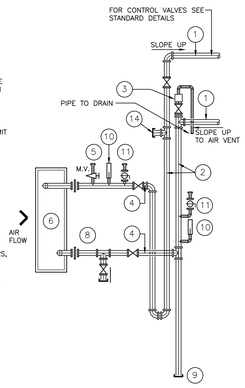
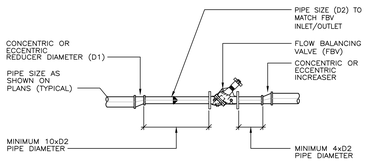
NOTES:

1. SUPPLY AND RETURN BRANCHES FROM MAINS. SIZE SHOWN ON DRAWINGS.
2. VERTICAL SUPPLY AND RETURN HEADERS FULL SIZE.
3. AUTOMATIC AIR ELIMINATOR.
4. BRANCH TO COIL. SAME SIZE AS COIL INLET AND OUTLET CONNECTIONS.
5. AIR VENT AND FLUSHING CONNECTION WITH 3/4"(19) HOSE END.
6. WATER COIL. PROVIDE ADEQUATE SPACE FOR COIL REMOVAL. INSTALL COIL WITH SLOPE AS RECOMMENDED BY MANUFACTURER.
7. DRAIN VALVE. 3/4"(19) HOSE END.
8. INSTALL UNIONS OR FLANGES TO PERMIT CLEAR COIL WITHDRAWL SPACE.
9. SCALE POCKET WITH REMOVABLE CAP.
10. THERMOMETER
11. PLUGGED 1/4"(6) PRESSURE GAUGE CONNECTION.
12. COILS MUST BE PIPED FOR COUNTERFLOW. I.E. WATER ENTERS AIR LEAVING SIDE OF COIL. COLDEST WATER TO COLDEST AIR AND WARMEST WATER TO WARMEST AIR.
13. FOR INDIVIDUAL ROOM REHEAT COILS, FAN COIL UNITS, CABINET UNIT HEATERS, AND OTHER SIMILAR COILS DELETE ITEM 5, 7, 10, 11 & 14
14. AIR DRYER CONNECTION – 2" (50mm) CAPPED CONNECTION

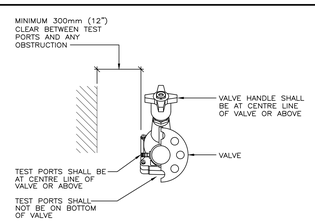


10 / TM-0.7 WATER COIL CONNECTION (MSD-765.02)



NOTE:

SIZE IN ACCORDANCE WITH THE WATER FLOW RATE (LPM/GPM) AT 3kPa (0.432psi) DIFFERENTIAL PRESSURE AT 100% FULL OPEN POSITION.



7 / TM-0.7 TYPICAL FLOW BALANCING VALVE INSTALLATION (MSD-705.08)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCT UP OR FROM ABOVE		ACOUSTICALLY LINED TRANSFER AIR DUCT
	SUPPLY DUCT DOWN OR FROM BELOW		SILENCER
	RETURN OR EXHAUST DUCT UP OR FROM ABOVE	1 CTS	CROSSTALK SILENCER
	RETURN OR EXHAUST DUCT DOWN OR FROM BELOW		DUCT WITH MINIMUM CLEARANCE FIRE RATED ENCLOSURE
	ROUND DUCT UP OR FROM ABOVE	F/D	DUCT WITH SLEEVE, INSULATION AND DAMPER
	ROUND DUCT DOWN OR FROM BELOW	CAP	CAPPED CONNECTION
	ACOUSTIC LINED DUCT		INSULATION DUCT
	FLEXIBLE CONNECTION	RISE UP	RISE IN DUCT
	SQUARE ELBOW DUCT WITH TURNING VANE	SLOPE DN	DROP IN DUCT
	RADIUS ELBOW WITH TURNING VANES	S.B.	SOUND BAFFLE
	AXIAL FAN/INLINE FAN MIXED FLOW OR CENTRIFUG	MOD. DMPR	PROPELLER FAN WITH PROTECTIVE SCREEN
			CENTRIFUGAL FAN (ONLY IN SCHEMATIC)
DIFFUSER GRILLE OR REGISTER TYPE; IMPERIAL: CFM.[INS.] METRIC: L/s.[mm]	P4 150ø 300; NECK OR FACE SIZE (MM); AIR FLOW (L/S)	LINEAR SLOT DIFFUSER; AIR FLOW (L/S)	S4 1500X1200mm 300; IMPERIAL: CFM.[INS.] METRIC: L/s.[mm]; NECK SIZE AND LINEAR DIFFUSER LENGTH (MM)
	ROUND SUPPLY DIFFUSER		LINEAR SUPPLY AIR DIFFUSER C/W FLEXIBLE DUCT
	DUCTED RETURN OR EXHAUST REGISTER OR GRILLE		LIGHT TROFFER DIFFUSER TOP INLET C/W FLEXIBLE DUCT
	SQUARE OR RECTANGULAR DIFFUSER		LIGHT TROFFER DIFFUSER SIDE INLET C/W FLEXIBLE DUCT
	NON DUCTED RETURN OR EXHAUST GRILLE		DUCT MOUNTED SUPPLY OR RETURN GRILLE
	NON DUCTED ROUND RETURN OR EXHAUST GRILLE		LINEAR SUPPLY OR RETURN GRILLE
	SQUARE PLAQUE DIFFUSER		SPIN-IN CONNECTION C/W BALANCING DAMPER AND FLEX DUCT
	DIFFUSERS WITH BLANK-OFF PORTION (QTY SHOWN)		SPIN-IN CONNECTION C/W BALANCING DAMPER AND RIGID DUCT

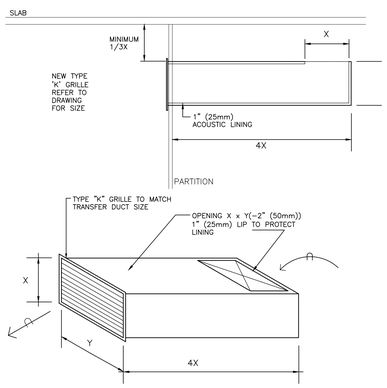
NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

4 / TM-0.7 AIR HANDLING SYMBOLS (MSD-012.10)

MECHANICAL DRAWING LIST

SHEET NUMBER	SHEET TITLE	SCALE
TM-0.1	MECHANICAL DRAWING LIST, LEGENDS, AND DETAILS	N.T.S.
TM-0.2	MECHANICAL DETAILS	1:100
TM-2.1.1	2ND LEVEL – PHASE 1 MECHANICAL DEMOLITION LAYOUT	1:100
TM-2.2.1	2ND LEVEL – PHASE 1 PLUMBING AND PIPING LAYOUT	1:100
TM-2.3.1	2ND LEVEL – PHASE 1 H.V.A.C. LAYOUT	1:100
TM-2.4.1	2ND LEVEL – PHASE 1 FIRE PROTECTION LAYOUT	1:100
TM-3.1	3RD LEVEL – PHASE 1 MECHANICAL DEMOLITION LAYOUT	1:100
TM-3.2	3RD LEVEL – PHASE 1 PLUMBING AND PIPING LAYOUT	1:100
TM-3.2	3RD LEVEL – PHASE 1 H.V.A.C. LAYOUT	1:100
TM-3.4	3RD LEVEL – PHASE 1 FIRE PROTECTION LAYOUT	1:100

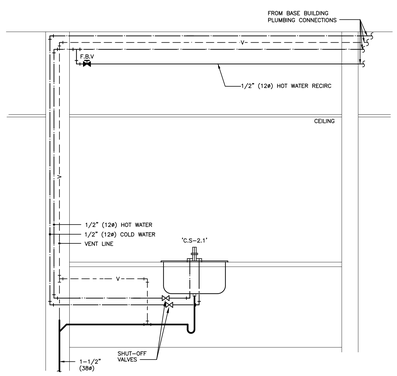
1 / TM-0.7 MECHANICAL DRAWING LIST



NOTES:

TOTAL FREE AREA NOTED ON DRAWINGS. CONTRACTOR TO PROVIDE MULTIPLE TRANSFER AIR DUCTS OF SMALLER DIMENSIONS TO SUIT SITE CONDITIONS AS REQUIRED

11 / TM-0.7 ACOUSTICALLY LINED TRANSFER DUCT WITH SIDEWALL GRILLE



THIS DETAIL CONTAINS THE FOLLOWING INFORMATION:
HUB DRAIN BELOW COUNTER
FILTER
CAP FOR COFFEE

8 / TM-0.7 COUNTER SINK CS-2.1 DETAIL

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
6 / M-01	DETAIL NUMBER; DRAWING NUMBER	12 / M-01	SECTION NUMBER; DRAWING NUMBER
4	REVISION NUMBER		REVISION BUBBLE
OR	ELBOWS		PIPING SERVICE CONTINUES
	TEE		REFER TO STANDARD DETAIL DRAWINGS FOR ADDITIONAL REQUIREMENTS OF EQUIPMENT NOTED
	BRANCH OFF BOTTOM OF MAIN		VENT PIPE REDUCER
	BRANCH OFF TOP OF MAIN	CFM	AIR QUANTITY C.F.M. (L/s)
	DIRECTION OF FLOW		NAMING OF EXISTING EQUIPMENT: EX-FC-12-01 — DENOTES EXISTING; EQUIPMENT DESIGNATION; FLOOR NUMBER; SEQUENTIAL NUMBER

NOTE: EXISTING EQUIPMENT, PIPING, VALVES, DUCTWORK SHOWN LIGHT TO REMAIN

	EXISTING DUCT, FLEX, DUCT AND AIR SUPPLY TO REMAIN	EX	EXISTING CONCEALED SPRINKLER HEAD & PIPING TO REMAIN
T T S	EXISTING ELECTRIC/PNEUMATIC THERMOSTAT/TEMPERATURE SENSOR AND SPEED CONTROL SWITCH TO REMAIN	EX	EXISTING PENDANT SPRINKLER HEAD & PIPING TO REMAIN
EX	EXISTING UPRIGHT SPRINKLER HEAD & PIPING TO REMAIN	EX	EXISTING SIDEWALL OR WINDOW SPRINKLER HEAD & PIPING TO REMAIN

NOTE: EXISTING EQUIPMENT SHOWN HATCHED TO BE REMOVED AND/OR RELOCATED.

	EXISTING DUCT, FLEX, DUCT AND AIR SUPPLY TO BE REMOVED	EX	EXISTING CONCEALED SPRINKLER HEAD TO BE REMOVED/RELOCATED
	EXISTING ELECTRIC/PNEUMATIC THERMOSTAT/TEMPERATURE SENSOR AND SPEED CONTROL SWITCH TO BE REMOVED/RELOCATED	EX	EXISTING PENDANT SPRINKLER HEAD TO BE REMOVED/RELOCATED
EX	EXISTING UPRIGHT SPRINKLER HEAD TO BE REMOVED/RELOCATED	EX	EXISTING SIDEWALL OR WINDOW SPRINKLER HEAD TO BE REMOVED/RELOCATED

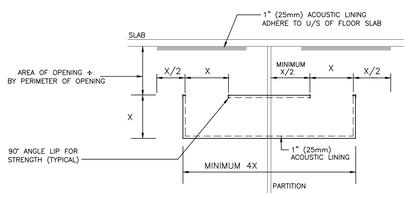
NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

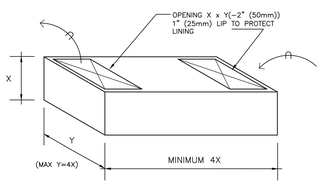
5 / TM-0.7 GENERAL SYMBOLS AND ABBREVIATIONS (MSD-012.13)

SYMBOL	DESCRIPTION
	2 WAY CONTROL VALVE
	3 WAY CONTROL VALVE
	HIGH PRESSURE CONDENSATE
	6 WAY CONTROL VALVE ELECTRIC
	6 WAY CONTROL VALVE TYPE 1

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

2 / TM-0.7 MECHANICAL PIPING (MSD-012.08)

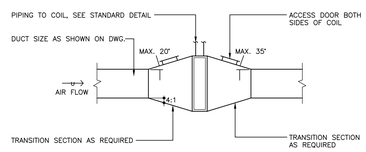




NOTES:

TOTAL FREE AREA NOTED ON DRAWINGS. CONTRACTOR TO PROVIDE MULTIPLE TRANSFER AIR DUCTS OF SMALLER DIMENSIONS TO SUIT SITE CONDITIONS AS REQUIRED

12 / TM-0.7 ACOUSTICALLY LINED TRANSFER DUCT (MSD-840.12)



COIL INSTALLATION

NOTE:

PROVIDE ADEQUATE SPACE FOR COIL REMOVAL. INSTALL COIL WITH SLOPE AS RECOMMENDED BY MANUFACTURER.

9 / TM-0.7 DUCT COIL INSTALLATION (MSD-840.09)

SYMBOL	DESCRIPTION
F.D.	FLOOR DRAIN SIZE AS NOTED REFER TO SPECIFICATION FOR TYPES
F.F.D.	FUNNEL FLOOR DRAIN SIZE AS NOTED REFER TO SPECIFICATION FOR TYPES
C.O.	UPTURNED CLEANOUT
C.O.	HORIZONTAL CLEANOUT
S	FLOOR DRAIN FROM ABOVE WITH TRAP
S	FUNNEL FLOOR DRAIN FROM ABOVE WITH TRAP
W	WATER CLOSET AS NOTED REFER TO SPECIFICATION FOR TYPES
CS	SINGLE COMPARTMENT KITCHEN SINK
MS	MOP SINK
CS	DOUBLE COMPARTMENT SINK
DF	DRINKING FOUNTAIN
U	URINAL
L	WALL HUNG LAVATORY
SP	WET SPRINKLER
DSP	DRY SPRINKLER
F.H.C.–x	FIRE HOSE CABINET AND TYPE
S.V.C.–x	SPRINKLER SHUT-OFF VALVE CABINET AND TYPE
F.E.–x	FIRE EXTINGUISHER AND TYPE
F.E.C.–x	FIRE EXTINGUISHER CABINET AND TYPE
F.R.	FIRE REEL
WM	WATER METER
BFP	BACK FLOW PREVENTOR

SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER (DOM. COLD WATER)
	DOMESTIC HOT WATER (DOM. HOT WATER)
	DOMESTIC HOT WATER RECIRCULATION (DOM. HOT WATER RECIRC.)
T	TEMPERED DOMESTIC HOT WATER
G	NATURAL GAS
GV	NATURAL GAS VENT
V	VENT
SAN	SANITARY ABOVE GRADE OR FLOOR
SAN(B)	SANITARY BELOW GRADE OR FLOOR
	GATE OR ISOLATION VALVE (REFER TO SPECIFICATION)
	GLOBE VALVE
	BALL VALVE
	PENDANT SPRINKLER HEAD
DP	DRY PENDANT SPRINKLER HEAD
	UPRIGHT SPRINKLER HEAD
	CONCEALED SPRINKLER HEAD
NF	NON-FREEZE SPRINKLER HEAD
HT	HIGH TEMPERATURE SPRINKLER HEAD
*	CHEMICAL SPRINKLER HEAD
	SIDEWALL SPRINKLER HEAD
W	WINDOW SPRINKLER HEAD

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

6 / TM-0.7 GENERAL SYMBOLS AND ABBREVIATIONS (MSD-012.14)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
HWS	HEATING WATER SUPPLY	FOS	FUEL OIL SUPPLY
HWR	HEATING WATER RETURN	FOR	FUEL OIL RETURN
CHS	CHILLED WATER SUPPLY	EFOV	EMERGENCY FUEL OIL VENT
CHR	CHILLED WATER RETURN	FOV	FUEL OIL VENT
GLS	GLYCOL SUPPLY	FOF	FUEL OIL FILL
GLR	GLYCOL RETURN	PC	PUMPED STEAM CONDENSATE
GLHS	GLYCOL HEATING SUPPLY	RS	REFRIGERATION SUCTION
GLHR	GLYCOL HEATING RETURN	RL	REFRIGERATION LIQUID
GLCS	GLYCOL COOLING SUPPLY	RHG	REFRIGERATION HOT GAS
GLCR	GLYCOL COOLING RETURN	DTS	DUAL TEMPERATURE SUPPLY
CDS	CONDENSER WATER SUPPLY	DTR	DUAL TEMPERATURE RETURN
CDR	CONDENSER WATER RETURN		BUCKET TYPE STEAM TRAP
	LOW PRESSURE STEAM		FLOAT AND THERMOSTAT TYPE STEAM TRAP
	MEDIUM PRESSURE STEAM	S.V.B.	STEAM VACUUM BREAKER
	HIGH PRESSURE STEAM	TEV	REFRIGERATION THERMAL EXPANSION VALVE
	LOW PRESSURE CONDENSATE	SLV	REFRIGERATION SOLENOID LIQUID VALVE
	MEDIUM PRESSURE CONDENSATE	RFD	REFRIGERATION FILTER DRYER
	HIGH PRESSURE CONDENSATE		6 WAY CONTROL VALVE ELECTRIC
CV	2 WAY CONTROL VALVE		6 WAY CONTROL VALVE TYPE 1
CV	3 WAY CONTROL VALVE		

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

3 / TM-0.7 AIR HANDLING SYMBOLS (MSD-012.09)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
F/D	FIRE DAMPER	SM/D	SMOKE DAMPER
M.O.D.	MOTOR OPERATED DAMPER	P.S.D.	POSITIVE SEAL DAMPER
M.D.	MANUAL DAMPER	B.D.D.	GRAVITY OR BACKDRAFT DAMPER
B.D.	BALANCING DAMPER	SP/D	SPLITTER DAMPER
C.S.F/D	COMBINATION SMOKE AND FIRE DAMPER	R.B.D.	REMOTE OPERATED BALANCING DAMPER
	VOLUME EXTRACTOR		

V.A.V. AND F.P.V.A.V. TAG: V.A.V. BOX TYPE — A; 0 / 1200 — MIN. FLOW (L/s) / MAX. FLOW (L/s); IMPERIAL: CFM.[INS.] METRIC: L/s.[mm]

MIN. PRIMARY FLOW / FAN POWERED V.A.V. BOX TYPE — C; 120/1000 / 1100 — MAX. PRIMARY FLOW (L/s); SECONDARY FLOW (L/s); IMPERIAL: CFM.[INS.] METRIC: L/s.[mm]; RHC – REHEAT COIL CAPACITY (KW)

	V.A.V. BOX (VARIABLE AIR VOLUME)		FAN POWERED BOX C/W RETURN AIR SILENCER OR ACOUSTICALLY LINED RETURN AIR
	V.A.V. BOX WITH ATTENTUATOR		INDUCTION V.A.V. BOX
	V.A.V. BOX WITH REHEAT COIL		PRESSURE INDEPENDENT AIR VALVE
	V.A.V. BOX WITH REHEAT COIL AND ATTENTUATOR		

HEATING ELEMENT TAG: A 1200W / 1944 — HEATING CAPACITY; ACTIVE ELEMENT LENGTH; ENCLOSURE TYPE

			DUCT COIL
U.H.–1	HORIZONTAL UNIT HEATER	R–X	RADIATION HEATING RISER NUMBERS (S=SUPPLY AND R=RETURN)
U.H.–2	DOWN BLAST UNIT HEATER		WALL FIN ELEMENT IN CONTINUOUS ENCLOSURE
	RADIANT HEATING PANEL		

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

1 / TM-0.7 MECHANICAL DRAWING LIST (MSD-012.07)

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100119597
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 F 416 487 9104 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

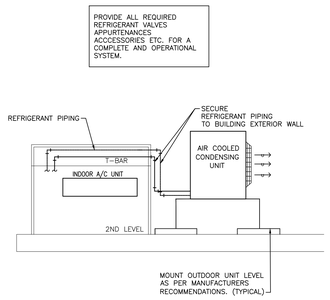
LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

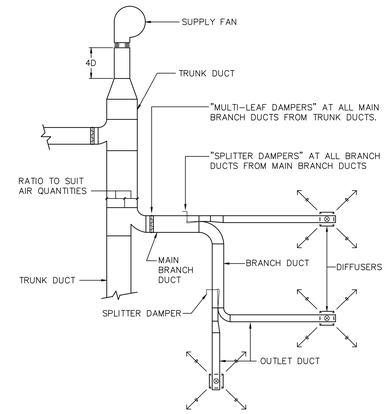
DRAWING TITLE:
MECHANICAL DRAWING LIST, LEGENDS, AND DETAILS

DATE: 2021-04-20
SCALE: N.T.S.
DRAWING No: TM–0.1

10 TM-0.2 NOT USED



7 TM-0.2 REFRIGERATION SYSTEM DETAIL

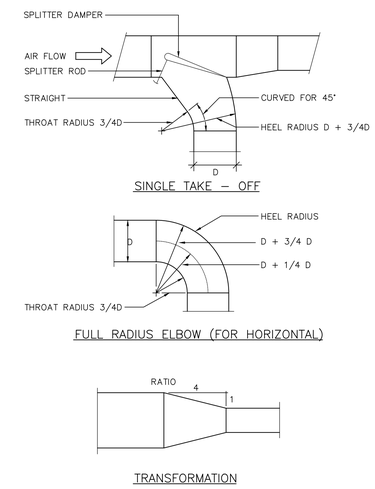


RETURN AND EXHAUST SYSTEMS TO BE AS SUPPLY SYSTEM SHOWN EXCEPT ALL SPLITTER DAMPERS TO BE REPLACED BY MULTI-LEAF VOLUME CONTROL DAMPERS IN BRANCH DUCTS

DEFINITIONS

TRUNK DUCT: -SERVING TWO OR MORE MAIN BRANCH DUCTS
MAIN BRANCH DUCT: -SERVING TWO OR MORE BRANCH DUCTS
BRANCH DUCTS: -SERVING TWO OR MORE DIFFUSERS
OUTLET DUCTS: -SERVING ONE DIFFUSER

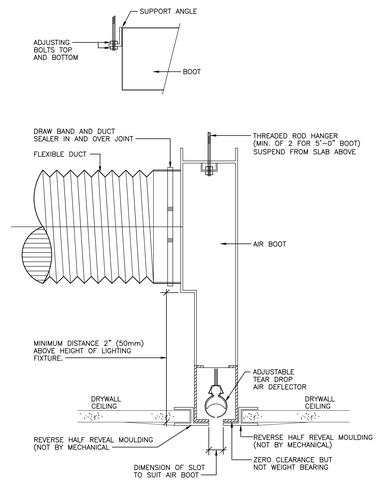
4 TM-0.2 BALANCING DAMPERS (MSD-840.03)



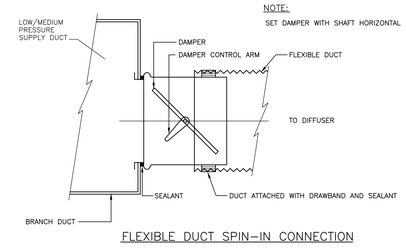
1 TM-0.2 DUCT DETAILS (MSD-840.05)

11 TM-0.2 NOT USED

8 TM-0.2 NOT USED



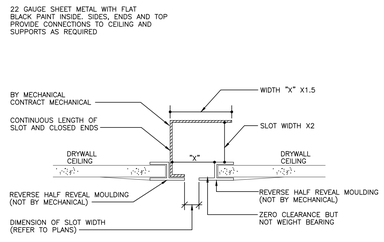
5 TM-0.2 AIR BOOT IN DRYWALL CEILING (MSD-870.02)



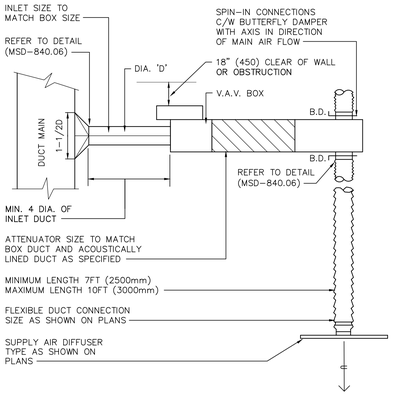
2 TM-0.2 FLEXIBLE DUCT CONNECTIONS (MSD-840.06)

12 TM-0.2 NOT USED

9 TM-0.2 NOT USED



6 TM-0.2 RETURN AIR TRANSFER SLOT IN DRYWALL CEILING WITH SIGHT BAFFLE (MSD-870.03)



3 TM-0.2 TYPICAL V.A.V. BOX INSTALLATION (MSD-840.04)

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100115697
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 / 416 487 9104 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

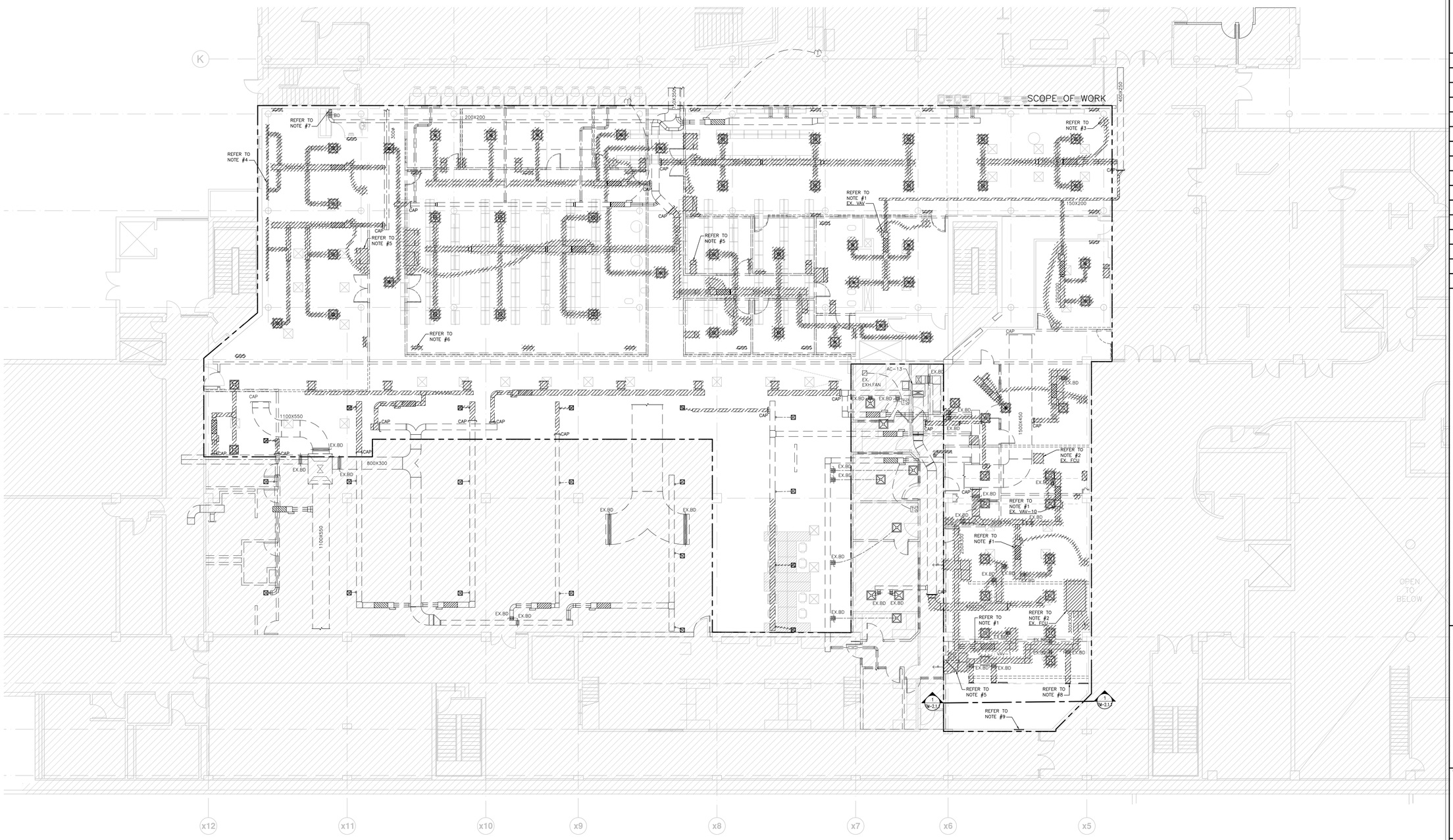
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

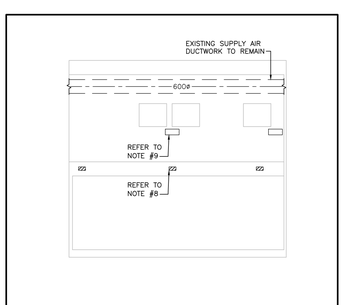
LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
MECHANICAL DETAILS

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-0.2





1 (TM-2.1) SECTION 1:75

GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. REMOVE EXISTING VAV BOX COMPLETE WITH ALL EXISTING HANGERS, SUPPORTS, ASSOCIATED RIGID DUCTS/FLEX DUCTS, DIFFUSERS, CONDUITS, CONTROL WIRING ETC. ELECTRICAL SERVICE DISCONNECTION BY THE ELECTRICAL DIVISION. CAP SUPPLY AIR DUCTWORK AS CLOSE TO MAIN AS INDICATED. PRICE IN TENDER FOR THE REMOVAL OF 250ø VAV BOX. (TYPICAL)
2. REMOVE EXISTING FAN COIL UNIT COMPLETE WITH ALL EXISTING HANGERS, SUPPORTS, DUCTS, CONTROLS, ETC. ELECTRICAL SERVICE DISCONNECTION BY THE ELECTRICAL DIVISION.
3. REMOVE EXISTING PNEUMATIC THERMOSTAT COMPLETE WITH CONTROL WIRING AND PNEUMATIC TUBING. (TYPICAL)
4. REMOVE EXISTING PERIMETER LINEAR SLOT DIFFUSER COMPLETE WITH ASSOCIATED RIGID/FLEX DUCTS AND RETURN AIR SLOT WITH Z-BAFFLE ABOVE AS SHOWN.
5. REMOVE EXISTING ACOUSTICALLY LINED TRANSFER AIR DUCT AS INDICATED. PRICE IN TENDER FOR THE REMOVAL OF 500X200 ACOUSTICALLY LINED TRANSFER AIR DUCT. (TYPICAL)
6. REMOVE EXISTING 600X150 RETURN AIR GRILLE AS INDICATED. (TYPICAL)
7. REMOVE EXISTING 200X200 SANITARY EXHAUST AIR GRILLE AS INDICATED. EXISTING 200X200 SANITARY EXHAUST AIR DUCT TO REMAIN.
8. PATCH AND REPAIR WALL WHERE SIDEWALL AIR TERMINALS ARE BEING REMOVED TO MATCH EXISTING CONDITIONS. PATCH AND REPAIR WORK TO BE COORDINATED ON SITE WITH ARCHITECTURAL DIVISION. REFER TO DETAIL #1/TM-2.1.1 (TYPICAL)
9. EXISTING RETURN AIR GRILLE TO REMAIN. CONTRACTOR TO VERIFY GRILLE SIZE ON SITE. TYPICAL OF 3.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100116007
15/11/2008
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Shepard Ave. East, Toronto On, M2N 6N5
416 487 8151 F 416 487 9104 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expressses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

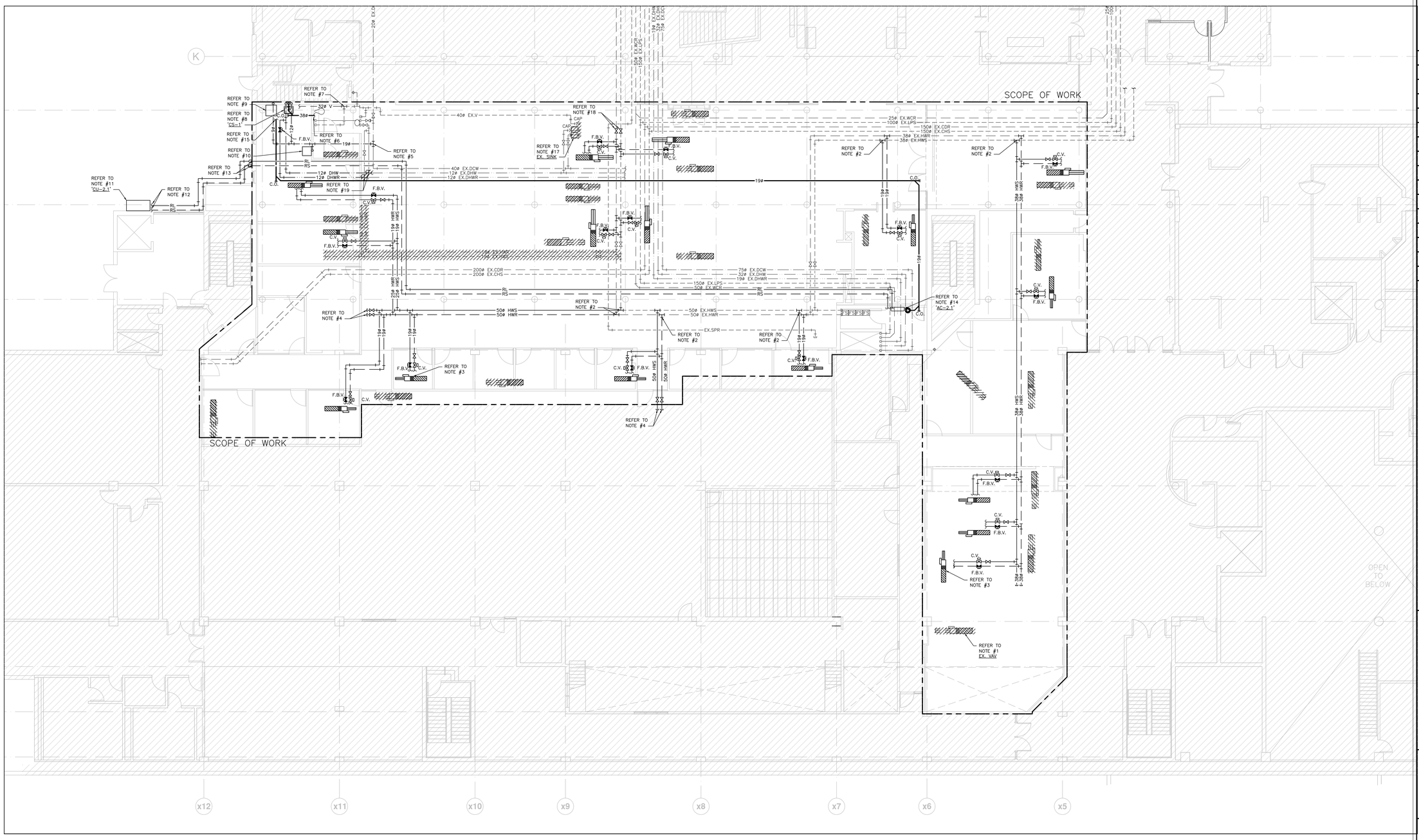
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
2ND LEVEL – PHASE 1 MECHANICAL DEMOLITION LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-2.1.1



GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. REMOVE EXISTING VAV BOX COMPLETE WITH HEATING WATER SUPPLY AND RETURN PIPING. CAP HEATING WATER SUPPLY AND RETURN AS CLOSE TO SOURCE AS POSSIBLE. PRICE IN TENDER FOR THE REMOVAL OF 30M OF 19ø PIPING NOT SHOWN ON THE DRAWING FOR EACH VAV BOX TO BE REMOVED. VAV BOX SIZES NOTED ON DRAWING. (TYPICAL)
2. CONNECT NEW HEATING WATER SUPPLY AND RETURN PIPES TO EXISTING PIPING ON THIS FLOOR AND EXTEND AS INDICATED. INCLUDE FOR PIPE FREEZING TO FACILITATE NEW CONNECTION WITHOUT DISTURBANCE TO EXISTING SERVICES. SIZE AS INDICATED ON DRAWING. (TYPICAL)
3. SUPPLY AND INSTALL NEW VAV BOX COMPLETE WITH HOT WATER RE-HEAT COIL DOWNSTREAM OF TERMINAL UNIT AS SHOWN. PROVIDE NEW 19ø HEATING WATER SUPPLY AND RETURN PIPES, NEW DDC CONTROL VALVES, ISOLATION VALVES, FLOW BALANCING VALVE AND EXTEND AS INDICATED. REFER TO DETAIL #7/TM-0.1 AND DETAIL #10/TM-0.1. (TYPICAL)
4. PROVIDE NEW 50ø HEATING WATER SUPPLY AND RETURN VALVED AND CAPPED CONNECTIONS FOR FUTURE PHASE (TYPICAL)
5. CONNECT NEW 19ø DOMESTIC COLD WATER PIPE TO EXISTING 19ø LINE ON THIS FLOOR AND EXTEND AS INDICATED. INCLUDE FOR PIPE FREEZING TO FACILITATE NEW CONNECTION WITHOUT DISTURBANCE TO EXISTING SERVICES.
6. CONNECT NEW 38ø SANITARY PIPE TO EXISTING SANITARY RISER SERVING THE EXISTING WASHROOM ON THIS FLOOR AND EXTEND AS INDICATED.
7. CONNECT NEW 32ø VENT PIPE TO EXISTING 38ø LINE ON THIS FLOOR AND EXTEND AS INDICATED.
8. 12ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO SINK, 32ø VENT LINE UP FROM SINK, AND 38ø SANITARY DRAIN DOWN FROM SINK TO RUN BELOW MILLWORK AND CONNECT TO EXISTING SANITARY RISER ON THIS FLOOR. REFER TO DETAIL #8/TM-0.1.
9. 9ø VALVED AND CAPPED DOMESTIC COLD WATER LINE FOR CLIENT SUPPLIED FRIDGE COMPLETE WITH BACKFLOW PREVENTER.
10. 12ø DOMESTIC COLD WATER LINE DOWN TO CLIENT SUPPLIED WATER COOLER COMPLETE WITH SHUT-OFF VALVE AND BACKFLOW PREVENTER.
11. PROVIDE AND INSTALL NEW AIR COOLED CONDENSING UNIT MOUNTED ON GRADE COMPLETE WITH "CCO-FOOT" SUPPORT STAND. EXACT LOCATION OF CONDENSING UNIT TO BE DETERMINED ON SITE BY CONTRACTOR AND APPROVED BY LANDLORD PRIOR TO INSTALLATION. REFER TO DETAIL DETAIL 7/TM-0.2.
12. NEW REFRIGERANT LINES TO RUN ALONG BUILDING EXTERIOR WALL AS INDICATED. SIZE AS PER MANUFACTURER'S REQUIREMENTS. SECURE REFRIGERANT LINES TO EXTERIOR BUILDING WALL.
13. NEW REFRIGERANT LINES TO PENETRATE THROUGH BUILDING EXTERIOR WALL AND RUN IN CEILING SPACE OF THIS FLOOR AS INDICATED. SEAL PENETRATION WATERTIGHT. SIZE AS PER MANUFACTURER'S REQUIREMENTS.
14. PROVIDE AND INSTALL NEW DUCTLESS WALL MOUNTED SPLIT A/C COMPLETE WITH REFRIGERANT LINES AND CONDENSATE PUMP. REFER TO DETAIL 7/TM-0.2.
15. NEW 19ø CONDENSATE DRAIN FROM SPLIT A/C TO RUN INSIDE WALL CAVITY AND DOWN TO TAILSTOCK OF NEW SINK UPSTREAM OF P-TRAP. MODIFY NEW SINK DRAIN PIPE TO RECEIVE CONNECTION FROM CONDENSATE DRAIN.
16. ALL HEATING WATER SUPPLY AND RETURN PIPES SHALL BE 19ø UNLESS INDICATED OTHERWISE.
17. REMOVE EXISTING SINK ALONG WITH ALL ASSOCIATED APPURTENANCES. CONTRACTOR TO REMOVE AND CAP EXISTING DOMESTIC COLD WATER, DOMESTIC HOT WATER, SANITARY DRAINAGE AND VENT PIPING.
18. PROVIDE NEW SHUT-OFF VALVES ON EXISTING 50ø HEATING WATER SUPPLY AND RETURN PIPING AS INDICATED.
19. CONNECT NEW 12ø DOMESTIC HOT WATER PIPE 12ø AND DOMESTIC HOT WATER RECIRC TO EXISTING LINES ON THIS FLOOR AND EXTEND AS INDICATED.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100119597
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 T 416 487 9104 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

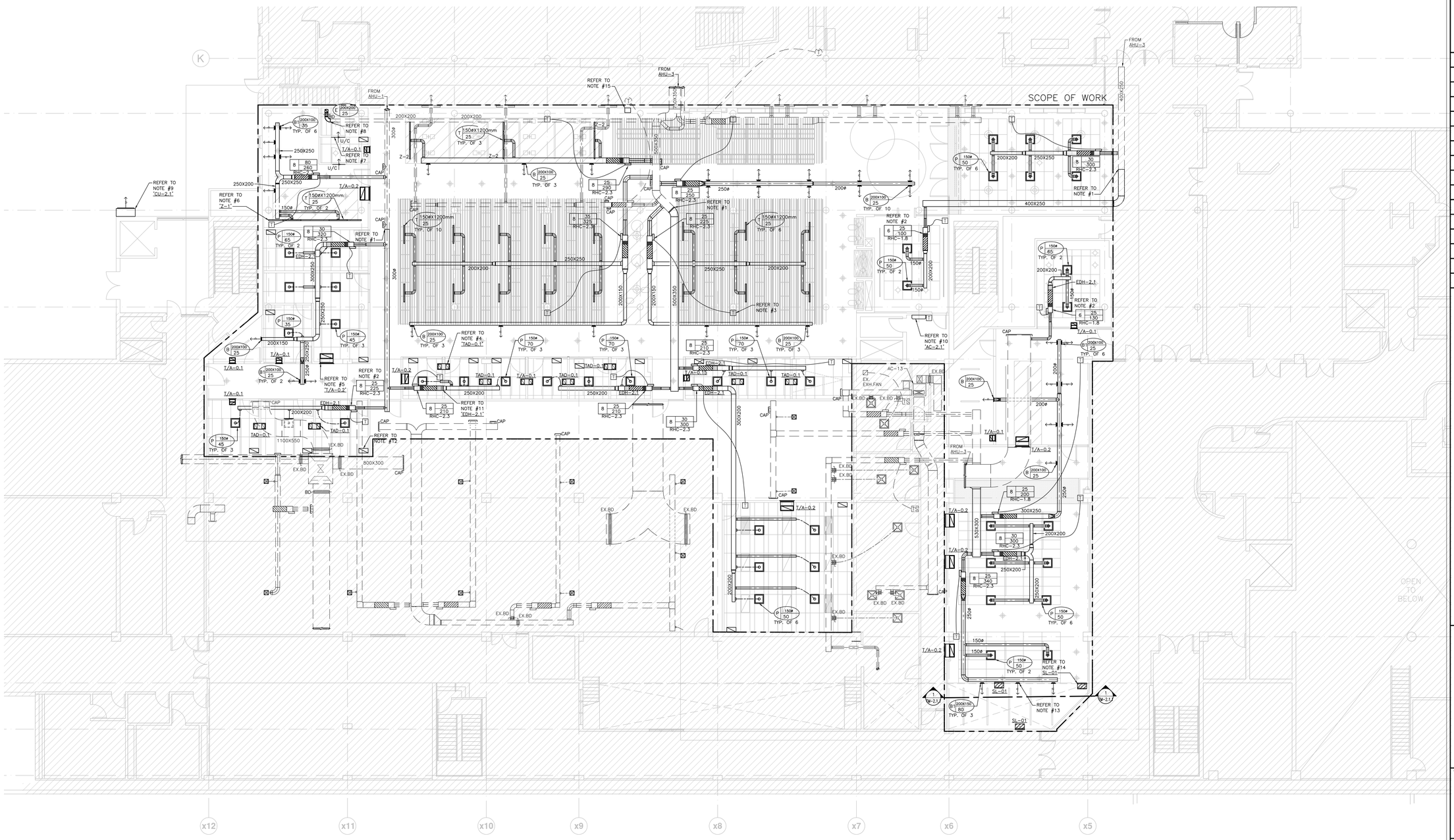
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

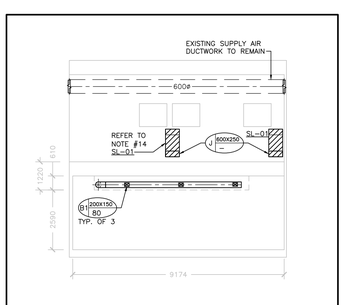
LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
2ND LEVEL – PHASE 1 PLUMBING AND PIPING LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-2.2.1





1 / TM-2.1 SECTION 1:75

GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. CONNECT NEW SUPPLY AIR DUCTWORK TO EXISTING AND EXTEND AS INDICATED. SIZE AS INDICATED ON DRAWING. (TYPICAL)
2. PROVIDE AND INSTALL NEW VAV BOX COMPLETE WITH WATER REHEAT COIL AND ALL ASSOCIATED HANGERS, CONTROLS AND FITTING CONNECTIONS. SIZES NOTED ON DRAWINGS. (TYPICAL)
3. PROVIDE NEW COMBINATION TEMPERATURE/CO2 SENSOR. INSTALL SENSORS AT NOMINALLY 1200mm A.F.F. ABOVE THE FINISHED FLOOR UNLESS INDICATED OTHERWISE. SENSORS ARE LOCATED TO AID IN PRICING ONLY AND ALL REQUIRED SENSORS MAY NOT BE SHOWN (REFER TO SPECIFICATIONS). COORDINATE FINAL LOCATION WITH THE INTERIOR DESIGNER WITHIN 1000mm OF LOCATION SHOWN. ALL RELOCATIONS OUTSIDE OF THIS RANGE SHALL BE REVIEWED WITH THE CONSULTANT.
4. PROVIDE ACOUSTICALLY LINED TRANSFER AIR DUCT IN LOCATION SHOWN. FREE AREA INDICATED. EXACT LOCATION, QUANTITY, AND SIZE TO SUIT CEILING SPACE AND SITE CONDITIONS. REFER TO DETAIL #11/TM-0.1. (TYPICAL)

   TAD-0.1 PROVIDE A TOTAL OF 0.1 SQ.M
   TAD-0.15 PROVIDE A TOTAL OF 0.15 SQ.M
   TAD-0.2 PROVIDE A TOTAL OF 0.2 SQ.M
5. PROVIDE ACOUSTICALLY LINED TRANSFER AIR DUCT IN LOCATION SHOWN. FREE AREA INDICATED. PROVIDE 'J' TYPE WALL GRILLE TO SUIT FREE AREA. EXACT LOCATION, QUANTITY AND SIZE TO SUIT CEILING SPACE AND SITE CONDITIONS. REFER TO DETAIL #12/TM-0.1. (TYPICAL)

   T/A-0.1 PROVIDE A TOTAL OF 0.1 SQ.M
   T/A-0.15 PROVIDE A TOTAL OF 0.15 SQ.M
   T/A-0.2 PROVIDE A TOTAL OF 0.2 SQ.M
6. SUPPLY AND INSTALL LINEAR SLOT DIFFUSERS WITHIN CONTINUOUS ARCHITECTURAL SLOT PROVIDED. REFER TO ARCHITECTURAL DRAWING FOR TOTAL SLOT LENGTH. NON-ACTIVE (RETURN) LENGTH TO BE COMPLETE WITH MATT BLACK 'Z' BAFFLE AND A MINIMUM NON-ACTIVE LENGTH TO BE:

   Z-1 MIN. OF 4'-0" RETURN/NON-ACTIVE LENGTH
   Z-1 MIN. OF 8'-0" RETURN/NON-ACTIVE LENGTH
7. UNDERCUT DOOR BY 25mm FOR TRANSFER AIR. NOT BY MECHANICAL DIVISION.
8. CONNECT NEW 200X200 SANITARY EXHAUST AIR DUCT TO EXISTING AND EXTEND AS INDICATED COMPLETE WITH BALANCING DAMPER. CONNECT NEW EXHAUST DUCT TO 200X200 TYPE 'E' GRILLE.
9. PROVIDE AND INSTALL NEW AIR COOLED CONDENSING UNIT MOUNTED ON GRADE COMPLETE WITH "ECO-FOOT" SUPPORT STAND. EXACT LOCATION OF CONDENSING UNIT TO BE DETERMINED ON SITE BY CONTRACTOR AND APPROVED BY LANDLORD PRIOR TO INSTALLATION. INSTALL AS PER MANUFACTURER'S REQUIREMENTS.
10. PROVIDE AND INSTALL NEW DUCTLESS WALL MOUNTED SPLIT A/C (AC-2.1) COMPLETE WITH ALL ASSOCIATED SUPPORTS, CONDUITS, THERMOSTAT, CONTROL WIRING ETC.
11. PROVIDE AND INSTALL NEW 2KW ELECTRIC DUCT HEATER (EDH-2.1) DOWNSTREAM OF TERMINAL UNIT. REFER TO ELECTRIC DUCT HEATER SPECIFICATIONS. REFER TO VAV BOX SCHEDULE FOR TERMINAL UNIT OUTLET DIMENSIONS. POWER CONNECTION BY ELECTRICAL DIVISION. (TYPICAL)
12. PROVIDE 600X300 RETURN AIR GRILLES UNLESS NOTED OTHERWISE.
13. ALL DUCTWORK GRILLES WITHIN OPEN CEILING AREAS TO BE FLUSH WITH DUCTWORK.
14. PROVIDE AND INSTALL NEW CROSS-TALK SILENCER IN LIEU OF EXISTING RETURN AIR GRILLE. REMOVE EXISTING RETURN AIR GRILLE TO FACILITATE THE WORK REQUIRED. PROVIDE ACOUSTICALLY LINED TRANSITION AS REQUIRED. REFER TO MECHANICAL SPECIFICATIONS FOR SILENCER SCHEDULE. CONTRACTOR TO VERIFY EXISTING GRILLE SIZE ON SITE AND PROVIDE NEW CROSS-TALK SILENCER TO MATCH EXISTING OPENING DIMENSIONS. TERMINATE OPEN END WITH TYPE 'J' GRILLE. COORDINATE WITH ARCHITECTURAL DIVISION ON SITE FOR INTERFERENCES. REFER TO DETAIL #1/TM-2.1.1 (TYPICAL)
15. PROVIDE AND INSTALL NEW SIEMENS CONTROL PANEL FOR NEW VAV CONTROLS. FINAL LOCATION TO BE COORDINATED ON SITE.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100116007
15/11/2008
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 F 416 487 9104 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expressses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

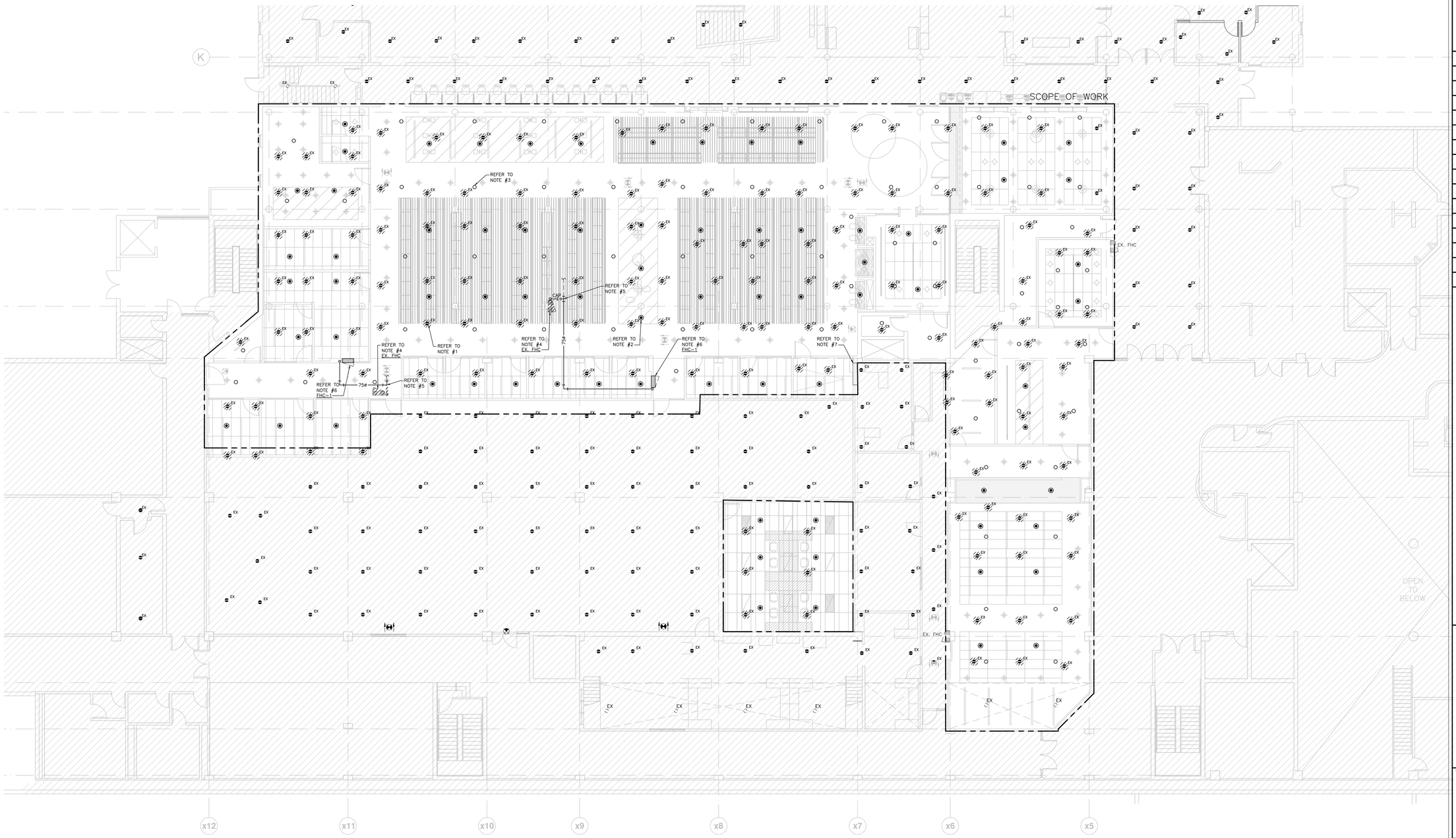
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
2ND LEVEL – PHASE 1
H.V.A.C. LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-2.3.1



GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. EXISTING PENDENT HEAD TO BE REMOVED. (TYPICAL)
2. PROVIDE AND INSTALL NEW CUSTOM FACTORY PAINTED CONCEALED TYPE SPRINKLER HEAD COMPLETE WITH METAL DEFLECTOR. REFER TO ARCHITECT DRAWINGS FOR CAP FINISH COLOR. (TYPICAL)
3. PROVIDE AND INSTALL NEW UPRIGHT TYPE SPRINKLER HEAD.
4. REMOVE EXISTING 100' FIRE HOSE CABINET. REMOVE AND CAP EXISTING 75ø FIRE LINE AT HIGH LEVEL. (TYPICAL)
5. CONNECT NEW 75ø FIRE LINE TO EXISTING 75ø AND EXTEND AS INDICATED. INCLUDE FOR PIPE FREEZING TO FACILITATE NEW CONNECTION WITHOUT DISTURBANCE TO SERVICES.
6. PROVIDE AND INSTALL NEW 100' RECESSED FIRE HOSE CABINET. NEW 75ø FIRE LINE DOWN TO NEW FIRE HOSE CABINET.
7. EXISTING SPRINKLER VALVE CABINET TO REMAIN.
8. QUANTITY AND LOCATION OF SPRINKLER HEADS, WHERE SHOWN ARE TO AID IN PRICING ONLY. PROVIDE EXACT NUMBER OF HEADS TO SUIT DENSITY REQUIREMENTS AS SPECIFIED OR SHOWN. CONFORM TO ARCHITECTURAL REFLECTED CEILING PLAN LOCATIONS WHERE INDICATED AND MEET MINIMUM REQUIREMENTS OF ENFORCED NFPA 13 STANDARD.
9. PROVIDE SPRINKLER DRAWINGS AND HYDRAULIC CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER. INDICATED ZONING AND DENSITY. PROVIDE A SPRINKLER PLANS. PROVIDE SHOP DRAWINGS IDENTIFYING PROPOSED LAYOUT FOR REVIEW PRIOR TO INSTALLATION.
10. PROVIDE A SEALED LETTER BY THE PROFESSIONAL ENGINEER OF RECORD CONFIRMING THE INSTALLATION COMPLIES WITH THE SHOP DRAWINGS AND THE ENFORCED NFPA 13 AND 14 STANDARD. INCLUDE ALL ASSOCIATED COSTS IN THE TENDER PRICE.
11. COORDINATE FIRE PROTECTION SERVICES WITH ALL OTHER TRADES PRIOR TO INSTALLATION. RECTIFY, AT OWN EXPENSE, ALL CONFLICTS RESULTING FROM UNCOORDINATED FIRE PROTECTION SYSTEMS INSTALLED IN ADVANCE OF THE REQUIRED INTERFERENCE PROCESS.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100119997
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 F 416 487 9104 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

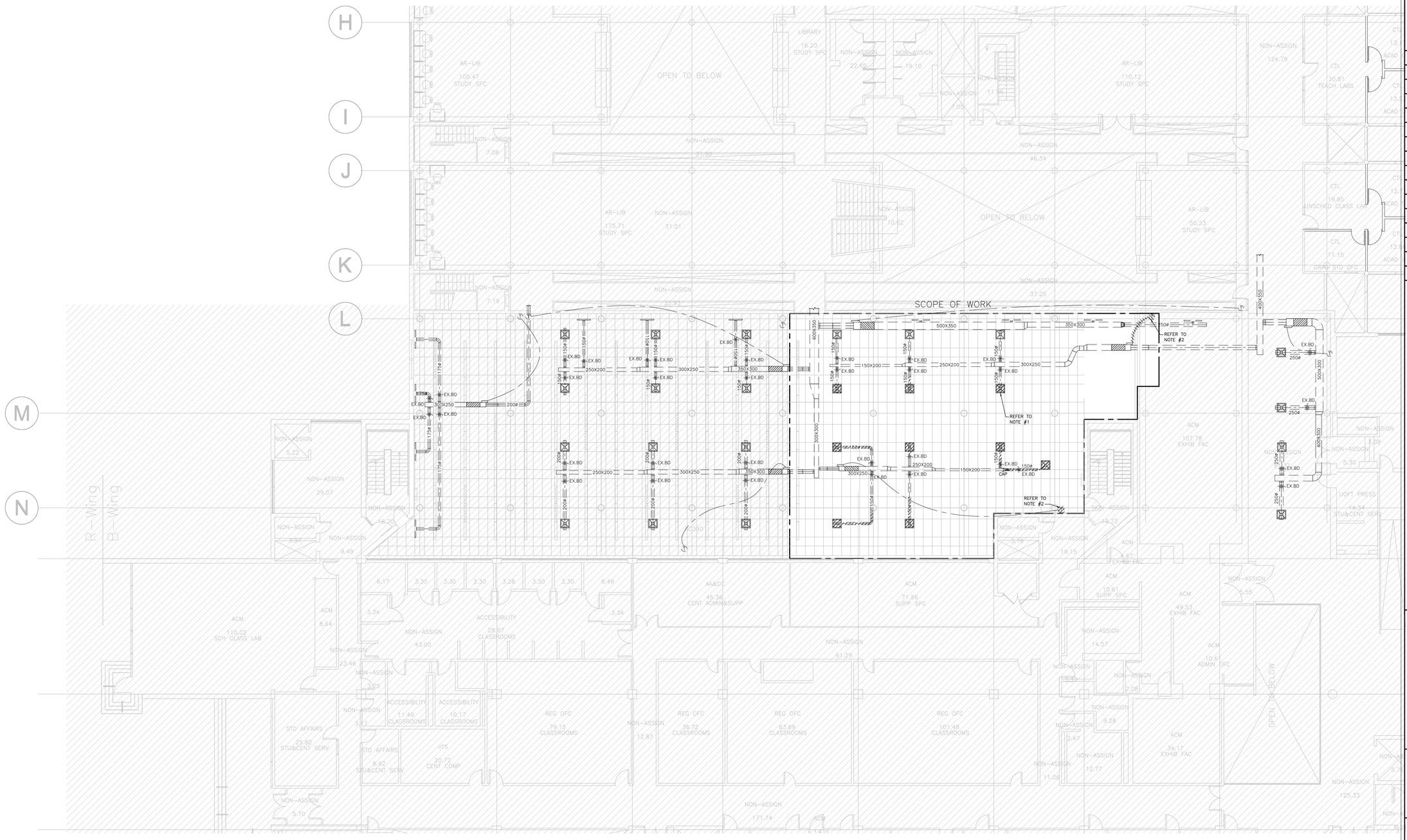
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
2ND LEVEL – PHASE 1
FIRE PROTECTION LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM–2.4.1



GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. REMOVE AND RELOCATE EXISTING DIFFUSER. REMOVE ASSOCIATED RIGID/FLEX DUCTS AS SHOWN. DO NOT REUSE FLEX DUCT. REFER TO DRAWING TM-3.3 FOR NEW LOCATION. (TYPICAL)
2. REMOVE EXISTING PNEUMATIC THERMOSTAT COMPLETE WITH CONTROL WIRING AND PNEUMATIC TUBING. REFER TO DRAWING TM-3.3 FOR NEW LOCATION.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100119607
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 f 416 487 9104 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

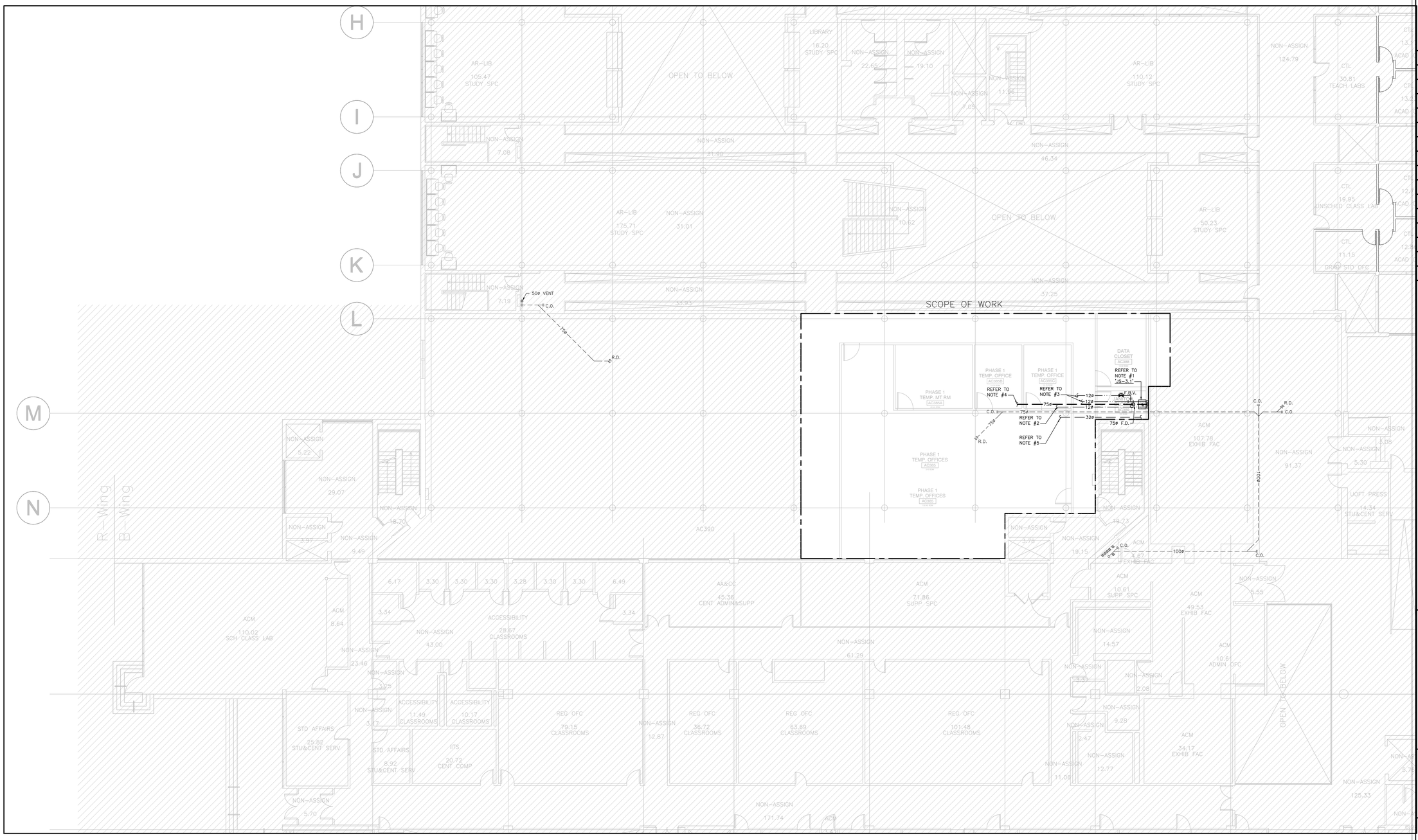
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
3RD LEVEL – PHASE 1
MECHANICAL DEMOLITION
LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-3.1



GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. 12ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO JANITOR SINK, 32ø VENT LINE UP FROM SINK, AND 75ø SANITARY DRAIN DOWN COMPLETE WITH P-TRAP FROM SINK TO EXISTING SANITARY PIPING WITHIN CEILING SPACE OF FLOOR BELOW.
2. CONNECT NEW 12ø DOMESTIC COLD WATER PIPE TO EXISTING LINE ON THIS FLOOR AND EXTEND AS INDICATED. CONTRACTOR TO VERIFY ROUTING ON SITE AND ALLOW FOR PRICING IN TENDER FOR APPROXIMATELY 30M OF PIPING. INCLUDE FOR LOCAL FREEZING TO FACILITATE THE WORK REQUIRED WITHOUT DISTURBANCE TO EXISTING SERVICES.
3. CONNECT NEW 12ø DOMESTIC HOT WATER PIPE 12ø AND DOMESTIC HOT WATER RECIRC TO EXISTING LINES ON THIS FLOOR AND EXTEND AS INDICATED. CONTRACTOR TO VERIFY ROUTING ON SITE AND ALLOW FOR PRICING IN TENDER FOR APPROXIMATELY 30M OF PIPING. INCLUDE FOR LOCAL FREEZING TO FACILITATE THE WORK REQUIRED WITHOUT DISTURBANCE TO EXISTING SERVICES.
4. CONNECT NEW 75ø SANITARY PIPE TO EXISTING SANITARY PIPING WITHIN CEILING SPACE OF FLOOR BELOW AND EXTEND AS INDICATED. CONTRACTOR TO VERIFY ROUTING ON SITE AND ALLOW FOR PRICING IN TENDER FOR APPROXIMATELY 30M OF PIPING.
5. CONNECT NEW 32ø VENT PIPE TO EXISTING LINE ON THIS FLOOR AND EXTEND AS INDICATED. CONTRACTOR TO VERIFY ROUTING ON SITE AND ALLOW FOR PRICING IN TENDER FOR APPROXIMATELY 30M OF PIPING.
6. PRICE IN TENDER FOR 8HR OF INVESTIGATION WORK TO VERIFY DOMESTIC COLD WATER, DOMESTIC HOT WATER, SANITARY DRAINAGE, AND VENT PIPING TO NEW JANITOR SINK.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100119607
05/18/2008
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 T 416 487 8124 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

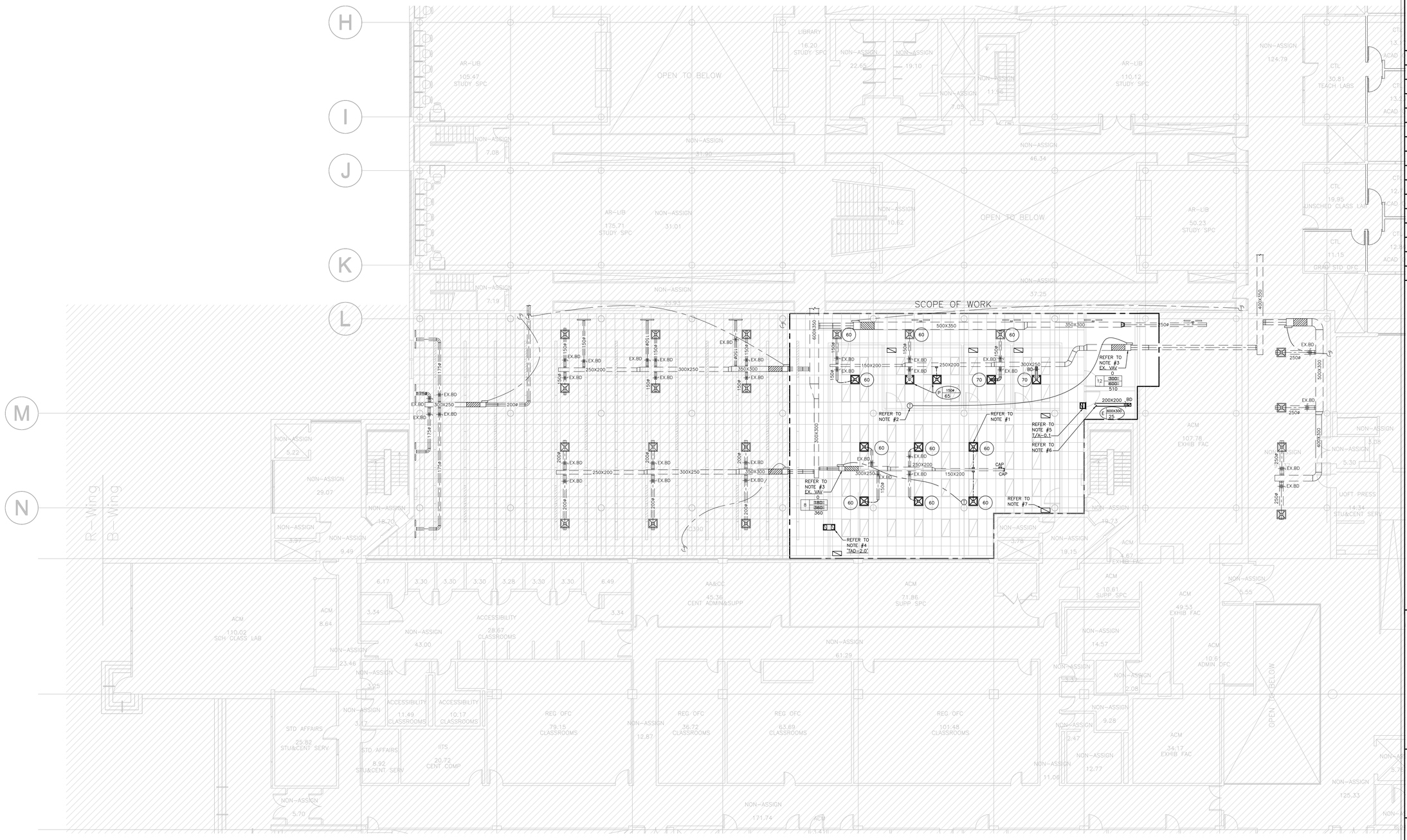
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
3RD LEVEL – PHASE 1 PLUMBING AND PIPING LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-3.2



GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. RELOCATED DIFFUSER. PROVIDE NEW RIGID/FLEX DUCT AS SHOWN. (TYPICAL)
2. RELOCATED PNEUMATIC THERMOSTAT. PROVIDE NEW CONTROL WIRING/PNEUMATIC TUBING AS REQUIRED TO EXTEND TO NEW LOCATION. INSTALL THERMOSTATS AT NOMINALLY 1200mm A.F.F. ABOVE THE FINISHED FLOOR UNLESS INDICATED OTHERWISE. THERMOSTATS ARE LOCATED TO AID IN PRICING ONLY AND ALL REQUIRED THERMOSTATS MAY NOT BE SHOWN (REFER TO SPECIFICATIONS). COORDINATE FINAL LOCATION WITH THE INTERIOR DESIGNER WITHIN 1000mm OF LOCATION SHOWN. ALL RELOCATIONS OUTSIDE OF THIS RANGE SHALL BE REVIEWED WITH THE CONSULTANT. (TYPICAL)
3. BALANCE THE AIR FLOW RATES EQUALLY BETWEEN ALL INTERIOR DIFFUSERS BASED ON THE MAXIMUM AIR FLOW RATE FOR THE ASSOCIATED EXISTING VAV BOX. CONTRACTOR TO VERIFY BOX SIZE ON SITE. (TYPICAL)
4. PROVIDE ACOUSTICALLY LINED TRANSFER AIR DUCT IN LOCATION SHOWN. FREE AREA INDICATED. EXACT LOCATION, QUANTITY, AND SIZE TO SUIT CEILING SPACE AND SITE CONDITIONS. REFER TO DETAIL #11/TM-0.1. (TYPICAL)

   TAD-0.2 PROVIDE A TOTAL OF 0.2 SQ.M
5. PROVIDE ACOUSTICALLY LINED TRANSFER AIR DUCT IN LOCATION SHOWN. FREE AREA INDICATED. PROVIDE 'J' TYPE WALL GRILLE TO SUIT FREE AREA. EXACT LOCATION, QUANTITY AND SIZE TO SUIT CEILING SPACE AND SITE CONDITIONS. REFER TO DETAIL #12/TM-0.1. (TYPICAL)

   T/A-0.1 PROVIDE A TOTAL OF 0.1 SQ.M
6. NEW 200X200 EXHAUST AIR DUCT COMPLETE WITH BALANCING DAMPER. CONNECT NEW EXHAUST DUCT TO 200X200 TYPE 'E' GRILLE. CONTRACTOR TO SITE VERIFY ROUTING TO EXISTING SANITARY EXHAUST DUCT ON THIS FLOOR. PRICE IN TENDER FOR 4HR OF INVESTIGATION WORK. PRICE IN TENDER FOR APPROXIMATELY 30M OF DUCTWORK
7. PROVIDE 600X300 RETURN AIR GRILLES UNLESS NOTED OTHERWISE.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100119607
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 f 416 487 8124 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

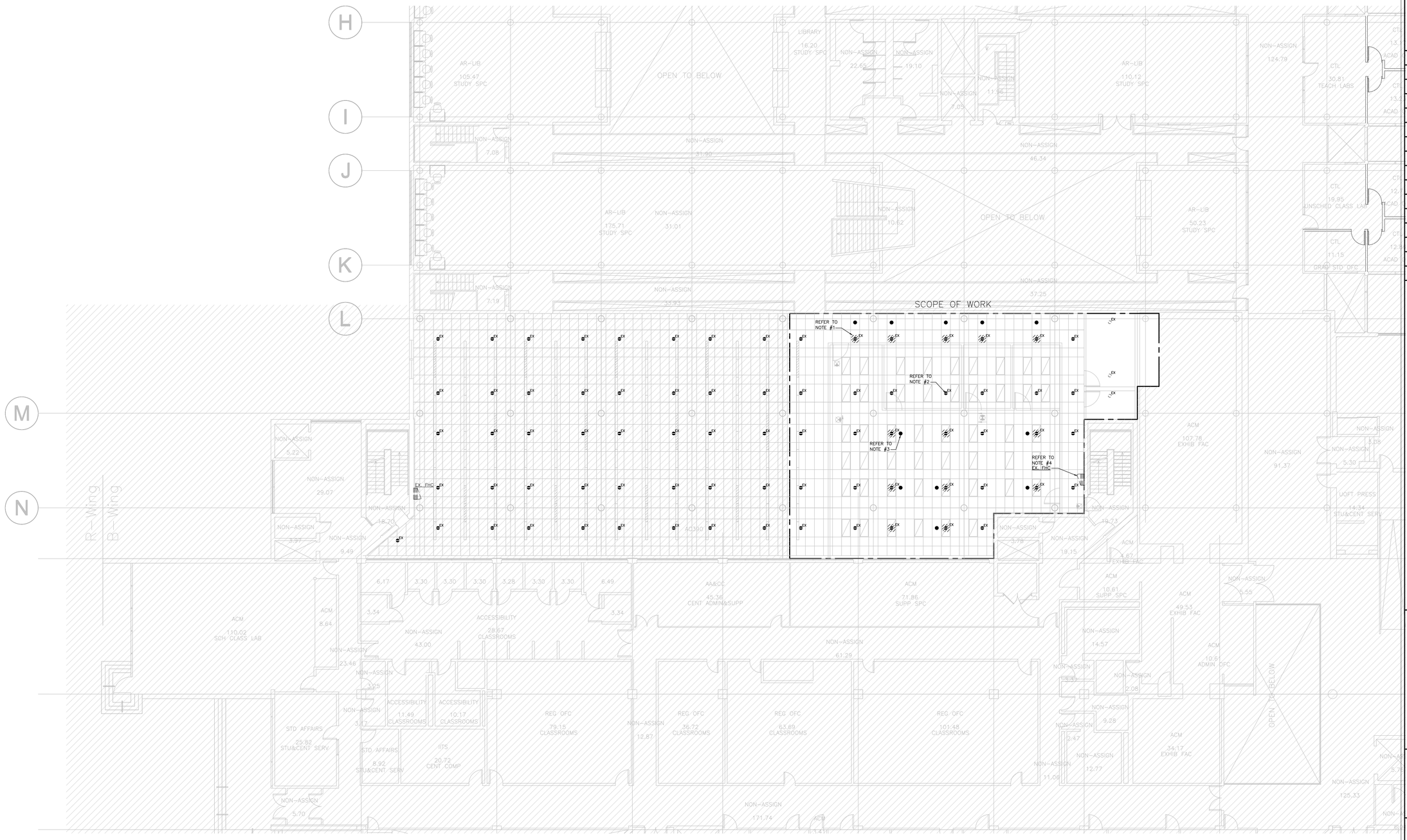
PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
3RD LEVEL – PHASE 1
H.V.A.C. LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-3.3



GENERAL NOTES:

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- READ FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS SHALL BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
- REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. EXISTING PENDENT TYPE HEAD TO BE REMOVED. (TYPICAL)
2. EXISTING PENDENT TYPE HEAD TO REMAIN. (TYPICAL)
3. PROVIDE AND INSTALL NEW PENDENT TYPE HEAD TO MATCH BASE BUILDING STANDARD. (TYPICAL)
4. EXISTING 100' FIRE HOSE CABINET TO REMAIN.
5. QUANTITY AND LOCATION OF SPRINKLER HEADS, WHERE SHOWN ARE TO AID IN PRICING ONLY. PROVIDE EXACT NUMBER OF HEADS TO SUIT DENSITY REQUIREMENTS AS SPECIFIED OR SHOWN. CONFORM TO ARCHITECTURAL REFLECTED CEILING PLAN LOCATIONS WHERE INDICATED AND MEET MINIMUM REQUIREMENTS OF ENFORCED NFPA 13 STANDARD.
6. PROVIDE SPRINKLER DRAWINGS AND HYDRAULIC CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER. INDICATED ZONING AND DENSITY. PROVIDE A SPRINKLER PLANS. PROVIDE SHOP DRAWINGS IDENTIFYING PROPOSED LAYOUT FOR REVIEW PRIOR TO INSTALLATION.
7. PROVIDE A SEALED LETTER BY THE PROFESSIONAL ENGINEER OF RECORD CONFIRMING THE INSTALLATION COMPLIES WITH THE SHOP DRAWINGS AND THE ENFORCED NFPA 13 STANDARD. INCLUDE ALL ASSOCIATED COSTS IN THE TENDER PRICE.
8. COORDINATE FIRE PROTECTION SERVICES WITH ALL OTHER TRADES PRIOR TO INSTALLATION. RECTIFY, AT OWN EXPENSE, ALL CONFLICTS RESULTING FROM UNCOORDINATED FIRE PROTECTION SYSTEMS INSTALLED IN ADVANCE OF THE REQUIRED INTERFERENCE PROCESS.

UNIVERSITY OF TORONTO SCARBOROUGH

DESIGN & CONSTRUCTION MANAGEMENT
1265 Military Trail
Toronto Ontario
M1C 1A4

NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER

NAME: ALI SAFI
TEL: 416 487 8151 (ext 1354)
EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

STAMP:

LICENSED PROFESSIONAL ENGINEER
2021-06-25
R. CHAN
100118607
PROVINCE OF ONTARIO

CONSULTANT:

Smith + Andersen
1100 – 100 Sheppard Ave. East, Toronto On, M2N 6N5
416 487 8151 f 416 487 8124 smithandandersen.com

Notes:

All dimensions and information shall be checked and verified on the site and any discrepancies must be reported to the UofT Project Manager or the UofT Project Coordinator before commencing the work. Drawings are not to be scaled.

This drawing and all aspects of its content are protected by copyright. Reproduction in whole or in part, by any means whatsoever, whether electronic, mechanical or otherwise, without the expresses written permission of the University of Toronto Scarborough, is prohibited by law.

CLIENT:
LIBRARY/ INFO & INSTRUCTIONAL TECHNOLOGY SERVICES- UNIVERSITY OF TORONTO SCARBOROUGH
TORONTO ONTARIO, M1C1A4

PROJECT #:
03118.008.M.001

PROJECT TITLE:
LIBRARY / IITS INTERIOR RENOVATION - ARC BUILDING PHASE I

LIBRARY / IITS, 1265 MILITARY TRAIL

DRAWN BY: AS
CHECKED BY: AV

DRAWING TITLE:
3RD LEVEL – PHASE 1
FIRE PROTECTION LAYOUT

DATE: 2021-04-20
SCALE: 1:100
DRAWING No: TM-3.4