that the inner walls verticals are 15M@250mm EW and 20M@200mm and 15M@300mm for the exterior walls; but there is also a note that says 20M@225mm verticals for inner walls and 20M@250mm for the exterior walls. Can you clarify me which note is right one for the walls or if both apply?</div>	<div>A 18 – section A-A/S102 has been revised, please refer to clouded areas on S102. Revised plan will be issued in addendum.</div>						

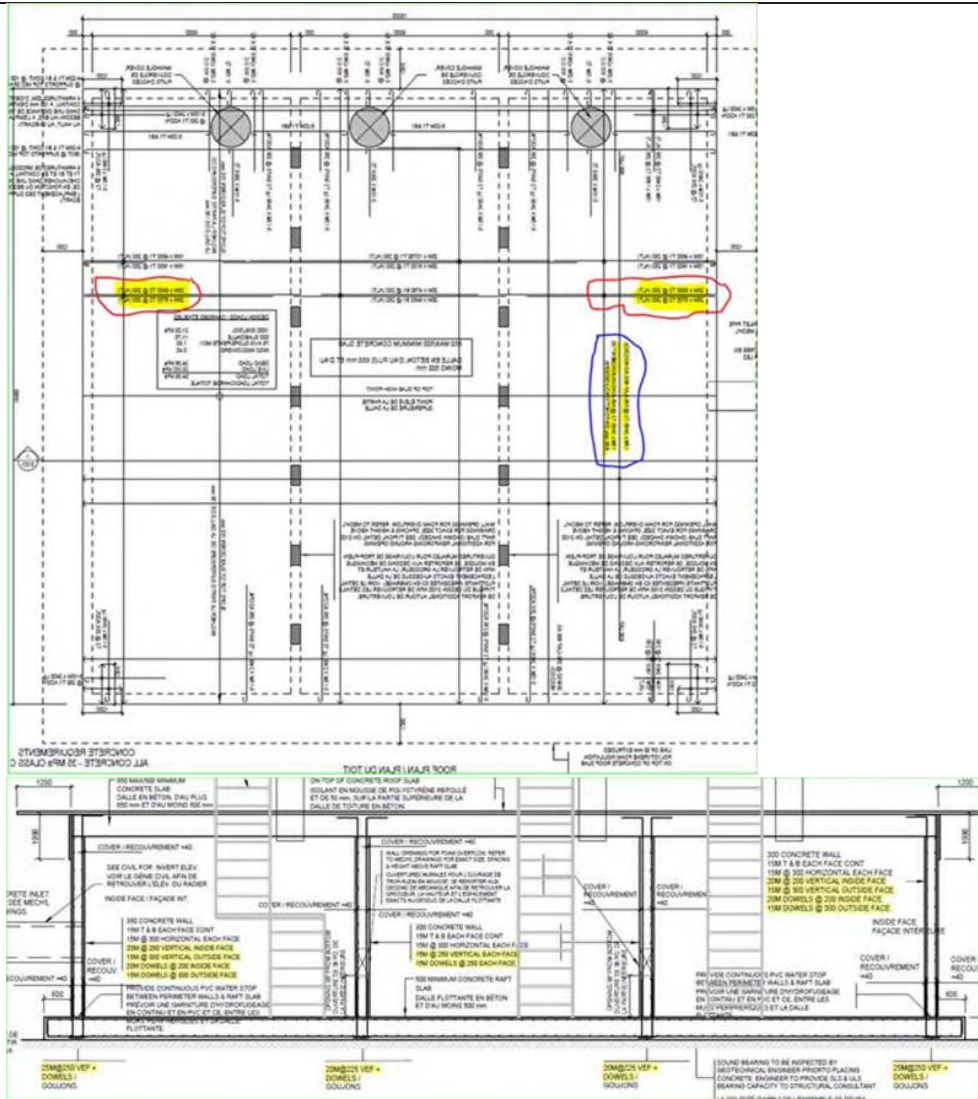
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<p>Q 19 - the change from ABC wheel unit to CO2 wheel unit, are they asking for 50 lbs or 100 lbs CO2 wheel unit, both rated at 20 B,C.</p>	<p>A19 – it shall be 50 lbs as per specifications. Addendum to follow.</p>
<p>Q 20 - On Drawing M201 the notes for detail 3/M201 say “new 50mm schedule 40, class 1 div 1 pumped san to existing SP1/SP2 san pit”. Can you please confirm what type of pipe this is? There is no specification in Division 22 for the pumped sanitary.</p>	<p>A20 – all below slab piping, except concrete effluent piping, shall be cast iron. Specification edit will be issued in addendum.</p>
<p>Q 21 - Also on drawing M201 there are several notes for the piping connecting from the trench drains to the manholes indicating “150 steel san”, the specification for buried sanitary is for cast iron pipe and fittings. Is the piping connecting the trench drains to the manholes cast iron or black pipe? The notes seem to indicate black but the spec says cast.</p>	<p>A 21 – see A 20 above.</p>
<p>Q 22 - M201 drawing note #4 “cut out, cap and remove sections of existing abandoned effluent piping below slab” Can you please clarify what type sanitary pipe it is that is being capped?</p>	<p>A 22 – the existing effluent pipe is cast iron.</p>
<p>Q 23 - 1) Detail 7/A.012 shows a different height of the storage tank concrete wall than what's shown on structural drawings. Please clarify required wall height?</p>  <p>NEW STORAGE TANK SECTION DETAIL DETAIL EN COUPE - NOUVEAU RESERVOIR D'ENTREPOSAGE</p>	<p>A 23 – Dimensions shown on 7/A.012 match the structural drawings. The dimensions with the red circle is at the access hatches only and this matches the civil drawings, detail D07. The elevation on detail 7/A.012 match the elevation on one of the hatches, the other varies slightly. The dimensions on the other side of detail 7/A.012 dimensions the main part of the storage tank and match the structural. No change to the documents required.</p>

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Q 24 - Please provide missing concrete mixes strengths required for new addition valve room footings and walls and concrete mix required for interior slab on grade to be reinstated in hanger building. Also, concrete mixes provided in spec section 03 30 00 don't match structural drawings- please review and update.	A 24 – Concrete compressive strength for the footings and above-grade walls will be revise to 25 MPa Type N. Will be changed in addendum.
Q 25 - General note#1 on drawing A.009 refers to mechanical drawings M.01 & M.02. These drawings are not provided. Please review and provide if required.	A 25 – note will be revised via addendum to read “Coordinate work on this drawing with Structural and Mechanical drawings.
Q 26 - Note#8 on drawing A.014 for partial hanger reflected ceiling plan indicates paint finish for concrete slab. Please clarify note	A 26 – note 8 will be deleted in addendum.
Q 27 - In drawing S102 – Roof Plan, in the red outlined area below it is shown 25M x 6550 T2 @ 250 (alt) & 25M x 5700 T2 @ 250 (alt). Should these be labelled as T2, or should they be B1?	A 27 – The reinforcing labels for the indicated rebars will be changed to B1 in addendum.
Q 28 - In drawing S102 – Roof Plan, in the blue outlined area below it is shown 15M x 2400 T2 @ 500 (lap 600 as needed). Please confirm if this note is correct and if 500mm is the required spacing?	A 28 – The indicated rebars should be dimensionless, and they are spaced at 500 o/c with 600 mm lap each end.
Q 29 - The reinforcement in the plan often shows to alternate the rebar. For example, 25M x 6550 T2 @ 250 (alt) & 25M x 5700 T2 @ 250 (alt) Does this mean that 25M x 6550 T2 @ 250 should be spaced every 250mm and 25M x 5700 T2 @ 250 also has to be spaced every 250mm, and they have to alternate with each other? Therefore, the clear distance between the two different bar lengths will be 125 mm?	A 29 – Bars are to alternate length at 250 o/c, effective spacing of 250 o/c. Will be clarified via addendum.
Q 30 - In drawing S102, section A-A/S101 – CROSS-SECTION, the wall reinforcement is shown on the side of each wall. Also bottom of each wall is shown vertical reinforcement which is different from the vertical reinforcement shown on the side of the walls. See section “A-A” below. Can you please clarify which vertical reinforcement should be used?	A 30 – We have revised our wall reinforcement in section A-A/S102, refer to clouded areas on S102 in addendum for further details.

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Q 31 - Phase plan T.000 indicates the requirement to install 300mm fire protection main pipe in phase 1A. However, work under phases 3A,B,C,D indicates rough-in for 300mm pipe. Please clarify in which phase the 300mm pipe will be completed?

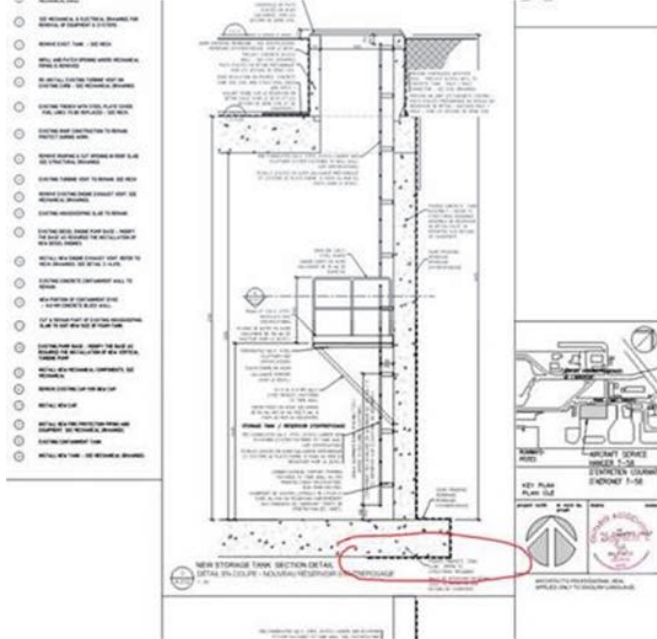
Q 31 – as indicated in the phase 1A note, the 300 mm diameter pipe must be installed in its entirety across the hangar during Phase 1A to bring water to zone valves located in the new addition.

Q 32 - Detail 7/A.12 shows damp-proofing membrane extending under the tank footing. Please confirm if the damp-proofing membrane has to go around the whole tank (including

A 32 – Dampproof membrane to stop at bottom of footing. Part of dampproof membrane under footing will be deleted in Addendum.

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walls, above slab and under tank footing)?



Q 33 - For the new 300mm sprinkler main pipe to be installed in the hanger building, can you please confirm that no additional reinforcing are required for the roof structure to account for the added pipe load?

A 33 – We have provided a supplementary support detail for the new 300 mm sprinkler main pipe, refer to the clouded areas on S301 for further details in addendum.

Q 34 - Considering that the construction of new valve room (phase 1A) and construction of new storage tank and exterior civil (phase 2) work will have some work overlap, can you please confirm if these phases (1A & 2) can be done at the same time?

A 34 – Phasing overlap is understood and acceptable. All construction activities and modifications to the phasing plan are subject to review and approval by Departmental Representative.

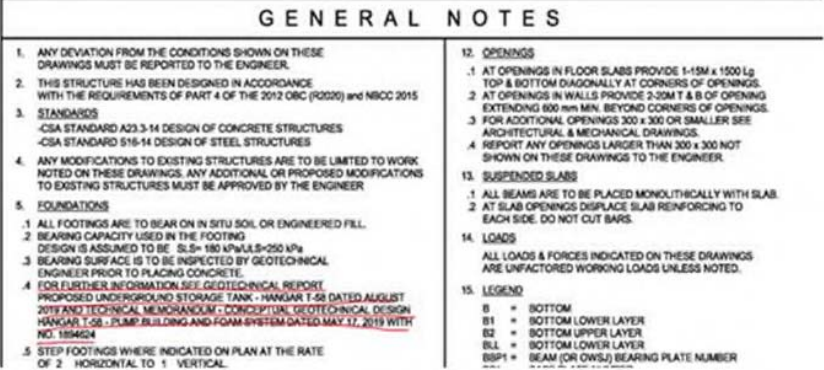
Q 35 - Similar to the above question, can you please confirm if phase 1B for building fire alarm replacement can be conducted at the same time of phase 1A & 2?

A 35 – There are currently no set time restrictions on project phasing beyond mobilization and substantial completion dates.

Q 36 - Drawing A.011 indicates the requirement of type W2 exterior wall metal siding 2hr F.R.R. There is no reference to fire rated metal siding in performed metal siding spec section#07 46 13. Please review and update as required.

A 36 – The wall assembly is 2-hour fire rated and this is accomplished by the concrete wall. The siding is non-combustible only

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		and does not contribute to rating of the wall.
Q 37 - General notes in structural drawings refers to geotechnical reports for new storage tank and pump building. These reports are not provided. Please advise.	 <p>GENERAL NOTES</p> <ol style="list-style-type: none"> ANY DEVIATION FROM THE CONDITIONS SHOWN ON THESE DRAWINGS MUST BE REPORTED TO THE ENGINEER. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF PART 4 OF THE 2012 OBC (R2020) and NBC 2015 STANDARDS <ul style="list-style-type: none"> -CSA STANDARD A23.3-14 DESIGN OF CONCRETE STRUCTURES -CSA STANDARD S16-14 DESIGN OF STEEL STRUCTURES ANY MODIFICATIONS TO EXISTING STRUCTURES ARE TO BE LIMITED TO WORK NOTED ON THESE DRAWINGS. ANY ADDITIONAL OR PROPOSED MODIFICATIONS TO EXISTING STRUCTURES MUST BE APPROVED BY THE ENGINEER FOUNDATIONS <ul style="list-style-type: none"> 1. ALL FOOTINGS ARE TO BEAR ON IN SITU SOIL OR ENGINEERED FILL. 2. BEARING CAPACITY USED IN THE FOOTING DESIGN IS ASSUMED TO BE: $SLS = 180 \text{ kPa}$ & $ULS = 250 \text{ kPa}$ 3. BEARING SURFACE IS TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE. 4. FOR FURTHER INFORMATION SEE GEOTECHNICAL REPORT PROPOSED UNDERGROUND STORAGE TANK - HANGAR T-58 DATED AUGUST 2019 AND TECHNICAL MEMORANDUM - CONCEPTUAL GEOTECHNICAL DESIGN HANGAR T-58 - PUMP BUILDING AND FARM SYSTEM DATED MAY-17, 2019 WITH NO. 1894624 5. STEP FOOTINGS WHERE INDICATED ON PLAN AT THE RATE OF 2:1 HORIZONTAL TO 1:1 VERTICAL. OPENINGS <ul style="list-style-type: none"> 1. AT OPENINGS IN FLOOR SLABS PROVIDE 1-15M x 1500 Lg TOP & BOTTOM DIAGONALLY AT CORNERS OF OPENINGS. 2. AT OPENINGS IN WALLS PROVIDE 2-30M T & B OF OPENINGS EXTENDING 600 mm MIN. BEYOND CORNERS OF OPENINGS. 3. FOR ADDITIONAL OPENINGS 300 x 300 OR SMALLER SEE ARCHITECTURAL & MECHANICAL DRAWINGS. 4. REPORT ANY OPENINGS LARGER THAN 300 x 300 NOT SHOWN ON THESE DRAWINGS TO THE ENGINEER. SUSPENDED SLABS <ul style="list-style-type: none"> 1. ALL BEAMS ARE TO BE PLACED MONOLITHICALLY WITH SLAB. 2. AT SLAB OPENINGS DISPLACE SLAB REINFORCING TO EACH SIDE. DO NOT CUT BARS. LOADS <ul style="list-style-type: none"> ALL LOADS & FORCES INDICATED ON THESE DRAWINGS ARE UNFACTORED WORKING LOADS UNLESS NOTED. LEGEND <ul style="list-style-type: none"> B = BOTTOM B1 = BOTTOM LOWER LAYER B2 = BOTTOM UPPER LAYER BLL = BOTTOM LOWER LAYER BSP1 = BEAM (OR CHWS) BEARING PLATE NUMBER 	A 37 – since this 3 rd party document is not available in a bilingual format, it cannot be provided during the tendering process. It can only become available as a reference document post-tender.
Q 38 - Security section 1.3 under work restrictions section 01 14 00 indicates that costs for security escorts will be paid by 'Departmental Representative'. Please confirm if the intent to have the client pay for the security escort required for this project?		A 38 – Yes, the Departmental Representative will pay for security escorts, however, contractor is still required to security clear all workers per specification section 01 00 10, 1.3.3.1.
Q 39 - Details 2-4/A0.17 indicate the requirement to apply fire retardant coating on all existing exposed structure. Please clarify if this to be applied to all existing structure including steel beams, bracing, steel deck or if it's only to existing beams and cross bracing at location of new aluminum drafts? Also, please clarify if any existing fire coating need to be removed?		A 39 – The existing steel structure portion of the hangar has applied fireproofing. Fireproofing that is damaged by this work is to be made good. Fireproofing to attach draft curtains is expected and will need to be replaced to protect existing steel structure. There is an expectation also that when mechanical and electrical items are removed or added that fireproofing will be either damaged and/or will need to be removed in order to do the work. The fireproofing will need to be made good to protect the steel structure.

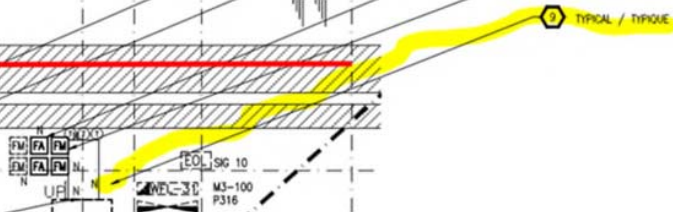
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Q 40 - Will the existing fire alarm system be active until the new system is in perfect working condition. To clarify, we cannot re-use the existing device conduits if this is the case and we will need to run new conduit infrastructure throughout the complex.	A.40 – As indicated on the documents. Provide a link between the new fire alarm panel and the existing. Each loop completed daily to be transferred to the new panel.
Q 41 - Could there be a cash allowance to deal with the daily bypasses of the existing system. If not we are at the mercy of the base building fire alarm contractor. It would be difficult to assume how many times false alarm or troubles could occur. As well a new system manufacturer would have difficulty being competitive if this is not at a minimum an identified price.	A.41 – There shall be no cash allowance. Contractor to bid as per plans and specifications.
Q 42 - Will the building/hangars be occupied with aircraft during the slab repairs. Will the slab be accessible by scissor lift or will planes be in the way?	A 42 – Yes, aircraft will be present in the Hangar adjacent to the phased work areas. Refer to specification section 01 14 00, 1.2.6 for protection of aircraft.
Q 43 - Will employees be in the office areas during the fit-up?	A.43 – Yes the building will be occupied.
Q 44 - Clarify the existing t tap problems and price to fix 20 of them. Should this not be of concern if you are getting new system?	A.44 – Potential T-taps. Over the life of the building it doesn't appear to have any major changes.
Q 45 - Will the annunciator power require a MI cable for the 24v power source?	A.45 – MI cable is not required for the annunciator.
Q 46 - Changing over the pump room existing devices, will completely in-activate the extinguishing system for large period of time is this acceptable.	A 46 – Refer to proposed sequence of construction phasing on drawing T.000., item 3. Contractor shall provide 24 hour fire watch for duration of any interruption as indicated.
Q 47 - Can a cash allowance be provided for the elevator contractor? If not who is the base building elevator company?	A.47 – There shall be no cash allowance. Contractor to bid as per plans and specifications.
Q 48 - Are there door holder or openers to be shut down on alarm. If so can they be identified on the plans?	A.48 – The documents indicate existing door controls. Typically, it is the rolling shutters.

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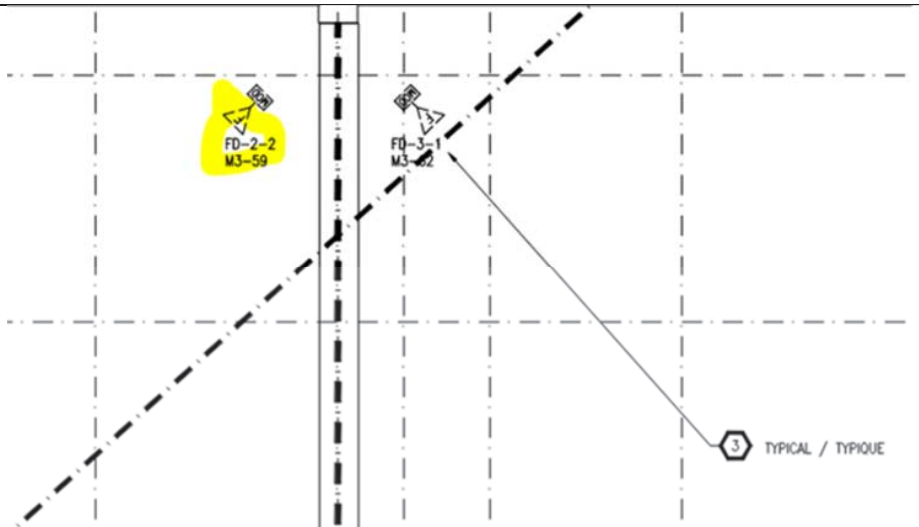
<p>Q 49 - Section 1.5 Fire Safety Requirements under General Instructions Section 01 00 10 indicates that watchman and fire watch services should be provided if there are any interruptions to the fire alarm or fire suppression systems. We understand that there are existing fulltime security at the Hanger Building. Therefore, in order to avoid adding additional cost to this project, can you please confirm if existing security can be used for fire watch or watchman service or does this work have to be carried by the GC? Also, notes on phasing drawing T.000 indicates that fire watch should be maintained for 24 HRS per day for entire duration of interruption. If this work to be conducted by the GC, is 24 HRS watchman service required to be provided or is it only for after working hours and on weekends?</p> <p>.4 Where work requires interruption or cause activation of fire alarms or fire suppression, extinguishing or protection systems:</p> <p>.1 Provide "Watchman Service" as described in NFC; In general, watchman service is defined as an individual conversant with "Fire Emergency Procedures", performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour.</p> <p>.2 Retain services of manufacturer for fire protection systems on daily basis or as approved by Departmental Representative, to isolate and protect all devices relating to:</p> <p>.1 Modification of fire alarms, fire suppression, extinguishing or protection systems; and/or</p> <p>.2 Cutting, welding, soldering or other construction activities that might activate fire protection systems.</p> <p>.3 Immediately upon completion of work, restore fire protection systems to normal operation and verify that all devices are fully operational.</p> <p>.4 Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.</p>	<p>A 49 – Contractor must provide personnel for fire watch. Contractor must maintain fire watch 24 hours per day for duration of interruption.</p>
<p>Q 50 - Provided specification 09 67 23 for Resinous Flooring System doesn't indicate any requirements for anti-slip. As per manufacturer feedback the requested product will have a very slippery surface (especially when wet) and may require some type of anti-slip material. Therefore, please confirm if the provided specs for epoxy flooring sufficient as it is or if an anti-slip flooring system is required?</p>	<p>A 50 – Slip resistance for the flooring should be adequate for the use. Note that in Addendum No. 1 we added a grit for the plane washing area.</p>
<p>Q 51 - Also, there are no indication on provided specs for epoxy flooring or on drawings for epoxy cove base or any other type of base at wall at perimeter of floor finish. Therefore, please confirm if a flooring base is required and if so please provide details and requirements?</p>	<p>A 51 – No base currently exists and no base is contemplated.</p>
<p>Q 52 - Phasing drawing T.000 indicates that phases 4 to 7 have to be completed separately and each phase has to be turned over to owner when completed with restricted use by GC. Can you please confirm if the epoxy flooring has to be done in different to match required sequence or if it can just be applied after the completion of all of these phases?</p>	<p>A 52 – Floor epoxy must be completed in phases.</p>
<p>Q 53 - Some of the responses provided for RFIs in addendum 8 & 9 refer to additional revised details and information which are not provided as part of issued addendums- please see following examples from addendum 8 & 9. Please advise.</p>	<p>Structural Q53: The plans on drawing S102 have section markers which indicate A on S101. The location was changed to S102 and the section referred to is located immediately above the Roof Plan on S102. All the necessary information is shown.</p>

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<p>Q 30 - In drawing S102, section A-A/S101 – CROSS-SECTION, the wall reinforcement is shown on the side of each wall. Also bottom of each wall is shown vertical reinforcement which is different from the vertical reinforcement shown on the side of the walls. See section "A-A" below. Can you please clarify which vertical reinforcement should be used?</p>	<p>A 30 – We have revised our wall reinforcement in section A-A/S102, refer to clouded areas on S102 in addendum for further details.</p>	
<p>Q 33 - For the new 300mm sprinkler main pipe to be installed in the hanger building, can you please confirm that no additional reinforcing are required for the roof structure to account for the added pipe load?</p>	<p>A 33 – We have provided a supplementary support detail for the new 300 mm sprinkler main pipe, refer to the clouded areas on S301 for further details in addendum.</p>	
<p>Q 54 – When comparing dwg E303 (note 9) and E308 (note 3) as well as comparing E304 (note 8) and E309, I am unsure if the intent is to have 2 sets of flame sensors at the same location (one at 5M AFF, and one at 1.2M AFF). Please confirm.</p> <div><p>9 TYPICAL FLAME SENSORS TO BE MOUNTED 1200mm A.F.F.</p><p>This typical note isn't pointing to a device.</p></div>		<p>A 54 – as noted on the documents there is two (2) sets of flame detectors. The lower flame detectors are mounted at 1200mm A.F.F. and the upper flame detectors are mounted at approximately 5-meter A.F.F.</p>

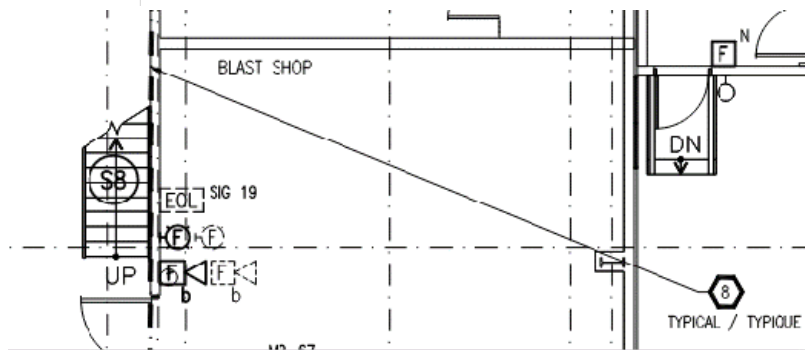
E.308

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3 TYPICAL
REPLACE EXISTING FLAME DETECTOR AND ADDRESSABLE MODULE. EXISTING MOUNTING HEIGHT APPROXIMATELY 5 METERS A.F.F.

E.304

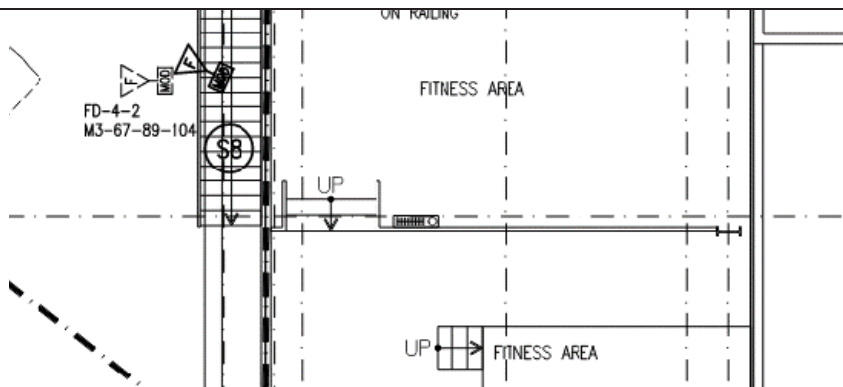


8 TYPICAL
FLAME SENSORS TO BE MOUNTED 1200mm A.F.F.

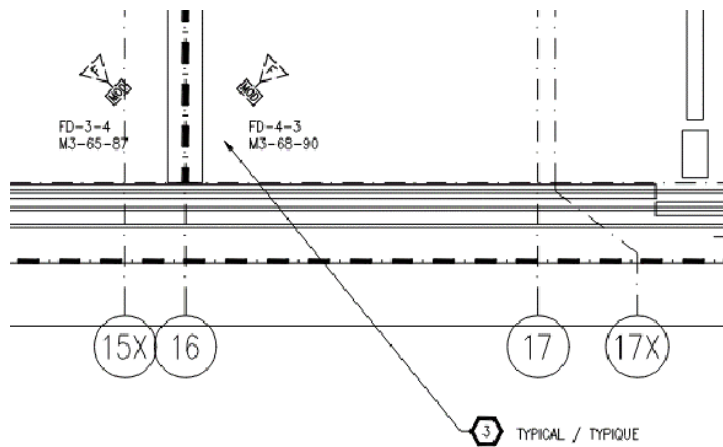
This typical note isn't pointing to a device.

E.309

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(is this the same as shown on E304, note 8?)



3 TYPICAL
REPLACE EXISTING FLAME DETECTOR AND ADDRESSABLE MODULE. EXISTING
MOUNTING HEIGHT APPROXIMATELY 5 METERS A.F.F.

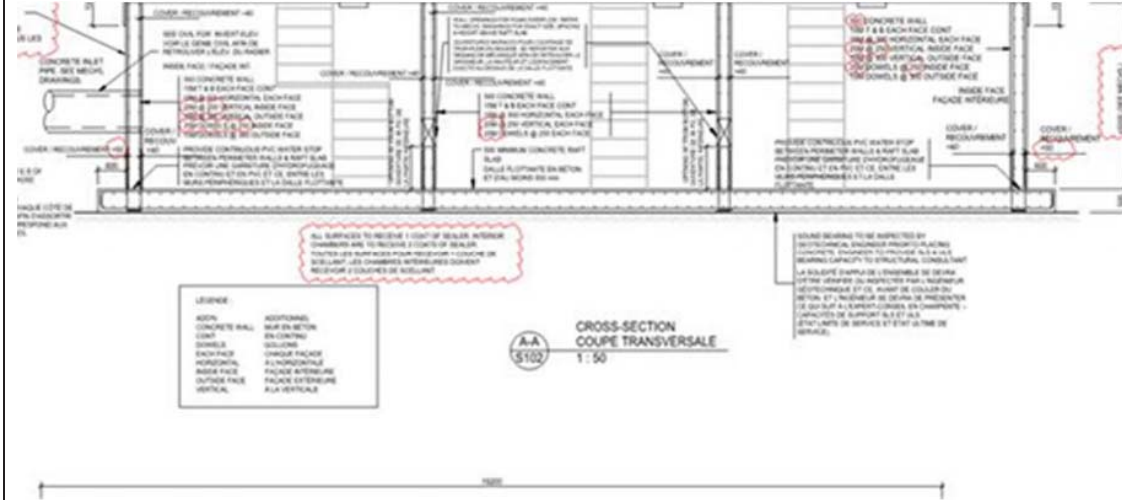
Q 55 - In regards to the flame detectors, can you confirm that all of the existing flame detectors shown are to be replaced with new? Typically existing fire alarm devices are shown on the drawings to be removed with new devices shown next to these, but for the flame detectors, only the existing ones are shown with a typical note to provide a new one.

A 55 – All flame detectors are to be replaced.

<p>3 TYPICAL REPLACE EXISTING FLAME DETECTOR AND ADDRESSABLE MODULE. EXISTING MOUNTING HEIGHT APPROXIMATELY 5 METERS A.F.F.</p>	
<p>Q 56 -The revised drawings provided in addendum 10 are unclear and missing information-please see attached provided addendum for your reference. Can you please re-issue.</p>	<p>A 57 – Documents will be uploaded again.</p>
<p>Q 57 - Also, the following specification sections to be provided as indicated in the addendum are not part of provided addendum. Please advise</p> <p>SPECIFICATIONS</p> <p>1 Section 01 74 00 – Cleaning</p> <p>Add the following section: 1.4.2.5 Proof of thermal destruction meeting foam manufacturer's recommended disposal requirements shall be provided.</p> <p>2 Add Section 04 05 12 – Masonry Mortar and Grout.</p> <p>3 Add Section 04 22 00 – Concrete Unit Masonry.</p> <p>4 Add Section 07 11 00 – Bituminous Damp-proofing.</p>	<p>A 58 – Documents will be uploaded again.</p>
<p>Q 58 - Also, can you please clarify the following: Revised structural drawings for storage tank indicates to provide sealer to interior surface of storage tank. Please confirm what type</p>	<p>A 58 - Specification section 03 30 00 Cast-in-place Concrete identifies a Curing Compound in 2.1.7: to CAN/CSA-A23.1-19 to ASTM C 309, Type 1. This is synonymous</p>

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of sealer is required?



with the sealer noted in question 58.

Q 59 - In regard of section 01 14 00, work restrictions, 1.2 .7, are system testing, fire pump, sprinkler testing, HEF system testing and AFFF hose station testing considered work that would be noisy and that would interfere with normal operation? In other words, would the testing be required to be done during after-hours or weekend after-hour?

A 59 – yes, after hours.

Q 60 - In a procedure from the foam manufacturer, it was written for another HEF system, but it will be similar for this one.

A 60 – bid as per plans and specifications.

This is not mentioning in this procedure, but they confirm to me that they are flowing the water first as deluge system and if the all the generator fan are working fine they can proceed to the Final with Foam activation on the same day.

Testing the generator one by one also involve putting valve at each generator, they will need to be either remove after or locked or supervised. Either option is costly and have the human error risk to forget on in place being closed.

Q 61 - Regarding the preliminary test for the High Expansion foam Generator, in section 21 13 00.01, 3.4.1.3 asking to test each HEF generator individually, it will not be a good test for the whole system (as they are deluge system) and will not show some deficiencies like balancing of the system and time of discharge at the farthest HEF generator. Is the preliminary test can be a full test with water only, meaning that all the HEF generator will flow water simultaneously for a short period of time? Is the proportioners preliminary test can be done at a test port on the man riser and at the test headers?

A 61 – bid as per plans and specifications.

This way the system will be tested for the foam mixing and the distribution system as a complete system.

The water poured inside the hangar would be drain in the under slab system and pump out of the outside drain reservoir.