

CHILLED WATER AIR HANDLER SCHEDULE																																										
TAG	STATUS	MAKE	MODEL	TYPE	LOCATION	SERVICE	SUPPLY FAN					PERFORMANCE (NOTE 1)		AIR SIDE (NOTE 1)								WATER (NOTE 1)				FILTER				ELECTRICAL			PHYSICAL				REMARKS					
							CFM	OSA	TSG WG	DRIVE	RPM	MOTOR		SENSIBLE MBH	TOTAL MBH	ENTERING		LEAVING		TYPE				GPM	EWT	LWT	dP FT	QTY	L	W	D	PRESS. DROP IN WG	V	PH	MCA	L		W	H	WEIGHT (LBS)		
												BHP EA	HP EA			TDB	TWB	AREA	FPM	ROWS	FINS																					
AH 2	EXISTING	DAIKIN	CAH039GDAM	CUSTOM STACKED, BELT, CHW	MECH RM.	SW & SE OFFICES - OCWD	10,400	2,220	2.75	BELT	850	1	3.3	10	850	297.6	341.6	82.3	66.3	55.8	55.4	500	480	6	12	68.3	45.0	55.0	12	6	20	25	2	0.28	460	3	-	-	-	-	-	

VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE FOR NEW ZONES																									
TAG	STATUS	SIZE					MAKE	MODEL	TYPE	PERFORMANCE								PHYSICAL				COMMENTS			
		INLET		OUTLET						COOLING AIRFLOW	HEATING AIRFLOW	MAX AIRFLOW	MIN AIRFLOW	VELOCITY		PRESSURE		L	W	H	WEIGHT				
		DIA (W)	H	W	H	ROWS								INLET	OUTLET	S.P.	T.P.								
VAV 23	EXISTING	10	-	14	12.5	2	TITUS	DESV	PRESSURE INDEPENDENT	910	995	1400	145	-	-	0.58	-	48	14	12.5	100	①			
VAV 24	EXISTING	9	-	14	12.5	2	TITUS	DESV		855	925	1050	120	-	-	0.54	-	48	14	12.5	100				
VAV 25	EXISTING	7	-	12	10	2	TITUS	DESV		520	630	650	70	-	-	0.23	-	48	12	10	100				
VAV 26	EXISTING	16	-	24	16	2	TITUS	DESV		2730	1755	4000	385	-	-	0.43	-	51	24	16	200				
VAV 27	EXISTING	12	-	16	15	2	TITUS	DESV		1110	910	2000	190	-	-	0.45	-	48	16	15	100				
VAV 28	EXISTING	12	-	16	15	2	TITUS	DESV		765	600	2000	190	-	-	0.54	-	48	16	15	100				
VAV 29	EXISTING	9	-	14	12.5	2	TITUS	DESV		630	600	1050	120	-	-	0.49	-	48	14	12.5	100				
VAV 30	EXISTING	9	-	14	12.5	2	TITUS	DESV		570	410	1050	120	-	-	0.54	-	48	14	12.5	100				
VAV 31	EXISTING	10	-	14	12.5	2	TITUS	DESV		1145	1000	1400	145	-	-	0.49	-	48	14	12.5	100				
VAV 32	EXISTING	9	-	14	12.5	2	TITUS	DESV		600	350	1050	120	-	-	0.54	-	48	14	12.5	100				
VAV 33	EXISTING	14	-	20	17.5	2	TITUS	DESV		2185	1785	3000	300	-	-	0.59	-	51	20	17.5	100				
VAV 34	EXISTING	10	-	14	12.5	2	TITUS	DESV		1200	485	1400	145	-	-	0.44	-	48	14	12.5	100				
VAV 40	EXISTING	6	-	6	8	2	TITUS	DESV		610	320	500	45	-	-	0.50	-	48	6	8	100				
VAV 41	EXISTING	8	-	12	10	2	TITUS	DESV		430	485	900	90	-	-	0.50	-	48	12	10	100				
VAV 42	EXISTING	6	-	6	8	2	TITUS	DESV		260	280	500	45	-	-	0.50	-	48	6	8	100				

DIFFUSER, REGISTER AND GRILL SCHEDULE										
UNIT NO.	MANUFACTURER & MODEL NO.	DESCRIPTION	FACE TYPE	FACE SIZE	COLOR	MATERIAL	OBD	REMARKS		
CD-1	TITUS MCD BORDER 3, OR EQUAL	MODULAR CORE	LAY IN	24"X24"	⑧	STEEL	NO	①②③④⑤⑥⑦		
CD-2	TITUS MCD BORDER 3, OR EQUAL	MODULAR CORE	SURFACE	24"X24"	⑧	STEEL	NO	①②③④⑤⑥⑦		
R-1	TITUS PAR, OR EQUAL	SQUARE CEILING RETURN	LAY-IN, PERFORATED	24"X24"	⑧	STEEL	NO	①②③④⑤⑥⑦		
R-2	TITUS PAR, OR EQUAL	SQUARE CEILING RETURN	SURFACE, PERFORATED	24"X24"	⑧	STEEL	NO	①②③④⑤⑥⑦		
EG-1	TITUS PAR, OR EQUAL	SQUARE CEILING EXHAUST	LAY-IN, PERFORATED	24"X24"	⑧	STEEL	NO	①②③④⑤⑥⑦		
NOTES:										
① COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS FOR BORDER TYPES.					⑤	SEE SHEET M-401/2 THIS SHEET FOR TYPICAL CEILING DIFFUSER INSTALLATION DETAIL.			⑧	COORDINATE THE COLOR WITH THE ARCHITECT.
② MAXIMUM TOTAL PRESSURE DROP SHALL BE 0.1" WG.					⑥	NECK SIZE AND CFM SHOWN ON PLANS.				
③ MAXIMUM NC LEVEL SHALL BE 25.					⑦	PROVIDE MIN. 3" HIGH RECTANGULAR / SQUARE TO ROUND TRANSITION AS REQUIRED. ROUND NECK AREA SHALL EQUAL OR EXCEED RECTANGULAR NECK SIZE.				
④ ALL VISIBLE SURFACES AND DUCTWORK BEHIND FACE SHALL BE PAINTED BLACK.										

CLIENT




18700 Ward Street
Fountain Valley, California
92708

PROJECT NAME


MUNICIPAL WATER
DISTRICT OF ORANGE
COUNTY
SEISMIC RETROFIT AND
ADA UPGRADE

ENGINEER/ARCHITECT



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ISSUE		
REV.	DESCRIPTION	DATE
	90% CD	07 - 02 - 19

KEY PLAN

PROJECT NO.	18X093
PRINT DATE	19-09-2019
DRAWN BY	AY
CHECKED BY	WM

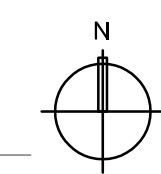
SHEET TITLE

MECHANICAL
SCHEDULES

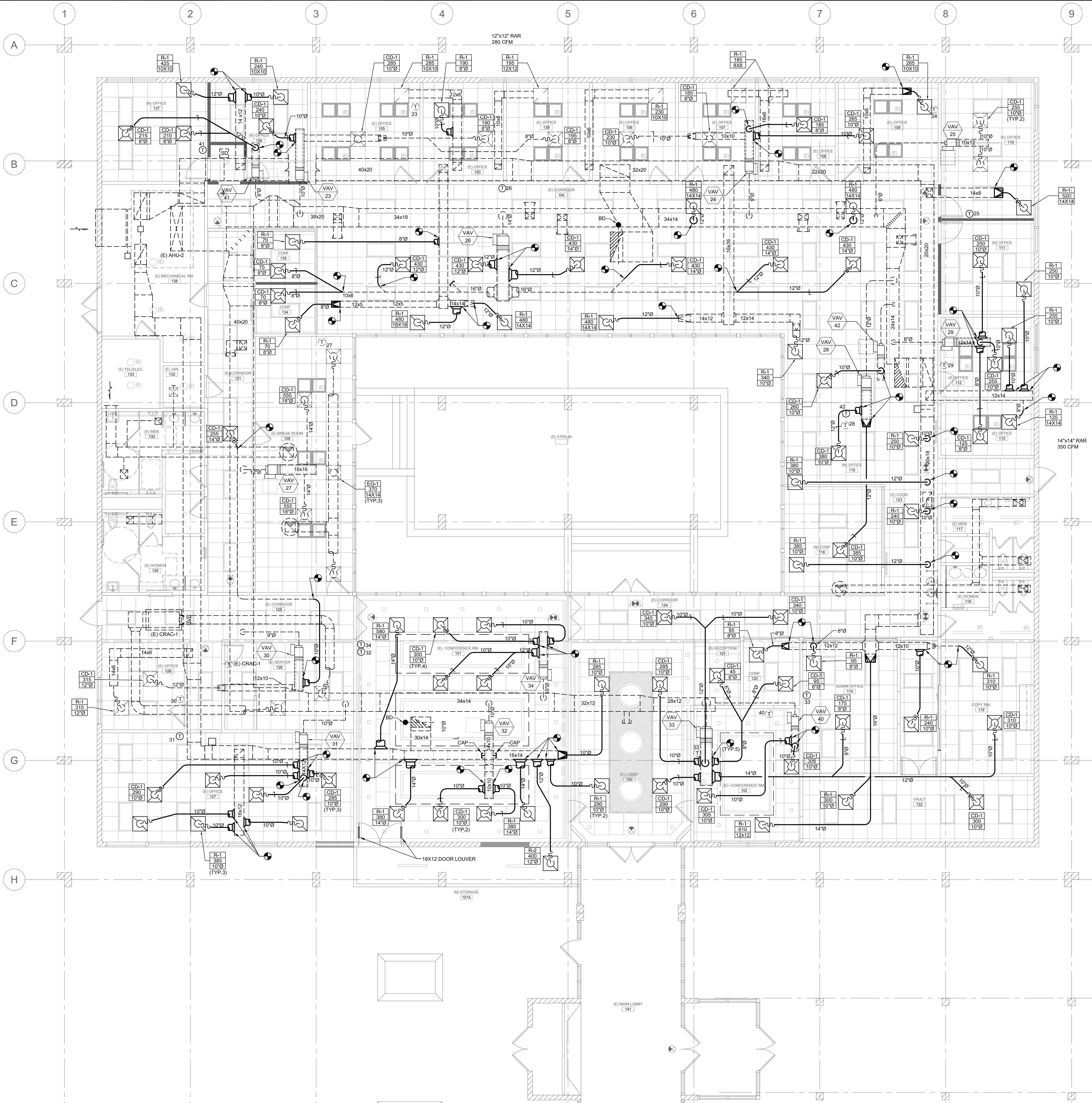
SHEET NUMBER

M-002

NOT FOR CONSTRUCTION



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MECHANICAL NEW WORK FLOOR PLAN 3/16"=1'-0" 1

GENERAL NOTES

- COORDINATE DIFFUSER/RETURN LOCATION WITH LIGHTING LAYOUT. SEE ELECTRICAL DRAWINGS.
- MATERIAL INSTALLED IN THE PLENUMS SPACE ABOVE CEILING TILES SHALL COMPLY WITH CMC SECTION 602.2. FLAME SPREAD INDEX SHALL BE NOT MORE THAN 25 AND THE SMOKE DEVELOPMENT RATING SHALL BE NOT MORE THAN 50.
- DUCTWORK DIMENSIONS SHOWN ON DRAWINGS SHALL BE ACTUAL FREE INSIDE DIMENSIONS.
- DUCTWORK AND PIPING SHALL BE SUPPORTED AND BRACED IN ACCORDANCE WITH THE 2016 CBC/CMC AND THE LATEST EDITION OF SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING".
- UNLESS OTHERWISE NOTED, RETURN AIR SHALL BE THROUGH SPECIFIED LIGHT FIXTURES.
- EXHAUST DUCTS UNDER POSITIVE PRESSURE AND VENTING SYSTEMS SHALL NOT EXTEND INTO OR PASS THROUGH DUCTS OR PLENUMS (CMC 602.1).
- ALL MATERIAL EXPOSED WITHIN THE PLENUM SPACE SHALL COMPLY WITH CMC SECTION 605. MATERIALS SHALL HAVE A MOLD, HUMIDITY, AND EROSION RESISTANT FACE THAT MEETS THE REQUIREMENTS OF UL 181.
- MOUNT SPACE TEMPERATURE THERMOSTAT @ 48" MAX. A.F.F. VERIFY EXACT LOCATION WITH ARCHITECT.
- THE HVAC CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO SUBMITTING HIS/HER BID IN ORDER TO VERIFY ALL EXISTING FIELD CONDITIONS. THE HVAC DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ANY OFFSETS DUE TO EXISTING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- COORDINATE ENTIRE INSTALLATION OF THE HVAC SYSTEM WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- CONTRACTOR SHALL COORDINATE WIRING, FUSED DISCONNECT SWITCHES AND CONDUIT REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT SHALL BE VERIFIED WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO COMMENCEMENT OF WORK.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS DAMPERS, VALVES AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- MAINTENANCE LABEL SHALL BE AFFIXED TO ALL MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.
- ALL HVAC EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION TO COMPLY WITH EFFICIENCY STANDARDS PER TITLE-24 SECTIONS (2-5314 (A)(B)).
- ALL DUCTWORK SHALL BE CONSTRUCTED, SEALED, ERECTED AND TESTED IN ACCORDANCE WITH CHPT. 6 OF CMC. THE MOST RESTRICTIVE OF LOCAL REGULATIONS, PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION.
- DUCT WORK HANDLING CONDITIONED AIR SHALL BE INSULATED OR LINED. INSULATION SHALL BE 1" THICK, 3/4" LB PER CUBIC FOOT DENSITY WITH MINIMUM R=2.1, EXCLUDING FILM RESISTANCE. ALL DUCT WORK EXPOSED SHALL BE INTERNALLY LINED. ACOUSTIC LINER SHALL BE 1-1/2".
- MAKE CONNECTION TO CEILING DIFFUSERS WITH INSULATED "GLASSFLEX" LOW PRESSURE FLEXIBLE DUCT. PROVIDE 5'-0" LENGTH MINIMUM.
- PAINT INSIDE OF DUCT FLAT BLACK WHERE VISIBLE THRU AIR OUTLETS (VISIBLE LINER SHALL HAVE BLACK FACING).
- MANUAL VOLUME DAMPERS SHALL BE PROVIDED IN ALL DUCT BRANCHES TAKE OFF'S TO INDIVIDUAL DIFFUSERS AND REGISTERS.
- FOR CONCEALED ITEMS REQUIRING SERVICE OR ADJUSTMENT, PROVIDE ACCESS DOOR/PANEL AND SIZE PER CODE REQUIREMENT.
- ALL DAMPERS SHALL BE ACCESSIBLE THROUGH FELT STRIPPED ACCESS PANEL IN DUCT AND SHALL BE THE FULL SIZE OF THE DUCT. CONSTRUCT WITH CHANNEL FRAME AND TAG FOR EASY IDENTIFICATION AFTER INSTALLATION.
- FLEX DUCTS ARE NOT ALLOWED FOR TOILET EXHAUST.
- FLEXIBLE DUCTS SHALL BE FACTORY FABRICATED INSULATED LOW PRESSURE DUCT WITH THE FOLLOWING CHARACTERISTICS:
 - ZINC COATED SPRING STEEL HELIX WITH (1) ONE INCH THICK FIBERGLASS INSULATION, SHEATHED IN A SEAMLESS VAPOR BARRIER JACKET.
 - INTERIOR FIRE RESISTANT COATED TO PREVENT FIBER EROSION.
 - CLASS 1 WITH A FLAME SPREAD OF 25 OR LESS, SMOKE DEVELOPED OF 50 OR LESS AS DEFINED IN NFPA-90(A) AND BEARING A U.L. LABEL.
- ALL LINE AND LOW VOLTAGE WIRING SHALL BE INSTALLED IN A CONDUIT. ALL CONDUITS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THE ELECTRICAL DRAWINGS OR AS SPECIFIED IN THE ELECTRICAL SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS OF GOVERNING BODIES HAVING JURISDICTION THEREOF.
- CONTRACTOR SHALL RAISE EXISTING DUCTWORK TO ACCOMMODATE NEW CEILING HEIGHT AS NEEDED.
- RE-BALANCE THE SYSTEM AIRFLOW PER THE NEW MECHANICAL PLANS THAT'S INCLUDE DIFFUSERS, GRILLES & VAV BOXES.
- REUSE ALL THE EXISTING THERMOSTATS AND RELOCATE SOME OF THEM AS NOTED ON THE MECHANICAL PLAN TO COMPLY WITH RENOVATION AIR DISTRIBUTION.

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SHEET TITLE

**MECHANICAL
NEW WORK
FLOOR PLAN**

SHEET NUMBER

M-202

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