PHASE 2 REMODELING FOR NEW STATE'S ATTORNEY OFFICE FACILITY

WILL COUNTY COURT ANNEX
57 N. OTTAWA ST. & 57 W. JEFFERSON ST.
JOLIET, ILLINOIS

COUNTY OF WILL, OWNER

LIST OF DRAWINGS

T1	TITLE SHEET
A1	BASEMENT DEMOLITION PLAN
A2	FIFTH FLOOR EAST DEMOLITION PLAN
A3	FIFTH FLOOR WEST DEMOLITION PLAN
A4	BASEMENT PLAN
A5	FIFTH FLOOR EAST FLOOR PLAN
A6	FIFTH FLOOR WEST FLOOR PLAN
A7	ROOM FINISH SCHEDULE, DETAILS
A8	BUILDING SECTION, FIRST FLOOR WORK
A9	DOOR SCHEDULE, DETAILS
A10	BASEMENT REFLECTED CEILING PLAN
A11	FIFTH FLOOR EAST REFLECTED CEILING PLAN
A12	FIFTH FLOOR WEST REFLECTED CEILING PLAN
A13	FIFTH FLOOR WEST ROOF PLAN & DETAILS
FS1	BASEMENT SPRINKLER PLAN
FS2	FIFTH FLOOR EAST SPRINKLER PLAN
FS3	FIFTH FLOOR WEST SPRINKLER PLAN
FA1	BASEMENT FIRE ALARM PLAN
FA2	FIFTH FLOOR EAST FIRE ALARM PLAN
FA3	FIFTH FLOOR WEST FIRE ALARM PLAN
MEP DEMO 1	FIFTH FLOOR WEST DEMO PLAN
MEP DEMO 2	FIFTH FLOOR EAST DEMO PLAN
M-1	BASEMENT WEST HVAC PLAN
M-1.1	BASEMENT WEST HVAC PLAN
M-2	FIRST FLOOR WEST HVAC PLAN
M-3	FIFTH FLOOR WEST HVAC PLAN
M-3.1	FIFTH FLOOR WEST HVAC NORTHWEST VIEW
M-4	FIFTH FLOOR EAST HVAC PLAN
M-4.1	FIFTH FLOOR EAST HVAC NORTHEAST VIEW
M-5	FIFTH FLOOR WEST ROOF HVAC PLAN
M-6	SEVENTH FLOOR EAST ROOF HVAC PLAN
MS-1	HVAC DETAILS
MS-2	HVAC SCHEDULES
MS-3	HVAC NOTES & SCHEDULES
MS-4	HVAC VENT SCHEDULES
E-1	BASEMENT WEST LIGHTING PLAN
E-2	BASEMENT WEST POWER PLAN
E-2.1	PARTIAL FIRST FLOOR POWER PLAN
E-3	FIFTH FLOOR WEST LIGHTING PLAN
E-4	FIFTH FLOOR WEST POWER PLAN
E-5	FIFTH FLOOR EAST LIGHTING PLAN
E-6	FIFTH FLOOR EAST POWER PLAN
E-7	FIFTH FLOOR WEST ROOF POWER PLAN
E-8	SEVENTH FLOOR EAST ROOF POWER PLAN
ES-1	ELECTRICAL - SCHEDULES
ES-2	ELECTRICAL - SCHEDULES
ES-3	ELECTRICAL - SCHEDULES
ES-4	ELECTRICAL - SPECIFICATIONS
P-1	BASEMENT WEST DWV PLAN
P-2	BASEMENT WEST WATER PIPING PLAN
P-3	FIFTH FLOOR WEST DWV PLAN
P-4	FIFTH FLOOR WEST WATER PIPING PLAN
P-5	FIFTH FLOOR EAST WATER PIPING PLAN
PS-1	PLUMBING DETAILS
PS-2	PLUMBING DETAILS
PS-3	PLUMBING NOTES & SCHEDULES

STATEMENT OF COMPLIANCE:

I HAVE PREPARED OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH THE ENVIRONMENTAL BARRIERS ACT (410 ILCS 25) AND THE ILLINOIS ACCESSIBILITY CODE (71 ILL. ADM. CODE 400) AND LOCAL CODES AND ORDINANCES.

SEAL

SIGNED:_____
ANDREW R. PARTAK, JR. AIA

DATE:_____ ILLINOIS REIGISTRATION NO.: 001-010906 EXPIRATION DATE: 11/30/2016

R1307B

ANDREW R. PARTAK, JR. AIA
ARCHITECT

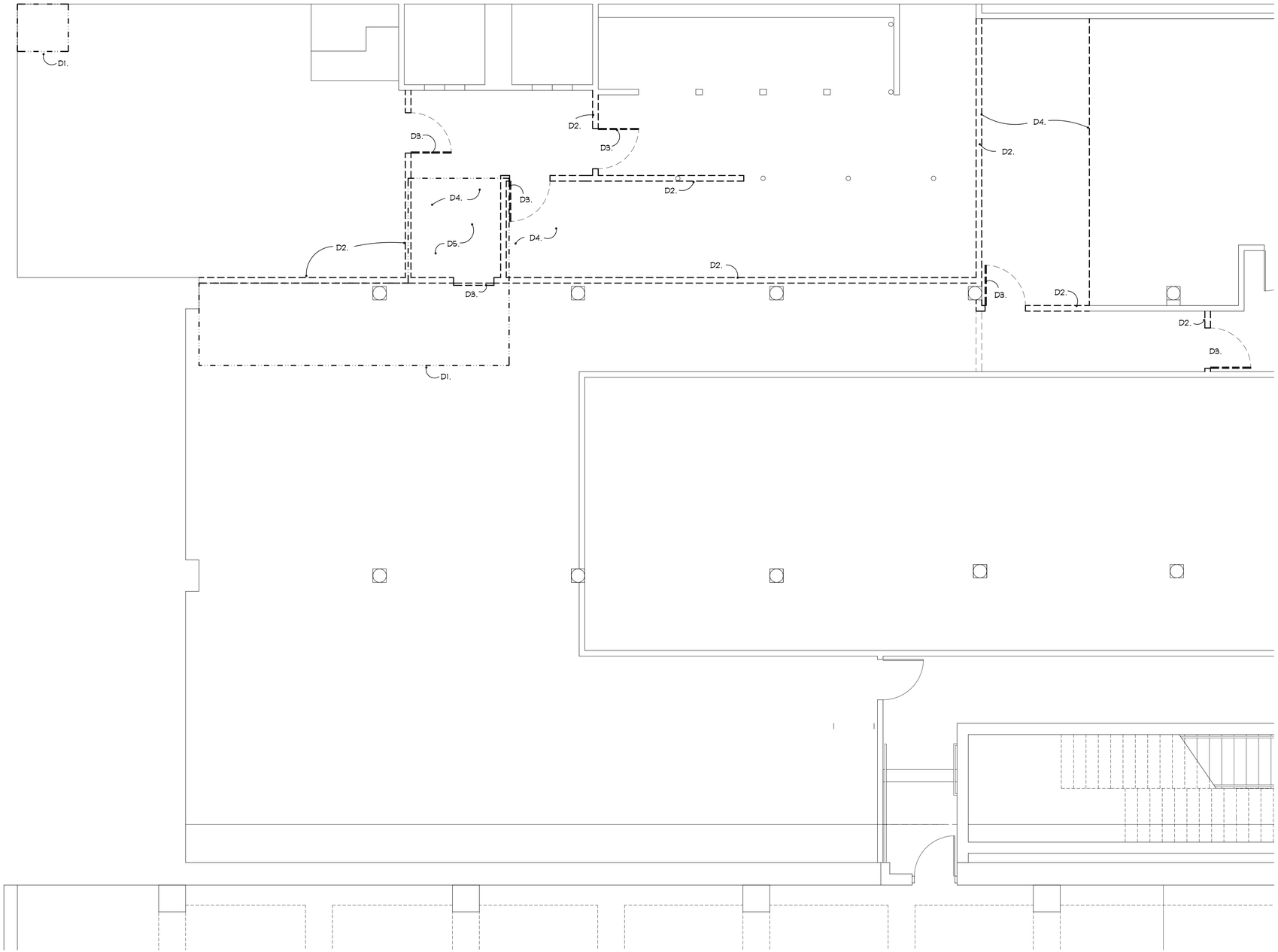
14141 W. BRUNS ROAD
MANHATTAN, ILLINOIS 60442 (815) 478-5604

DRAWN BY: AP.

DATE: 12/18/15

PHASE 2 REMODELING FOR NEW STATE'S ATTORNEY OFFICE FACILITY
WILL COUNTY COURT ANNEX
JEFFERSON & OTTAWA STS, JOLIET, ILLINOIS
COUNTY OF WILL , OWNER

SHEET T1 OF 1



DEMOLITION NOTES

D1. SAW CUT AND REMOVE PORTION OF CONCRETE FLOOR. COORDINATE WITH NEW WORK, SEE BASEMENT FLOOR PLAN AND MEP DRAWINGS.

D2. REMOVE EXISTING PARTITION IN ITS ENTIRETY.

D3. REMOVE EXISTING DOOR, FRAME AND HARDWARE.

D4. REMOVE EXISTING CEILING IN THIS AREA.

D5. REMOVE EXISTING FLOOR FINISH. REPAIR, CLEAN AND PREPARE SUB-SURFACE FOR SPECIFIED NEW FLOOR FINISH.

WORKING NORTH

BASEMENT DEMOLITION PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

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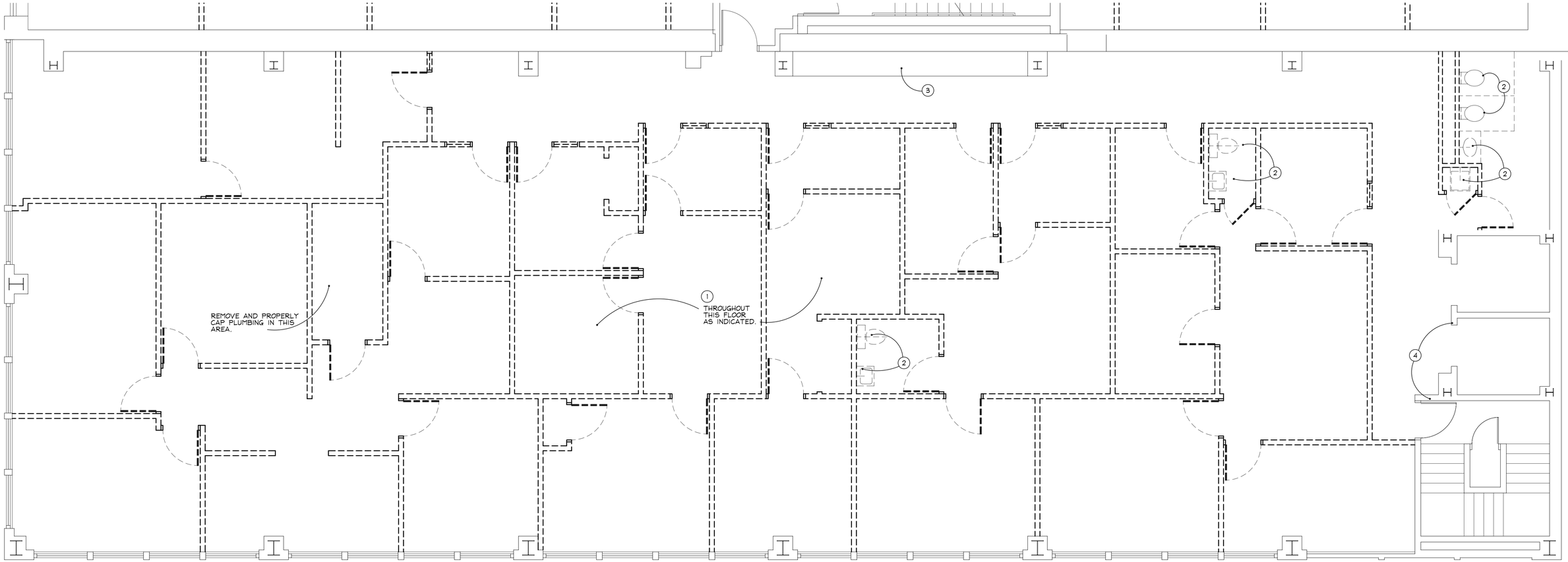
PHASE 2 OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET A1 OF 13



NORTH
WORKING

FIFTH FLOOR DEMOLITION PLAN

SCALE: 1/4" = 1'-0" EAST SIDE

DEMOLITION NOTES

1. AREA OF GENERAL DEMOLITION (GUTTING). DEMOLITION INCLUDES CEILINGS, WOOD FRAME PARTITIONS, FINISHES, DOORS BORROWED LIGHTS AND ASSOCIATED ITEMS. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION.
2. EXISTING PLUMBING FIXTURES TO BE REMOVED. SEE PLUMBING DWGS. PATCH OPENINGS IN FLOOR WITH CONSTRUCTION TO MATCH EXISTING.
3. EXISTING ELECTRICAL CLOSET TO REMAIN.
4. EXISTING CONSTRUCTION TO REMAIN.

NOTE:
SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION WORK.

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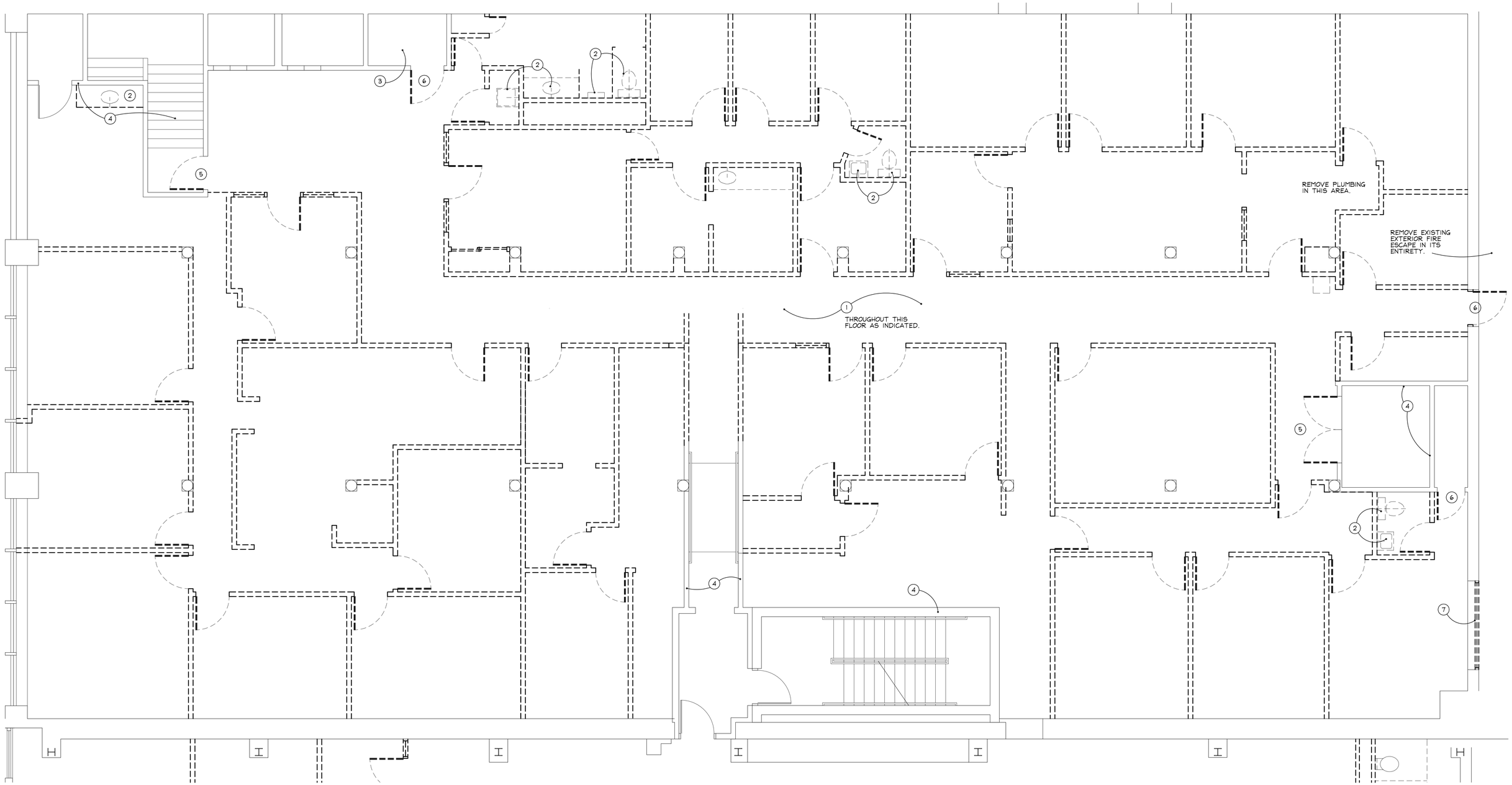
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET
A2
OF 13



WORKING NORTH

FIFTH FLOOR DEMOLITION PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

DEMOLITION NOTES

1. AREA OF GENERAL DEMOLITION (GUTTING). DEMOLITION INCLUDES CEILINGS, WOOD FRAME PARTITIONS, FINISHES, DOORS BORROWED LIGHTS, INSULATION AND ASSOCIATED ITEMS. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION.
2. EXISTING PLUMBING FIXTURES TO BE REMOVED. SEE PLUMBING DWGS. PATCH OPENINGS IN FLOOR WITH CONSTRUCTION TO MATCH EXISTING.
3. EXISTING ELECTRICAL CLOSET TO REMAIN.
4. EXISTING CONSTRUCTION TO REMAIN.
5. REMOVE EXISTING DOOR. SEE FLOOR PLAN AND DOOR SCHEDULE FOR OTHER POTENTIAL REMOVALS.
6. REMOVE EXISTING DOOR, FRAME AND HARDWARE.
7. REMOVE EXISTING ALUMINUM WINDOW.

NOTE:
SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION WORK.

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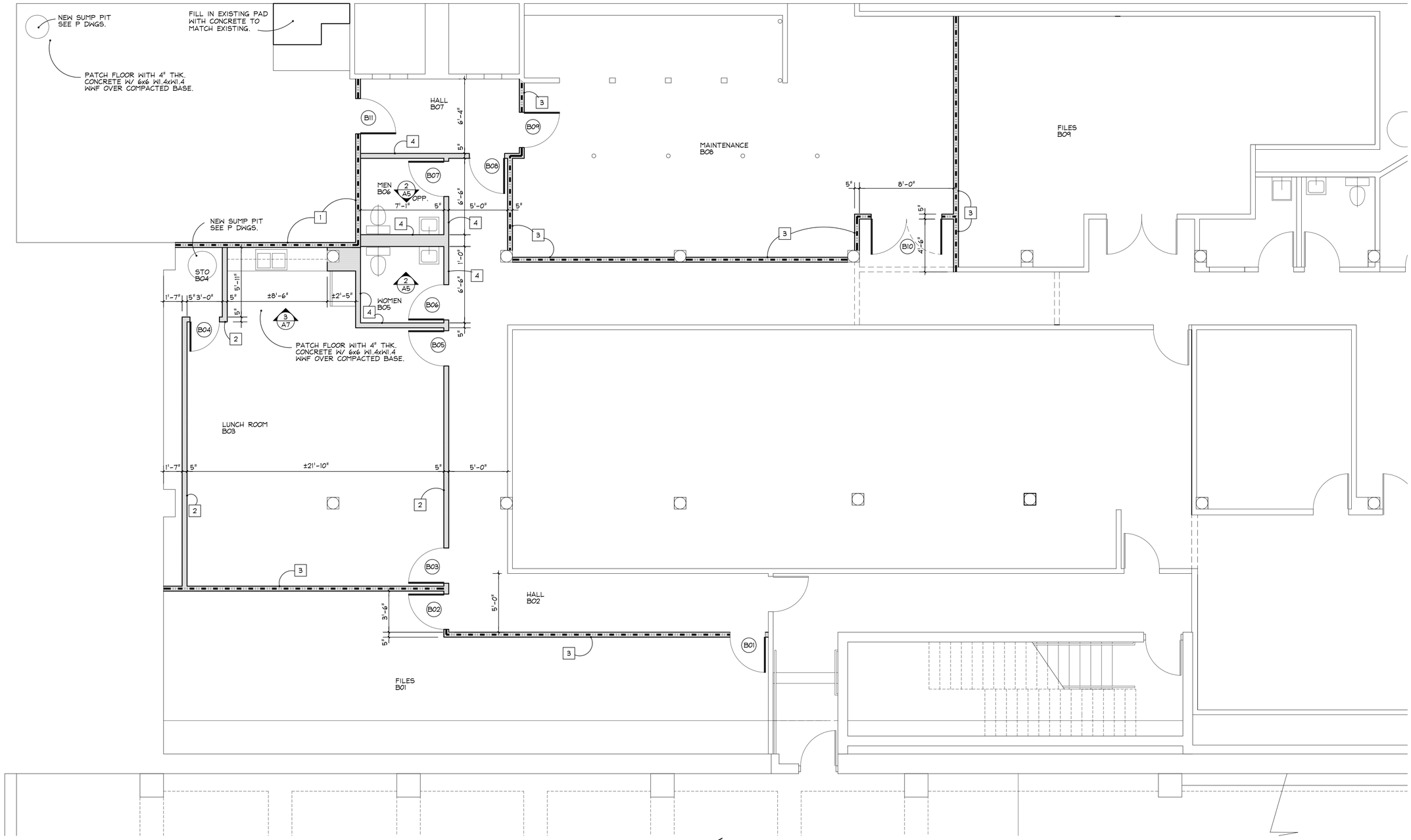
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET A3 OF 13



WORKING NORTH

BASEMENT FLOOR PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

GENERAL NOTES

ALL CONDITIONS ARE TO BE FIELD VERIFIED.

ALL EXISTING FLOOR CONSTRUCTION SHALL BE REPAIRED AS REQUIRED TO PROVIDE A LEVEL, UNIFORM SURFACE. REPAIRS SHALL INCLUDE THE INSTALLATION OF EPOXY CONCRETE.

MANY NEW PARTITIONS ARE FIELD-LOCATED BY ALIGNING WITH THE CENTERLINE OF EXISTING WINDOW MULLIONS AND COLUMN ENCLOSURES. THE DIMENSIONS NOT MARKED WITH "±" ARE "HOLD-TO" DIMENSIONS.

PLAN KEY NOTES

1. NEW PARTITION CONSISTING OF 25 GA. 3-5/8" LIGHT GAGE MTL FRAMING @ 16" O.C. W/ TWO LAYERS OF 5/8" FIRE CODE GYP BD EACH SIDE. FULLY FIRE STOP ALL PENETRATIONS. PARTITION TO THE EXTEND TIGHT TO THE UNDERSIDE OF STRUCTURAL CEILING CONSTRUCTION ABOVE.
2. NEW PARTITION CONSISTING OF 25 GA. 3-5/8" LIGHT GAGE MTL FRAMING @ 16" O.C. W/ ONE LAYER OF 5/8" FIRE CODE GYP BD EACH SIDE. PARTITION TO THE EXTEND TO 12" ABOVE NEW SUSPENDED CEILING.
3. NEW PARTITION CONSISTING OF 25 GA. 3-5/8" LIGHT GAGE MTL FRAMING @ 16" O.C. W/ ONE LAYER OF 5/8" FIRE CODE GYP BD EACH SIDE. PARTITION TO THE EXTEND TIGHT TO THE UNDERSIDE OF STRUCTURAL CEILING CONSTRUCTION ABOVE.
4. NEW PARTITION CONSISTING OF 25 GA. 3-5/8" LIGHT GAGE MTL FRAMING @ 16" O.C. W/ ONE LAYER OF 5/8" FIRE CODE GYP BD EACH SIDE. PARTITION TO THE EXTEND TO 12" ABOVE NEW SUSPENDED CEILING. PROVIDE FULL DEPTH ACOUSTIC BATT INSULATION IN CAVITIES.

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OTTAWA & JEFFERSON STS., JOLIET, ILL.
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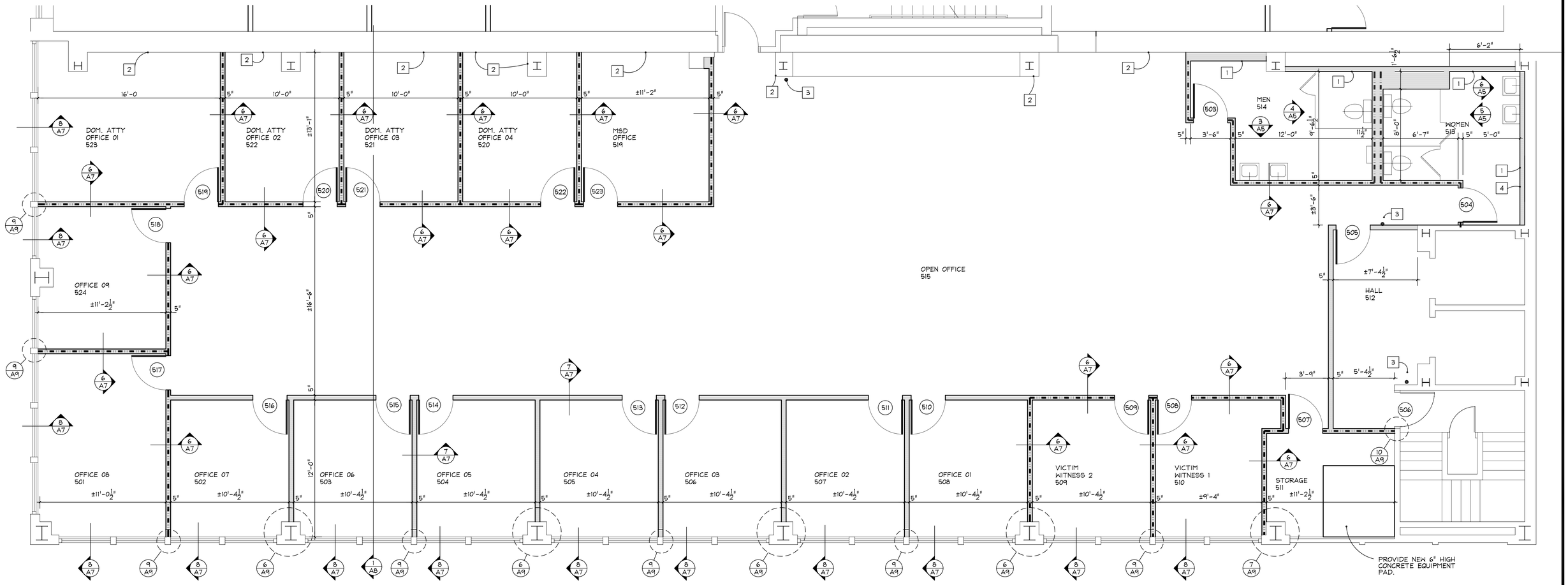
SHEET A4 OF 13



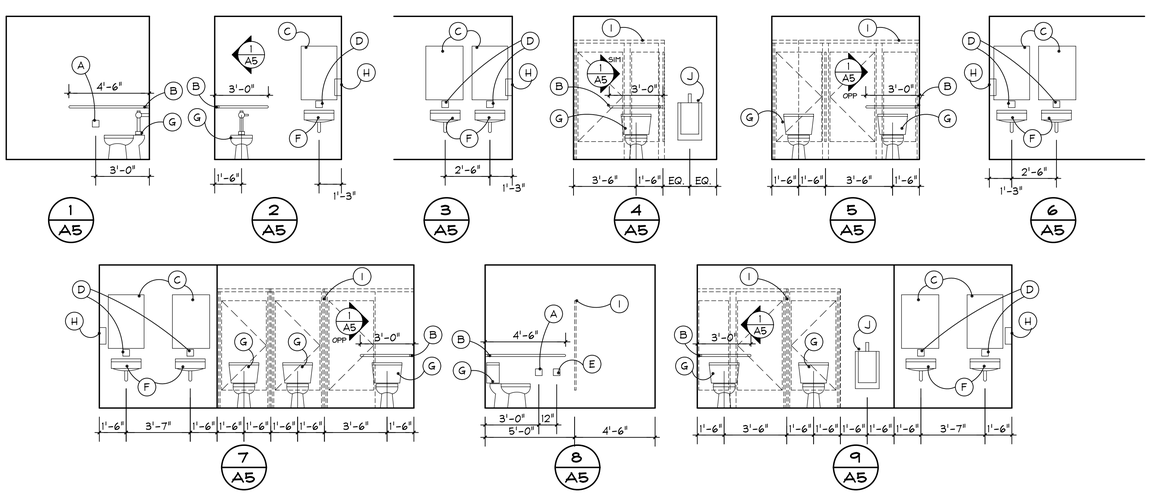
NORTH

FIFTH FLOOR PLAN

SCALE: 1/4" = 1'-0" EAST SIDE

PLAN KEY NOTES

1. PROVIDE A NEW WALL FACE CONSISTING OF 25 GA. 3-5/8" LIGHT GAGE METAL FRAMING AT 16" O.C. WITH 5/8" THK GYP. BD. THE NEW WALL FACE SHALL EXTEND FROM THE FLOOR TO THE UNDERSIDE OF THE EXISTING STRUCTURAL CEILING ABOVE.
2. RE-SURFACE EXISTING WALL TO PROVIDE A SMOOTH SURFACE TEXTURE TO MATCH SURFACE OF NEW PARTITIONS.
3. NEW WALL MOUNTED FIRE EXTINGUISHER.
4. PROVIDE FULL THICKNESS SPRAYED CLOSED CELL FOAM INSULATION IN THIS LOCATION.



RESTROOM ELEVATIONS

SCALE: 1/4" = 1'-0"

KEY NOTES for TOILET PLANS & ELEVATIONS

- (A) TISSUE DISPENSER, CENTER @ 24" ABOVE FINISHED FLOOR.
- (B) GRAB BAR, TOP 35" ABOVE FINISHED FLOOR.
- (C) 24" x 36" MIRROR, BOTTOM @ 40" ABOVE FIN. FLOOR.
- (D) SOAP DISPENSER, CENTER @ 36" ABOVE FIN. FLOOR.
- (E) SANITARY NAPKIN DISPOSAL UNIT, CENTER 24" ABOVE FIN. FLOOR. (@ WOMEN'S ONLY)
- (F) LAVATORY WITH RIM @ 31" ABOVE FINISHED FLOOR.
- (G) WATER CLOSET.
- (H) TOWEL DISPENSER, TOP @ 54" ABOVE FINISHED FLOOR. LOCATE AS PER OWNER'S DIRECTION.
- (I) TOILET PARTITION.
- (J) URINAL WITH RIM @ 17" ABOVE FINISHED FLOOR. FLUSH CONTROLS SHALL BE NOT MORE THAN 44" ABOVE FINISH FLOOR.

NOTE: ITEMS A, C, D, E & H ARE TO BE PROVIDED AND INSTALLED BY THE OWNER AND ARE NOT PART OF THE PROJECT.

GENERAL NOTES

ALL CONDITIONS ARE TO BE FIELD VERIFIED.

ALL EXISTING FLOOR CONSTRUCTION SHALL BE REPAIRED AS REQUIRED TO PROVIDE A LEVEL, UNIFORM SURFACE. REPAIRS SHALL INCLUDE THE INSTALLATION OF EPOXY CONCRETE.

UNLESS OTHERWISE NOTED, SEE DETAIL 7/A7 FOR TYPICAL INTERIOR WALL DETAIL.

ALL DAMAGE TO EXISTING FIREPROOFING RESULTING FROM WORK ASSOCIATED WITH THIS PROJECT SHALL BE REPAIRED.

MANY NEW PARTITIONS ARE FIELD-LOCATED BY ALIGNING WITH THE CENTERLINE OF EXISTING WINDOW MULLIONS AND COLUMN ENCLOSURES. THE DIMENSIONS NOT MARKED WITH "±" ARE "HOLD-TO" DIMENSIONS.

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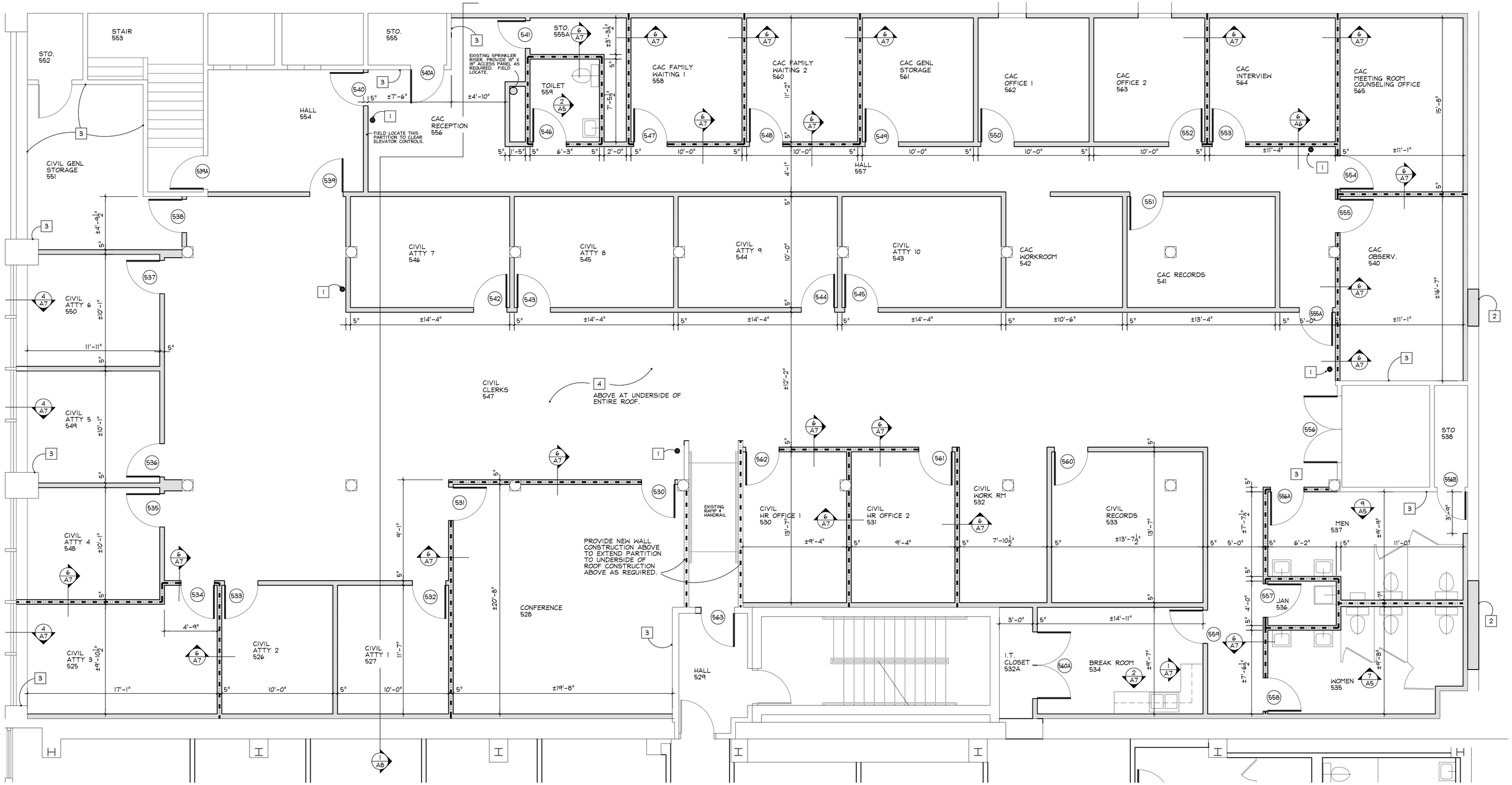
SHEET A5 OF 13



WORKING NORTH

FIFTH FLOOR PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

FLOOR PLAN GENERAL NOTES:

ALL CONDITIONS ARE TO BE FIELD VERIFIED.

SEE DETAIL 7/A7 FOR TYPICAL INTERIOR PARTITION DETAIL.

SEE DETAIL 8/A9 FOR TYPICAL COLUMN DETAIL.

MANY NEW PARTITIONS ARE FIELD-LOCATED BY ALIGNING WITH THE FACE OF THE ENCLOSURES OF THE EXISTING COLUMNS (SEE DETAIL 6/A6). THE DIMENSIONS NOT MARKED WITH "±" ARE "HOLD-TO" DIMENSIONS.

AT THE EXTERIOR WALLS ON THE NORTH AND WEST SIDES OF THE BUILDING, PROVIDE A NEW WALL FACE CONSISTING OF 20 GAGE 3-5/8" LIGHT-GAGE METAL FRAMING AT 16" O.C. WITH 5/8" GYP BD., FULL THICKNESS CLOSED CELL SPRAY FOAM INSULATION R23. THE NEW WALL FACE SHALL EXTEND FROM THE FLOOR TO THE UNDERSIDE OF THE EXISTING ROOF STRUCTURE ABOVE.

AT THE PARTY WALL TO THE EAST (SEPARATING THE JEFFERSON STREET PORTION FROM THE OTTAWA STREET PORTION), PROVIDE A NEW 9'-0" HIGH WALL FACE CONSISTING OF 20 GAGE 3-5/8" LIGHT-GAGE METAL FRAMING AT 16" O.C. WITH 5/8" THK. GYP. BD.

AT THE EXTERIOR WALLS ON THE SOUTH SIDE OF THE BUILDING, PROVIDE 4" THICK CLOSED CELL SPRAY FOAM INSULATION OVER EXISTING MASONRY. FIELD VERIFY EXISTING CONDITIONS.

FLOOR PLAN KEY NOTES:

1. NEW WALL MOUNTED FIRE EXTINGUISHER.
2. CLOSE OPENING WITH BRICK CONSTRUCTION MATCHING THE THICKNESS OF EXISTING MASONRY. TIE JAMBS TO THE EXISTING MASONRY WITH #3 RODS @ 8" O.C. VERTICALLY WITH 4" EMBEDMENT.
3. INSTALL NEW 5/8" GYP. BD. OVER EXISTING CONSTRUCTION.
4. PROVIDE CLOSED CELL SPRAT FOAM INSULATION TO UNDERSIDE OF ROOF DECK TO PROVIDE AN ADDITIONAL R27. [APPROXIMATE 4" THICKNESS.] ALL EXPOSED CLOSED CELL FOAM INSULATION [THAT WHICH IS NOT CONCEALED BY GYPSUM WALLBOARD.] SHALL RECEIVE IGNITION BARRIER COATING.

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PHASE 2 OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

ROOM FINISH SCHEDULE

TAG	ROOM NAME	FLOOR (*)	BASE	WALLS	CEILING	HGT	REMARK
B01	STORAGE	EXISTING	RESILIENT	GB/P, EX.	EXP. STR.	EX	(2)
B02	HALL	CARPET	RESILIENT	GB/P	ACP1	8'0"	(2)
B03	LUNCH ROOM	VCT	RESILIENT	GB/P	ACP1	8'0"	(2)
B04	STORAGE	CONCRETE	RESILIENT	GB/P, EX.	EXP. STR.	8'0"	(2)
B05	WOMEN	VCT	RESILIENT	GB/P	ACP1	8'0"	(2)
B06	MEN	VCT	RESILIENT	GB/P	ACP1	8'0"	(2)
B07	HALL	CARPET	RESILIENT	GB/P	ACP1	8'0"	(2)
B08	MAINTENANCE	NO WORK	NO WORK	NO WORK	EXP. STR.	EX	
B09	FILES	EXISTING	RESILIENT	GB/P	EXISTING	EX	(2)
501	OFFICE 08	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
502	OFFICE 07	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
503	OFFICE 06	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
504	OFFICE 05	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
505	OFFICE 04	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
506	OFFICE 03	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
507	OFFICE 02	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
508	OFFICE 01	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
509	VICTIM WITNESS 2	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
510	VICTIM WITNESS 1	CARPET	RESILIENT	GB/P	ACP1	8'6"	
511	STORAGE	VCT	RESILIENT	GB/P	EX. CONST.	-	
512	HALL	CARPET	RESILIENT	GB/P	ACP1	8'6"	
513	WOMEN	VCT	RESILIENT	GB/P	ACP1	8'6"	
514	MEN	VCT	RESILIENT	GB/P	ACP1	8'6"	
515	OPEN OFFICE	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
516	NO ROOM						
517	NO ROOM						
518	NO ROOM						
518A	NO ROOM						
519	MSD OFFICE	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
520	DOM. ATTY OFFICE 04	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
521	DOM. ATTY OFFICE 03	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
522	DOM. ATTY OFFICE 02	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
523	DOM. ATTY OFFICE 01	CARPET	RESILIENT	GB/P	ACP1	8'6"	(1)
524	OFFICE 09	CARPET	RESILIENT	GB/P	ACP1	8'6"	
525	CIVIL ATTY 3	CARPET	RESILIENT	GB/P	ACP1	8'6"	
526	CIVIL ATTY 2	CARPET	RESILIENT	GB/P	ACP1	8'6"	
527	CIVIL ATTY 1	CARPET	RESILIENT	GB/P	ACP1	8'6"	
528	CONFERENCE	CARPET	RESILIENT	GB/P	ACP1	8'6"	
529	HALL	CARPET	RESILIENT	GB/P	ACP1	8'6"	
530	CIVIL HR OFFICE 1	CARPET	RESILIENT	GB/P	ACP1	8'6"	
531	CIVIL HR OFFICE 2	CARPET	RESILIENT	GB/P	ACP1	8'6"	
532	CIVIL WORK RM	CARPET	RESILIENT	GB/P	ACP1	8'6"	
532A	I.T. CLOSET	CARPET	RESILIENT	GB/P	ACP1	8'6"	
533	CIVIL RECORDS	CARPET	RESILIENT	GB/P	ACP1	8'6"	
534	BREAK ROOM	VCT	RESILIENT	GB/P	ACP1	8'6"	
535	WOMEN	VCT	RESILIENT	GB/P	ACP1	8'6"	
536	JANITOR	VCT	RESILIENT	GB/P	ACP1	8'6"	
537	MEN	VCT	RESILIENT	GB/P	ACP1	8'6"	
538	STORAGE	VCT	RESILIENT	GB/P	ACP1	8'6"	
539	NO ROOM	-	-	-	-	-	
540	CAC OBSERV.	CARPET	RESILIENT	GB/P	ACP1	8'6"	
541	CAC RECORDS	CARPET	RESILIENT	GB/P	ACP1	8'6"	
542	CAC WORKROOM	CARPET	RESILIENT	GB/P	ACP1	8'6"	
543	CIVIL ATTY 10	CARPET	RESILIENT	GB/P	ACP1	8'6"	
544	CIVIL ATTY 9	CARPET	RESILIENT	GB/P	ACP1	8'6"	
545	CIVIL ATTY 8	CARPET	RESILIENT	GB/P	ACP1	8'6"	
546	CIVIL ATTY 7	CARPET	RESILIENT	GB/P	ACP1	8'6"	
547	CIVIL CLERKS	CARPET	RESILIENT	GB/P	ACP1	8'6"	
548	CIVIL ATTY 4	CARPET	RESILIENT	GB/P	ACP1	8'6"	
549	CIVIL ATTY 5	CARPET	RESILIENT	GB/P	ACP1	8'6"	
550	CIVIL ATTY 6	CARPET	RESILIENT	GB/P	ACP1	8'6"	
551	CIVIL GENL STORAGE	CARPET	RESILIENT	GB/P	ACP1	8'6"	
552	STORAGE	CARPET	RESILIENT	GB/P	ACP1	8'6"	
553	STAIR	EXISTING	EXIST.	EXIST.	EXIST.	-	
554	HALL	CARPET	RESILIENT	GB/P	ACP1	8'6"	
555	STORAGE	EXISTING	EXIST.	EXIST.	EXIST.	-	
555A	STORAGE	VCT	RESILIENT	GB/P	EX. CONST.	-	
556	CAC RECEPTION	CARPET	RESILIENT	GB/P	ACP1	8'6"	
557	HALL	CARPET	RESILIENT	GB/P	ACP1	8'6"	
558	CAC FAMILY WAITING 1	CARPET	RESILIENT	GB/P	ACP1	8'6"	
559	TOILET	VCT	RESILIENT	GB/P	ACP1	8'6"	
560	CAC FAMILY WAITING 2	CARPET	RESILIENT	GB/P	ACP1	8'6"	
561	CAC GENL STORAGE	CARPET	RESILIENT	GB/P	ACP1	8'6"	
562	CAC OFFICE 1	CARPET	RESILIENT	GB/P	ACP1	8'6"	
563	CAC OFFICE 2	CARPET	RESILIENT	GB/P	ACP1	8'6"	
564	CAC INTERVIEW	CARPET	RESILIENT	GB/P	ACP1	8'6"	
565	CAC MTG RM/COUNSELOR OFF.	CARPET	RESILIENT	GB/P	ACP1	8'6"	

ROOM FINISH ABBREVIATIONS:

ACP = SUSPENDED ACOUSTIC CEILING PANEL NUMBER INDICATES TYPE.

VCT = VINYL COMPOSITION TILE

GB/P = GYPSUM BOARD, PAINTED

CONSTR/P = EXPOSED CONSTRUCTION, PAINTED

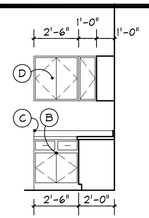
CARPET = CARPET

ROOM FINISH NOTES:

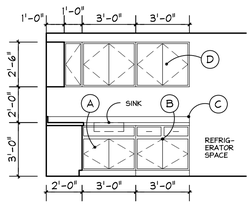
(1) REPAIR EXISTING WALL SURFACES AS REQUIRED AT EXTERIOR WALLS.

(2) PROVIDE ONE LAYER OF 5/8" THK. TYPE X GYP. BD. TO EXPOSED AREAS OF EXISTING FLOOR CONSTRUCTION ABOVE.

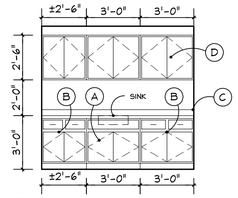
(*) EXISTING FLOOR SUBSTRATES SHALL BE PATCHED & PREPARED AS REQUIRED FOR SPECIFIED FLOOR FINISH.



1 / A7 CAB'T ELEV.
SCALE: 1/4" = 1'-0" BREAK ROOM 534



2 / A7 CAB'T ELEV.
SCALE: 1/4" = 1'-0" BREAK ROOM 534



3 / A7 CAB'T ELEV.
SCALE: 1/4" = 1'-0" BREAK ROOM 534

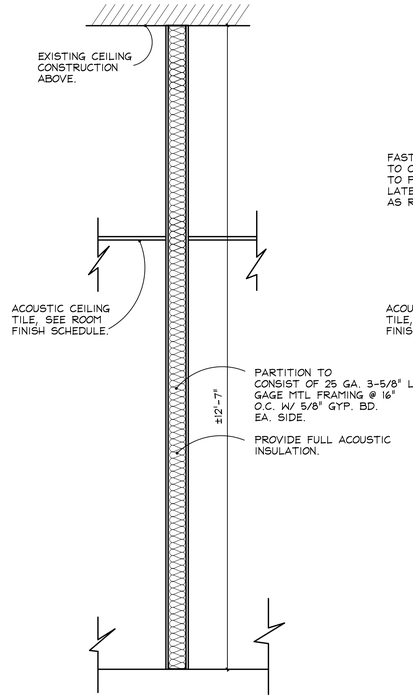
CABINETRY NOTES

(A) BASE CABINET UNIT WITH TWO (2) DOORS AND BLANK DRAWER PANELS AT SINK.

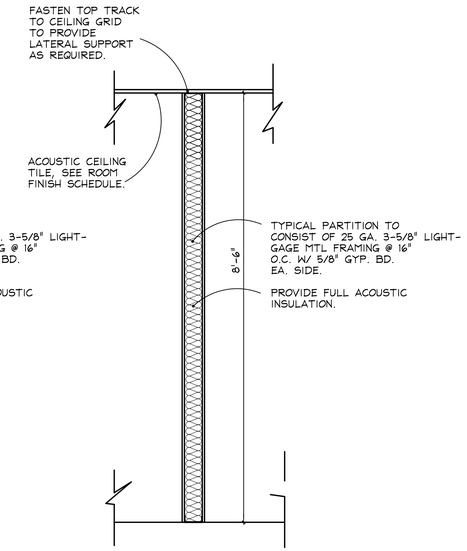
(B) BASE CABINET UNIT WITH TWO (2) DRAWERS AND TWO (2) DOORS AS INDICATED. PROVIDE ONE (1) ADJUSTABLE SHELF BEHIND DOORS.

(C) CONTINUOUS COUNTERTOP WITH 4" BACKSPLASH.

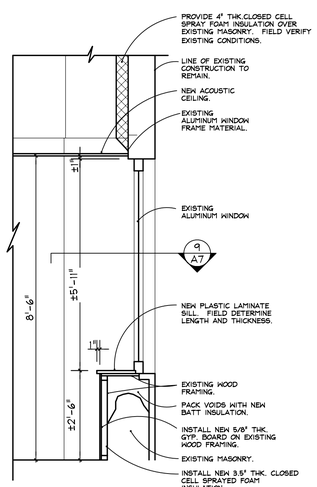
(D) WALL CABINET UNIT WITH TWO (2) SHELVES AS INDICATED.



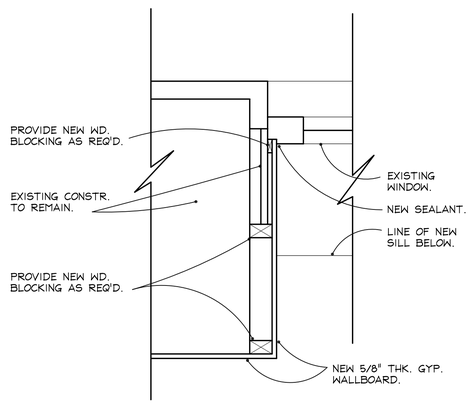
6 / A7 WALL DETAIL
SCALE: 3/4" = 1'-0"



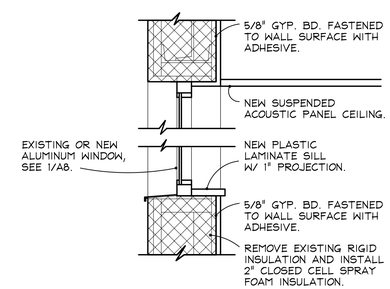
7 / A7 TYPICAL WALL DETAIL
SCALE: 3/4" = 1'-0"



4 / A7 TYPICAL WINDOW SILL DETAIL
SCALE: 1/2" = 1'-0" WEST SIDE



5 / A7 TYPICAL WINDOW JAMB DETAIL
SCALE: 1-1/2" = 1'-0" WEST SIDE



8 / A7 TYPICAL WINDOW SILL DETAIL
SCALE: 1/2" = 1'-0" EAST SIDE

R1307B

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DRAWN BY: AP.

DATE: 12/18/15

PHASE 2 REMODELING FOR
NEW STATE'S ATTORNEY
OFFICE FACILITY

WILL COUNTY COURT ANNEX

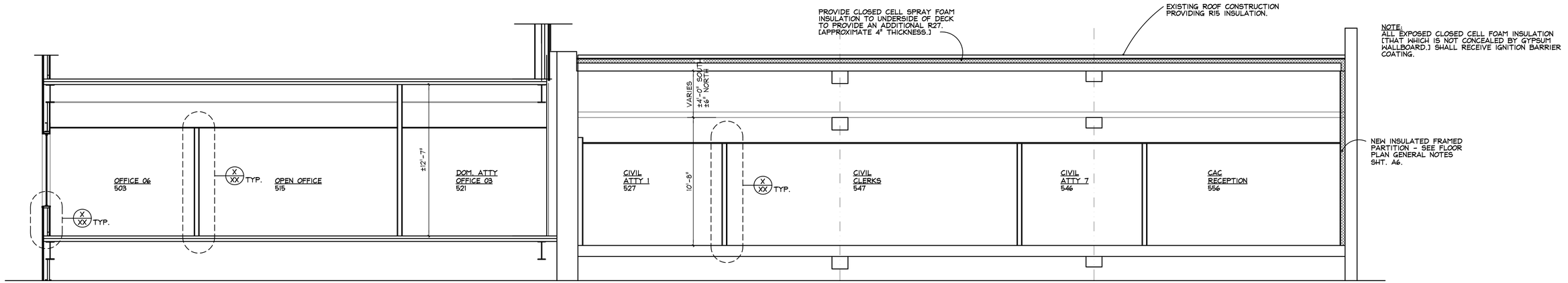
JEFFERSON & OTTAWA STS, JOLIET, ILLINOIS

COUNTY OF WILL , OWNER

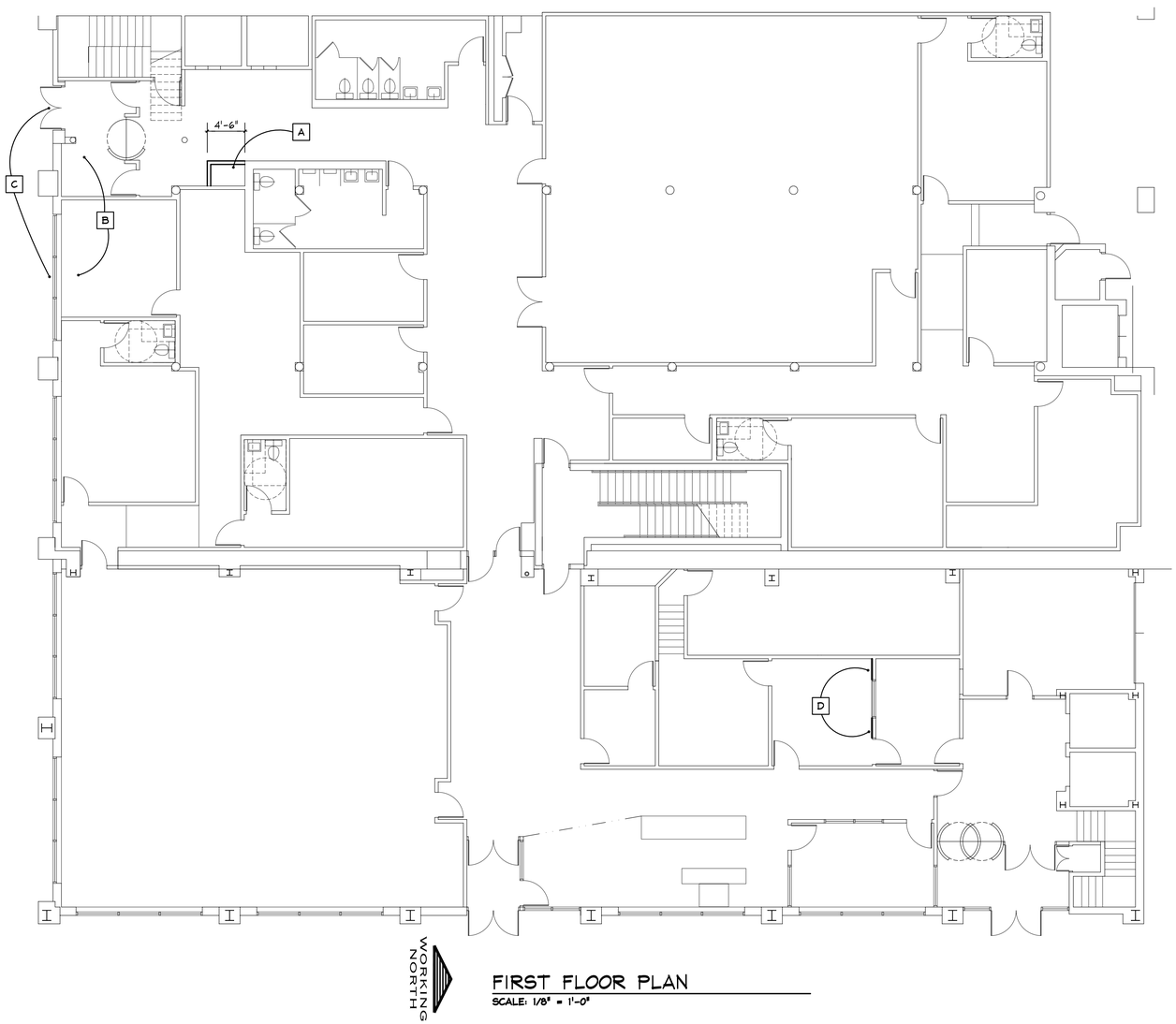
SHEET

A7

OF 13



1 / A8 PARTIAL BUILDING SECTION
SCALE: 1/4" = 1'-0"



FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

PLAN KEY NOTES

A CAREFULLY REWORK EXISTING FINISHES TO PROVIDE NEW DUCTWORK ENCLOSURE AS INDICATED. DUCTWORK ENCLOSURE TO CONSIST OF 25 GA. 3-5/8" LIGHTGAGE METAL FRAMING @ 16" O.C. W/ 5/8" GYP. BD. ON FINISHED SIDE. ENCLOSURE TO EXTEND TO 6" ABOVE EXISTING CEILING. REPAIR ALL FINISHES DAMAGED BY THIS WORK. PROVIDE 24" X 24" ACCESS PANEL LOCATED TO ACCESS FIRE DAMPERS.

B REMOVE EXISTING CEILING IN THIS AREA AS REQUIRED TO PERFORM HVAC WORK IN THE IS AREA. RE-INSTALL/REPAIR CEILING FOLLOWING COMPLETION OF THE HVAC WORK.

C CREATE OPENINGS IN EXISTING EXTERIOR WALL TO ACCOMMODATE NEW HVAC GRILLES. FIELD DETERMINE EXISTING CONSTRUCTION DURING CONSTRUCTION AND REPORT TO ARCHITECT ADDITIONAL LINTEL REQUIREMENTS. COORDINATE WITH HVAC WORK. PATCH/REPAIR CONSTRUCTION AND FINISHES AS REQUIRED.

D REMOVE EXISTING RESILIENT BASE. INSTALL NEW ?" BULLET RESISTANT PANEL OVER ENTIRE WALL SURFACE. INSTALL ?" GYPSUM WALLBOARD OVER PANEL. PROVIDE J-MOULDING AT GYP. BD. EDGES AT CEILING, WALLS AND DOOR/WINDOW FRAMES. PROVIDE SEALANT JOINT AT WINDOW AND DOORS FRAMES. INSTALL NEW RESILIENT BASE TO MATCH EXISTING.

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COUNTY OF WILL , OWNER

DOOR SCHEDULE

TAG	SIZE	DOOR TYPE		FRAME TYPE		HEAD DTL	JAMB DTL	SILL DTL	HDW SET	REMARK	TAG
B01	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	3		B01
B02	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	3		B02
B03	3'0" x 7'0" x 1-3/4"	SCWD	G	HM	3/A9	1/A9	1/A9	-	1	1/4" TEMPERED GLASS	B03
B04	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	3		B04
B05	3'0" x 7'0" x 1-3/4"	SCWD	G	HM	3/A9	1/A9	1/A9	-	1	1/4" TEMPERED GLASS	B05
B06	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	6	(B)	B06
B07	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	6	(B)	B07
B08	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	2	(D)	B08
B09	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	2	(D)	B09
B10	TWO 3'0" x 7'0" x 1-3/4"	SCWD	F	HM	4/A9	1/A9	1/A9	-	5		B10
B11	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	3		B11
	NO DOORS 501 THRU 502										
503	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	2	(B)	503
504	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	2	(B)	504
505	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	4	(D)	505
506	3'0" x 7'0" x 1-3/4" (EXISTING)	-	-	-	-	-	-	-	-	(D) (E)	506
507	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	3		507
508	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		508
509	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		509
510	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		510
511	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		511
512	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		512
513	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		513
514	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		514
515	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	3		515
516	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		516
517	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		517
518	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		518
519	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		519
520	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		520
521	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		521
522	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		522
523	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		523
530	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	1		530
531	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		531
532	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		532
533	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		533
534	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		534
535	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		535
536	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		536
537	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		537
538	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	1		538
539	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	4	(D)	539
539A	3'0" x 7'0" x 1-3/4"	HM	F	EXISTING		-	-	-	4	(D) (E) A LABEL DR	539A
540	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	4	(D)	540
540A	3'0" x 7'0" x 1-3/4"	HM	F	HM	3/A9	1/A9	2/A9	-	3	(F)	540A
541	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	3		541
542	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		542
543	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		543
544	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		544
545	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		545
546	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		546
547	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		547
548	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		548
549	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		549
550	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		550
551	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		551
552	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		552
553	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		553
554	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		554
555	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		555
555A	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	7		555A
556	TWO 3'0" x 7'0" x 1-3/4"	HM	F	EXISTING		-	-	-	5	A LABEL DOORS	556
556A	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	2	(B)	556A
556B	2'6" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9		3	(F)	556B
557	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	3		557
558	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	2	(B)	558
559	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		559
560	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	3		560
560A	TWO 3'0" x 7'0" x 1-3/4"	SCWD	F	HM	4/A9	1/A9	1/A9	-	5		560A
561	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	1		561
562	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	2/A9	-	1		562
563	3'0" x 7'0" x 1-3/4"	SCWD	F	HM	3/A9	1/A9	1/A9	-	4	(D)	563

HARDWARE SCHEDULE

SET	FUNCTION	LOCKSET (**) (***)	BUTT HINGES 1-1/2 PAIR	CLOSER	BUMPER	PANIC HARDWARE	PUSH-PULL	CYLINDER (***)	KICKPLATE	THRESHOLD	WEATHERSTRIPPING	SIGNAGE (*)	SILENCERS	REMARK
1	OFFICE	■	■		■								■	-
2	CLASSROOM DEADBOLT	■	■	■	■		■	■	■			■	■	(A)
3	STORAGE	■	■	■	■								■	-
4	STORAGE	■	■	■	■				■				■	(C)
5	OFFICE/DUMMY	■	2		2								■	PROVIDE FLUSHBOLTS
6	PRIVACY	■	■	■	■								■	(A)
7	PRIVACY	■	■	■	■				■				■	

(*) PROVIDE SIGNAGE IN FULL COMPLIANCE WITH THE "ILLINOIS ACCESSIBILITY CODE" DATED 04/24/97, SECTION 400.310 (u).

(**) PROVIDE LOCKSET IN FULL COMPLIANCE WITH THE "ILLINOIS ACCESSIBILITY CODE" DATED 04/24/97 SECTION 400.310 (j,8)

(***) ALL CYLINDERS PROVIDED BY OWNER.

DOOR/HARDWARE NOTES & ABBREVIATIONS

SCWD = SOLID CORE WOOD FLUSH HM = HOLLOW METAL

NOTES:

(A) PROVIDE SIGNAGE AS SELECTED BY OWNER. (*)

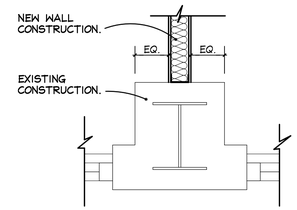
(B) PROVIDE 1" UNDERCUT AT THIS DOOR.

(C) ELECTRIFIED CENTER HINGE.

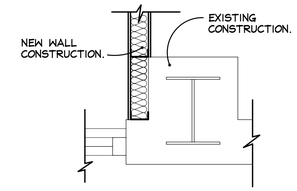
(D) PROVIDE EMPTY CONDUIT AS INDICATED AT CONDUIT DETAIL 5/A9.

(E) EXISTING DOOR TO BE ELECTRIFIED TO PROVIDE CARD ACCESS FROM STAIR. MODIFY DOOR, FRAME AND HARDWARE AND PROVIDE REQUIRED CONDUIT.

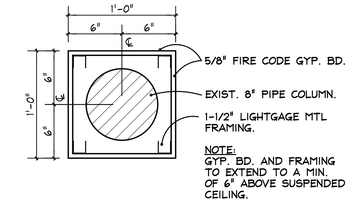
(F) RE-USE EXISTING WALL OPENING. FIELD VERIFY DOOR SIZE REQUIRED.



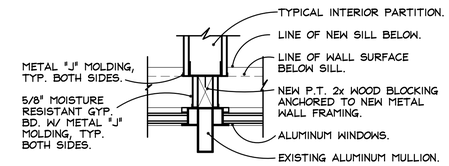
6 A8 WALL DETAIL
3/4" = 1'-0"



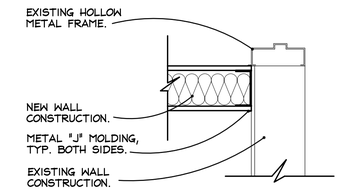
7 A8 WALL DETAIL
3/4" = 1'-0"



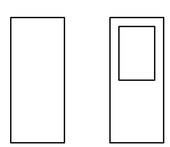
8 A8 COLUMN DETAIL
1-1/2" = 1'-0"



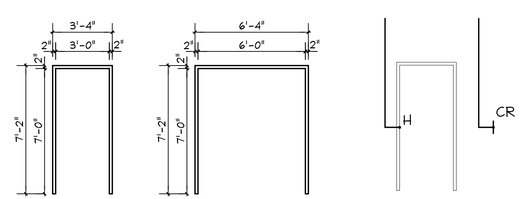
9 A9 WALL DETAIL
1-1/2" = 1'-0"



10 A9 WALL DETAIL
1-1/2" = 1'-0"



DOOR TYPES
SCALE: 1/4" = 1'-0"



3 A9 HOLLOW STL DOOR FRAME ELEVATION

4 A9 HOLLOW STL DOOR FRAME ELEVATION

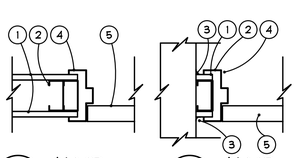
5 A9 EMPTY CONDUIT DETAIL
1/4" = 1'-0"

DOOR FRAME ELEVATIONS
SCALE: 1/4" = 1'-0"

EMPTY CONDUIT KEY NOTES

H - CONDUIT IN FRAME TO CENTER HINGE.

CR - CONDUIT IN WALL, COORDINATE LOCATION WITH OWNER.



1 A9 JAMB
1-1/2" =1'-0"

2 A9 JAMB
1-1/2" =1'-0"

DOOR/WINDOW DETAIL NOTES

1. 5/8" THK. GYP BOARD.
2. 3-1/2" COLD FORMED STEEL FRAMING.
3. SEALANT.
4. 2" HOLLOW STEEL FRAME.
5. DOOR.

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14141 W. BRUNS ROAD
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(815) 478-5604

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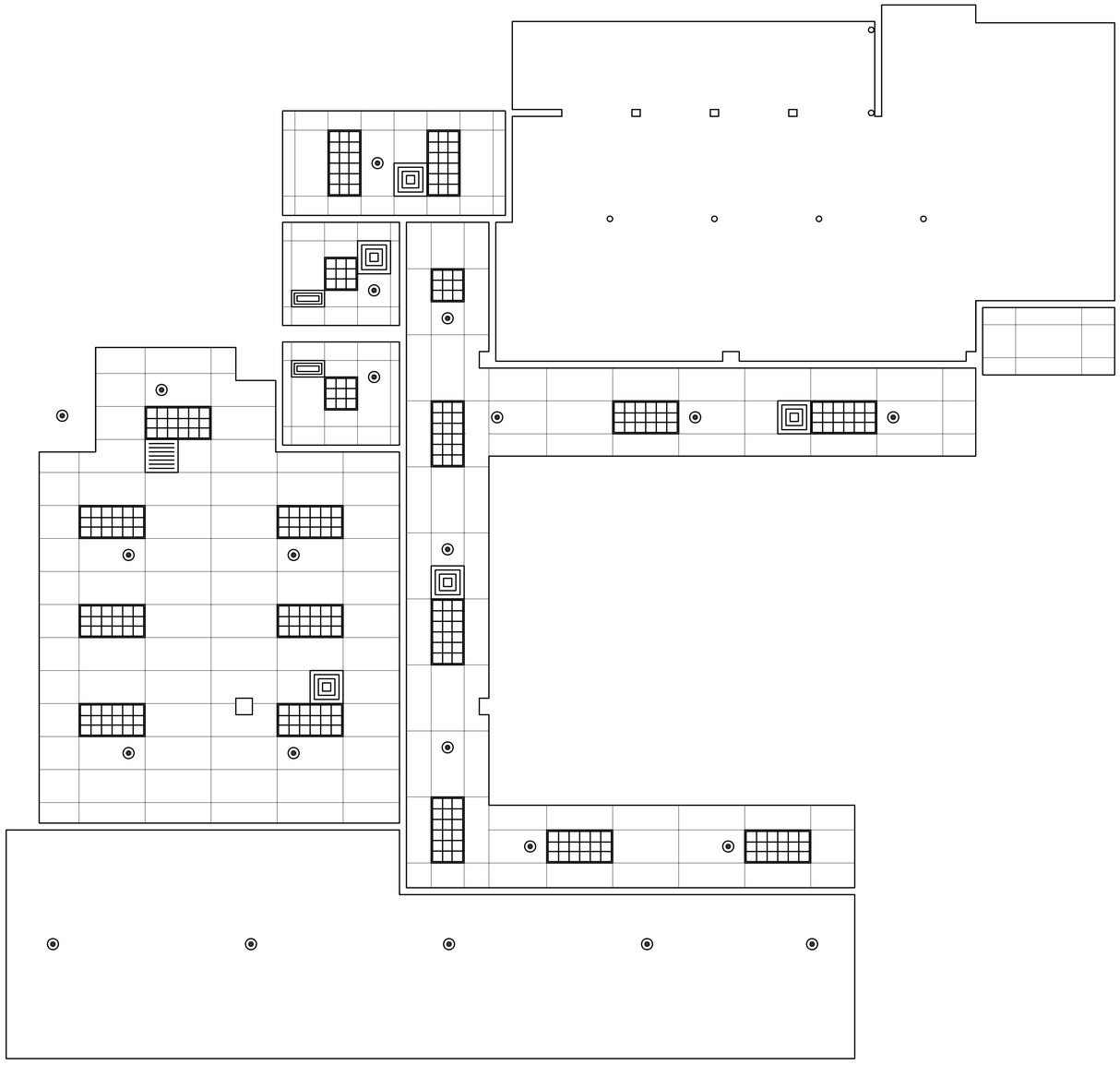
DATE: 12/18/15

PHASE 2 REMODELING FOR
NEW STATE'S ATTORNEY
OFFICE FACILITY
WILL COUNTY COURT ANNEX
JEFFERSON & OTTAWA STS, JOLIET, ILLINOIS
COUNTY OF WILL , OWNER



WORKING NORTH

BASEMENT CEILING PLAN

SCALE: 1/4" = 1'-0"

WEST SIDE

R1307B

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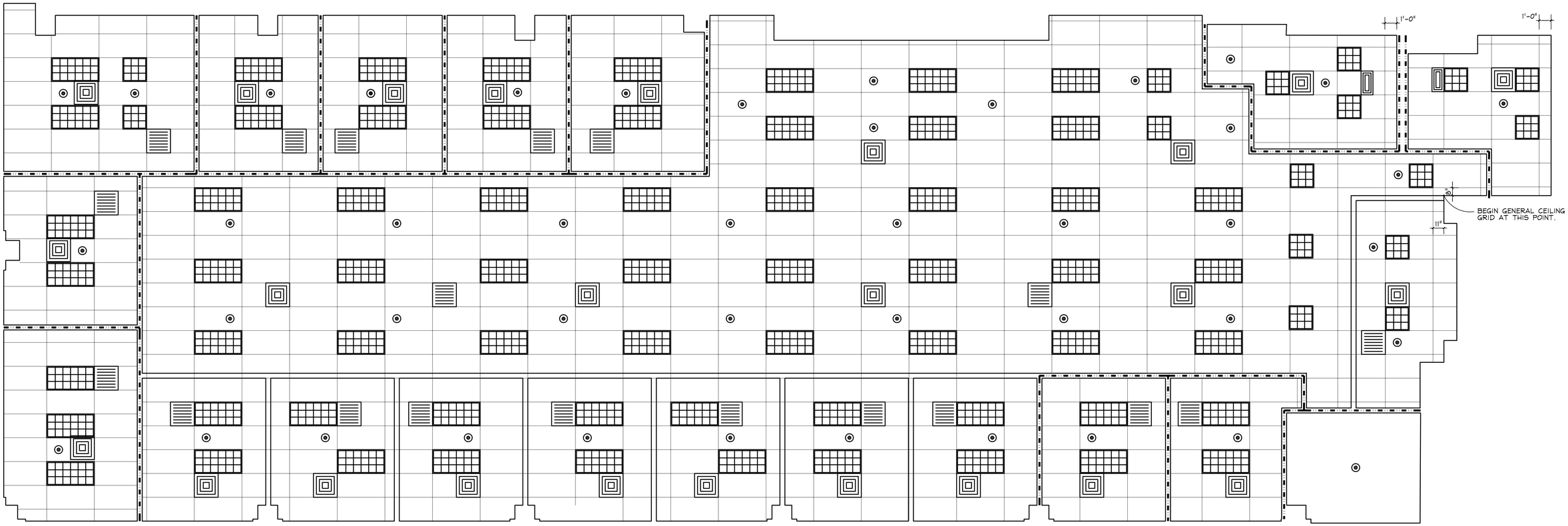
PHASE 2 OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET

A10

OF 13



WORKING NORTH

FIFTH FLOOR CEILING PLAN

SCALE: 1/4" = 1'-0" EAST SIDE

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OTTAWA & JEFFERSON STS., JOLIET, ILL.
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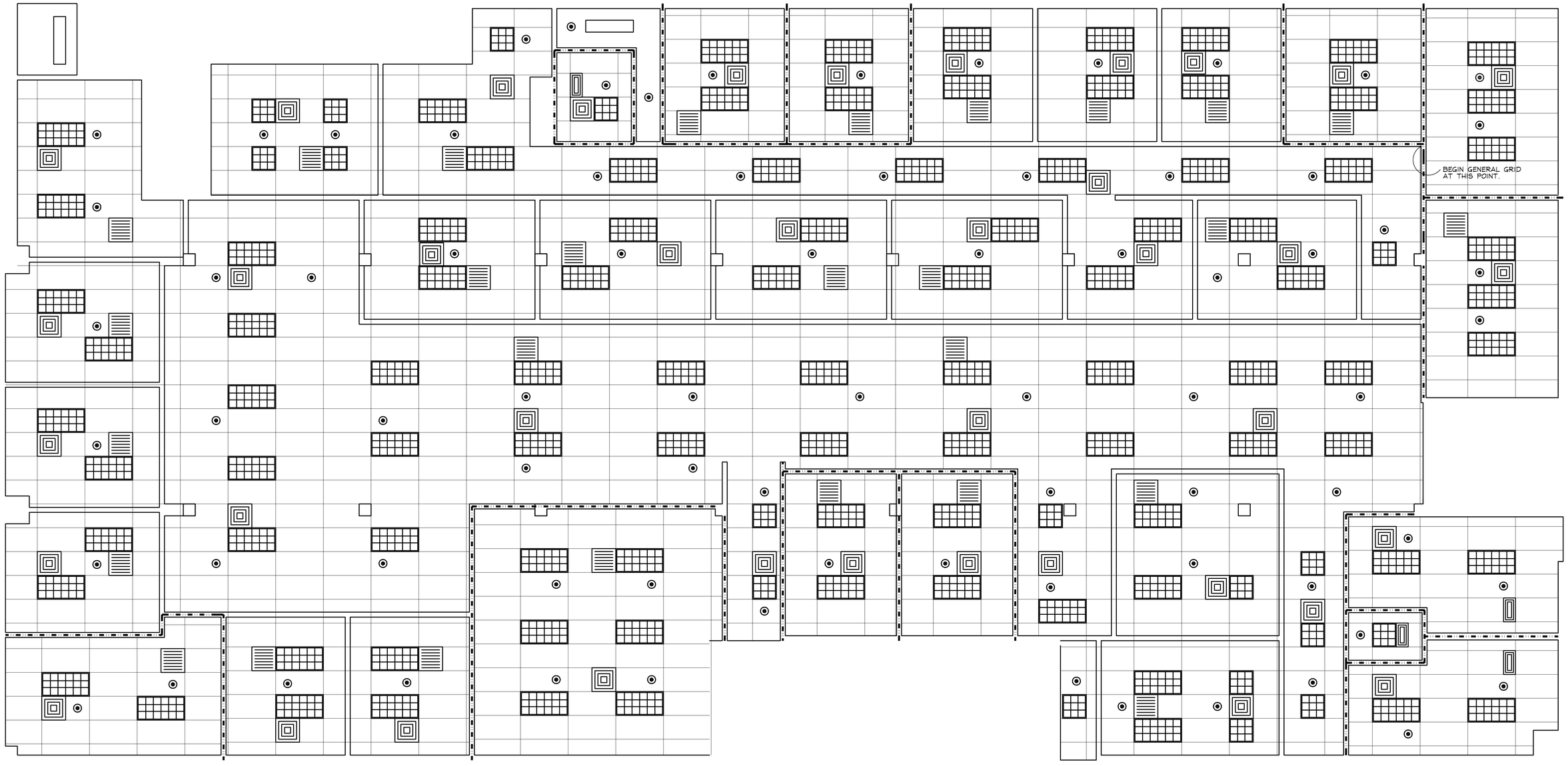
SHEET A11 OF 13



WORKING NORTH

FIFTH FLOOR CEILING PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

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OTTAWA & JEFFERSON STS., JOLIET, ILL.
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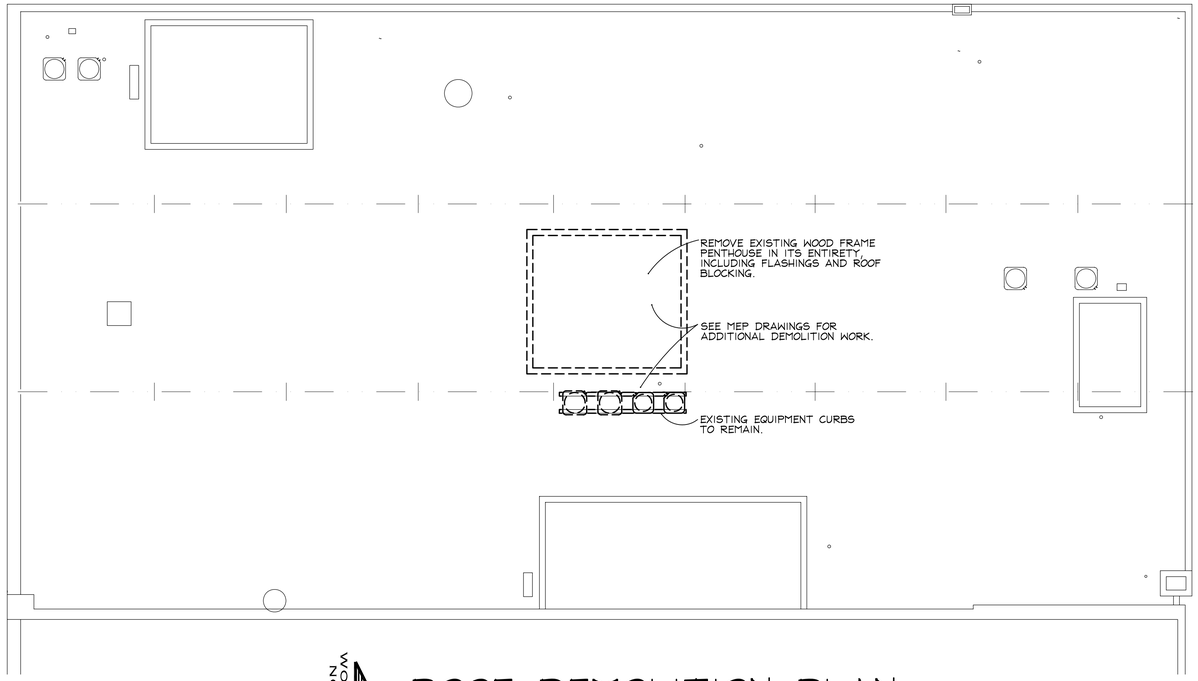
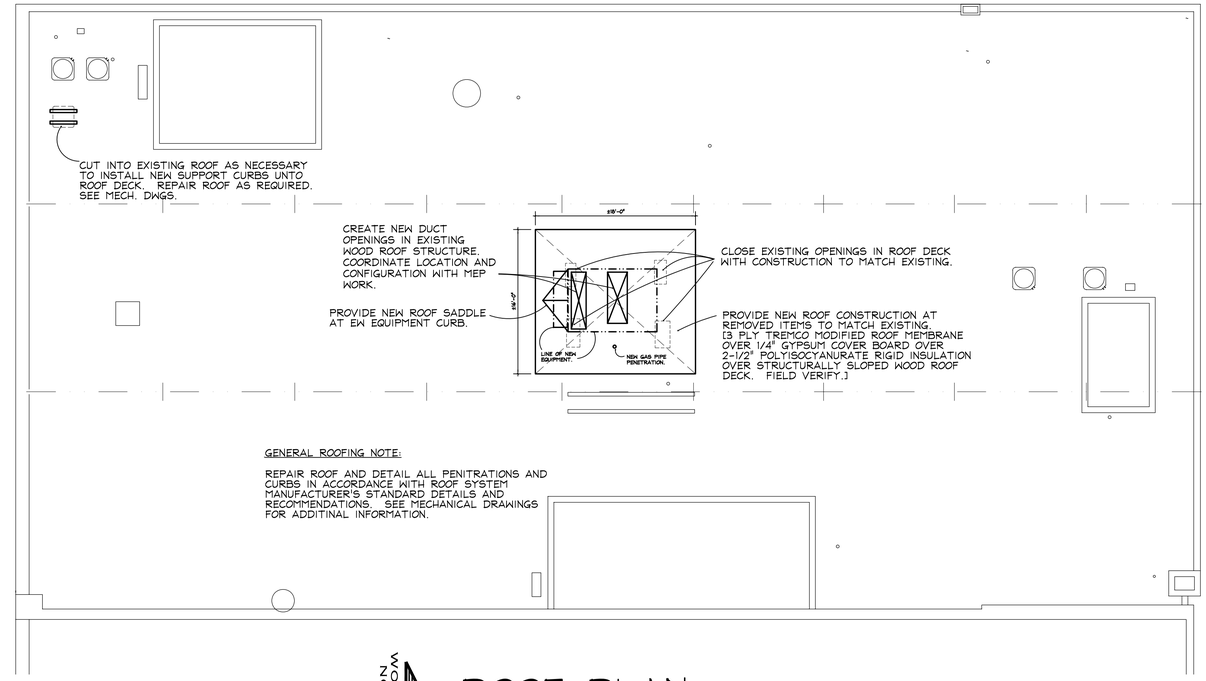
SHEET A12 OF 13



WORKING NORTH

ROOF DEMOLITION PLAN

SCALE: 1/8" = 1'-0" WEST SIDE



GENERAL ROOFING NOTE:

REPAIR ROOF AND DETAIL ALL PENITRATIONS AND CURBS IN ACCORDANCE WITH ROOF SYSTEM MANUFACTURER'S STANDARD DETAILS AND RECOMMENDATIONS. SEE MECHANICAL DRAWINGS FOR ADDITINAL INFORMATION.

WORKING NORTH

ROOF PLAN

SCALE: 1/8" = 1'-0" WEST SIDE

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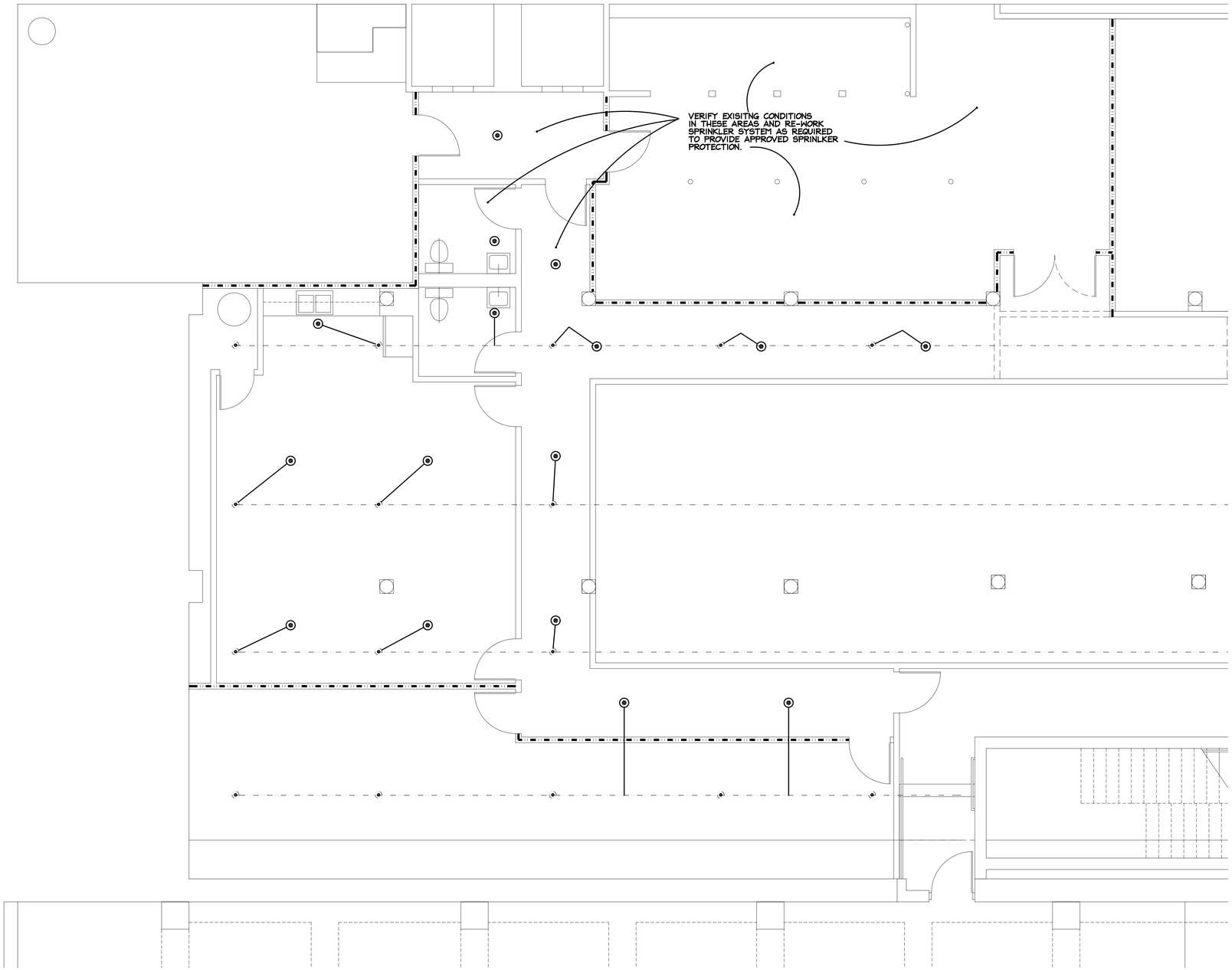

WORKING NORTH

BASEMENT SPRINKLER PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

SPRINKLER PLAN LEGEND

- NEW PENDANT HEAD
- EXISTING PENDANT HEAD TO BE REMOVED
- EXISTING PENDANT HEAD TO REMAIN.
- EXISTING UPRIGHT HEAD TO REMAIN
- EXISTING UPRIGHT HEAD TO BE REMOVED AND PIPE CAPPED.
- EXISTING PIPING TO REMAIN
- NEW PIPING
- EXISTING PIPING TO BE REMOVED
- REMOVE EXISTING HEAD AND SECTION OF EXISTING PIPE AND CAP.
- REMOVE EXISTING HEAD AND CONNECT NEW PIPE TO EXISTING.
- REMOVE EXISTING HEAD AND SECTION OF EXISTING PIPE AND CONNECT NEW PIPE TO EXISTING.
- REMOVE EXISTING UPRIGHT HEAD AND CONNECT NEW TO EXISTING.
- TAP INTO EXISTING PIPE AND CONNECT NEW PIPE TO EXISTING.

SPRINKLER SYSTEM NOTES

- SPRINKLER CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS AND DIMENSIONS
- ALL SPRINKLER HEAD LOCATIONS AND PIPE LOCATIONS ARE PURELY DIAGRAMMATICAL
- SPRINKLER SYSTEM SHALL BE DESIGNED PER N.F.P.A. #13 LIGHT HAZARD OCCUPANCY
  (SEE ARCHITECTURAL FLOOR PLANS FOR ROOM IDENTIFICATION.)
- HANGERS SHALL BE PROVIDED PER N.F.P.A. #13
- SPRINKLER PLANS SHALL BE SUBMITTED TO CITY OF JOLIET FIRE DEPARTMENT FOR APPROVAL
- SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED
- SPRINKLER CONTRACTOR SHALL INCLUDE ALL MATERIALS, LABOR, TESTING AND PERMITS
- SPRINKLER SYSTEM SHALL BE HYDROSTATICLLY TESTED FOR TWO HOURS @ 200 PSI
- SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.

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OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

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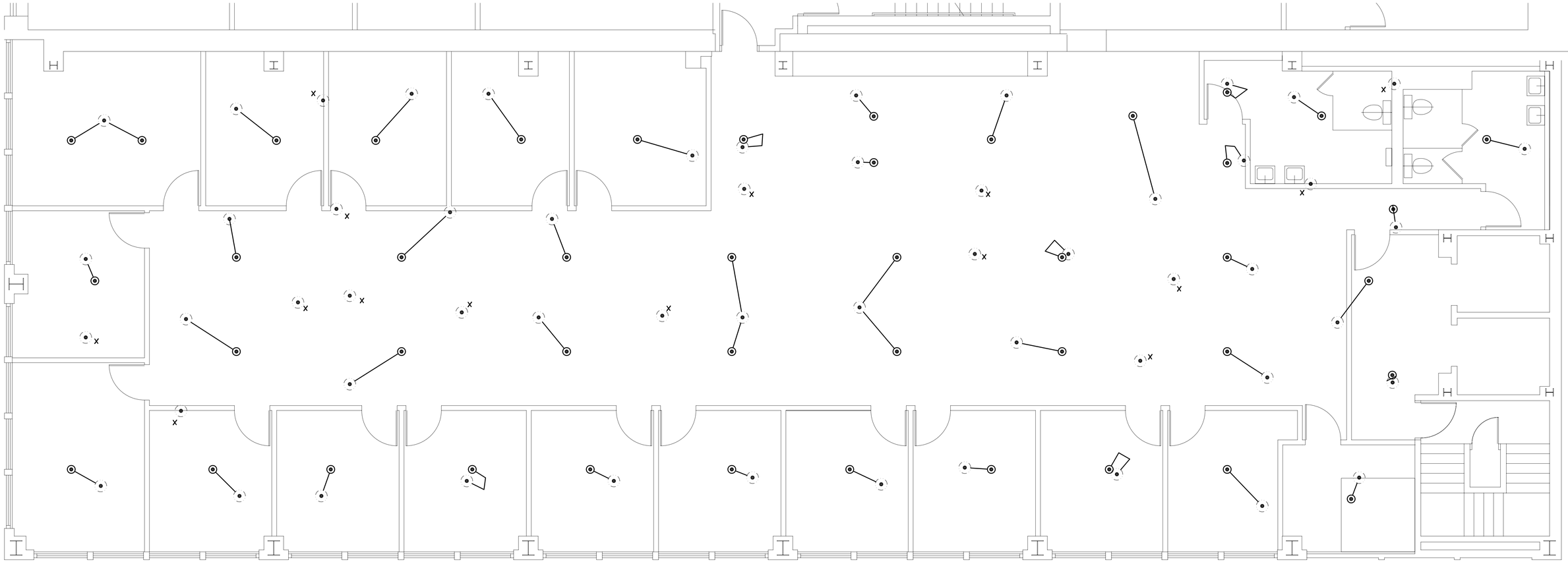
OF 3



NORTH

FIFTH FLOOR SPRINKLER PLAN

SCALE: 1/4" = 1'-0" EAST SIDE

SPRINKLER PLAN LEGEND

- NEW PENDANT HEAD
- EXISTING PENDANT HEAD TO BE REMOVED, CAP PIPE.
- EXISTING PENDANT HEAD TO REMAIN.
- EXISTING UPRIGHT HEAD TO REMAIN
- EXISTING UPRIGHT HEAD TO BE REMOVED AND PIPE CAPPED.
- EXISTING PIPING TO REMAIN
- NEW PIPING
- EXISTING PIPING TO BE REMOVED
- REMOVE EXISTING HEAD AND SECTION OF EXISTING PIPE AND CAP.
- REMOVE EXISTING HEAD AND CONNECT NEW PIPE TO EXISTING.
- REMOVE EXISTING HEAD AND SECTION OF EXISTING PIPE AND CONNECT NEW PIPE TO EXISTING.
- REMOVE EXISTING UPRIGHT HEAD AND CONNECT NEW TO EXISTING.
- TAP INTO EXISTING PIPE AND CONNECT NEW PIPE TO EXISTING.

SPRINKLER SYSTEM NOTES

- SPRINKLER CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS AND DIMENSIONS
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- SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED
- SPRINKLER CONTRACTOR SHALL INCLUDE ALL MATERIALS, LABOR, TESTING AND PERMITS
- SPRINKLER SYSTEM SHALL BE HYDROSTATICLLY TESTED FOR TWO HOURS @ 200 PSI
- SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.
- SPRINKLER CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF EXISTING HEADS, PIPING AND MAINS.
- ALL EXISTING HEADS ABOVE CEILING SHALL REMAIN.

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WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

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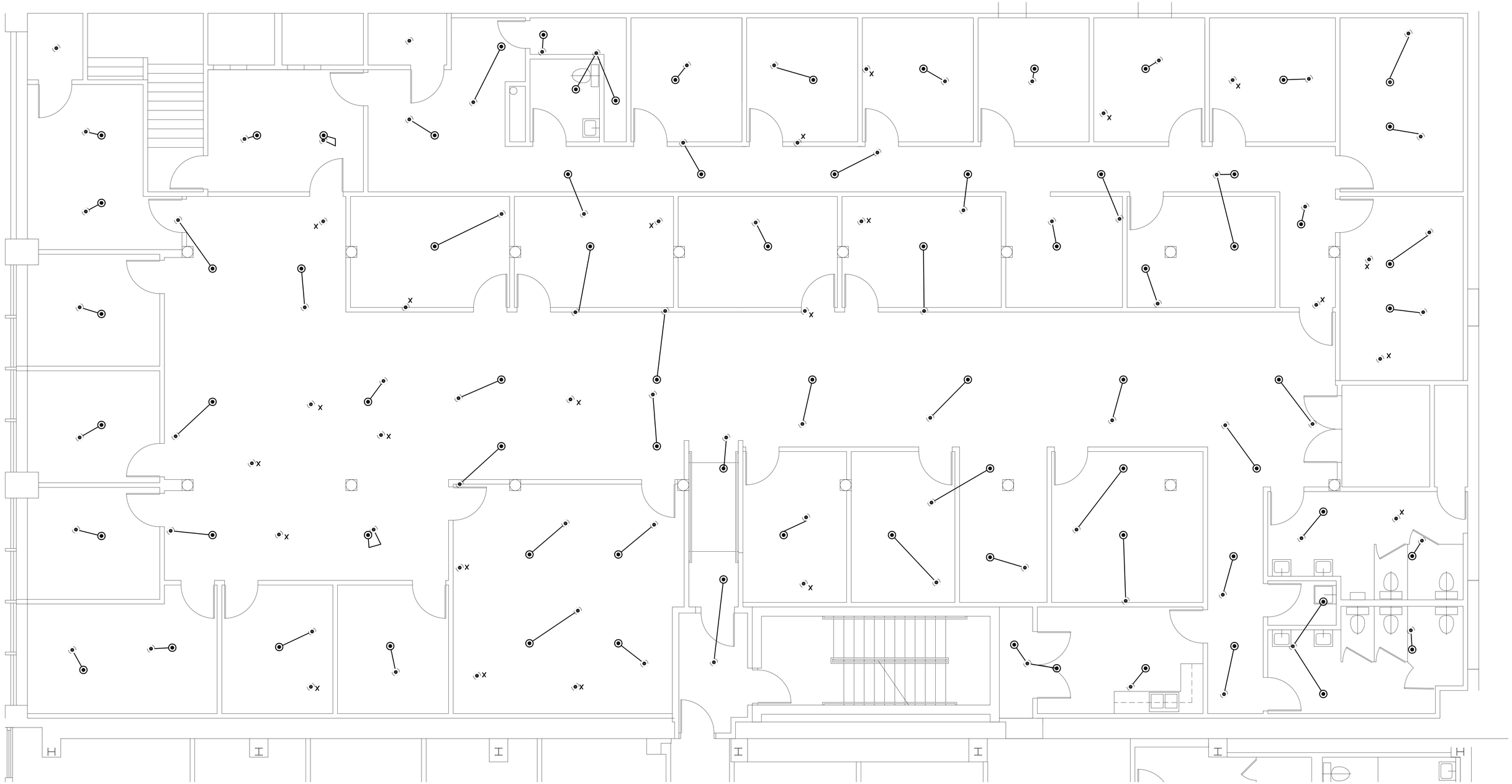

WORKING NORTH

FIFTH FLOOR SPRINKLER PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

SPRINKLER PLAN LEGEND

- NEW PENDANT HEAD
- EXISTING PENDANT HEAD TO BE REMOVED, CAP PIPE.
- EXISTING PENDANT HEAD TO REMAIN.
- EXISTING UPRIGHT HEAD TO REMAIN
- EXISTING UPRIGHT HEAD TO BE REMOVED AND PIPE CAPPED.
- EXISTING PIPING TO REMAIN
- NEW PIPING
- EXISTING PIPING TO BE REMOVED
- REMOVE EXISTING HEAD AND SECTION OF EXISTING PIPE AND CAP.
- REMOVE EXISTING HEAD AND CONNECT NEW PIPE TO EXISTING.
- REMOVE EXISTING HEAD AND SECTION OF EXISTING PIPE AND CONNECT NEW PIPE TO EXISTING.
- REMOVE EXISTING UPRIGHT HEAD AND CONNECT NEW TO EXISTING.
- TAP INTO EXISTING PIPE AND CONNECT NEW PIPE TO EXISTING.

SPRINKLER SYSTEM NOTES

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- SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.
- SPRINKLER CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF HEADS, PIPING AND MAINS.
- ALL EXISTING ABOVE CEILING HEADS SHALL REMAIN.

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WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

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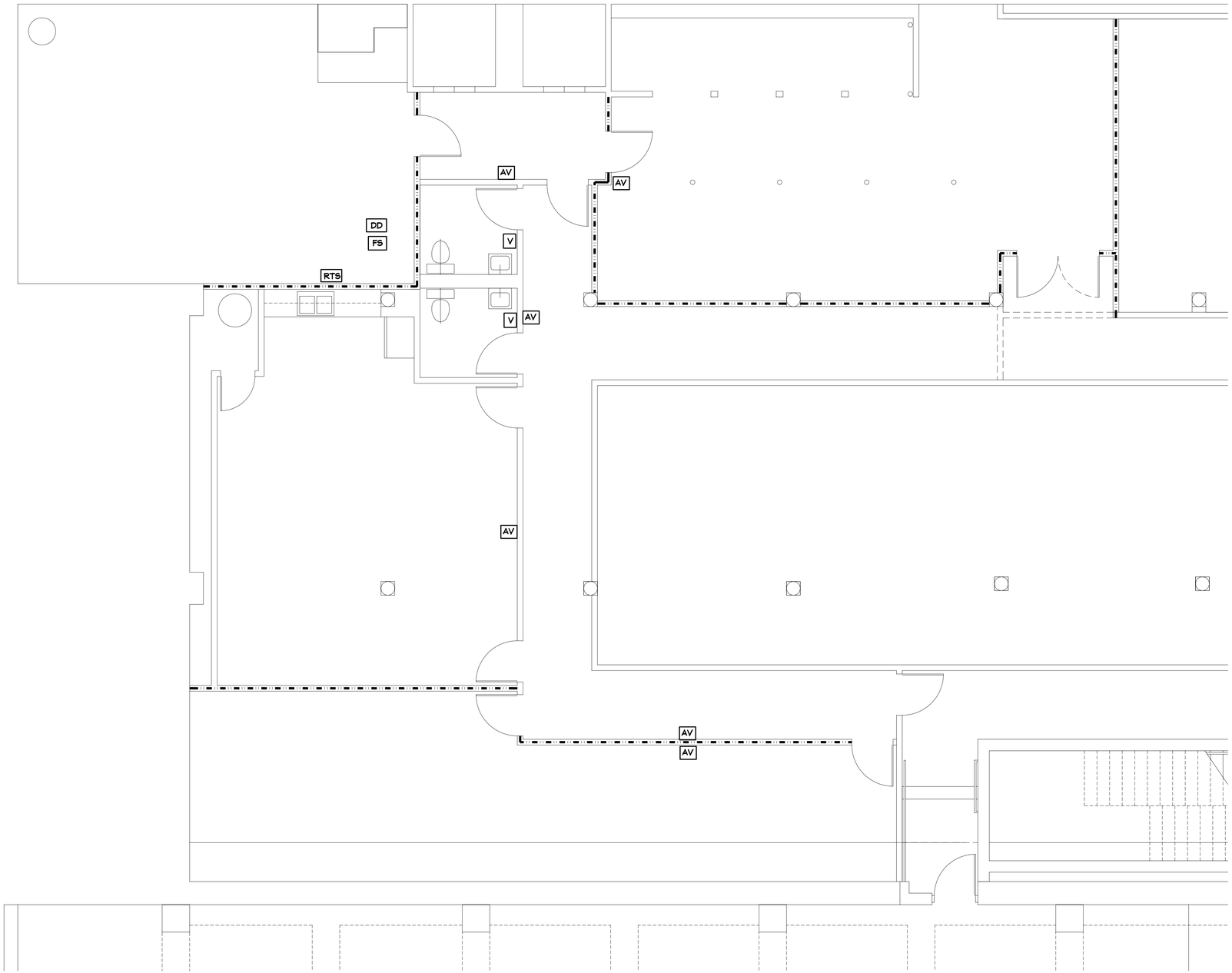

WORKING NORTH

BASEMENT FIRE ALARM PLAN

SCALE: 1/4" = 1'-0"

WEST SIDE

GENERAL NOTES:

PLANS ARE DIAGRAMMATIC. FIELD VERIFY EXACT LOCATIONS OF EXISTING DEVICES AND FIELD DETERMINE EXACT LOCATIONS FOR NEW DEVICES.

THE EXISTING FIRE ALARM SYSTEM IS AS MANUFACTURED BY EDWARDS SYSTEMS TECHNOLOGY. FIELD DETERMINE THE LOCATIONS OF ALL EXISTING COMPONENTS AND WIRING AS REQUIRED FOR THE PERFORMANCE OF ALL FIRE ALARM SYSTEM WORK INDICATED.

EXISTING FINISHES DAMAGED BY THIS WORK SHALL BE REPAIRED AND PATCHED AS REQUIRED IN ALL OCCUPIED AREAS OF THE BUILDING.

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE ALL CONDUIT, WIRING, OUTLET BOXES, JUNCTION BOXES, CABINETS AND SIMILAR DEVICES NECESSARY FOR THE INSTALLATION OF THE FIRE ALARM SYSTEM WORK.

FIRE ALARM SYSTEM LEGEND

- (S) SMOKE DETECTOR
- (H) HEAT DETECTOR
- DD DUCT DETECTOR, W/ REMOTE TEST SWITCH
- MP PULL STATION
- AV HORN W/ STROBE
- V VISUAL STROBE
- RTS REMOTE TEST SWITCH
- FACP FIRE ALARM CONTROL PANEL
- BPS REMOTE BOOSTER POWER SUPPLY
- TS TAMPER SWITCH
- WF WATER FLOW SWITCH
- ANN ANNUNCIATOR PANEL
- P ALARM INPUT MODULE
- * ITEMS MARKED WITH AN ASTERISK ARE EXISTING.
- DO INDICATES ITEM TO BE REMOVED AND DELIVERED TO OWNER.
- INDICATES EXISTING ITEM TO BE RELOCATED.
- FS FAN SHUT-DOWN
- FSLL
- CED CONTOLLED EXIT DEVICE
- M MAGNETIC DOOR HOLDER

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OTTAWA & JEFFERSON STS., JOLIET, ILL.
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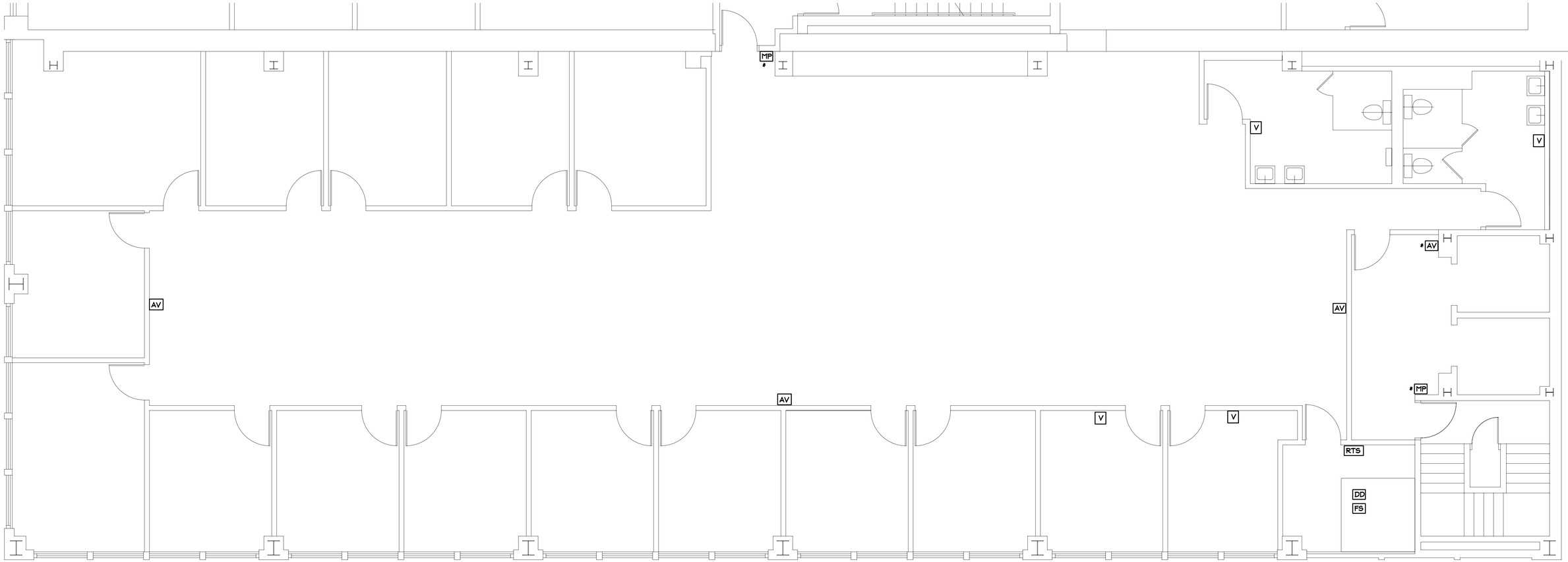

NORTH
WORKING

FIFTH FLOOR FIRE ALARM PLAN

SCALE: 1/4" = 1'-0" EAST SIDE

GENERAL NOTES:

PLANS ARE DIAGRAMMATIC. FIELD VERIFY EXACT LOCATIONS OF EXISTING DEVICES AND FIELD DETERMINE EXACT LOCATIONS FOR NEW DEVICES.

THE EXISTING FIRE ALARM SYSTEM IS AS MANUFACTURED BY EDWARDS SYSTEMS TECHNOLOGY. FIELD DETERMINE THE LOCATIONS OF ALL EXISTING COMPONENTS AND WIRING AS REQUIRED FOR THE PERFORMANCE OF ALL FIRE ALARM SYSTEM WORK INDICATED.

EXISTING FINISHES DAMAGED BY THIS WORK SHALL BE REPAIRED AND PATCHED AS REQUIRED IN ALL OCCUPIED AREAS OF THE BUILDING.

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE ALL CONDUIT, WIRING, OUTLET BOXES, JUNCTION BOXES, CABINETS AND SIMILAR DEVICES NECESSARY FOR THE INSTALLATION OF THE FIRE ALARM SYSTEM WORK.

FIRE ALARM SYSTEM LEGEND

- (S) SMOKE DETECTOR
- (H) HEAT DETECTOR
- DD DUCT DETECTOR, W/ REMOTE TEST SWITCH
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- AV HORN W/ STROBE
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- BPS REMOTE BOOSTER POWER SUPPLY
- TS TAMPER SWITCH
- WF WATER FLOW SWITCH
- ANN ANNUNCIATOR PANEL
- P ALARM INPUT MODULE
- * ITEMS MARKED WITH AN ASTERISK ARE EXISTING.
- DD INDICATES ITEM TO BE REMOVED AND DELIVERED TO OWNER.
- INDICATES EXISTING ITEM TO BE RELOCATED.
- FS FAN SHUT-DOWN
- FSLL
- CED CONTOLLED EXIT DEVICE
- M MAGNETIC DOOR HOLDER

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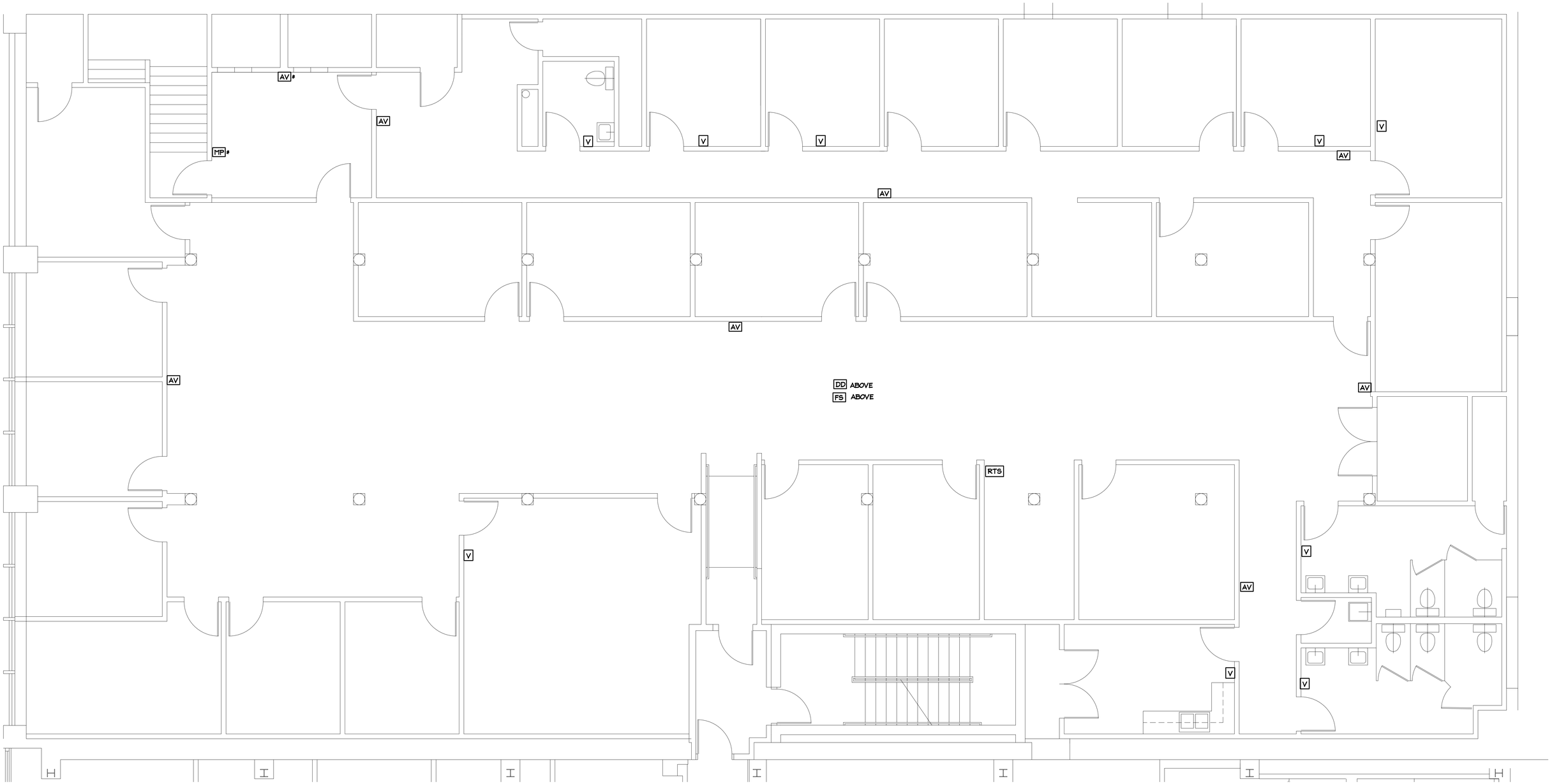

FIRE ALARM SYSTEM LEGEND

- (S) SMOKE DETECTOR
- (H) HEAT DETECTOR
- DD DUCT DETECTOR, W/ REMOTE TEST SWITCH
- MP PULL STATION
- AV HORN W/ STROBE
- V VISUAL STROBE
- RTS REMOTE TEST SWITCH
- FACP FIRE ALARM CONTROL PANEL
- BPS REMOTE BOOSTER POWER SUPPLY
- TS TAMPER SWITCH
- WF WATER FLOW SWITCH
- ANN ANNUNCIATOR PANEL
- P ALARM INPUT MODULE
- * ITEMS MARKED WITH AN ASTERISK ARE EXISTING.
- DD INDICATES ITEM TO BE REMOVED AND DELIVERED TO OWNER.
- INDICATES EXISTING ITEM TO BE RELOCATED.
- FS FAN SHUT-DOWN
- FSLL
- CED CONTOLLED EXIT DEVICE
- M MAGNETIC DOOR HOLDER

WORKING NORTH

FIFTH FLOOR FIRE ALARM PLAN

SCALE: 1/4" = 1'-0" WEST SIDE

GENERAL NOTES:

PLANS ARE DIAGRAMMATIC. FIELD VERIFY EXACT LOCATIONS OF EXISTING DEVICES AND FIELD DETERMINE EXACT LOCATIONS FOR NEW DEVICES.

THE EXISTING FIRE ALARM SYSTEM IS AS MANUFACTURED BY EDWARDS SYSTEMS TECHNOLOGY. FIELD DETERMINE THE LOCATIONS OF ALL EXISTING COMPONENTS AND WIRING AS REQUIRED FOR THE PERFORMANCE OF ALL FIRE ALARM SYSTEM WORK INDICATED.

EXISTING FINISHES DAMAGED BY THIS WORK SHALL BE REPAIRED AND PATCHED AS REQUIRED IN ALL OCCUPIED AREAS OF THE BUILDING.

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE ALL CONDUIT, WIRING, OUTLET BOXES, JUNCTION BOXES, CABINETS AND SIMILAR DEVICES NECESSARY FOR THE INSTALLATION OF THE FIRE ALARM SYSTEM WORK.

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OTTAWA & JEFFERSON STS., JOLIET, ILL.
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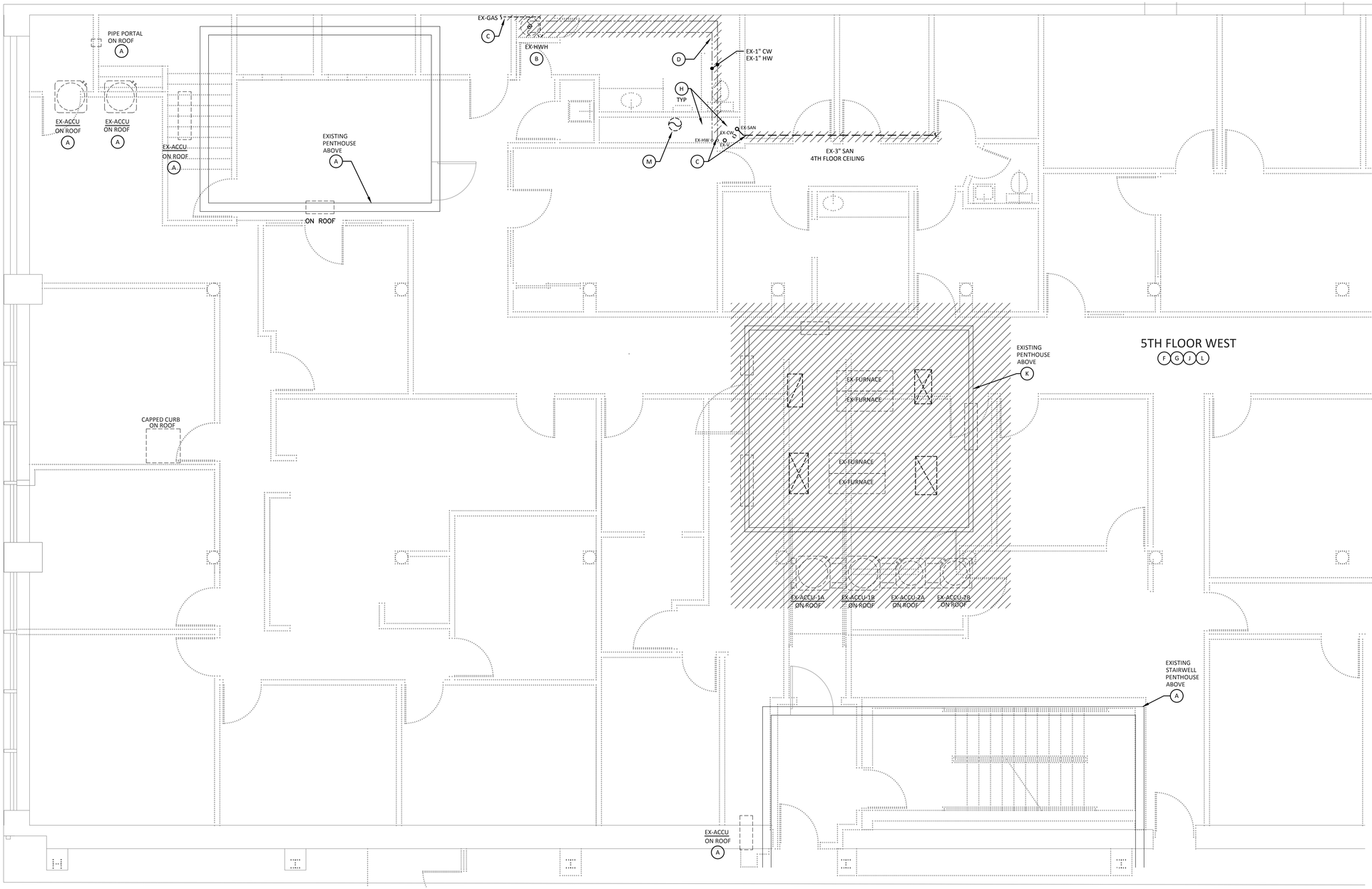

PLAN NOTES

- (A) TYPICAL EXISTING ITEM TO REMAIN.
- (B) TYPICAL EXISTING ITEM TO BE REMOVED IF SERVING THE EXISTING 5TH FLOOR.
- (C) TYPICAL EXISTING ITEM TO BE CUT AND CAPPED IF SERVING THE EXISTING 5TH FLOOR ONLY.
- (D) TYPICAL EXISTING ITEM TO BE CUT FOR RECONNECTION TO NEW.
- (F) SEE ELECTRICAL PLANS FOR DEMO INFORMATION.
- (G) DEMO ALL EXISTING MEP EQUIPMENT, DUCTWORK, PIPING, CONDUITS, DWV & WATER PIPING SERVING THIS FLOOR UNLESS NOTED OTHERWISE. CUT AND CAP ALL MAINS BACK AT THE RISERS. ALL EXISTING EQUIPMENT, DUCTWORK, PIPING, CONDUITS, DWV & WATER PIPING LOCATED ON THIS FLOOR SERVING OTHER FLOORS TO REMAIN.
- (H) ALL EXISTING RISERS SERVING OTHER FLOORS SHALL REMAIN.
- (J) VERIFY EXISTING LOCATIONS OF ALL SPRINKLER MAINS & BRANCHES. COORDINATE WITH NEW DUCT AND PIPE.
- (K) DEMO ALL EXISTING MEP EQUIPMENT, DUCTWORK, PIPING AND CONDUITS IN THE EXISTING PENTHOUSE. PENTHOUSE TO BE REMOVED BY OTHERS. EXISTING TWINNED FURNACES, COILS & CONDENSERS TO BE TURNED OVER TO OWNER IN GOOD & SAME OPERATING CONDITION.
- (L) ALL FANS, DUCTWORK, GRILLES, REGISTERS & PIPING SERVING THIS FLOOR ARE TO BE REMOVED.
- (M) REROUTE EXISTING EXHAUST VENT TO NEW 5TH FLOOR STORAGE ROOM PIPING RISER AREA. PROVIDE NEW VENT THRU ROOF IF REQUIRED.

MEP FIFTH FLOOR WEST DEMO PLAN

SCALE: 1/4" = 1'-0"

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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DATE: 12/18/15
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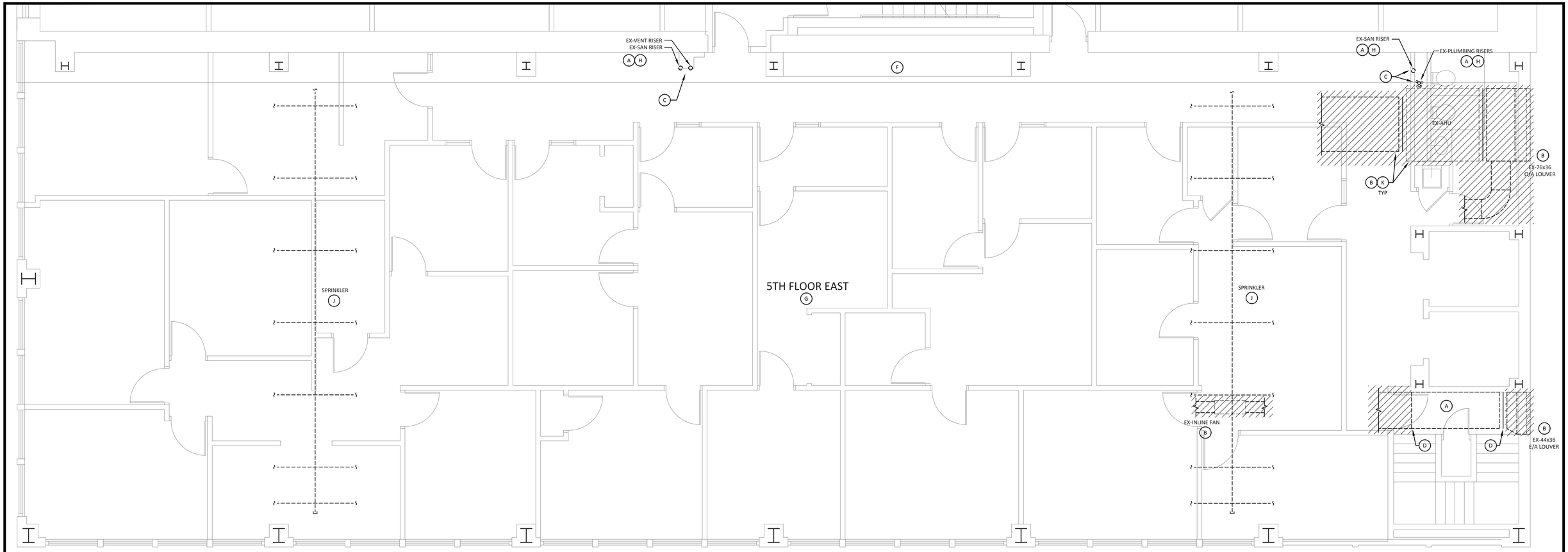
MEP FIFTH WEST DEMO PLAN R1307B

PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET MEP DEMO 1 OF 2



MEP FIFTH FLOOR EAST DEMO PLAN

SCALE: 1/4" = 1'-0"

PLAN NOTES

- (A) TYPICAL EXISTING ITEM TO REMAIN.
- (B) TYPICAL EXISTING ITEM TO BE REMOVED.
- (C) EXISTING PLUMBING ITEMS ON THIS FLOOR SERVING OTHER FLOORS TO REMAIN.
- (D) TYPICAL EXISTING ITEM TO BE CUT FOR RECONNECTION TO NEW.
- (F) EXISTING FLOOR ELECTRICAL CLOSET. SEE ELECTRICAL PLANS FOR DEMO INFORMATION.
- (G) DEMO ALL EXISTING MEP EQUIPMENT, DUCTWORK, PIPING, CONDUITS, DWV & WATER PIPING SERVING THIS FLOOR UNLESS NOTED OTHERWISE. CUT AND CAP ALL MAINS BACK AT THE RISERS. ALL EXISTING EQUIPMENT, DUCTWORK, PIPING, CONDUITS, DWV & WATER PIPING LOCATED ON THIS FLOOR SERVING OTHER FLOORS TO REMAIN.
- (H) ALL EXISTING RISERS SERVING OTHER FLOORS SHALL REMAIN.
- (J) VERIFY EXISTING LOCATIONS OF ALL SPRINKLER MAINS & BRANCHES. COORDINATE WITH NEW DUCT AND PIPE.
- (K) ALL FANS, DUCTWORK, GRILLES, REGISTERS & PIPING TO BE REMOVED.

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

MEP FIFTH EAST DEMO PLAN R1307B

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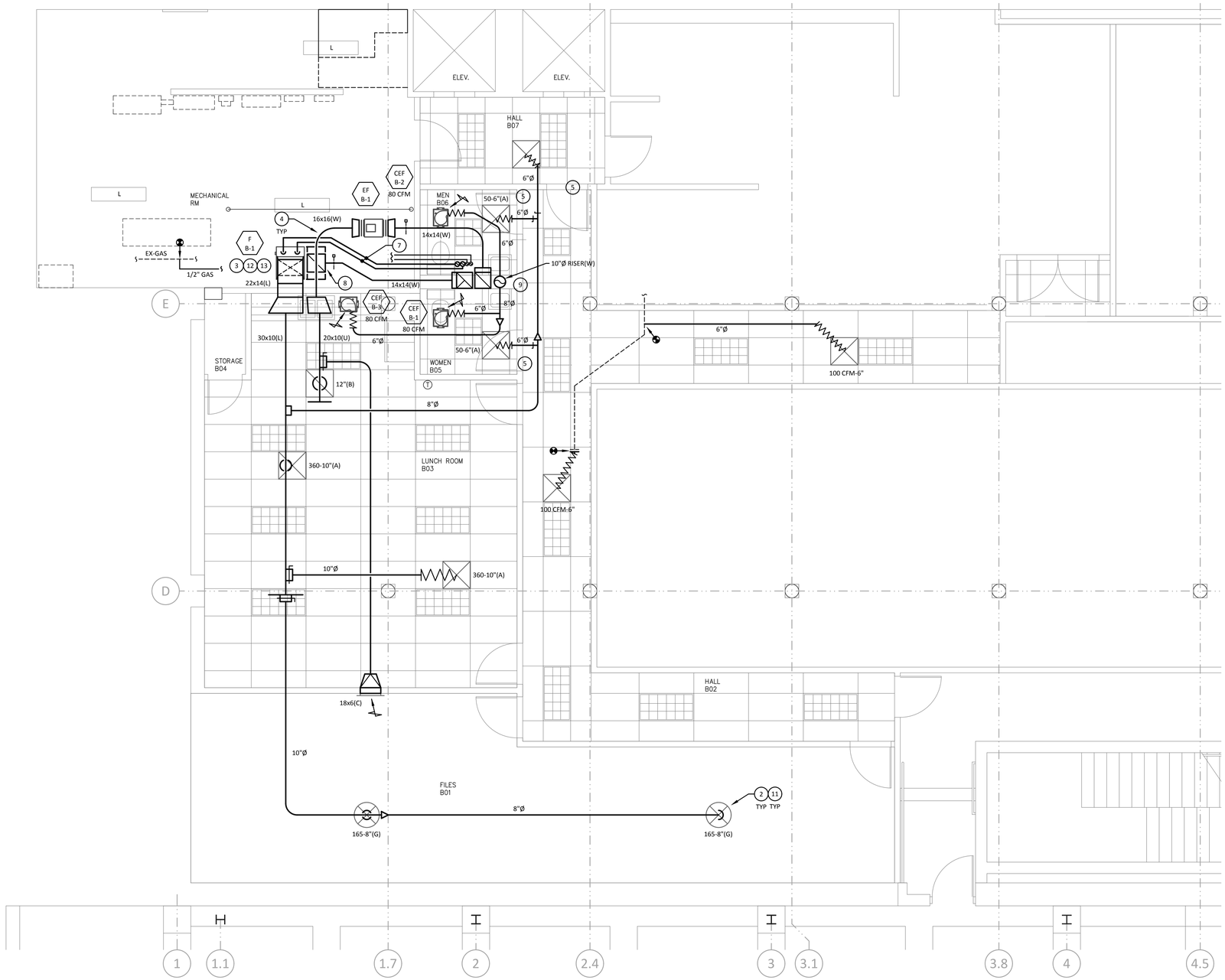
PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET MEP DEMO 2 OF 2



PLAN NOTES

1. SEE DETAILS ON 'MS' SHEETS FOR ADDITIONAL INFORMATION.
2. ALL TERMINATIONS TO CEILING MOUNTED DIFFUSERS TO BE MADE WITH A MAXIMUM OF 5' OF FLEXIBLE DUCTWORK. PROVIDE SPIN COLLAR AND/OR LOCKING TYPE DAMPER AT ALL FINAL BRANCH TAPS FOR ALL GRILLES AND DIFFUSERS. SEE DIVISION 23 (HVAC) NOTES.

   ALL TERMINATIONS TO EXPOSED CEILING GRILLES, REGISTERS AND DIFFUSERS TO BE MADE WITH HARD DUCT CONNECTIONS. PROVIDE SPIN COLLAR AND/OR LOCKING TYPE DAMPER AT ALL FINAL BRANCH TAPS. SEE DIVISION 23 (HVAC) NOTES.

   SEPARATE NEW BRANCH DUCT TAP LOCATIONS. MINIMUM CENTERLINE SEPARATION DISTANCE TO BE (2) EQUIVALENT DUCT MAIN DIAMETERS.
3. TRANSITION FROM UNIT CONNECTION SIZE(S) TO PLAN SIZE AND TURN HORIZONTAL WITH RADIUS ELBOW(S) (TAPS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
4. ALL ELBOWS TO BE RADIUS TYPE - UNLESS NOTED OTHERWISE (SQUARE THROAT ELBOWS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
5. UNDERCUT DOOR 3/4".
6. VERIFY ACCESS TO ALL EQUIPMENT.
7. 3" PVC VENT WITH MEDIUM RADIUS ELBOWS.
8. RETURN AIR MOTOR OPERATED DAMPER BETWEEN EXHAUST AND OUTSIDE AIR.
9. PROVIDE FIRE DAMPERS FOR ALL PENETRATIONS THRU FIRE RATED ASSEMBLIES, FLOORS, WALLS AND SHAFTS. SEE DIVISION 23 (HVAC) NOTES AND DETAILS.
10. VANED ELBOW (SEE DUCTWORK SYMBOLS LEGEND).
11. TYPICAL DUCT MOUNTED DIFFUSER. SEE DETAIL #D-1-7A.
12. NEW FURNACE LOCATION. SEE DETAIL #D-4-7A.
13. SEE DETAIL #G-14A.

BASEMENT WEST HVAC PLAN

SCALE: 1/4" = 1'-0"

BASEMENT WEST HVAC PLAN R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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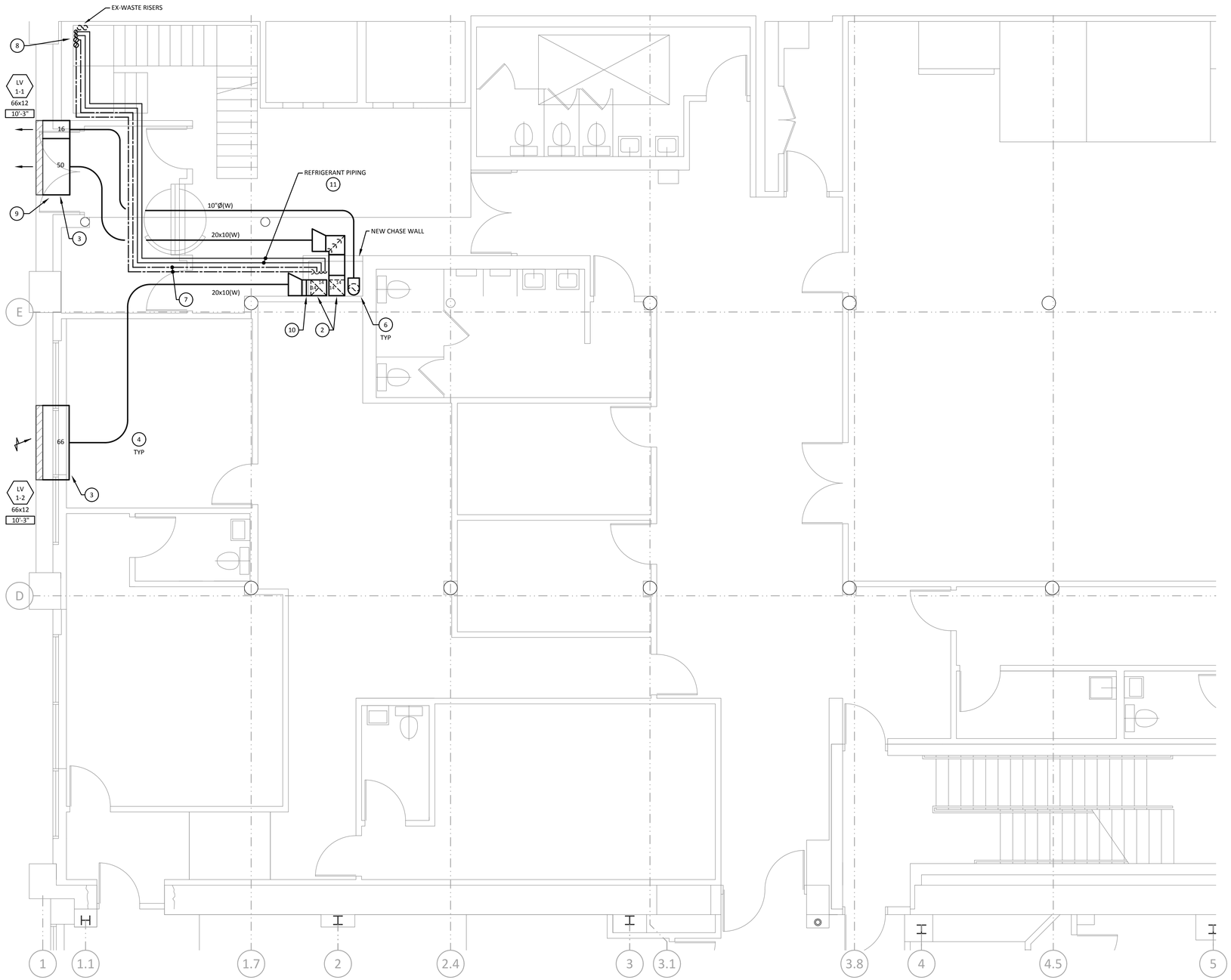

PLAN NOTES

1. SEE DETAILS ON 'MS' SHEETS FOR ADDITIONAL INFORMATION.
2. VANED ELBOW (SEE DUCTWORK SYMBOLS LEGEND).
3. WRAPPED PLENUM BOX. CENTER LOUVER BETWEEN EXISTING COLUMNS.
4. ALL ELBOWS TO BE RADIUS TYPE - UNLESS NOTED OTHERWISE (SQUARE THROAT ELBOWS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
5. VERIFY ACCESS TO ALL EQUIPMENT.
6. PROVIDE FIRE DAMPERS FOR ALL PENETRATIONS THRU FIRE RATED ASSEMBLIES, FLOORS, WALLS AND SHAFTS. SEE DIVISION 23 (HVAC) NOTES AND DETAILS.
7. 3" PVC VENT WITH MEDIUM RADIUS ELBOWS.
8. UP THRU FIFTH FLOOR ROOF. SEE DETAIL #D-4-3B.
9. RELOCATE/MOVE ELECTRIC WIRE/CONDUIT AS REQUIRED.
10. RELOCATE EXISTING ELECTRIC BASEBOARD.
11. 1 1/8" SUCTION, 3/8" LIQUID LINE: LONG LINE APPLICATION.

FIRST FLOOR WEST HVAC PLAN

SCALE: 1/4" = 1'-0"

FIRST FLOOR WEST HVAC PLAN R1307B

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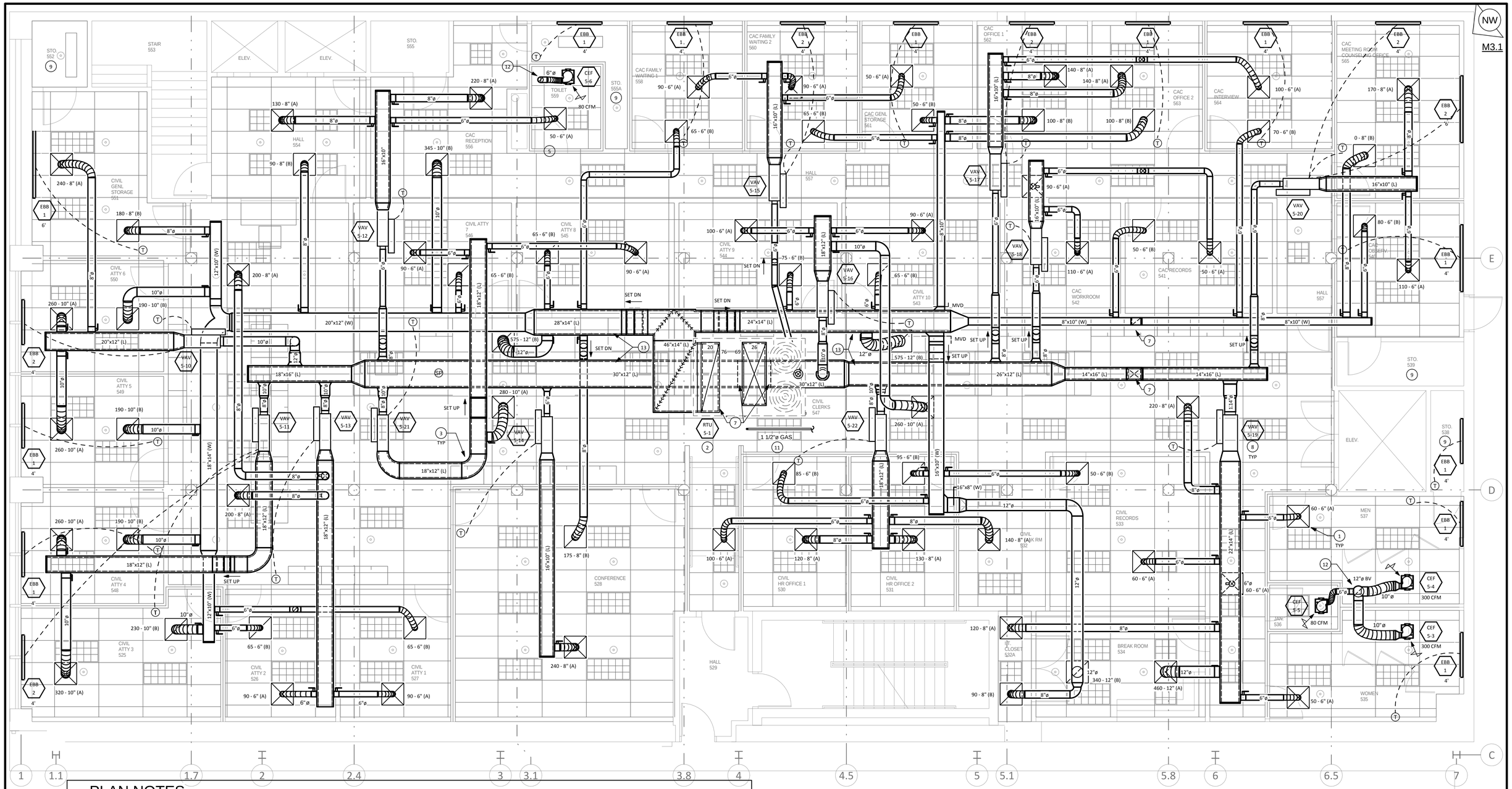

PLAN NOTES

1. ALL TERMINATIONS TO CEILING MOUNTED DIFFUSERS TO BE MADE WITH A MAXIMUM OF 5' OF FLEXIBLE DUCTWORK. PROVIDE SPIN COLLAR AND/OR LOCKING TYPE DAMPER AT ALL FINAL BRANCH TAPS FOR ALL GRILLES AND DIFFUSERS. SEE DIVISION 23 (HVAC) NOTES.

   SEPARATE NEW BRANCH DUCT TAP LOCATIONS. MINIMUM CENTERLINE SEPARATION DISTANCE TO BE (2) EQUIVALENT DUCT MAIN DIAMETERS.
2. FURNISH AND INSTALL FLEX CONNECTIONS AT UNIT. TRANSITION FROM UNIT CONNECTION SIZE(S) TO PLAN SIZE (TAPS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
3. ALL ELBOWS TO BE RADIUS TYPE - UNLESS NOTED OTHERWISE (SQUARE THROAT ELBOWS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
4. SEE DETAILS ON 'MS' SHEETS FOR ADDITIONAL INFORMATION.
5. UNDERCUT DOOR 3/4".
6. VERIFY ACCESS TO ALL EQUIPMENT.
7. VANED ELBOW (SEE DUCTWORK SYMBOLS LEGEND).
8. SEE DETAIL #D-1-5.
9. EXPOSED CEILING AREA. ALL OTHER AREAS ARE GYPSUM OR LAY-IN AS SHOWN.
10. PROVIDE FIRE DAMPERS FOR ALL PENETRATIONS THRU FIRE RATED ASSEMBLIES, FLOORS, WALLS AND SHAFTS. SEE DIVISION 23 (HVAC) NOTES AND DETAILS.
11. INSTALL NEW 1 1/2" GAS LINE FROM EXISTING RISER MAIN TO RTU-5-1.
12. TYPICAL EXHAUST B-VENT THRU ROOF (SEE DETAIL #D-2-8A).
13. INSTALL NEW DUCT MAINS ON UPPER WOOD TRUSS JOISTS.

FIFTH FLOOR WEST HVAC PLAN

SCALE: 1/4" = 1'-0"

FIFTH FLOOR WEST HVAC PLAN R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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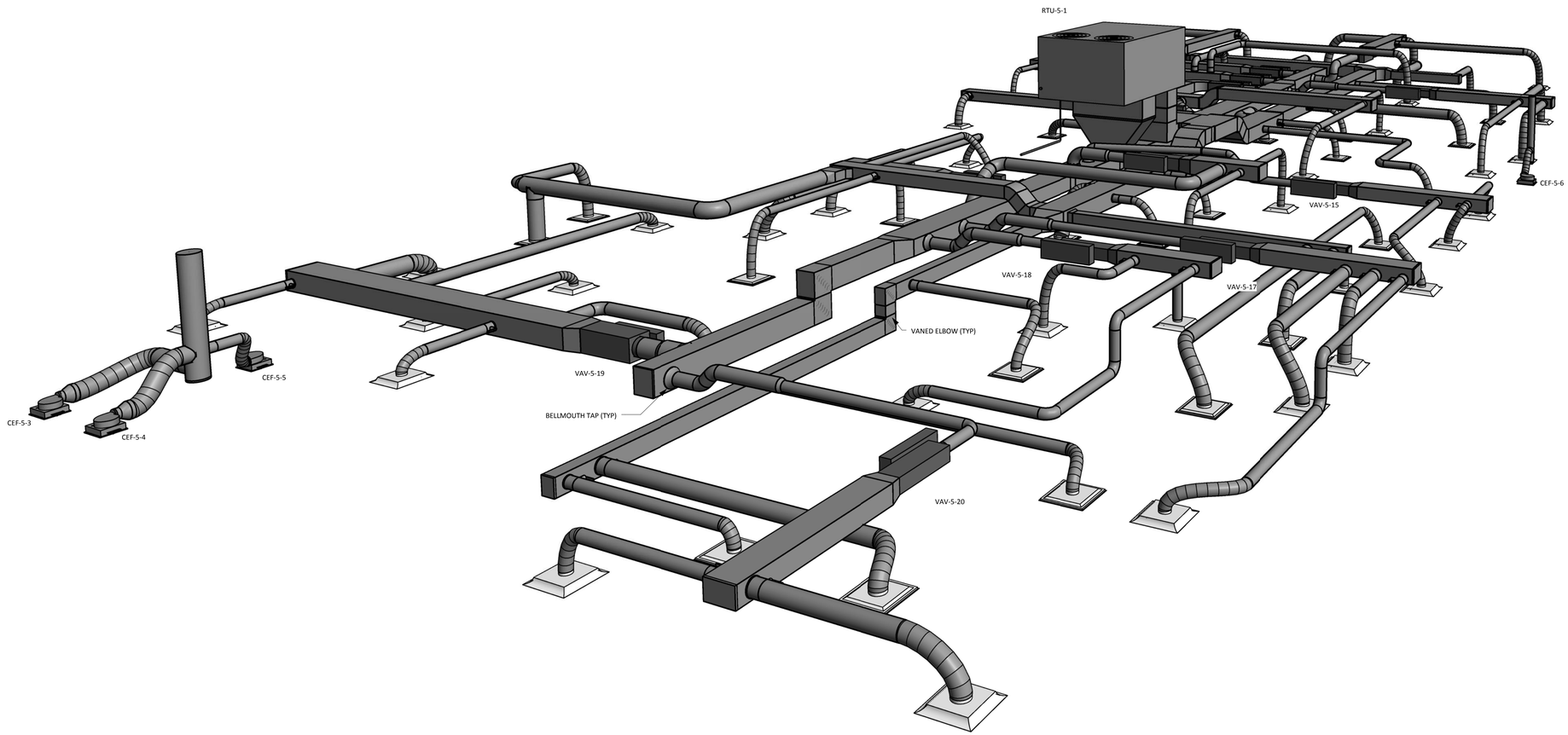

FIFTH FLOOR WEST HVAC NORTHWEST VIEW

FIFTH FLOOR WEST HVAC NORTHWEST VIEW R1307B

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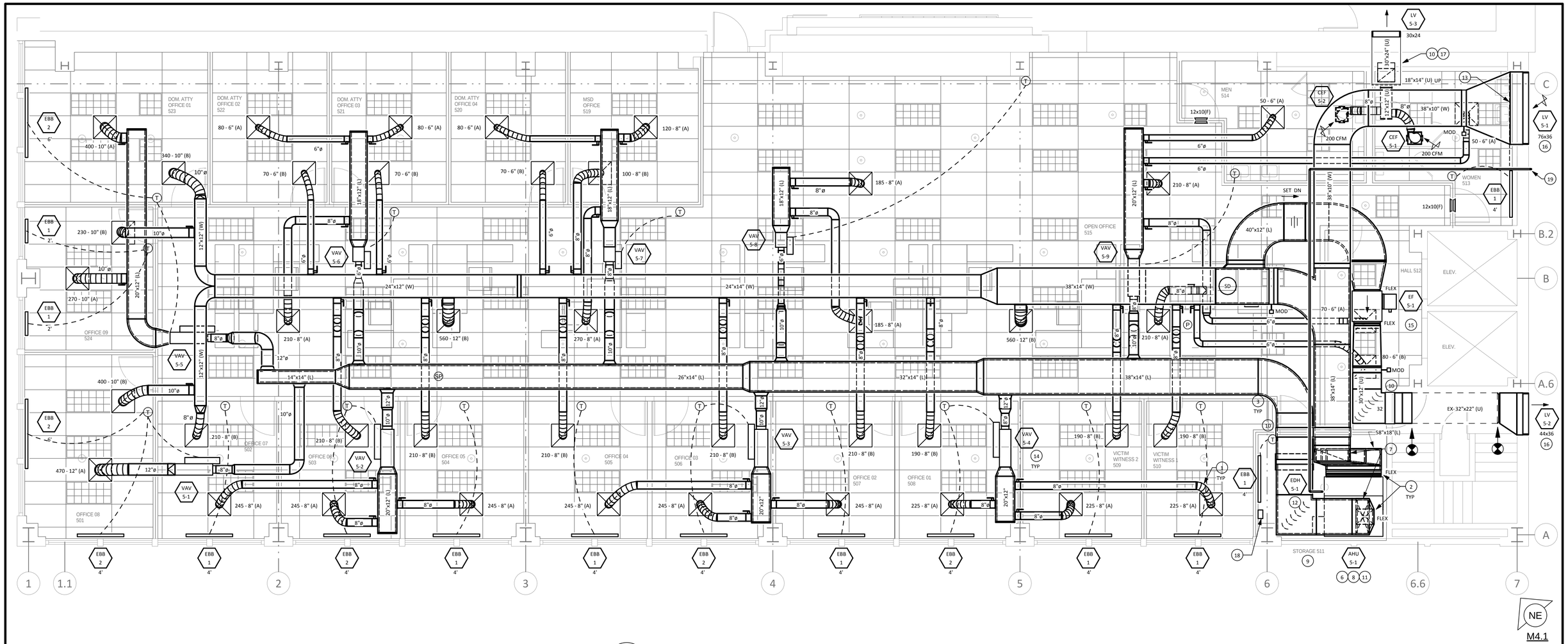

FIFTH FLOOR EAST HVAC PLAN

SCALE: 1/4" = 1'-0"

PLAN NOTES

1. ALL TERMINATIONS TO CEILING MOUNTED DIFFUSERS TO BE MADE WITH A MAXIMUM OF 5' OF FLEXIBLE DUCTWORK. PROVIDE SPIN COLLAR AND/OR LOCKING TYPE DAMPER AT ALL FINAL BRANCH TAPS FOR ALL GRILLES AND DIFFUSERS. SEE DIVISION 23 (HVAC) NOTES.

   SEPARATE NEW BRANCH DUCT TAP LOCATIONS. MINIMUM CENTERLINE SEPARATION DISTANCE TO BE (2) EQUIVALENT DUCT MAIN DIAMETERS.
2. FURNISH AND INSTALL FLEX CONNECTIONS AT UNIT. TRANSITION FROM UNITCONNECTION SIZE(S) TO PLAN SIZE AND TURN HORIZONTAL WITH RADIUS ELBOW(S) (TAPS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
3. ALL ELBOWS TO BE RADIUS TYPE - UNLESS NOTED OTHERWISE (SQUARE THROAT ELBOWS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
4. SEE DETAILS ON 'MS' SHEETS FOR ADDITIONAL INFORMATION.
5. UNDERCUT DOOR 3/4".
6. VERIFY ACCESS TO ALL EQUIPMENT.
7. VANED ELBOW (SEE DUCTWORK SYMBOLS LEGEND).
8. RUN CONDENSATE PIPING TO NEAREST FLOOR DRAIN. SEE DETAIL #P-13.
9. EXPOSED CEILING AREA. ALL OTHER AREAS ARE GYPSUM OR LAY-IN AS SHOWN.
10. PROVIDE FIRE DAMPERS FOR ALL PENETRATIONS THRU FIRE RATED ASSEMBLIES, FLOORS, WALLS AND SHAFTS. SEE DIVISION 23 (HVAC) NOTES AND DETAILS.
11. AHU-5-1 TO BE INSTALLED ON NEW 6" CONCRETE PAD.
12. ELECTRIC DUCT HEATER CONTROL PANEL TO BE LOCATED ON BOTTOM OF DUCT.
13. SEE DETAIL #D-1-14.
14. SEE DETAIL #D-1-5.
15. SEE DETAIL #D-2-7B.
16. NEW LOUVER TO REPLACE EXISTING. SEAL AS REQUIRED.
17. NEW LOUVER INSTALLED IN WALL ABOVE WEST BUILDING ROOF LEVEL. NEW EXHAUST DUCT INSTALLED ON 6TH FLOOR FOR NEW EXHAUST RISER ENCLOSED IN CHASE WALL. SEE DETAIL #D-2-12.
18. NEW PNEUMATIC CONTROL PANEL LOCATION. (VERIFY)
19. INSTALL NEW REFRIGERANT PIPING UP TO ACCU-5-1 ON SEVENTH FLOOR ROOF. SEE DETAIL #R-1.

FIFTH FLOOR EAST HVAC PLAN R1307B

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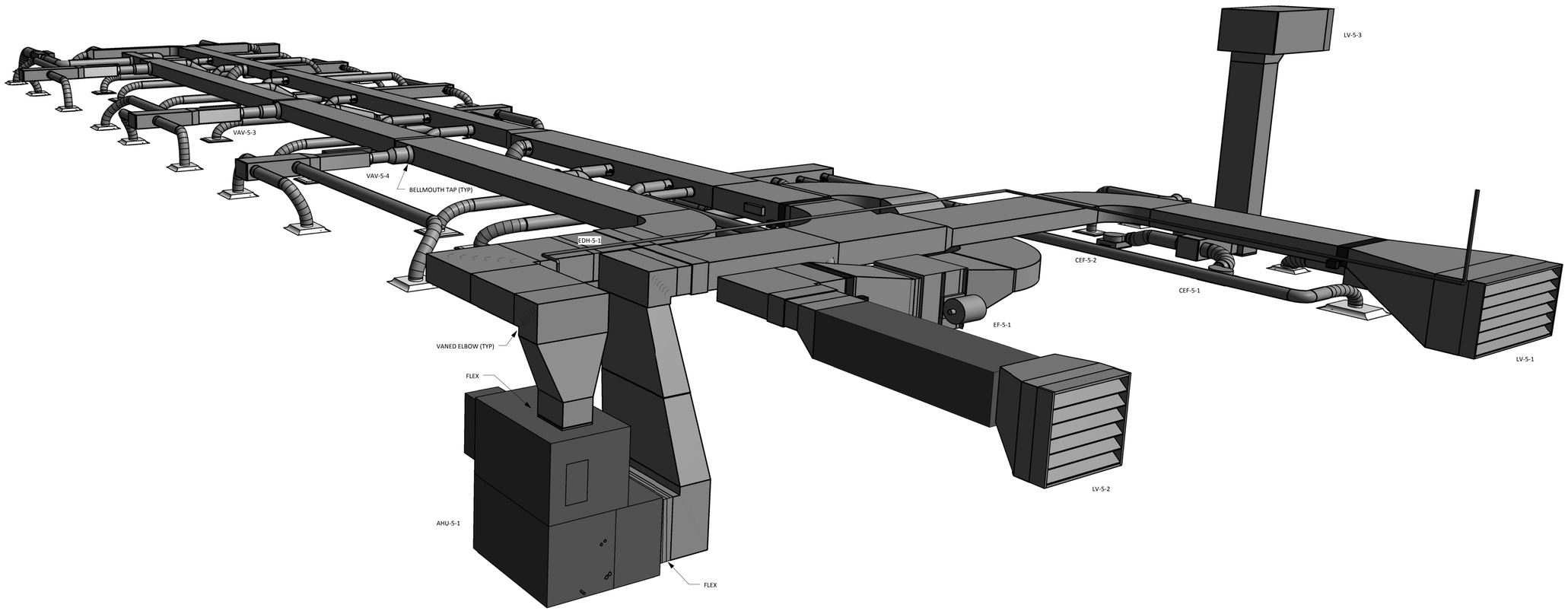

FIFTH FLOOR EAST HVAC NORTHEAST VIEW

FIFTH FLOOR EAST HVAC NORTHEAST VIEW R1307B

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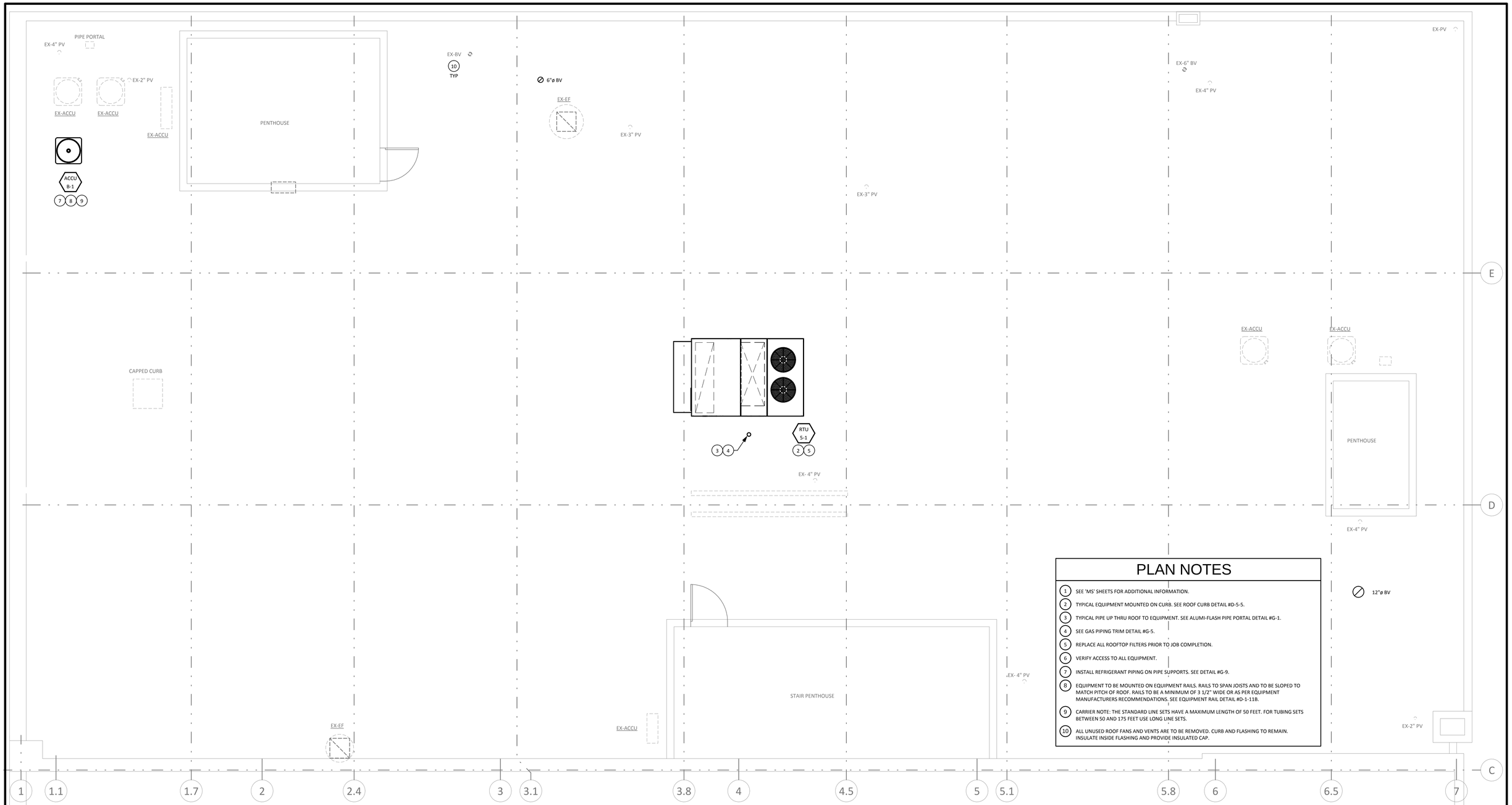

PLAN NOTES

1. SEE 'MS' SHEETS FOR ADDITIONAL INFORMATION.
2. TYPICAL EQUIPMENT MOUNTED ON CURB. SEE ROOF CURB DETAIL #D-5-5.
3. TYPICAL PIPE UP THRU ROOF TO EQUIPMENT. SEE ALUMI-FLASH PIPE PORTAL DETAIL #G-1.
4. SEE GAS PIPING TRIM DETAIL #G-5.
5. REPLACE ALL ROOFTOP FILTERS PRIOR TO JOB COMPLETION.
6. VERIFY ACCESS TO ALL EQUIPMENT.
7. INSTALL REFRIGERANT PIPING ON PIPE SUPPORTS. SEE DETAIL #G-9.
8. EQUIPMENT TO BE MOUNTED ON EQUIPMENT RAILS. RAILS TO SPAN JOISTS AND TO BE SLOPED TO MATCH PITCH OF ROOF. RAILS TO BE A MINIMUM OF 3 1/2" WIDE OR AS PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS. SEE EQUIPMENT RAIL DETAIL #D-1-11B.
9. CARRIER NOTE: THE STANDARD LINE SETS HAVE A MAXIMUM LENGTH OF 50 FEET. FOR TUBING SETS BETWEEN 50 AND 175 FEET USE LONG LINE SETS.
10. ALL UNUSED ROOF FANS AND VENTS ARE TO BE REMOVED. CURB AND FLASHING TO REMAIN. INSULATE INSIDE FLASHING AND PROVIDE INSULATED CAP.

FIFTH FLOOR WEST ROOF HVAC PLAN

SCALE: 1/4" = 1'-0"

FIFTH FLOOR WEST ROOF HVAC PLAN R1307B

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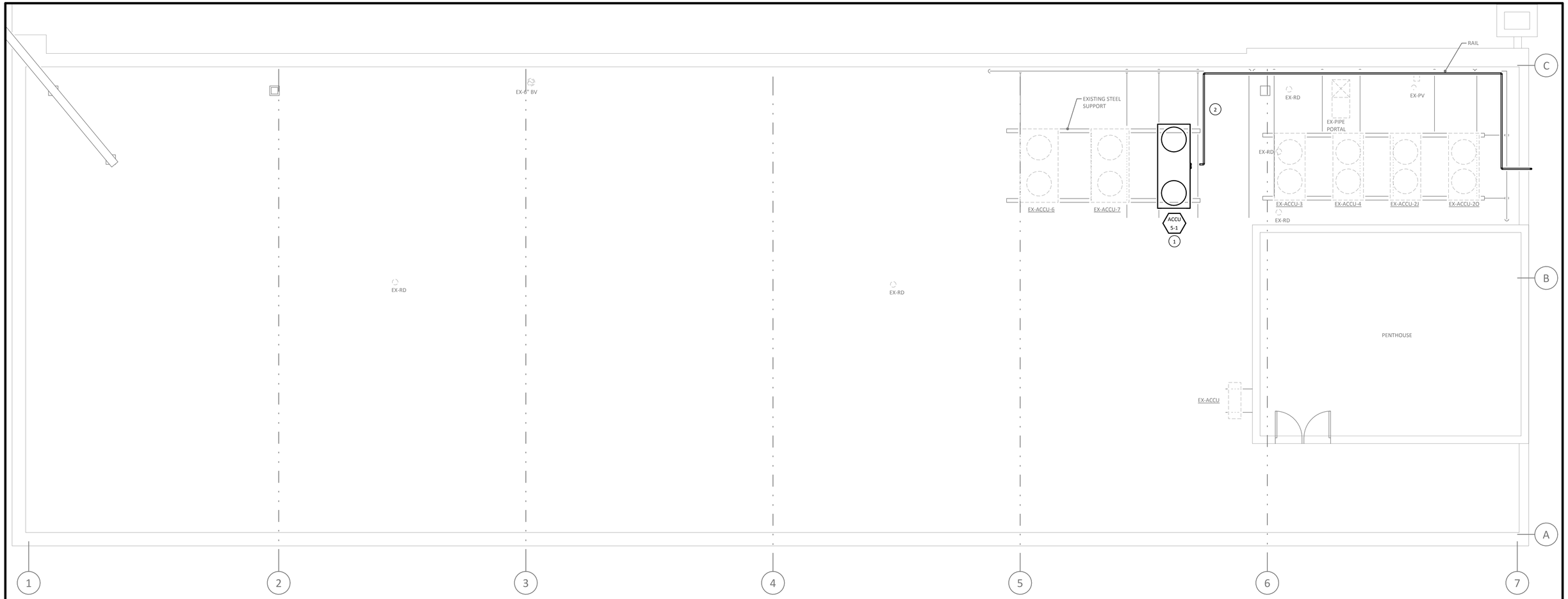

SEVENTH FLOOR EAST ROOF HVAC PLAN

SCALE: 1/4" = 1'-0"

PLAN NOTES

1. NEW CONDENSING UNIT TO BE INSTALLED IN SAME LOCATION AS REMOVED UNIT. SEE 'MS' SHEETS FOR MORE INFORMATION.
2. NEW REFRIGERANT PIPING FROM AHU-5-1. SEE DETAIL #R-1.

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SEVENTH FLOOR EAST ROOF HVAC PLAN R1307B

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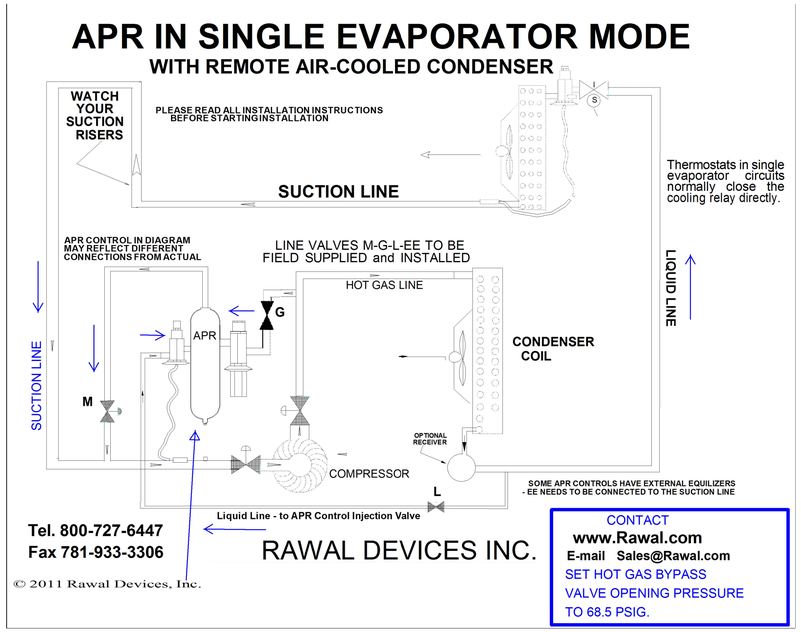

HOT GAS BYPASS DETAIL

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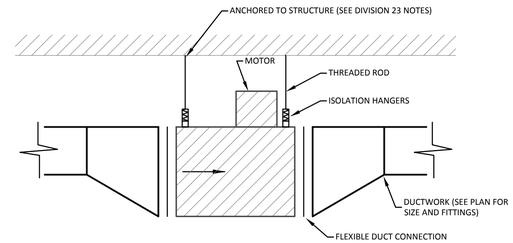

INLINE FAN SECTION DETAIL

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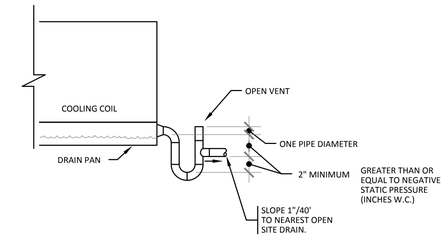
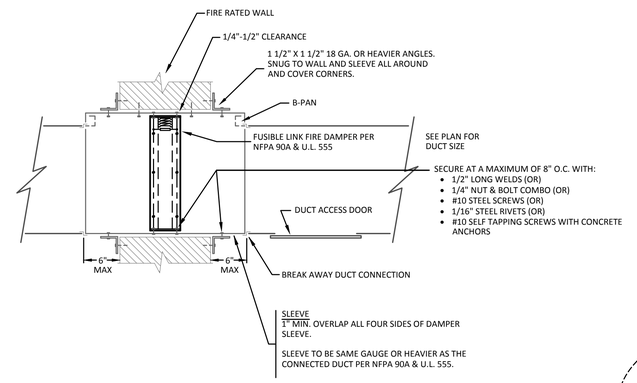


EVAPORATOR DRAIN DETAIL (DRAW THRU)

NO SCALE #P-13

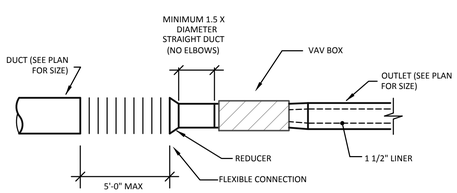


TYPE "B" FIRE DAMPER DETAIL IN DUCT

NO SCALE #D-3-4

TYPICAL REFRIGERANT PIPING INSTALLATION NOTES

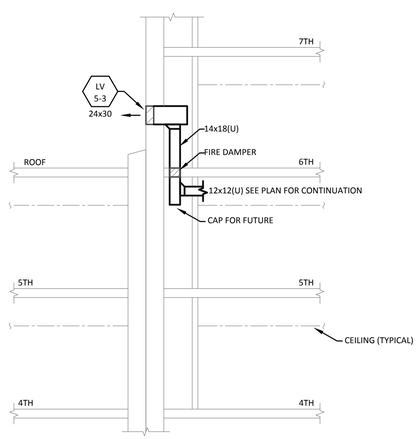
- R-410A IS A HIGHER PRESSURE REFRIGERANT THAT REQUIRES COMPONENTS OF THE SYSTEM TO BE RATED ACCORDINGLY.
- ROUTE ALL REFRIGERANT PIPING AS STRAIGHT AS POSSIBLE. AVOID UNNECESSARY CHANGES OF DIRECTION.
- SUCTION LINES TO BE INSTALLED WITH A SLOPE OF ¼ TO 1 INCH PER 10 FEET OF RUN TOWARD THE INDOOR COIL.
- LIQUID LINE TO BE INSTALLED WITH A SLIGHT SLOPE IN THE DIRECTION OF FLOW. SIMILAR TO SUCTION LINE.
- DOUBLE RISERS MUST NOT BE INSTALLED.
- DO NOT INSTALL RISER TRAPS. (SEE THE TRANE TUBE SIZE AND COMPONENT SELECTION APPLICATION GUIDE FOR TRANE TTA UNITS USING R-410A REFRIGERANT.)
- NEW FILTER DRIER, TXV, SIGHT GLASS, ACCESS PORTS ETC. TO BE PER THE MANUFACTURERS INSTALLATION RECOMMENDATIONS.
- REMOVE THE PRE-INSTALLED FILTER DRIER FROM THE NEW TRANE TTA CONDENSING UNIT. INSTALL A NEW FILTER DRIER PER MANUFACTURERS RECOMMENDATIONS.
- PROVIDE AND INSTALL ACCESS PORTS (SCHRAEDER VALVE WITH A CORE) AT THE CONDENSING UNIT AND THE EVAPORATOR.
- WARNING: DO NOT INSTALL A LIQUID LINE SOLENOID VALVE IN ANY SYSTEM EQUIPPED WITH A CHECK VALVE. FAILURE TO FOLLOW THIS RECOMMENDATION COULD RESULT IN A REFRIGERANT LINE EXPLODING UNDER PRESSURE WHICH COULD RESULT IN DEATH OR SERIOUS INJURY.
- REFER TO MANUFACTURERS APPLICATION GUIDES AND INSTALLATION/OPERATION MANUALS FOR MORE INFORMATION.



TYPICAL VAV BOX DETAIL

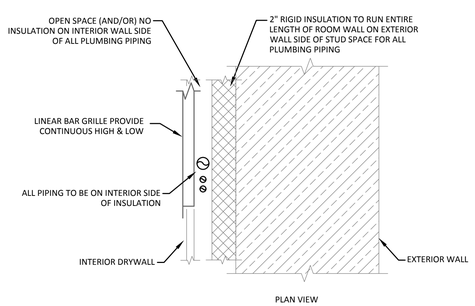
NO SCALE #D-1-5

VAV CONN. SCHEDULE	
INLET SIZE	MIN. INLET STRAIGHT DUCT LENGTH
4"	12"
5"	12"
6"	12"
7"	12"
8"	12"
9"	18"
10"	18"
12"	18"
14"	24"



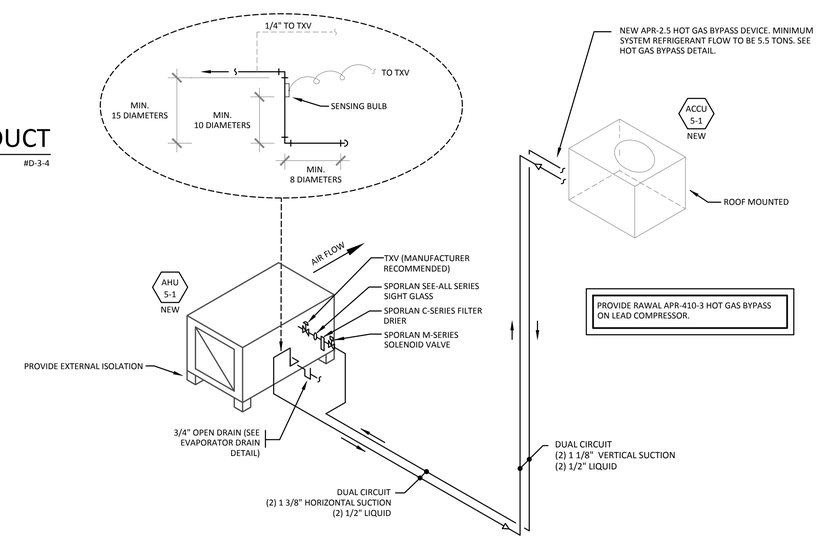
EXHAUST RISER DETAIL

NO SCALE #D-2-12



OUTSIDE WALL PIPING DETAIL

NO SCALE #D-1-14



REFRIGERANT PIPING DIAGRAM

NO SCALE #R-1

HVAC DETAILS R1307B

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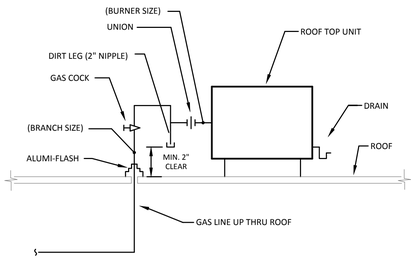
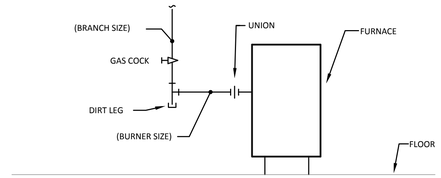


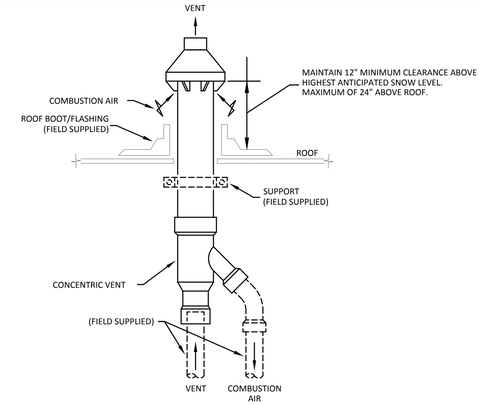
ROOF TOP GAS PIPING TRIM DETAIL

(LOW PRESSURE) GAS PIPE INSIDE #G-5



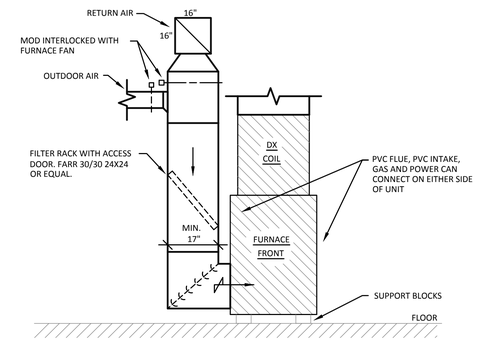
FURNACE GAS PIPING TRIM DETAIL

(LOW PRESSURE) #G-14A



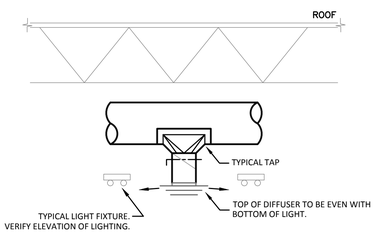
CONCENTRIC VENT DETAIL (ROOF)

NO SCALE #D-4-3B



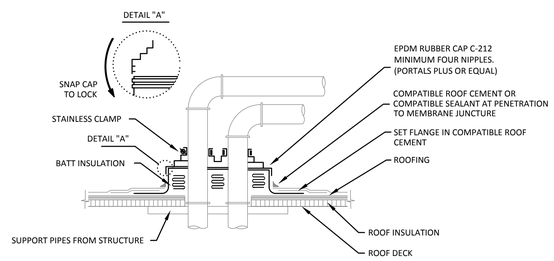
FURNACE DETAIL

NO SCALE #D-4-7A



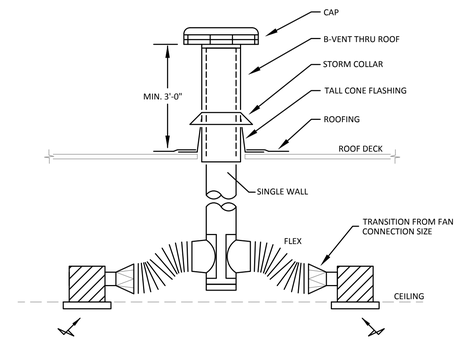
DUCT MOUNTED DIFFUSER DETAIL

NO SCALE #D-1-7A



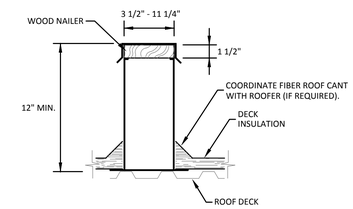
ALUMI-FLASH PIPE PORTAL DETAIL

NO SCALE #G-1



CEILING EXHAUST FAN DETAIL

NO SCALE #D-2-8A

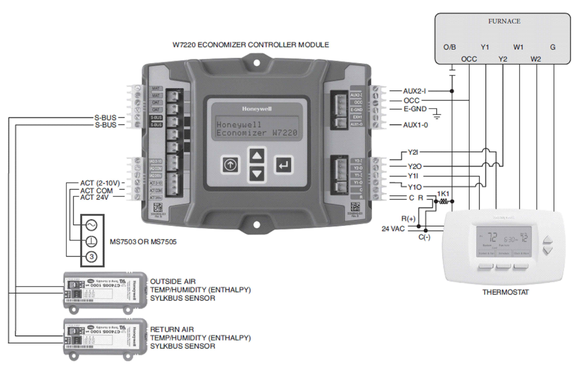


RPS CORPORATION, MODEL: ER-2 OR EQUAL

* 18 GAUGE GALVANIZED STEEL
* UNITIZED CONSTRUCTION WITH INTREGAL BASE PLATE
* WELDED CONSTRUCTION
* WOOD NAILER
* GALVANIZED COUNTER FLASHING WITH LAG SCREWS
* INTERNALLY REINFORCED

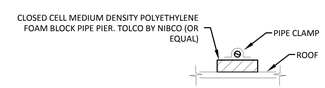
EQUIPMENT RAIL DETAIL

NO SCALE #D-1-11B



FURNACE ECONOMIZER WIRING DIAGRAM

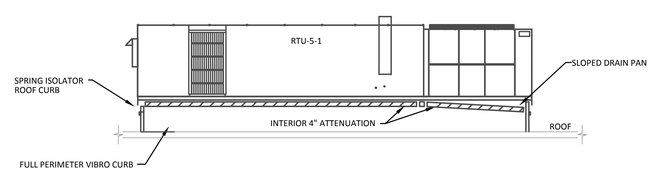
NO SCALE



TOLCO CLASSIC 50H SERIES - 50 LBS. MAX
TOLCO PIPE PIER 150 SERIES - 150 LBS. MAX
TOLCO PIPE PIER 300 SERIES - 300 LBS. MAX

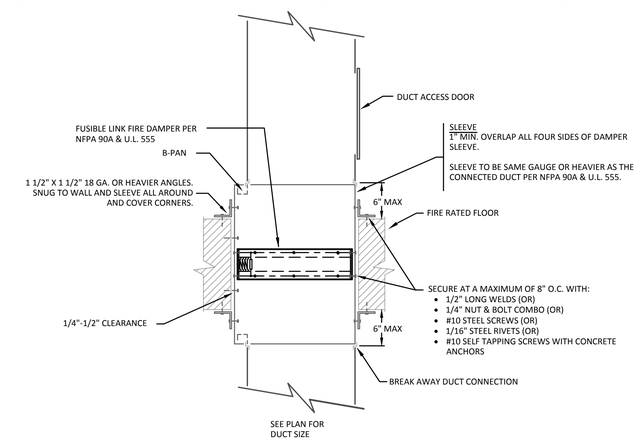
ROOF PIPE SUPPORT DETAIL

NO SCALE #G-9



VIBRO CURB DETAIL

NO SCALE TYHBAR VIBRO CURB



TYPE "B" FIRE DAMPER DETAIL IN FLOOR

NO SCALE #D-3-7

HVAC DETAILS

R1307B

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ELECTRIC HEAT EQUIPMENT SCHEDULE

TAG		EBB-1	EBB-2	EDH-5-1
MFGR.		QMARK	QMARK	THERMOLEC
MODEL		2500 SERIES	2500 SERIES	SC SERIES
TYPE		BASEBOARD	BASEBOARD	DUCT HEATER
CFM		-	-	5000
SIZE		SEE PLAN	SEE PLAN	SEE PLAN
ELECTRICAL DATA	KW	250W PER FOOT	250W PER FOOT	22
	VOLT	277	277	460
	PHASE	1	1	3
UNIT WEIGHT (LBS.)		-	-	
REMARKS/ACCESSORIES		1-4	1,2,3,5	1,2,6

1. ACCEPTABLE ALTERNATES: MARKEL, INDEECO
2. NEW
3. COLOR AND STYLE TO MATCH EXISTING BASEBOARDS
4. STAND ALONE REMOTE THERMOSTAT
5. INTERLOCK BASEBOARD CONTROLS TO PE SWITCH IN VAV BOX ENCLOSURE.
6.
   - MAGNETIC CONTACTOR FULL BREAK
   - AUTOMATIC CUT-OUT
   - MANUAL CUT-OUT
   - TRANSFORMER C/W FUSIBLE LINK
   - BUILT-IN AIR FLOW SENSOR
   - GASKETED CONTROL BOX
   - INTERLOCK TERMINAL STRIP
   - DOOR INTERLOCK DISCONNECT SWITCH
   - S.C.R MODULATING CONTROL
   - PNEUMATIC INPUT
   - BOTTOM MOUNT CONTROL ENCLOSURE
   - SLIP-IN DUCT HEATER

FURNACE SCHEDULE

TAG		F-B-1
LOCATION SERVING		BASEMENT WEST
MFGR.		CARRIER
MODEL		59SC2B080-20
TYPE		CONDENSING
CFM		1200
ESP (DUCT ONLY)		1
HEATING DATA	INPUT (MBH) (MAX)	80
	OUTPUT (MBH) (MAX)	75
	STAGES	1
COOLING COIL	MODEL	CNPVP 4217 ALA
	TYPE	CASED
	REFRIGERANT	R-410A
ELECTRICAL DATA	MCA/MOCP	13/20
	VOLT	120
	PHASE	1
OUTDOOR AIR (CFM)		360
UNIT WEIGHT (LBS.)		200
REMARKS/ACCESSORIES		1-5

1. ACCEPTABLE ALTERNATES: TRANE, YORK
2. NEW
3. FILTER RACK
4. OEM PROGRAMMABLE T-STAT
5. ECONOMIZER MODULE (HONEYWELL JADE)

AIR COOLED CONDENSING UNIT SCHEDULE

TAG		ACCU-8-1	ACCU-5-1
LOCATION SERVING		BASEMENT WEST	5TH FLOOR EAST
MFGR.		CARRIER	TRANE
MODEL		24ABB342	TTA180E
NOMINAL TONS		3.5	15
COOLING ENERGY EFFICIENCY		13 SEER	12.8 IEER
REF. TYPE		R-410A	R-410A
CAPACITY (MAX. MBH)		42	186
% UNLOAD			50% (2 STAGE)
CIRCUITS		4	2
COMPRESSOR DATA	QTY	1	2
	TYPE	SCROLL	MANIFOLDED SCROLL
ELECTRICAL DATA	MCA/MOCP	9/15	33/40
	VOLT	460	460
	PHASE	3	3
UNIT WEIGHT (LBS.)		250	900
REMARKS/ACCESSORIES		1,2,4	1-3

1. ACCEPTABLE ALTERNATES: TRANE, YORK, CARRIER
2. NEW
3.
   - CRANKCASE HEATER
   - ANTI-SHORT CYCLE TIMER
   - TIMED DELAY RELAY
   - LOW AMBIENT CONTROL
   - ISOLATORS
   - COIL HAIL GUARD
   - DUAL CIRCUITED, FULL FACE AREA COIL
4.
   - LOW AMBIENT KIT
   - COMPRESSOR START ASSIST CAPACITOR & RELAY
   - CRANKCASE HEATER
   - HARD SHUT-OFF TXV
   - REFER TO THE SYSTEM LONGLINE APPLICATION GUIDELINE
   - FURNISH AND INSTALL EQUIPMENT RAILS

AIR HANDLING UNIT SCHEDULE

TAG			AHU-5-1
LOCATION SERVING			5TH FLOOR EAST
MFGR.			TRANE
MODEL			CSAA-10
REF. TYPE			R-410A
SUPPLY FAN DATA		CFM	5000
		SUPPLY ESP	2.2
		RETURN ESP	1.8
		RPM	2445
		HP	7.5
		VOLT	460
		PHASE	3
COIL DATA		COIL TYPE	DX COOLING
		CAPACITY (MBH)	189
		SUCTION TEMP.	45
		ROWS	6
		FINS (PER FOOT)	72
		CIRCUITS	
	AIR	P.D. (IN. H2O)	.6
		EAT (DB/WB)	80.5/66
		LAT (DB/WB)	55/53.5
FILTER DATA		TYPE	2" PLEATED MERV 8
		QTY.	
		SIZE (EA.)	
OUTDOOR AIR (CFM)			700
UNIT WEIGHT (LBS.)			1500
REMARKS/ACCESSORIES			1-4

1. ACCEPTABLE ALTERNATES: YORK, CARRIER
2. NEW
3. VERIFY AHU SECTIONS: COOLING COIL SECTION, ANGLED FILTER SECTION, SUPPLY FAN SECTION (SEE M-4)
4.
   - LEFT HAND ACCESS & CONNECTIONS
   - STAINLESS STEEL DRAIN PAN
   - EXTERNAL VIBRATION ISOLATORS (IN ADDITION TO INTERNAL ISOLATION)
   - DOUBLE WALL WITH FOAM INSULATION
   - HI EFFICIENCY TEFC MOTOR (ASHRAE 90.1 COMPLIANT)
   - PNEUMATIC CONTROLS
   - DUAL CIRCUITED, FULL FACE AREA COIL

ROOF TOP UNIT SCHEDULE (GAS)

TAG			RTU-5-1
LOCATION SERVING			5TH FLOOR WEST
MFGR.			TRANE
MODEL			YSD240
NOM. TONS			20
COOLING ENERGY EFFICIENCY			11 EER
REFRIGERANT TYPE			R-410A
SUPPLY FAN DATA	CFM		6400
	ESP (DUCT ONLY)		2.5"
	RPM		
	HP		10
COOLING COIL DATA	MBH		250
	EAT	(DB/WB)	81.5/66.5
	LAT	(DB/WB)	55/54
	STAGES		VAV
HEATING DATA	INPUT (MBH) (MAX)		350
	OUTPUT (MBH) (MAX)		284
	STAGES		MODULATING
ELECTRICAL DATA	MCA/MOCP		52/70
	VOLT		460
	PHASE		3
OUTDOOR AIR (CFM)			1500
UNIT WEIGHT (LBS)			3500
REMARKS/ACCESSORIES			1-3

1. ACCEPTABLE ALTERNATES: YORK, CARRIER
2. NEW
3.
   - COMPARATIVE ENTHALPY ECONOMIZER
   - POWER EXHAUST
   - 2" THROWAWAY FILTERS
   - MULTI-ZONE VAV
   - ROOF VIBRO-CURB (THYCURB)
   - BELT DRIVE
   - VERTICAL DISCHARGE
   - SEPARATELY WIRED CONVENIENCE OUTLET
   - DISCONNECT SWITCH
   - HAIL GUARDS
   - RETURN AIR SMOKE DETECTOR
   - MOTOR WITH VFD

VAV BOX SCHEDULE

TAG	MANUFACTURER	MODEL	SIZE UNIT	SIZE OUTLET	CFM MAX	CFM MIN	STATIC PRESSURE INLET	STATIC PRESSURE DOWN	STATIC PRESSURE MIN	NC LEVELS RAD	NC LEVELS DIS	ELECTRIC HEAT COIL CFM	ELECTRIC HEAT COIL KW	ELECTRIC HEAT COIL V/PH	ELECTRIC HEAT COIL STEPS	ELECTRIC HEAT COIL EAT	ELECTRIC HEAT COIL LAT	ELECTRICAL MCA	ELECTRICAL MOCP	CONTROL TYPE	REMARKS
VAV-5-01	TITUS	PESV	8	12x10	470	80	1	0.25	0.02	20	18	290	4	277/1	S	57	100.6	18.1	20	PNUEMATIC	1-11
VAV-5-02	TITUS	PESV	10	14x13	735	200	1	0.25	0.08	23	17	320	4.5	480/3	S	57	101.4	6.8	15	PNUEMATIC	1-11
VAV-5-03	TITUS	PESV	10	14x13	735	200	1	0.25	0.08	23	17	320	4.5	480/3	S	57	101.4	6.8	15	PNUEMATIC	1-11
VAV-5-04	TITUS	PESV	8	12x10	675	190	1	0.25	0.04	24	21	320	4.5	480/3	S	57	101.4	6.8	15	PNUEMATIC	1-11
VAV-5-05	TITUS	PESV	8	12x10	670	200	1	0.25	0.04	24	21	290	4	277/1	S	57	100.6	18.1	20	PNUEMATIC	1-11
VAV-5-06	TITUS	PESV	6	12x8	370	0	1	0.25	0.11	23	18	-	-	-	-	-	-	-	-	PNUEMATIC	1-11
VAV-5-07	TITUS	PESV	8	12x10	470	0	1	0.25	0.01	20	18	-	-	-	-	-	-	-	-	PNUEMATIC	1-11
VAV-5-08	TITUS	PESV	6	12x8	370	0	1	0.25	0.11	23	18	-	-	-	-	-	-	-	-	PNUEMATIC	1-11
VAV-5-09	TITUS	PESV	8	12x10	605	560	1	0.25	0.03	23	20	560	5	480/3	S	57	85.2	7.5	15	PNUEMATIC	1-11
VAV-5-10	TITUS	DESV	10	14x13	760	130	1	0.25	0.08	23	17	360	5	480/3	S	57	100.9	7.5	15	DIGITAL	1-9,12
VAV-5-11	TITUS	DESV	8	12x10	580	90	1	0.25	0.03	22	19	250	3.5	277/1	S	57	101.2	15.8	20	DIGITAL	1-9,12
VAV-5-12	TITUS	DESV	6	12x8	400	90	1	0.25	0.13	24	20	150	2	277/1	S	57	99.1	9	15	DIGITAL	1-9,12
VAV-5-13	TITUS	DESV	8	12x10	580	160	1	0.25	0.03	22	19	160	2	277/1	S	57	96.5	9	15	DIGITAL	1-9,12
VAV-5-14	TITUS	DESV	6	12x8	240	150	1	0.25	0.05	17	13	150	1.5	277/1	S	57	88.6	6.8	15	DIGITAL	1-9,12
VAV-5-15	TITUS	DESV	6	12x8	230	140	1	0.25	0.04	16	13	150	2	277/1	S	57	99.1	9	15	DIGITAL	1-9,12
VAV-5-16	TITUS	DESV	8	12x10	450	130	1	0.25	0.02	19	17	150	2	277/1	S	57	99.1	9	15	DIGITAL	1-9,12
VAV-5-17	TITUS	DESV	6	12x8	380	100	1	0.25	0.12	24	18	180	2.5	277/1	S	57	100.9	11.3	15	DIGITAL	1-9,12
VAV-5-18	TITUS	DESV	6	12x8	250	150	1	0.25	0.05	17	14	150	1.5	277/1	S	57	88.6	6.8	15	DIGITAL	1-9,12
VAV-5-19	TITUS	DESV	12	16x15	1160	840	1	0.25	0.09	23	20	840	7	480/3	S	57	83.3	10.5	15	DIGITAL	1-9,12
VAV-5-20	TITUS	DESV	6	12x8	280	70	1	0.25	0.06	18	15	150	2	277/1	S	57	99.1	9	15	DIGITAL	1-9,12
VAV-5-21	TITUS	DESV	8	12x10	460	130	1	0.25	0.02	19	17	130	1.5	277/1	S	57	93.5	6.8	15	DIGITAL	1-9,12
VAV-5-22	TITUS	DESV	8	12x10	490	190	1	0.25	0.02	20	18	190	2.5	277/1	S	57	98.6	11.3	15	DIGITAL	1-9,12

NOTES:
1. Acceptable Alternates: Price, Trane
2. New
3. Standard Features: Primary automatic reset thermal cutout, Secondary manual reset thermal cutout, Airflow switch, Derated nickel chrome heating elements, Magnetic or Safety contactors, Line terminal block, Control terminal block, ETL listed, 80/20 nickel chrome element wire.
4. All performance based on tests conducted in accordance with ASHRAE 130-2008 and AHRI 880-2008.
5. All NC levels determined using AHRI 885-2008 Appendix E.
6. All airflow, pressure losses and heating performance values have been corrected for altitude.
7. Units of measure: dimensions (in), airflow (cfm), water flow (gpm), air pressure (in wg), water head losses (ft) and temperatures (degF).
8. In the "Steps" column, code "S" denotes a modulating SCR heater.
9. The minimum supply circuit ampacity (MCA) and maximum overcurrent protection (MOP) ratings were calculated in accordance with UL standards based on motor and electric coil full load current ratings.
10. Provide PE switch in VAV box enclosure. Interlock with room electric baseboard heater. Field wire controls between VAV box, baseboard and t-stat (by controls contractor). Baseboards to be 1st stage and VAV box heater to be 2nd stage of heat.
11. Titus II dual minimum pneumatic controller with electric heat.
12. Provide controller in VAV box enclosure. Interlock with room electric baseboard heater. Field wire controls between VAV box, baseboard and t-stat (by controls contractor). Baseboards to be 1st stage and VAV box heater to be 2nd stage of heat.

FAN SCHEDULE

TAG		EF-B-1	EF-5-1	CEF-B-1, B-2, B-3	CEF-5-1, 5-2	CEF-5-3, 5-4	CEF-5-5, 5-6
LOCATION SERVING		BASEMENT WEST	5TH FLOOR EAST	BASEMENT WEST	5TH FLOOR EAST	5TH FLOOR WEST	5TH FLOOR WEST
MFGR.		COOK	COOK	COOK	COOK	COOK	COOK
MODEL		100SQN-B	245SQN-HP	GC-144	GC-184	GC-520	GC-142
TYPE		INLINE	INLINE	CEILING EXHAUST	CEILING EXHAUST	CEILING EXHAUST	CEILING EXHAUST
CFM		1200	5000	80	200	300	80
ESP (DUCT ONLY)		1	2.5	.625	.625	.375	.375
FAN RPM		2700	1328	1100	1500	1205	1000
FAN MOTOR DATA	HP	1	5	98 WATTS	220 WATTS	172 WATTS	59 WATTS
	VOLT	460	460	120	120	120	120
	PHASE	3	3	1	1	1	1
UNIT WEIGHT (LBS.)		150	500	20	20	20	20
REMARKS/ACCESSORIES		1-5	1-6	1,2,7	1,2,7	1,2,7	1,2,7

1. ACCEPTABLE ALTERNATES: GREENHECK, ACME
2. NEW
3. MOTOR GUARD/COVER
4. INSULATED HOUSING
5. VIBRATION ISOLATORS
6. REINFORCED WHEEL
7. BACK DRAFT DAMPER

LOUVER SCHEDULE

TAG	LV-1-1	LV-1-2	LV-5-1	LV-5-2	LV-5-3
MFGR.	RUSKIN	RUSKIN	RUSKIN	RUSKIN	RUSKIN
MODEL	ELF6375DX	ELF6375DX	ELF6375DX	ELF6375DX	ELF6375DX
TYPE	INTAKE	INTAKE	INTAKE	RELIEF	EXHAUST
MATERIAL	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM
CFM	1440	1200	5000	5000	1600
P.D. (IN. H2O)					
LOUVER SIZE (WxHxD)	66x12x6	66x12x6	76x36x6	44x36x6	30x24x4
FREE AREA (SQ. FT.)	1.96	1.96	10.45	5.94	2.4
REMARKS/ACCESSORIES	1,2	1,2	1-3	1-3	1,2

1. ACCEPTABLE ALTERNATES: SAFE AIR/DOWCO
2. NEW
3. REPLACE EXISTING LOUVER

GRILLE, REGISTER & DIFFUSER SCHEDULE

TAG	A	B	C	D	F	G	J
MFGR.	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS	RAYMON DONCO
MODEL	TMS	PAR	300RS	350RL	T700L (STEEL)	TMR	DBG-100
TYPE	S/A DIFFUSER	R/A, E/A DIFFUSER	REGISTER	GRILLE	DOOR GRILLE	ROUND S/A DIFFUSER	BAR GRILLE
NECK SIZE	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN
MOUNTING TYPE	LAY IN	LAY IN	SURFACE	SURFACE	SURFACE	DUCT	SURFACE
DAMPER	-	-	OBD	-	-	-	-
REMARKS/ACCESSORIES	1,2	1,2	1,2	1,2	1,2,4	1,2	1,2,3

1. ACCEPTABLE ALTERNATES: PRICE, METALAIRE
2. VERIFY COLOR WITH ARCHITECT
3. 1 1/2" WIDE, 8' LONG
4. GRILLE WITH BORDER ON BOTH SIDES OF DOOR

WORK ITEM SCHEDULE

ITEM	PROVIDED BY	INSTALLED BY	WIRED BY	NOTES/REMARKS
SMOKE DETECTORS	EC	EC	EC	(A)
REMOTE TEST STATIONS	EC	EC	EC	(A)
CONTROL PANELS	CC	CC	CC	
T-STATS/REMOTE SENSORS	MC/CC	CC	CC	VAV'S, EBB'S
ELECTRICAL DISCONNECTS	EC	EC	EC	
OCCUPANCY SENSORS	EC	EC	EC	TOILET EF'S

MC - MECHANICAL CONTRACTOR
EC - ELECTRICAL CONTRACTOR
CC - CONTROLS CONTRACTOR

NOTES:

(A) SEE DIVISION 23 NOTES ON MECHANICAL SHEETS FOR SMOKE DETECTOR AND REMOTE TEST STATION INFORMATION.

HVAC SCHEDULES R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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DRAWN BY: UE
DATE: 12/18/15

PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET MS-2 OF 13

DIVISION 23 (HVAC)

1) GENERAL:
JOB SPECIFICATIONS ARE AS FOLLOWS:

CODE - CONTRACTOR TO LOCATE, REVIEW AND COMPLY WITH ALL LOCAL, STATE AND/OR NATIONAL CODES. CONTRACTOR TO SPECIFICALLY LOCATE, REVIEW AND COMPLY WITH ALL LOCAL CODE AMENDMENTS.

WORKMANSHIP/WARRANTY - CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, MATERIALS, METHODS, TECHNIQUES, SEQUENCES AND DETAILS TO PERFORM ITS WORK. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE THE EQUIPMENT/SYSTEMS ARE PLACED INTO OPERATION AND ACCEPTED BY THE OWNER. WARRANTY TO INCLUDE LABOR & MATERIALS REQUIRED FOR WARRANTY ISSUES.

SCHEDULED EQUIPMENT - CONTRACTOR PRICING TO BE BASED ON THE SCHEDULED EQUIPMENT. SUBSTITUTIONS TO BE SUBMITTED AS DEDUCTS (OR ADDS) TO THE BASE CONTRACT ALONG WITH A DESCRIPTION OF THE DIFFERENCES.

SUBMITTALS - CONTRACTOR TO COORDINATE SUBMITTAL SCHEDULE WITH OWNER IMMEDIATELY AFTER ACCEPTANCE OF CONTRACT. AS SOON AS POSSIBLE, EMAIL NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING SUBMITTALS (INCLUDING ALL ACCESSORIES). NO NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING ITEMS ARE TO BE INSTALLED UNTIL SUBMITTED INFORMATION IS APPROVED. UPON COMPLETION OF PROJECT, CONTRACTORS TO PROVIDE (4) HARD COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ALL NEW EQUIPMENT WITH TYPE WRITTEN SECTION TAGS AND IN SAME COLORED BINDERS.

SHOP DRAWINGS/AS BUILT DRAWINGS - BEFORE INSTALLATION, PROVIDE 1/4" SCALE 'SHOP DRAWINGS' FOR COORDINATION AND APPROVAL. 'SHOP DRAWINGS' TO SHOW DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. INSTALLATION TO START ONLY AFTER WRITTEN APPROVAL FROM ENGINEER. UPON COMPLETION OF THE INSTALLATION WORK, PROVIDE 'AS BUILT' CHANGES CLEARLY SHOWING THE FINAL DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. ALL SHOP DRAWING AND AS BUILT DRAWING CHANGES TO BE MADE WITH 'AUTO CAD' DRAFTING SOFTWARE AND SUBMITTED IN PAPER AND DIGITAL FORMAT. DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS 'SHOP DRAWINGS' OR SUBMITTALS. PROVIDE FOUR PAPER COPIES OF DRAWINGS.

OPERATION AND MAINTENANCE MANUALS - CONTRACTOR TO PROVIDE OPERATION AND MAINTENANCE MANUALS WITH THE FOLLOWING:
- WARRANTY LETTER FROM CONTRACTOR.
- COMPLETE LIST OF MODEL NUMBERS AND SERIAL NUMBERS FOR EACH PIECE OF EQUIPMENT
- INSTALLATION AND OPERATION MANUALS FOR EACH PIECE OF EQUIPMENT
- PARTS LIST FOR EACH PIECE OF EQUIPMENT
- LOCATION AND PHONE NUMBER FOR LOCAL VENDORS FOR EACH PIECE OF EQUIPMENT FOR PARTS AVAILABILITY FOR FUTURE
- SCHEMATIC REPRESENTATION OF LOCATION FOR EACH PIECE OF EQUIPMENT

ACCESS DOORS - CONTRACTOR TO FURNISH AND INSTALL ACCESS DOORS AS REQUIRED. MEP TRADE TO COORDINATE WITH CARPENTRY CONTRACTOR THE LOCATION OF ACCESS DOORS IN ALL CEILINGS, SOFFITS AND WALLS FOR ACCESS TO EQUIPMENT, VALVES, DAMPERS, FIRE DAMPERS, CLEAN OUTS, SWITCHES, CONTROLS, ETC.

STRUCTURE PROTECTION - THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY THE INSTALLATION OF ANY NEW SYSTEMS. WHERE FLOORS, WALLS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE ARE REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLING OR REPAIRING ANY SYSTEM, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A SAFE STRUCTURAL CONDITION IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.

FIRE RESISTANT ASSEMBLIES - PENETRATIONS OF WALL/FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.

ACCESSIBILITY - MANUAL ACCESSIBLE ITEMS IN OCCUPIED SPACES (SUCH AS CONTROLS, THERMOSTATS, SWITCHES AND ELECTRICAL OUTLETS) TO BE LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" PER THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. VERIFY LOCAL ACCESSIBILITY CODE REQUIREMENTS OVER AND ABOVE THE ADA REQUIREMENTS. COORDINATE FINAL MOUNTING HEIGHTS WITH OWNER.

2) GENERAL HVAC CONDITIONS:
KEEP OUTSIDE AIR INTAKES A MINIMUM OF 10'-0" AWAY FROM CONTAMINANT SOURCES.

KEEP B-VENTS A MINIMUM OF 3'-0" ABOVE ROOF PENETRATION AND/0R 2'-0" ABOVE ANY PART OF THE BUILDING WITHIN 10'-0". B-VENTS TO CLEAR COMBUSTIBLES BY 3" MIN.

THERMOSTATS, SENSORS AND CONTROL PANELS FOR HVAC EQUIPMENT SHALL BE LOCATED IN ACCORDANCE WITH THE MECHANICAL PLANS. FURNISH AND INSTALL CLEAR LOCKING COVERS FOR ALL T-STATS. ALL COVERS TO BE KEYED THE SAME.

PROVIDE ENGRAVED TAGS FOR ALL EQUIPMENT.

3) DUCTWORK:
ALL DUCTWORK SHALL MEET S.M.A.C.N.A. STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE. DUCTWORK TO BE GALVANIZED SHEET METAL UNLESS NOTED OTHERWISE.

RTU S/A & R/A DROPS	- 1 1/2" LINER
RECTANGULAR S/A	- 1 1/2" LINER. UNLESS NOTED OTHERWISE.
RECTANGULAR R/A	- 1 1/2" LINER. UNLESS NOTED OTHERWISE.
RECTANGULAR E/A	- UNINSULATED.
RECTANGULAR O/A	- 2" FIBERGLASS WRAP
ROUND S/A	- 2" FIBERGLASS WRAP
ROUND R/A	- 2" FIBERGLASS WRAP
ROUND E/A	- UNINSULATED.
FLEX S/A	- INSULATED (5'-0" MAXIMUM LENGTH)
FLEX R/A	- INSULATED (5'-0" MAXIMUM LENGTH)
FLEX E/A	- UNINSULATED. (5'-0" MAXIMUM LENGTH)
RECT. DUCT LENGTHS	- 59" WITH S&D JOINTS
DIMENSIONS	- OUTSIDE DIMENSIONS SHOWN ON PLANS
ELBOW RADIUS	- ONE HALF THE DUCT WIDTH (SEE DUCTWORK SYMBOLS LEGEND)
SHOE-TAPS	- 6" LONG
BALANCING DAMPERS	- AT ALL FINAL DIFFUSER & GRILLE TAP LOCATIONS (LOCKING TYPE)
CONTROL DAMPERS (MOD)	- OPPOSED BLADE AIRFOIL TYPE (RUSKIN CD60)
BACKDRAFT DAMPERS	- ALUMINUM MEDIUM DUTY TTPE (RUSKIN BD6)
DUCT PRESSURE CLASS	- 1" W.C. (LOW PRESSURE)
DUCT SEAL CLASS	- CLASS A
INSULATION & LINER	- MINIMUM R-6 FOR INTERIOR DUCTWORK. MINIMUM R-8 FOR EXTERIOR DUCTWORK. ADD INSULATION TO LINED DUCTWORK IF NEEDED. - DUCT LINER TO BE KNAUF SONIX XP DUCT LINER (1.5 PCF) OR OWENS CORNING EQUIVALENT - DUCT WRAP FOR INTERIOR DUCTWORK TO BE KNAUF FRIENDLY FEEL DUCT WRAP (1.5 PCF) OR OWENS CORNING EQUIVALENT.

DUCTWORK (MEDIUM PRESSURE):

RECTANGULAR S/A TO BOX	- 56" TDC JOINTS - 1 1/2" LINER - 3" PRESSURE CLASS (SEAL CLASS A)
RECTANGULAR R/A	- 56" TDC JOINTS - 1 1/2" LINER - 2" PRESSURE CLASS (SEAL CLASS A)
ROUND S/A TO BOX	- 5' JOINTS, SPIRAL - 2" WRAP - 3" PRESSURE CLASS (SEAL CLASS A)
FLEX S/A TO BOX	- 4' JOINTS - INSULATED - 3" PRESSURE CLASS (SEAL CLASS A)
DUCTWORK DOWNSTREAM OF BOX	- (SEE LOW PRESSURE DUCTWORK NOTES)
INSULATION & LINER	- MINIMUM R-6 FOR INTERIOR DUCTWORK. MINIMUM R-8 FOR EXTERIOR DUCTWORK. ADD INSULATION TO LINED DUCTWORK IF NEEDED.

* ALL RECTANGULAR BRANCH DUCTS TO HAVE OPPOSED BLADE DAMPERS.

* ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK, SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS, OR TAPES. TAPE AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.

4) CURBS:
CURBS TO BE INSULATED AND A MINIMUM 12" HIGH. CURBS TO BE PITCHED TO MATCH SLOPE OF ROOF.

5) PIPING:
ALL HVAC PIPING AND PIPE MATERIALS TO MEET ASTM AND ASME STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE AND LOCAL CODES. CONTACT THE CITY/TOWNSHIP FOR THE PROPER EDITIONS AND AMENDMENTS OF THE ALL RELATIVE CODE PUBLICATIONS. ALL GAS PIPING AND MATERIALS TO MEET ASTM STANDARDS AS LISTED IN THE INTERNATIONAL FUEL GAS CODE.

PRESSURE RATINGS - PIPE, FITTING AND VALVE PRESSURE RATINGS TO EXCEED MAXIMUM SYSTEM OPERATING PRESSURE BY A MINIMUM OF 20%. VERIFY EACH PIPE SYSTEM OPERATING PRESSURE BEFORE INSTALLATION.

ABOVE GROUND GAS PIPING:
ALL ABOVE GROUND GAS PIPING TO BE SCH. 40 BLACK STEEL WITH SCREWED MALLEABLE FITTINGS FOR 2" AND SMALLER PIPING AND WELDED FOR 2 1/2" AND LARGER PIPING.

REFRIGERANT PIPING:
ALL REFRIGERANT PIPING TO BE TYPE "ACR" COPPER. SUCTION LINES TO BE INSULATED. LIQUID LINES TO BE UNINSULATED.

DRAIN PIPING:
ALL DWV PIPING TO BE PLAIN END SCH. 40 DWV PVC WITH SOCKET TYPE DWV PVC FITTINGS.

PIPE INSULATION (KNAUF EARTHWOOL 1000° PIPE INSULATION OR OWENS CORNING EQUIVALANT) (PER 2012 IECC):
BASED ON INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/HR · FT^2 · °F.

REFRIGERANT SUCTION LINES	- 3/4" CLOSED CELL ELASTOMERIC REFRIGERANT PIPE INSULATION (INSUL-TUBE OR EQUAL)

6) ANCHORING, SUPPORT & ISOLATION (EQUIPMENT, PIPING & DUCTWORK):
ANCHORING & SUPPORT:
ANCHOR ALL EQUIPMENT, DUCTWORK AND PIPING TO APPROVED STRUCTURES WITH UL LISTED AND FACTORY MUTUAL APPROVED ANCHORING AND SUPPORT PRODUCTS. APPROVED ANCHORING SYSTEMS INCLUDE CONCRETE DROP IN ANCHORS, TOP CHORD MOUNTED C-CLAMPS AND TOP CHORD MOUNTED BEAM CLIP DUCTWORK STRAP HANGERS. APPROVED SUPPORT SYSTEMS INCLUDE MINIMUM 3/8" THREADED ROD, MINIMUM 1" 20 GAUGE SHEET METAL DUCT STRAPS, U-CHANNEL, ANGLE IRON AND/OR PIPE CLEVIS HANGERS. FOLLOW THE ABOVE REQUIREMENTS UNLESS NOTED OTHERWISE BY EQUIPMENT MANUFACTURER OR STAMPED STRUCTURAL SUPPORT DRAWINGS.

EQUIPMENT VIBRATION ISOLATION:
FURNISH AND INSTALL VIBRATION ISOLATION TO PREVENT TRANSMISSION OF SOUND AND VIBRATION FROM MOTORIZED AND ROTATING EQUIPMENT TO THE BUILDING STRUCTURE. TYPICAL APPROVED VIBRATION ISOLATION PRODUCTS INCLUDE ISOLATION HANGERS, ISOLATION SPRINGS, ISOLATION PADS AND ISOLATION CURBS. PROVIDE THE ABOVE ISOLATION FOR ALL EQUIPMENT 1/2 HORSEPOWER OR GREATER OR AS PER THE MANUFACTURERS RECOMMENDATIONS. FURNISH AND INSTALL ISOLATION CURBS AND FLEXIBLE PIPING CONNECTIONS ONLY AS SPECIFICALLY NOTED ON PLANS.

FURNISH AND INSTALL EQUIPMENT DUCTWORK CONNECTIONS WITH SIX INCH (6") LONG DOUBLE THICK, AIR TIGHT, WATER TIGHT AND FIREPROOF FLEXIBLE CONNECTORS. (AIR HANDLING UNITS, INLINE FANS, UTILITY SETS, ROOF MOUNTED UNITS WITH ISOLATION PADS OR ISOLATION CURBS, ETC.)

PIPING SUPPORT:
PIPING TO BE SUPPORTED WITH CLEVIS HANGERS AND INSULATION PROTECTORS WHERE INSULATED. ALLOW FOR EXPANSION AND DO NOT DIRECTLY ATTACH PIPE BETWEEN ANY TWO FIXED STRUCTURES.

MAXIMUM PIPE SUPPORT SPACING SHALL BE AS FOLLOWS.

STEEL PIPE	-12' HORIZONTAL, 15' VERTICAL
COPPER PIPE	-12' HORIZONTAL, 10' VERTICAL
PVC PIPE	- 4' HORIZONTAL, 10' VERTICAL (MID-STORY GUIDE)

DUCTWORK SUPPORT:
DUCTWORK TO BE SUPPORTED IN ACCORDANCE WITH S.M.A.C.N.A. STANDARDS. MAXIMUM OF 12' O.C. SUPPORT INTERVALS.

7) SMOKE DETECTORS AND REMOTE TEST STATIONS:
SMOKE DETECTORS TO BE PROVIDED AS PER NFPA AND LOCAL CODES. SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS, WITH A DESIGN CAPACITY GREATER THAN 2000 CFM, IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS OR DECONTAMINATION EQUIPMENT AND APPLIANCES. SAMPLING TUBES TO MATCH LONG DIMENSION OF DUCT PLENUM. DUCT SMOKE DETECTOR TO SHUT UNIT(S) DOWN UPON ALARM. SMOKE DETECTORS TO BE 4-WIRE PHOTOELECTRIC TYPE (SYSTEM SENSOR INNOVAIRFLEX SERIES OR EQUAL). REMOTE TEST STATION(S) TO BE EQUAL TO EDWARDS SIGNALING PRODUCTS MODEL SD-TRK4. FINAL MAKE AND MODEL TO BE COORDINATED WITH SMOKE DETECTORS FOR ALL UNITS.

8) FIRE DAMPERS:
FIRE DAMPERS TO BE PROVIDED AS PER NFPA AND LOCAL CODES. MINIMUM 18x18 ACCESS DOOR TO BE PROVIDED AT EVERY FIRE DAMPER NOT LOCATED DIRECTLY BEHIND A REMOVABLE GRILLE, REGISTER OR DIFFUSER. FIRE DAMPERS TO BE "B STYLE", U.L. 555 LISTED, 1.5 HOUR DAMPERS (SAFE AIR DOWCO 150 SERIES OR EQUAL) UNLESS NOTED OTHERWISE.

9) TESTING & BALANCING:
BALANCE ALL EQUIPMENT, GRILLES, REGISTERS AND DIFFUSERS TO FLOW RATES SHOWN ON THE PLANS. FURNISH AND INSTALL ALL NECESSARY DRIVES, SHEAVES, BELTS, MOTORS ETC. TO PROVIDE COMPLETE AND OPERABLE SYSTEMS. ALL TESTING AND BALANCING TO BE PERFORMED BY N.E.B.B. AND/OR A.A.B.C. CERTIFIED TECHNICIANS. TEST AND BALANCE CONTRACTOR TO BE INDEPENDENT FROM MECHANICAL CONTRACTOR. PROVIDE FOUR PAPER COPIES OF REPORT.

10) CONTROLS

AHU-5-1

GENERAL

THE FOLLOWING ARE CONTROL SEQUENCES ONLY. CONTROLS DESIGN AND INSTALLATION SHALL BE BY A MANUFACTURER'S AUTHORIZED CONTROLS CONTRACTOR. CONTROL ACCESSORIES TO BE INSTALLED, PIPED AND WIRED AS PER THE ORIGINAL EQUIPMENT MANUFACTURERS (OEM) REQUIREMENTS. NON-OEM BUILT UP CONTROL EQUIPMENT SHALL BE HONEYWELL AS THE BASIS OF DESIGN (OR JOHNSON EQUAL). COORDINATE LOCATION OF ALL NEW CONTROL PANELS AND CONTROLLERS WITH OWNER PRIOR TO INSTALLATION. PROVIDE (4) HARD COPIES AND AN ADOBE 'PDF' COPY OF SYSTEM DESIGN DRAWINGS INCLUDING EQUIPMENT SUBMITTALS, FLOW DIAGRAMS, EQUIPMENT TAGS (MATCHING THE PLAN TAGS) AND COMPONENT SCHEDULES FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

PNEUMATIC CONTROL - THE NEW AIR HANDLING SYSTEM CONTROLS TO BE PNEUMATIC AND TO TIE INTO EXISTING BUILDING PNEUMATIC PIPING SYSTEM. PROVIDE ALL ELECTRO-PNEUMATIC TRANSDUCERS AS NECESSARY TO ACHIEVE DESIRED SEQUENCES. ALL NEW CONTROL COMPONENTS TO MATCH THE EXISTING BUILDING PNEUMATIC CONTROL STANDARDS. VERIFY COMPONENT STANDARD WITH OWNER PRIOR TO INSTALLATION. NEW AIR HANDLER CONTROL CABINET TO MATCH THE LOOK, SIZE AND COMPONENT ORIENTATION AS THE EXISTING CABINETS SERVING THE SIMILAR 6TH AND 7TH FLOORS. THIS TO INCLUDE SIMILAR GAUGES AND COMPONENT LOCATIONS (SEE PICTURE ON DRAWING SHEET MS-4.) PROVIDE FILTRATION AS NEEDED TO MAINTAIN CLEAN, DRY AND OIL FREE AIR TO ALL SWITCHES, TRANSMITTERS AND SENSORS ETC. ZONE THERMOSTATS AND SYSTEM TO BE TWO PIPE.

VAV AIR HANDLING UNIT SYSTEM CONTROL

FAN CONTROL:

WHEN ENERGIZED, SUPPLY FAN TO RAMP UP SLOWLY FOR A PERIOD OF TIME (ADJ.) FROM OFF TO MAINTAIN DUCT STATIC PRESSURE SET POINT OF .75" WC (ADJ.). PROVIDE A DUCT STATIC PRESSURE SENSOR MOUNTED 2/3 DOWN THE LENGTH OF THE SUPPLY DUCT FROM THE FAN OUTLET. PNEUMATIC STATIC PRESSURE SENSOR TO TIE INTO PE TRANSDUCER WITH 0-10V OUTPUT TO THE FAN VFD DRIVE. SUPPLY AND RELIEF FAN DRIVES TO BE ABB ACH550 SERIES (OR EQUAL). (RELIEF FAN DRIVE MUST BE ABLE TO ACCEPT TWO SPEEDS FROM JADE AUX CONTACTS.)

MINIMUM AIR HANDLING UNIT (AHU) AIRFLOW:

THERE ARE TO BE (2) DISTINCT MINIMUM VFD AHU AIR FLOW SET POINTS. ONE FOR WHEN THE COMPRESSORS ARE ENERGIZED AND ANOTHER FOR WHEN THE COMPRESSORS ARE DE ENERGIZED. BOTH TO BE PER THE MANUFACTURERS RECOMMENDATIONS. NEITHER SET POINT TO BE LOWER THAN MINIMUM REQUIRED FOR SPACE PRESSURE. OPEN BOXES WITH HEAT TO MINIMUM AS REQUIRED TO RELIEVE EXCESS AIR FLOW.

DISCHARGE AIR TEMPERATURE CONTROL:

DURING THE COOLING SEASON, THE VAV UNIT TO MAINTAIN A CONSTANT DISCHARGE AIR TEMPERATURE OF 55 DEGREES (ADJ.) IN THE HEATING SEASON (BELOW 50F (ADJ.)), THE UNIT DISCHARGE AIR SET POINT TO BE OPERATOR ADJUSTABLE TO A MAXIMUM OF 60F (ADJ.). PNEUMATIC PROPORTIONAL-INTEGRAL (PI) CONTROLLER (HONEYWELL RP920 PI SERIES) TO CONTROL DISCHARGE AIR WITH PE SWITCHES TO HONEYWELL JADE Y1, Y2 ETC. CONTROLLER TO TIE INTO A RATIO RELAY TO EXPAND SIGNAL FOR 0-10V SCR TRANSDUCER TO MAIN AIR HANDLER HEATER. PROVIDE COOLING/HEATING LOCKOUT. (CONDENSING UNIT HOT GAS BYPASS TO BE AUTOMATIC BASED ON SUCTION PRESSURE.)

OUTDOOR AIR:

IN OCCUPIED MODE WHEN THE INDOOR FAN MOTOR IS ENERGIZED, THE OUTDOOR AIR DAMPER TO OPEN TO MINIMUM POSITION. WHEN THE FAN IS DE-ENERGIZED THE OUTDOOR AIR DAMPER IS TO BE CLOSED. IN ECONOMIZER MODE, BOTH THE OUTDOOR AIR DAMPER AND RETURN DAMPER TO MODULATE AS NOTED BELOW.

OCCUPIED ECONOMIZER DX COOLING:

PNEUMATIC DISCHARGE AIR TEMPERATURE CONTROLLER TO INTEGRATE WITH HONEYWELL JADE ECONOMIZER MODULE DAMPER CONTROL. PROVIDE HONEYWELL SYLK BUS DUAL TEMPERATURE AND HUMIDITY SENSORS IN THE OUTSIDE AIR AND RETURN AIR DUCTS. JADE ECONOMIZER TO SENSE OUTDOOR AIR AND RETURN AIR CONDITIONS AND MODULATE RETURN AIR AND OUTDOOR DAMPERS TO MAINTAIN MIXED AIR TEMPERATURE SET POINT OF 55F (ADJ.). EXHAUST DAMPER TO FULLY OPEN IN ECONOMIZER RELIEF MODE.

WHEN AMBIENT AIR HAS MORE ENERGY THAN RETURN AIR, THE OUTDOOR AIR DAMPER TO MOVE TO MINIMUM POSITION, RETURN AIR DAMPER TO OPEN AND THE COMPRESSORS TO STAGE AS NEEDED TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT. WHEN THE AMBIENT AIR HAS LESS ENERGY THAN RETURN AIR, THE OUTDOOR AIR DAMPER TO FULLY OPEN, THE RETURN AIR DAMPER TO CLOSE AND THE COMPRESSORS TO STAGE AS NEEDED TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT. BELOW 55F (ADJ.) AMBIENT, THE OUTDOOR AIR AND RETURN AIR DAMPERS TO MODULATE TO MIXED AIR TEMPERATURE SET POINT AND ALL COMPRESSOR STAGES TO BE DE-ENERGIZED. DURING OCCUPIED MODE, THE OUTSIDE AIR DAMPER TO MODULATE DOWN TO MINIMUM POSITION.

SPACE PRESSURE:

SPACE PRESSURE TO BE MAINTAINED WITH VFD RELIEF FAN. WHEN ENERGIZED, RELIEF FAN TO RAMP UP SLOWLY FOR A PERIOD OF TIME (ADJ.) FROM OFF TO MAINTAIN SET POINT. JADE TO ENABLE RELIEF FAN IN ECONOMIZER MODE. TWO VFD SPEEDS TO BE SET BASED ON JADE DAMPER SIGNAL POSITION USING JADE AUXILIARY CONTACTS 1&2. (FAN POSITIONS TO BE OFF, SPEED 1 AND SPEED 2). RELATIVE SPEEDS TO BE ADJUSTED WITH VFD AS NEEDED TO MAINTAIN POSITIVE SPACE PRESSURE.

ELECTRIC HEAT:

AN OEM BUILT IN SCR CONTROLLER TO MODULATE THE MAIN AIR HANDLER ELECTRIC HEAT COIL TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT. A SEPARATE PRESSURE 'FAN OFF' LOOP TO IMMEDIATELY DE-ENERGIZE ALL ELECTRIC HEATERS WHEN MAIN AHU FAN IS DE-ENERGIZED OR THE SYSTEM IS IN NIGHT SET BACK MODE. (ELECTRIC HEATERS TO INCLUDE MAIN AHU HEATER AND ALL VAV BOX HEATERS. ELECTRIC BASEBOARD TO REMAIN ENERGIZED AS NOTED BELOW.) 'FAN OFF' PRESSURE TO BE ABOVE 15 PSI (ADJ.).

FREEZE STAT / SYSTEM ALARMS:

PROVIDE A FREEZE STAT IN THE DISCHARGE AIR PLENUM. IF AT ANY TIME THE DISCHARGE AIR TEMPERATURE FALLS BELOW 45F (ADJ.), THE AIR HANDLING UNIT FAN TO DE-ENERGIZE, COMPRESSORS TO DE-ENERGIZE, THE OUTDOOR AIR DAMPER TO CLOSE AND THE SYSTEM TO ALARM. COORDINATE LOCATION OF ALL AUDIBLE AND VISIBLE ALARMS WITH THE BUILDING ENGINEERING STAFF.

MORNING WARM UP MODE:

ALL VAV BOXES TO OPEN TO 100% AND THE UNIT TO PROVIDE 110F (ADJ.) SUPPLY AIR FOR THE SCHEDULED MORNING WARM UP TIME FRAME. WHEN THE RETURN AIR TEMPERATURE HAS REACHED 72F (ADJ.) THE UNIT TO OPERATE IN NORMAL OCCUPIED MODE.

VAV TERMINAL UNIT CONTROL:

ALL BOXES TO MODULATE TO MAINTAIN SPACE TEMPERATURE. IN HEATING MODE, THE BOX TO MAINTAIN THE SCHEDULED MINIMUM AIRFLOW. IN COOLING MODE, THE BOX MINIMUM TO RESET TO ZERO. BOX CONTROLLER TO BE TITUS II DUAL MINIMUM CONTROLLER WITH ELECTRIC HEAT (0 PSI MAX HEAT - 15 PSI MAX COOL). PROVIDE DUAL PRESSURE SETBACK STATS.

VAV TERMINAL ELECTRIC HEATING:

EACH VAV ZONE TO HAVE TWO STAGES OF HEAT CONTROLLED FROM THE BOX. THE FIRST STAGE TO BE THE ROOM ELECTRIC BASEBOARD AND THE SECOND TO BE THE SCR CONTROLLED MODULATING BOX REHEAT COIL. STAGE ONE PE SWITCH TO ENERGIZE BASEBOARD. STAGE TWO TO TIE INTO A RATIO RELAY TO EXPAND SIGNAL FOR 0-10V SCR TRANSDUCER TO BOX HEATER.

PERIMETER ROOMS WITH ELECTRIC BASEBOARD ONLY, TO HAVE SINGLE STAGE REMOTE WALL MOUNT CONTROL PER THE PLANS. POWER TO ALL THE PERIMETER BASEBOARD TO BE ENERGIZED WITH A COMMON SWITCHED CONTACTOR(S). COMMON SWITCH TO BE LOCATED ON NEW CONTROL PANEL. SEE PICTURE.

UNOCCUPIED MODES:

DURING UNOCCUPIED MODES, AHU FAN, HEATING AND COOLING TO BE DE-ENERGIZED. DURING THE HEATING SEASON, THE PERIMETER BASEBOARD TO BE ENABLED. A NIGHT STAT (PLACED IN A COMMON EXTERIOR AREA) TO PUT THE SYSTEM IN OCCUPIED MODE IF SPACE TEMPERATURE DROPS BELOW 45F (ADJ.)

PROVIDE A 365 DAY PROGRAMMABLE DIGITAL TIME CLOCK TO MAINTAIN OCCUPIED AND UNOCCUPIED MODES. OCCUPIED MODE TIME CLOCK TO ENABLE: SUPPLY FAN DRIVE, RELIEF FAN DRIVE, JADE, DAT CONTROL (EP SWITCH) AND 'FAN OFF' LOOP (EP SWITCH). UNOCCUPIED MODE TIME CLOCK TO DISABLE THE SAME BUT ALSO LEAVE THE MAIN AHU FAN ENERGIZED FOR 5 MINUTES (ADJ.) AFTER THE 'FAN OFF LOOP' DE-ENERGIZES THE ELECTRIC HEAT COILS.

RTU-5-1

GENERAL

THE FOLLOWING ARE CONTROL SEQUENCES ONLY. CONTROLS DESIGN AND INSTALLATION TO BE BY LICENSED DESIGN/BUILD CONTROLS CONTRACTOR. CONTROLS TO BE PROGRAMMED AND INSTALLED BY A HONEYWELL OR JOHNSON FACTORY AUTHORIZED CONTROLS COMPANY THAT IS REGULARLY ENGAGED IN THE ENGINEERING, PROGRAMMING, INSTALLATION AND SERVICE OF CONTROL SYSTEMS OF SIMILAR SIZE, SCOPE AND COMPLEXITY TO THAT SPECIFIED IN THE DRAWINGS. CONTROL ACCESSORIES TO BE INSTALLED AND WIRED AS PER THE ORIGINAL EQUIPMENT MANUFACTURERS (OEM) REQUIREMENTS. NON-OEM BUILT UP CONTROL EQUIPMENT TO BE BY HONEYWELL WEBS-AX OR JOHNSON FX. CONTROLS CONTRACTOR TO PROVIDE (4) SETS OF CONTROLS DIAGRAMS AND EQUIPMENT SUBMITTALS FOR APPROVAL PRIOR TO INSTALLATION FOR ALL BUILT UP CONTROL SYSTEMS. MECHANICAL CONTRACTOR TO COORDINATE INSTALLATION OF CONTROLS AND CONTROLS EQUIPMENT REQUIRED FOR ALL MECHANICAL EQUIPMENT. COORDINATE LOCATION OF ALL NEW CONTROL PANELS AND CONTROLLERS WITH OWNER PRIOR TO INSTALLATION.

BAS SYSTEM TO CONSIST OF A NIAGARA AX 600E JACE (OR EQUAL) WITH ALL NECESSARY DRIVERS AND COMMUNICATIONS PORTS.

STATION GRAPHICS

BAS STATION GRAPHICS TO DISPLAY ACCURATE VISUAL REPRESENTATION OF THE BUILDING CONTROLS. GRAPHICS TO INCLUDE PLAN LAYOUT OF THE ROOMS WITH ROOM AND EQUIPMENT TAGS. EQUIPMENT TAGGING TO BE IDENTICAL TO PLAN EQUIPMENT TAGGING.

PACKAGED VAV ROOFTOP SYSTEM CONTROL

GENERAL

UNIT TO BE CONTROLLED WITH FACTORY OEM DIGITAL CONTROLLER. THE DIGITAL CONTROLLER SHALL HAVE THE ABILITY TO INTERFACE WITH THE BAS FOR THE PURPOSE OF MONITORING, ALARMING AND ADDITIONAL OR ENHANCED CONTROL STRATEGIES. PROVIDE ALL REQUIRED EXPANSION CONTROL MODULES NECESSARY FOR RESET AND CONTROL OF ALL SET POINTS.

OCCUPIED/UNOCCUPIED MODES: THE UNIT OCCUPANCY TO BE DETERMINED BY THE BAS SCHEDULE. WHEN THE SYSTEM IS IN OCCUPIED MODE, THE FANS ARE TO RUN CONTINUOUSLY AND THE SYSTEM TO USE OCCUPIED SET POINTS. DURING UNOCCUPIED MODE THE FANS ARE TO BE OFF AND SYSTEM TO USE UNOCCUPIED SET POINTS.

FAN CONTROL

STATIC PRESSURE SENSORS: THE VAV UNIT CONTROLLERS SHALL MEASURE THE DUCT STATIC PRESSURE AND MODULATE THE SUPPLY FAN VFD TO MAINTAIN AN OPTIMIZED DUCT STATIC PRESSURE SET POINT (AS NOTED BELOW). PROVIDE NEW DUCT STATIC PRESSURE SENSORS FOR NEW VAV UNITS. THE STATIC PRESSURE SENSORS SHALL BE FIELD MOUNTED 2/3 DOWN THE LENGTH OF THE DUCT FROM THE FAN.

OPTIMIZED STATIC PRESSURE RESET

THE STATIC PRESSURE SET POINT SHALL BE RESET BASED ON ZONE AIRFLOW REQUESTS DERIVED FROM ZONE DAMPER POSITION. WHILE ALL ZONE AIR DAMPERS ARE BELOW 90% OPEN, THE STATIC PRESSURE SET POINT SHALL BE DECREASED INCREMENTALLY DOWN TO THE UNIT'S MINIMUM FLOW. AS THE ZONE AIRFLOW DEMAND INCREASES AND AT LEAST ONE ZONE IS OPEN MORE THAN 99% THE STATIC PRESSURE SET POINT SHALL BE INCREASED INCREMENTALLY UP TO A MAXIMUM PRESSURE OF .75 WC (ADJ).

MINIMUM AIR HANDLING UNIT (AHU) AIRFLOW

THERE ARE TO BE (2) DISTINCT MINIMUM AHU AIR FLOW SET POINTS. ONE FOR WHEN THE COMPRESSORS ARE ENERGIZED AND ANOTHER FOR WHEN THE COMPRESSORS ARE DE-ENERGIZED. BOTH TO BE PER THE MANUFACTURERS RECOMMENDATIONS. NEITHER SET POINT TO BE LOWER THAN MINIMUM REQUIRED FOR SPACE PRESSURE. THE MINIMUM AHU AIRFLOW TO BE MONITORED VIA THE SUM OF THE INDIVIDUAL BOX AIRFLOW RATES. IF THE SUM OF THE BOX AIRFLOW RATES DROPS BELOW SET POINT, ALL BOXES BELOW THEIR INDIVIDUAL MINIMUMS TO INCREMENTALLY INCREASE UP TO THEIR MINIMUMS UNTIL SET POINT IS SATISFIED (VIA INDIVIDUAL BOX PID LOOPS).

DISCHARGE AIR TEMPERATURE CONTROL

DURING THE COOLING SEASON, THE VAV UNIT TO MAINTAIN A CONSTANT DISCHARGE AIR TEMPERATURE OF 55 DEGREES (ADJ.) BASED ON OEM BUILT IN SEQUENCES. DURING THE HEATING SEASON (BELOW 50F (ADJ.), THE UNIT DISCHARGE AIR SET POINT TO BE OPERATOR ADJUSTABLE TO A MAXIMUM OF 65F (ADJ.).

ECONOMIZER OPERATION

DIFFERENTIAL ENTHALPY ECONOMIZERS TO OPERATE BASED ON OEM BUILT IN SEQUENCES.

FREEZE PROTECTION

UNIT FREEZE PROTECTION TO BE PER OEM BUILT IN SEQUENCES.

MORNING WARM UP MODE

ALL FAN POWERED BOXES TO OPEN TO 100% AND THE UNIT TO PROVIDE 110F (ADJ.) SUPPLY AIR FOR THE SCHEDULED MORNING WARM UP TIME FRAME. WHEN THE AVERAGE SPACE TEMPERATURE HAS REACHED 72F (ADJ.) THE UNIT TO OPERATE IN NORMAL OCCUPIED MODE.

VAV TERMINAL UNIT CONTROL

CONTROLLER: PROVIDE NEW SPYDER (OR EQUAL) DIRECT DIGITAL CONTROLLER FOR EACH VAV TERMINAL UNIT. EACH CONTROLLER TO INTEGRATE INTO THE BAS VIA BACNET COMMUNICATION PROTOCOL. CONTROLLERS TO BE FULLY PROGRAMMABLE THROUGH NIAGARA AX SOFTWARE (OR EQUAL) ON THE JACE.

SENSORS: PROVIDE HONEYWELL ZIO WALL MODULES (OR EQUAL) FOR ALL ZONES. PROGRAM WALL MODULES FOR LIMITED 5 DEGREE ADJUSTABILITY FROM SET POINT.

OCCUPIED MODE: THE VAV BOX VOLUME DAMPER TO MODULATE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE SET POINT. WHEN THE SPACE TEMPERATURE DECREASES BEYOND THE CONTROL OF THE PRIMARY AIR VALVE, ELECTRIC HEAT TO BE ENERGIZED.

UNOCCUPIED MODE: DURING NIGHT CYCLE/UNOCCUPIED MODE, BOXES TO OPERATE THE SAME AS THE OCCUPIED MODE EXCEPT ON AN ADJUSTABLE UNOCCUPIED ROOM TEMPERATURE SET POINT TO BE MAINTAINED.

OCCUPANT OVERRIDE: IN AN OVERRIDE CONDITION (VIA THE PUSH BUTTON LED ON A WALL MODULE) OCCUPIED MODE TO BE ENGAGED FOR AN ADJUSTABLE PERIOD OF TIME. THE ZONE SHALL RETURN TO THE UNOCCUPIED MODE AFTER THE TIME HAS ELAPSED.

VAV TERMINAL ELECTRIC HEATING

EACH VAV ZONE TO HAVE TWO STAGES OF HEAT CONTROLLED FROM THE BOX. THE FIRST STAGE TO BE THE ROOM ELECTRIC BASEBOARD AND THE SECOND TO BE THE SCR CONTROLLED MODULATING BOX REHEAT COIL.

PERIMETER ELECTRIC HEAT

PERIMETER ROOMS WITH ELECTRIC BASEBOARD ONLY, TO HAVE SINGLE STAGE REMOTE WALL MOUNT CONTROL PER THE PLANS. POWER TO ALL THE PERIMETER BASEBOARD TO BE ENERGIZED WITH A COMMON SWITCHED CONTACTOR(S). COORDINATE LOCATION OF COMMON SWITCH WITH ELECTRICIAN AND BUILDING ENGINEERING STAFF

MISCELLANEOUS

TOILET FANS: CEILING MOUNTED TOILET EXHAUSTERS - TO BE ENERGIZED BY OCCUPANCY SENSOR FOR BOTH FAN AND LIGHT.

FURNACE SYSTEMS: SPLIT SYSTEM DX UNITS TO BE CONTROLLED WITH OEM PROGRAMMABLE THERMOSTATS. PROVIDE HONEYWELL JADE OR EQUAL) ECONOMIZER MODULE (PER INTERNATIONAL ENERGY CODE). INTERLOCK RELIEF FAN AND MOTOR OPERATED DAMPERS (RETURN, EXHAUST AND OUTDOOR AIR). SEE FURNACE ECONOMIZER WIRING DIAGRAM.

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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DRAWN BY: UE
DATE: 12/18/15

HVAC NOTES & SCHEDULES

R1307B

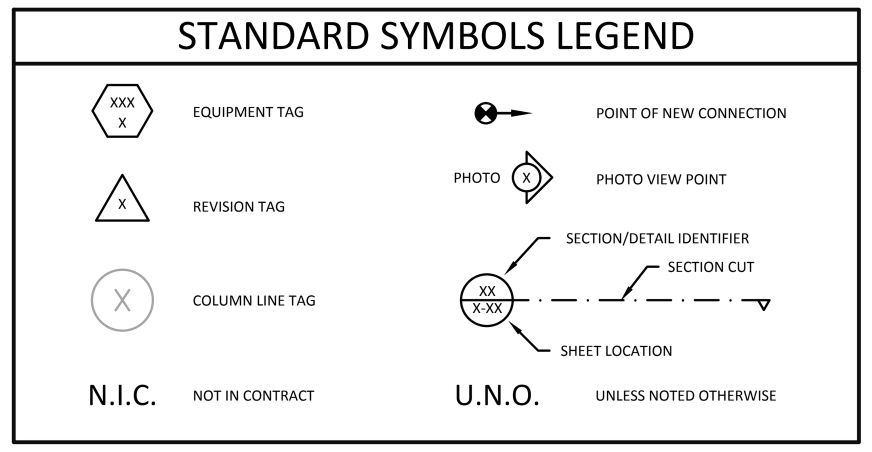
PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

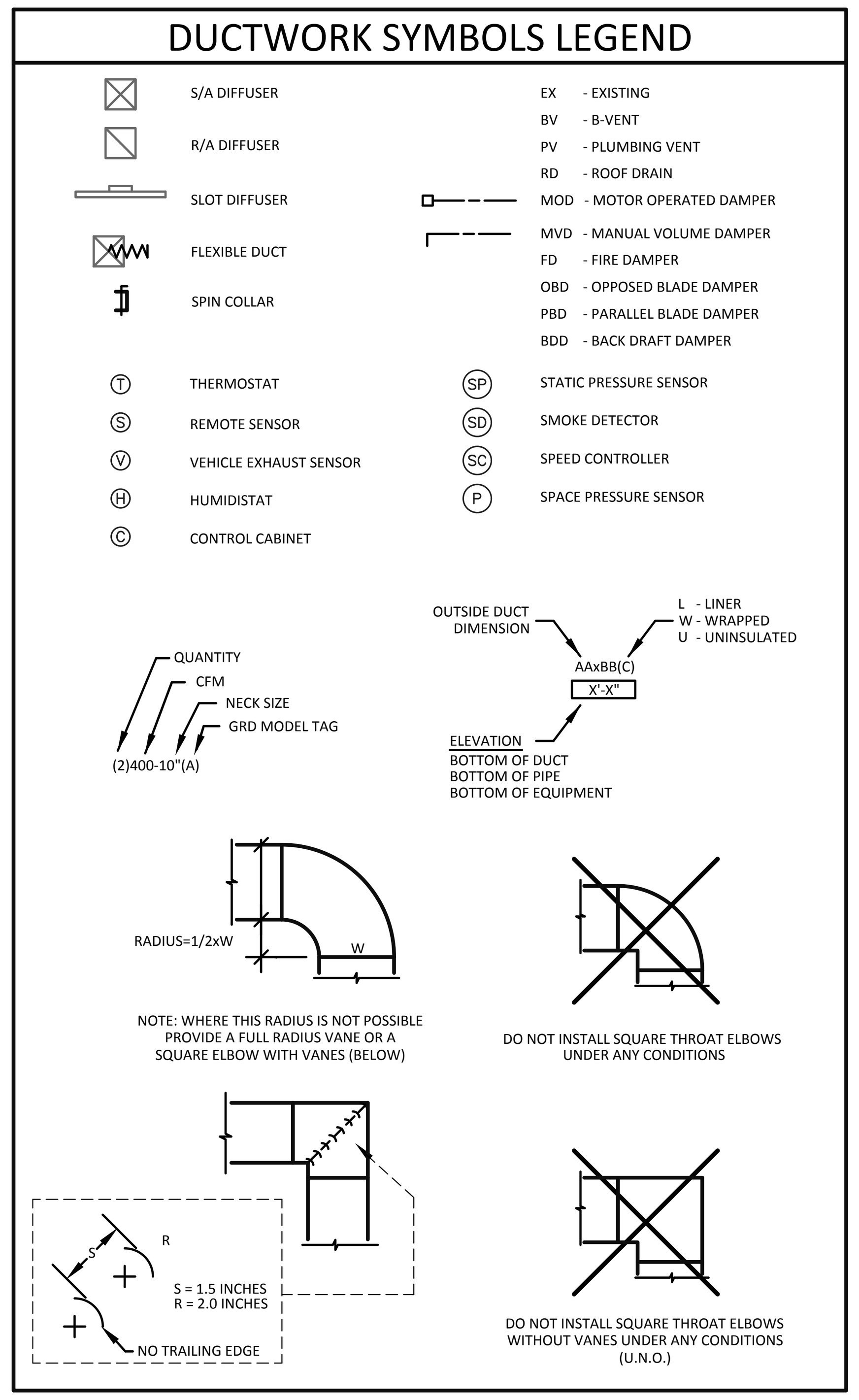
SHEET MS-3 OF 13

PANEL EXTERIOR

EXISTING PNEUMATIC CONTROL PANEL

FOR REFERENCE ONLY (FOURTH FLOOR AHU)





JOB NAME: JOB NUMBER:

2012 IMC Ventilation ROOM INPUT

ROOM NUMBER & NAME	AREA (S.F.)	OCCUPANCY Ref. No.	OCCUPANCY CLASSIFICATION	VENTILATION P/1000	PEOPLE CODE	PEOPLE ACTUAL	Rp CFM/P	Rp CFM	Ra CFM/SF	Ra CFM	Vbz CFM	EXHAUST FIX	CFM/ FIX	CFM/ S.F.	CFM	Equipment Note
B01-FILES	605	65	RET-STORAGE ROOMS	0	0.0	0.0	0	0	0.12	73	73		-	0	0	F-B-1, ACCU-B-1
B03-LUNCH	500	29	F&B-DINING ROOMS	70	35.0	16.0	7.5	120	0.18	90	210		-	0	0	F-B-1, ACCU-B-1
B04-STORAGE	20	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	F-B-1, ACCU-B-1
B05-WOMENS	45	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0		-	0	0	CEF-B-1
B06-MENS	45	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0		-	0	0	CEF-B-2
B07-HALL	85	49	PS-CORRIDORS	0	0.0	0.0	0	0	0.06	5	5		-	0	0	F-B-1, ACCU-B-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
	1,300				35	16		120		168	288	Vou			0	
					Ps =	16			D =		1					

JOB NAME: 2012 IMC Ventilation COMMON VENTILATION SYSTEM CORRECTION

ROOM NAME & NUMBER	SUPPLY (Cfm) Base	106% Target	116% Adjstd	116% Vpz	VENTILATION (CFM) Voz Ez	Voz CFM	OA Fraction Zp=Voz/Vpz	Ventilation Note
B01-FILES	308	326	330	330	1	73	22.0%	-
B03-LUNCH	644	682	720	720	1	210	29.2%	-
B04-STORAGE	21	22	0	0	1	0	0.0%	-
B05-WOMENS	10	11	50	50	1	0	0.0%	-
B06-MENS	23	24	50	50	1	0	0.0%	-
B07-HALL	32	34	50	50	1	5	10.2%	-
	0	0	0	0	1	0	0.0%	-
	1,038	1,100	1,200	1,200		288		

Multiple Zone = 1
Single or 100% =2 1

Max Zp = 29.2% O/A Percent- Critical Space
Ev = 0.8 360 Corrected Total Outdoor Airflow Rate

JOB NAME: WILL COUNTY COURT ANNEX - PHASE 2 JOB NUMBER: 1421-3

2012 IMC Ventilation ROOM INPUT

ROOM NUMBER & NAME	AREA (S.F.)	OCCUPANCY Ref. No.	OCCUPANCY CLASSIFICATION	VENTILATION P/1000	PEOPLE CODE	PEOPLE ACTUAL	Rp CFM/P	Rp CFM	Ra CFM/SF	Ra CFM	Vbz CFM	EXHAUST FIX	CFM/ FIX	CFM/ S.F.	CFM	Equipment Note
549-CIVIL ATTY 5	120	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	7	12		-	0	0	RTU-5-1
550-CIVIL ATTY 6	120	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	7	12		-	0	0	RTU-5-1
551-CIVIL STORAGE	175	65	RET-STORAGE ROOMS	0	0.0	0.0	0	0	0.12	21	21		-	0	0	RTU-5-1
552-STORAGE	40	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
525-CIVIL ATTY 3	220	45	OFF-OFFICE SPACES	5	1.1	2.0	5	10	0.06	13	23		-	0	0	RTU-5-1
548-CIVIL ATTY 4	120	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	7	12		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
554-HALL	245	49	PS-CORRIDORS	0	0.0	0.0	0	0	0.06	15	15		-	0	0	RTU-5-1
555-STORAGE	50	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	RTU-5-1
555A-STORAGE	65	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	RTU-5-1
556-CAC RECEPTION	230	45	OFF-OFFICE SPACES	5	1.2	2.0	5	10	0.06	14	24		-	0	0	RTU-5-1
559-TOILET	50	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0	1	75	0	75	RTU-5-1, CEF-5-6
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
526-CIVIL ATTY 2	140	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	RTU-5-1
527-CIVIL ATTY 1	140	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	RTU-5-1
547A-CIVIL GEN OFF	650	45	OFF-OFFICE SPACES	5	3.3	4.0	5	20	0.06	39	59		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
528-CONFERENCE	470	44	OFF-CONFERENCE ROOMS	50	23.5	10.0	5	50	0.06	28	78		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
558-CAC WAITING 1	135	46	OFF-RECEPTION AREAS	30	4.1	3.0	5	15	0.06	8	23		-	0	0	RTU-5-1
560-CAC WAITING 2	135	46	OFF-RECEPTION AREAS	30	4.1	3.0	5	15	0.06	8	23		-	0	0	RTU-5-1
561-CAC STORAGE	135	65	RET-STORAGE ROOMS	0	0.0	0.0	0	0	0.12	16	16		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
543-CIVIL ATTY 10	145	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	9	14		-	0	0	RTU-5-1
544-CIVIL ATTY 9	145	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	9	14		-	0	0	RTU-5-1
547C-CIVIL GEN OFF	395	45	OFF-OFFICE SPACES	5	2.0	2.0	5	10	0.06	24	34		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
562-CAC OFFICE 1	135	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	RTU-5-1
563-CAC OFFICE 2	135	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	RTU-5-1
564-CAC INTERVIEW	155	45	OFF-OFFICE SPACES	5	0.8	1.0	5	5	0.06	9	14		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
541-CAC RECORDS	135	65	RET-STORAGE ROOMS	0	0.0	0.0	0	0	0.12	16	16		-	0	0	RTU-5-1
542-CAC WORK RM	110	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	7	12		-	0	0	RTU-5-1
557-HALL	315	49	PS-CORRIDORS	0	0.0	0.0	0	0	0.06	19	19		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
532A-IT ROOM	35	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	RTU-5-1
533-CIVIL RECORDS	200	65	RET-STORAGE ROOMS	0	0.0	0.0	0	0	0.12	24	24		-	0	0	RTU-5-1
534-BREAK ROOM	180	29	F&B-DINING ROOMS	70	12.6	6.0	7.5	45	0.18	32	77		-	0	0	RTU-5-1
534A-HALL	180	49	PS-CORRIDORS	0	0.0	0.0	0	0	0.06	11	11		-	0	0	RTU-5-1
535-WOMENS	195	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0	3	75	0	225	RTU-5-1, CEF-5-3
536-J.C.	25	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0	1	75	0	75	RTU-5-1, CEF-5-5
537-MENS	160	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0	3	75	0	225	RTU-5-1, CEF-5-4
538-STORAGE	30	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	RTU-5-1
547D-CIVIL GEN OFF	360	45	OFF-OFFICE SPACES	5	1.8	2.0	5	10	0.06	22	32		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
539-STORAGE	50	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	RTU-5-1
540-CAC OBSERV.	140	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	RTU-5-1
565-CAC MEET/OFF	210	45	OFF-OFFICE SPACES	5	1.1	2.0	5	10	0.06	13	23		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
545-CIVIL ATTY 8	145	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	9	14		-	0	0	RTU-5-1
546-CIVIL ATTY 7	145	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	9	14		-	0	0	RTU-5-1
547A-CIVIL GEN OFF	450	45	OFF-OFFICE SPACES	5	2.3	3.0	5	15	0.06	27	42		-	0	0	RTU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
529-HALL	80	49	PS-CORRIDORS	0	0.0	0.0	0	0	0.06	5	5		-	0	0	RTU-5-1
530-CIVIL OFFICE 1	130	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	RTU-5-1
531-CIVIL OFFICE 2	130	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	RTU-5-1
532-CIVIL WORK RM	115	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	7	12		-	0	0	RTU-5-1
547B-HALL	70	49	PS-CORRIDORS	0	0.0	0.0	0	0	0.06	4	4		-	0	0	RTU-5-1
	7,940				68	56		295		495	790	Vou			600	
					Ps =	56			D =		1					

JOB NAME: WILL COUNTY COURT ANNEX - PHASE 2

2012 IMC Ventilation COMMON VENTILATION SYSTEM CORRECTION

ROOM NAME & NUMBER	SUPPLY (Cfm) Base	0% Target	37% Adjstd	37% Vpz	VENTILATION (CFM) Voz Ez	Voz CFM	OA Fraction Zp=Voz/Vpz	Ventilation Note
549-CIVIL ATTY 5	260	0	42	42	1	12	29.3%	-
550-CIVIL ATTY 6	260	0	42	42	1	12	29.3%	-
551-CIVIL STORAGE	240	0	38	38	1	21	54.7%	-
552-STORAGE	0	0	0	0	1	0	0.0%	-
	0	0	0	0	1	0	0.0%	-
525-CIVIL ATTY 3	320	0	45	45	1	23	51.8%	-
548-CIVIL ATTY 4	260	0	36	36	1	12	33.5%	-
	0	0	0	0	1	0	0.0%	-
554-HALL	130	0	27	27	1	15	53.8%	-
555-STORAGE	0	0	0	0	1	0	0.0%	-
555A-STORAGE	0	0	0	0	1	0	0.0%	-
556-CAC RECEPTION	220	0	46	46	1	24	51.5%	-
559-TOILET	50	0	11	11	1	0	0.0%	-
	0	0	0	0	1	0	0.0%	-
526-CIVIL ATTY 2	90	0	24	24	1	13	55.1%	-
527-CIVIL ATTY 1	90	0	24	24	1	13	55.1%	-
547A-CIVIL GEN OFF	400	0	108	108	1	59	54.6%	-
	0	0	0	0	1	0	0.0%	-
528-CONFERENCE	240	0	142	142	1	78	55.2%	-
	0	0	0	0	1	0	0.0%	-
558-CAC WAITING 1	90	0	53	53	1	23	43.5%	-
560-CAC WAITING 2	90	0	53	53	1	23	43.5%	-
561-CAC STORAGE	50	0	30	30	1	16	54.9%	-
	0	0	0	0	1	0	0.0%	-
543-CIVIL ATTY 10	90	0	25	25	1	14	54.4%	-
544-CIVIL ATTY 9	100	0	28	28	1	14	48.9%	-
547C-CIVIL GEN OFF	260	0	73	73	1	34	46.3%	-
	0	0	0	0	1	0	0.0%	-
562-CAC OFFICE 1	140	0	36	36	1	13	36.0%	-
563-CAC OFFICE 2	140	0	36	36	1	13	36.0%	-
564-CAC INTERVIEW	100	0	26	26	1	14	55.0%	-
	0	0	0	0	1	0	0.0%	-
541-CAC RECORDS	50	0	30	30	1	16	54.9%	-
542-CAC WORK RM	110	0	65	65	1	12	17.9%	-
557-HALL	90	0	53	53	1	19	35.6%	-
	0	0	0	0	1	0	0.0%	-
532A-IT ROOM	250	0	180	180	1	0	0.0%	-
533-CIVIL RECORDS	60	0	43	43	1	24	55.6%	-
534-BREAK ROOM	460	0	331	331	1	77	23.4%	-
534A-HALL	60	0	43	43	1	11	25.0%	-
535-WOMENS	50	0	36	36	1	0	0.0%	-
536-J.C.	0	0	0	0	1	0	0.0%	-
537-MENS	60	0	43	43	1	0	0.0%	-
538-STORAGE	0	0	0	0	1	0	0.0%	-
547D-CIVIL GEN OFF	220	0	158	158	1	32	19.9%	-
	0	0	0	0	1	0	0.0%	-
539-STORAGE	0	0	0	0	1	0	0.0%	-
540-CAC OBSERV.	110	0	26	26	1	13	50.8%	-
565-CAC MEET/OFF	170	0	41	41	1	23	55.4%	-
	0	0	0	0	1	0	0.0%	-
545-CIVIL ATTY 8	90	0	25	25	1	14	54.4%	-
546-CIVIL ATTY 7	90	0	25	25	1	14	54.4%	-
547A-CIVIL GEN OFF	280	0	78	78	1	42	53.6%	-
	0	0	0	0	1	0	0.0%	-
529-HALL	80	0	30	30	1	5	15.8%	-
530-CIVIL OFFICE 1	120	0	46	46	1	13	28.1%	-
531-CIVIL OFFICE 2	130	0	49	49	1	13	25.9%	-
532-CIVIL WORK RM	140	0	53	53	1	12	22.4%	-
547B-HALL	20	0	8	8	1	4	55.3%	-
	6,260	0	2,310	2,310		790		

Multiple Zone = 1
Single or 100% =2 1

Max Zp = 55.6% O/A Percent- Critical Space
Ev = 0.6 1,316 Corrected Total Outdoor Airflow Rate

37% Min. % S/A

57% Min. % O/A

JOB NAME: WILL COUNTY COURT ANNEX - PHASE 2 JOB NUMBER: 1421-3

2012 IMC Ventilation ROOM INPUT

ROOM NUMBER & NAME	AREA (S.F.)	OCCUPANCY Ref. No.	OCCUPANCY CLASSIFICATION	VENTILATION P/1000	PEOPLE CODE	PEOPLE ACTUAL	Rp CFM/P	Rp CFM	Ra CFM/SF	Ra CFM	Vbz CFM	EXHAUST FIX	CFM/ FIX	CFM/ S.F.	CFM	Equipment Note
501-OFFICE 8	180	45	OFF-OFFICE SPACES	5	0.9	1.0	5	5	0.06	11	16		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
502-OFFICE 7	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
503-OFFICE 6	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
504-OFFICE 5	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
505-OFFICE 4	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
506-OFFICE 3	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
507-OFFICE 2	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
508-OFFICE 1	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
509-VICTIM WIT. 2	125	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
510-VICTIM WIT. 1	120	45	OFF-OFFICE SPACES	5	0.6	1.0	5	5	0.06	7	12		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
523-ATTY OFF 1	210	45	OFF-OFFICE SPACES	5	1.1	2.0	5	10	0.06	13	23		-	0	0	AHU-5-1
524-OFFICE 9	140	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
515A-OPEN OFFICE	420	45	OFF-OFFICE SPACES	5	2.1	3.0	5	15	0.06	25	40		-	0	0	AHU-5-1
521-ATTY OFF 3	135	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
522-ATTY OFF 2	130	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
515B-OPEN OFFICE	370	45	OFF-OFFICE SPACES	5	1.9	2.0	5	10	0.06	22	32		-	0	0	AHU-5-1
519-MSD OFFICE	145	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	9	14		-	0	0	AHU-5-1
520-ATTY OFF 4	130	45	OFF-OFFICE SPACES	5	0.7	1.0	5	5	0.06	8	13		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
515C-OPEN OFFICE	810	45	OFF-OFFICE SPACES	5	4.1	5.0	5	25	0.06	49	74		-	0	0	AHU-5-1
			-	0	0.0	0.0	0	0	0	0	0		-	0	0	
511-STORAGE	100	95	CLOSET	0	0.0	0.0	0	0	0	0	0		-	0	0	AHU-5-1
512-HALL	230	49	PS-CORRIDORS	0	0.0	0.0	0	0	0.06	14	14		-	0	0	AHU-5-1
513-WOMEN	125	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0	2	75	0	150	AHU-5-1, CEF-5-1
514-MEN	120	53	PS-TOILET ROOMS (Jan Clos =1 WC)	0	0.0	0.0	0	0	0	0	0	2	75	0	150	AHU-5-1, CEF-5-2
515D-OPEN OFFICE	720	45	OFF-OFFICE SPACES	5	3.6	4.0	5	20	0.06	43	63		-	0	0	AHU-5-1
	5,085				23	31		155		284	439	Vou			300	
					Ps =	31			D =		1					

JOB NAME: WILL COUNTY COURT ANNEX - PHASE 2

2012 IMC Ventilation COMMON VENTILATION SYSTEM CORRECTION

ROOM NAME & NUMBER	SUPPLY (Cfm) Base	0% Target	51% Adjstd	51% Vpz	VENTILATION (CFM) Voz Ez	Voz CFM	OA Fraction Zp=Voz/Vpz	Ventilation Note
501-OFFICE 8	470	0	80	80	1	16	19.8%	-
	0	0	0	0	1	0	0.0%	-
502-OFFICE 7	245	0	64	64	1	13	19.6%	-
503-OFFICE 6	245	0	64	64	1	13	19.6%	-
504-OFFICE 5	245	0	64	64	1	13	19.6%	-
	0	0	0	0	1	0	0.0%	-
505-OFFICE 4	245	0	64	64	1	13	19.6%	-
506-OFFICE 3	245	0	64	64	1	13	19.6%	-
507-OFFICE 2	245	0	64	64	1	13	19.6%	-
	0	0	0	0	1	0	0.0%	-
508-OFFICE 1	225	0	63	63	1	13	19.8%	-
509-VICTIM WIT. 2	225	0	63	63	1	13	19.8%	-
510-VICTIM WIT. 1	225	0	63	63	1	12	19.4%	-
	0	0	0	0	1	0	0.0%	-
523-ATTY OFF 1	400	0	116	116	1	23	19.5%	-
524-OFFICE 9	270	0	78	78	1	13	17.1%	-
	0	0	0	0	1	0	0.0%	-
515A-OPEN OFFICE	210	0	210	210	1	40	19.1%	-
521-ATTY OFF 3	80	0	80	80	1	13	16.4%	-
522-ATTY OFF 2	80	0	80	80	1	13	16.0%	-
	0	0	0	0	1	0	0.0%	-
515B-OPEN OFFICE	270	0	270	270	1	32	11.9%	-
519-MSD OFFICE	120	0	120	120	1	14	11.4%	-
520-ATTY OFF 4	80	0	80	80	1	13	16.0%	-
	0	0	0	0	1	0	0.0%	-
515C-OPEN OFFICE	370	0	370	370	1	74	19.9%	-
	0	0	0	0	1	0	0.0%	-
511-STORAGE	70	0	64	64	1	0	0.0%	-
512-HALL	85	0	77	77	1	14	17.8%	-
513-WOMEN	50	0	46	46	1	0	0.0%	-
514-MEN	50	0	46	46	1	0	0.0%	-
515D-OPEN OFFICE	350	0	319	319	1	63	19.8%	-
	5,100	0	2,606	2,606		439		

Multiple Zone = 1
Single or 100% =2 1

Max Zp = 19.9% O/A Percent- Critical Space
Ev = 0.9 488 Corrected Total Outdoor Airflow Rate

51% Min. % S/A

19% Min. % O/A

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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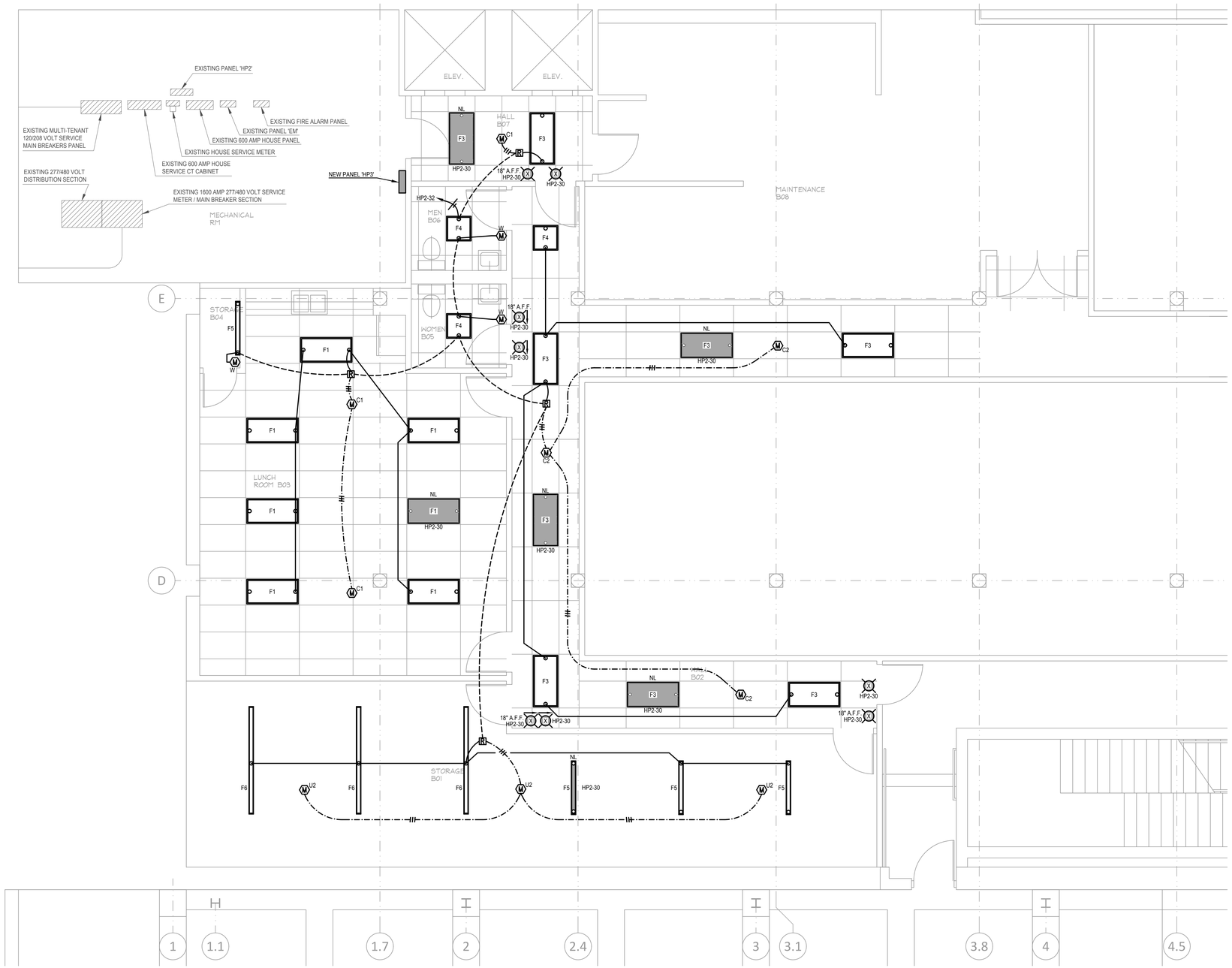
DATE: 12/18/15

HVAC VENT SCHEDULES

R1307B

PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET MS-4 OF 13



BASEMENT WEST LIGHTING PLAN

SCALE: 1/4"=1'-0"

DEMOLITION NOTES

1. SEE ARCHITECTURAL AND MECHANICAL DEMOLITION PLANS FOR SCOPE OF WORK AND ADDITIONAL REQUIREMENTS. DEMOLITION REQUIRED IN AREAS BEING REMODELED ONLY AND INCLUDES THE BASEMENT AREA SHOWN, THE FIFTH FLOOR AND RESPECTIVE ROOF AREAS. DISCONNECT ALL MECHANICAL AND PLUMBING EQUIPMENT BEING REMOVED.
2. THE E.C. SHALL BE RESPONSIBLE FOR DEMOLITION OF ALL FIXTURES, DEVICES, SURFACE BOXES, SURFACE RACEWAYS, WIRING, ETC., NOT BEING REUSED. ALL BRANCH CIRCUIT WIRING DISTURBED BY THIS CONSTRUCTION SHALL BE REPLACED. CAP OLD OUTLETS AS REQUIRED. ALL EQUIPMENT AND MATERIALS REMOVED SHALL BE SALVAGED/DISPOSED OF BY THE E.C. (REMOVED FROM SITE)
3. REMOVE OR RELOCATE AS REQUIRED BY GENERAL CONSTRUCTION ANY DEVICES, CONDUIT, WIRE, ETC. THAT OCCUR IN CEILINGS, WALLS OR FLOORS THAT ARE BEING REMODELED OR REMOVED EVEN IF NOT SPECIFICALLY SHOWN ON THE PLANS. SUCH ITEMS SHALL BE CONSIDERED INCIDENTAL AND SHALL BE DONE WITHOUT EXTRA COST TO THE OWNER. THE E.C. SHALL REFER TO THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS FOR AREAS AND EQUIPMENT BEING REMOVED OR REMODELED AND SHALL MAKE A FIELD SURVEY TO DETERMINE THE EXTENT OF WORK INVOLVED PRIOR TO SUBMITTING BID.
4. ANY EXISTING CIRCUITS OR EQUIPMENT NOT SHOWN ON THE DRAWINGS AND WHICH ARE LOGICALLY EXPECTED TO BE CONTINUED IN SERVICE THAT MAY BE INTERRUPTED OR DISTURBED DURING CONSTRUCTION, SHALL BE RECONNECTED IN AN APPROVED MANNER. IN ADDITION, ANY EXISTING CIRCUIT OR EQUIPMENT, WHICH MAY REQUIRE RELOCATION OR REROUTING AS A RESULT OF CONSTRUCTION, SHALL BE DONE BY THIS CONTRACTOR WITH NO ADDITIONAL COMPENSATION.
5. CONTRACTOR SHALL NOTE THAT THE EXISTING BUILDING WILL REMAIN IN SERVICE DURING CONSTRUCTION. AREAS OF THE BUILDING WILL BE VACATED AS REQUIRED TO FACILITATE CONSTRUCTION. THIS CONTRACTOR SHALL PROCEED WITH THE COMPLETION OF HIS WORK IN SUCH A MANNER AS TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH THE OWNER'S OPERATION AND ALL WORK REQUIRED IN THE EXISTING BUILDING SHALL BE DONE IN A MANNER AND TIME ACCEPTABLE TO THE OWNER.
6. KEEP ALL EXISTING ELECTRIC CIRCUITS, TELEPHONE SERVICE, DATA SERVICE, BUILDING AUTOMATION, SOUND SYSTEM, ETC. IN OPERATION DURING CONSTRUCTION AS REQUIRED BY THE OWNER AND AS FURTHER DESCRIBED IN OTHER DIVISIONS OF THE SPECIFICATIONS.

BASEMENT WEST LIGHTING PLAN R1307B

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COUNTY OF WILL, OWNER

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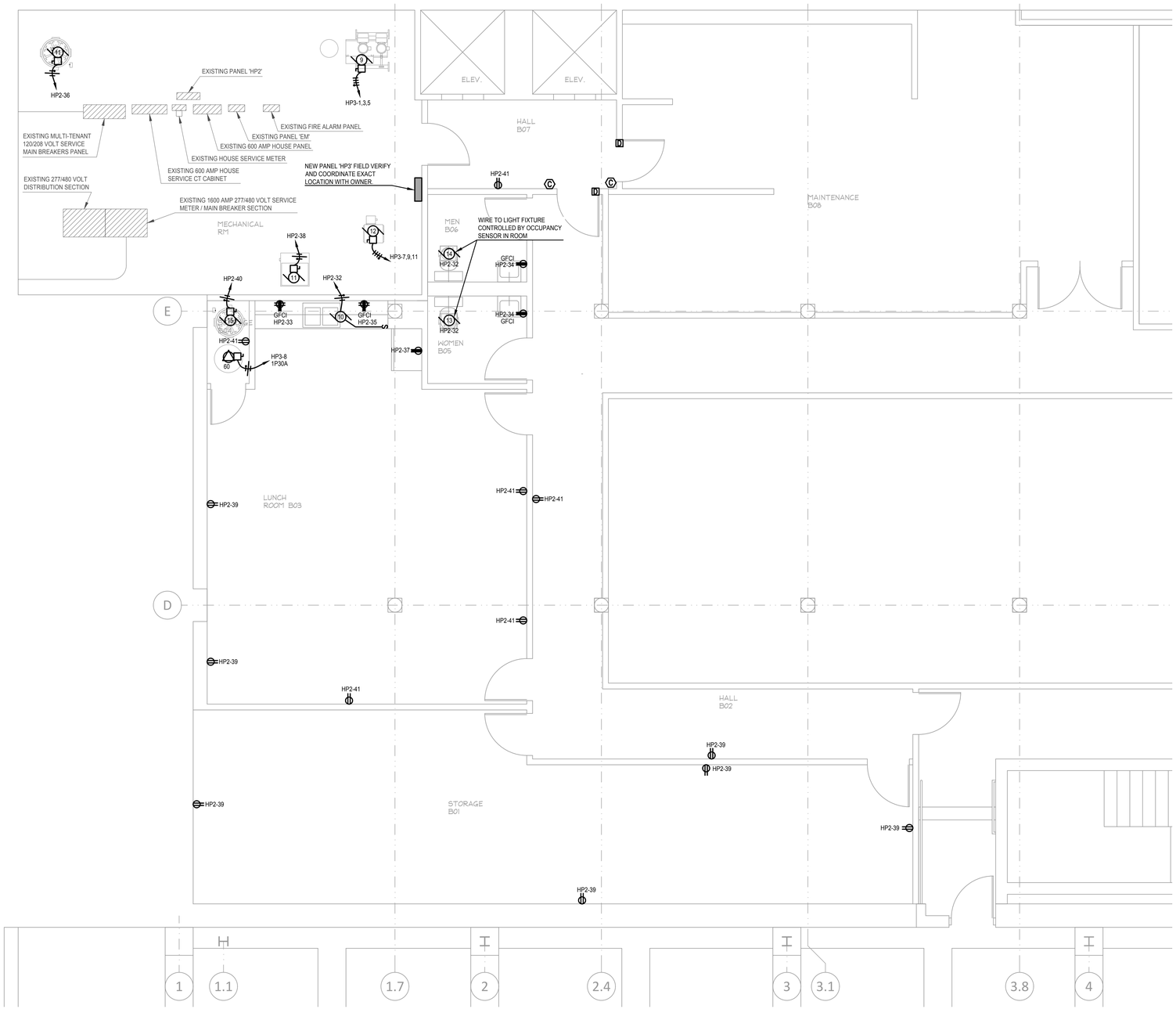
E-1
OF 13

K&A #15097



BASEMENT WEST POWER PLAN

SCALE: 1/4"=1'-0"

BASEMENT WEST POWER PLANS R1307B

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COUNTY OF WILL, OWNER

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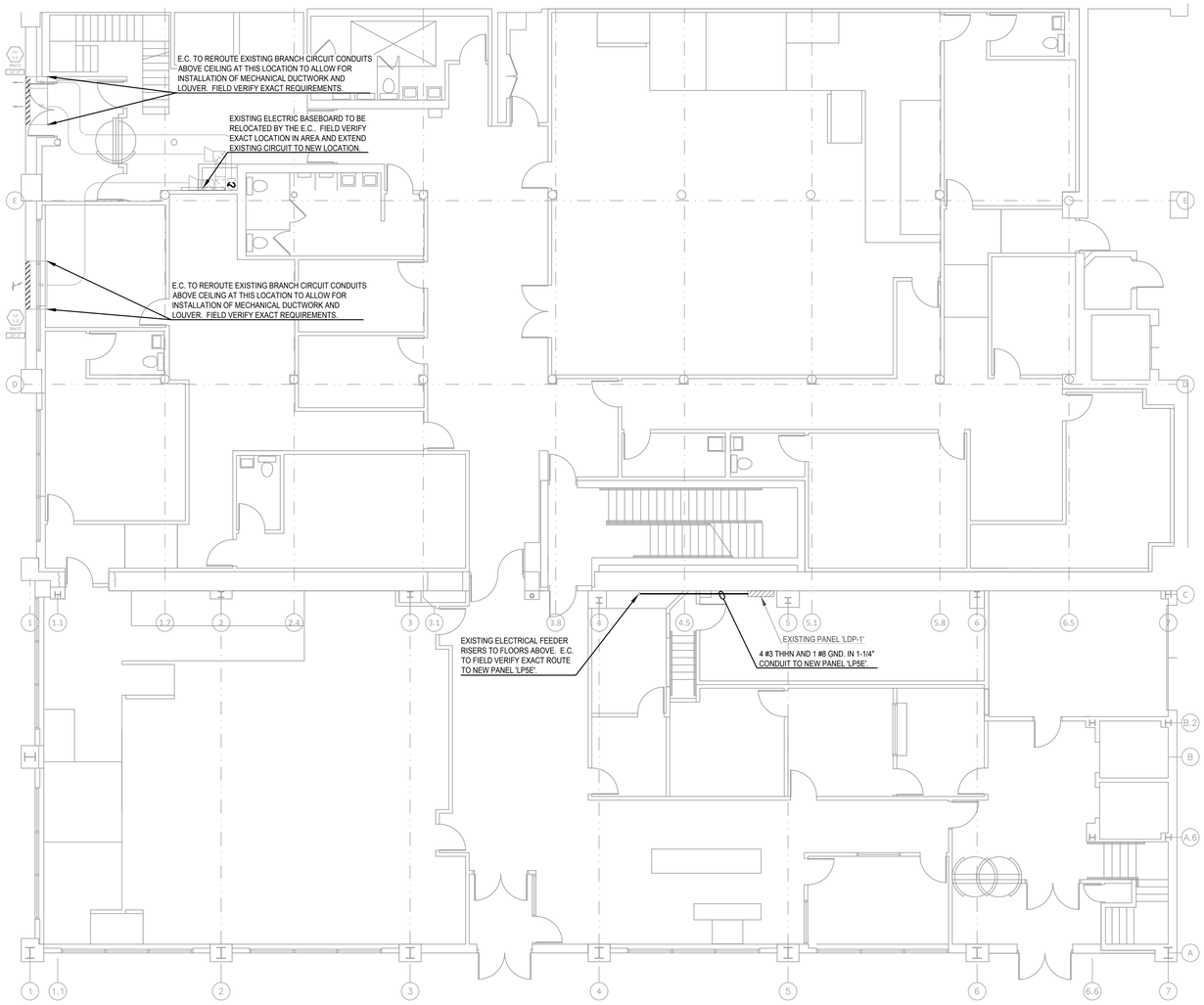
E-2
OF 13

K&A #15097



FIRST FLOOR POWER PLAN

SCALE: 1/8"=1'-0"

FIRST FLOOR POWER PLAN R1307B

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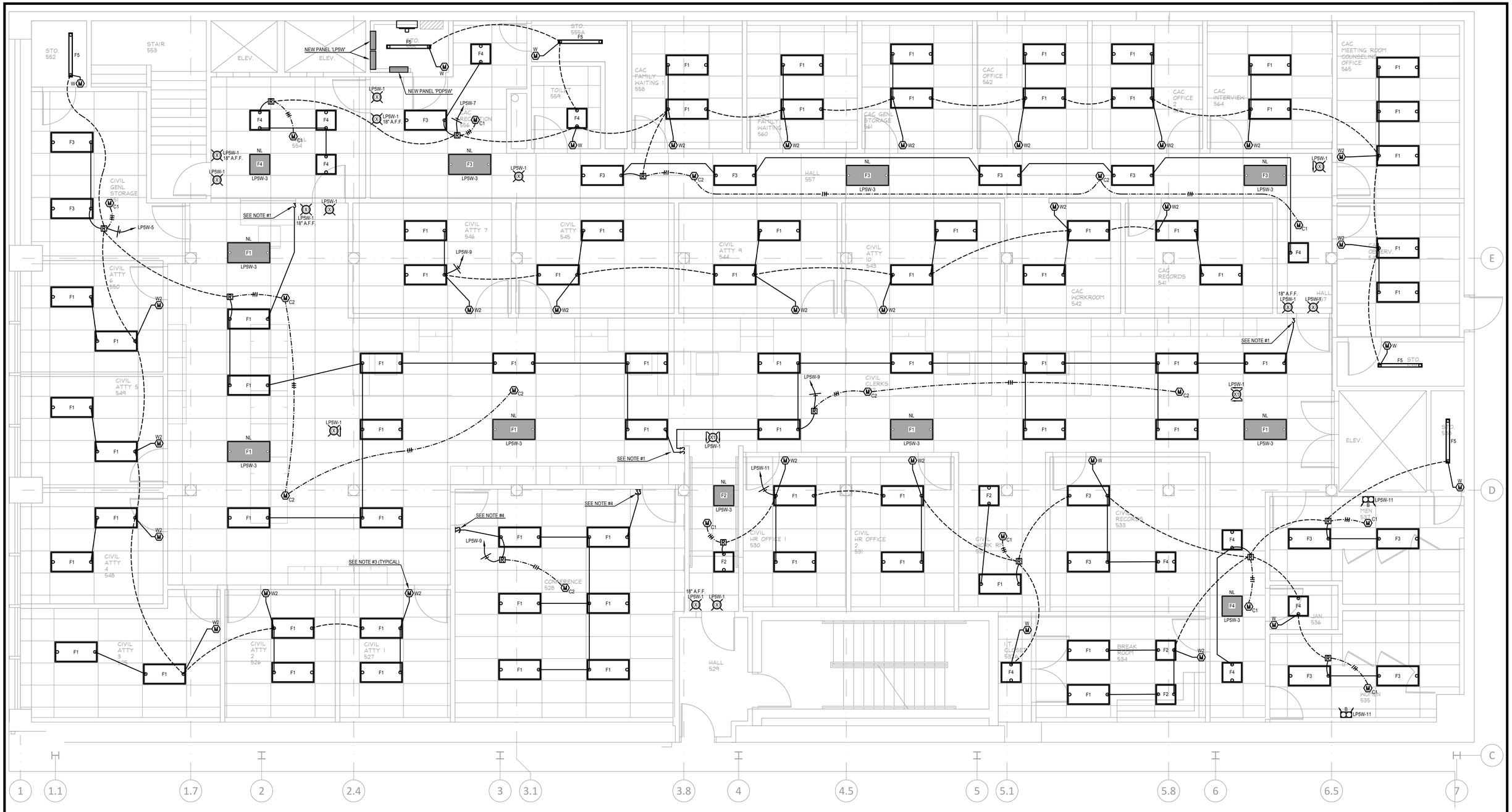
OF 13

K&A #15097



FIFTH FLOOR WEST LIGHTING PLAN

SCALE: 1/4"=1'-0"

NOTES:

1. LIGHTING TO BE CONTROLLED BY CEILING OCCUPANCY SENSORS IN EACH OPEN OFFICE SPACE. FIXTURES TO BE ENTIRELY OFF WHEN ROOM IS UNOCCUPIED (EXCLUDES NIGHT LIGHTS). LIGHT SWITCH IS TO CONTROL HIGH LEVEL OF BI-LEVEL DIMMING FEATURE WHEN ROOM IS OCCUPIED.
2. ALL NIGHT LIGHT FIXTURES TO INCLUDE AN INTEGRAL BATTERY PACK OPTION FROM LIGHT FIXTURE MANUFACTURER FOR EMERGENCY EGRESS LIGHTING. SEE FIXTURE SCHEDULE ON SHEET ES.1.
3. TWO SWITCHED OCCUPANCY SENSOR TO BE WIRED SO THAT SWITCH #1 CONTROLS FIXTURE TO 50% BRIGHTNESS, SWITCH #2 TO FULL OUTPUT.
4. OCCUPANCY SENSOR TO TURN OFF FIXTURES WHEN ROOM IS UNOCCUPIED. WALL SWITCHES TO CONTROL BI-LEVEL FUNCTION OF FIXTURES.

FIFTH FLOOR WEST LIGHTING PLAN R1307B

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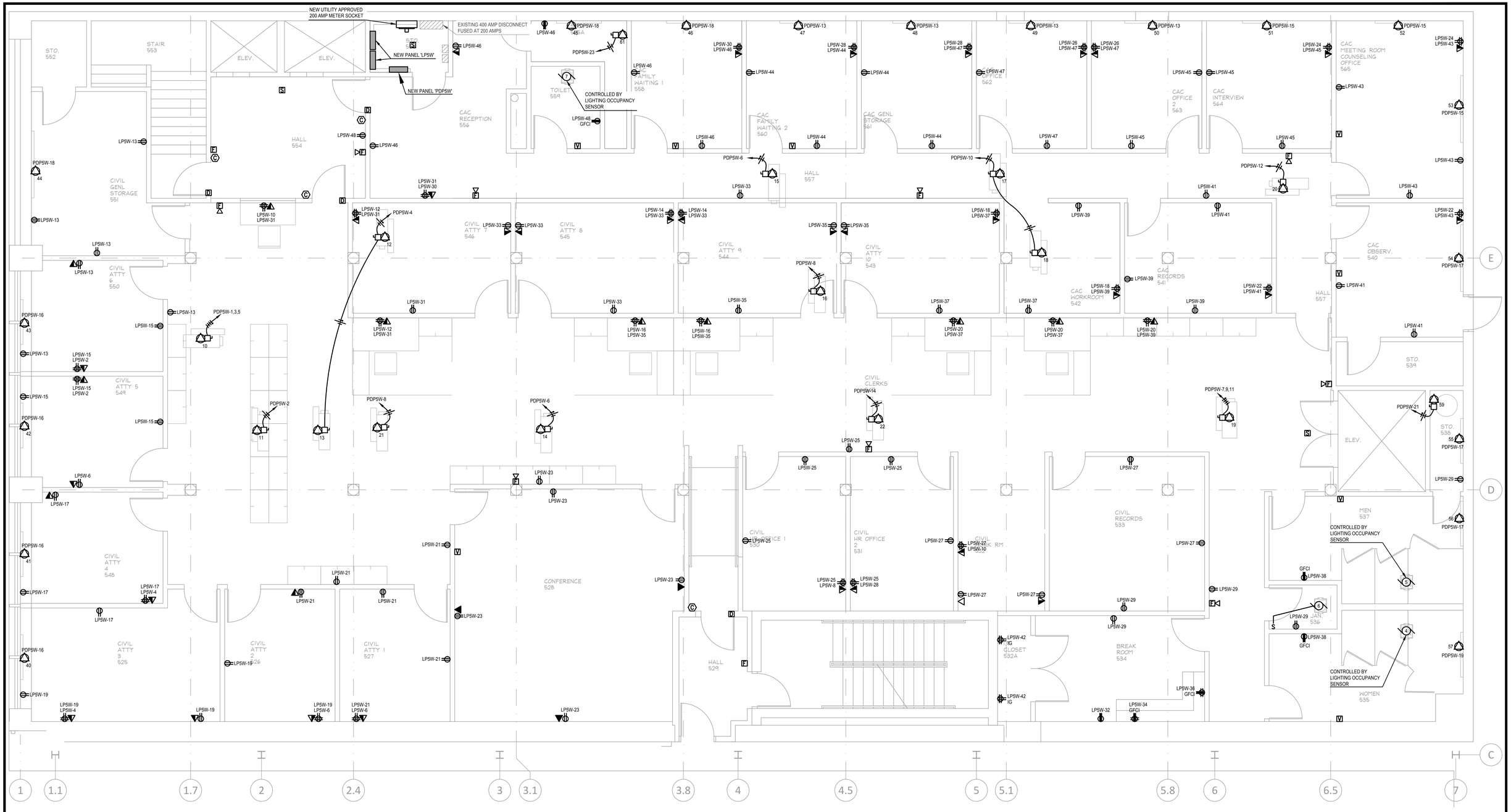
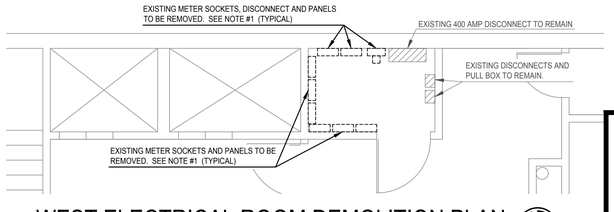
SHEET
E-3
OF 13

K&A #15097



FIFTH FLOOR WEST POWER PLAN

SCALE: 1/4"=1'-0"



WEST ELECTRICAL ROOM DEMOLITION PLAN

SCALE: 1/4"=1'-0"

DEMOLITION NOTES.

1. E.C. TO FIELD VERIFY EXISTING CIRCUITS WHICH WILL NEED TO REMAIN IN SERVICE AND EXTEND TO NEW SPARE BREAKERS IN PANEL 'LP5W'.

FIFTH FLOOR WEST POWER PLAN R1307B

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COUNTY OF WILL, OWNER

SHEET E-4 OF 13

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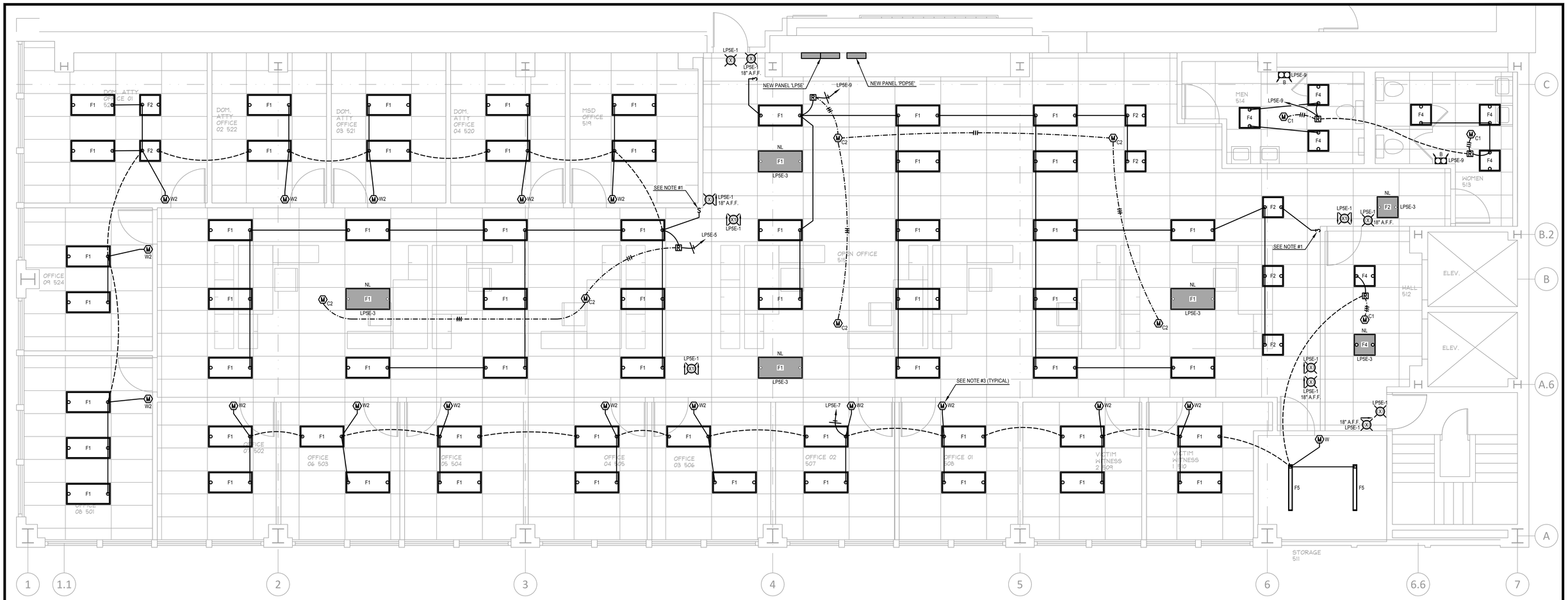

FIFTH FLOOR EAST LIGHTING PLAN

SCALE: 1/4"=1'-0"

NOTES:

1. LIGHTING TO BE CONTROLLED BY CEILING OCCUPANCY SENSORS IN EACH OPEN OFFICE SPACE. FIXTURES TO BE ENTIRELY OFF WHEN ROOM IS UNOCCUPIED (EXCLUDES NIGHT LIGHTS). LIGHT SWITCH IS TO CONTROL HIGH LEVEL OF BI-LEVEL DIMMING FEATURE WHEN ROOM IS OCCUPIED.
2. ALL NIGHT LIGHT FIXTURES TO INCLUDE AN INTEGRAL BATTERY PACK OPTION FROM LIGHT FIXTURE MANUFACTURER FOR EMERGENCY EGRESS LIGHTING. SEE FIXTURE SCHEDULE ON SHEET ES.1.
3. TWO SWITCHED OCCUPANCY SENSOR TO BE WIRED SO THAT SWITCH #1 CONTROLS FIXTURE TO 50% BRIGHTNESS, SWITCH #2 TO FULL OUTPUT.

FIFTH FLOOR EAST LIGHTING PLAN R1307B

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E-5
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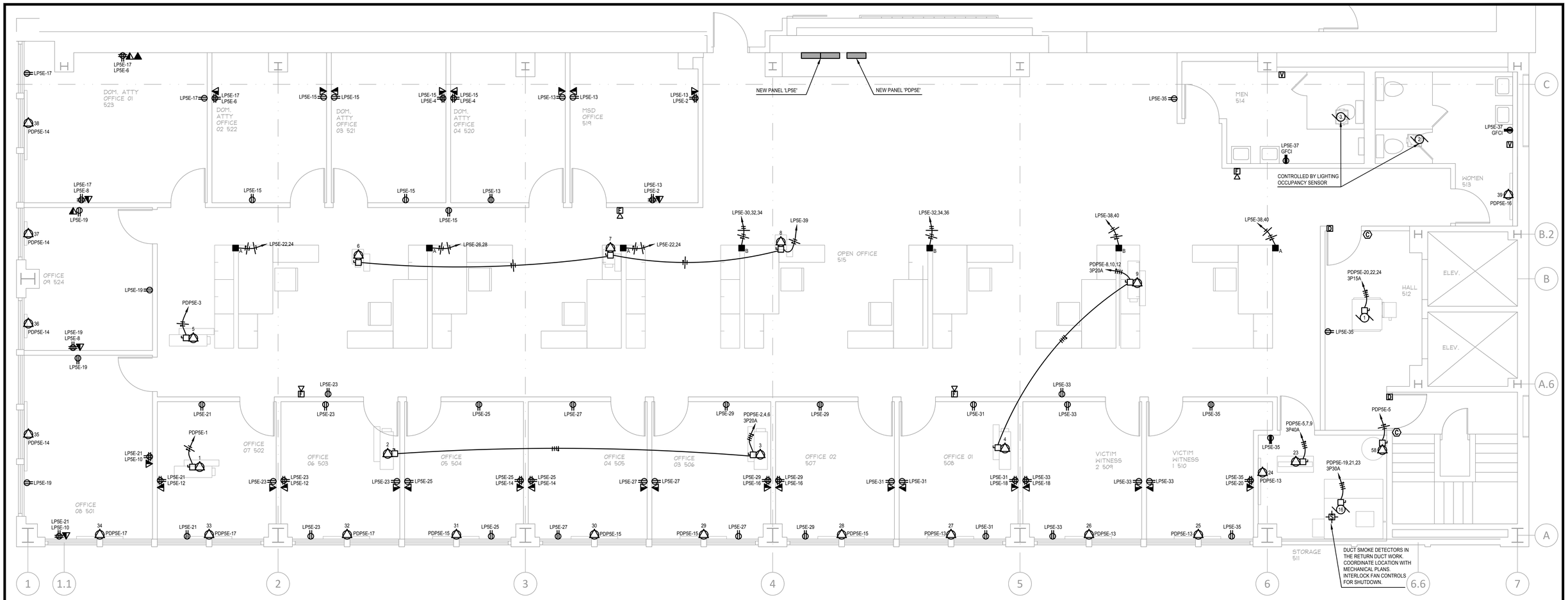
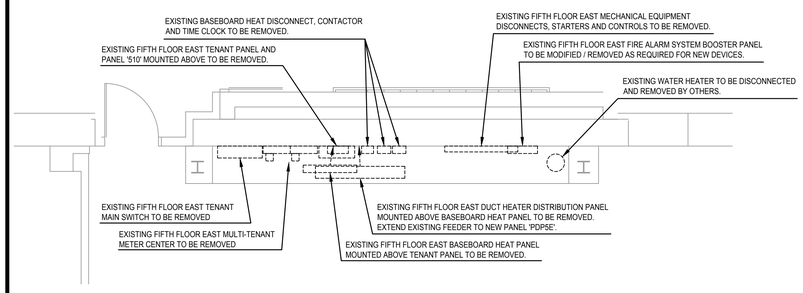


FIFTH FLOOR EAST POWER PLAN

SCALE: 1/4"=1'-0"



EAST ELECTRICAL CLOSET DEMOLITION PLAN

SCALE: 1/4"=1'-0"

FIFTH FLOOR EAST POWER PLAN R1307B

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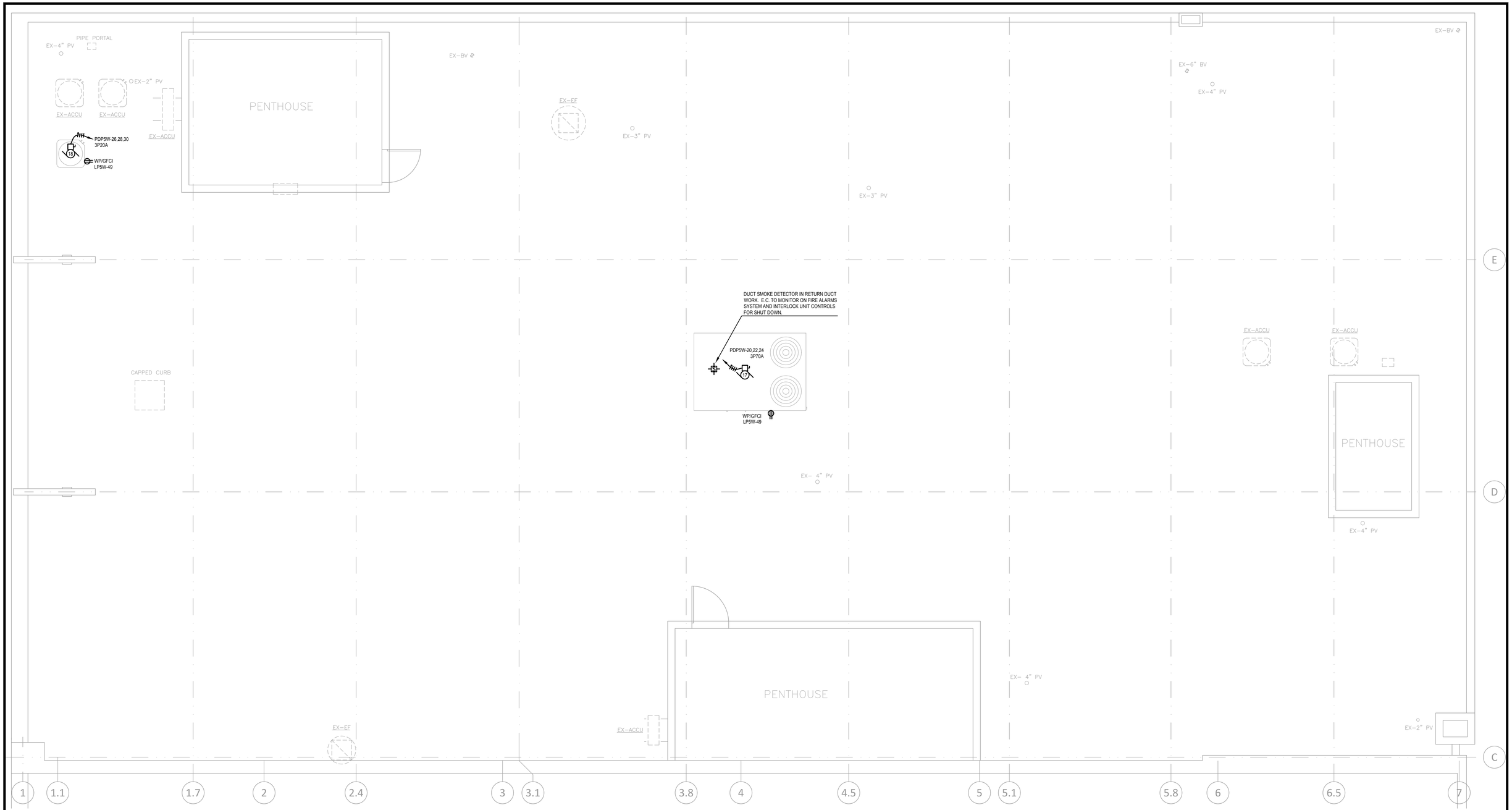

FIFTH FLOOR WEST ROOF POWER PLAN

SCALE: 1/4"=1'-0"

NOTES.

1. SEE MECHANICAL PLANS FOR EXISTING EQUIPMENT BEING REMOVED. E.C. TO DISCONNECT AND CAP EXISTING CONDUIT IN AN APPROVED MANNER..

FIFTH FLOOR WEST ROOF POWER PLAN R1307B

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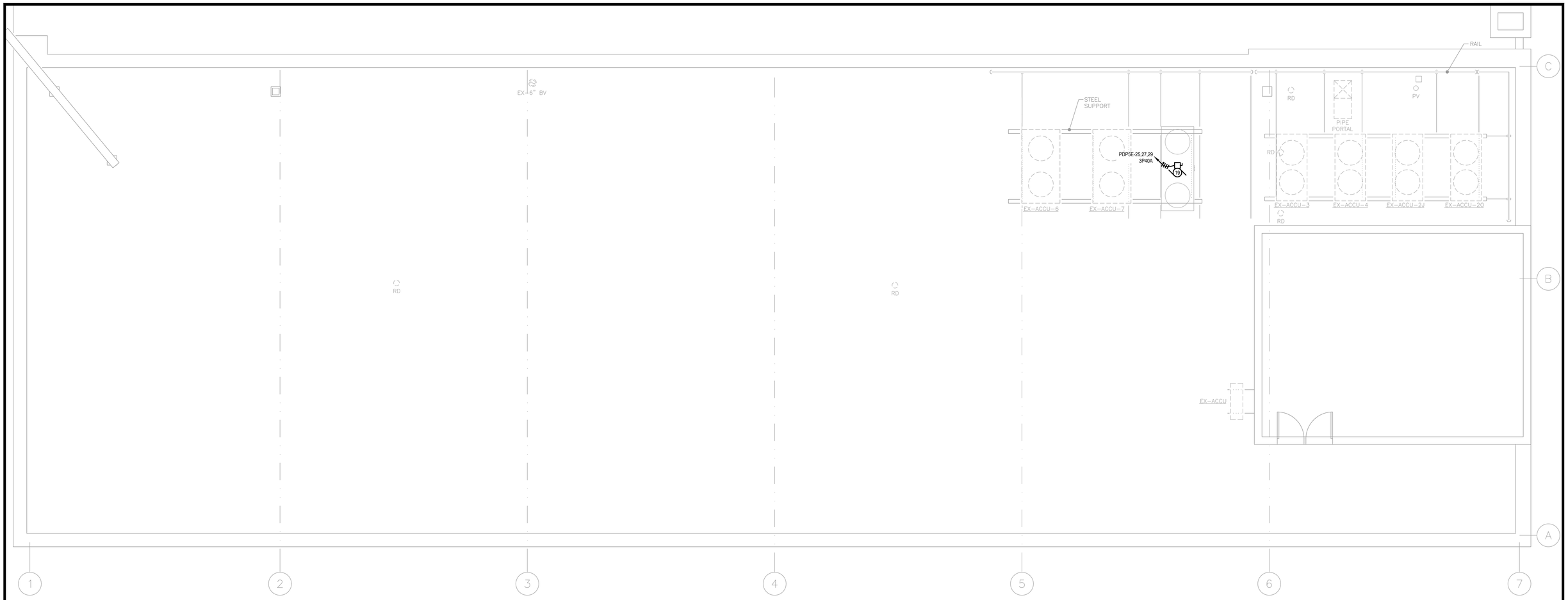

SEVENTH FLOOR EAST ROOF POWER PLAN

SCALE: 1/4"=1'-0"

SEVENTH FLOOR EAST ROOF POWER PLAN R1307B

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E-8
OF 13

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FIXTURE SCHEDULE

TYPE	INPUT WATTS	LAMPS NO.	LAMPS MANUFACTURER CATALOG NO.	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTS	SHIELDING	FINISH	MOUNTING	REMARKS
B		LED	WITH FIXTURE	EMERGENCY EGRESS FIXTURE	COOPER LIGHTING	APEL	120	ACRYLIC	WHITE	SURFACE	
F1	57	LED	WITH FIXTURE	2' X 4' GRID TROFFER	COOPER LIGHTING	DRI-WS-3L35-1D-120-24-T1-W6	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F2	35	LED	WITH FIXTURE	2' X 2' GRID TROFFER	COOPER LIGHTING	DRI-WS-3L35-1D-120-22-T1-W6	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F3	46	LED	WITH FIXTURE	2' X 4' GRID TROFFER	COOPER LIGHTING	DRI-WS-2L35-1D-120-24-T1-W6	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F4	28	LED	WITH FIXTURE	2' X 2' GRID TROFFER	COOPER LIGHTING	4-SNLED-LD4-30SL-LN-UNV-L835-CD-1	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F5	25	LED	WITH FIXTURE	4' STRIP	COOPER LIGHTING	8T-SNLED-LD4-75SL-LN-UNV-L835-CD-1	120	ACRYLIC	WHITE	CHAIN HUNG / SURFACE	
F6	65	LED	WITH FIXTURE	8' STRIP	COOPER LIGHTING	STL4 48L SLD LP835	120	ACRYLIC	WHITE	CHAIN HUNG / SURFACE	
F1-NL	57	LED	WITH FIXTURE	2' X 4' GRID TROFFER (EMERGENCY EGRESS)	COOPER LIGHTING	DRI-WS-3L35-1B-120-24-T1-W6	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F2-NL	35	LED	WITH FIXTURE	2' X 2' GRID TROFFER (EMERGENCY EGRESS)	COOPER LIGHTING	DRI-WS-3L35-1B-120-22-T1-W6	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F3-NL	46	LED	WITH FIXTURE	2' X 4' GRID TROFFER (EMERGENCY EGRESS)	COOPER LIGHTING	DRI-WS-2L35-1B-120-24-T1-W6	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F4-NL	28	LED	WITH FIXTURE	2' X 2' GRID TROFFER (EMERGENCY EGRESS)	COOPER LIGHTING	DRI-WS-2L35-1B-120-22-T1-W6	120	ACRYLIC	WHITE	RECESSED 2-1/4"	
F5-NL	35	LED	WITH FIXTURE	4' STRIP (EMERGENCY EGRESS)	COOPER LIGHTING	8T-SNLED-LD4-75SL-LN-UNV-EL14W-L835-CD-1	120	ACRYLIC	WHITE	CHAIN HUNG / SURFACE	
X		LED	WITH FIXTURE	SINGLE FACE EXIT	COOPER LIGHTING	CX-7-1-SD	120	RED ACRYLIC	BRUSHED ALUMINUM	UNIVERSAL	
X1		LED	WITH FIXTURE	DOUBLE FACE EXIT	COOPER LIGHTING	CX-7-2-SD	120	RED ACRYLIC	BRUSHED ALUMINUM	UNIVERSAL	

COM*check* Software Version 4.0.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: Will County Court Annex Phase 2
Project Type: Alteration

Construction Site: Ottawa & Jefferson Streets, Joliet, IL
Owner/Agent:
Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Office - Enclosed	15423	1.10	16965
		Total Allowed Watts =	16965

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Common Space Types:Office - Enclosed (15423 sq.ft.)				
LED 1: F1: Other:	1	146	49	7154
LED 2: F2: Other:	1	13	38	494
LED 3: F3: Other:	1	25	40	1000
LED 4: F4: Other:	1	24	24	576
LED 5: F5: Other:	1	7	31	217
LED 6: F6: Other:	1	6	49	294
			Total Proposed Watts =	9735

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in COM*check* Version 4.0.0 and to comply with the mandatory requirements listed in the Inspection Checklist.

David B. Kornacki - P.E. — Name - Title
David B. Kornacki — Signature
12-11-15 — Date

Project Title: Will County Court Annex Phase 2 — Report date: 12/11/15
Data filename: M:\DWG\United Engineering\(15097) Will County Court Annex - Phase 2\ComCheck\Will County Court Annex Phase 2.cck — Page 1 of 6

SYMBOLS / ABBREVIATIONS

- FLUORESCENT/LED LINEAR FIXTURE - SEE FIXTURE SCHEDULE
- RECESSED DOWNLIGHT FIXTURE - SEE FIXTURE SCHEDULE
- SURFACE/PENDANT FIXTURE - SEE FIXTURE SCHEDULE
- EMERGENCY BATTERY UNIT - SEE FIXTURE SCHEDULE
- S — SINGLE POLE SWITCH
- SS — TWO SINGLE POLE SWITCHES TO CONTROL CENTER AND OUTER LAMPS OF EACH LIGHT FIXTURE INDEPENDENTLY
- 33 — TWO THREE WAY SWITCHES TO CONTROL CENTER AND OUTER LAMPS OF EACH LIGHT FIXTURE INDEPENDENTLY
- 3 — THREE WAY SWITCH
- M — OCCUPANCY CONTROL SENSORS SENSOR SWITCH CAT. #
  - W - WSX PDT *
  - W2 - WSX PDT 2P *
  - C1 - CM-PDT-9-R
  - C2 - CM-PDT-10-R
  - * COORDINATE SWITCH/PLATE COLOR WITH OTHER DEVICES ON PROJECT.
- R — OCCUPANCY CONTROLS RELAY - SENSOR SWITCH CAT. #PP20
- S — OCCUPANCY CONTROLS SLAVE RELAY - SENSOR SWITCH CAT. #SP-20
- DUPLEX GROUNDED RECEPTACLE - 18" AFF. UNLESS OTHERWISE NOTED. HUBBELL STYLE LINE WITH BRUSHED STAINLESS STEEL COVER PLATE. VERIFY DEVICE COLOR WITH ARCHITECT OR INTERIOR DESIGNER.
- DUPLEX GROUNDED RECEPTACLE - MOUNT 6" ABOVE COUNTER TOP, 6" ABOVE BACK SPLASH (WHERE PRESENT) OR 48" WHERE NO COUNTER PRESENT. HUBBELL STYLE LINE WITH BRUSHED STAINLESS STEEL COVER PLATE. VERIFY DEVICE COLOR WITH ARCHITECT OR INTERIOR DESIGNER.
- A — POWER POLE - HUBBELL CATALOG #HBLPPO12AAL WITH (2) HUBBELL #DR20GRYTR DUPLEX RECEPTACLES.
- B — POWER POLE - HUBBELL CATALOG #HBLPPO12AAL WITH (3) HUBBELL #DR20GRYTR DUPLEX RECEPTACLES.
- IG — QUAD GROUNDED RECEPTACLE. PROVIDE 4" SQUARE BOX WITH 2-GANG PLASTER RING AND THE FOLLOWING DEVICES: HUBBELL CAT. #IG5262OSA ISOLATED GROUND, SURGE SUPPRESSION, DUPLEX RECEPTACLE AND HUBBELL CAT. #DR15LATR DUPLEX RECEPTACLE WITH A BRUSHED STAINLESS STEEL COVER PLATE.

- SPECIAL PURPOSE OUTLET
- ELECTRIC HEAT OUTLET
- JUNCTION BOX
- MOTOR OUTLET
- DISCONNECT SWITCH
- PUSH BUTTON
- SWITCHED CIRCUIT
- BRANCH CIRCUIT
- TELEPHONE/DATA OUTLET - PROVIDE A 4" SQUARE BOX WITH A SINGLE GANG PLASTER RING. STUB 1" CONDUIT WITH PULL STRING FROM BOX TO ABOVE AN ACCESSIBLE CEILING..
- F — FIRE ALARM PULL STATION - SEE NOTE #1
- F — FIRE ALARM WALL MOUNTED AUDIO/VISUAL SIGNAL - SEE NOTE #1
- V — FIRE ALARM VISUAL SIGNAL - SEE NOTE #1
- S — SYSTEM SMOKE DETECTOR - SEE NOTE #1
- SYSTEM DUCT SMOKE DETECTOR - SEE NOTE #1
- D — ELECTRONIC DOOR STRIKE OR HINGE - STUB 1/2" CONDUIT TO ABOVE FINISHED CEILING. SEE SHEET A-9 FOR NOTES AND DETAILS.
- C — CARD READER - STUB 1/2" CONDUIT TO ABOVE FINISHED CEILING. SEE SHEET A-9 FOR NOTES AND DETAILS.
- CAM — CAMERA

AFF	ABOVE FINISHED FLOOR
AFI	ARC FAULT INTERRUPTER
AMP	AMPERES/AMPERAGE
BFC	BELOW FINISHED CEILING
BOL	BUILT-IN OVERLOAD
BRKR	BREAKER
BWE	BAKED WHITE ENAMEL
CBA	COLOR BY ARCHITECT
CRCT	CIRCUIT
CTL	CONTROL
DC	DUPLEX CONTROLLER
DCP	DOCK EQUIPMENT CONTROL PANEL
DISC	DISCONNECT
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
ER	EXISTING RELOCATED
EXR	EXISTING TO BE REMOVED/RELOCATED
EX	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FLSW	FLOAT SWITCH
FPC	FIRE PROTECTION CONTRACTOR
FURN	FURNISHED
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HOA	HAND-OFF-AUTOMATIC SWITCH
HP	HORSEPOWER
HVAC	HEATING AND VENTILATING CONTRACTOR
IG	ISOLATED GROUND
INT	INTEGRAL
IR	IN ROOM
IU	IN UNIT
JB	JUNCTION BOX
KW	KILOWATTS
LOC	LOCATION
LT	LOW TEMPERATURE
LTSW	LIGHT SWITCH
LVT	LOW VOLTAGE THERMOSTAT
MAG	MAGNETIC STARTER
MAN	MANUAL STARTER
MSPL	MANUAL STARTER WITH PILOT LIGHT
NL	NIGHT LIGHT
NU	NEAR UNIT
OHP	OVERHEAT PROTECTION
OS	OCCUPANCY SENSOR
OU	ON UNIT
PB	PUSH BUTTON
PC	PLUMBING CONTRACTOR
PESW	PNEUMATIC ELECTRIC SWITCH
PW	PREWIRED
RC	REFRIGERATION CONTRACTOR
RCC	REFRIGERATION CONTROL CONTRACTOR
RECEPT	RECEPTACLE
SBA	SELECTED BY ARCHITECT
SC	SEPARATE CIRCUIT
SPSW	SPEED SWITCH
SS	SOFT START
SW	SWITCH
T	LINE VOLTAGE THERMOSTAT
TBD	TO BE DETERMINED
TC	TIME CLOCK
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
UM	UNIT MANUFACTURER
UNO	UNLESS NOTED OTHERWISE
WP	WEATHER PROOF
XFMR	TRANSFORMER

SYMBOLS NOTES:

1. E.C. TO PROVIDE NEW FIRE ALARM DEVICES AND CONTROL/SIGNAL MODULES TO MATCH EXISTING SYSTEM COMPONENTS AS INSTALLED ON THE 6TH AND 7TH FLOORS. TIE INTO THE EXISTING FIRE ALARM SYSTEM AS REQUIRED BY SYSTEM MANUFACTURER.

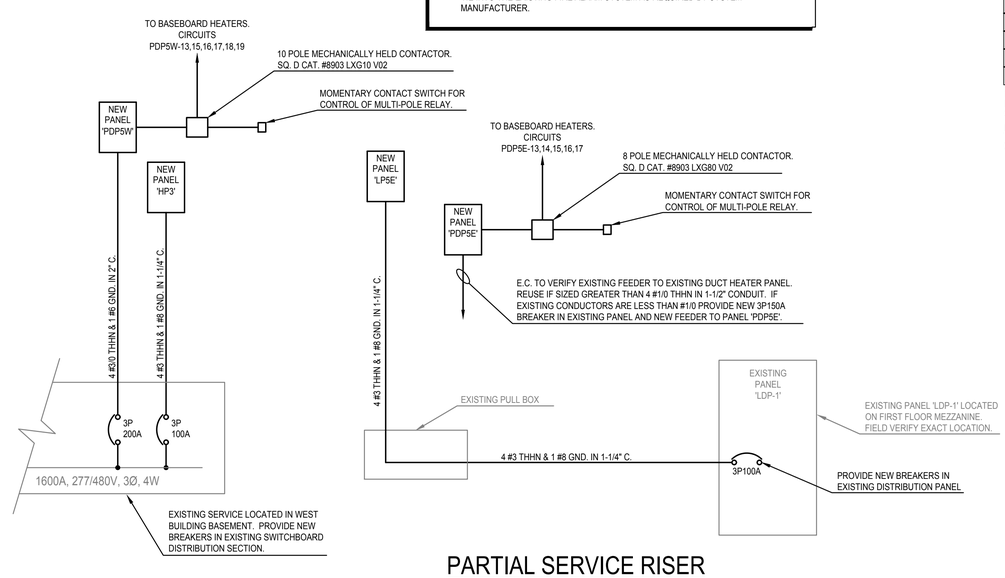
WORK ITEM SCHEDULE

ITEM	PROVIDED BY	INSTALLED BY	WIRED BY	NOTES/REMARKS
SMOKE DETECTORS	EC	EC	EC	(A)
REMOTE TEST STATIONS	EC	EC	EC	(A)
CONTROL PANELS	CC	CC	CC	
T-STATS/REMOTE SENSORS	MC/CC	CC	CC	VAV'S, EBB'S
ELECTRICAL DISCONNECTS	EC	EC	EC	
OCCUPANCY SENSORS	EC	EC	EC	TOILET EF'S

MC - MECHANICAL CONTRACTOR
EC - ELECTRICAL CONTRACTOR
CC - CONTROLS CONTRACTOR

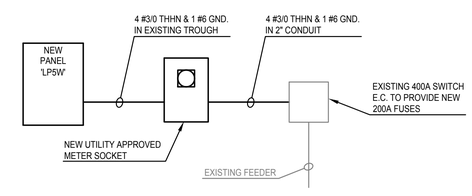
NOTES:

(A) SEE DIVISION 23 NOTES ON MECHANICAL SHEETS FOR SMOKE DETECTOR AND REMOTE TEST STATION INFORMATION.



PARTIAL SERVICE RISER

NO SCALE



ELECTRICAL SCHEDULES — R1307B

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ELECTRIC HEAT OUTLET SCHEDULE (EHO) (△)

NO.	DESCRIPTION	LOCATION	FLA	KW	HP	VOLT	PHASE	PANEL NO. CRCT NO.	BRKR/FUSE		CONTROL WIRING			CIRCUIT WIRING			EQUIPMENT TO FURNISH	REMARKS
									POLE	AMP	TYPE	BY	LOC.	NO.	TYPE / GROUND	COND.		
1	VAV 5-1	5TH FLOOR EAST		4		277	1	PDP5E-1	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
2	VAV 5-2	5TH FLOOR EAST		4.5		480	3	PDP5E-2,4,6	3	20	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
3	VAV 5-3	5TH FLOOR EAST		4.5		480	3	PDP5E-2,4,6	-	-	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
4	VAV 5-4	5TH FLOOR EAST		4.5		480	3	PDP5E-8,10,12	3	20	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
5	VAV 5-5	5TH FLOOR EAST		4		277	1	PDP5E-3	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
6	VAV 5-6 CONTROL WIRING ONLY	5TH FLOOR EAST				120	1	LP5E-49	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
7	VAV 5-7 CONTROL WIRING ONLY	5TH FLOOR EAST				120	1	LP5E-49	-	-	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
8	VAV 5-8 CONTROL WIRING ONLY	5TH FLOOR EAST				120	1	LP5E-49	-	-	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
9	VAV 5-9	5TH FLOOR EAST		5		480	3	PDP5E-8,10,12	-	-	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
10	VAV 5-10	5TH FLOOR WEST		5		480	3	PDP5W-1,3,5	3	15	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
11	VAV 5-11	5TH FLOOR WEST		3.5		277	1	PDP5W-2	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
12	VAV 5-12	5TH FLOOR WEST		2		277	1	PDP5W-4	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
13	VAV 5-13	5TH FLOOR WEST		2		277	1	PDP5W-4	-	-	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
14	VAV 5-14	5TH FLOOR WEST		1.5		277	1	PDP5W-6	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
15	VAV 5-15	5TH FLOOR WEST		2		277	1	PDP5W-6	-	-	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
16	VAV 5-16	5TH FLOOR WEST		2		277	1	PDP5W-8	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
17	VAV 5-17	5TH FLOOR WEST		2.5		277	1	PDP5W-10	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
18	VAV 5-18	5TH FLOOR WEST		1.5		277	1	PDP5W-10	-	-	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
19	VAV 5-19	5TH FLOOR WEST		7		480	3	PDP5W-7,9,11	3	15	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
20	VAV 5-20	5TH FLOOR WEST		2		277	1	PDP5W-12	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
21	VAV 5-21	5TH FLOOR WEST		1.5		277	1	PDP5W-8	-	-	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
22	VAV 5-22	5TH FLOOR WEST		2.5		277	1	PDP5W-14	1	20	LVT	HVAC	REMOTE	2 1	12 THHN 12 GROUND	1/2"	DISCONNECT BY E.C.	
23	ELECTRIC DUCT HEATER 5-1	5TH FLOOR EAST		22		480	3	PDP5E-5,7,9	3	40	LVT	HVAC	REMOTE	3 1	8 THHN 10 GROUND	3/4"	DISCONNECT BY E.C.	
24	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-13	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
25	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-13	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
26	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-13	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
27	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-13	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
28	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-15	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
29	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-15	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
30	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-15	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
31	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-15	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
32	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-17	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
33	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-17	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
34	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-17	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
35	ELECTRIC BASEBOARD	5TH FLOOR EAST		1.5		277	1	PDP5E-14	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
36	ELECTRIC BASEBOARD	5TH FLOOR EAST		0.5		277	1	PDP5E-14	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
37	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-14	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
38	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-14	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
39	ELECTRIC BASEBOARD	5TH FLOOR EAST		1		277	1	PDP5E-16	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
40	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-16	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
41	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-16	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
42	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-16	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
43	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-16	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
44	ELECTRIC BASEBOARD	5TH FLOOR WEST		1.5		277	1	PDP5W-18	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
45	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-18	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
46	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-18	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
47	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-13	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
48	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-13	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
49	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-13	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
50	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-13	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
51	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-15	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
52	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-15	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
53	ELECTRIC BASEBOARD	5TH FLOOR WEST		1.5		277	1	PDP5W-15	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
54	ELECTRIC BASEBOARD	5TH FLOOR WEST		1.5		277	1	PDP5W-17	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
55	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-17	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
56	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-17	-	-	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
57	ELECTRIC BASEBOARD	5TH FLOOR WEST		1		277	1	PDP5W-19	1	20	INT	PW	IU	2 1	12 THHN 12 GROUND	1/2"		
58	ELECTRIC WATER HEATER 5-1	5TH FLOOR EAST		6		277	1	PDP5E-5	1	30	OHP	PW	IU	2 1	10 THHN 10 GROUND	1/2"	DISCONNECT BY E.C.	
59	ELECTRIC WATER HEATER 5-2	5TH FLOOR WEST		6		277	1	PDP5W-21	1	30	OHP	PW	IU	2 1	10 THHN 10 GROUND	1/2"	DISCONNECT BY E.C.	
60	ELECTRIC WATER HEATER B-1	BASEMENT		6		277	1	HP3-2	1	30	OHP	PW	IU	2 1	10 THHN 10 GROUND	1/2"	DISCONNECT BY E.C.	
61	ELECTRIC WATER HEATER 5-3	5TH FLOOR WEST		6		277	1	PDP5W-23	1	30	OHP	PW	IU	2 1	10 THHN 10 GROUND	1/2"	DISCONNECT BY E.C.	

MOTOR SCHEDULE (M)

NO.	DESCRIPTION	LOCATION	FLA	KW	HP	VOLT	PHASE	PANEL NO. CRCT NO.	BRKR/FUSE		DISC FURN BY	STARTER				CONTROL WIRING			CIRCUIT WIRING			REMARKS
									POLE	AMP		TYPE	FURN. BY	WIRED BY	LOC.	TYPE	BY	LOC.	NO.	TYPE / GND.	COND.	
1	EXHAUST FAN 5-1	5TH FLOOR EAST			5	480	3	PDP5E-20,22,24	3	15	EC	VFD	HVAC	EC	NU		HVAC		3 1	12 THHN 12 GROUND	1/2"	
2	CEILING EXHAUST FAN 5-1	5TH FLOOR EAST		0.22		120	1	LP5E-7	1	20	EC	BOL	UM	PW	IU	OS	EC	IR	2 1	12 THHN 12 GROUND	1/2"	
3	CEILING EXHAUST FAN 5-2	5TH FLOOR EAST		0.22		120	1	LP5E-7	-	-	EC	BOL	UM	PW	IU	OS	EC	IR	2 1	12 THHN 12 GROUND	1/2"	
4	CEILING EXHAUST FAN 5-3	5TH FLOOR WEST		0.172		120	1	LP5W-11	1	20	EC	BOL	UM	PW	IU	OS	EC	IR	2 1	12 THHN 12 GROUND	1/2"	
5	CEILING EXHAUST FAN 5-4	5TH FLOOR WEST		0.172		120	1	LP5W-11	-	-	EC	BOL	UM	PW	IU	OS	EC	IR	2 1	12 THHN 12 GROUND	1/2"	
6	CEILING EXHAUST FAN 5-5	5TH FLOOR WEST		0.1		120	1	LP5W-11	-	-	EC	BOL	UM	PW	IU	SW	EC	IR	2 1	12 THHN 12 GROUND	1/2"	
7	CEILING EXHAUST FAN 5-6	5TH FLOOR WEST		0.1		120	1	LP5W-7	1	20	EC	BOL	UM	PW	IU	OS	EC	IR	2 1	12 THHN 12 GROUND	1/2"	
8	BASEMENT SEWAGE EJECTOR B-2	BASEMENT			1/2	120	1	HP2-36	1	20	EC	MAN	PC	EC	NU	FLSW	EC	NU	2 1	12 THWN 12 GROUND	1/2"	
9	WATER BOOSTER PUMP #1	BASEMENT	29mca			480	3	HP3-1,3,5	3	40	EC	MAG	PC	EC	NU	DC	EC	NU	3 1	10 THWN 10 GROUND	3/4"	
10	CEILING EXHAUST FAN B-3	BASEMENT		0.1		120	1	HP2-	1	20	EC	BOL	UM	PW	IU	SW	EC	IR	2 1	12 THWN 12 GROUND	1/2"	
11	FURNACE B-1	BASEMENT	13mca			120	1	HP2-38	1	20	EC	MAN	HVAC	EC	NU	LVT	HVAC	REMOTE	2 1	12 THWN 12 GROUND	1/2"	
12	EXHAUST FAN B-1	BASEMENT			1	480	3	HP3-7,9,11	3	15	EC	MAG	HVAC	EC	NU	LVT	HVAC	REMOTE	3 1	12 THWN 12 GROUND	1/2"	
13	CEILING EXHAUST FAN B-1	BASEMENT		0.1		120	1	HP2-32	1	20	EC	BOL	UM	PW	IU	OS	EC	IR	2 1	12 THWN 12 GROUND	1/2"	
14	CEILING EXHAUST FAN B-2	BASEMENT		0.1		120	1	HP2-32	-	-	EC	BOL	UM	PW	IU	OS	EC	IR	2 1	12 THWN 12 GROUND	1/2"	
15	SEWAGE EJECTOR B-1	BASEMENT			1/2	120	1	HP2-40	1	20	EC	MAN	PC	EC	NU	FLSW	EC	NU	2 1	12 THWN 12 GROUND	1/2"	
16	AIR HANDLING UNIT 5-1	5TH FLOOR EAST			7.5	480	3	PDP5E-19,21,23	3	20	EC	VFD	HVAC	EC	NU	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	
17	ROOF TOP UNIT 5-1	WEST ROOF	60.2mca			480	3	PDP5W-20,22,24	3	70	EC	MAG	UM	PW	IU	LVT	HVAC	REMOTE	3 1	6 THHN 8 GROUND	3/4"	SEE NOTE #1
18	AIR COOLED CONDENSING UNIT B-1	WEST ROOF	9mca			480	3	PDP5W-26,28,30	3	15	EC	MAG	UM	PW	IU	LVT	HVAC	REMOTE	3 1	12 THHN 12 GROUND	1/2"	
19	AIR COOLED CONDENSING UNIT 5-1	EAST ROOF	33mca			480	3	PDP5E-25,27,29	3	40	EC	MAG	UM	PW	IU	LVT	HVAC	REMOTE	3 1	8 THHN 10 GROUND	3/4"	

MOTOR SCHEDULE NOTES:

1. E.C. TO COORDINATE WITH MECHANICAL CONTRACTOR FOR CONNECTION OF EXHAUST FAN INSIDE ROOF TOP UNIT.

ELECTRICAL SCHEDULES R1307B

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DATE: 12/18/15
D

PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

K&A #15097

PANEL 'PDP5W'

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
1	3P15	VAV 5-10	3500 / 1670			VAV 5-11	1P20	2
3				4000 / 1670		VAV 5-11, VAV 5-13	1P20	4
5					3500 / 1670	VAV 5-14, VAV 5-15	1P20	6
7	3P15	VAV 5-19	3500 / 2340			VAV 5-16, VAV 5-21	1P20	8
9				4000 / 2340		VAV 5-17, VAV 5-18	1P20	10
11					2000 / 2340	VAV 5-20	1P20	12
13	1P20	ELECTRIC BASEBOARDS	2500 / 4000			VAV 5-22	1P20	14
15	1P20	ELECTRIC BASEBOARDS		4000 / 3500		ELECTRIC BASEBOARDS	1P20	16
17	1P20	ELECTRIC BASEBOARDS			3500 / 3500	ELECTRIC BASEBOARDS	1P20	18
19	1P20	ELECTRIC BASEBOARDS	14390 / 1000			ROOF TOP UNIT 5-1	3P70	20
21	1P30	WATER HEATER		14390 / 6000				22
23	1P30	WATER HEATER			14390 / 6000			24
25			2490			AIR COOLED CONDENSING UNIT B-1	3P20	26
27				2490				28
29					2490			30
31								32
33								34
35								36
37								38
39								40
41								42

VOLTAGE: 277/480 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: 31,790
TOTAL PHASE B: 42,390
TOTAL PHASE C: 39,390
TOTAL PANEL: 113,570
TOTAL AMPS: 136.8
DEMAND WATTS: DEMAND AMPS:

SQ.D CAT. # NF442L2/MH44/NC44S
☐ MAIN BREAKER ■ MAIN LUGS ONLY
AMPS: 200 AIC AMPS:
☐ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS: PROVIDE BRANCH BREAKERS AS REQUIRED.

PANEL 'PDP5E'

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
1	1P20	VAV 5-1	3000 / 4000			VAV 5-2, VAV 5-3	3P20	2
3	1P20	VAV 5-5		3000 / 4000				4
5	1P30	WATER HEATER			3000 / 6000			6
7	3P40	ELECTRIC DUCT HEATER	3170 / 7340			VAV 5-4, VAV 5-9	3P20	8
9				3170 / 7340				10
11					3170 / 7340			12
13	1P20	ELECTRIC BASEBOARDS	4000 / 4000			ELECTRIC BASEBOARDS	1P20	14
15	1P20	ELECTRIC BASEBOARDS		1000 / 4000		ELECTRIC BASEBOARDS	1P20	16
17	1P20	ELECTRIC BASEBOARDS			3000			18
19	3P20	AIR HANDLING UNIT 5-1	1920 / 2800			EXHAUST FAN 5-1	3P15	20
21				1920 / 2800				22
23					1920 / 2800			24
25	3P40	AIR COOLED CONDENSING UNIT 5-1	9130					26
27				9130				28
29					9130			30
31								32
33								34
35								36
37								38
39								40
41								42

VOLTAGE: 277/480 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: 39,360
TOTAL PHASE B: 36,360
TOTAL PHASE C: 36,360
TOTAL PANEL: 112,080
TOTAL AMPS: 135.0
DEMAND WATTS: DEMAND AMPS:

SQ.D CAT. # NF442L2/MH44/MC44S
☐ MAIN BREAKER ■ MAIN LUGS ONLY
AMPS: 250 AIC AMPS: 14,000
☐ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS: PROVIDE BRANCH BREAKERS AS REQUIRED.

PANEL 'LP5W'

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
1	1P20	EXIT LIGHTS	360 / 130			RECEPTACLES (2)	1P20	2
3	1P20	NIGHT LIGHTS/EM EGRESS LIGHTING		360 / 546		RECEPTACLES (2)	1P20	4
5	1P20	LIGHTING			360 / 1614	RECEPTACLES (2)	1P20	6
7	1P20	LIGHTING	360 / 1422			RECEPTACLES (2)	1P20	8
9	1P20	LIGHTING		360 / 1188		RECEPTACLES (2)	1P20	10
11	1P20	LIGHTING			360 / 1315	RECEPTACLES (2)	1P20	12
13	1P20	RECEPTACLES (6)	360 / 1080			RECEPTACLES (2)	1P20	14
15	1P20	RECEPTACLES (5)		360 / 900		RECEPTACLES (2)	1P20	16
17	1P20	RECEPTACLES (5)			360 / 900	RECEPTACLES (2)	1P20	18
19	1P20	RECEPTACLES (5)	540 / 900			RECEPTACLES (3)	1P20	20
21	1P20	RECEPTACLES (6)		360 / 1080		RECEPTACLES (2)	1P20	22
23	1P20	RECEPTACLES (5)			360 / 900	RECEPTACLES (2)	1P20	24
25	1P20	RECEPTACLES (6)	360 / 1080			RECEPTACLES (2)	1P20	26
27	1P20	RECEPTACLES (6)		360 / 1080		RECEPTACLES (2)	1P20	28
29	1P20	RECEPTACLES (5)			360 / 900	RECEPTACLES (2)	1P20	30
31	1P20	RECEPTACLES (5)	180 / 900			RECEPTACLES (1)	1P20	32
33	1P20	RECEPTACLES (6)		360 / 1080		RECEPTACLES (2)	1P20	34
35	1P20	RECEPTACLES (5)			360 / 900	RECEPTACLES (2)	1P20	36
37	1P20	RECEPTACLES (5)	360 / 900			RECEPTACLES (2)	1P20	38
39	1P20	RECEPTACLES (5)		360 / 900		RECEPTACLES (2) IG	1P20	40
41	1P20	RECEPTACLES (5)			360 / 900	RECEPTACLES (2) IG	1P20	42

VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: CONTINUED
TOTAL PHASE B: CONTINUED
TOTAL PHASE C: CONTINUED
TOTAL PANEL:
TOTAL AMPS:
DEMAND WATTS: DEMAND AMPS:

SQ.D CAT. # NQOD442L225TFL/MH41/MHC41S
☐ MAIN BREAKER ■ MAIN LUGS ONLY
AMPS: 225 AIC AMPS: 10,000
■ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS: PROVIDE BRANCH BREAKERS AS REQUIRED.

PANEL 'LP5W' (CONT.)

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
43	1P20	RECEPTACLES (5)	900 / 900			RECEPTACLES (5)	1P20	44
45	1P20	RECEPTACLES (5)		1080 / 900		RECEPTACLES (6)	1P20	46
47	1P20	RECEPTACLES (5)			360 / 900	RECEPTACLES (2)	1P20	48
49	1P20	SPARE				SPARE	1P20	50
51	1P20	SPARE				SPARE	1P20	52
53	1P20	SPARE				SPARE	1P20	54
55	1P20	SPARE				SPARE	1P20	56
57	1P20	SPARE				SPARE	1P20	58
59	1P20	SPARE				SPARE	1P20	60
61	1P20	SPARE				SPARE	1P20	62
63	1P20	SPARE				SPARE	1P20	64
65	1P20	SPARE				SPARE	1P20	66
67								68
69								70
71								72
73								74
75								76
77								78
79								80
81								82
83								84

VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: 11,092
TOTAL PHASE B: 11,274
TOTAL PHASE C: 11,209
TOTAL PANEL: 33,575
TOTAL AMPS: 93.3
DEMAND WATTS: DEMAND AMPS:

SQ.D CAT. # NQOD442L225/MH41/MHC41S
☐ MAIN BREAKER ■ MAIN LUGS ONLY
AMPS: 225 AIC AMPS: 10,000
☐ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS: PROVIDE BRANCH BREAKERS AS REQUIRED.

PANEL 'LP5E'

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
1	1P20	EXIT SIGNS	360 / 30			RECEPTACLES (2)	1P20	2
3	1P20	NIGHT LIGHTS		360 / 290		RECEPTACLES (2)	1P20	4
5	1P20	LIGHTING			360 / 1580	RECEPTACLES (2)	1P20	6
7	1P20	LIGHTING	360 / 1143			RECEPTACLES (2)	1P20	8
9	1P20	LIGHTING		360 / 1352		RECEPTACLES (2)	1P20	10
11	1P20	SPARE			360	RECEPTACLES (2)	1P20	12
13	1P20	RECEPTACLES (5)	360 / 900			RECEPTACLES (2)	1P20	14
15	1P20	RECEPTACLES (6)		360 / 1080		RECEPTACLES (2)	1P20	16
17	1P20	RECEPTACLES (5)			360 / 900	RECEPTACLES (2)	1P20	18
19	1P20	RECEPTACLES (5)	180 / 900			RECEPTACLES (1)	1P20	20
21	1P20	RECEPTACLES (5)		360 / 900		RECEPTACLES (2)	1P20	22
23	1P20	RECEPTACLES (6)			360 / 1080	RECEPTACLES (2)	1P20	24
25	1P20	RECEPTACLES (5)	360 / 900			RECEPTACLES (2)	1P20	26
27	1P20	RECEPTACLES (5)		360 / 900		RECEPTACLES (2)	1P20	28
29	1P20	RECEPTACLES (5)			180 / 900	RECEPTACLES (1)	1P20	30
31	1P20	RECEPTACLES (5)	360 / 900			RECEPTACLES (2)	1P20	32
33	1P20	RECEPTACLES (6)		360 / 1080		RECEPTACLES (2)	1P20	34
35	1P20	RECEPTACLES (6)			180 / 1080	RECEPTACLES (1)	1P20	36
37	1P20	RECEPTACLES (2)	360 / 360			RECEPTACLES (2)	1P20	38
39	1P20	VAV 5-6, VAV 5-7, VAV 5-8 CONTROL WIRING		360 / 600		RECEPTACLES (2)	1P20	40
41	1P20	SPARE				SPARE	1P20	42

VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: CONTINUED
TOTAL PHASE B: CONTINUED
TOTAL PHASE C: CONTINUED
TOTAL PANEL:
TOTAL AMPS:
DEMAND WATTS: DEMAND AMPS:

SQ.D CAT. # NQOD442L225TFL/MH41/MHC41S
☐ MAIN BREAKER ■ MAIN LUGS ONLY
AMPS: 225 AIC AMPS: 10,000
■ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS: PROVIDE BRANCH BREAKERS AS REQUIRED.

PANEL 'LP5E' (CONT.)

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
43	1P20	SPARE				SPARE	1P20	44
45	1P20	SPARE				SPARE	1P20	46
47	1P20	SPARE				SPARE	1P20	48
49	1P20	SPARE				SPARE	1P20	50
51	1P20	SPARE				SPARE	1P20	52
53	1P20	SPARE				SPARE	1P20	54
55								56
57								58
59								60
61								62
63								64
65								66
67								68
69								70
71								72
73								74
75								76
77								78
79								80
81								82
83								84

VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: 6,373
TOTAL PHASE B: 8,722
TOTAL PHASE C: 7,340
TOTAL PANEL: 22,435
TOTAL AMPS: 62.3
DEMAND WATTS: DEMAND AMPS:

SQ.D CAT. # NQOD442L225/MH41/MHC41S
☐ MAIN BREAKER ■ MAIN LUGS ONLY
AMPS: 225 AIC AMPS: 10,000
☐ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS: PROVIDE BRANCH BREAKERS AS REQUIRED.

EXISTING PANEL 'HP2'

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
1	3P20	WALL HEATER				WALL HEATER	3P20	2
3								4
5								6
7	3P20	WALL HEATER				WALL HEATER	3P20	8
9								10
11								12
13	3P20	WALL HEATER				STAIR LIGHTING	1P20	14
15						STAIR RECEPTACLES	1P20	16
17						STAIR LIGHTING	1P20	18
19	1P20	STAIR LIGHTING				STAIR RECEPTACLES	1P20	20
21	1P20	ELEVATOR PIT LIGHTING				STAIR RECEPTACLES	1P20	22
23	1P20	ELEVATOR SUMP PUMP				STAIR RECEPTACLES	1P20	24
25	1P20	ELEVATOR SUMP PUMP				STAIR RECEPTACLES	1P20	26
27	1P20	ELEVATOR PIT LIGHTING				CONTROL POWER	1P20	28
29	2P60	?			372	BASEMENT EXIT & EGRESS LIGHTING	1P20	30
31			1091			BASEMENT LIGHTING & CEILING EXHAUST	1P20	32
33	1P20	RECEPTACLES (2)		360 / 360		RECEPTACLES (2)	1P20	34
35	1P20	RECEPTACLES (2)			1130 / 360	SUMP PUMP	1P20	36
37	1P20	REFRIGERATOR/VENDING RECEPTACLES (1)	1250 / 1130			FURNACE	1P20	38
39	1P20	RECEPTACLES (7)		1130 / 1260		SEWAGE EJECTOR	1P20	40
41	1P20	RECEPTACLES (6)			1080	SPARE	1P20	42

VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: EXISTING + 3,471
TOTAL PHASE B: EXISTING + 3,110
TOTAL PHASE C: EXISTING + 2,842
TOTAL PANEL: EXISTING + 9,423
TOTAL AMPS: EXISTING + 26.2
DEMAND WATTS: DEMAND AMPS:

■ MAIN BREAKER ☐ MAIN LUGS ONLY
AMPS: 200 AIC AMPS: 10,000
☐ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS: PROVIDE BRANCH BREAKERS FOR NEW CIRCUITS AS REQUIRED.

PANEL 'HP3'

CRCT NO.	BRKR	DESCRIPTION	PHASE A	PHASE B	PHASE C	DESCRIPTION	BRKR	CRCT NO.
1	3P40	WATER BOOSTER PUMP	6000 / 8020			WATER HEATER	1P30	2
3				8020				4
5					8020			6
7	3P15	EXHAUST FAN	450					8
9				450				10
11					450			12
13								14
15								16
17								18
19								20
21								22
23								24
25								26
27								28
29								30

VOLTAGE: 277/480 VOLT, 3 PHASE, 4 WIRE
TOTAL PHASE A: 14,470
TOTAL PHASE B: 8,470
TOTAL PHASE C: 8,470
TOTAL PANEL: 31,410
TOTAL AMPS: 37.8
DEMAND WATTS: DEMAND AMPS:

SQ.D CAT. # NF430L1/MH32/NC32S
☐ MAIN BREAKER ■ MAIN LUGS ONLY
AMPS: 125 AIC AMPS: 14,000
☐ FEED THROUGH LUGS ☐ SUB FEED LUGS
☐ FLUSH ■ SURFACE
COMMENTS:

ELECTRICAL SCHEDULES R1307B

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DATE: 12/18/15
D

PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET
ES-3
OF 13

K&A #15097

SECTION 16001
ELECTRICAL WORK

I. SCOPE

A. Requirements of Conditions of Contract and of sections listed under General Requirements and Special Conditions apply to work under this section.

B. Work Included:
I. Scope
II. General Provisions
III. Raceway System
IV. Wiring Methods
V. Distribution Facilities
VI. Wiring Devices
VII. Location of Outlets and Wiring Devices
VIII. Lighting Fixtures and Lamps
IX. Motor Wiring
X. Telephone System
XI. Fire Alarm System

II. GENERAL PROVISIONS

A. In general, this work includes everything essential for a complete electrical system in operating order as shown or implied on the drawings or as specified herein. The contractor shall provide all labor, materials, tools, test instruments, scaffolding, and transportation as necessary to complete the project in conformity with the drawings, the specifications and other contract documents.

B. Installation shall comply with rules and regulations of the latest edition of the Occupational Safety and Health Act, National Electrical Code, State Electrical Code, local municipal code, Americans With Disabilities Act (ADA), the electric utility furnishing electrical energy to this project and any other board having jurisdiction over the electrical installation.

C. Contractor shall be licensed to perform electrical work in the municipality in which the project is located and shall obtain all necessary permits for electrical work, shall pay all required fees and sales or use tax as applicable to this branch of work. Upon completion of the work, deliver to the owner without cost all required certificates of inspection and approval.

D. The contractor shall examine the site and all drawings relating to this work (including architectural, electrical, HVAC, plumbing etc.) and shall become fully informed as to the extent and character of the work required and its relation to other work in the building or on the premises. No consideration will be granted for alleged misunderstanding of materials to be furnished or work to be done, it being understood that the tender of a proposal carries with it the agreement to all items and conditions referred to herein or indicated on the drawings.

E. Materials and Equipment:

1. Unless otherwise stipulated in the specifications or noted on the drawings, all materials and equipment incorporated in the work shall be new and unused and in complete accordance with the specification.

2. Materials and equipment by manufacturers other than those specifically named will be considered if such substitution items are equal in quality, in accordance with general requirements applicable thereto and are otherwise similar in composition, dimension, construction, capacity, finish, and performance.

3. Furnish minimum of (5) copies of shop drawings. Equipment of a type such as lighting fixtures, special systems, electrical apparatus shall be bound and in separate brochures, each complete with an index sheet. If equipment covered by these shop drawings is installed prior to drawing approval, it will be at this contractor's risk.

F. Dimensions and Definite Locations: The drawings depicting electrical work are diagrammatic and show approximate locations of all electrical equipment; exact locations of equipment shall be established in the field and shall be satisfactory to the architect.

G. Cutting, Patching, Cleaning and Painting:

1. This contractor shall be responsible for all cutting and patching necessary for the installation of the electrical work. In the event holes must be cut through reinforced concrete, they must be core drilled and only with specific approval of the architect.

2. Damage done by this contractor shall be repaired by the contractor whose work is affected, at the expense of the electrical contractor.

3. The contractor shall clean all exposed iron work, interior and exterior of panels and pull boxes, etc., and remove all rubbish and debris resulting from the work.

4. Where painted surfaces of equipment have been abused, removed or rusted during construction, the contractor shall paint same to match original factory or surrounding finish.

H. Identification and Instruction:

1. Each panelboard shall be identified with an engraved black and white laminated plastic plate and have a typewritten directory indicating rooms or equipment being served.

2. Furnish three copies of instructions and maintenancemanuals for all complex equipment and systems being supplied under this contract.

I. Final Tests: On completion of the work and in the presence of the owner or his representative:

1. Conduct such tests as are necessary or requested to demonstrate the absence of short circuits and ground, feeders to be meggered.

2. Make such changes as directed to make the installation comply with the plans and specifications.

3. Repair or replace all faulty work or equipment as directed by the owner.

J. Temporary Light and Power

1. The existing building electrical service and distribution equipment is available to feed construction power requirements for this expansion. A field survey of existing panels to determine location(s) and capacities should be completed prior to furnishing bid. The temporary light and power system shall include all necessary branch circuits, GFCI receptacles outlets, lighting fixtures, lamps and the maintenance thereof.
All energy charges for temporary lighting and power to be paid by the owner.
Electrical Contractor shall provide temporary lighting and power systems adequate for the construction of this project and in accordance with OSHA requirements for construction projects.

2. Contractors requiring power for equipment requiring more than 20 ampere, 120 volt, single phase, shall make separate arrangements with the Electrical Contractor for installation and related costs of same.

K. Acceptance, Defective Work, and Guarantee:

1. Upon completion of the installation, the contractor shall furnish certificates of approval from all authorities having jurisdiction. He shall demonstrate that all work is complete and in perfect operation with raceway and conduit system properly grounded; all wiring to be free from grounds, shorts and that the entire installation is free from any physical defects.

2. The contractor hereby agrees to remedy and make good in the manner and time directed by the architect any defective workmanship materials or equipment appearing within one year from the date of acceptance of the work by the owner, providing such defects are not clearly due to abuse or misuse the owner or occupants of the project after its occupancy.

L. Record Drawings. The Contractor shall keep an up-to-date set of "record drawings" kept current on a daily basis. Such drawings shall be available to the engineer or his representative at the job site at all times. Upon completion of the contract turn over to the engineer one complete set of reproducible drawings.

III. RACEWAY SYSTEM

A. Furnish and install a complete conduit raceway system for all feeders, branch circuits, control, instrumentation and communication circuits, unless otherwise indicated in the specifications or on the plans.

1. Size all components in accordance with the code.

2. Complete raceway system shall be metallic and grounded so that ground will be electrically continuous from the service to all outlet boxes.

B. Conduit:

1. In General:

a. Galvanized rigid steel, I.M.C., or E.M.T. in trade sizes.

b. Flexible, metal conduit (Greenfield) as approved and required by code.

2. Conduit shall be securely fastened to structural parts of the building. Supporting devices shall be specifically designed for the application.

C. Couplings, Connectors, and Fittings:

1. Conduit couplings shall be rain-tight compression type made of steel. Indentor, cast set screw or drive on type couplings or connectors are NOT acceptable. Male fittings are to have insulated throats.

2. Conduit terminations at cabinets and boxes shall be rigidly secured with galvanized lock nuts and bushings.

3. Provide expansion/deflection fittings in all metallic conduit runs where crossing expansion joints in a structural wall or slab.

4. Where conduits or exposed cables penetrate fire rated or fire stopped walls, partitions, ceilings, floors, etc. approved fire stop devices shall be used to keep fire rating integrity.

D. Outlet Boxes:

1. Furnish galvanized steel outlet boxes as required to accommodate device as indicated on the drawing and sized in accordance with the code.

2. All outlet boxes shall be 4" square minimum, set parallel to construction, independently attached to the structure and adjusted to set level with finished surfaces. Through wall or back-to-back outlets are not allowed.

3. Outlet boxes for surface, pendant, or wall bracket type lighting fixtures shall be complete with fixture stud or strap. Ceiling boxes shall be 4"x2-1/8" deep octagonal and shall be supported with approved type channel box spanning ceiling carrier channels.

4. For the mounting of single receptacles, single or double switch outlets in plaster or concrete walls use 4" square boxes fitted with 3/4" raised plaster covers. More than two switches shall be installed in multiple gang switch box. In brick or block walls use masonry boxes except for single gang outlets in 4" square shallow boxes with square cut device covers of thickness to suit block, brick or tile.

IV. WIRING METHOD

A. General: Furnish and install feeders, branch circuit, and control wiring required to complete installation of lighting, power, and controls as shown on the drawings.

B. Conductor: All conductor shall be new, soft drawn copper with 600 volt insulation color coded as required by the Code and otherwise as follows:

1. Delivered to the job site in the original cartons.

2. No. 8 and larger shall be stranded.

3. No. 12 minimum unless otherwise indicated.

C. Insulation:

1. In General: Type THHN/THWN solid or stranded, for No. 10 and smaller.

2. All Conductor No. 8 and larger: Type THHN/THWN stranded.

3. Fixture Wire: Type THHN, 90 degree C, No. 14 minimum (applicable to conductor in fixture stems, fluorescent fixture channels and flexible Greenfield connection).

D. Branch circuit wiring in general shall be provided to limit voltage drop at the outlet to 3% per code. The following will be considered minimum requirements:

1. 0 to 75 foot run from panel to first outlet No. 12 AWG minimum.

2. 75 to 150 foot run from panel to first outlet increase one wire size to No. 10 AWG.

E. Solderless Connectors:

1. Joints, taps, and splices in conductor No. 10 and smaller shall be made with spring compression type solderless connectors with plastic cover of type and size by approved manufacturer.

2. Joints, taps, and splices in conductor No. 8 and larger shall be made with solderless connectors of an approved type and size.

3. Each joint, tap, and splice in conductor No. 8 and larger shall be taped with vinyl tape providing insulation not less than that of the conductor and, in any case not less than two half-lap layers each.

V. DISTRIBUTION FACILITIES

A. General: See electric service riser diagram and details on the drawings; furnish and install all equipment and do all work in accordance with same.

B. The Electrical Contractor shall notify the power company of the change in use of the existing service and provide any load information required by the power company for their determination that their equipment is adequate to supply the existing and new electrical loads. The Electrical Contractor shall verify with the utility company that the size of the existing transformer as well as the secondary incoming wiring is of adequate size to accommodate the new and existing loads.

C. Grounding:

1. Metallic raceway system shall be grounded as required by the code, so that ground will be electrically continuous from the service entrance to all outlet boxes.

D. Feeders:

1. See Riser Diagram on the drawings; size all conduit and wiring and furnish conductor insulation accordingly.

2. Extend feeder at full capacity from point of origin to last panel.

3. Provide junction or tap boxes as indicated and required.

E. Distribution Panels and Cabinets:

1. Furnish distribution panels and cabinets in size required to accommodate as indicated on the plans with the following requirements considered minimum.

a. Galvanized steel cabinets flush or surface mounted as called for on the plans with 4" minimum width gutters and adjustable trim clamps on panel front.

2. Provide typewritten directory behind clear plastic on inside of door, listing all branch circuits.

3. Provide engraved nameplate identifying panel.

4. Breakers to be bolted type, quick make, quick?break, trip indicating, thermal magnetic. Multiple breakers to have a common trip. No handle ties acceptable.

VI. WIRING DEVICES

A. At each location indicated on the drawings, furnish, and install specification grade wiring devices as indicated by symbol on the drawings. All devices to be new. Arrow-Hart is specified, equal by Hubbell is acceptable.

1. Local Switches: Up to 1000W, use Arrow-Hart Nos. 1841I, 1952I, 1843I, or 1844I. 1000 to 1900W, use Arrow-Hart Nos. 1941I, 1942I, 1943I, or 1944I.

2. Receptacles:

a. In General: Arrow-Hart No. 5242I, 15 amp., 125 volt or No. 5342I (20 amp).

b. G.F.I. Receptacle: Arrow-Hart No. GF5242I (15 amp) or GF No. 5242I (20 amp).

B. Furnish combination, multi-gang and special plates as required.

1. Finished Area Public and Commercial: Satin stainless steel.

2. Unfinished Area: Galvanized steel.

VII. LOCATION OF OUTLETS AND WIRING DEVICES

A. Location of outlets and electrical equipment of the drawings or established in specifications. The exact location of electrical outlets shall be established in the field by a directive from the architect. Generally, outlets shall be located as required for proper installation of the equipment served, otherwise, locations shall be established by construction or code requirements and such to be coordinated with equipment of other trades.

B. The architect reserves the right to make reasonable changes in the location of outlets, apparatus, or equipment up to the time of roughing-in. Such changes as directed shall be made by the contractor without additional compensation.

C. Generally, wiring devices shall be located as follows:

1. Wall receptacles shall generally be mounted 18" up unless otherwise indicated.

2. Special purpose receptacles shall be located as required by equipment served.

3. Switches shall be centered 48" above finished floor on latch side of door opening with edge of plate not more than 12" from door frame.

VIII. LIGHTING FIXTURES AND LAMPS

A. Furnish and install lighting fixtures complete with initial fill of lamps.

1. As called for in the lighting fixture schedule on the plans.

2. In quantities and/or row lengths as shown on the plans. Plans shall be scaled for this purpose. Furnish row lengths corresponding to the nearest multiple of 4'-0" as scaled.

B. Ballasts shall be electronic type where available and shall meet applicable ANSI Standards and Underwriters' Laboratories specifications regarding light output, reliable starting, radio interference and dielectric rating. The Electrical Contractor is responsible for checking voltage requirements of each ballast prior to release of lighting fixtures.

1. Ballasts for fluorescent fixtures shall be manufactured by Advance, Universal, Sylvania, General Electric or approved equal made in the U.S. with the following characteristics:

a. Ballast shall operate lamps at a frequency of 42 KHz or higher with less than 2% lamp flicker.

b. Ballast shall operate at an input voltage of 108-132 Vac (120V line) or 244-305 Vac (277V line) at an input frequency of 60 Hz. Light output shall remain constant for line voltage fluctuation of plus/minus 5%.

c. Ballast shall comply with EMI and RFI limits set by the FCC (Part 18) for Non-Consumer Equipment and not interfere with normal electrical equipment.

d. Ballast shall withstand transients as specified by ANSI C62.41 for location category A3 in the normal mode and location category A1 in the common mode.

e. Ballast shall meet applicable ANSI standards.

f. Ballast shall have a minimum power factor of .98.

g. Ballast shall have less than 10% Total Harmonic Distortion.

h. Ballast shall have less than 6% Third Harmonic distortion.

i. Ballast shall meet sound rating "A".

j. Ballast must be Underwriters Laboratories (UL) listed Class P, Type 1 Outdoor.

k. Ballast shall provide normal rated lamp life as stated by lamp manufacturers.

l. Rapid start ballast are series wired and shall maintain full cathode heat during operation.

m. Rapid start ballast shall have less than a 1.5 Lamp Current Crest Factor (LCCF) and instant start ballasts shall have less than a 1.7 LCCF.

n. Instant start ballast shall have parallel lamp operation.

2. Ballasts for metal halide lamps shall be pulse start, constant wattage, auto transformer type. Line current during starting shall be less than normal operating current. All ballasts shall be designed for operation down to -20° F. Provide lamp/ballast combination as recommended by the lamp manufacturer.

C. Lamps

1. Incandescent lamps shall be 130 volt.

2. Fluorescent lamps unless otherwise noted on the plans shall be T8 SP35 energy saving as manufactured by General Electric, Sylvania or Phillips.

3. Metal halide lamps shall be warm tone and pulse start type with burning position coordinated with fixture manufacturer. Provide clear or coated lamp per manufacturer's recommendations for optimal fixture performance based on even illumination. Metal halide lamps are to be manufactured by Venture.

D. The basic catalog number only is indicated on the Lighting Fixture Schedule; this contractor shall furnish complete lighting fixture in quantities and/or row lengths as shown on the plans. He shall furnish and install couplings, suspension assemblies, mounting brackets, and all auxiliary accessories required to install lighting fixtures in accordance with the manufacturer's recommendations as approved by the architect.

IX. MOTOR WIRING

A. Applicable to motors furnished under architectural, heating, air conditioning, and plumbing branches of the work.

B. Motor starters shall be furnished by those supplying equipment and turned over to this contractor.

C. This contractor shall install starters in an approved manner at locations established by the contractor supplying the equipment.

D. This contractor shall extend motor circuit to location of starter and from same to motor terminal boxes making final connections in each instance.

E. All line voltage motor control wiring from starter to motor controllers, and all incidental line voltage wiring shall be done by this contractor, except that the heating and ventilating temperature control contractor shall do all low voltage control wiring associated with the heating, ventilating, and air conditioning equipment.

F. Provide motor disconnect switches as required.

G. Provide green ground wire extending from starter to motor frame within flexible Greenfield terminating at motor outlet box. Length of Greenfield to be 18" minimum.

H. Provide Avery label identifying each motor, starter, control, disconnect as to usage and voltage.

X. TELEPHONE and DATA SYSTEM

A. Local outlets to be a 4" square box with 1" conduit extended to above an accessible ceiling.

B. Provide a four module, single gang face plate with voice and data jacks. Coordinate jack requirements with owners IT representative.

C. Provide a pull wire in all conduits.

XI. FIRE ALARM SYSTEM

A. The fire alarm system is an existing system. Expand the existing system as required to accommodate the new devices. Extend the existing system to new devices shown on the plans as required. Provide required equipment to establish zones for the new equipment. Provide wiring and conduit as required from the F.A.C.P. to the new devices. The added equipment is to be connected, tested and left in first-class operating condition. The system shall be U.L. listed for fire alarm use and shall meet NFPA-72A, B, C, D, E and ADA (Americans with Disabilities Act), local and state requirements, and shall be approved by the Fire Marshall.

B. System Operation: The new equipment shall function the same as the existing equipment and shall be annunciated with its assigned fire alarm zone. Actuation of any manual station or automatic detector shall activate the system.

C. All equipment, wiring and operation of the system shall comply with Local and National Codes and ordinances.

D. Circuits of this fire alarm system shall meet requirements of the National Electric Code for a limited energy low voltage system.

E. Mounting Heights
1. Manual Stations - 48".
2. Audio Visual Signals - 80" or ceiling (c/g) as indicated on plans.
3. Visual signals - 80".

GENERAL:

1) JOB SPECIFICATIONS ARE AS FOLLOWS:

CODE - CONTRACTOR TO LOCATE, REVIEW AND COMPLY WITH ALL LOCAL, STATE AND/OR NATIONAL CODES. CONTRACTOR TO SPECIFICALLY LOCATE, REVIEW AND COMPLY WITH ALL LOCAL CODE AMENDMENTS.

WORKMANSHIP/WARRANTY - CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, MATERIALS, METHODS, TECHNIQUES, SEQUENCES AND DETAILS TO PERFORM ITS WORK. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE THE EQUIPMENT/SYSTEMS ARE PLACED INTO OPERATION AND ACCEPTED BY THE OWNER. WARRANTY TO INCLUDE LABOR & MATERIALS REQUIRED FOR WARRANTY ISSUES.

SCHEDULED EQUIPMENT - CONTRACTOR PRICING TO BE BASED ON THE SCHEDULED EQUIPMENT. SUBSTITUTIONS TO BE SUBMITTED AS DEDUCTS (OR ADDS) TO THE BASE CONTRACT ALONG WITH A DESCRIPTION OF THE DIFFERENCES.

SUBMITTALS - CONTRACTOR TO COORDINATE SUBMITTAL SCHEDULE WITH OWNER IMMEDIATELY AFTER ACCEPTANCE OF CONTRACT. AS SOON AS POSSIBLE, EMAIL NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING SUBMITTALS (INCLUDING ALL ACCESSORIES). NO NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING ITEMS ARE TO BE INSTALLED UNTIL SUBMITTED INFORMATION IS APPROVED. UPON COMPLETION OF PROJECT, CONTRACTORS TO PROVIDE (4) HARD COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ALL NEW EQUIPMENT WITH TYPE WRITTEN SECTION TAGS AND IN SAME COLORED BINDERS.

SHOP DRAWINGS/AS BUILT DRAWINGS - BEFORE INSTALLATION, PROVIDE 1/4" SCALE 'SHOP DRAWINGS' FOR COORDINATION AND APPROVAL. 'SHOP DRAWINGS' TO SHOW DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. INSTALLATION TO START ONLY AFTER WRITTEN APPROVAL FROM ENGINEER. UPON COMPLETION OF THE INSTALLATION WORK, PROVIDE 'AS BUILT' CHANGES CLEARLY SHOWING THE FINAL DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. ALL SHOP DRAWING AND AS BUILT DRAWING CHANGES TO BE MADE WITH 'AUTO CAD' DRAFTING SOFTWARE AND SUBMITTED IN PAPER AND DIGITAL FORMAT. DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS 'SHOP DRAWINGS' OR SUBMITTALS. PROVIDE FOUR PAPER COPIES OF DRAWINGS.

OPERATION AND MAINTENANCE MANUALS - CONTRACTOR TO PROVIDE OPERATION AND MAINTENANCE MANUALS WITH THE FOLLOWING:
- WARRANTY LETTER FROM CONTRACTOR.
- COMPLETE LIST OF MODEL NUMBERS AND SERIAL NUMBERS FOR EACH PIECE OF EQUIPMENT
- INSTALLATION AND OPERATION MANUALS FOR EACH PIECE OF EQUIPMENT
- PARTS LIST FOR EACH PIECE OF EQUIPMENT
- LOCATION AND PHONE NUMBER FOR LOCAL VENDORS FOR EACH PIECE OF EQUIPMENT FOR PARTS AVAILABILITY FOR FUTURE
- SCHEMATIC REPRESENTATION OF LOCATION FOR EACH PIECE OF EQUIPMENT

ACCESS DOORS - CONTRACTOR TO FURNISH AND INSTALL ACCESS DOORS AS REQUIRED. MEP TRADE TO COORDINATE WITH CARPENTRY CONTRACTOR THE LOCATION OF ACCESS DOORS IN ALL CEILINGS, SOFFITS AND WALLS FOR ACCESS TO EQUIPMENT, VALVES, DAMPERS, FIRE DAMPERS, CLEAN OUTS, SWITCHES, CONTROLS, ETC.

STRUCTURE PROTECTION - THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY THE INSTALLATION OF ANY NEW SYSTEMS. WHERE FLOORS, WALLS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE ARE REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLING OR REPAIRING ANY SYSTEM, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A SAFE STRUCTURAL CONDITION IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.

FIRE RESISTANT ASSEMBLIES - PENETRATIONS OF WALL/FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.

ACCESSIBILITY - MANUAL ACCESSIBLE ITEMS IN OCCUPIED SPACES (SUCH AS CONTROLS, THERMOSTATS, SWITCHES AND ELECTRICAL OUTLETS) TO BE LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" PER THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. VERIFY LOCAL ACCESSIBILITY CODE REQUIREMENTS OVER AND ABOVE THE ADA REQUIREMENTS. COORDINATE FINAL MOUNTING HEIGHTS WITH OWNER.

ELECTRICAL - SPECIFICATIONS R1307B

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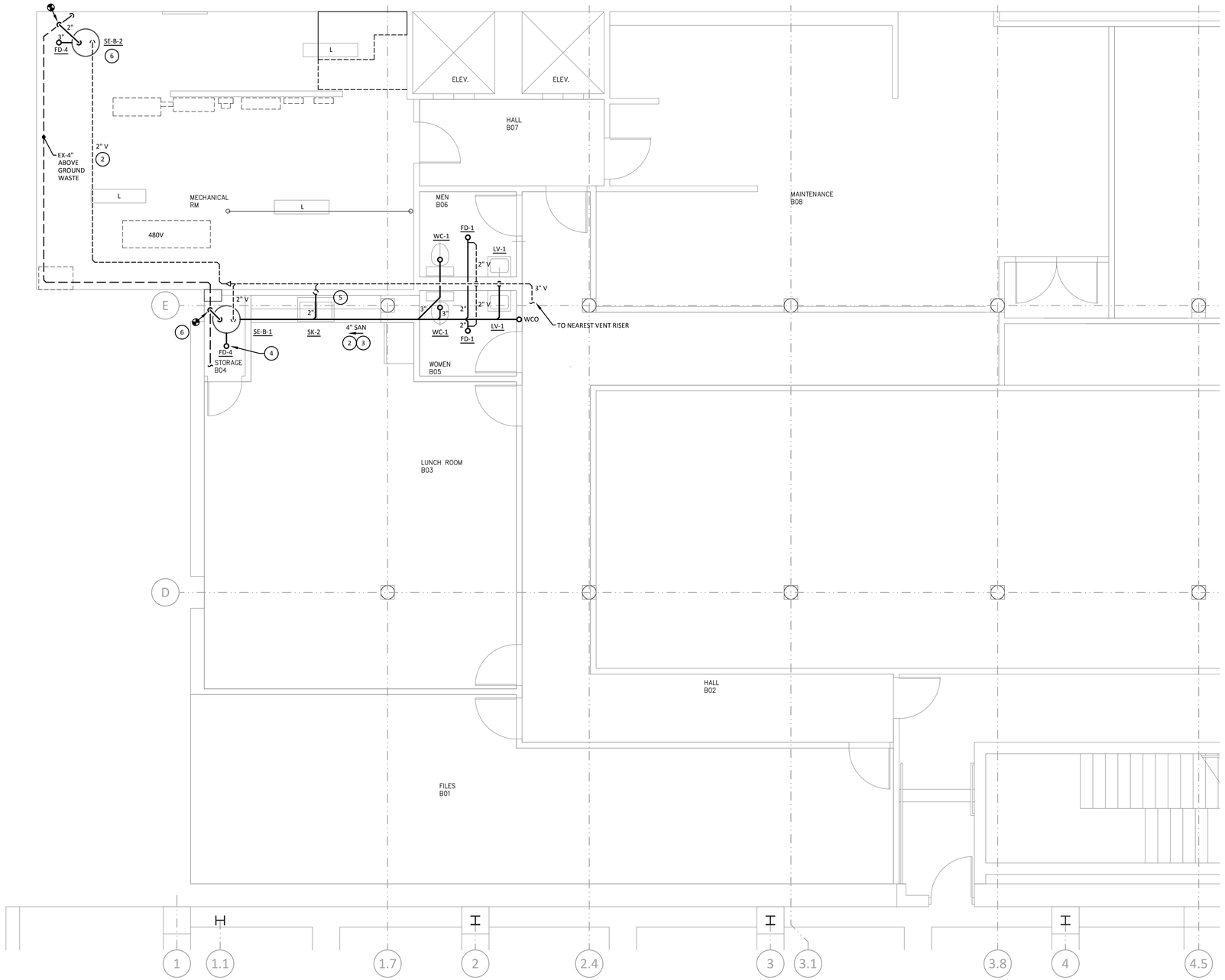
PHASE TWO OFFICE REMODELING
WILL COUNTY COURT ANNEX
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET
ES-4
OF 13

K&A #15097



PLAN NOTES

1. SEE 'PS' SHEETS FOR ADDITIONAL INFORMATION.
2. SLOPE PIPING 1/8" PER FOOT.
3. UNDERGROUND PIPE.
4. INDIRECT WASTE CONNECTION.
5. CONNECT WITH FIXED AIR GAP OR CODE APPROVED ATMOSPHERIC VACUUM BREAKER.
6. SEE SEWAGE EJECTOR PUMP/PIT DETAIL #P-3.

DWV PIPING LEGEND

SAN	SAN (SANITARY DRAIN)
	V (VENT)
STM	STM (STORM DRAIN)
	EX-SAN (EXISTING SANITARY DRAIN)
	EX-V (EXISTING VENT)
	EX-STM (EXISTING STORM DRAIN)

BASEMENT WEST DWV PLAN

SCALE: 1/4" = 1'-0"

BASEMENT WEST DWV PLAN R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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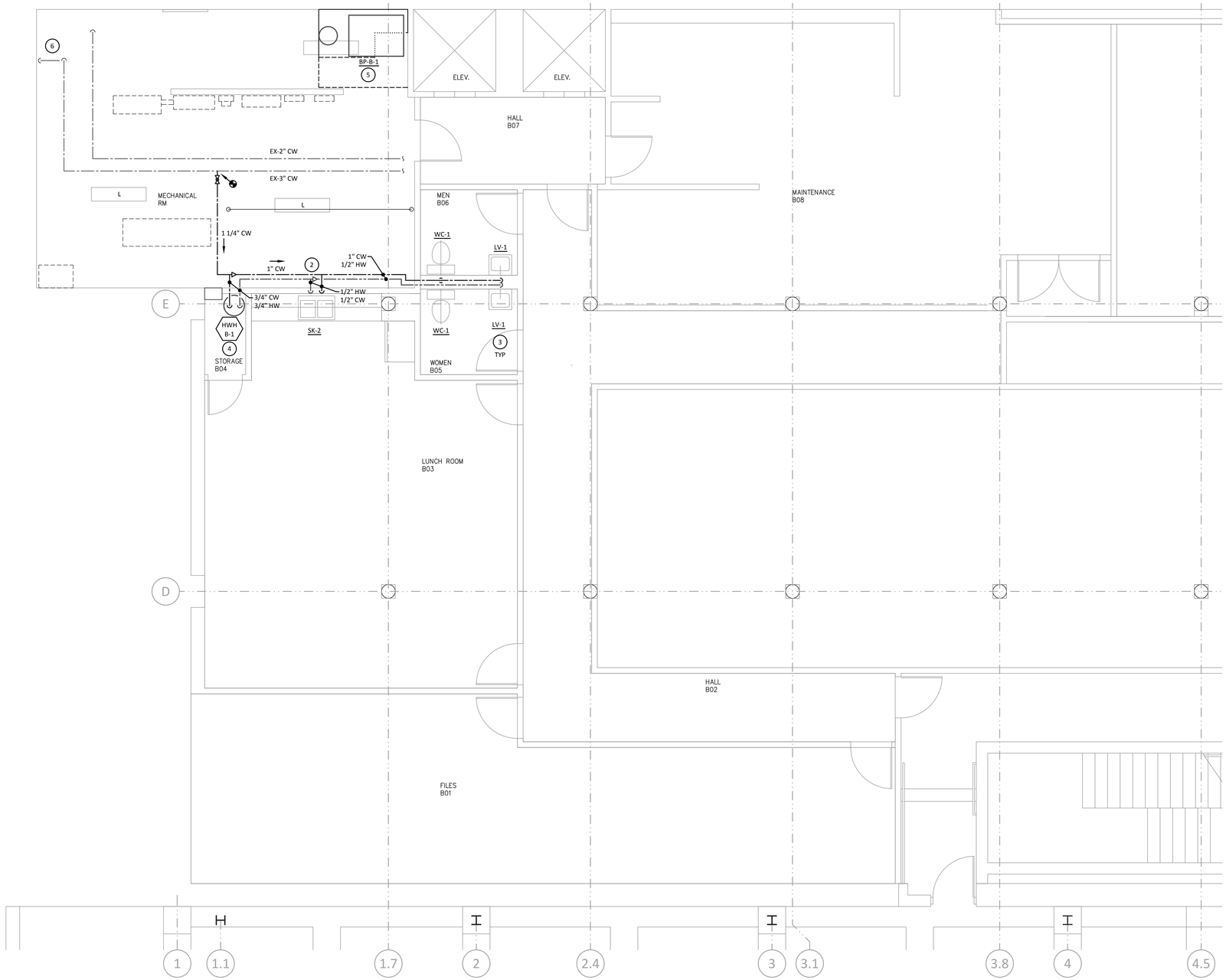
OTTAWA & JEFFERSON STS., JOLIET, ILL.
COUNTY OF WILL, OWNER

SHEET P-1 OF 9



PLAN NOTES

1. SEE 'PS' SHEETS FOR ADDITIONAL INFORMATION.
2. PROVIDE BALL VALVE SHUT-OFFS FOR HOT AND COLD WATER.
3. FURNISH AND INSTALL SAFETY MIXING VALVES ON ALL LAVATORIES. SEE DIVISION 22 (PLUMBING) NOTES.
4. INSTALL NEW HOT WATER HEATER AS HIGH AS POSSIBLE. SEE HOT WATER HEATER PIPING DIAGRAM #P-10.
5. NEW DUPLEX BOOSTER PUMP LOCATION. FILL IN CONCRETE PAD TO ACCOMMODATE NEW BOOSTER PUMP. SEE DETAIL #P-29.
6. SEE WATER SERVICE DETAILS ON 'PS' SHEETS FOR ADDITIONAL INFORMATION.

PIPING LEGEND

- G (GAS)
- CW (COLD WATER)
- HW (HOT WATER)
- HWR (HOT WATER RECIRC.)
- EX-CW (EXISTING COLD WATER)
- EX-HW (EXISTING HOT WATER)
- EX-HWR (EXISTING HOT WATER RECIRC.)

BASEMENT WEST WATER PIPING PLAN

SCALE: 1/4" = 1'-0"

BASEMENT WEST WATER PIPING PLAN R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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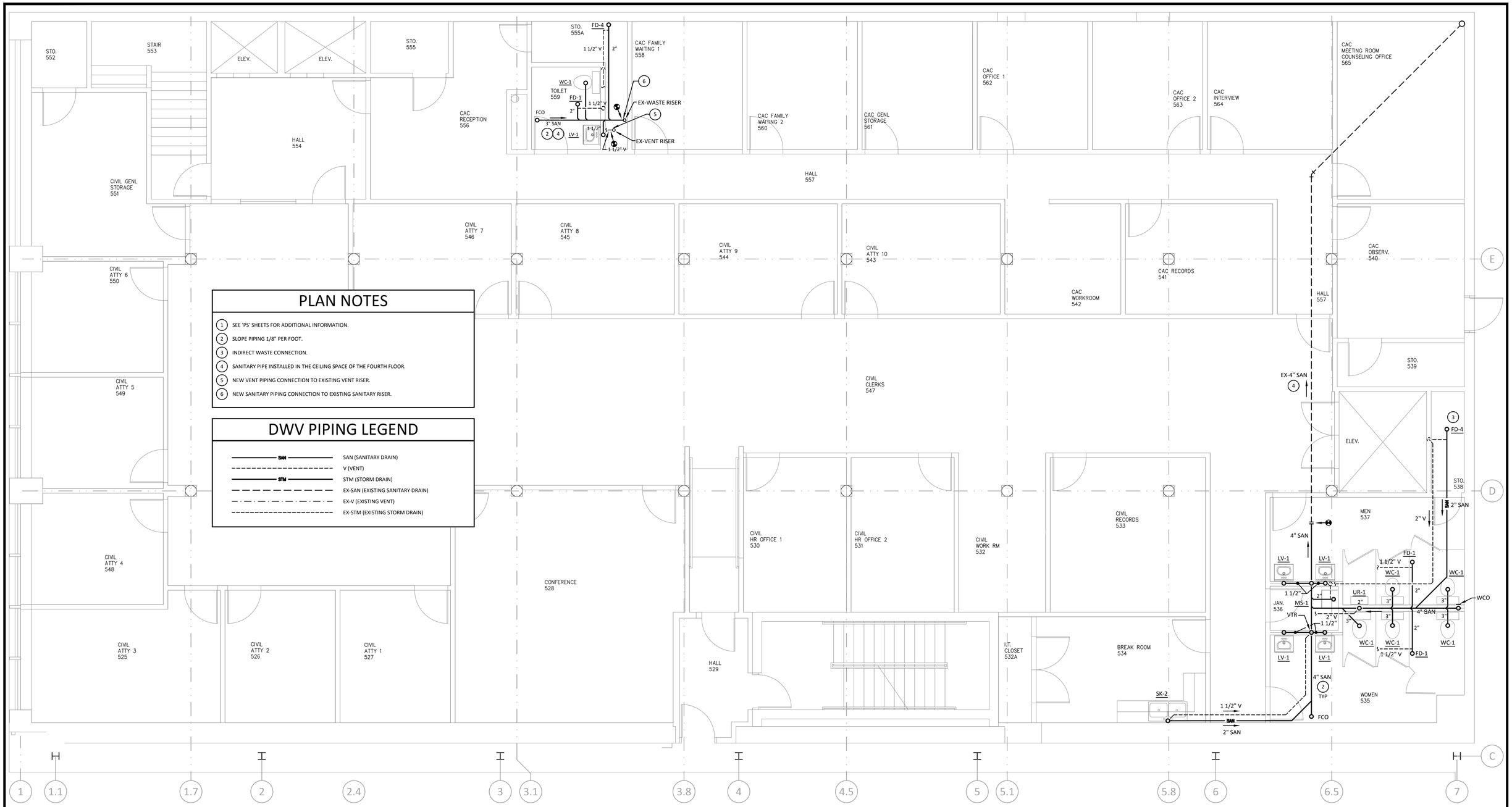
SHEET P-2 OF 9



PLAN NOTES

1. SEE 'PS' SHEETS FOR ADDITIONAL INFORMATION.
2. SLOPE PIPING 1/8" PER FOOT.
3. INDIRECT WASTE CONNECTION.
4. SANITARY PIPE INSTALLED IN THE CEILING SPACE OF THE FOURTH FLOOR.
5. NEW VENT PIPING CONNECTION TO EXISTING VENT RISER.
6. NEW SANITARY PIPING CONNECTION TO EXISTING SANITARY RISER.

DWV PIPING LEGEND

SAN	SAN (SANITARY DRAIN)
	V (VENT)
STM	STM (STORM DRAIN)
	EX-SAN (EXISTING SANITARY DRAIN)
	EX-V (EXISTING VENT)
	EX-STM (EXISTING STORM DRAIN)

FIFTH FLOOR WEST DWV PLAN

SCALE: 1/4" = 1'-0"

FIFTH FLOOR WEST DWV PLAN R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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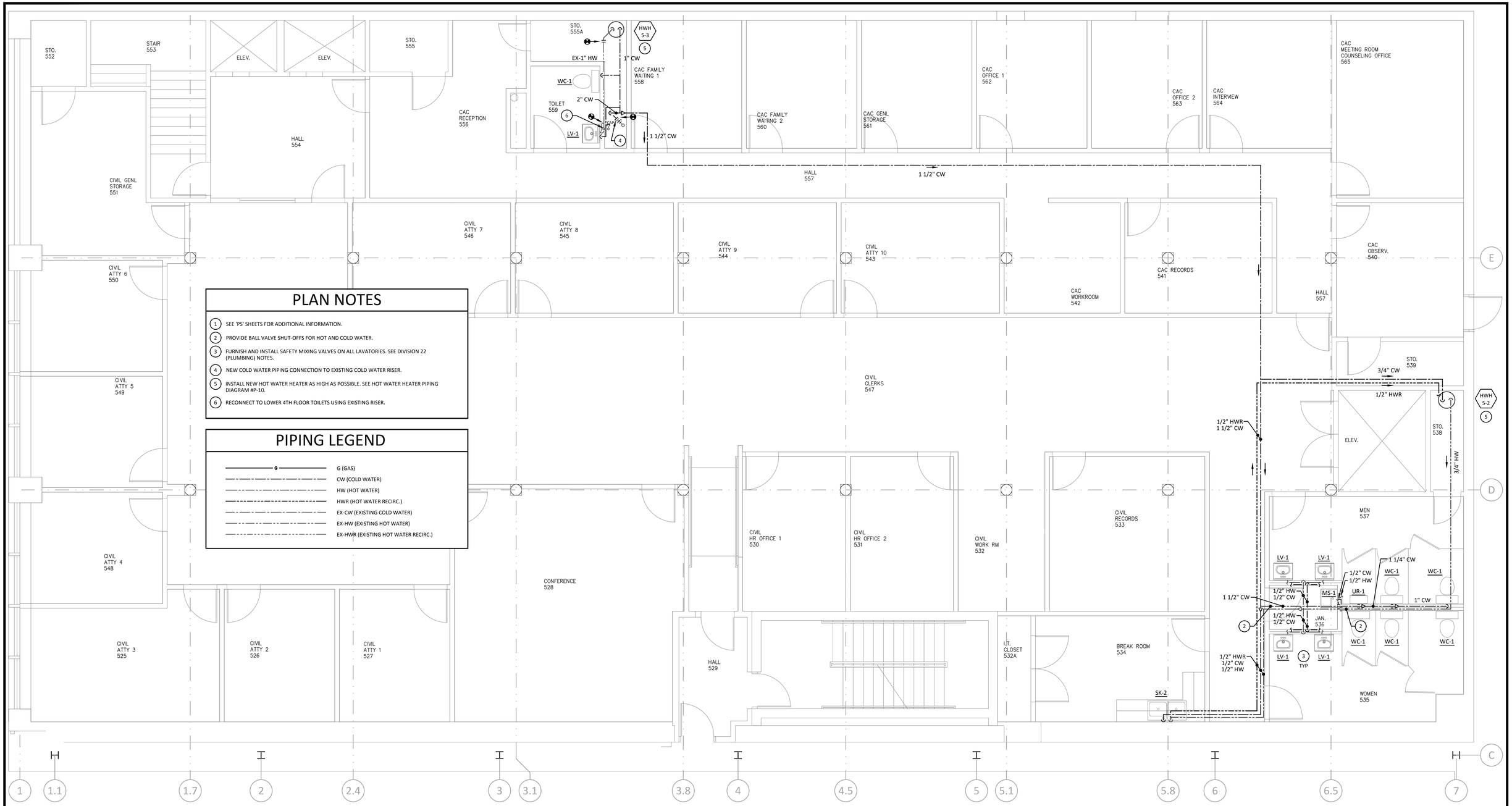
COUNTY OF WILL, OWNER

SHEET P-3 OF 9



PLAN NOTES

1. SEE 'PS' SHEETS FOR ADDITIONAL INFORMATION.
2. PROVIDE BALL VALVE SHUT-OFFS FOR HOT AND COLD WATER.
3. FURNISH AND INSTALL SAFETY MIXING VALVES ON ALL LAVATORIES. SEE DIVISION 22 (PLUMBING) NOTES.
4. NEW COLD WATER PIPING CONNECTION TO EXISTING COLD WATER RISER.
5. INSTALL NEW HOT WATER HEATER AS HIGH AS POSSIBLE. SEE HOT WATER HEATER PIPING DIAGRAM #P-10.
6. RECONNECT TO LOWER 4TH FLOOR TOILETS USING EXISTING RISER.

PIPING LEGEND

- G (GAS)
- CW (COLD WATER)
- HW (HOT WATER)
- HWR (HOT WATER RECIRC.)
- EX-CW (EXISTING COLD WATER)
- EX-HW (EXISTING HOT WATER)
- EX-HWR (EXISTING HOT WATER RECIRC.)

FIFTH FLOOR WEST WATER PIPING PLAN

SCALE: 1/4" = 1'-0"

FIFTH FLOOR WEST WATER PIPING PLAN R1307B

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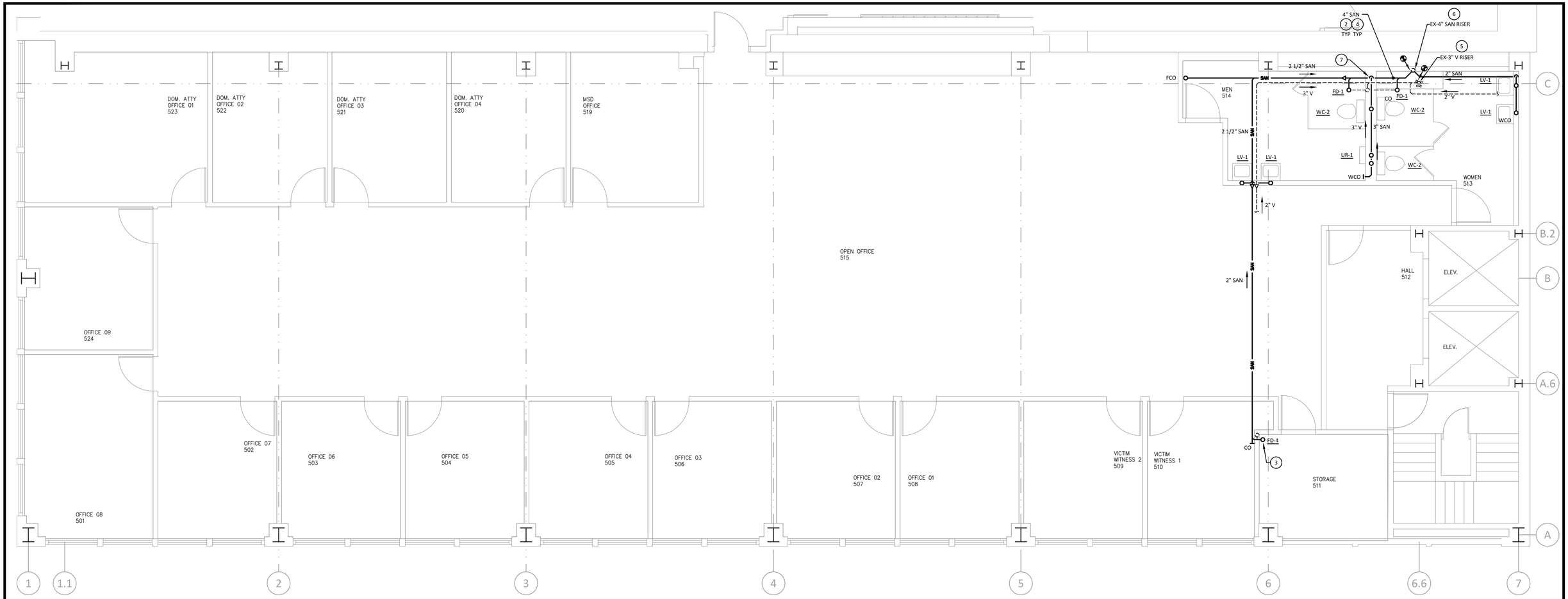
SHEET
P-4
OF 9



FIFTH FLOOR EAST DWV PLAN

SCALE: 1/4" = 1'-0"

PLAN NOTES

1. SEE 'PS' SHEETS FOR ADDITIONAL INFORMATION.
2. SLOPE PIPING 1/8" PER FOOT.
3. INDIRECT WASTE CONNECTION.
4. SANITARY PIPE INSTALLED IN THE CEILING SPACE OF THE FOURTH FLOOR.
5. NEW VENT PIPING CONNECTION TO EXISTING VENT RISER.
6. NEW SANITARY PIPING CONNECTION TO EXISTING SANITARY RISER.
7. SANITARY RISER. UP INTO CHASE WALL FOR WALL MOUNTED FIXTURES.

DWV PIPING LEGEND

SAN	SAN (SANITARY DRAIN)
	V (VENT)
STM	STM (STORM DRAIN)
	EX-SAN (EXISTING SANITARY DRAIN)
	EX-V (EXISTING VENT)
	EX-STM (EXISTING STORM DRAIN)

FIFTH FLOOR EAST DWV PLAN R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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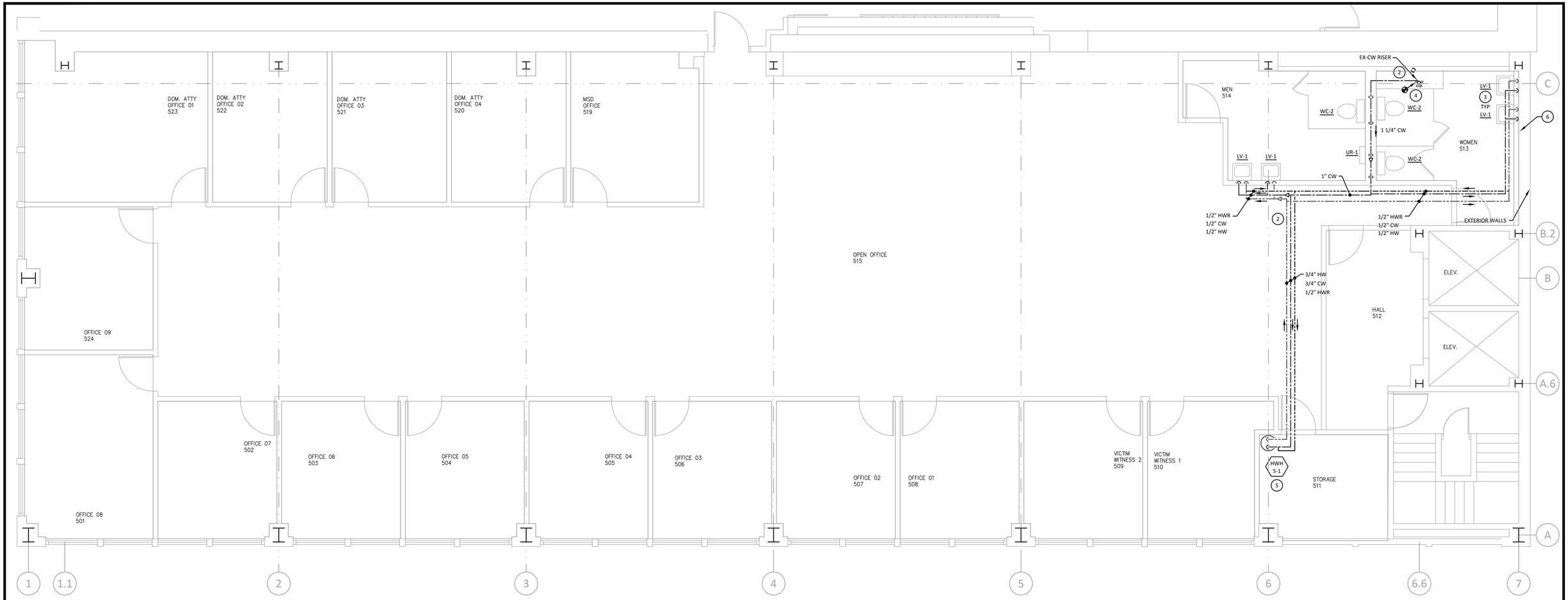
SHEET P-5 OF 9



FIFTH FLOOR EAST WATER PIPING PLAN

SCALE: 1/4" = 1'-0"

PLAN NOTES

1. SEE 'PS' SHEETS FOR ADDITIONAL INFORMATION.
2. PROVIDE BALL VALVE SHUT-OFFS FOR HOT AND COLD WATER.
3. FURNISH AND INSTALL SAFETY MIXING VALVES ON ALL LAVATORIES. SEE DIVISION 22 (PLUMBING) NOTES.
4. NEW COLD WATER PIPING CONNECTION TO EXISTING COLD WATER RISER.
5. INSTALL NEW HOT WATER HEATER AS HIGH AS POSSIBLE. SEE HOT WATER HEATER PIPING DIAGRAM #P-10.
6. SEE OUTSIDE WALL PIPING DETAIL #D-1-14 ON 'MS' SHEETS.

PIPING LEGEND

G	G (GAS)
	CW (COLD WATER)
	HW (HOT WATER)
	HWR (HOT WATER RECIRC.)
	EX-CW (EXISTING COLD WATER)
	EX-HW (EXISTING HOT WATER)
	EX-HWR (EXISTING HOT WATER RECIRC.)

FIFTH FLOOR EAST WATER PIPING PLAN R1307B

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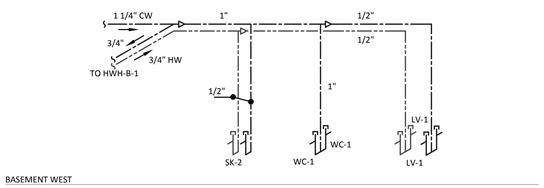
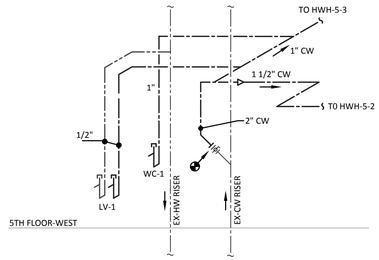


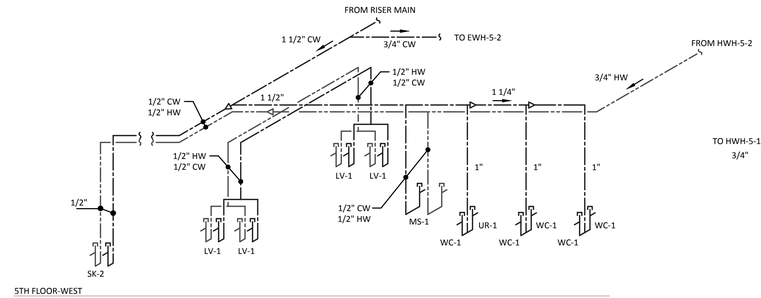
WATER PIPING RISER DIAGRAM

NO SCALE — BASEMENT WEST



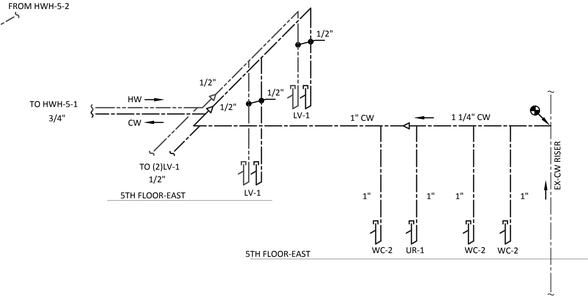
WATER PIPING RISER DIAGRAM

FIFTH FLOOR WEST



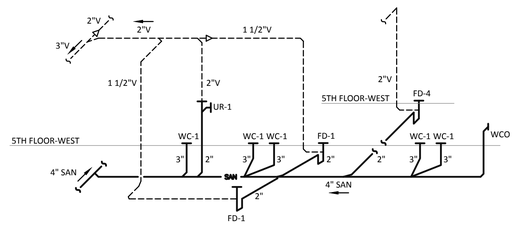
WATER PIPING RISER DIAGRAM

FIFTH FLOOR WEST



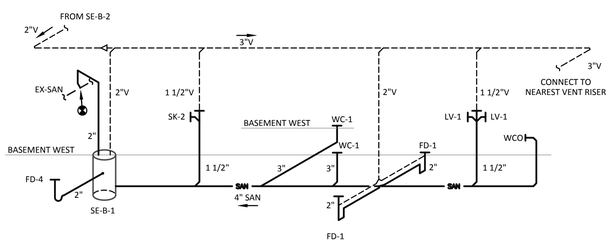
WATER PIPING RISER DIAGRAM

NO SCALE — FIFTH FLOOR EAST



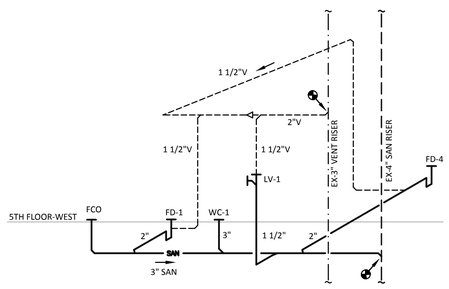
MEN-537 & WOMEN-535
DWV PIPING RISER DIAGRAM

NO SCALE — FIFTH FLOOR WEST



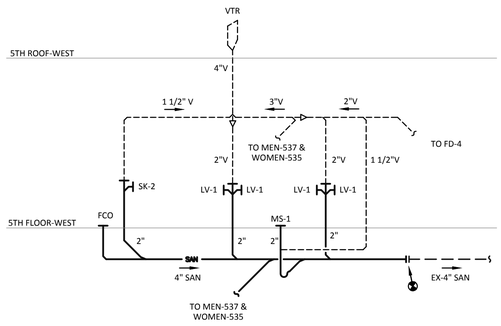
DWV PIPING RISER DIAGRAM

NO SCALE — BASEMENT WEST



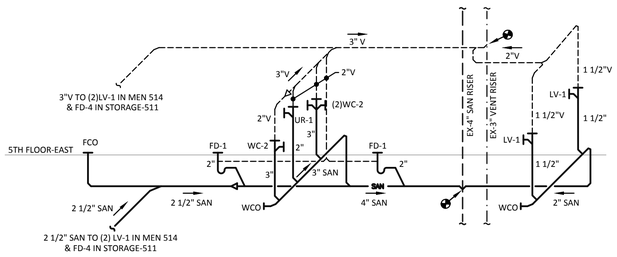
TOILET-559
DWV PIPING RISER DIAGRAM

NO SCALE — FIFTH FLOOR WEST



DWV PIPING RISER DIAGRAM

NO SCALE — FIFTH FLOOR WEST



DWV PIPING RISER DIAGRAM

NO SCALE — FIFTH FLOOR EAST

PLUMBING DETAILS — R1307B

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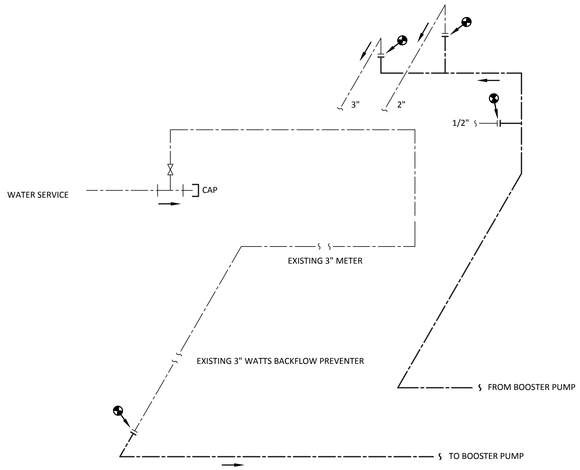
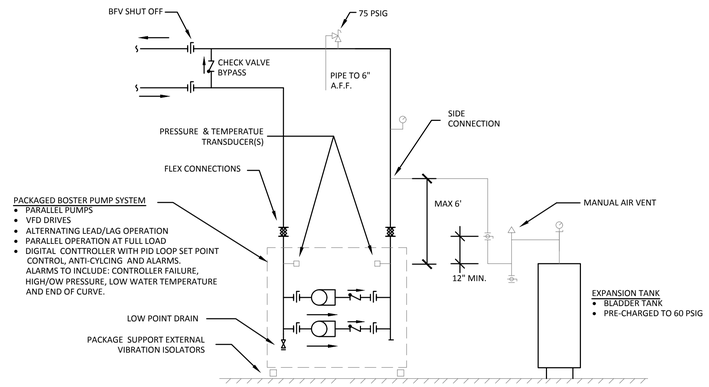
COUNTY OF WILL, OWNER

SHEET PS-1 OF 9



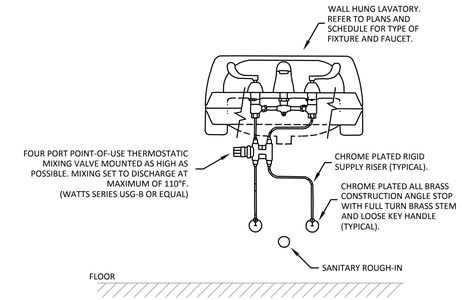
NEW COMBINED WATER SERVICE

NO SCALE



BOOSTER PUMP PIPING DETAIL

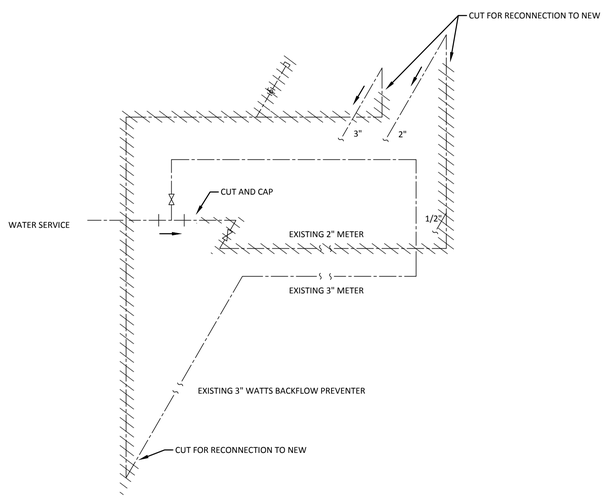
NO SCALE #P-29



NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR LAVATORY MOUNTING HEIGHTS.
2. P-TRAP, TAIL PIECE AND WASTE ARM NOT SHOWN FOR CLARITY.
3. FOR HANDICAP LAVATORY INSTALLATION ALL WASTE PIPING UNDER SINK SHALL BE WRAPPED WITH PROTECTIVE PIPE COVERS.
4. FOR HANDICAP LAVATORY INSTALLATION ANGLE STOP VALVES AND SUPPLY RISERS SHALL BE WRAPPED WITH PROTECTIVE PIPE COVERS. SUPPLY RISERS SHALL BE WRAPPED FROM STOP VALVES TO MIXING VALVE. ENDS OF PROTECTIVE WRAP SHALL BE CUT SQUARE AND TIE WRAPPED CLOSED.

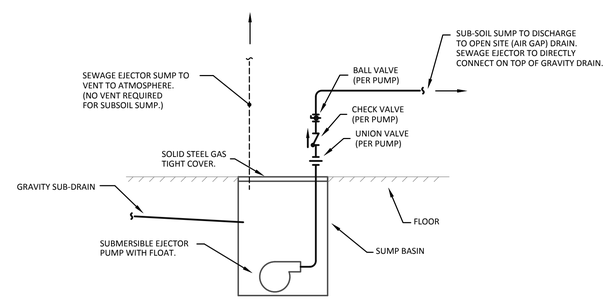
LAVATORY MIXING VALVE DETAIL

NO SCALE #P-18



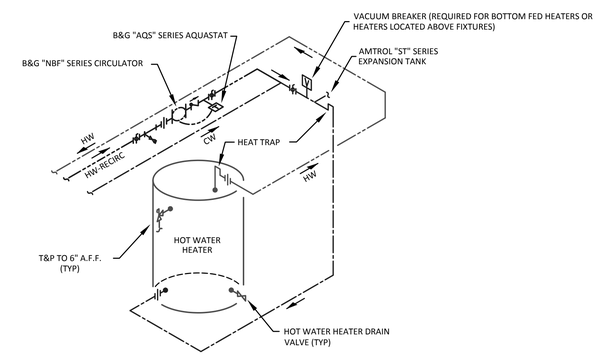
EXISTING WATER SERVICE DEMO

NO SCALE



SEWAGE EJECTOR PIPING DETAIL

NO SCALE #P-3



HOT WATER HEATER PIPING DIAGRAM

NO SCALE #P-10

PLUMBING DETAILS R1307B

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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SHEET PS-2 OF 9

PLUMBING FIXTURE SCHEDULE

TAG		WC-1	WC-2	UR-1	LV-1	SK-2	MS-1
FIXTURE	MFGR.	AMERICAN STANDARD	AMERICAN STANDARD	AMERICAN STANDARD	AMERICAN STANDARD	ELKAY	FIAT
	MODEL	CADET ADA 16 1/2"H 2467.016	GLENWALL 2093.100	LYNBROOK 6601.012	LUCERNE 0355.012	LRAD 3322	MSB3624
	TYPE	TANK/FLOOR MOUNT	WALL MOUNT	URINAL	WALL HUNG LAVATORY	DOUBLE S.S. SINK	MOP SINK
CARRIER	MFGR.	-	JAY R. SMITH	JAY R. SMITH	JAY R. SMITH	-	-
	MODEL	-	0200 SERIES	JRS 636	JRS 0700-M31	-	-
	TYPE	-	CONCEALED	CONCEALED	CONCEALED	-	-
ACCESSORIES		* OPEN SEAT 5901.100	* OPEN SEAT 5901.100	* SLOAN ROYAL 186-1 FLUSH VALVE	* CHICAGO FAUCET 802-V317ABCP	* ELKAY FAUCET LKD2432	* CHICAGO FAUCET 540-LD8975WXFABCP * MOP BRACKET * WALL GUARD * S.S. BUMPER * STRAINER
REMARKS		* VERIFY WITH ARCHITECT * HANDICAP (ADA) * WHITE * TOP OF SEAT TO BE 17" A.F.F. * COORDINATE LOCATION OF TRIP LEVER ON ADA ACCESSIBLE (WIDE) SIDE * PRESSURE-ASSISTED	* VERIFY WITH ARCHITECT * HANDICAP (ADA) * WHITE * TOP OF SEAT TO BE 17" A.F.F. * COORDINATE LOCATION OF TRIP LEVER ON ADA ACCESSIBLE (WIDE) SIDE * PRESSURE-ASSISTED	* VERIFY WITH ARCHITECT * HANDICAP (ADA) * WHITE * MOUNT TOP OF RIM AT 14" A.F.F. * 1 1/4" TOP SPUD * BLOWOUT	* VERIFY WITH ARCHITECT * HANDICAP (ADA) * WHITE	* VERIFY WITH ARCHITECT * COUNTERTOP * STAINLESS STEEL * 6 1/2" BOWL DEPTH MAX.	* VERIFY WITH ARCHITECT

* OR ZURN EQUAL

PLUMBING EQUIPMENT SCHEDULE

TAG	FD-1	FD-4	FCO	WCO	SE-B-1	SP-B-1	BP-B-1
MFGR.	JAY R. SMITH	JAY R. SMITH	JAY R. SMITH	JAY R. SMITH	ZOELLER	ZOELLER	AMT
MODEL	JRS 2005-A-5-NB	JRS 3510	JRS 4023-NB	JRS 4422	M267	M98	EZ FLOW SERIES
TYPE	FLOOR DRAIN	FLOOR DRAIN	FLOOR CLEAN OUT	WALL CLEAN OUT	SEWAGE EJECTOR PUMP	SUMP PUMP	DUPLEX BOOSTER PUMP
ACCESSORIES	* 5" ADJ. NICKEL BRONZE STRAINER	* 4" ADJ. NICKEL BRONZE STRAINER WITH FUNNEL	* THREAD. BRNZ. PLUG * NICKEL BRNZ. TOP	* STAINLESS COVER W/ CENTER SCREW * THREAD. BRNZ. PLUG	* 24"x36" DEEP BASIN W/ (1) HUB INLET * GAS TIGHT CORROSION RESISTANT COVER * HIGH WATER ALARM ZOELLER "A-PAK II"	* 24"x36" DEEP BASIN W/ (1) HUB INLET * GAS TIGHT CORROSION RESISTANT COVER * HIGH WATER ALARM ZOELLER "A-PAK II"	* (2)73 GPM@40 PSI * TACO PAX SERIES BLADDER TANK 45 GALLON * SKID MOUNTED PACKAGE
REMARKS	* CAST IRON	* CAST IRON * INDIRECT	* CAST IRON	* CAST IRON	* SUBMERSIBLE WITH FLOAT * 115V/1P, 1/2 HP	* SUBMERSIBLE WITH FLOAT * 115V/1P, 1/2 HP	* SEE DETAIL * 460V/3P, 5 HP, 28.9 MCA, 41.3 MOCP

* OR ZURN EQUAL

ELECTRIC WATER HEATER SCHEDULE

TAG		HWH-B-1, 5-1	HWH-5-2	HWH-5-3
MFGR.		RHEEM	RHEEM	RHEEM
MODEL		EGSP-10	EGSP-15	EGSP-6
TYPE		ELECTRIC	ELECTRIC	ELECTRIC
GALLON		10	15	10
RECOVERY (GPH)		33	33	33
ELECTRICAL DATA	KW	6	6	6
	VOLT	277	277	277
	PHASE	1	1	1
UNIT WEIGHT (LBS.)		150	200	120
REMARKS/ACCESSORIES		1	1	1

(1) NEW

STANDARD SYMBOLS LEGEND

- XXX / X — EQUIPMENT TAG
- X — REVISION TAG
- X — COLUMN LINE TAG
- N.I.C. — NOT IN CONTRACT
- POINT OF NEW CONNECTION
- PHOTO X — PHOTO VIEW POINT
- SECTION/DETAIL IDENTIFIER
- SECTION CUT
- XX / X-XX — SHEET LOCATION
- U.N.O. — UNLESS NOTED OTHERWISE

PIPING SYMBOLS LEGEND

- GATE VALVE
- CIRCUIT SETTER
- BALL VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- SUCTION DIFFUSER
- PRESSURE REDUCING VALVE
- 2-WAY CONTROL VALVE
- TRIPLE DUTY VALVE
- 3-WAY CONTROL VALVE
- PRESSURE RELIEF VALVE
- CAP
- BLIND FLANGE
- PIPE UNION
- FLEXIBLE PIPE CONNECTION
- FLANGED CONNECTION
- STRAINER
- MANUAL AIR VENT
- PRESSURE GAUGE
- THERMOMETER
- P-T PLUG
- GAS COCK
- NEEDLE VALVE
- DRAIN WITH HOSE CONNECTION
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER

HYDRONIC PIPING LABELS

CWS	- CHILLED WATER SUPPLY	TWS	- TOWER WATER SUPPLY
CWR	- CHILLED WATER RETURN	TWR	- TOWER WATER RETURN
HWS	- HOT WATER SUPPLY	HPS	- HEAT PUMP WATER SUPPLY
HWR	- HOT WATER RETURN	HPR	- HEAT PUMP WATER RETURN
ST	- STEAM SUPPLY	C	- CONDENSATE RETURN
EX	- EXISTING		

PLUMBING PIPING LABELS

CO	- CLEAN OUT	FD	- FLOOR DRAIN
FCO	- FLOOR CLEAN OUT	OSD	- OPEN SITE DRAIN
WCO	- WALL CLEAN OUT	VTR	- VENT THRU ROOF
EX	- EXISTING	UG	- UNDERGROUND

DIVISION 22 (PLUMBING)

1) GENERAL:
JOB SPECIFICATIONS ARE AS FOLLOWS:

CODE - CONTRACTOR TO LOCATE, REVIEW AND COMPLY WITH ALL LOCAL, STATE AND/OR NATIONAL CODES. CONTRACTOR TO SPECIFICALLY LOCATE, REVIEW AND COMPLY WITH ALL LOCAL CODE AMENDMENTS.

WORKMANSHIP/WARRANTY - CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, MATERIALS, METHODS, TECHNIQUES, SEQUENCES AND DETAILS TO PERFORM ITS WORK. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE THE EQUIPMENT/SYSTEMS ARE PLACED INTO OPERATION AND ACCEPTED BY THE OWNER. WARRANTY TO INCLUDE LABOR & MATERIALS REQUIRED FOR WARRANTY ISSUES.

SUBMITTALS - CONTRACTOR TO COORDINATE SUBMITTAL SCHEDULE WITH OWNER IMMEDIATELY AFTER ACCEPTANCE OF CONTRACT. AS SOON AS POSSIBLE, EMAIL NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING SUBMITTALS (INCLUDING ALL ACCESSORIES). NO NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING ITEMS ARE TO BE INSTALLED UNTIL SUBMITTED INFORMATION IS APPROVED. UPON COMPLETION OF PROJECT, CONTRACTORS TO PROVIDE (4) HARD COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ALL NEW EQUIPMENT WITH TYPE WRITTEN SECTION TAGS AND IN SAME COLORED BINDERS.

SHOP DRAWINGS/AS BUILT DRAWINGS - BEFORE INSTALLATION, PROVIDE 1/4" SCALE 'SHOP DRAWINGS' FOR COORDINATION AND APPROVAL. 'SHOP DRAWINGS' TO SHOW DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. INSTALLATION TO START ONLY AFTER WRITTEN APPROVAL FROM ENGINEER. UPON COMPLETION OF THE INSTALLATION WORK, PROVIDE 'AS BUILT' CHANGES CLEARLY SHOWING THE FINAL DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. ALL SHOP DRAWING AND AS BUILT DRAWING CHANGES TO BE MADE WITH 'AUTO CAD' DRAFTING SOFTWARE AND SUBMITTED IN PAPER AND DIGITAL FORMAT. DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS 'SHOP DRAWINGS' OR SUBMITTALS. PROVIDE FOUR PAPER COPIES OF DRAWINGS.

OPERATION AND MAINTENANCE MANUALS - CONTRACTOR TO PROVIDE OPERATION AND MAINTENANCE MANUALS WITH THE FOLLOWING:
- WARRANTY LETTER FROM CONTRACTOR.
- COMPLETE LIST OF MODEL NUMBERS AND SERIAL NUMBERS FOR EACH PIECE OF EQUIPMENT
- INSTALLATION AND OPERATION MANUALS FOR EACH PIECE OF EQUIPMENT
- PARTS LIST FOR EACH PIECE OF EQUIPMENT
- LOCATION AND PHONE NUMBER FOR LOCAL VENDORS FOR EACH PIECE OF EQUIPMENT FOR PARTS AVAILABILITY FOR FUTURE
- SCHEMATIC REPRESENTATION OF LOCATION FOR EACH PIECE OF EQUIPMENT

ACCESS DOORS - CONTRACTOR TO FURNISH AND INSTALL ACCESS DOORS AS REQUIRED. MEP TRADE TO COORDINATE WITH CARPENTRY CONTRACTOR THE LOCATION OF ACCESS DOORS IN ALL CEILINGS, SOFFITS AND WALLS FOR ACCESS TO EQUIPMENT, VALVES, DAMPERS, FIRE DAMPERS, CLEAN OUTS, SWITCHES, CONTROLS, ETC.

STRUCTURE PROTECTION - THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY THE INSTALLATION OF MECHANICAL SYSTEMS. WHERE FLOORS, WALLS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE ARE REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLING OR REPAIRING ANY SYSTEM, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A SAFE STRUCTURAL CONDITION IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.

FIRE RESISTANT ASSEMBLIES - PENETRATIONS OF WALL/FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

ACCESSIBILITY - MANUAL ACCESSIBLE ITEMS IN OCCUPIED SPACES (SUCH AS CONTROLS, THERMOSTATS, SWITCHES AND ELECTRICAL OUTLETS) TO BE LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" PER THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. VERIFY LOCAL ACCESSIBILITY CODE REQUIREMENTS OVER AND ABOVE THE ADA REQUIREMENTS. COORDINATE FINAL MOUNTING HEIGHTS WITH OWNER.

2) GENERAL PLUMBING CONDITIONS:
PLUMBING FIXTURES & FIXTURE CONNECTIONS:
FURNISH AND INSTALL THE FOLLOWING CODE APPROVED ITEMS:
- SHUTOFF VALVES - AT ALL PLUMBING WATER SUPPLY FIXTURES. COORDINATE ACCESS TO VALVES IN CONCEALED AREAS AND ARRANGE ALL PIPING TO PERMIT REMOVAL OF FIXTURES.
- WATER HAMMER PREVENTION - ALL BUILDING WATER SUPPLY SYSTEMS SHALL BE PROVIDED WITH AIR CHAMBERS OR APPROVED MECHANICAL DEVICES OR WATER HAMMER ARRESTORS TO ABSORB HIGH PRESSURES.
- FLEXIBLE METAL HOSE CONNECTORS - AT FINAL CONNECTIONS TO FIXTURES.
- CHROMED PIPE ESCUTCHEONS AND PIPE - FOR ALL EXPOSED FIXTURE PIPING PENETRATING FINISHED WALLS.
- P-TRAPS - AT ALL PLUMBING FIXTURES WITHOUT INTEGRAL TRAPS. FURNISH & INSTALL OPEN SITE TRAP DRAINS AT ALL AIR CONDITIONING EVAPORATOR COILS FOR COIL CONDENSATION.
- ADA APPROVED PIPE AND TRAP PROTECTION - FOR LAVATORIES AND SINKS WITH EXPOSED WATER SUPPLIES AND TRAPS 'LAV GUARD' OR EQUAL.
- PROTECTION - FOR ALL PLUMBING FIXTURES AND EQUIPMENT THROUGHOUT THE DURATION OF THE PROJECT. PLUMBING FIXTURES AND EQUIPMENT SHALL BE FREE FROM DAMAGE AND OPERATIONAL FLAWS AT THE TIME OF PROJECT COMPLETION.
- INDIRECT WASTE AIR GAP - FOR FIXTURES SHALL BE AT LEAST (2) TIMES THE DIAMETER OF THE FIXTURE DRAIN OR DRAINAGE PIPE SERVED, BUT NOT LESS THAN 1". FLOOR SINKS TO BE MOUNTED FLUSH WITH FINISHED FLOOR WITH A MAXIMUM HORIZONTAL PIPE DISTANCE OF 5'.
- WATER TEMPERATURE - ALL LAVATORY FAUCETS FOR PUBLIC USE, SHOWER COMPARTMENTS AND SHOWER-BATH COMBINATIONS SHALL BE PROVIDED WITH AN AUTOMATIC SAFETY WATER MIXING DEVICE. THE AUTOMATIC SAFETY WATER MIXING DEVICE SHALL COMPLY WITH ANSI/ASSE 1016-1996 OR 1017-1998. LAVATORY MIXING DEVICE SHALL BE ADJUSTED TO A MAXIMUM SETTING OF 110°F. SHOWER MIXING DEVICE SHALL BE ADJUSTED TO A MAXIMUM SETTING OF 115°F.

DRAINAGE AND VENT SYSTEM SHALL BE PRESSURE TESTED WITH WATER OR AIR.

WHERE WORK INVOLVES THE REUSE OF EXISTING DRAIN PIPING SYSTEMS, CONTRACTOR SHALL INSPECT AND ROD OUT ALL PIPING TO PROVIDE A CLEAN AND FREELY OPERATING DRAINAGE SYSTEM IN COMPLIANCE WITH CODE REQUIREMENTS.

3) TESTING AND CLEANING:
ALL PIPING SYSTEMS SHALL BE CHECKED AND CLEANED OF DIRT AND DEBRIS BEFORE BEING TESTED. ALL PRESSURE PIPE SYSTEMS TO MAINTAIN 100 PSIG OF AIR PRESSURE FOR A MINIMUM OF 2 HOURS PRIOR TO BEING CLEANED, FLUSHED AND FILLED. PIPING TO BE FREE OF ALL CUTTING OILS, CUTTING SCRAPS AND/OR FOREIGN MATERIALS.

CHLORINATED MUNICIPAL WATER SUPPLY SYSTEMS SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL NO DIRTY WATER APPEARS AT ALL OUTLETS. NON-CHLORINATED WATER SUPPLY SYSTEMS SHALL BE CLEANED AND TESTED WITH CHLORINE SOLUTIONS AS PER ILLINOIS PLUMBING CODE.

4) BACKFLOW:
BACKFLOW PREVENTERS TO BE REDUCED PRESSURE TYPE EQUAL TO WATTS SERIES 009 (1/4"-3") OR WATTS SERIES 909 (2 1/2"-10"). EACH BACKFLOW DEVICE SHALL BE INSTALLED IN ACCESSIBLE, TESTABLE AND SERVICEABLE LOCATIONS. EACH DEVICE SHALL BE INSTALLED BY AN ILLINOIS LICENSED PLUMBER AND EACH TESTABLE DEVICE SHALL BE TESTED AND CERTIFIED BY AN IEPA CCCDI BEFORE BEING PUT INTO SERVICE.

5) PIPING:
ALL PLUMBING PIPING, MATERIALS AND EQUIPMENT TO MEET THE LATEST ASTM, CISPI-301, ASME AND ANSI STANDARDS AS LISTED IN THE ILLINOIS PLUMBING CODE. CONTACT THE CITY/TOWNSHIP FOR THE PROPER EDITIONS AND AMENDMENTS OF ALL RELATIVE CODE PUBLICATIONS.

CLEANOUTS SHALL BE ACCESSIBLE, FULL SIZED AND SHALL BE INSTALLED IN DRAINAGE PIPING AT EACH CHANGE OF DIRECTION GREATER THAN SIXTY DEGREES (60°).

BUILDING DRAIN PIPING CLEANOUTS TO BE:
- ≤ 4" PROVIDE CLEANOUT EVERY 50'
- 5-10" PROVIDE CLEANOUT EVERY 100'
- > 10" PROVIDE CLEANOUT EVERY 150'

PIPE INSULATION (KNAUF EARTHWOOL 1000° PIPE INSULATION OR OWENS CORNING EQUIVALENT)(PER 2012 IECC):

HOT WATER (INSIDE) MAXIMUM 200°F	- 1 1/2" FIBERGLASS WITH ALL SERVICE JACKET (2" FG > 1 1/4" PIPE)
ALL INSIDE PIPING LOCATED ON OUTSIDE WALLS	- 1 1/2" FIBERGLASS WITH ALL SERVICE JACKET (2" FG > 1 1/4" PIPE)
EXPOSED SANITARY DRAINS & STORM PIPING (INSIDE)	- 1 1/2" FIBERGLASS WITH ALL SERVICE JACKET

ABOVE GROUND DOMESTIC WATER PIPING:
ABOVE GROUND WATER PIPING TO BE TYPE "L" HARD COPPER WITH SOLDER JOINT COPPER FITTINGS.

ALL WATER PIPING ELBOWS 2 1/2" AND LARGER TO HAVE A MINIMUM CENTERLINE RADIUS OF 1.5 X DIAMETER.

DWV PIPING:
ALL DWV PIPING TO BE PLAIN END SCH. 40 DWV PVC WITH SOCKET TYPE DWV PVC FITTINGS.

6) ANCHORING & SUPPORT:
ANCHOR ALL EQUIPMENT AND PIPING TO APPROVED STRUCTURES WITH UL LISTED AND FACTORY MUTUAL APPROVED ANCHORING AND SUPPORT PRODUCTS. APPROVED ANCHORING SYSTEMS INCLUDE CONCRETE DROP IN ANCHORS, TOP CHORD MOUNTED C-CLAMPS AND TOP CHORD MOUNTED BEAM CLIP HANGERS. APPROVED SUPPORT SYSTEMS INCLUDE MINIMUM 3/8" THREADED ROD, U-CHANNEL, ANGLE IRON AND/OR PIPE CLEVIS HANGERS. FOLLOW THE ABOVE REQUIREMENTS UNLESS NOTED OTHERWISE BY EQUIPMENT MANUFACTURER OR STAMPED STRUCTURAL SUPPORT DRAWINGS.

PLUMBING NOTES & SCHEDULES R1307B

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