

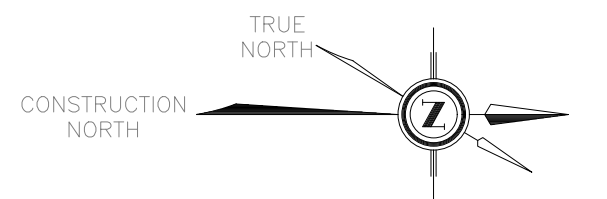
MECHANICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING DUCTS, PIPES & EQUIPMENT		DOWN THROUGH FLOOR
	DUCTS, PIPES & EQUIPMENT TO BE REMOVED		CONNECT TO EXISTING
	NEW DUCT OR PIPE		PIPE UP
	NEW DUCT OR EQUIPMENT		PIPE DOWN
	NEW FLEXIBLE DUCT		NEW UNION
	DUCT WITH 25mm(1") ACOUSTIC LINING		NEW BACKFLOW PREVENTER
	DUCT WITH 25mm(1") ACOUSTIC LINING		ACCESS PANEL
	NEW CAP ON EXISTING DUCT OR PIPE		EXISTING SANITARY DRAIN
	NEW CAP ON EXISTING DUCT		EXISTING SANITARY DRAIN UNDER FLOOR
	NEW SUPPLY AIR DIFFUSER		EXISTING STORM DRAIN
	NEW RETURN GRILLE		EXISTING STORM DRAIN UNDER FLOOR
	NEW RETURN GRILLE		NEW SANITARY DRAIN
	EXISTING RETURN GRILLE		NEW SANITARY DRAIN UNDER FLOOR
	EXISTING THERMOSTAT		NEW STORM DRAIN
	REMOVE OR RE-USE WHERE SHOWN AS NEW		NEW STORM DRAIN UNDER FLOOR
	NEW THERMOSTAT		EXISTING DOMESTIC COLD WATER
	DIFF NECK SIZE/DIFF TYPE		EXISTING DOMESTIC HOT WATER
	DIFF NECK SIZE/DIFF TYPE		NEW DOMESTIC COLD WATER
	GRILLE OR REGISTER SIZE/TYPE		NEW DOMESTIC HOT WATER
	GRILLE OR REGISTER SIZE/TYPE		NEW SANITARY VENT PIPE
	GRILLE OR REGISTER SIZE/TYPE		EXISTING SANITARY VENT PIPE
	GRILLE OR REGISTER SIZE/TYPE		NEW CONDENSATE DRAIN
	GRILLE OR REGISTER SIZE/TYPE		EXISTING CONDENSATE DRAIN
	GRILLE OR REGISTER SIZE/TYPE		HEATED WATER SUPPLY
	GRILLE OR REGISTER SIZE/TYPE		EXISTING HEATED WATER SUPPLY
	EXISTING SPRINKLER HEAD		NEW HEATED WATER RETURN
	REMOVE EXISTING SPRINKLER HEAD		EXISTING HEATED WATER RETURN
	NEW SPRINKLER HEAD (SEMI RECESSED TYPE)		NEW CHILLED WATER SUPPLY
	NEW SPRINKLER HEAD (UPRIGHT TYPE)		EXISTING CHILLED WATER SUPPLY
	NEW SPRINKLER HEAD (CONCEALED TYPE)		NEW CHILLED WATER RETURN
	EXISTING FIRE HOSE CABINET		EXISTING CHILLED WATER RETURN
	NEW FLOOR DRAIN OR ROOF DRAIN		EXISTING FIRE LINE
	EXISTING GATE VALVE		EXISTING SPRINKLER LINE
	NEW GATE VALVE		NEW FIRE LINE
	EXISTING CONTROL VALVE		NEW SPRINKLER LINE
	NEW CONTROL VALVE		NEW MANUAL BALANCING DAMPER

DRAWING SCHEDULE	
DWG NO	DRAWING TITLE
M-100	MECHANICAL LEGEND, DRAWING LIST, DETAILS AND SCHEDULE
M-101	MECHANICAL SPECIFICATIONS
M-102	MECHANICAL SPECIFICATIONS (CONT'D)
M-103	PD CUTSHEETS
M-104	PD CUTSHEETS
M-200	MOLSON FAN ZONE UPPER CONCOURSE EXISTING/DEMOLITION PLAN SOUTH PDFF - DEMOLITION
M-201	MOLSON FAN ZONE UPPER CONCOURSE EXISTING/DEMOLITION PLAN NORTH PDFF - DEMOLITION
M-300	MOLSON FAN ZONE UPPER CONCOURSE EXISTING/DEMOLITION PLAN SOUTH HVAC - DEMOLITION
M-301	MOLSON FAN ZONE UPPER CONCOURSE EXISTING/DEMOLITION PLAN NORTH HVAC - DEMOLITION
M-400	MOLSON FAN ZONE UPPER CONCOURSE CONSTRUCTION PLAN SOUTH PDFF - NEW
M-401	MOLSON FAN ZONE UPPER CONCOURSE CONSTRUCTION PLAN NORTH PDFF - NEW
M-500	MOLSON FAN ZONE UPPER CONCOURSE CONSTRUCTION PLAN SOUTH HVAC - NEW
M-501	MOLSON FAN ZONE UPPER CONCOURSE CONSTRUCTION PLAN NORTH HVAC - NEW
M-600	DIAGED BAR 1st & 3rd FLOOR CONCOURSE EXISTING/DEMOLITION AND MECHANICAL - DEMOLITION & NEW
M-700	ALUMNI LOUNGE SUITES 231-232 DEMOLITION PLAN, FLOOR PLAN PDFF - DEMOLITION & NEW
M-800	ALUMNI LOUNGE SUITES 231-232 DEMOLITION PLAN, FLOOR PLAN HVAC - DEMOLITION & NEW

AIR TERMINAL SCHEDULE							
TAG	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL	FINISH	MOUNTING	COMMENTS
A	SINGLE DEFLECTION SUPPLY LOWVUE	E.H. PRICE	510D	STEEL	B13	-	MATCH EXISTING SUPPLY GRILLE
B	EGGCRATE EXHAUST GRILLE	E.H. PRICE	80	ALUMINUM	B13	-	
C	DOUBLE DEFLECTION SUPPLY GRILLE	E.H. PRICE	520D	ALUMINUM	B13	-	MATCH EXISTING SUPPLY GRILLE
D	ROUND CONE VESTIBULE SUPPLY	E.H. PRICE	RCD	STEEL	TO MATCH CEILING	-	COORDINATE GRILLE COLOUR WITH ARCHITECT
NOTES: 1. NECK SIZE NOTED ON PLANS.							

EQUIPMENT LEGEND					ELECTRICAL							MECHANICAL				
ITEM #	QUANTITY	DESCRIPTION	MANUFACTURER	MODEL	AMPS	KW.	VOLT.	PHASE	PLUG	HEIGHT	NOTES / REMARKS	MBTU	H.W.	C.W.	WASTE	NOTES / REMARKS
K1	2	UNDER COUNTER FRIDGE	TRUE	TRU-24-SC-B	1.9	115	1									
K2	2	HOT DOG ROLLER	APW WYIOTT	HR5D-315	8.3	120	1						1.7			
K3	6	SNEEZEGUARD	BSIX GUARD													
K4	6	HEAT LAMP	HATCO	GRA-30			120	1					0.45			
K5	4	HOT PLATE	HATCO	GRSIF-36-O	6.3	120	1						1.1			

Issue/Revision		Date
△	ISSUED FOR COORDINATION	13 MAY 2016
△	ISSUED FOR PRICING	17 MAY 2016
△		
△		
△		
△		
△		
△		
△		
△		
△		



**TMP**

THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD., TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title

MECHANICAL LEGENDS,  
DRAWING LIST, DETAILS  
AND SCHEDULE

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

M-100



## GENERAL

PERFORM ALL mechanical work detailed on these drawings to provide a complete and fully functional operating system to the satisfaction of the mechanical consultant.

SPECIFIED WORK described or indicated on drawings does not delegate function to any specified subcontractor or identify absolute contractual limits between mechanical or subcontractors.

ENGINEERS FINAL INSPECTION is imperative. **Prior to installation of all ceilings**, this contractor shall **contact Gunther Lammers (416-699 8000 ext.203 or email [guntherlammers@tmptoronto.com](mailto:guntherlammers@tmptoronto.com))** and the landlord to perform a final inspection. When ceiling tiles have been installed it will be necessary for the contractor to remove portions for inspection.

THE MOST RIGOROUS OF THIS SPECIFICATION AND BASE BUILDING STANDARDS shall form the basis for this construction. Comply with landlord's requirements for system shutdown and connection.

CODES AND BYLAWS shall be strictly adhered to. Obtain necessary permits, approvals and inspections from the authorities having jurisdiction.

PERMITS AND FEES required by the authorities having jurisdiction shall be obtained and paid for by this contractor. Include all applicable taxes. Arrange for the inspection of work by all inspection authorities having jurisdiction over the work of this division. All changes and alterations required by such authorities shall be carried out promptly and without charge.

EXISTING SITE CONDITIONS affecting the work of this trade shall be reviewed prior to tender submission. Failure to do so shall not relieve contractor of full contract responsibility.

CUTTING, PATCHING AND CORE DRILLING required by this trade shall be paid for by this contractor. X-Ray concrete structure in accordance with Owner/Landlord structural engineer's requirements. Provide details of new openings through structural components for engineer's approval. Incur all related costs for structural approval.

FIRE STOP shall be ULC listed for the required separation and provided at all pipe penetrations through rated assemblies. Repair/Provide all spoy fire proofing required to maintain original ratings.

PREMIUM TIME COSTS shall be included for work outside of normal working hours.

FLASHING AND COUNTER FLASHING for exterior penetrations or water-proofed floors shall be provided under this contract. Flash all mechanical parts passing through, or built into a roof, outside wall or waterproof floor. Use prefabricated aluminum or pvc flashings for roof, and membrane or copper for walls and floors. Ensure all openings are weather, water and fire proof, using an approved flexible sealant.

SHOP DRAWINGS shall be complete with contractors reviewed stamp. Submit 6 copies. Allow one (1) week for engineers review.

EQUIPMENT SUBSTITUTIONS after award of contract will not be considered without written explanation and consultant's written authorization. The quality and performance characteristics of substituted product shall be equivalent to the specified product. All substitute products shall be approved by consultants. Any additional costs incurred by all trades for substituted equipment installation must be incurred by this contract.

CONTROL WIRING AND DEVICES shall be provided under this contract. Control work shall be completed by Owner's/Landlord's approved contractor JCI and paid for under this contract.

PROVIDE A COMPLETE and fully functioning system operating in accordance with the sequence of operations. Install all systems to allow for all future maintenance. Align all access doors, unit access locations and piping/duct connections to ensure future serviceability of all system.

All load side wiring and electrical devices shall be provided including wiring, starters, disconnects, VFD's etc. Verify and coordinate voltage and phase with the electrical contractor prior to ordering equipment.

ACCESS DOORS shall be provided for all inaccessible mechanical equipment and services requiring inspection or service. Finish shall suit architect/designers requirements. Access doors shall be recessed as required to suit wall finish (eg. tile.). Provide fire rated access doors in fire rated partitions.

ARCHITECT/DESIGNER APPROVAL of air terminal, thermostat, and access door locations must be obtained prior to installation.

ONE YEAR WRITTEN WARRANTY shall be provided for the complete mechanical installation from date of acceptance.

CAD AS-BUILT DRAWINGS shall be completed utilizing AutoCAD. Record accurately installed work on white prints transferring to AutoCAD. Submit both copies. Keep one up to date set on site.

OPERATING AND MAINTENANCE MANUALS containing approved shop drawings, air and water balancing reports, equipment data sheets, written warranty, operating instructions and maintenance procedures shall be submitted to consultant for review. Manuals shall be separated with dividers in appropriate sections. Make all corrections requested by consultant and resubmit for review.

CHANGE NOTICE QUOTATIONS shall be submitted complete with cost breakdown of labour and materials. Failure to provide will result in rejection. All Mechanical Change Notices shall be priced in accordance with "MECHANICAL CONTRACTORS ASSOCIATION" (MCA). Labour units not marked up to reflect site conditions strictly for labour and for material cost use "ALL PRICER" less discount of 20% sum total of all labour mark ups may not exceed 20% of base labour rate.

TEMPORARY FILTERS 25mm (1 in.) shall be provided at all base building return air openings which remain operational during construction. Filters to be replaced weekly. Remove upon construction completion.

BASE BUILDING HVAC components removed i.e. light troffers, diffusers, vav boxes etc. shall be turned over to the landlord/owner at their directions.

COMPLY WITH THE GENERAL contractors construction schedule.

## PACKING STRUCTURE

Project drawing package includes three (3) upgrade projects: Molsen Fan Zone (North & South), Alumni Lounge, and Diageo Bars (100 Level & 300 Level).

Pricing is to completed on an individual basis for each project noted above.

## SEPARATE PRICING

ITEMS LISTED below are to be priced as separate items.

- North Molsen Fan Zone; Shifting of mechanical services and fixtures to suit the shifting of the bar. Disconnect existing fixtures' plumbing and reconnect after bar has shifted. Add new plumbing as required to accommodate move.
- North Molsen Fan Zone Washrooms: Complete removal and replacement of all plumbing fixtures, plumbing and HVAC serving washrooms. Provide new ductwork and plumbing services as per M-401.

## CLEAN UP

During the process of the work each contractor shall keep his work tidy. The premises shall at all times be free from rubbish and surplus materials, clean dry.

## PROTECTING-TRADES

Division 15 is entirely financially responsible for all damage to property or adjacent property, arising of the work of this contractor, whether caused by himself or any persons engaged on his work.

Division 15 contractors are responsible to ensure that their employees and sub-trades use only safe practices and conditions, observe all safety regulations, security regulations and fire safety rules.

## MATERIALS AND ALTERNATIVES

Use only new materials, capitals and code approved in accordance with all laws, regulations and authorities having jurisdiction.

Before proceeding with **any** changes, submit for approval by the engineers and owner.

All material and equipment (exhaust fans, pipe, insulation, meters, etc.) to meet or exceed base building standards and have landlord's/tenant's approval before ordering.

Tender price to be as specified, show alternative equipment and itemized cost savings with tender documents.

## IDENTIFICATION

Provide name plates on all mechanical equipment showing voltage, designation, CRU# and use. Numbers and letters to be 3/8" (10mm) high, white lettering on black laminated plastic.

Identify all valves with tags. Provide a framed list of valves, indicating their location and use, supply to owner/tenant.

## DUCTWORK

Fabricate ductwork from galvanized sheet metal with a minimum coating of {1.83 grams/m<sup>2</sup>} {0.60 oz/sq.ft.} (G60coating) unless other materials are specifically named. Duct insulation shall conform to the following:

Ductwork shall be smooth on the inside and free of obstructions, vibration and rattle. Fabricate ductwork, except as described in the next item, according to the following classifications:

Class 1: All ducting subject to positive or negative static pressure of [250 Pa] [1 in w.g.] or less with maximum velocities of {13 m/s} [2500 fpm] shall be constructed in accordance with SMACNA construction standards for [250 Pa] [1 in w.g.] duct.

Class 2: All ducting subject to positive or negative static pressure of more than [250 Pa] [1 in w.g.] up to [500 Pa] [2 in w.g.] with maximum velocity of {13 m/s} [2500 fpm] shall be constructed in accordance with SMACNA construction standards for [500 Pa] [2 in w.g.] duct.

Class 3: All ducting subject to positive or negative static pressure of greater than [500 Pa] [2 in w.g.] up to [750 Pa] [3 in w.g.] with maximum velocity of [20 m/s] [4000 fpm] shall be constructed in accordance with SMACNA construction standards for [750 Pa] [3 in w.g.] duct.

Class 4: All ducting subject to positive pressure greater than [750 Pa] [3" w.g.] up to [1000 Pa] [4 in w.g.] with maximum velocity of [20 m/s] [4000 fpm] shall be constructed in accordance with SMACNA construction

Provide new sheaves, belt and all labour required to balance all Air Handlers, Rooftop Units, Fans as required to meet specified air flow.

FAN SHEAVES, BELTS AND PULLEYS shall be adjusted or replaced as required to obtain design air quantities. Coordinate this work with Owner/Landlord.

All new dampers must be Tamco series 9000 or equal.

## FIRE RATED DUCT WRAP

- Provide a fire rated duct wrap on duct(s) where shown on drawings.

- Duct wrap shall be 3M FireMaster Duct Wrap consisting of two layers of {40 mm} [1-1/2 "] thick non combustible, flexible fireproof blanket, fully encapsulated in a foil scrim and supplied in roll form. The wrap material shall be applied directly onto the installed ductwork strictly in accordance with the manufacturer's instructions and the ULC listing. Design No. FRRD-3, Guide No. 40 U21, Fire Resistant Ducts, as tested to ISO Standard 6944, Warnock Hersey design number CL4/FRD-PHV/120-01

- All hangers, support rods, concrete anchors and fire stopping of duct penetrations through fire separations shall be in accordance with the ULC listing and the manufacturer's instructions.

- The maximum duct size shall be {600 mm x 2100 mm} [24" x 84"] and shall be installed in accordance with the following:

- |      |  |
|------|--|
| Duct | - 24 ga. galvanized steel                    |
|      | - meets NFPA 90A                             |
|      | - maximum {186 Pa} [1.25"] negative pressure |

- |            |   |
|------------|---|
| Insulation | - 3M FireMaster Duct Wrap blanket double layer of {40 mm} [1½"] thick |
|------------|---|

- |              |   |
|--------------|---|
| Joints/Seams | - butt joints staggered at {300 mm} [12"] centres |
|--------------|---|

- |        |  |
|--------|--|
| Collar | - {200 mm} [8"] wide collar - 3M Fire Barrier FireMaster Duct Wrap |
|--------|--|

- |              |  |
|--------------|--|
| Support rods | - threaded steel rod                         |
| Spacing      | - {1500 mm} [60"] maximum O.C.               |
|              | - {12 mm} [½"] dia. non wrapped              |
|              | - {10 mm} [3/8"] dia. non wrapped for ducts, |
|              | - {0.36 sq. m;} [560 sq. in] or larger ducts |

- |        |   |
|--------|---|
| Cradle | - steel angle, {50 mm x 50 mm x 5 mm} [2" x 2" x 3/16"] |
|        | - cocoon wrap cradle                                    |

- |                 |  |
|-----------------|--|
| Insulation pins | - copper coated steel  |
|                 | - {3 mm x 103 mm} [1/8" x 4 1/8"]  |
|                 | - welded to bottom on horizontal duct runs and widest surface on vertical runs, spans {600 mm} [24"] wide or greater |
|                 | - spacing: lengthwise {260 mm} [10 ½"] O.C. widthwise {300 mm} [12"] O.C.  |
|                 | - speed clips, galvanized steel, {25 mm x 25 mm} [1" x 1"]   |

- |         |  |
|---------|--|
| Banding | - size {3 mm x 20 mm} [0.15" x 3/4"]     |
|         | - stainless steel to meet 2 hour ratings |
|         | - spacing, {260 mm} [10 ½"] O.C.         |

## STRUCTURAL

All mechanical equipment weights & openings are to be reviewed by a structural engineer, for framing support and building safety. Division 15 to arrange and pay for this structural review and/or action. Submit drawings for review by base building Engineer.

## MECHANICAL DEMOLITION

Provide labour, materials, products, equipment and services required to complete the demolition specified herein

Refer to drawing for extent of demolition work. The drawings indicate the approximate locations of services as far as these are known.

Dispose, off site, of all debris in accordance with the jurisdictional authorities.

Removal and storage of salvageable items will be a directed by this specification section and the Owner or their representative.

Mechanical Demolition work associated with this building is indicated on the demolition drawings and generally consists of the following:

- Plumbing and Drainage
  - Sprinklers and Fire Protection
  - HVAC systems and equipment
  - Building Control System
- CAN/CSA-S350-M1980 - Code of Practice for Safety in Demolition of Structures.
  - Ontario Building Code.
  - Occupational Health and Safety Act.
  - Regulations for Construction Projects.
  - Ontario Fire Code.
  - Regulations under Fire Marshals Act.

All work shall be performed by a firm having adequate equipment and skilled labour and being able to provide written evidence of satisfactorily completed work, similar to that specified during the past immediate five (5) years.

Removal from site and disposal of debris shall be carried out in accordance with the requirements of the local jurisdictional authorities.

Arrange and pay for all permit, notices and inspections necessary for the proper execution and completion of the demolition work.

Submit shop drawings as requested by the consultant, indicating demolition sequence, cutting and patching, bracing and protection of existing services designated to remain.

All materials which have not been designated for salvage from the demolition shall become the property of the Contractor. Remove all material and debris from the site as quickly as possible and dispose of legally. Burning of debris or selling of materials on the site will not be permitted.

Present to the Owner existing equipment removed but not identified for salvage on site. Acceptance of removed equipment is at the discretion of the Owner. Remove such items from site when deemed unsuitable.

Conform to requirements of municipality's Works Department regarding disposal of waste materials.

Materials prohibited from municipality waste management facilities shall be removed from site and disposed to recycling companies specializing in recyclable materials.

At the end of each work shift, leave work in a safe condition.

Patch fire rated partitions and floor to maintain rating upon removal of mechanical services originally spanning fire rated assembly.

Demolish work into sections of practical size for removal without alteration or damage to existing building.

Store materials only in areas designated by the Owner and as permitted by the local jurisdictional authorities.

Material and debris shall not be stacked in building to the extent that overloading of any part of the structure will occur.

Adhere strictly to the Owners requirements.

Confer with the Owner concerning schedule, duct and noise control prior to commencing work in or adjacent to existing facilities where such work might affect either those facilities or their occupants.

Execute work with least possible interference or disturbance to occupants, public and normal use of premises.

Provide temporary means to maintain security when security has been reduced by Division 15! I20 00 00!.

Only elevators, dumbwaiters, conveyors or escalators assigned for Contractor's use may be used for moving men and material within building. Protect walls of passenger elevators to approval of Owner prior to use. Accept liability for damage, safety of equipment and overloading of existing equipment.

Provide temporary duct screens, barriers, warning signs in locations where renovation and alteration work is adjacent to areas which will be operative during work.

Protect all mechanical systems, idicated to remain, from damage.

Provide and maintain ready access to fire fighting equipment at all times.

Provide and maintain proper and suitable fire extinguisher throughout the duration of the work.

The drawings indicate the approximate locations of services as far as these are known. Should any mechanical or electrical service line be broken or disrupted by operations specified under this contract, repair service lines, and make good all damage due to the disruption or break, at no expense to the Owner. Notify the Owner immediately whenever any service line is broken or damaged.

The drawings indicate the approximate locations of services as far as these are known. Immediately advise Consultant in writing when unknown services are encountered.

Accept liability for costs incurred by the Owner in repairing and cleaning equipment, etc., resulting from failure to comply with above requirements.

Use only those existing entrances and stairs designated by the Owner for access to the egress from the existing buildings and various floors when work of this contract is to be carried out. No traffic through other areas of the building will be permitted without the prior consent of the Owner.

Keep stairs and corridors clear and open as required by Fire Marshall for exit purposes in case of fire, and as required for use by the Owner's personnel.

Owner will designate which toilet facilities may be used.

Notify the consultant a minimum of 48 hours prior to commencing this work.

Prior to commencing this work arrange to have the appropriate trades concerned present for the disconnection of all utility services.

Ensure that all existing services designated to remain are adequately protected.

Arrange and pay for the disconnection, capping and for plugging of gas, water, sewer, storm and other services to the building to be demolished. In each case the utility company involved shall be notified in advance and its approval obtained before commencing that portion of the work. Disconnect and cap services at the locations.

Arrange, schedule and perform work with minimum disturbance to existing facilities and services.

Submit a complete schedule of service interruptions and changeovers with approximate dates required, durations and times of day, for approval before proceeding.

Notify Owner in writing at least 72 hours in advance of planned interruption to existing services.

Interruption of service must occur at the times and for the duration stipulated by the Owner.

Keep service interruption duration to an absolute minimum. Carry out all preparatory work, measurements, etc., without interruptions of existing services.

If service interruptions are required by the Owner during the night or on the weekends, etc., premium time shall be included at the Contract Price. No extra charges will be allowed at a later date for failure to include same.

## HANGERS AND SUPPORTS

Provide all required supports on outside of ductwork, installation shall be to the requirements of applicable codes. All support must be from building structure and not from other equipment, piping or ductwork.

## PLUMBING SYSTEMS

### SCOPE OF WORK

Provide all hot and cold water systems to all plumbing fixtures and equipment requiring water connections.

Provide all soil, waste, vent systems required.

Provide all plumbing fixtures including all required trim and supports.

Rough-in and provide final connection to all equipment.

Provide all final plumbing connections to heating and air conditioning equipment including condensate drains.

Pressure test all piping systems in accordance with local & provincial codes for leaks, before insulation is added. Submit report to the owner and a copy to the engineer.

Provide all trenching and backfilling required for Division 15 work.

Water: co-ordinate and furnish all labour and/or materials, all in accordance with the requirements of the local water company and/or landlord.

Provide all required venting to conform to local codes and with authorities having jurisdiction.

Prime all traps as required to meet code requirements and requirements of local authorities.

## PIPING INSTALLATION

Provide and install all piping as required for a complete installation whether indicated or not and in accordance with relevant codes.

Conform to manufacturer's recommendations.

Provide and install vent piping as per local code requirements.

For underground installations, provide suitable bedding, coverage and slope to ease drainage.

Install temporary caps or closures on the end of all pipes, conduits etc.; to prevent debris entering during construction.

Separate dissimilar metals by means of gaskets, di-electric unions or couplings that prevent electrolytic action. (e.g. Brass between copper and steel).

Suspend all pipes, in the ceiling space, as high as possible. Coordinate all work with other sub-trades so as not to interfere with ductwork, etc. Support all suspended hub drains from below.

Slope hot water, cold water & recirculation piping to low points for drainage of the system c/w drain valves.

Provide accessible shut-off valves on hot and cold water supplies to each piece of equipment, including kitchen equipment. (provide back flow preventor on all equipment as stated on equipment schedule.)

## INSERTS AND SLEEVES

Pipe sleeves passing through walls, floors and ceilings to be schedule 40, black steel, packed for water tightness and sound transmission with fireproof, smoke proof, flexible sealant. Install polished chrome escutcheon plates on all pipes, which are visible to staff or public personnel.

## HANGERS AND SUPPORTS

Supports and clevis type hangers shall be on outside of insulation, installation shall be to the requirements of applicable codes. All support must be from building structure and not from other equipment, piping or ductwork.

EXISTING SANITARY DRAIN locations and invert elevations shall be verified on site prior to commencement of work.

	Pipe Size {65mm} [2-1/2"] & Smaller	Pipe Size {75mm} [3"] & Larger
SANITARY - ABOVE GROUND	DWV copper pipe with drainage fittings and 95/5 tin/antimony solder joints.	CSA Class 4000 cast iron soil pipe and fittings, with mechanical joints.
SANITARY - BELOW GROUND	Profile pvc sewer pipe with solvent welded fittings	CSA Class 4000 cast iron soil pipe and fittings, with mechanical joints or IPEX Ring-Tite SDR35, CSA certified to B182.2 PVC gasketted sewer pipe.
STORM - ABOVE GROUND	DWV copper pipe with drainage fittings, 95/5 tin /antimony solder joints.	CSA Class 4000 cast iron soil pipe and fittings with mechanical joints.
STORM - BELOW GROUND	not applicable	CSA Class 4000 cast iron soil pipe and fittings, with mechanical joints or IPEX Ring-Tite SDR35, CSA certified to B182.2 PVC gasketted sewer pipe.
VENT PIPING - ABOVE GROUND	DWV copper pipe with drainage fittings, 95/5 tin /antimony solder joints.	CSA Class 4000 cast iron soil pipe and fittings with mechanical joints.
VENT PIPING - BELOW GROUND	Type L copper pipe with wrought copper fittings and 95/5 tin/antimony solder joints.	CSA Class 4000 cast iron soil pipe and fittings, with mechanical joints or IPEX Ring-Tite SDR35, CSA certified to B182.2 PVC gasketted sewer pipe.
DOMESTIC WATER:		
Domestic hot water - all sizes:		
.1	Type L hard copper pipe, wrought copper fittings with 95/5 tin/antimony solder joints.	
Domestic cold water and domestic chilled water all sizes:		
.1	Type L hard copper pipe, wrought copper fittings with 95/5 tin/antimony solder joints.	
Provide Type K soft copper pipe without joints below ground.		
For working pressures up to [2100 kPa] [300 psig], Victaulic style 606 couplings with Grade E flush seal Vic Plus gasket, and grooved copper piping systems may be used in accessible areas for domestic water. Provide Victaulic installation instructions on site.		
VALVES		
Provide ASTM domestic water valves to the following Kitz figure numbers:		
Gate Valves:		
.1	{50 mm} [2"] and smaller - soldered [1400 kPa] [200 psi] w.o.g. Fig. 44.	
.2	{65 mm} [2-1/2"] and larger - flanged [1400 kPa] [200 psi] w.o.g. Fig. 75.	
Standard Check Valves:		
.1	{50 mm} [2"] and smaller - soldered [2070 kPa] [300 psi] w.o.g. Fig. 23.	
.2	{65 mm} [2-1/2"] and larger - flanged [1400 kPa] [200 psi] w.o.g. Fig. 78.	
VERIFICATION OF INVERTS		
DUTY	INSULATION TYPE	THICKNESS VAPOUR BARRIER
DOMESTIC COLD WATER		
4" and less	P-1	1/2" Yes

- No extra will be paid at a later date for rerouting of drains because site inverts cannot be met.

## TESTING

Carry out not less than the following tests:

- Ball test drains.
- Perform water tests on all soil, waste, vent and rainwater systems when rough-in of the system, or section thereof including fittings, branches, cleanouts and traps except fixture traps is completed. When the system or section is filled, shut off the water, and allow to stand for one hour. There shall be no loss by leakage during this time.
- Pressure test domestic cold water, domestic hot water, and recirculation lines with water at 150% of maximum operating pressure, for 6 hours without loss of pressure.

Conduct additional tests required by the authorities having jurisdiction.

If tests are required by an authority having jurisdiction, perform tests in the presence of each governing authority's authorized inspector, and obtain certification.

Certify tests not required by the authorities having jurisdiction.

Perform tests before piping, drains or vents are covered or concealed.

Remove all components which will not withstand test pressure, and replace after tests.

Eliminate leaks, or remove and refit defective parts. Caulking of threaded or welded joints will not be permitted.

Repeat tests as often as necessary to obtain certification.

Set all fixtures and fill all traps with water after tests have been completed.

## CLEANING AND FLUSHING SEWERS

On completion of construction of drains, flush all drains until the deposits of earth and other foreign material have been removed.

## CLEANING, FLUSHING AND DISINFECTING WATER PIPING

Be responsible for care and cleaning of the piping system during and after construction. Plug all open ends during construction to prevent the entrance of foreign materials.

Flush all systems with clean, potable water to remove scale and sediment immediately upon filling.

Sterilize all potable water lines to meet local municipal requirements.

After completing satisfactory hydrostatic tests of the complete system, and flushing mains as outlined above, disinfect the mains in accordance with AWWA Standard C651-86. Repeat the flushing and disinfecting operation until the test results are satisfactory.

Ensure by operation of isolating valves or the installation of check valves, that the disinfecting solution does not flow back into street mains or other sections of piping in use.

Arrange and pay for water quality tests to be performed by a recognized independent testing laboratory. Obtain certificates confirming safety of potable water supply.

## CONNECTIONS TO OWNER'S EQUIPMENT

Rough in and connect to Owner's equipment. Do not rough in prior to receipt of final approved layout of Owner's equipment.

## CONNECTIONS TO KITCHEN EQUIPMENT

Provide rough-in and make all final connections to the kitchen area equipment as shown on Drawings.

Do not begin rough-in work until supplied with a final set of dimensioned rough-in drawings from the kitchen equipment supplier.

All final connections shall include shut off valves on hot and cold water supplies and the installation of all vacuum breakers, check valves, backflow preventors, and other plumbing specialties to meet authorities having jurisdiction.

PLUMBING FIXTURES including domestic hot water heaters shall be new, of first quality, in perfect condition and installed in best workmanlike manner. Verify plumbing fixture quantities and locations with Architect's/Designer's drawings. Reuse of domestic water heater is not permitted.

TRAP SEAL PRIMER must be provided on all new Floor Drains, Funnel Floor Drains and



DOMESTIC HOT WATER			
2" and less	P-1	1"	No
2-1/2" and larger	P-1	1-1/2"	No
CHILLED WATER			
6" and less	P-1	1"	Yes
HORIZONTAL STORM AND SANITARY DRAINAGE			
all pipe sizes	P-1	1"	Yes
HORIZONTAL CONDENSATE DRAINS			
all pipe sizes	P-1	1/2"	Yes

#### SHEET METAL INSULATION

PROVIDE INSULATION with a minimum thermal resistance of 0.25 BTU.in/hr. sq.ft °F at 75°F mean temperature.

APPLY VAPOUR BARRIER over insulation on cold temperature ductwork.

CIRCULAR SILENCERS AND ACOUSTIC PLENUMS need not be externally insulated.

DUCTWORK AND CASINGS lined with acoustic insulation 1" or more in thickness need not be externally insulated.

PROVIDE THE FOLLOWING DUCTWORK INSULATION type as indicated in the ductwork insulation table below.

TYPE D1' Owens Corning Rigid Vapour Seal Duct Insulation, John Manville 814 Spin-Glas with FSK Facing, Manson Spin-Glas Rigid insulating board with reinforced foil facing, or Knauf Rigid insulation board with FSK facing. Density shall be not less than 3lbs/cu.ft. Impale on mechanically fastened pins located at not greater than 12" centers. Secure with speed washers. Butt joints tightly together and seal washers, breaks and joints with self-adhering 4" wide plain aluminum tape, or adhere foil with Childers CP82 or Bakelite 230-39 adhesive.

TYPE D2' Owens Corning Flexible Duct Insulation, Johns Manville Microlite Type 75 duct Wrap, Manson Microlite insulation or Kraft Duct Wrap, (3/4lb./cu.ft.) density with factory applied reinforced foil facing. Adhere insulation to duct surface with Childers CP82 or Bakelite 230-39 adhesive, which shall be applied in strips 6" wide at not greater than 12" centers. Butt edges of insulation tightly together, and seal breaks and joints of facing with self-adhering 4" wide aluminum tape or adhere foil with Childer CP82 or Bakelite 230-39 adhesive.

DUTY	INSULATION TYPE	THICKNESS	VAPOUR BARRIER	NOTES
Panels behind unused portion of louvers	D-1	2"	Yes	
Exposed ductwork	D-1	1"	Yes	In the conditioned space only where indicated.
Supply ductwork	D-2	2"	Yes	

PROTECT THE WORK OF THIS TRADE from being defaced by other trades. Make good any damage and leave in perfect condition, ready for final painting.

APPLY INSULATION OVER CLEAN DRY SURFACES, firmly butting all sections together.

#### ACOUSTIC DUCT LINING

Provide [25 mm] [1"] thick acoustic duct liner where shown on drawings and as follows:

Rectangular Duct Liner: Permacote Lincoacoustic meeting ASTM C 1071 with air surface coated with acrylic coating treated with EPA registered anti-microbial agent proven to resist microbial growth as determined by ASTM G 21 and G 22.

- Noise Reduction Coefficient : 70 or higher based on "Type A mounting" and tested in accordance to ASTM C 423.
- Adhesive: meeting ASTM C 916.
- Fasteners: Duct liner galvanized steel pins, welded or mechanically fastened.

Round Duct Liner: Permacote Spiracoustic, rigid preformed round liner, or Spiracoustic Plus with air surface coated with acrylic coating treated with EPA register anti-microbial agent proven to resist microbial growth as determined by ASTM G 21 and G 22.

Noise Reduction Coefficient of .70 as per ASTM C 423. (Type A mounting)

#### FIRE PROTECTION SYSTEM

Provide all labour, material, products, equipment and services to supply and install combined sprinkler and fire hose systems as indicated on the Drawings and specified in this Section of the Specification.

Fire protection system utilizing extended coverage heads are not acceptable.

Provide certificate of compliance that is compatible and, where applicable, certified for intended use by nationally recognized testing agency.

Systems shall include for:

- The Sprinkler contractor shall Hydraulically design all new and modified fire protection systems and shall become the engineer of record for the design.
- Provide Zoning as shown on drawings.
- Provide additional heads as required by Code to achieve a fully sprinklered building. The minimum available number of heads is as shown on the drawings. Centre heads both ways in ceiling tiles.
- All sprinkler heads are to be hard piped. Flexible connections are not permitted.
- Design all retail space to Ordinary Hazard Group 2 requirements.

Immediately after award of contract, verify with governing authorities that the source of water is adequate for the required pressure and flow for sprinkler system.

Perform flow test on nearest street fire hydrant to verify water pressure and flow requirements. Submit test data as part of the shop drawings. Notify Consultant and all authorities 72 hours in advance of all tests. When requested, conduct tests in presence of any authorities and follow requested procedures.

INSTALLATION shall be in compliance with National Fire Protection Association NFPA-10, NFPA-13, NFPA-14, governing authorities and Owner's/Landlord's insurance underwriter. All components shall be ULC listed. Sprinkler installation shall be by Owner's/Landlord's approved contractor. Meet Federal, Provincial, and Municipal building and fire regulations. Flexible head sprinklers are not permissible.

SPRINKLER SHOP DRAWINGS including hydraulic calculations shall be submitted to mechanical consultant in duplicate for review. Drawings and calculations shall be certified by a Professional Engineer currently practicing in the fire protection industry.

COORDINATE HEAD LOCATIONS with final reflected ceiling plans and other ceiling mounted components. Align heads in ceiling tiles in both directions.

LANDLORD'S APPROVED SPRINKLER CONTRACTOR shall complete sprinkler work at the tenant's expense.

SPRINKLER AND LIFE SAFETY SYSTEMS shall remain in service at all times. If shutdown is required, notify Landlord and local authorities 48 hours prior to this work. Arrange and pay for a fire watch.

NEW SPRINKLER HEADS shall match base building in like applications, and shall conform to legend.

CONCEALED SPRINKLER HEADS where indicated on drawings shall match the base building standards. The sprinkler contractor shall be responsible for verifying and matching the sprinkler head type. In buildings requiring QUICK RESPONSE heads provide RELIABLE Model G40R, in buildings requiring STANDARD RESPONSE heads provide RELIABLE Model G4. Finish shall be provided by sprinkler head manufacturer, as directed by Architect/Designer.

LOCATIONS AND QUANTITIES of fire hose cabinets shall be confirmed from both Architect's/Designer's drawings and mechanical drawings. The larger quantity complete with all required piping shall apply.

All piping 4"ø and larger shall be ASTM A-53 Schedule 40 with threaded cast iron or malleable iron fittings. Provide welded steel piping for piping less than 4"ø.

#### SPRINKLER HEADS

Sprinkler heads shall be as manufactured by Reliable. Submit samples for approval.

Where pendant type sprinkler heads are shown on the drawings, provide Reliable Model F1 chrome plated recessed sprinkler heads with chrome plated escutcheons.

Where upright type sprinkler heads are shown on the drawings, provide Reliable Model F1 bronze upright sprinkler heads with bronze/bright chrome finish.

Where concealed type sprinkler heads are shown on the drawings, provide Reliable Model G1 concealed sprinkler heads with cover plate having white paint finish.

Where sidewall type sprinkler heads are shown on the drawings, provide Reliable Model G horizontal bronze/chrome plated sidewall sprinkler heads.

Use high temperature heads where required to suit the governing authority, and where located in elevator machine rooms, in electrical rooms and near heat producing equipment.

Flexible connections to sprinkler heads are not permitted.

#### TEST AND DRAIN FITTINGS

Provide ULC listed and FM approved combined test and drain fitting with orifice sized according to installed sprinkler heads. Provide Victaulic Style 718 or 719, or National Fire Equipment Model A60 fittings.

#### CABINET AND SPARE SPRINKLERS

Provide metal cabinet containing the required number of spare sprinklers of each type and of each melting point temperature and the tools required to replace heads.

Install accessory cabinet where indicated by Owner on site.

#### PROVISION FOR FUTURE SPRINKLER HEADS

For each typical floor office level sprinkler system provide minimum [25 mm] [1"] outlets at each head location on branch lines and size branch lines hydraulically so that the water flow for one (1) extra head can be added anywhere on the branch line without increasing branch line sizes.

Calculate size of cross mains with additional capacity as follows:

- Light Hazard – add 100% to water flow – (i.e. 1 x 1500 x 2.00 = 300 gpm).
- Ordinary Hazard – add 65% to water flow (i.e. 19 x 1500 x 1.65 = 470 gpm).

#### BALL DRIP

Provide National Fire Equipment Ltd., Model #458 [12 mm] [½"] diameter automatic ball drips to drain the piping between the siamese and associated check valve. Install in horizontal position.

#### INSPECTION

Do not recess, point or conceal any work including piping and accessory equipment before it has been inspected and approved.

#### TESTING

Test all sprinkler systems to NFPA 13 requirements.

Test all standpipes and fire hose systems to NFPA 14 requirements.

Carry out any additional tests required by the authorities having jurisdiction.

Perform tests in the presence of each governing authority's authorized inspector.

Submit certification that systems have been designed and installed in accordance with local requirements.

Perform tests before piping is conceded.

Remove all components which will not withstand test pressure, and replace after tests.

Eliminate leaks, or remove and refit defective parts. Caulking of threaded or welded joints will not be permitted.

Repeat tests as often as necessary to obtain certification.

#### SPRINKLER DRAINS AND TEST CONNECTIONS

Install test and drain connections to meet NFPA 13.

Pipe discharge lines to nearest floor drain or service sink. Do not discharge to the building exterior.

Provide sprinkler drain risers to discharge location.

Pipe backflow preventor relief and drain connections to nearest floor drain.

#### SPRINKLER HEAD INSTALLATION

Install sprinkler heads symmetrically in ceiling tiles, unless otherwise directed by the Consultant.

#### PROTECTION

Provide guards for sprinkler heads in elevator machine rooms, garbage room, walk-in coolers or freezers, mechanical rooms, storage rooms and where indicated on Drawings.

Assume full responsibility for protecting sprinkler heads during painting. Replace damaged and painted components.

#### AS-BUILT REQUIREMENTS

Be responsible for necessary modifications to the installation in the event the as-built hydraulic calculations do not meet the design criteria.

#### CONTROLS

MANUFACTURE AND INSTALLATION shall be by Owner's/Landlord's approved contractor.

NEW THERMOSTATS shall match base building.

MOUNTING HEIGHT shall be 1200 mm from finished floor. Coordinate location with Architect/Designer. Do not install in vicinity of electrical lighting dimmers.

PROVIDE ALL NECESSARY EMT CONDUIT, fittings and wire to provide a complete and operating control system. Hard wire all electrical control devices into the associated system magnetic starter. Provide power to control panel from the nearest normal power electrical distribution panel.

EXISTING HEAT PUMPS in suites converted to new Alumni lounge are to be renamed and updated, by base building contractor JCI, within BMS such that their names reflect the new room name. Associated thermostats are to be relocated, by base building contractor JCI, to locations noted on plans. Existing thermostats and control wiring are to be reused.

#### THERMOSTAT CONTROL WIRING

All thermostat/control wiring is to be 18AWG shielded plenum rated FT6 minimum.

- Support all wiring in ceiling plenum using wire ties / bridle rings.
- Mechanical contractor is to wire and install thermostats and control wiring to each mechanical unit shown on HVAC plan.

#### TESTING

All equipment shall be checked, adjusted and started to the manufacturer's recommendations, under his supervision.

Conduct equipment tests to demonstrate performance as soon as conditions permit. Make adjustment to suit.

Operate equipment for one week minimum period and repair any breakdowns. Replace all filters and lubricate equipment and adjust all moving parts to manufacturer's recommendations. Calibrate thermostats and adjust automatic controls as directed. Eliminate all vibration and reduce sound, whether air borne or transmitted.

It shall be the responsibility of Div. 15 to test run and commission all equipment. Div. 15 shall hire and pay for the equipment manufacturer's representative to start-up all equipment and check out all associated controls and safety cutouts, this includes thermostats, unit outside air dampers, fire stats, exhaust fan interlocks etc. this work shall be complete and any deficiencies rectified prior to notifying the balancing company that the systems are ready to be balanced.

START TAB only when building is essentially completed, including: installation of ceilings, door, windows, other contruction affecting TAB.

#### AIR SYSTEMS:

- Filters in place clean.
- Duct system clean.
- Ducts, air shafts, ceiling plenums are airtight.
- Correct fan rotation.
- Fire, smoke, volume control dampers installed and open.
- Coil fins combed, clean.
- Access doors, installed, closed.
- All outlets installed, volume control dampers open.

#### LIQUID SYSTEMS:

- Flushed, filled, vented.
- Correct pump rotation.
- Strainers in place, baskets clean.
- Isolating and balancing valves installed, open.
- Calibrated balancing valves installed, at factory settings.

DO TAB to following tolerances of design values:

– All HVAC systems: plus 5%, minus 5%.

– Hydronic systems: plus or minus 10%.

SUBMIT 6 COPIES of TAB Report to Consultant for verification and approval, in English in D-ring binders, complete with index tabs.

#### COMPLETION OF CONTRACT

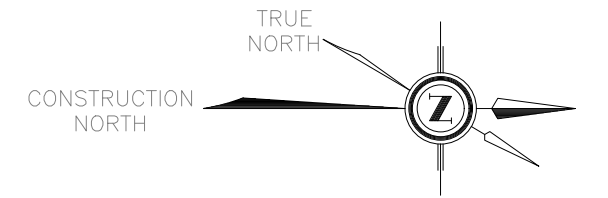
All systems shall be complete, tested and ready for use, with all equipment and controls functioning correctly.

#### COMPLETION OF CONTRACT

All systems shall be complete, tested and ready for use, with all equipment and controls functioning correctly.

Submit all certificates of inspection and test results to the Consultant for review.

Issue/Revision	Date
△ ISSUED FOR COORDINATION	10 MAY 2016
△ ISSUED FOR PRICING	17 MAY 2016
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	



**TMP**

THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD, TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
**2016 F & B UPGRADES**

Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title

## MECHANICAL SPECIFICATIONS (CONT'D)

Date	2016-02-23	
Scale	AS NOTED	
Project	1601	
Drawn	CAD	
Checked	AP	
Dwg. File		
Sheet No.		

# M-102



[illegible]

Technical drawing of a 1500 mm diameter manhole. The drawing shows a cross-section of the manhole structure, including the concrete base, the brickwork walls, and the metal frame. Key dimensions include a total height of 1500 mm, a base thickness of 150 mm, and a wall thickness of 150 mm. The drawing also shows the internal structure, including the brickwork and the metal frame. The drawing is labeled with '1500 mm' and '1500 mm x 1500 mm'.

CONSTRUCTION  
NORTH

TRUE  
NORTH



---

**TAMP**

THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

---

285 YORKLAND BLVD., TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

---

**16-3187-660**

---

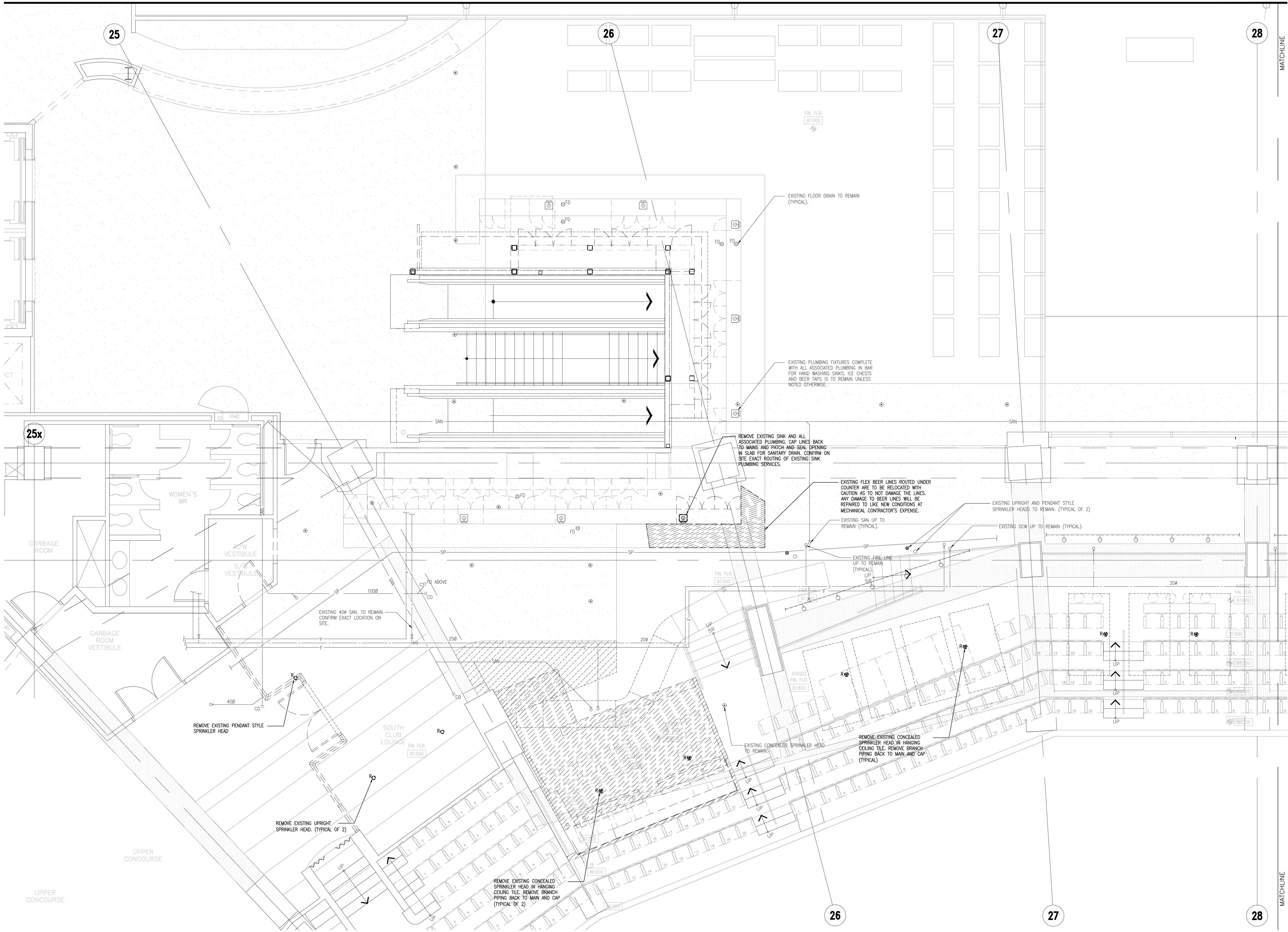
Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Technical drawing of a 1000W, 100V, 50/60Hz transformer. The drawing includes a top view showing the core, windings, and cooling fins, and a side view showing the transformer's profile. Key dimensions include a core width of 100mm, a winding diameter of 100mm, and a total height of 100mm. The drawing is labeled with '1000W', '100V', and '50/60Hz'.

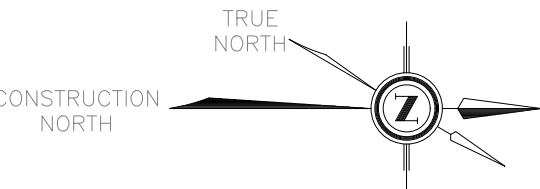
# M-103







Issue/Revision	Date
ISSUED FOR COORDINATION	10 MAY 2016
ISSUED FOR PRICING	17 MAY 2016



THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD, TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

Air Canada Centre, 40 Bay Street, Toronto, ON

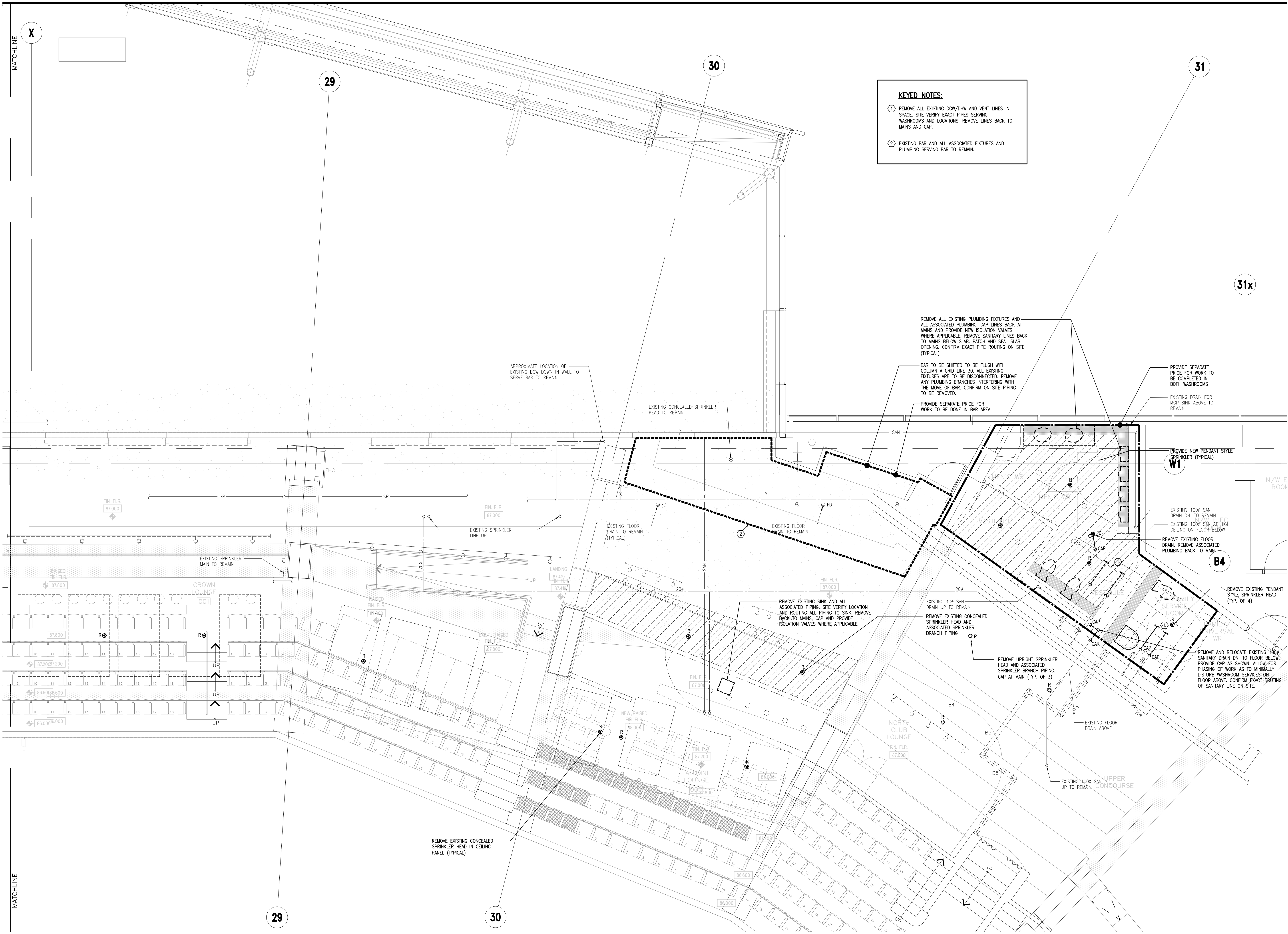
Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
EXISTING/DEMOLITION PLAN  
SOUTH  
PDFP - DEMOLITION

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

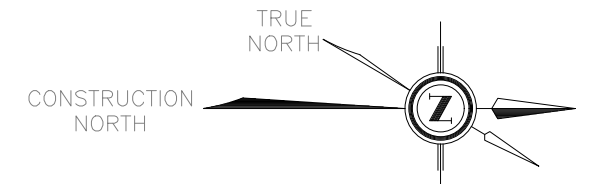
M-200

1 DEMOLITION PLAN (SOUTH)  
1:50





Issue/Revision	Date
1. ISSUED FOR COORDINATION	10 MAY 2016
2. ISSUED FOR PRICING	17 MAY 2016



**TMP**  
THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS  
285 YORKLAND BLVD, TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000  
16-3187-660  
Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

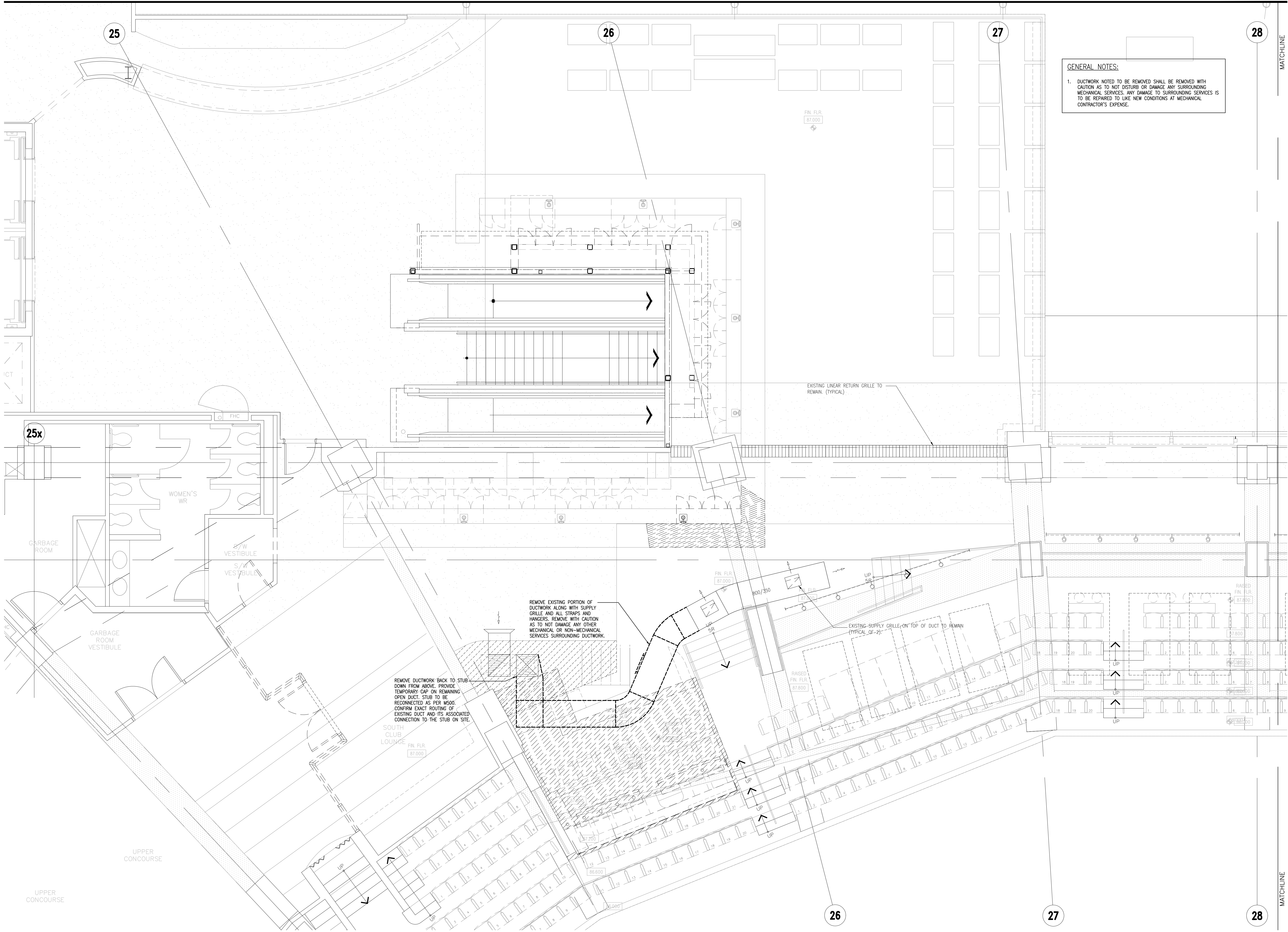
Project 2016 F & B UPGRADES

Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
EXISTING/DEMOLITION PLAN  
NORTH  
PDPF - DEMOLITION

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

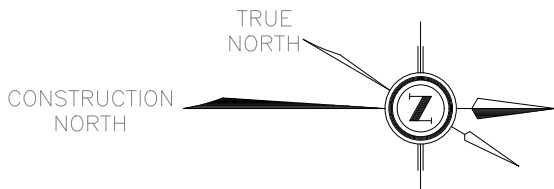
M-201



GENERAL NOTES:

1. DUCTWORK NOTED TO BE REMOVED SHALL BE REMOVED WITH CAUTION AS TO NOT DISTURB OR DAMAGE ANY SURROUNDING MECHANICAL SERVICES. ANY DAMAGE TO SURROUNDING SERVICES IS TO BE REPAIRED TO LIKE NEW CONDITIONS AT MECHANICAL CONTRACTOR'S EXPENSE.

Issue/Revision	Date
ISSUED FOR COORDINATION	10 MAY 2016
ISSUED FOR PRICING	17 MAY 2016



THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD, TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

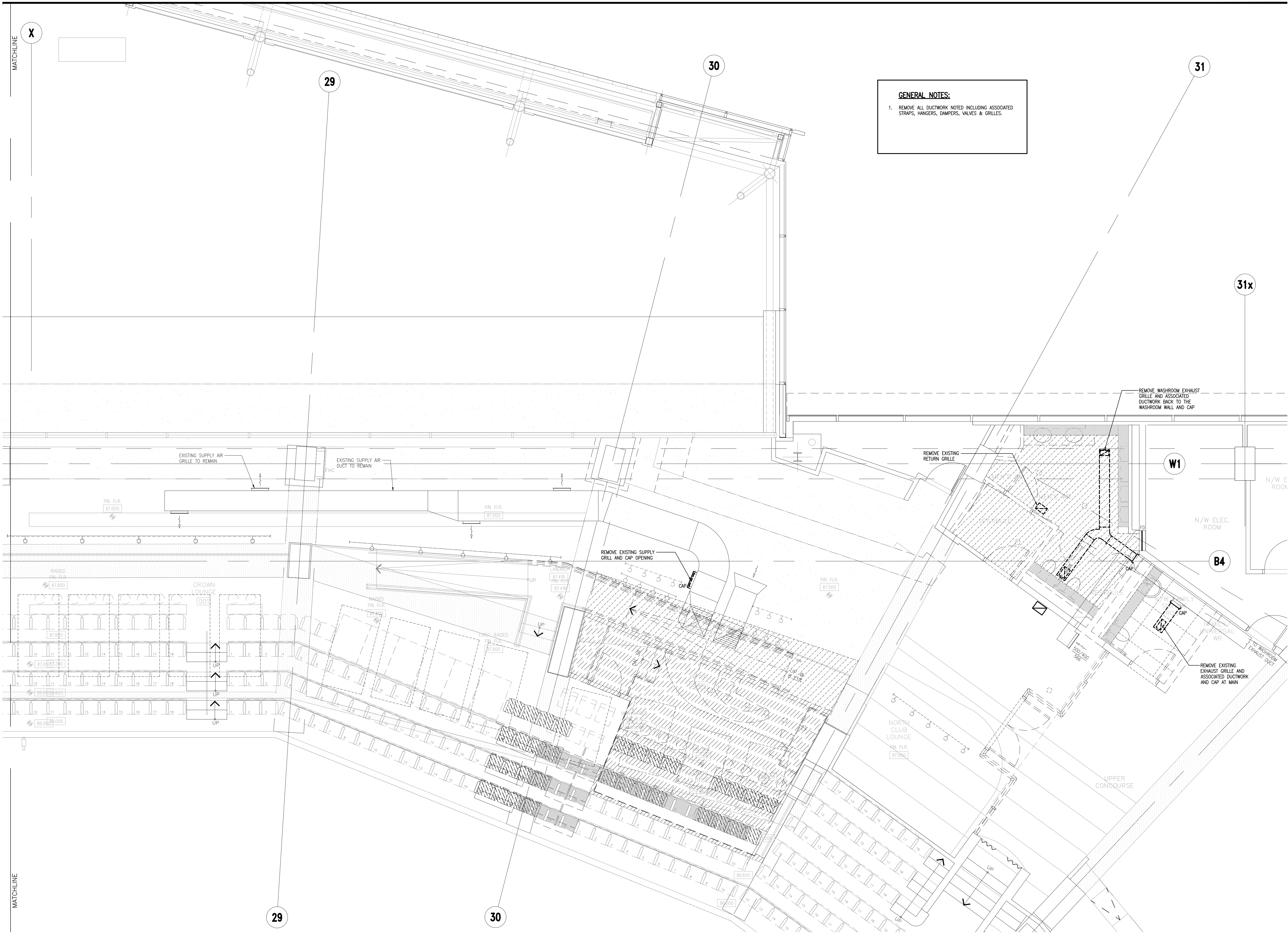
Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
EXISTING/DEMOLITION PLAN  
SOUTH  
HVAC - DEMOLITION

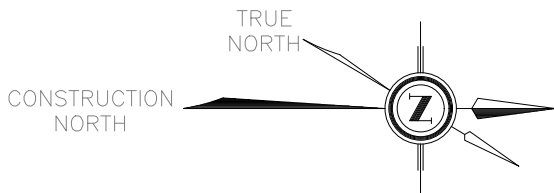
Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

M-300





Issue/Revision	Date
1. ISSUED FOR COORDINATION	10 MAY 2016
2. ISSUED FOR PRICING	17 MAY 2016
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	



THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD, TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

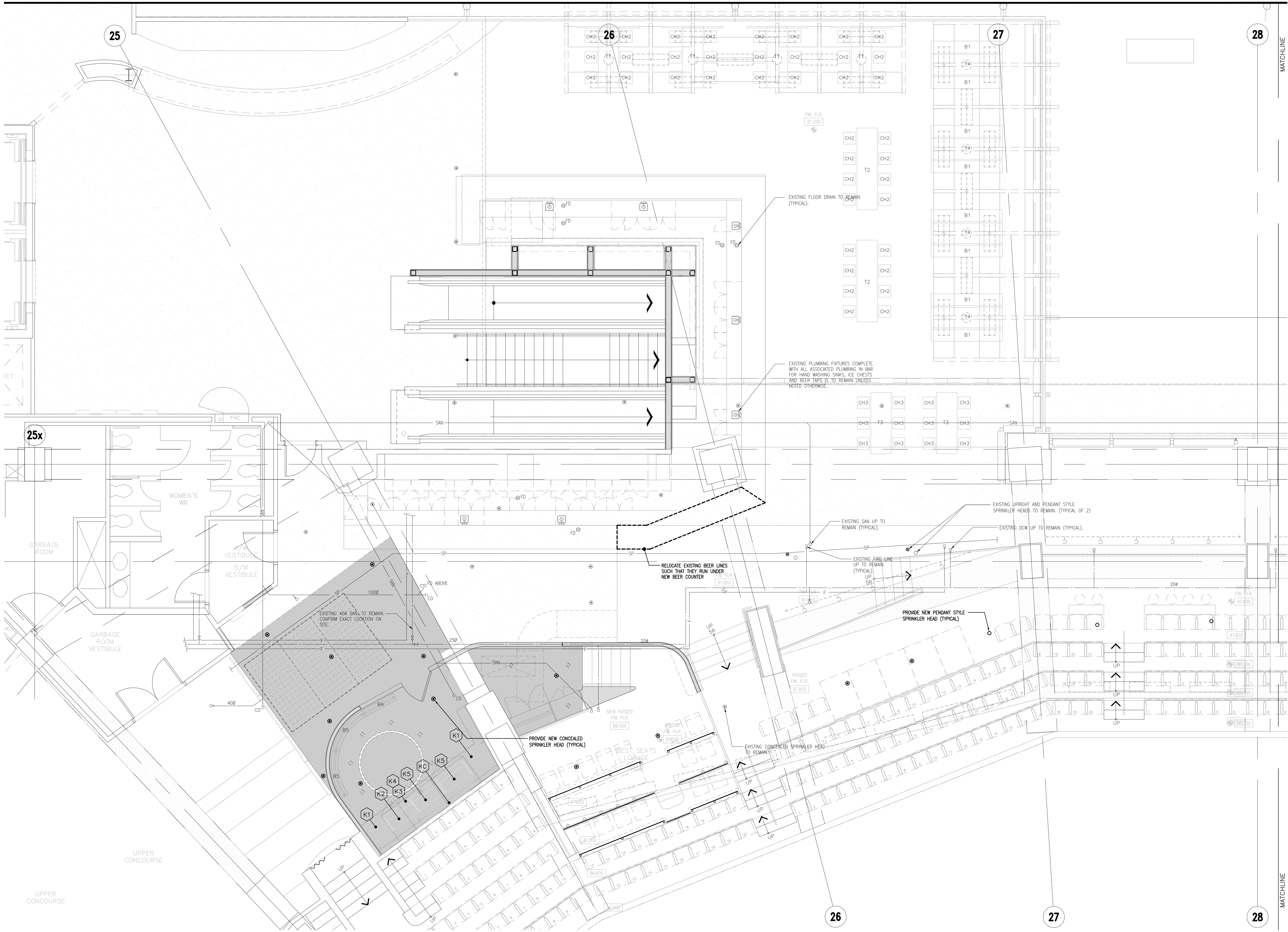
Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
EXISTING/DEMOLITION PLAN  
NORTH  
HVAC - DEMOLITION

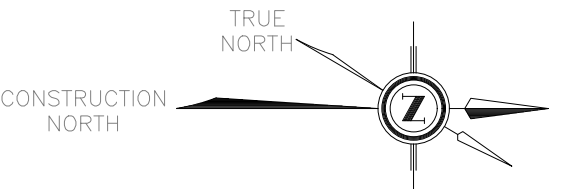
Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

M-301





Issue/Revision	Date
1. ISSUED FOR COORDINATION	10 MAY 2016
2. ISSUED FOR PRICING	17 MAY 2016



THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD., TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

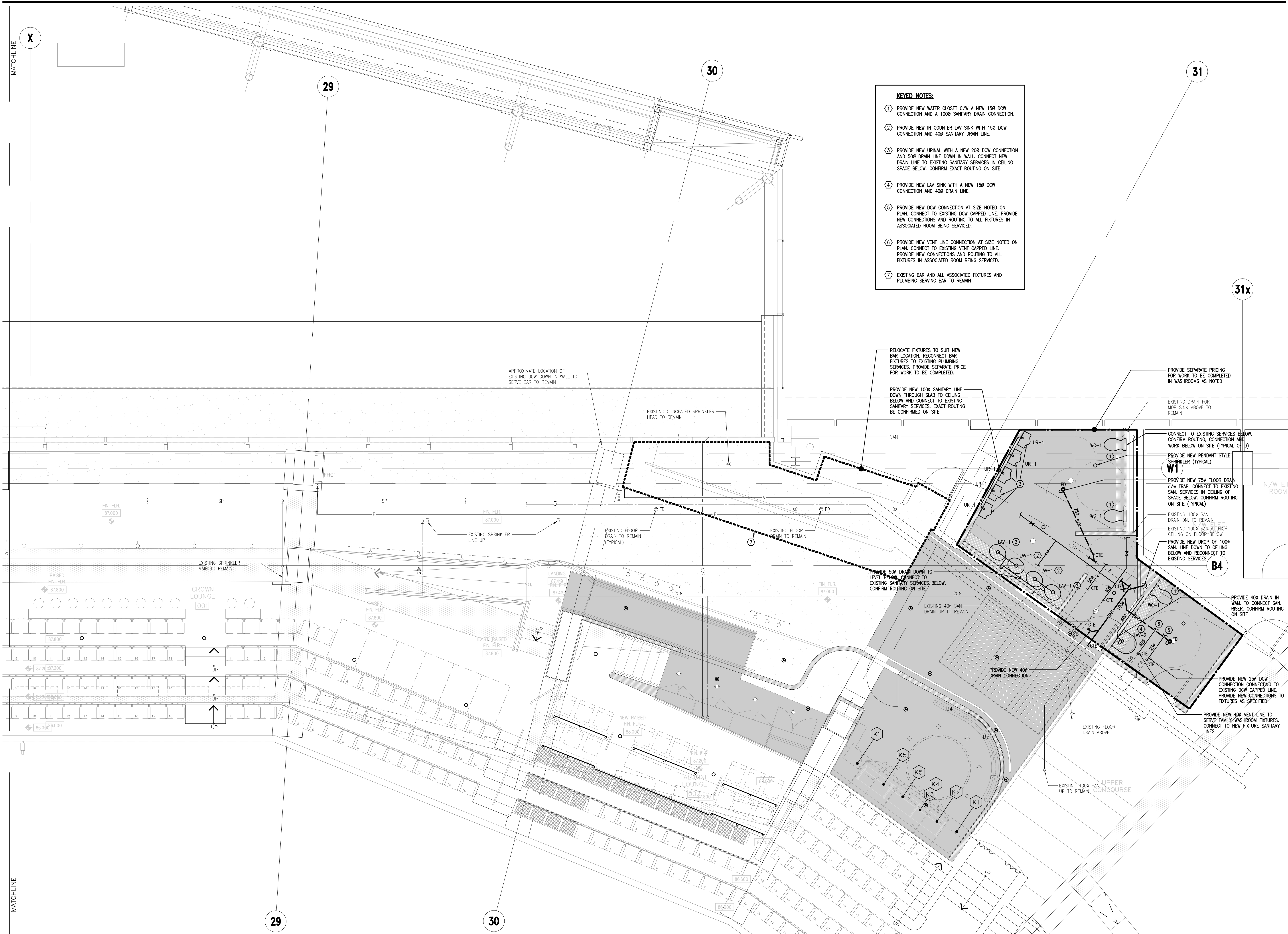
Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
CONSTRUCTION PLAN  
SOUTH  
PDFP - NEW

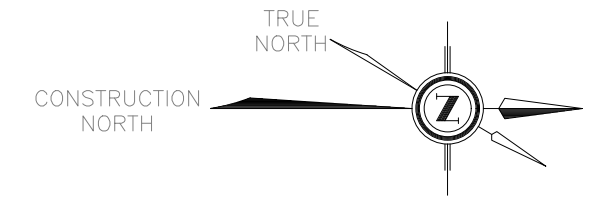
Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

M-400





Issue/Revision	Date
1. ISSUED FOR COORDINATION	10 MAY 2016
2. ISSUED FOR PRICING	17 MAY 2016



**TMP**  
THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS  
285 YORKLAND BLVD., TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000  
16-3187-660  
Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

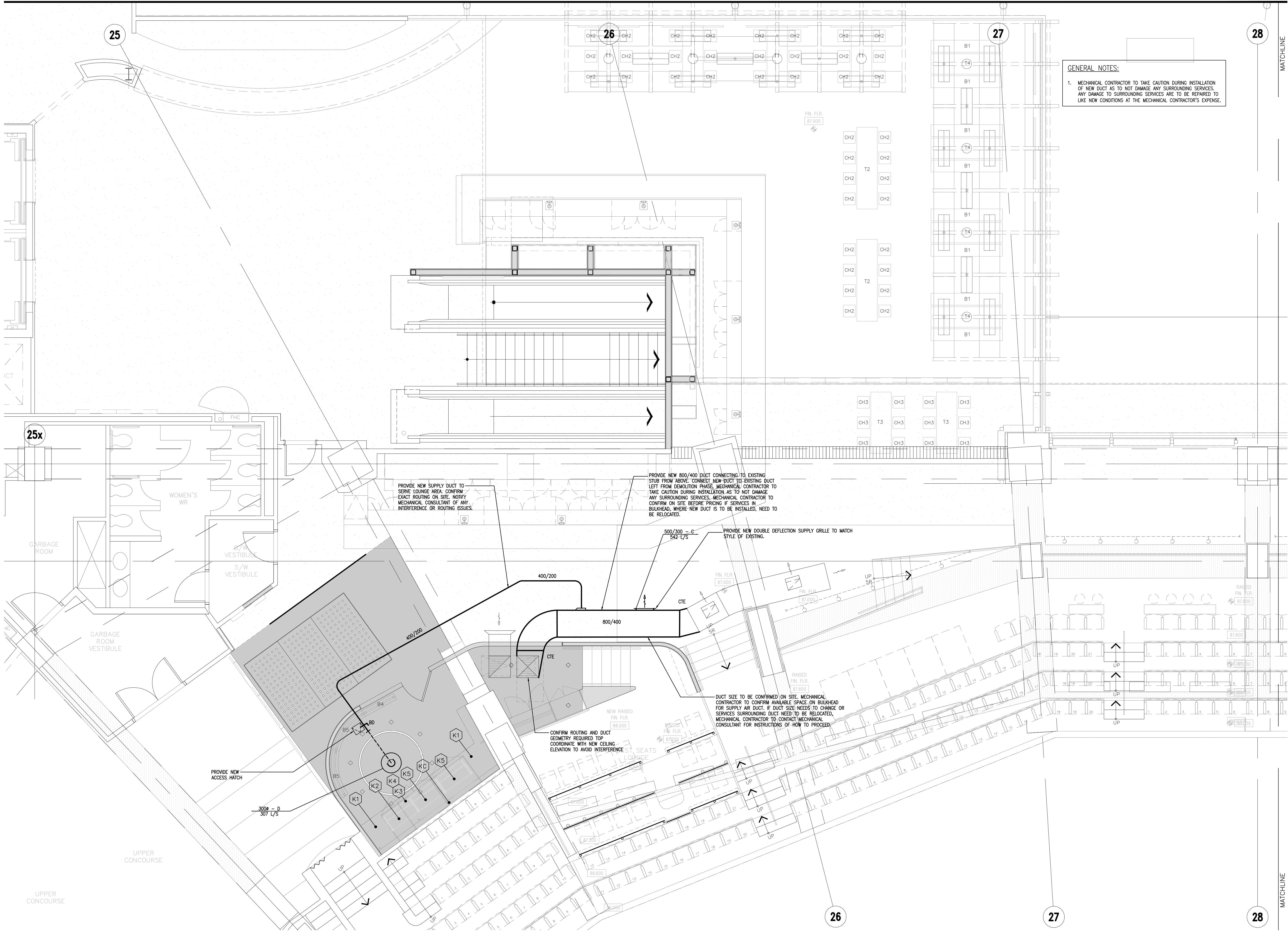
Project  
2016 F & B UPGRADES

Air Canada Centre, 40 Bay Street, Toronto, ON

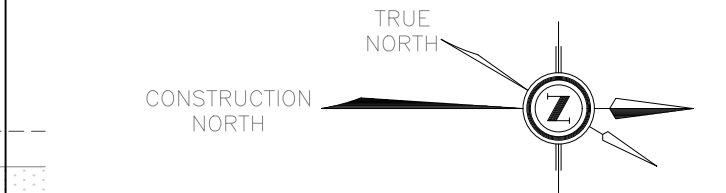
Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
CONSTRUCTION PLAN  
NORTH  
PDFP - NEW

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

M-401



Issue/Revision	Date
1. ISSUED FOR COORDINATION	10 MAY 2016
2. ISSUED FOR PRICING	17 MAY 2016



**TMP**  
THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD., TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

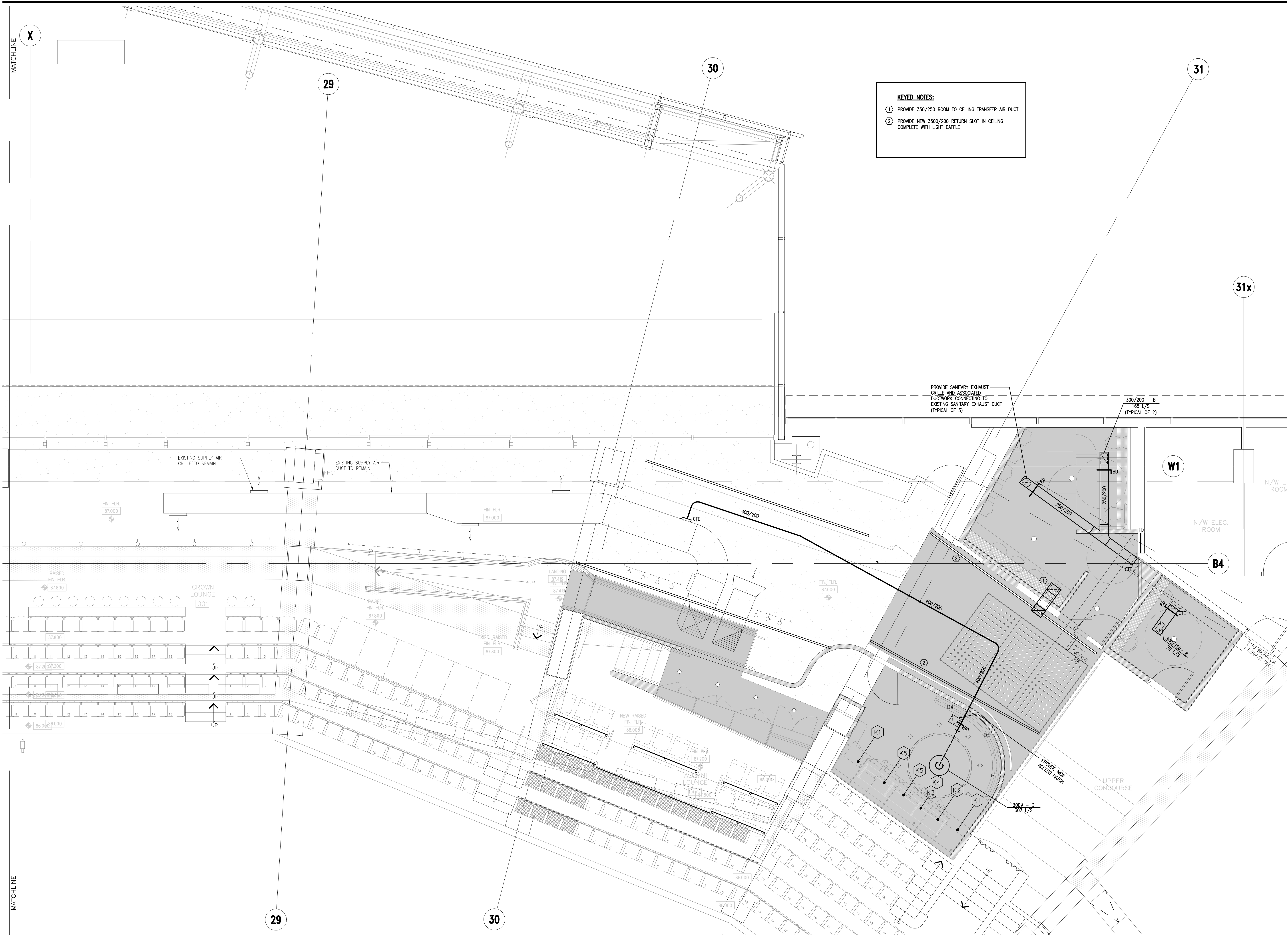
Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
CONSTRUCTION PLAN  
SOUTH  
HVAC - NEW

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

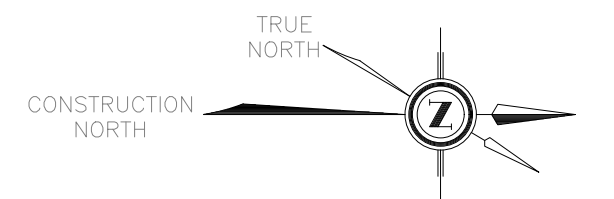
**M-500**





1 CONSTRUCTION PLAN (NORTH)  
1:50

Issue/Revision	Date
1 ISSUED FOR COORDINATION	10 MAY 2016
2 ISSUED FOR PRICING	17 MAY 2016



**TMP**  
THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD., TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

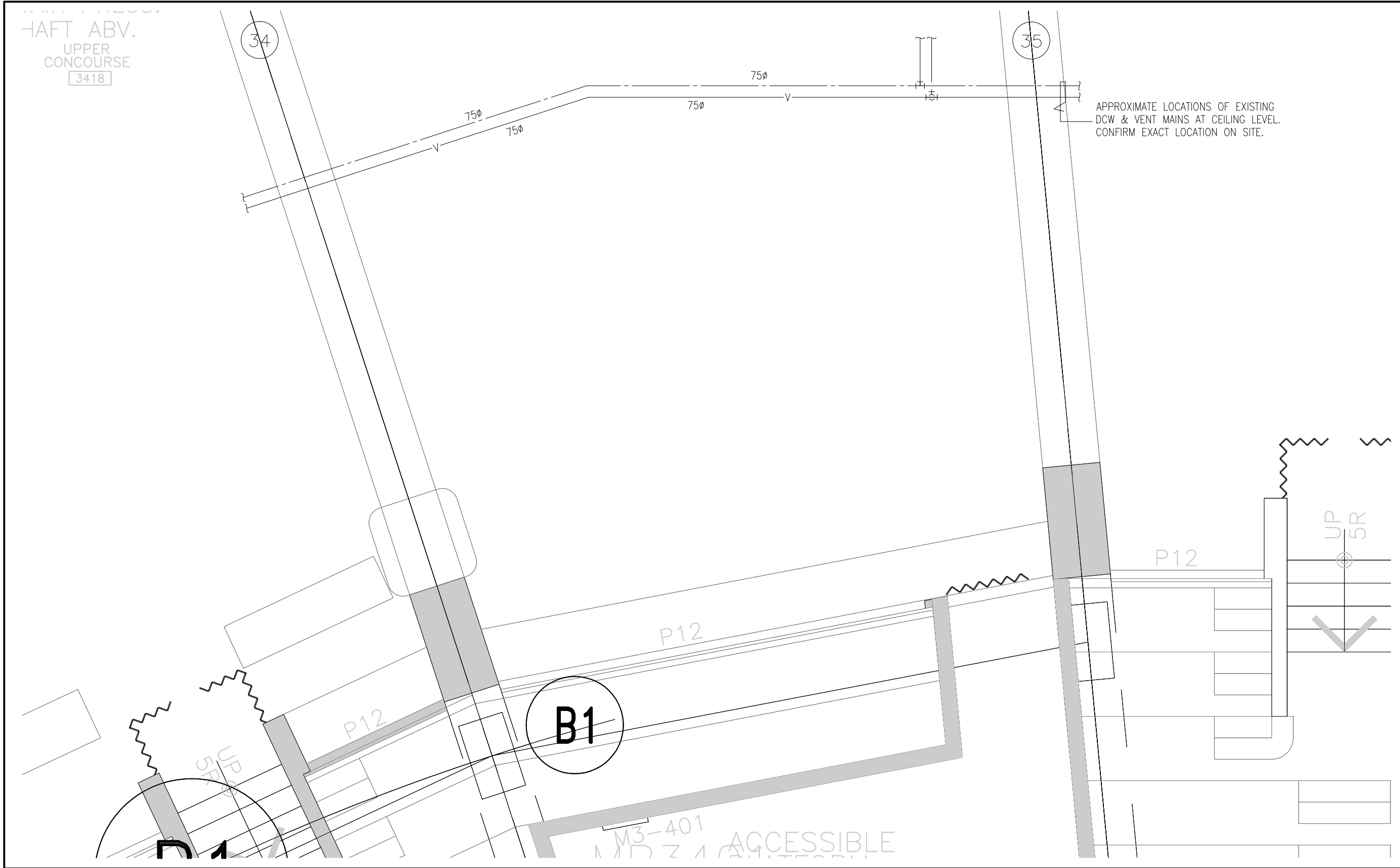
Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title  
MOLSON FAN ZONE  
Upper Concourse  
CONSTRUCTION PLAN  
NORTH  
HVAC - NEW

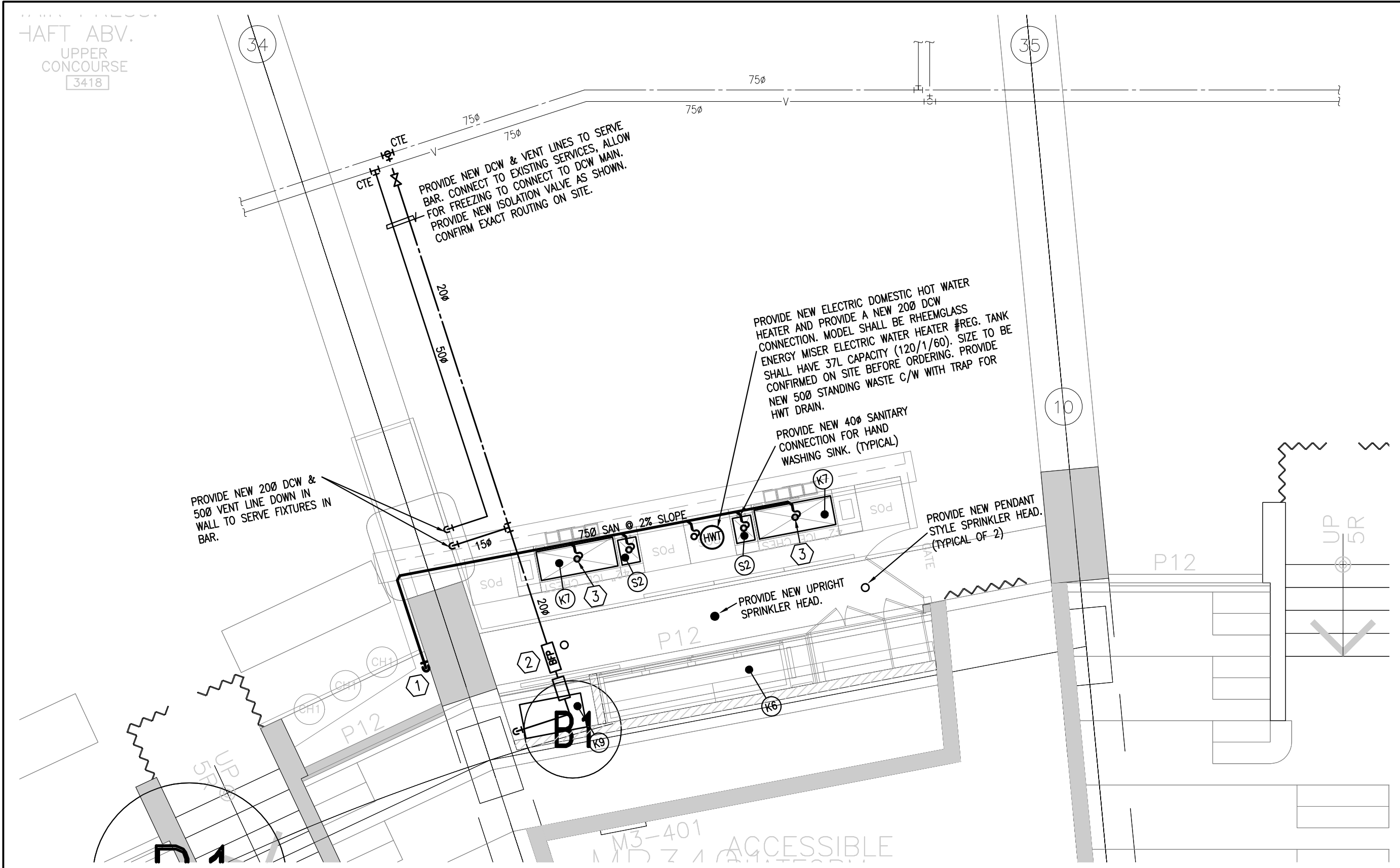
Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	
Sheet No.	

M-501

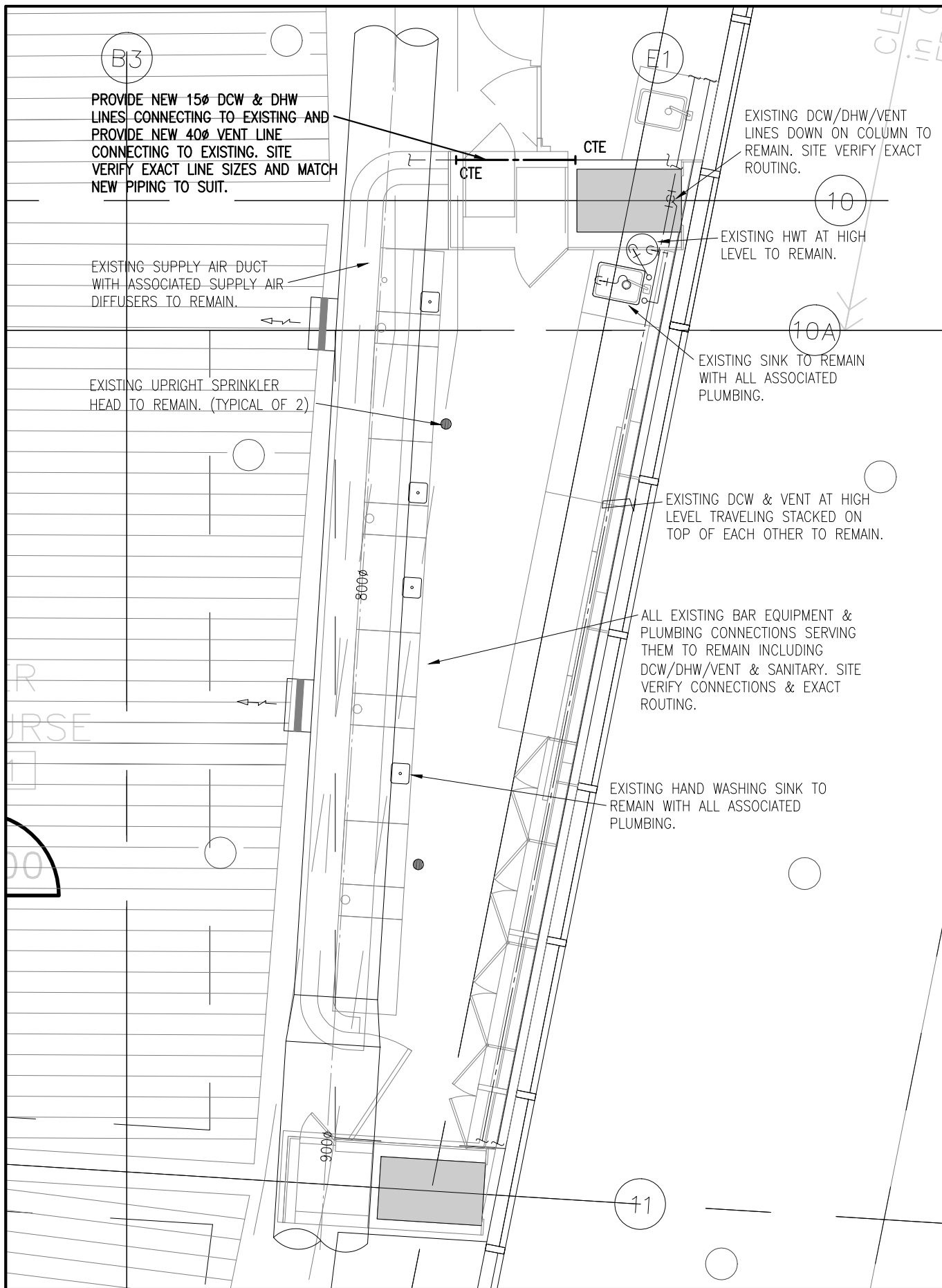




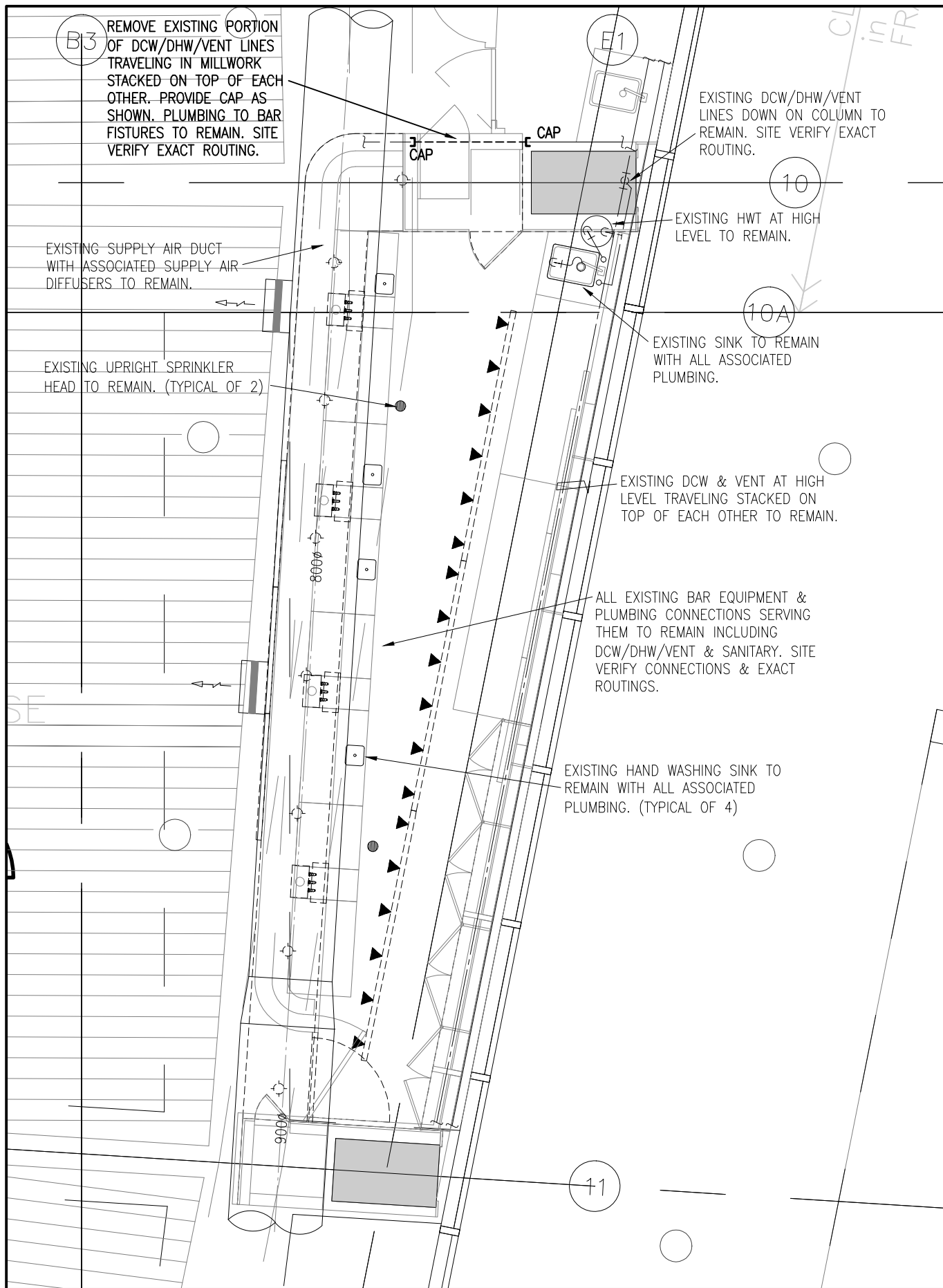
1 3RD FLOOR CONCOURSE BAR: DEMOLITION PLAN  
M-600/ 1:50



2 3RD FLOOR CONCOURSE BAR: MECHANICAL PLAN  
M-600/ 1:50



4 1ST FLOOR CONCOURSE BAR: MECHANICAL PLAN  
M-600/ 1:50



3 1ST FLOOR CONCOURSE BAR: DEMOLITION PLAN  
M-600/ 1:50

### 3RD FLOOR KEY NOTES

- 1 PROVIDE NEW 75W SANITARY LINE DOWN INTO THE CEILING OF SUITE BELOW TO SERVE BAR FIXTURES. SANITARY LINE TO BE KEPT AS TIGHT TO U/S OF SLAB AS POSSIBLE. ROUTE NEW SANITARY LINE TO SINK AT BACK OF SUITE BELOW. CONNECT NEW SANITARY TO EXISTING SANITARY SERVICES CONFIRMING EXACT ROUTING OF NEW AND EXISTING SANITARY ON SITE.
- 2 PROVIDE NEW BACK FLOW PREVENTER AND IN-LINE FILTER ON DWV BRANCH SERVING COCA-COLA SYRUP SYSTEM.
- 3 PROVIDE NEW 15W DRAIN CONNECTION TO ICE CHEST AND TERMINATE INDIRECTLY VIA STANDING WASTE ABOVE SLAB C/W WITH HUB AND TRAP. ROUTE DRAIN TO SANITARY MAIN SERVING BAR.

EQUIPMENT LEGEND					ELECTRICAL					MECHANICAL				
ITEM #	QUANTITY	DESCRIPTION	MANUFACTURER	MODEL	AMPS	KW.	VOLT.	PHASE	PLUG	HEIGHT	NOTES / REMARKS	MBTU	H.W.	C.W.
K6	1	BACK BAR REFRIGERATOR	PERLUCK	SDBS108		6.3	120	1						
K7	2	ICE CHEST	PERLUCK	TS42IC										15mm
K9	1	COCA COLA SYRUP SYSTEM	PACKAGE	28-2060							TBC			20mm
S2	2	STAINLESS STEEL HAND SINK											15mm	15mm
													40mm	STANDING WASTE



THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD., TORONTO,  
ONTARIO M2J1S5 | 416.499.8000

16-3187-660

Baldwin & Franklin Architects Inc.  
167 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail bfarch@bfarch.com

Project  
2016 F & B UPGRADES

Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title  
DIAGEO BAR 1st & 3rd  
FLOOR Concourse  
EXISTING/DEMOLITION  
AND MECHANICAL  
- DEMOLITION & NEW

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	

Sheet No.

# M-600



Issue/Revision	Date
 <del>ISSUED</del> FOR COORDINATION	12 May 2016
 ISSUED FOR PRICING	17 MAY 2016
	
	
	
	
	
	
	
	
	

## DEMOLITION KEYED NOTES

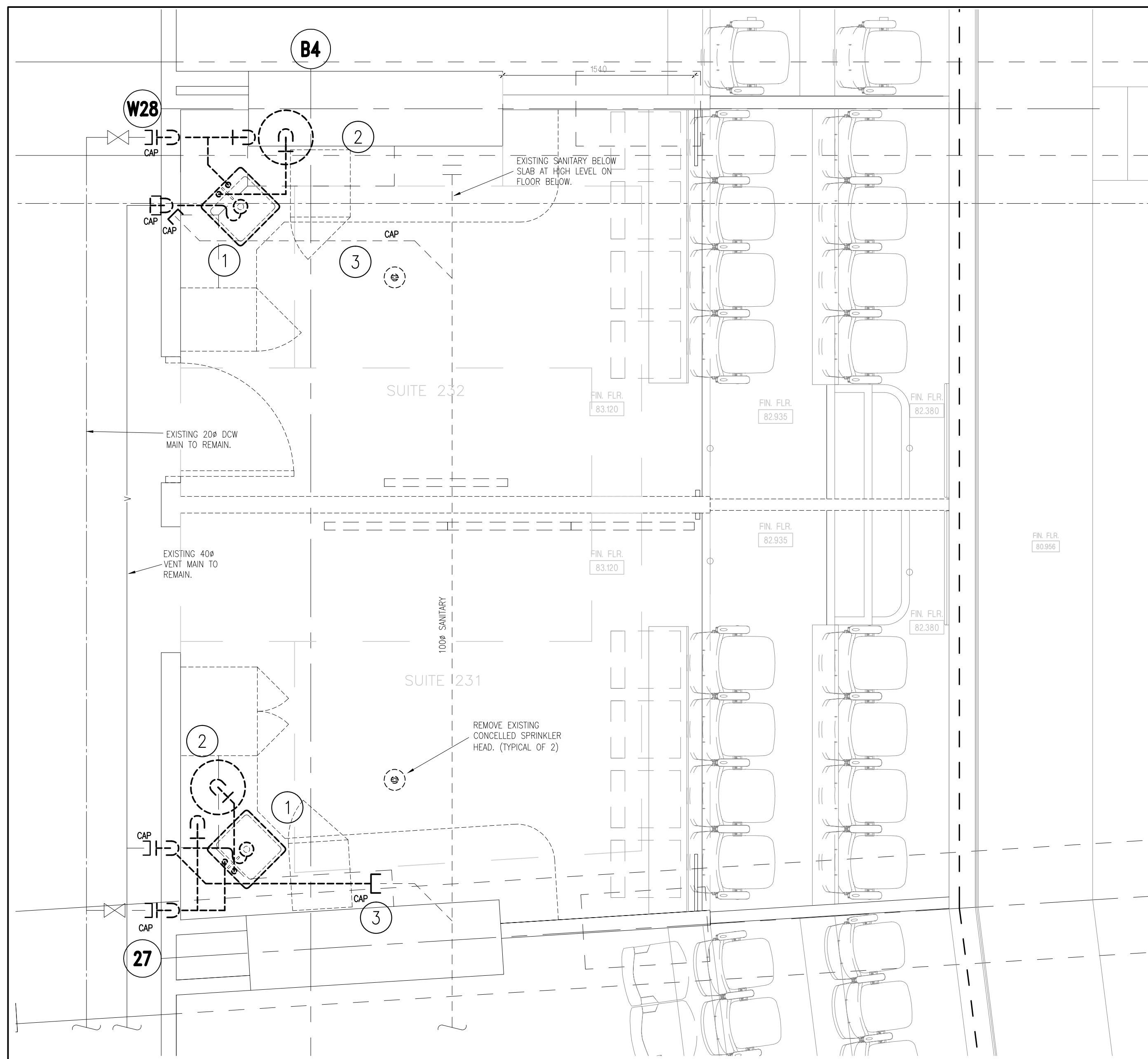
- 1 REMOVE EXISTING SINK & ALL ASSOCIATED DOW/DHW/SAN & VENT PLUMBING.  
REMOVE EXISTING PLUMBING & PROVIDE CAPS AS SHOWN.
- 2 REMOVE EXISTING HWT BELOW SINK AND ALL ASSOCIATED PLUMBING..
- 3 REMOVE EXISTING SANITARY AT HIGH CEILING ON LEVEL BELOW SERVING THE EXISTING  
SINK. CAP BACK AT MAIN. SITE VERIFY EXACT LOCATION & ROUTING OF SANITARY  
DRAINS LINES.

## NEW — GENERAL NOTES

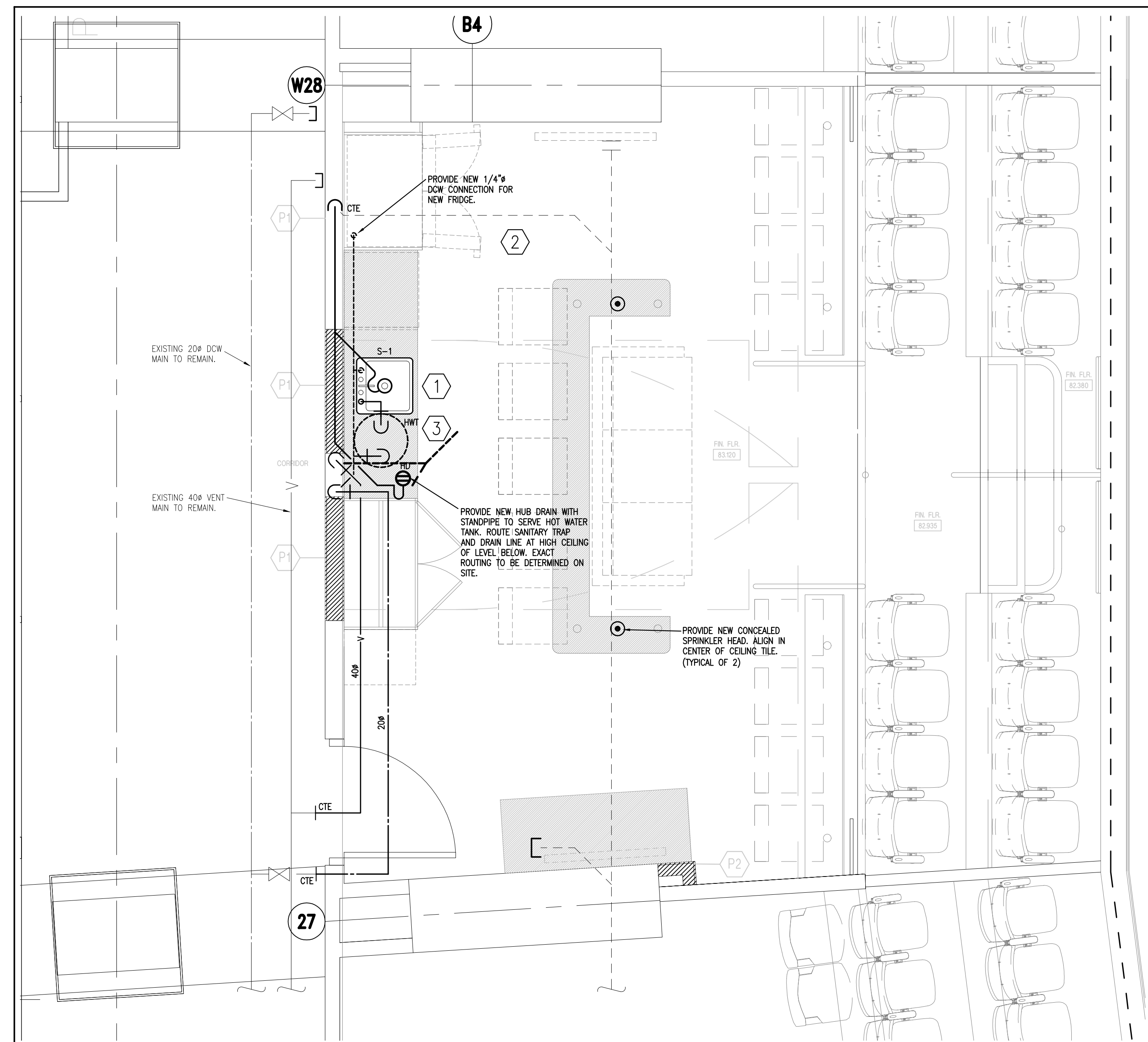
1. PROVIDE & INSTALL, INCLUDING ALL SERVICE CONNECTIONS, ALL TAGGED PLUMBING FIXTURES TO SUIT SPACES UNLESS OTHERWISE NOTED.
2. ALL PLUMBING & DRAINAGE WORK SHALL CONFORM TO OBC PART 7 & ALL APPLICABLE LOCAL BUILDING AND PLUMBING CODES & BY-LAWS.

## NEW KEYED NOTES

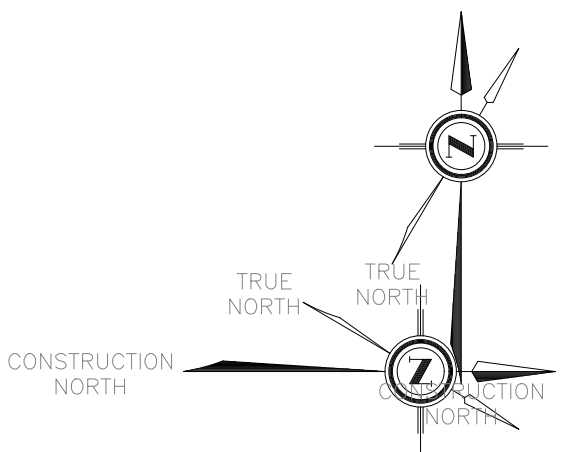
- ① PROVIDE NEW SINK 5'-1" WITH ASSOCIATED 90° DOW/DWN CONNECTION & 40" DRAIN C/W TRAP, DOWN IN WALL AND CONNECT TO EXISTING SANITARY AS SHOWN. SINK SHALL BE EQUAL TO "BLANCO PERFORMA SINK, MODEL #400841" STAINLESS STEEL, 3 1/2" STAINLESS STEEL STRAINERS, BLANCO ZIGRO SILVER LINE, SOLID SPOUT, SOLID BRASS CONSTRUCTION, CERAMIC DISK CARTRIDGE. CONSULT ARCHITECT FOR FINISH, NO ESCUTCHEON PLATE REQUIRED.
- ② PROVIDE NEW 50" SANITARY PROVISION AT HIGH CEILING ON LEVEL BELOW TO SERVE NEW SINK, CONNECT TO EXISTING MAIN AS SHOWN.
- ③ PROVIDE NEW RHEEMGLASS ENERGY WISER ELECTRIC WATER HEATER #REG BELOW SINK. TANK SHALL HAVE 37L CAPACITY, 120V/160. SIZE TO BE CONFIRMED ON SITE PRIOR TO ORDERING.



1 DEMOLITION PLAN  
1:25



2 FLOOR PLAN  
1:25



THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD, TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Waldwin & Franklin Architects Inc.  
67 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail [bfarch@bfarch.com](mailto:bfarch@bfarch.com)

2016 F &amp; B UPGRADES

Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title

ALUMNI LOUNGE  
Suites 231-232  
DEMOLITION PLAN  
FLOOR PLAN  
PDFP - DEMOLITION & NEW

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Dwg. File	

Sheet No.

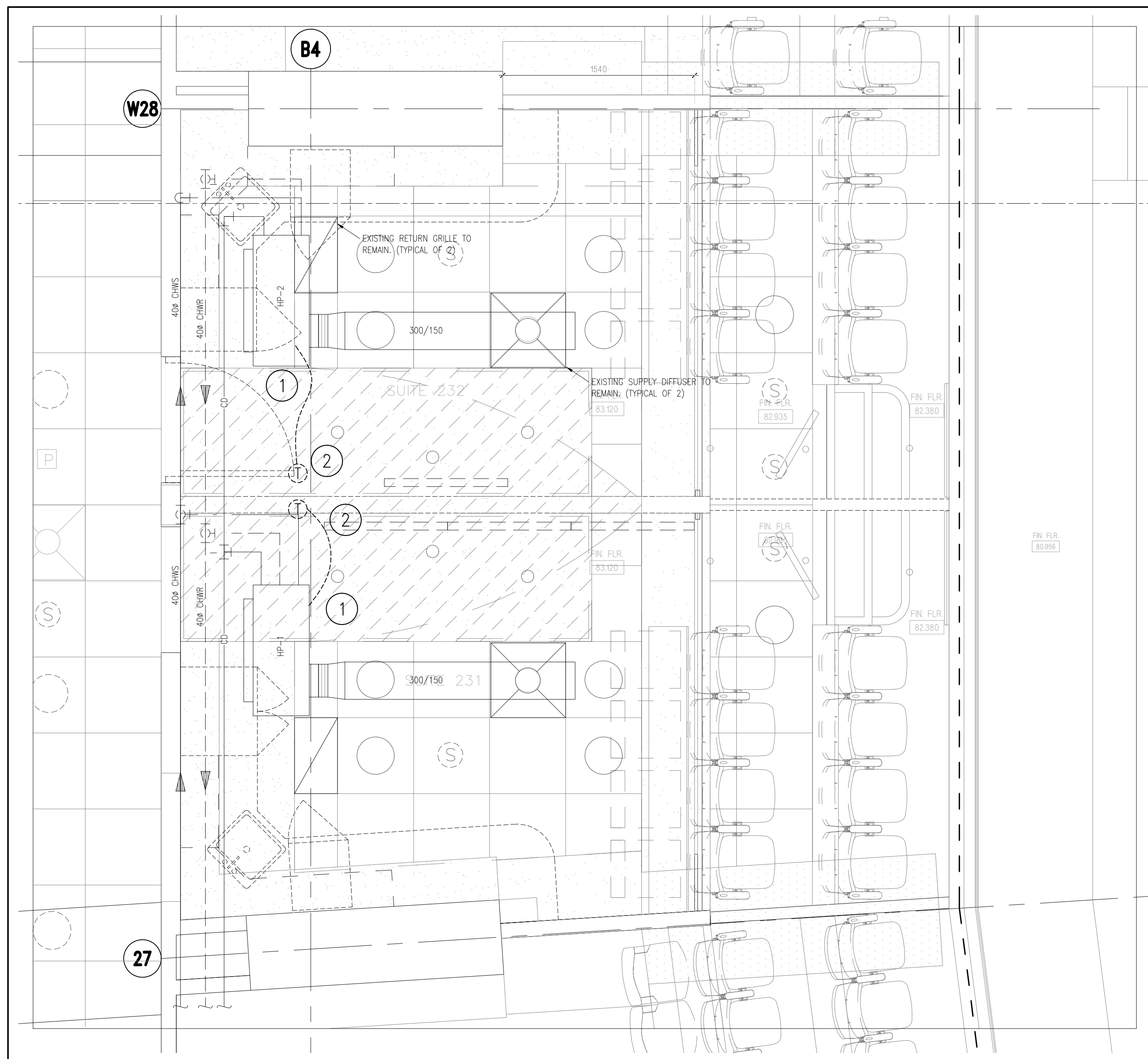
# M-700



Issue/Revision	Date
 ISSUED FOR COORDINATION	12 MAY 2016
 ISSUED FOR PRICING	17 MAY 2016
	
	
	
	
	
	
	
	
	

## DEMOLITION KEYED NOTES

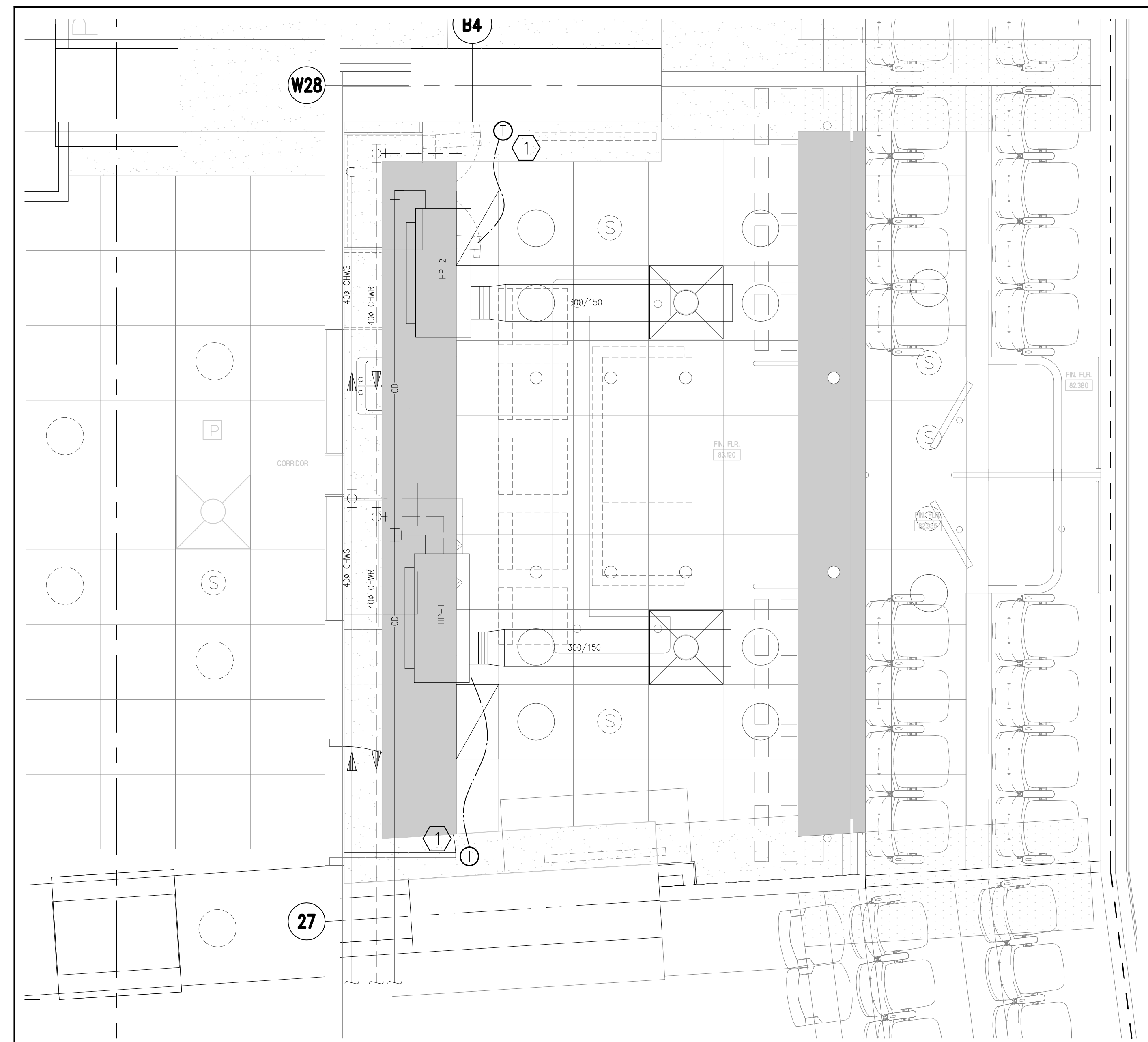
- 1 EXISTING HEAT PUMP AND ALL ASSOCIATED DUCTWORK (INCLUDING DIFFUSER) TO REMAIN. EXISTING CHWS/CHWR LINES AS WELL AS CONDENSATE DRAIN LINE TO REMAIN.
- 2 EXISTING THERMOSTAT TO BE REMOVED AND RELOCATED. SEE 2/M-504 FOR NEW LOCATION.



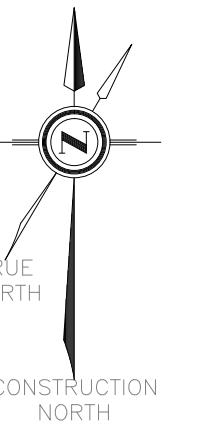
1 DEMOLITION PLAN  
1:25

NEW KEYED NOTES

- 1 RELOCATE EXISTING THERMOSTAT TO NEW LOCATION SHOWN.



2 FLOOR PLAN  
1:25



THE MITCHELL PARTNERSHIP INC.  
CONSULTING ENGINEERS

285 YORKLAND BLVD, TORONTO,  
ONTARIO M2J 1S5 | 416.499.8000

16-3187-660

Waldwin & Franklin Architects Inc.  
67 Richmond Street East  
Toronto, Ontario, Canada M5A 1N9  
Telephone (416) 364-4521  
Facsimile (416) 364-9522  
E-mail [bfarch@bfarch.com](mailto:bfarch@bfarch.com)

2016 F &amp; B UPGRADES

Air Canada Centre, 40 Bay Street, Toronto, ON

Sheet Title

ALUMNI LOUNGE  
Suites 231-232  
DEMOLITION PLAN  
FLOOR PLAN  
HVAC - DEMOLITION & NEW

Date	2016-02-23
Scale	AS NOTED
Project	1601
Drawn	CAD
Checked	AP
Wg. File	

Sheet No.

# M-800

