



CERTIFICATE OF SUBSTANTIAL PERFORMANCE OF THE CONTRACT

Greater Toronto Airports Authority
3111 Convair Dr, Mississauga, ON L5P 1B2

This is to certify that the following improvement:

T1.New Maintenance Operations Center.Urgent
(Project Name)

Contract # 2053924-48, 2053924-69, 6001443, 6002730, 6003729, 6005088
(Contract Number)

At the following premises:

Toronto Pearson Airport Terminal 1
(Street address or the location of the premises)

Achieved Substantial Performance on:

February 14, 2024
(Substantial Performance date)

Date Certificate Signed

May 29, 2024
(Date of signatures)

With Payment Certifier:

Without Payment Certifier

William Knutson, P. Eng.
WSP Canada Inc.
(On behalf of GTAA)

Name and signature of certifier

Name and Signature of Owner

Name and Signature of Contractor

Name of Contractor	Royalty Construction Limited
Address of Contractor	2580 Matheson Blvd E Suite 201, Mississauga, ON L4W 4J1
Name of Payment Certifier <i>(where there is one)</i>	Click to Enter (if applicable)
Address of Payment Certifier	Click to Enter (if applicable)

Identification of Premise as per attached

Outstanding deficiencies are listed on the Deficiencies List attached to this Certificate

[SCHEDULE "X"]

TORONTO PEARSON INTERNATIONAL AIRPORT

LEGAL DESCRIPTION

Peel Land Titles

In the City of Mississauga, in the Regional Municipality of Peel, in the Province of Ontario, registered in the Land Registry Office for the Land Titles Division of Peel (No. 43) being composed of:

1stly: PIN 13526-0011 (LT)

Lot 1, Registrar's Compiled Plan 1004, S/T and T/W Easements described in RO1129884; S/T TT74437, TT91081, TT120053, TT144298, VS248789 and VS390394; Mississauga; T/W Easement as in PR361078.

2ndly: PIN 13526-0001 (LT)

Lot 1, Registrar's Compiled Plan 1006, T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

3rdly: PIN 13526-0002 (LT)

Lot 2, Registrar's Compiled Plan 1006, S/T RO791683; S/T and T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

4thly: PIN 13526-0003 (LT)

Lot 3, Registrar's Compiled Plan 1006, T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

5thly: PIN 13526-0004 (LT)

Lot 4, Registrar's Compiled Plan 1006, T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

6thly: PIN 13526-0005 (LT)

Lot 5, Registrar's Compiled Plan 1006, T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

7thly: PIN 13526-0006 (LT)

Lot 6, Registrar's Compiled Plan 1006, T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

8thly: PIN 13526-0007 (LT)

Lot 7, Registrar's Compiled Plan 1006, S/T and T/W Easements described in RO1129884; S/T Easement 163646VS; Brampton/Mississauga; T/W Easement as in PR361078.

9thly: PIN 13526-0008 (LT)

Lot 8, Registrar's Compiled Plan 1006, T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

10thly: PIN 13526-0009 (LT)

Lot 9, Registrar's Compiled Plan 1006, T/W Easements described in RO1129884; Brampton/Mississauga; T/W Easement as in PR361078.

11thly: PIN 13263-0105 (LT)

Lot 10, Registrar's Compiled Plan 1006, Mississauga; S/T Right in VS236038; S/T RO699556 and TT143798; Mississauga; T/W Easement as in PR361078.

12thly: PIN 13281-0038 (LT)

Lot 11, Registrar's Compiled Plan 1006, Toronto; S/T VS135754; Mississauga; T/W Easement as in PR361078.

13thly: PIN 13281-0030 (LT)

Lot 12, Registrar's Compiled Plan 1006, Toronto; Mississauga; T/W Easement as in PR361078.

14thly: PIN 13281-0026 (LT)

Lot 13, Registrar's Compiled Plan 1006, Toronto; Mississauga; T/W Easement as in PR361078.

15thly: PIN 13281-0040 (LT)

Lot 14, Registrar's Compiled Plan 1006, Toronto; S/T VS135754; Mississauga; T/W Easement as in PR361078.

- 16thly: PIN 13281-0048 (LT)
Lot 15, Registrar's Compiled Plan 1006, Toronto; T/W VS179365; S/T VS135754; Mississauga; T/W Easement as in PR361078.
- 17thly: PIN 13274-0051 (LT)
Lot 16, Registrar's Compiled Plan 1006, Mississauga; T/W Easement as in PR361078.
- 18thly: PIN 13273-0369 (LT)
Lot 17, Registrar's Compiled Plan 1006, Mississauga; S/T TT135084 and TT135726; Mississauga; T/W Easement as in PR361078.
- 19thly: PIN 13260-0094 (LT)
Lot 18, Registrar's Compiled Plan 1006, Toronto; Mississauga; T/W Easement as in PR361078.
- 20thly: PIN 13262-0034 (LT)
Lot 19, Registrar's Compiled Plan 1006, Toronto; Mississauga; T/W Easement as in PR361078.
- 21thly: PIN 13526-0010 (LT) **[Elmbank Cemetery Lands]**
Lot 20, Registrar's Compiled Plan 1006, Brampton/Mississauga; T/W Easement as in PR361078.
- 22thly: PIN 13263-0118 (LT)
Parcel Block 6-1, Section 43M-596; Block 6, Plan 43M-596; Mississauga; T/W Easement as in PR361078.
- 23thly: PIN 13262-0014 (LT)
Part of Parcel 6-1, Section 43 TOR GORE 7 S.D.; Part of Lot 6, Concession 7, SDTG, designated as Part 1 on Plan 43R-19167; Mississauga; T/W Easement as in PR361078.
- 24thly: PIN 13262-0042 (LT)
Part of Parcel 6-1, Section 43 TOR GORE 7 S.D.; Part of Lot 6, Concession 7, SDTG, designated as Part 2 on Plan 43R-19167; Mississauga; T/W Easement as in PR361078.

25thly: PIN 13276-0119 (LT) **[Kelly Lands]**

Part of Lot 8, Concession 4, East of Hurontario Street, Toronto as in RO1083835; S/T RO421898; S/T RO556165 and RO556166; Mississauga; T/W Easement over Part of Lot 8, Concession 4, East of Hurontario Street, save and except that part designated as Parts 12, 13, 14, 15 and 16 on Plan 43R-17345 and Parts 3 and 4 on Plan RD291 as in PR361078.

26thly: PIN 13276-0120 (LT) **[Runnymede Lands]**

Parcel 8-10, Section 43 TOR TWP-4 East of Hurontario Street; Part of Lots 8 and 9, Concession 4, East of Hurontario Street, designated as Part 1 on Plan 43R-15952, except Part 1 on Plan 43R-17800; T/W Right over Part 1 on Plan 43R-17800, until dedicated as public highway, as in LT1125349 (S/T TT120053, TT144298 and VS248789), Mississauga; T/W Easement over Part of Lots 8 and 9, Concession 4, East of Hurontario Street, designated as Part 1 on Plan 43R-15952, save and except Part 1 on Plan 43R-17800 as in PR361078.

27thly: PIN 13262-0019 (LT) **[Dorman Road/Slough Lands]**

Part of Lot 6, Concession 7, East of Hurontario Street, Toronto; Part of the Road Allowance between Concessions 7 and 8, East of Hurontario Street, Toronto as closed by VS124286, designated as Parts 1 and 2 on Plan 43R-8871; S/T RO1058691 and VS134244; Mississauga.

28thly: PIN 13262-0015 (LT) **[Dorman Road/Slough Lands]**

Part of Lot 6, Concession 7, East of Hurontario Street, Toronto, designated as Parts 3 and 4 on Plan 43R-8871; S/T VS121384; Mississauga.

29thly: Part of PIN 13260-0166 (LT) **[Boeing Parcel 1 Lands]**

Part of Lots 9 and 10, Concession 6, East of Hurontario Street, Toronto, designated as Parts 11, 14, 15, 16, 25, 26, 27, 28, 34, 35, 36, 37 on Plan 43R-27815; S/T Easement as in RO9080020; S/T RO634341; Mississauga.

Subject to a fee, uninterrupted and unobstructed easement or right in the nature of an easement in favour of Part of Lots 9 and 10, Concession 6, East of Hurontario Street, designated as Parts 1 to 10, inclusive, 12, 13, 17 to 24, inclusive, and 29 to 33, inclusive, on Plan 43R-27815, at all times to enter on, over, under, upon, across and through Part 27 on Plan 43R-27815, for purposes of facilitating the use, operation, maintenance, repair, servicing and/or replacement of the duct bank chamber partially situate on said part 27 and for purposes of permitting at all times the encroachment of the easterly wall of such duct bank chamber on, over, under, upon, across and through said Part 27;A

Subject to a fee, uninterrupted and unobstructed easement or right in the nature of an easement in favour of Part of Lots 9 and 10, Concession 6, at all times to enter on, over, under, upon, across and through Part 27 on Plan 43R-27815, East of Hurontario Street, designated as Parts 1 to 10, inclusive, 12, 13, 17 to 24, inclusive, and 29 to 33, inclusive, on Plan 43R-27815, for purposes of facilitating the use, operation, maintenance, repair, servicing and/or replacement of the duct bank chamber partially situate on said part 28 and for purposes of permitting at all times the encroachment of the easterly wall of such duct bank chamber on, over, under, upon, across and through said Part 28;

Subject to a right-of-way for access in favour of Part of Lots 9 and 10, Concession 6, East of Hurontario Street, designated as Parts 1 to 10, inclusive, 12, 13, 17 to 24, inclusive, and 29 to 33, inclusive on Plan 43R-27815 over Parts 25, 26, 36 and 37 on Plan 43R-27815;

Subject to an easement or right in the nature of an easement for water, sewer and utilities in favour of Part of Lots 9 and 10, Concession 6, East of Hurontario Street, designated as Parts 1 to 10, inclusive, 12, 13, 17 to 24, inclusive, and 29 to 33, inclusive, on Plan 43R-27815 over Parts 25, 26, 26 and 37 on Plan 43R-27815.

30thly: PIN 13527-0068 (LT) **[Alstep Lands]**
Part of Lot 10, Concession 4 EHS Toronto, designated as Parts 11, 12, 13, 14, 15 and 16 on Reference Plan 43R-23587, City of Mississauga, subject to RO1182169 and RO1182171, together with a right of way in RO1182170 and together with a right of way in RO1182171.

31stly: **[Highway 409 Lands]**

- (a) Part of PIN 13260-0014 (LT)
Part of Lot 7, Concession 8, East of Hurontario Street (Geographic Township of Toronto) designated as Part 4 on Plan 43R-29922, City of Mississauga, Regional Municipality of Peel; and
- (b) PIN 13262-0017 (LT)
Part of Lot 6, Concession 7, East of Hurontario Street (Geographic Township of Toronto) designated as Part 1 on Plan 43R-29945, City of Mississauga, Regional Municipality of Peel; and
- (c) PIN 13262-0020 (LT)
Part of Lots 5 and 6 and Part of the Road Allowance between Lots 5 and 6, Concession 7, East of Hurontario Street (Geographic Township of Toronto) designated as Parts 3, 4, 5 and 9 on Plan 43R-24544, Part 1 on Plan 43R-29072 and Part 1 on Plan 43R-25309, City of Mississauga, Regional Municipality of Peel; and

- (d) PIN 13262-0021 (LT)
Part of the Road Allowance between Concessions 7 and 8, East of Hurontario Street (Geographic Township Of Toronto) designated as Part 4 on Plan 43R-29072, City of Mississauga, Regional Municipality of Peel; and
- (e) Part of PIN 13262-0022 (LT)
Part of Lots 6 and 7, Concession 8 and Part of the Road Allowance between Concessions 7 and 8, East of Hurontario Street (Geographic Township Of Toronto) designated as Parts 3, 5, 6 and 9 on 43R-29072, Part 2 on Plan 43R-24544, Part 2 on Plan 43R-25309 and Part 1 on Plan 43R-29922, City of Mississauga, Regional Municipality of Peel; and
- (f) PIN 13262-0023 (LT)
Part of Lot 6, Concession 7, East of Hurontario Street (Geographic Township of Toronto) designated as Part 2 on Plan 43R-29072 and Parts 6 and 11 on Plan 43R-24544, City of Mississauga, Regional Municipality of Peel; and
- (g) PIN 13262-0035 (LT)
Part of Lot 6, Concession 7, East of Hurontario Street (Geographic Township of Toronto) designated as Part 8 on Plan 43R-24544, City of Mississauga, Regional Municipality of Peel; and
- (h) PIN 13262-0038 (LT)
Part of Lots 5 and 6, and Part of the Road Allowance between Lots 5 and 6, Concession 7, East of Hurontario Street (Geographic Township of Toronto) designated as Part 10 on Plan 43R-24544, City of Mississauga, Regional Municipality of Peel; and
- (i) PIN 13262-0095 (LT)
Part of Lot 6, Concession 8, East of Hurontario Street (Geographic Township of Toronto) designated as Part 7 on Plan 43R-29072, City of Mississauga, Regional Municipality of Peel; and
- (j) PIN 13262-0187 (LT)
Part of Lot 6 and Part of the Road Allowance between Lots 5 and 6, Concession 7, East of Hurontario Street (Geographic Township of Toronto) designated as Parts 1, 2 and 3 on Plan 43R-25403, City of Mississauga, Regional Municipality of Peel; and
- (k) PIN 13260-0315 (LT)
Part of Lot 7, Concession 8, East of Hurontario Street (Geographic Township of Toronto) designated as Parts 2 and 3 on Plan 43R-29922, City of Mississauga, Regional Municipality of Peel.

32ndly: 13260-0324 (LT) [**Boeing Middle Parcel Lands**]
Part of Lots 9 and 10, Concession 6, East of Hurontario Street, City of Mississauga, Regional Municipality of Peel, designated as Parts 1, 2, 3, 4, 5, 6, 7, 8 and 9, Plan 43R-33107.

33rdly: Part of PIN No. 13260-0344 (LT) [**Boeing Parcel 3 Lands**]
PT LT 10, CON 6, EHS, TORONTO, DESIGNATED AS PARTS 1 TO 13 INCLUSIVE ON PLAN 43R-33513; CITY OF MISSISSAUGA, REGIONAL MUNICIPALITY OF PEEL.

TOGETHER WITH AN EASEMENT AS IN R0609809; TOGETHER WITH AN EASEMENT AS IN R0807925.

SUBJECT TO AN EASEMENT OVER PTS 8 & 11 PL 43R33513 IN FAVOUR OF THE CONSUMERS GAS COMPANY AS IN TT16365; SUBJECT TO AN EASEMENT FOR ENTRY AS IN R063431; SUBJECT TO AN EASEMENT OVER PTS 6, 11 & 12 PL 43R33513 IN FAVOUR OF MISSISSAUGA HYDRO-ELECTRIC COMMISSION AS IN R063431; TOGETHER WITH EASEMENTS A PR1068447; TOGETHER WITH EASEMENTS AS IN PR1873026;

RESERVING A FREE, UNINTERRUPTED AND UNOBSTRUCTED EASEMENT OR RIGHT IN THE NATURE OF AN EASEMENT IN FAVOUR OF PT LT 10 CON 6 EHS DES PTS 1 TO 13 PL 43R33514 AT ALL TIMES TO ENTER ON, OVER, UNDER, UPON, ACROSS AND THROUGH PT 13 PL 43R33513 FOR PURPOSES OF FACILITATING THE PLACEMENT, USE, OPERATION, MAINTENANCE, REPAIR, SERVICING AND/OR REPLACEMENT OF UNDERGROUND SEWER LINES.

Toronto Land Titles

In the City of Toronto (formerly the City of Etobicoke, in the Municipality of Metropolitan Toronto), in the Province of Ontario, registered in The Land Titles Division of the Toronto Registry Office No. 66 (formerly the Land Registry Office for the Land Titles Division of Metropolitan Toronto (No. 66)) being composed of:

1stly: PIN 07633-0001 (LT)

Lot 1, Registrar's Compiled Plan 12114, S/T and T/W Easements described in CA440644; Etobicoke; T/W an Easement over Registry Office Lands described as Part of Lot 19, Concession 3, FTH, designated as Part 1 on Plan 66R-19891 as in Certificate of Easement AT97652, Certificate of Easement with respect to this Easement was filed in the Registry Office as CA798165, City of Toronto.

2ndly: PIN 07633-0002 (LT)

Lot 2, Registrar's Compiled Plan 12114, S/T and T/W Easements described in CA440644; Etobicoke; T/W an Easement over Registry Office Lands described as Part of Lot 19, Concession 3, FTH, designated as Part 1 on Plan 66R-19891 as in Certificate of Easement AT97652, Certificate of Easement with respect to this Easement was filed in the Registry Office as CA798165, City of Toronto.

3rdly: PIN 07424-0038 (LT)

Lot 3, Registrar's Compiled Plan 12114, Etobicoke, S/T TB351006; Toronto (Etobicoke); City of Toronto.

4thly: PIN 07424-0209 (LT)

Lot 4, Registrar's Compiled Plan 12114, Etobicoke, S/T CA321339 and CA353095; Toronto (Etobicoke); City of Toronto.

5thly: **[Highway 409 Lands]**

- (a) Part of PIN 07419-0020 (LT)
Parts of Lot 25, Concession 4, Fronting the Humber, (Geographic Township of Etobicoke) and Parts of the Road Allowance between Concession 4, Fronting the Humber, (Geographic Township of Etobicoke) and the Township of Toronto designated as Parts 1, 3, 5, 6 and 7 on Plan 66R-21014, City of Toronto; and
- (b) Part of PIN 07418-0036 (LT)
Part of Lot 25, Concession 4, Fronting the Humber (Geographic Township of Etobicoke) designated as Part 4 on Plan 66R-21014, City of Toronto; and
- (c) Part of PIN 07420-0041 (LT)
Part of Lot 24, Concession 4, Fronting the Humber (Geographic Township of Etobicoke) designated as Part 2 on Plan 66R-21014, City of Toronto; and
- (d) PIN 07420-0043 (LT)
Part of the Road Allowance between Concession 4, Fronting the Humber (Geographic Township of Etobicoke) and the Township of Toronto designated as Part 1 on Plan 66R-18746, City of Toronto.

GTAA BMS OFFICE RENOVATION

SUBSTANTIAL COMPLETION SITE VISIT REPORT

GTAA TORONTO PEARSON AIRPORT

CONFIDENTIAL

PROJECT NO.: CA0031446.1953

CLIENT REF:13415

DATE: MAY 29, 2024

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1 SITE ASSESSMENT

1.1 GENERAL INFORMATION

As described in the Project Plan, WSP and A49 reviewed and analyzed the existing record drawings, submittals, certificates, and other construction documents provided by the client (GTAA). In addition, a site visit was conducted to review the current state of the BMS Office renovations and to determine if the Certificate of Substantial Completion may be issued to the contractor. The following representatives attended the site visit on behalf of WSP and A49:

- ❖ Amir Jamal – Architectural (A49)
- ❖ Wesley Chau – Structural (WSP)
- ❖ Prasanth Sreedhar – Mechanical (WSP)
- ❖ William Knutson – Electrical (WSP)

The spaces that were visited by the team are the BMS Office (EBS019), the Central Alarm and Control Facilities (CACF) Room (EBS013), and the nearby Electrical Room (EBS079).

Based on the observations made and discussions with GTAA, WSP recommends that the Certificate of Substantial Completion be issued for the project. WSP also recommends that GTAA, their code consultant LMDG, and the contractor and designer team confirm that the potential deficiency noted in Figure 18 (page 20) is not present before signing and submitting the Total Performance Certificate since these represent a potential life-safety concern.

All deficiencies noted are to be rectified by the contractor or accepted by the GTAA, after which a final site visit will be conducted, and the Total Performance Certificate will be issued. Refer to Section 1.2 Outstanding Deficiencies below for a list of observed deficiencies).

1.1.1 ARCHITECTURAL SITE VISIT OBSERVATIONS

Overview:

Based on a general overview of the renovation, there were several minor deficiencies of an aesthetic nature that can be remediated by the contractor. There were no major building code related contraventions noted at the site.

Fire-Rated Walls:

As the renovation work at site had been completed, it was not possible to perform an intrusive investigation to determine and confirm if the fire-rated walls conform to contract documents. However, the label located on the fire-rated door and smoke seals installed indicated building code conformance.

Kitchenette Millwork:

Some minor variances in sizes and details of the kitchenette millwork were observed that have been noted in the deficiency list along with site photos. Countertop edge details did not conform to design / drawings. Solid surface gable/partition was installed but not indicated in the design. Plastic laminate installed at plywood edges had visible gaps and residual adhesive. Stainless-steel base trim was either missed or not installed. Countertop height and height of millwork uppers varied by 10 mm from the design drawings.

Ceiling Tiles and Grid:

Suspended ceiling tiles and grid did not appear to conform to the contract documents. Details of non-conformance are noted in the deficiency list, tegular edge ceiling tiles indicated on drawings and square edge tiles installed. Shadow mold edge trim was not installed and replaced by a regular ceiling edge trim. Overall workmanship of the ceiling appeared to be below

acceptable industry standard. Several instances were observed where the ceiling grid was damaged, ceiling tiles did not sit tight within the ceiling grid, and there were visible gaps between the ceiling edge trim and GWB walls.

Wall Scuff Marks and Damage:

Few areas with scuff marks and slight damage to the GWB walls were noticed. A chair rail/wall trim should have been installed at locations where workstations are located to avoid future damage during use. Particularly, exposed wall corners were damaged; our suggestion is to install protective corner guards of a suitable size and material (N.I.C). Wall areas with scuff marks and other surface imperfections require paint touch-ups.

Monitor Wall and CACF Room:

The monitor wall was not in conformance with the design. The CACF room had a missing fire-rated caulking tag/label at the ceiling mounted make-up air mount/threaded rod penetration through ceiling. Refer to site photos in deficiency list.

1.1.2 STRUCTURAL SITE VISIT OBSERVATIONS

All steel beams and columns, column base plates and related structural items of the steel frame for the support of screen monitor were complete and concealed by drywalls. All works are complete.

In a follow-up email on April 19, 2024, the Client was reminded to provide WSP with the photos of the structural construction work during construction for visual review and record purpose.



Figure 1 - Framework for Screen Monitor under Construction



Figure 2 - Column Base Plates of Framework for Screen Monitor

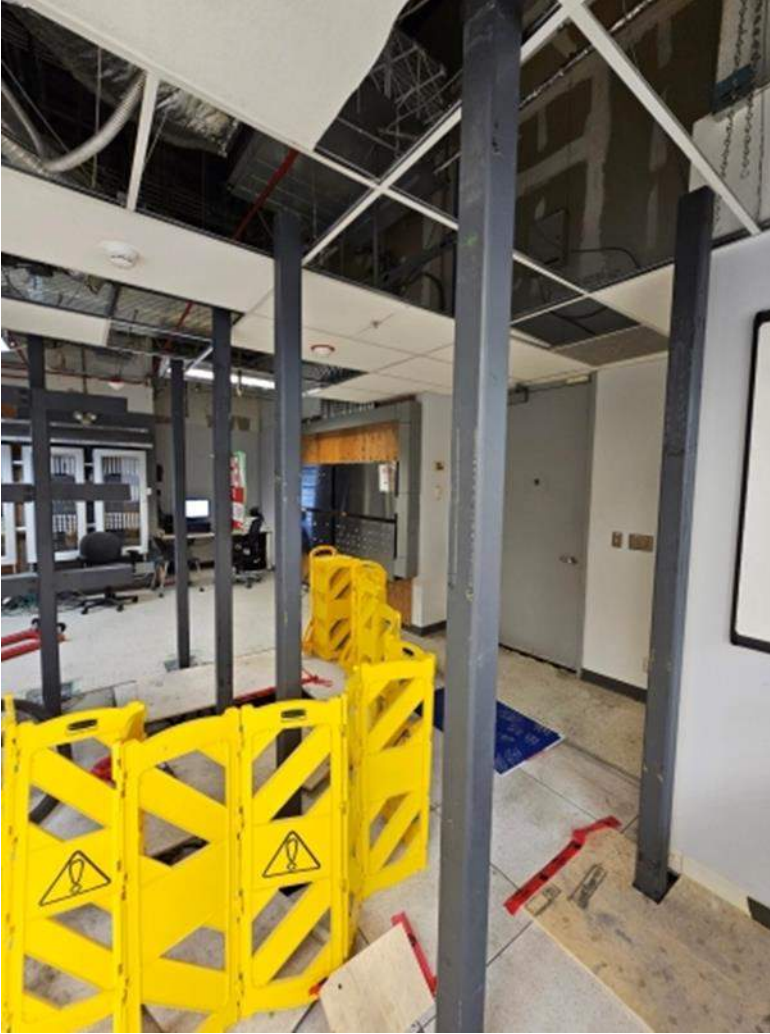


Figure 3 - Typical HSS 89x89x6.4 Columns of Framework for Screen Monitor



Figure 4 - Current Condition of Screen Monitor in BMS Office

1.1.3 MECHANICAL SITE VISIT OBSERVATIONS

This report outlines the findings and observations made during a site visit conducted to assess the HVAC (Heating, Ventilation, and Air Conditioning), plumbing, and firefighting systems at BMS office. The purpose of the visit was to evaluate the existing conditions and to note any deviations from the original design. Many of the equipment and installations could not be checked visually due to limited access to the ceiling access doors, and the space is already occupied.

To verify that the units underwent testing as mentioned in the sprinkler test report, we require access to drawing number 7862.

1.1.4 ELECTRICAL SITE VISIT OBSERVATIONS

The electrical site visit review confirmed the installation of power, lighting, communications, security, and fire alarm systems and devices, including outlets, light fixtures, light switches, data outlets, wire molds, smoke detectors, access control door accessories, and exit signs. While most devices were observable, some were installed in areas that are now enclosed and therefore could not be verified (under raised floor, above dropped ceiling). It is understood that the client's own Code Consultant had inspected the installations prior to them being closed off and confirmed that they were acceptable. The source panel boards were also investigated to confirm that proper circuiting was followed and that new panel schedules were provided with the updated load list. Fire alarm devices were also confirmed to be installed in the correct locations, and the fire alarm verification reports were reviewed to confirm that all devices are functioning as intended.

1.2 OUTSTANDING DEFICIENCIES

The following is a list of deficiencies noted during the site visit. While some deficiencies are minor/aesthetic in nature and may be acceptable to the Owner, others are potential code violations and must be rectified before the Total Performance Certificate can be issued.

1.2.1 ARCHITECTURAL DEFICIENCIES



Figure 5 - Scuff marks / smudges on several walls.

Comments: Touch-up paint or clean marks on wall.

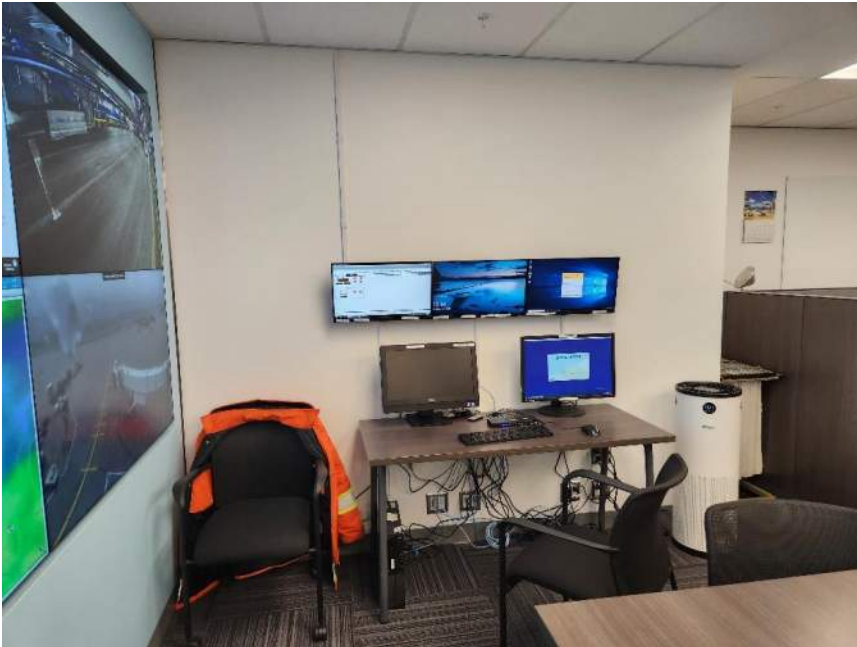


Figure 6 - View of monitor wall as-built condition at site.

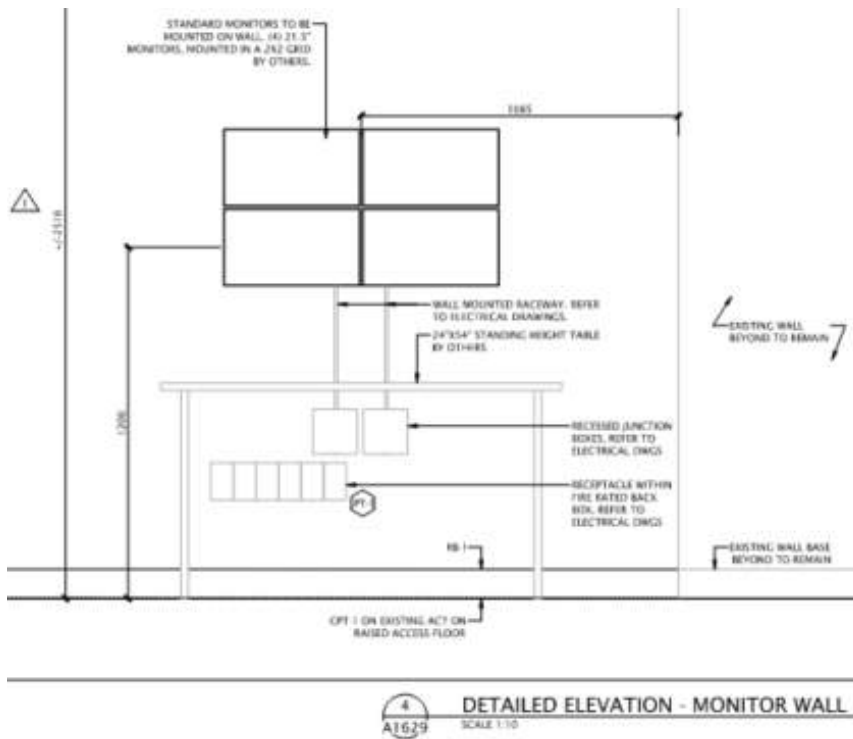


Figure 7 - Layout of monitor wall as designed appears to be different from site installation.



Figure 8 - Minor damage noticed at GWB wall corner edges.

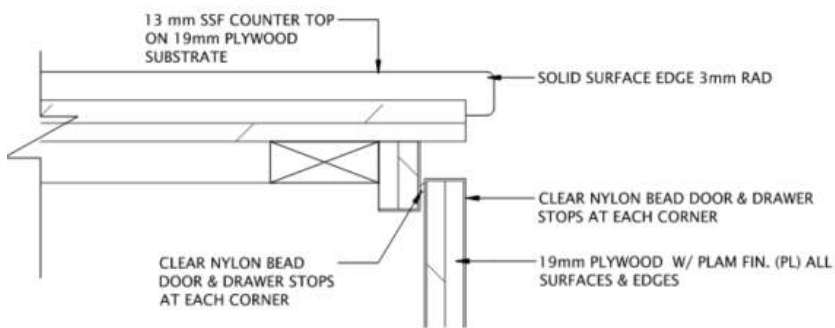


Figure 9 - Minor damage noticed at GWB wall corner edges.

Comments: Consider installing a PVC or stainless-steel corner guard to protect exposed GWB corner from future damage.



Figure 10 - Solid surface countertop edge detail does not appear to conform to kitchenette millwork drawing/detail.



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A1631

SECTION - COUNTERTOP EDGE DETAIL
SCALE 1:2

Figure 11 - Solid surface countertop edge detail drops down to cover plywood substrate.

Comments: Solid surface counter front edge does not conform to design intent. There is a chance for moisture penetration between the plywood substrate under the solid surface material. Visible gap at this location needs to be caulked with suitable type of caulking.



Figure 12 - Quality of workmanship of plastic laminate installed at sides of plywood substrate seems below average. Residual adhesive is visible.

Comments: Plastic laminate edges require thorough clean-up.



Figure 13 - Height of countertop from floor finish level was measured at: 850 mm, drawing shows height as: 860 mm.



Figure 14 - Heigh of millwork cabinet uppers from countertop was measured at: 600 mm, drawing shows: 590 mm.



Figure 15 - Solid surface countertop protrudes beyond edge of kitchenette millwork.

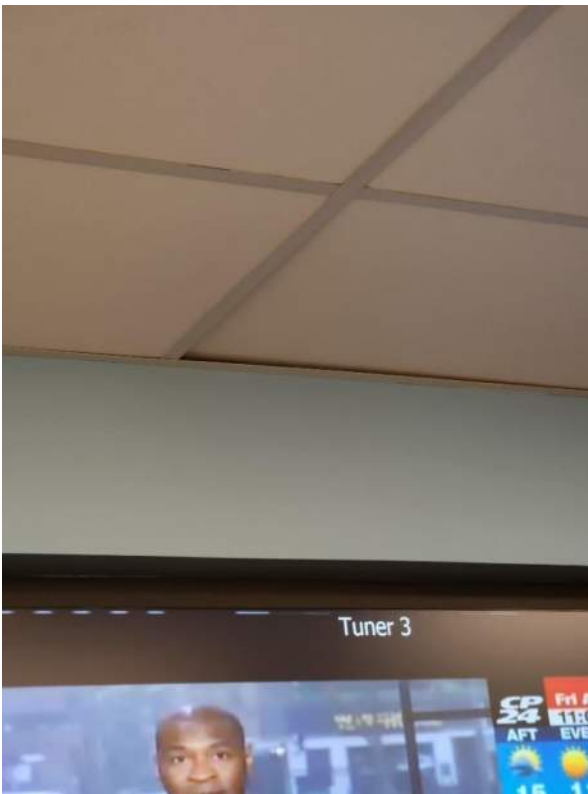


Figure 16 - Ceiling tile does not seem to sit tightly in ceiling frame above video wall.



Figure 17 - Existing C.A.C.F. Room (EBS013) Ceiling mounted make-up air unit is missing fire-rating labels at threaded-rod ceiling penetrations.



Figure 18 - Existing C.A.C.F. Room (EBS013) fire rated (red) caulking was not visible below fire rated GWB partition wall. Concern about installation of firestopping around new fire rated walls. This is to be verified as it is an occupant life-safety requirement according to the building code.

1.2.2 STRUCTURAL DEFICIENCIES

- ❖ No deficiencies were observable, as construction work was completed and is concealed by drywalls.

1.2.3 MECHANICAL DEFICIENCIES

- ❖ Due to the closed ceiling and occupancy of the room, we were unable to inspect the HVAC ductwork. Kindly furnish any construction photos available for review.
- ❖ Confirmation of the fire sprinkler and its connections was not feasible due to the sealed ceiling. Please submit any relevant construction photographs for examination.
- ❖ Secure and neatly arrange the connections to the water filter (refer to **Figure 19 - Under-sink water** below).



Figure 19 - Under-sink water filter.

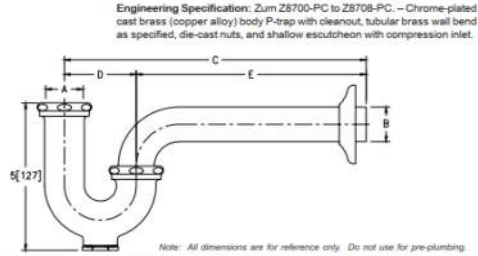
- ❖ To ensure proper functionality, it is imperative that the faucet sink pullout weight moves freely and does not become lodged against the false wall (refer to **Figure 20 - Faucet Sink Pullout Weight** below).



Figure 20 - Faucet Sink Pullout Weight

- ❖ The P-trap supplied for the sink deviates from the specifications delineated in the approved submittal (refer to **Figure 21 - Specified P-Trap Approved Submittal** and **Figure 22 - Installed P-Trap** below).

ZURN KITCHEN SINK & FAUCET
SEMI-CAST P-TRAPS WITH WALL BEND
 Z8700-PC TO Z8708-PC
 TAG _____



PRODUCT NUMBER	A INLET in(mm)	B OUTLET in(mm)	GAUGE	DIMENSIONS			MASTER CARTON	WEIGHT CARTON (lbs)
				C in(mm)	D in(mm)	E in(mm)		
Z8700-PC	1 1/4(32)	1 1/4(32)	17	10(254)	2 1/2(64)	7 1/2(191)	12	24
Z8700-8-PC	1 1/4(32)	1 1/4(32)	17	11(279)	2 1/2(64)	8 1/2(216)	12	24
Z8700-15-PC	1 1/4(32)	1 1/4(32)	17	15(381)	2 1/2(64)	12 1/2(318)	18	40
Z8701-PC	1 1/4(32)	1 1/2(38)	17	10 1/2(267)	3(76)	7 1/2(191)	12	24
Z8701-8-PC	1 1/4(32)	1 1/2(38)	17	12(305)	3(76)	9(229)	12	24
Z8701-15-PC	1 1/4(32)	1 1/2(38)	17	15(381)	3(76)	12(305)	18	42
Z8702-PC	1 1/2(38)	1 1/2(38)	17	10 1/2(267)	3(76)	7 1/2(191)	12	24
Z8702-8-PC	1 1/2(38)	1 1/2(38)	17	13(305)	3(76)	9(229)	12	24
Z8702-15-PC	1 1/2(38)	1 1/2(38)	17	15(381)	3(76)	12(305)	18	42
Z8703B-PC**	1 1/2(38)	2(51)	17	12 1/2(318)	3 1/2(89)	9(229)	6	18
Z8704B-PC**	2(51)	2(51)	17	12 1/2(318)	3 1/2(89)	9(229)	6	18
Z8706-PC	1 1/4(32)	1 1/4(32)	20	10(254)	2 1/2(64)	7 1/2(191)	12	24
Z8707-PC	1 1/4(32)	1 1/2(38)	20	10 1/2(267)	3(76)	7 1/2(191)	12	24
Z8708-PC	1 1/2(38)	1 1/2(38)	20	10 1/2(267)	3(76)	7 1/2(191)	12	24

OPTIONAL ACCESSORIES

Suffix Description

Figure 21 - Specified P-Trap Approved Submittal



Figure 22 - Installed P-Trap

- ❖ The filter and its corresponding rating for the Makeup Air Unit (MAU-1) could not be located and verified. Please provide clarification (refer to **Figure 23 - Approved submittal for MAU stating filter to be provided by contractor** below).

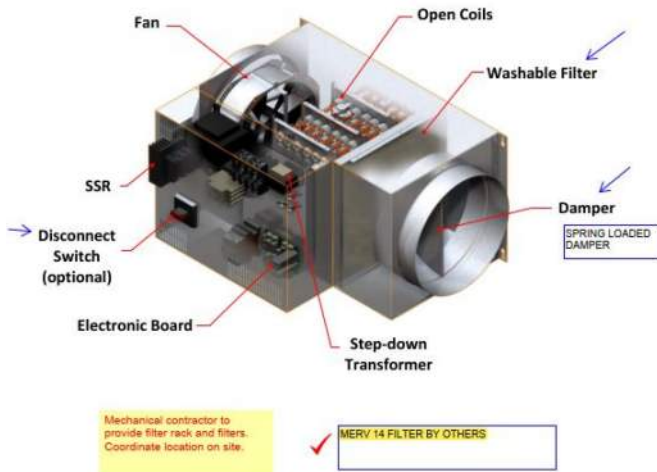


Figure 23 - Approved submittal for MAU staging filter to be provided by contractor

- ❖ Confirmation of the connection between the fresh air ductworks and the new MAU-1 was impeded by the sealed ceiling. Kindly provide relevant construction photographs.
- ❖ Verification of the fire smoke damper and its associated connections was hindered by the inaccessible ceiling. Please supply any pertinent construction images for assessment
- ❖ It appears that the installation of the Makeup Air Unit (MAU-1) does not conform to the manufacturer's installation requirements (refer to **Figure 24 - Manufacturer's Installation Requirements for MAU-1-1** and **Figure 25 - Site Installation of MAU Ductwork Not Conforming to Manufacturer's Instructions** below).

- For proper air flow, a minimum straight duct distance of 2x the collar size/duct diameter must be maintained upstream and downstream the CMU, between the unit and any obstacle, such as dampers, louvers and elbows.
- Use round insulated ducts for the inlet connection and uninsulated ducts for the outlet, while ensuring to minimize the use of elbows.
- When taking air directly from outside, install the inlet duct at an incline, in order to prevent condensation or melted snow from flowing into the unit.
- It is recommended to have a secondary damper before the inlet of the make-up air unit, in order to prevent a strong draft of wind from opening the damper in the unit. The secondary damper can be a gravity damper or a damper with an actuator.
- A louver with a bird protection grille must be installed on the air inlet.

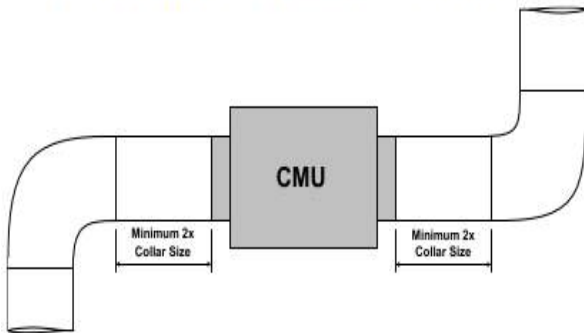


Figure 24 - Manufacturer's Installation Requirements for MAU-1



Figure 25 - Site Installation of MAU Ductwork Not Conforming to Manufacturer's Instructions

- ❖ Verification of the damper and bird screens on the supply side of the Makeup Air Unit (MAU-1) was not possible due to access limitations. Please submit any relevant construction photographs for examination.
- ❖ Provide the testing and commissioning report for MAU-1. Also, confirm if the MAU has been configured with the BAS.
- ❖ Provide the testing and balancing report for modified duct work. Refer to figure 35 below.

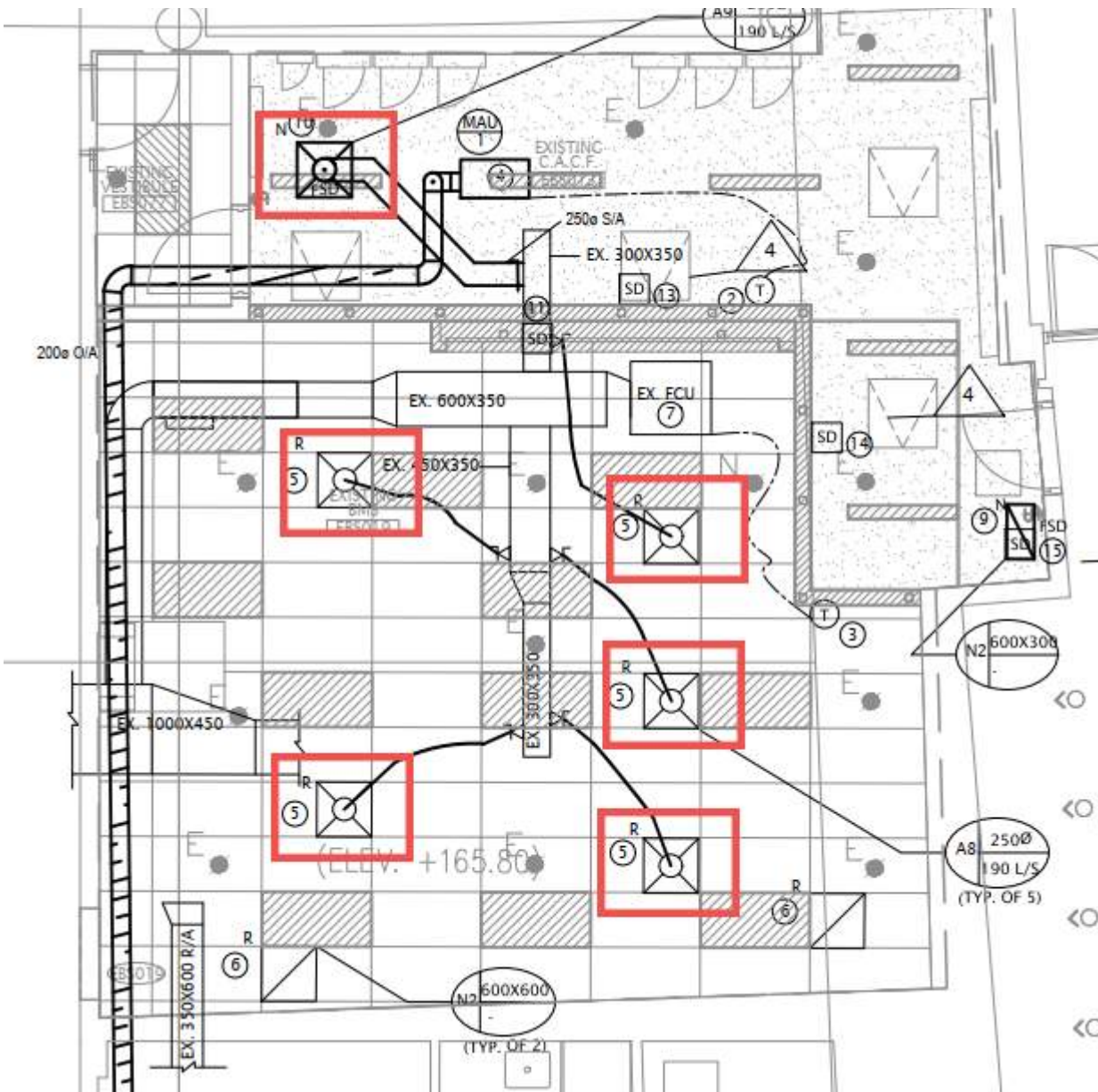


Figure 26 : Modified duct and terminals arrangement

❖ Cannot find the fire rating labels on the threaded rods for the MAU-1. Please refer to Figure 36 below.



Figure 27: Thread rods do not have fire rating labels.

- ❖ Clarify if the contractor provided operational training for the owner's key personnel.
- ❖ Provide identification for the exposed duct work at the CACF room.

1.2.4 ELECTRICAL DEFICIENCIES

- ❖ An existing receptacle in the BMS Office EBS019 that is below the new sink is not a GFCI-type receptacle (refer to **Figure 28 - Receptacle below sink in BMS Office EBS019** below). Given its proximity to a source of water, either the receptacle must be GFCI-type, or the circuit breaker serving this receptacle must have GFCI-capability. The circuit number on the receptacle

refers to a panel PPEASN241 circuit 16, but the facilities escort was not aware of a panel by this name. To rectify this issue, the contractor shall either.

- Replace the existing duplex receptacle with a GFCI-type receptacle, or
- Trace the branch circuit back to the source panel, confirm the breaker is a GFCI-type, and update the circuit tag on the receptacle.



Figure 28 - Receptacle below sink in BMS Office EBS019

1.3 CONCLUSION

Based on the relatively minor status of the above deficiencies with the exception of the architectural deficiency noted in Figure 18, WSP recommends that the Certificate of Substantial Completion be issued. It is strongly recommended that GTAA, their code consultant LMDG, and the contractor and designer team confirm there is no life-safety code violation in regards to the deficiency noted in Figure 18 before issuing the Total Performance Certificate to the contractor. Once all deficiencies have either been rectified by the contractor or designated as accepted by GTAA, WSP will conduct a final site investigation to confirm completion and issue the Total Performance Certificate.

Thank you,

William Knutson, P. Eng.