



ISSUANCES

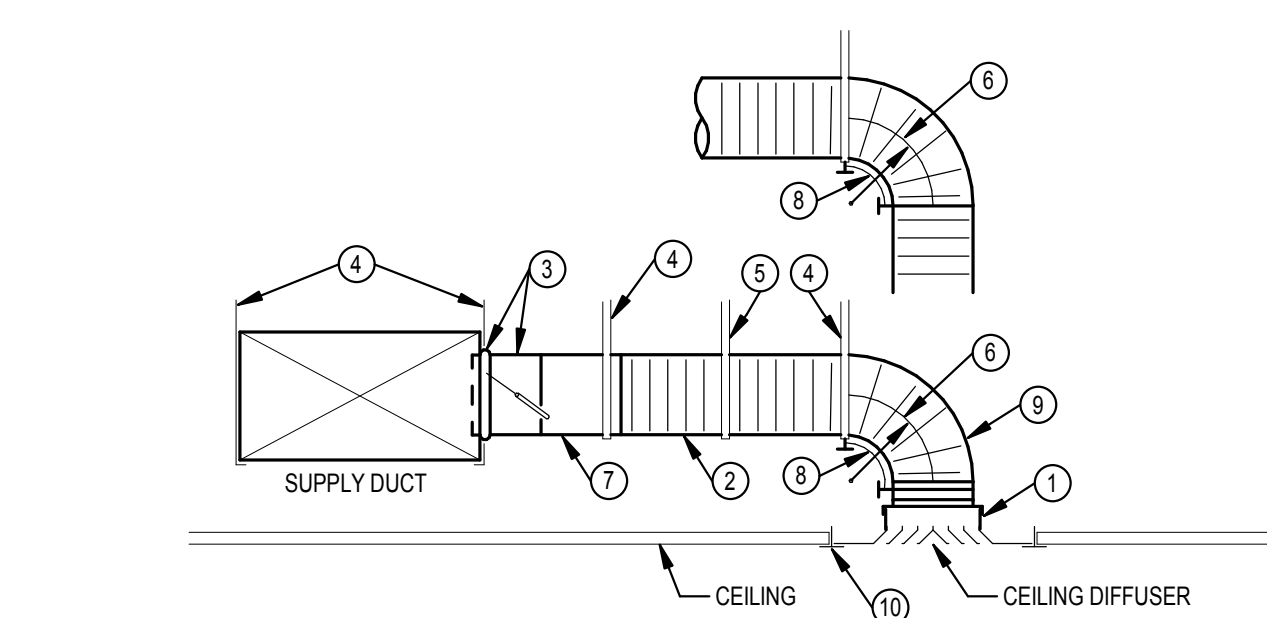
No.	Description	Date
1	60% CD SET	01/16/2023
2	75% CD SET	01/30/2023
3	90% CD SET	02/13/2023
4	98% CD SET	03/20/2023
5	CONSTRUCTION DOCS	04/07/2023

Drawn By
Author
Checked By
Checker
Client No.
659
Project No.
8064



SCHEDULES & DETAILS

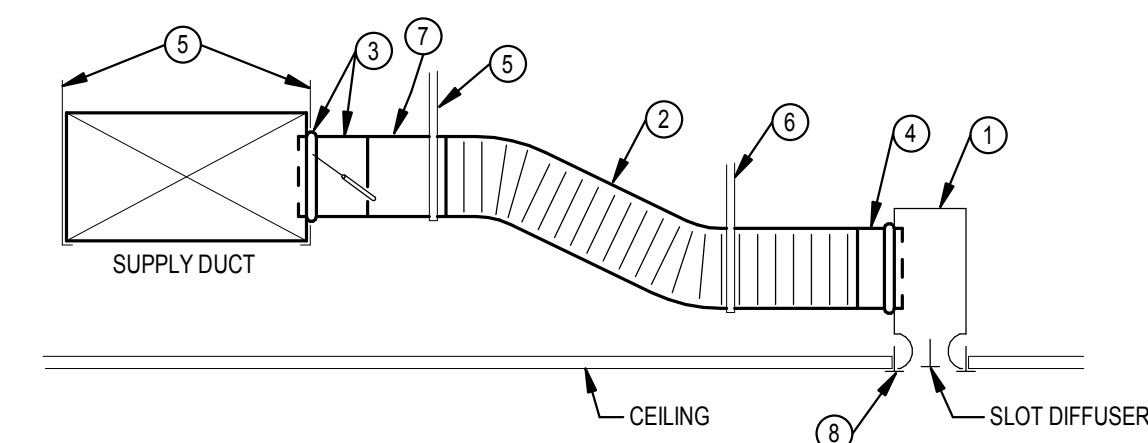
H002



NOTES

- SQUARE-TO-ROUND ADAPTER IF DIFFUSER NECK IS SQUARE. CONNECT ADAPTOR TO DIFFUSER. SEAL TO AIR DEVICE. SEAL CLASS A. INSULATE ADAPTOR AND EXPOSED BACKSIDE SURFACES OF AIR DEVICE.
- INSULATED FLEXIBLE DUCT SAME DIAMETER AS BRANCH DUCT (7). 5 FT. MAXIMUM TOTAL LENGTH PER AIR DEVICE. STRETCH FLEXIBLE DUCT TO AT LEAST 90% OF FULLY EXTENDED LENGTH.
- SPIN-IN BRANCH TAP FITTING, STRAIGHT SIDE WITH MANUAL DAMPER. DAMPER SHAFT IN HORIZONTAL. INTEGRAL INSULATION GUARD SLEEVE REQUIRED FOR TAP FITTING TO MAIN DUCT WITH INTERNAL INSULATION, AND EXTENDED DAMPER SHAFT AND HANDLE WITH STAND-OFF TO ACCOMMODATE EXTERNAL INSULATION.
- DUCT STRAP HANGER. ATTACH TO STRUCTURE.
- STRAP HANGER REQUIRED IF LENGTH OF FLEXIBLE DUCT IS LONGER THAN 4 FT.
- MINIMUM CENTERLINE RADIUS EQUAL TO DUCT DIAMETER.
- ROUND SHEET METAL BRANCH DUCT. SAME SIZE AS DIFFUSER INLET UNLESS NOTED OTHERWISE.
- FLEXIBLE DUCT ELBOW SUPPORT. INSTALLED WITH NYLON BANDING PER MANUFACTURER'S INSTRUCTIONS.
- A RADIUS SHEET METAL ELBOW MAY BE USED IN LIEU OF A FLEXIBLE DUCT ELBOW SUPPORT WHEN CONNECTED DIRECTLY TO AIR DEVICE.
- CEILING T-BAR SUPPORT (FOR LAY-IN APPLICATIONS). COORDINATE AND VERIFY T-BAR TYPE FOR COMPATIBILITY WITH DIFFUSER.

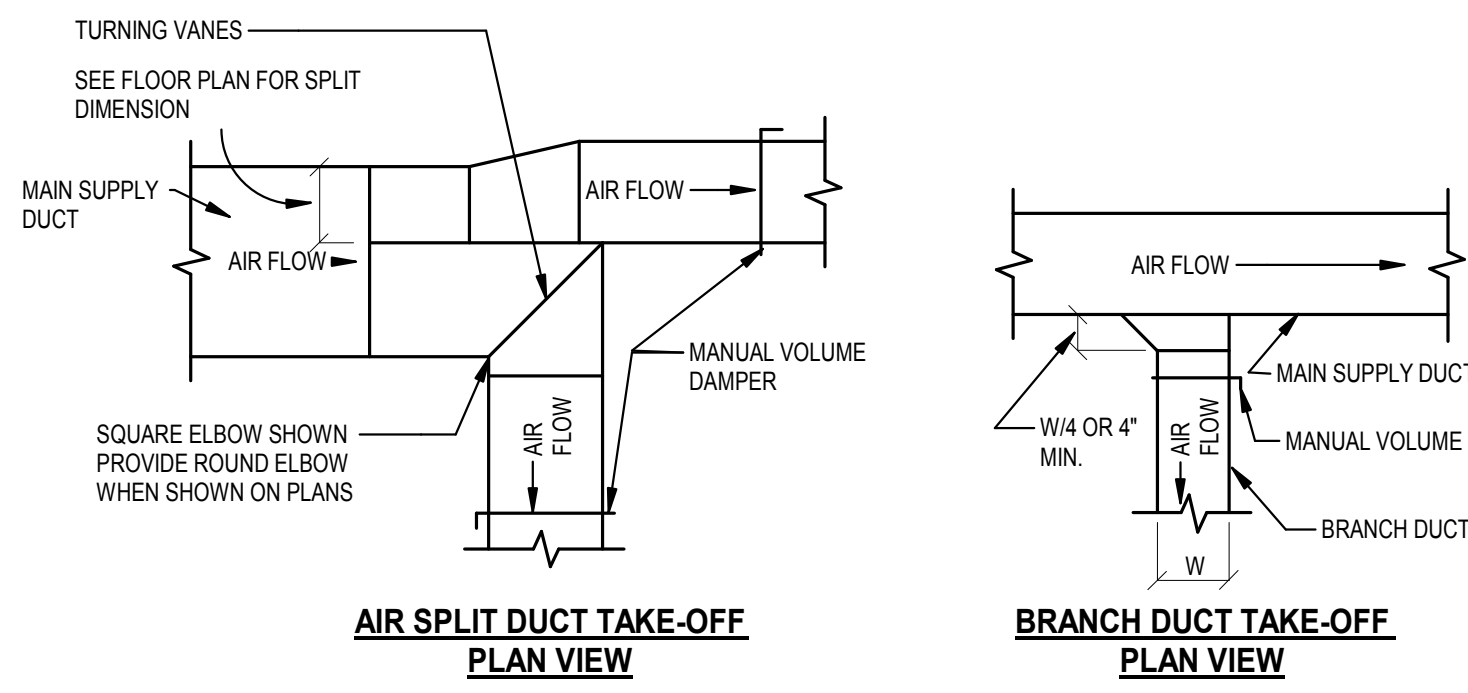
1 CEILING DIFFUSER DUCT CONNECTION
SCALE: NONE



NOTES

- SLOT DIFFUSER ASSEMBLY AND PLENUM WITH SAME INTERNAL OR EXTERNAL INSULATION AS MAIN SUPPLY DUCT. CONNECT PLENUM TO DIFFUSER. SEAL PLENUM TO DIFFUSER. SEAL CLASS A. INSULATE BACKSIDE SURFACES OF DIFFUSER.
- INSULATED FLEXIBLE DUCT SAME DIAMETER AS BRANCH DUCT (7). 5 FT. MAXIMUM TOTAL LENGTH PER AIR DEVICE. STRETCH FLEXIBLE DUCT TO AT LEAST 90% OF FULLY EXTENDED LENGTH.
- SPIN-IN BRANCH TAP FITTING, STRAIGHT SIDE WITH MANUAL DAMPER. DAMPER SHAFT IN HORIZONTAL. INTEGRAL INSULATION GUARD SLEEVE REQUIRED FOR TAP FITTING TO MAIN DUCT WITH INTERNAL INSULATION, AND EXTENDED DAMPER SHAFT AND HANDLE WITH STAND-OFF TO ACCOMMODATE EXTERNAL INSULATION.
- SPIN-IN TAP FITTING SIMILAR TO (5) EXCEPT NO DAMPER.
- DUCT STRAP HANGER. ATTACH TO STRUCTURE.
- STRAP HANGER REQUIRED IF LENGTH OF FLEXIBLE DUCT IS LONGER THAN 4 FT.
- ROUND SHEET METAL BRANCH DUCT. SAME SIZE AS DIFFUSER INLET UNLESS NOTED OTHERWISE.
- CEILING T-BAR SUPPORT (FOR LAY-IN APPLICATIONS). COORDINATE AND VERIFY T-BAR TYPE FOR COMPATIBILITY WITH DIFFUSER.

5 SLOT DIFFUSER DUCT CONNECTION
SCALE: NONE



2 SUPPLY DUCTWORK BRANCH TAKE-OFFS
SCALE: NONE

THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM, AND UP TO 40% WHEN THE MAIN DUCT VELOCITY IS 1000 FPM OR LESS. THE AIR SPLIT DUCT TAKE-OFF SHALL BE USED IN ALL OTHER CASES

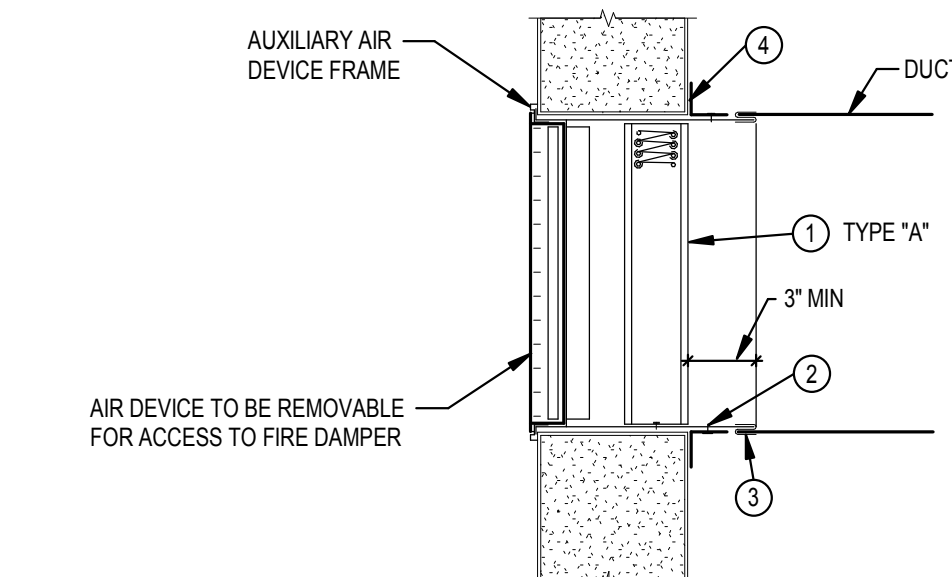
GENERAL NOTES

- FIRE DAMPERS SHALL BE UL LABELED.
- INSTALLATION OF FIRE DAMPERS AND ACCESSORIES SHALL CONFORM TO NFPA 90A, SMACNA AND MANUFACTURER'S INSTRUCTIONS.
- DETAILS SHOW INSTALLATION OF FIRE DAMPER IN WALL. DAMPER INSTALLATION IN FLOOR SIMILAR. COORDINATE REQUIRED ACCESS LOCATIONS.
- INSULATE RETAINING ANGLES FOR SYSTEMS REQUIRED TO BE INSULATED.

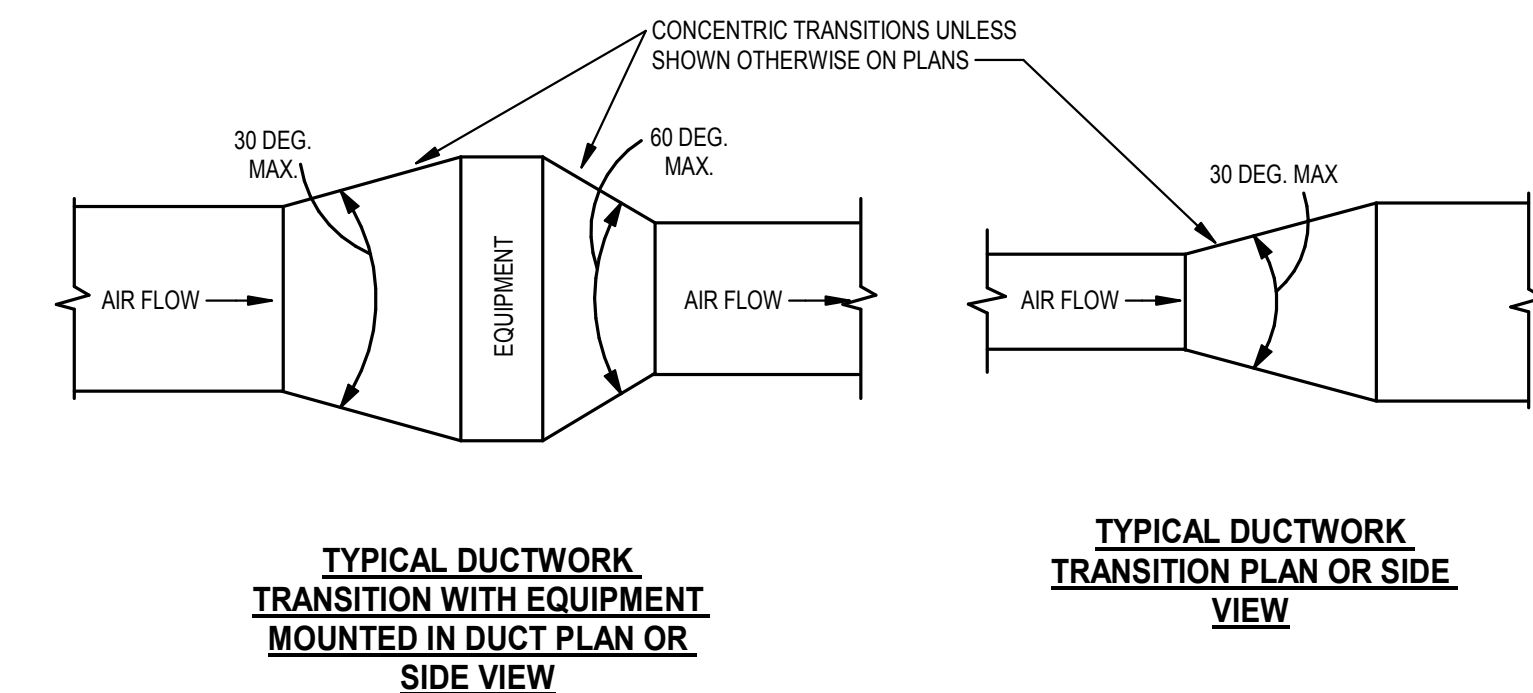
NOTES

- FIRE DAMPER, FOLDED BLADE CURTAIN TYPE, EXCEPT AS NOTED. VERTICAL MOUNT. GRAVITY DROP. HORIZONTAL MOUNT. SPRING LOADED TO CLOSE. REFER TO SPECS FOR VELOCITY LIMITATIONS OF EACH TYPE. REFER TO DRAWINGS FOR STATIC OR DYNAMIC REQUIREMENTS.
 - TYPE "A" - BLADES STORED IN AIR STREAM. RECTANGULAR, ROUND OR OVAL DUCT CONNECTION.
 - TYPE "B" - BLADES STORED OUT OF AIR STREAM. RECTANGULAR, ROUND OR OVAL DUCT CONNECTION.
 - TYPE "C" - HIGH VELOCITY TYPE. BLADES STORED OUT OF AIR STREAM. RECTANGULAR, ROUND OR OVAL DUCT CONNECTION.
 - TYPE "D" - HIGH VELOCITY CENTER PIVOTED MULTI-BLADE. RECTANGULAR, ROUND OR OVAL DUCT CONNECTION.
 - TYPE "E" - HORIZONTAL CEILING RADIATION TYPE.
 - TYPE "A", "B", "C", "D" - SAME AS "A", "B", "C", "D", EXCEPT RATED FOR 3 HRS.
- SWEET METAL WALL SLEEVES. SAME MATERIAL AS DUCT EXCEPT GALVANIZED SHEET METAL FOR FIBERGLASS DUCT. SHEET METAL GAUGE PER SMACNA. USE EXTENDED HEAVY GAUGE SLEEVES WHEN INSTALLED CONDITION REQUIRES.
- DUCTSLEEVE CONNECTION. BREAKAWAY TYPE SHOWN. CONNECTION MAY BE RIGID TYPE IF ALLOWED BY CODE AUTHORITY.
- RETAINING ANGLE ALL FOUR SIDES. GAUGE PER SMACNA. 1" MINIMUM OVERLAP OF WALL OPENING. LONGER LEG MAY BE REQUIRED TO ATTAIN REQUIRED OVERLAP. BOLT, SCREW OR TACK WELD TO WALL SLEEVE. SPACING OF FASTENERS PER SMACNA.
- DUCT ACCESS PANEL OR DOOR. REFER TO SPECIFICATIONS.
- CEILING ACCESS PANEL IF CEILING IS NOT ACCESSIBLE.

6 FIRE DAMPER AT AIR DEVICE - WALL
SCALE: NONE

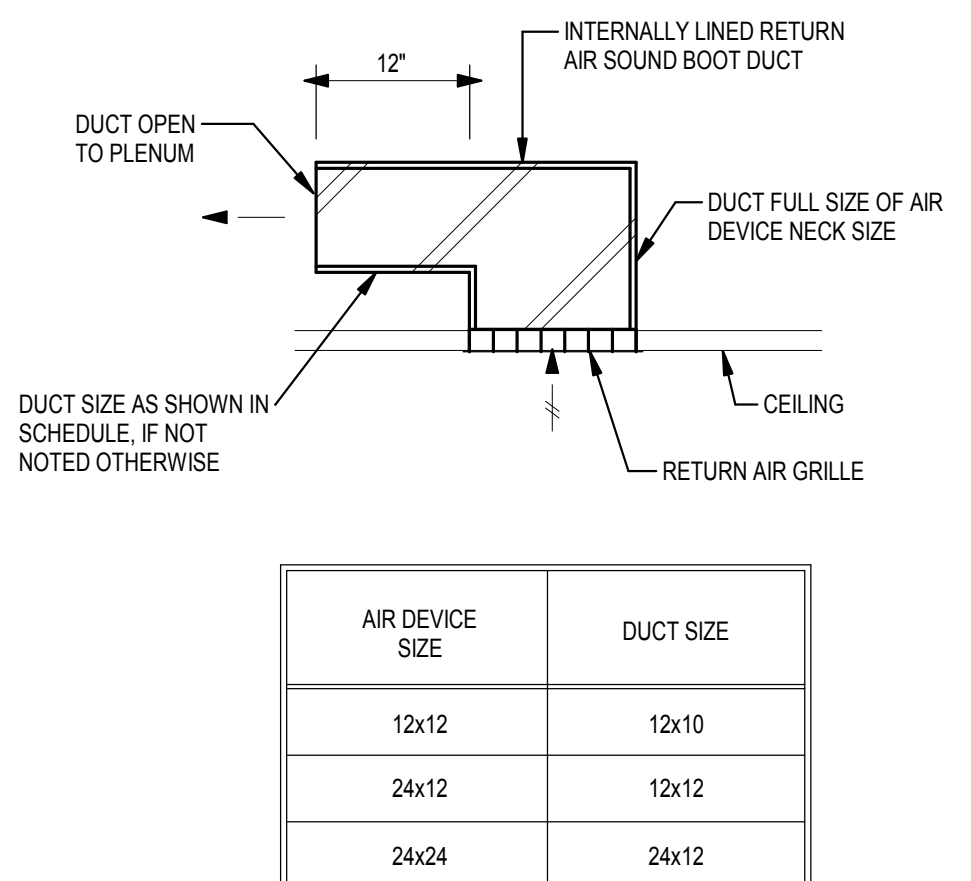


3 DUCTWORK TRANSITIONS
SCALE: NONE



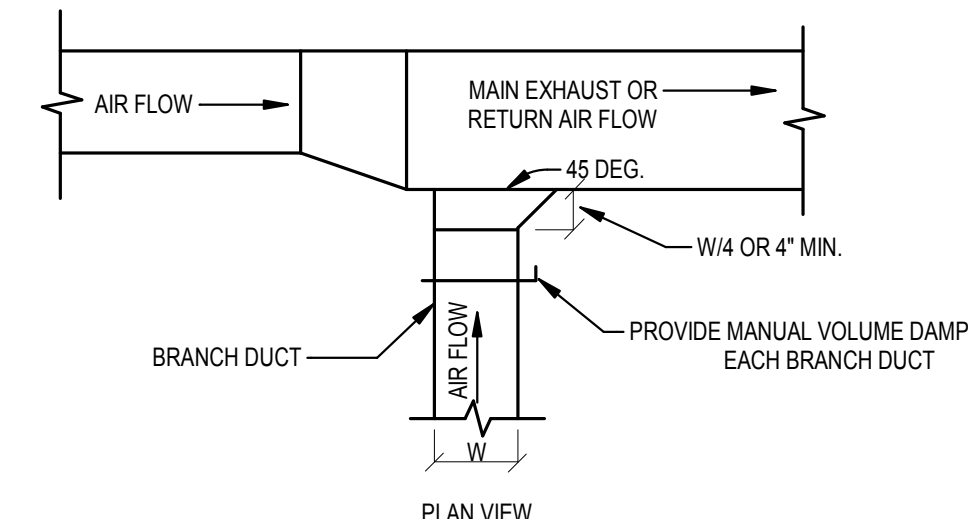
NOTE:
A. UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.
B. TRANSITION ANGLES IN AND OUT OF FANS SHALL BE 90% OF THOSE SHOWN ABOVE.

7 RETURN AIR SOUND BOOT
SCALE: NONE

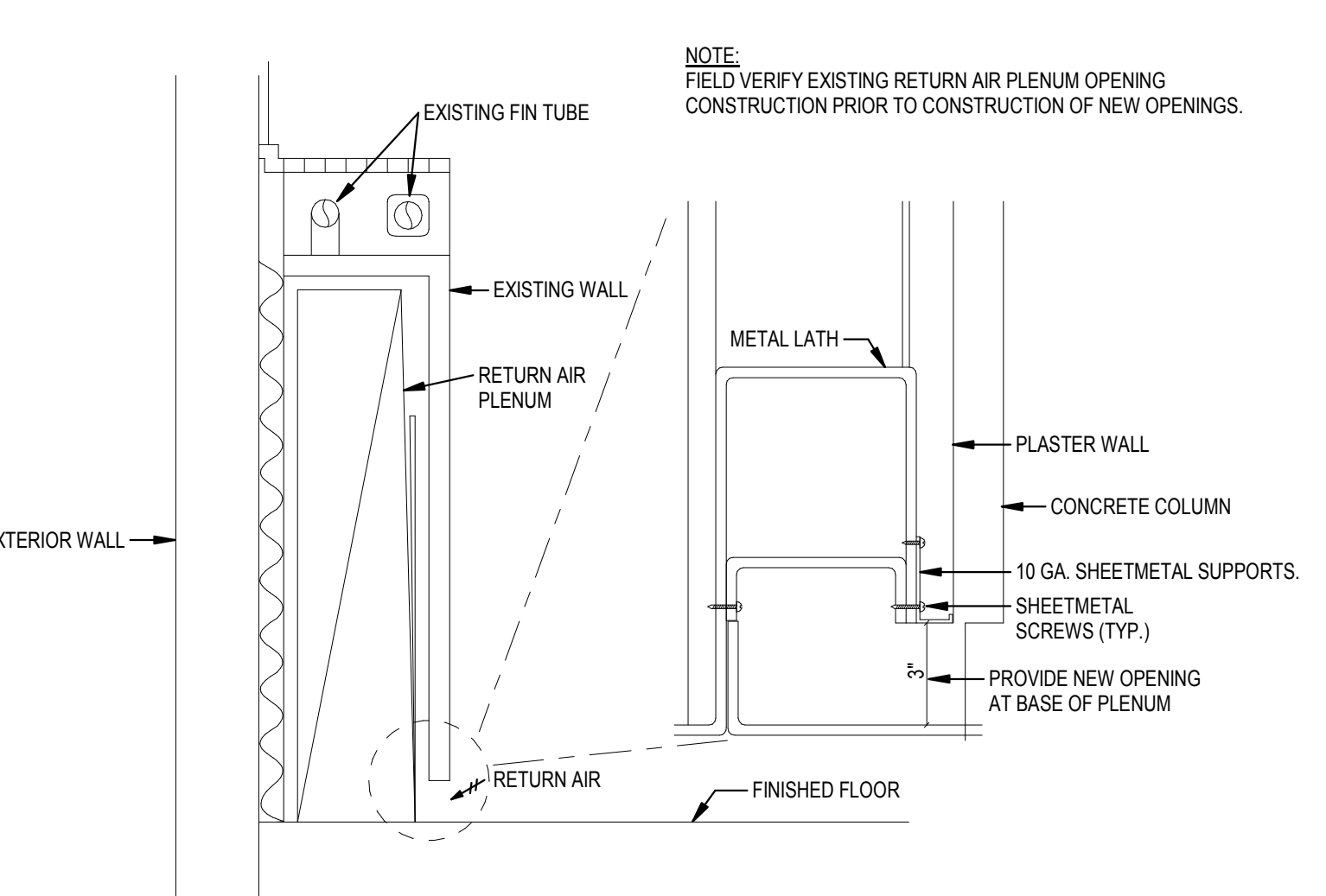


AIR DEVICE SIZE	DUCT SIZE
12x12	12x10
24x12	12x12
24x24	24x12

4 EXHAUST OR RETURN BRANCH DUCTWORK
SCALE: NONE



8 RETURN AIR PLENUM OPENING
SCALE: NONE



HVAC DESIGN DATA					
GENERAL NOTES: A. OUTDOOR DESIGN CONDITIONS: B. DESIGN ALTITUDE: 850 FT. 92°F DB SUMMER 74°F WB SUMMER 1°F DB WINTER					
NOTES: 1. LISTED RH IS MAXIMUM ANTICIPATED AT LISTED DB TEMPERATURE. 2. "FLOATING" MEANS THERE IS NO ACTIVE CONTROL.					
INTERIOR DESIGN DATA					
	SUMMER		WINTER		
SPACE NAME / TYPE	°F DB	% RH (NOTE 1)	°F DB	% RH	SEE NOTE
OFFICES	74	50	72	FLOATING	2
CLASSROOMS	74	50	72	FLOATING	-
CONFERENCE ROOMS	74	50	72	FLOATING	2
ALL OTHER SPACES	74	50	72	FLOATING	2

AIR DISTRIBUTION DEVICES														
GENERAL NOTES: A. ALL LAY-IN AIR DEVICES SHALL FIT IN 24"X24" LAY-IN CLG SYSTEM. VERIFY GRID TYPE AND COORDINATE AIR DEVICE COMPATIBILITY. B. FINISH KEY: "W.E." - WHITE BAKED ENAMEL. "E.C.L." - ETCHED CLEAR LACQUER OR ANODIZED. "C.C.B.A." - CUSTOM COLOR SELECTED BY ARCHITECT. C. SUPPLY AIR DIFFUSERS SHALL BE 4-WAY BLOW, UNLESS INDICATED OTHERWISE ON DRAWINGS. D. PROVIDE AUX. FRAMES FOR AIR DEVICES IN PLASTER, GYPSUM BOARD, TILE OR OTHER HARD SURFACES.														
NOTES:														
MARK	DESCRIPTION	LAY-IN SURFACE	DUCT	SPLINE	SNAP-IN	STEEL	ALUMINUM	STAINLESS STEEL	W.B.E.	E.C.L.	C.C.B.A.	BASIS OF DESIGN		SEE NOTE
												OPPOSED BLADE DAMPER	SO-TO-RD NECK ADAPTOR	
A1	STANDARD SQ. PLAQUE CEILING DIFFUSER - ROUND NECK - 24 X 24	•	•	•	•	•	•	•	•	•	•	TITUS	OMNI	
F1	SIDEWALL SUPPLY REGISTER	•	•	•	•	•	•	•	•	•	•	TITUS	271FL	
G1	SIDEWALL RETURN GRILLE	•	•	•	•	•	•	•	•	•	•	TITUS	350FL	
J1	EGGCRATE RETURN GRILLE	•	•	•	•	•	•	•	•	•	•	TITUS	50F	
S1	HIGHTHROW SLOT DIFFUSER - 1 SLOT, 48" LENGTH	•	•	•	•	•	•	•	•	•	•	TITUS	FL-30	

DUCT CONSTRUCTION, SEALING, AND INSULATION									
GENERAL NOTES: A. REFER TO SPECIFICATIONS FOR DUCT CONSTRUCTION: B. DUCT CONSTRUCTION AND SEALING SHALL BE PER SHEET METAL DUCT, INTERIOR LINING, EXTERIOR INSULATION, FIBERGLASS DUCTBOARD, ETC. C. LATEST S.M.A.C.N.A. STANDARDS.									
NOTES: 1. ROUND SHEET METAL RUN-OUTS TO AIR DEVICES DOWNSTREAM OF VAV BOXES SHALL BE EXTERNALLY INSULATED. 2. CONCEALED ROUND RUNOUT DUCTS TO AIR DEVICES MAY BE 1" S.P. CLASS. 3. REFER TO DETAIL 7 ON SHEET H002.									
DUCT SYSTEM	S.P. CONSTRUCT.	S.M.A.C.N.A. CLASS		INTERNAL LINED	EXTERNAL INSULATION	DOUBLE WALL INSULATED	NOT INSULATED	SEE NOTE	
		SEAL CLASS	LEAKAGE CLASS						
CONCEALED SUPPLY DUCTWORK DOWNSTREAM OF VAV BOXES.	+1"	A	16	8	•	-	-	-	1, 2
EXPOSED DUCTWORK DOWNSTREAM OF VAV BOXES	+1"	A	16	8	-	-	•	-	-
RETURN DUCTWORK	-2"	A	16	8	-	-	-	•	-
TRANSFER/RETURN AIR SOUND BOOT	-1"	A	16	-	•	-	-	-	3

AIR TERMINAL UNITS - HOT WATER HEAT									
GENERAL NOTES: A. TYPES: "V.V." - VARIABLE VOLUME; "V.V.R." - VARIABLE VOLUME REHEAT; "C.V.R." - CONSTANT VOLUME REHEAT; "V.V.E." - VARIABLE VOLUME EXHAUST; "C.V.E." - CONSTANT VOLUME EXHAUST. B. 0.5" MAX. S.P. DROP THRU UNIT & COIL. C. REHEAT COIL CAPACITIES BASED ON HEATING MAX. CFM, 55°F ENT. AIR & 180°F ENT. WATER. D. LEAVING AIR TEMP. SHALL BE APPROXIMATELY 110°F FOR UNITS. E. PROVIDE AIR BALANCE FOR ALL EXISTING AIR TERMINAL UNITS. TERMINAL UNITS SHALL BE BALANCED TO AIRFLOWS LISTED.									
MARK	TYPE	DIAMETER	MINIMUM INLET SIZE		CFM	REHEAT COIL		REFER TO NOTE	
			WIDTH	HEIGHT		COOLING MAXIMUM	WINTER MINIMUM		
A42002	V.V.R.	10"	1,000	355	230	-	1.0		
A42003	V.V.R.	12"	1,310	470	325	-	1.0		
A42006	V.V.R.	12"	1,300	465	325	-	1.0		
A42007	V.V.R.	10"	1,025	375	230	-	1.0		
A42011	V.V.R.	12"	1,300	465	325	-	1.1		
A42014	V.V.R.	12"	1,550	555	325	-	1.6		
A42019	V.V.R.	12"	1,300	470	325	-	1.0		
A42022	V.V.R.	10"	1,000	355	230	-	1.0		
A42026	V.V.R.	12"	1,575	550	325	-	1.6		
A42030	V.V.R.	12"	1,400	500	325	-	1.2		
A42033	V.V.R.	12"	1,620	570	325	-	1.6		
A42034	V.V.R.	12"	1,460	515	325	-	1.2		
A42038	V.V.R.	12"	1,600	560	325	-	1.7		
A42045	V.V.R.	12"	1,600	560	325	-	1.7		
A42050	V.V.R.	12"	1,500	525	325	-	1.6		



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Checked By

Checker

Client No.

659

Project No.

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THIRD FLOOR NEW
WORK

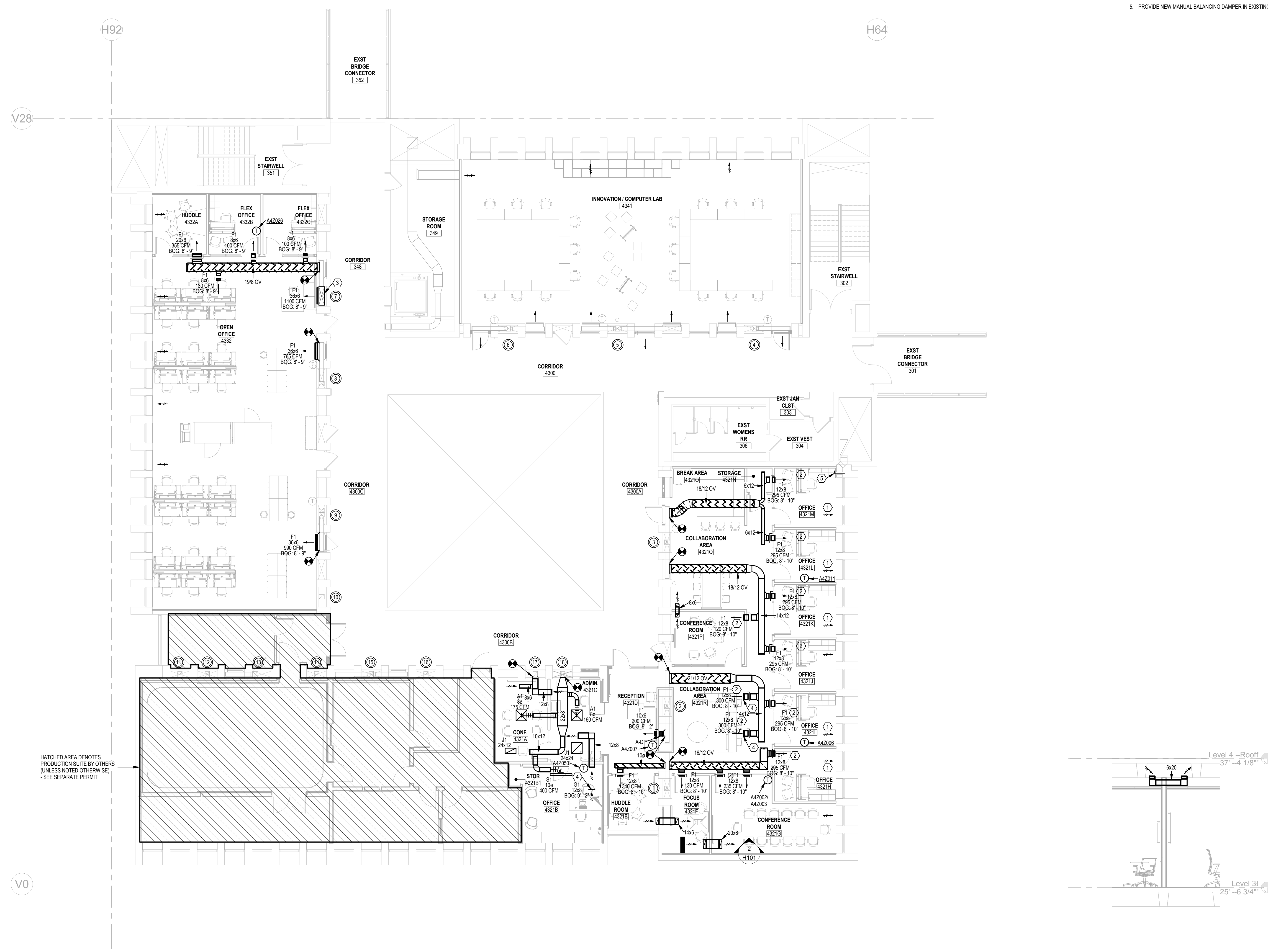
H101

GENERAL NOTES

A. HATCHED DUCTWORK SHALL BE DOUBLE WALL INSULATED. REFER TO DUCT CONSTRUCTION SCHEDULE.

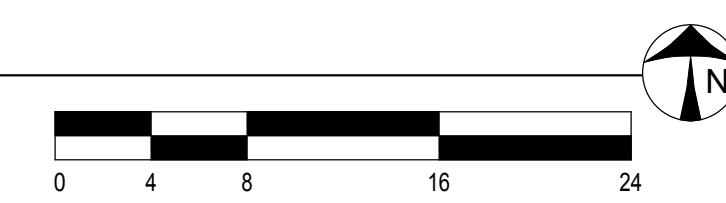
NOTES

1. PROVIDE NEW RETURN AIR OPENING IN LOCATION SHOWN. REFER TO DETAIL ON SHEET H002.
2. PROVIDE CABLE-ACTUATED REMOTE BALANCING DAMPER IN SUPPLY REGISTER RUNOUT DUCT. REMOTE BALANCING DAMPER SHALL BE YOUNG REGULATOR 830ACC OR APPROVED EQUAL.
3. TRANSITION DUCT WITHIN SHAFT AS REQUIRED FOR CONNECTION TO NEW AIR DEVICE.
4. AIR DEVICE LOCATED IN FACE OF NEW SOFFIT. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.
5. PROVIDE NEW MANUAL BALANCING DAMPER IN EXISTING RETURN AIR DUCT.

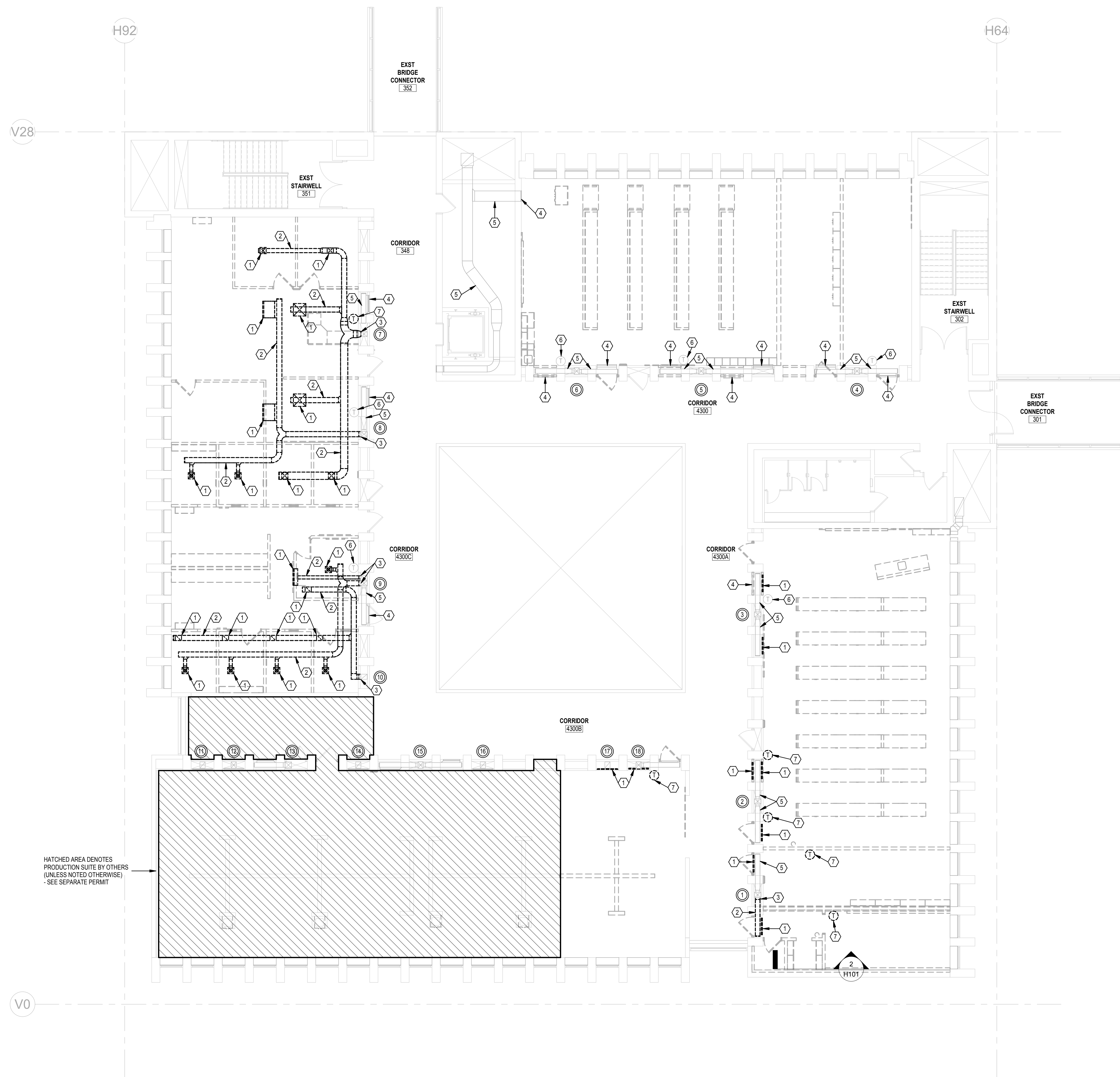


1 HVAC LEVEL 3
SCALE: 1/8" = 1'-0"

2 TYPICAL TRANSFER AIR DUCT
SCALE: 1/4" = 1'-0"

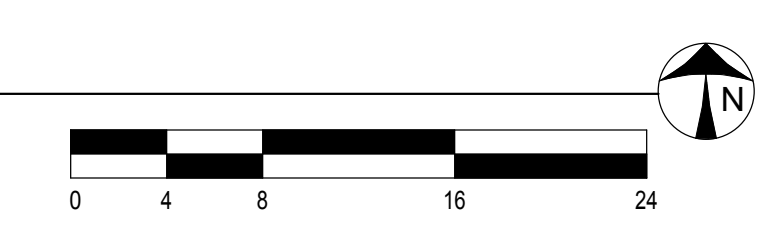


HATCHED AREA DENOTES
PRODUCTION SUITE BY OTHERS
(UNLESS NOTED OTHERWISE)
- SEE SEPARATE PERMIT



- NOTES**
1. REMOVE EXISTING AIR DEVICE AND ALL ASSOCIATED SUPPORTS, ACCESSORIES, ETC.
 2. REMOVE EXISTING DUCTWORK AND ALL ASSOCIATED HANGERS, SUPPORTS, ACCESSORIES, ETC. REMOVE DUCT BACK TO ACTIVE MAIN AND CAP.
 3. REMOVE DUCTWORK TO THIS POINT FOR RECONNECTION IN NEW WORK.
 4. EXISTING AIR DEVICE TO REMAIN.
 5. EXISTING DUCTWORK TO REMAIN.
 6. EXISTING THERMOSTAT TO REMAIN.
 7. REMOVE EXISTING THERMOSTAT FOR REINSTALLATION IN NEW WORK.

1 HVAC LEVEL 3
SCALE: 1/8" = 1'-0"



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THINK CREATE REALIZE



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FAC 23-04
eLEARNING, CTL,
INNOVATIONS LAB,
PRODUCTION STUDIO

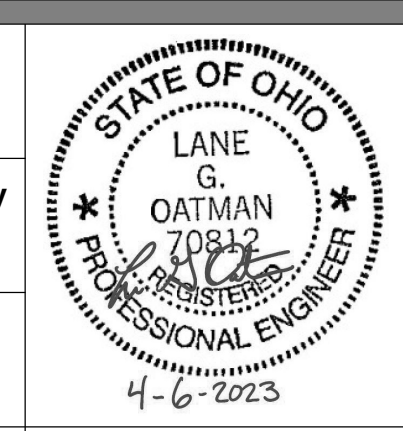


444 W 3rd St,
Dayton, OH 45402
Building 4
SCC PROJECT #: FAC 23-04

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THIRD FLOOR
DEMOLITION WORK

HD101