

DUCT SILENCER SCHEDULE

UNIT NO	LOCATION	SERVICE		CFM	DIMENSIONS W X D X L	PD IN. WC	MANUFACTURER/ MODEL NO	REMARKS
		BUILDING	ROOM					
L-CS-107-ST-01	MECH ROOM 107	LVEA	LASER AREA - 1	10,500	48 X 36 X 120	0.15	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-02	MECH ROOM 107	LVEA	LASER AREA - 2	15,000	48 X 60 X 120	0.10	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-03	MECH ROOM 107	LVEA	LASER AREA - 3	15,000	48 X 60 X 120	0.10	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-04	MECH ROOM 107	LVEA	LASER AREA - 4	10,000	48 X 36 X 120	0.15	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-05	MECH ROOM 107	LVEA	LASER AREA - 5	10,000	48 X 36 X 120	0.15	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-06	MECH ROOM 107	LVEA	MECHANICAL ROOM #107	6,000	48 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-07	MECH ROOM 107	LVEA	GENERAL RETURN OF LVEA	20,300	60 X 60 X 84	0.10	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-08	MECH ROOM 107	LVEA	GENERAL RETURN OF LVEA	20,300	60 X 60 X 84	0.10	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-09	MECH ROOM 107	LVEA	GENERAL RETURN OF LVEA	20,300	60 X 60 X 84	0.10	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-10	MECH ROOM 107	OSB	OSB COLD AIR DECK	24,000	60 X 48 X 84	0.25	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-11	MECH ROOM 107	OSB	OSB WARM AIR DECK	24,000	60 X 48 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-12	MECH ROOM 107	OSB	OSB RETURN AIR	24,000	60 X 60 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
L-CS-160-ST-13	MECH ROOM 160	OFFICES	SUPPLY AIR	9,700	42 X 18 X 60	0.40	INDUSTRIAL ACOUSTICS CO MS	
L-CS-160-ST-14	MECH ROOM 160	OFFICES	RETURN AIR	9,000	42 X 18 X 60	0.36	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-15	MECH ROOM 107	LVEA	OUTSIDE AIR	2,600	24 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-16	MECH ROOM 107	LVEA	OUTSIDE AIR	2,600	24 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-17	MECH ROOM 107	OSB	OUTSIDE AIR	650	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-18	MECH ROOM 107	OSB	OUTSIDE AIR	650	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-CS-107-ST-19	ROOM 149	OFFICES	TOILET EXHAUST	950	14" X 36	0.05	INDUSTRIAL ACOUSTICS CO FCL	
L-CS-107-ST-20	ROOM 149	OFFICES	TOILET EXHAUST	950	14" X 36	0.05	INDUSTRIAL ACOUSTICS CO FCL	
L-CS-107-ST-21	ROOM 137	OFFICES	TOILET EXHAUST	200	12" X 36	0.02	INDUSTRIAL ACOUSTICS CO FCL	
L-CS-107-ST-22	ROOM 137	OFFICES	TOILET EXHAUST	200	12" X 36	0.02	INDUSTRIAL ACOUSTICS CO FCL	
L-CS-107-ST-23	ROOM 169	OSB	EF-04 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
L-CS-107-ST-24	ROOM 169	OSB	EF-04 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
L-CS-107-ST-25	ROOM 168	OSB	EF-03 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
L-CS-107-ST-26	ROOM 168	OSB	EF-03 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
L-EA-203-ST-01	MECH ROOM 203	ENDSTATION - A	EXPERIMENT EG.	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-02	MECH ROOM 203	ENDSTATION - A	CLEANING AREA	840	12 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-03	MECH ROOM 203	ENDSTATION - A	VEA	8,400	30 X 36 X 84	0.20	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-04	MECH ROOM 203	ENDSTATION - A	INSPECTION	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-05	MECH ROOM 203	ENDSTATION - A	MECH. RM	2,200	18 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-06	MECH ROOM 203	ENDSTATION - A	RETURN	8,400	32 X 32 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-07	MECH ROOM 203	ENDSTATION - A	RETURN	4,200	24 X 24 X 84	0.12	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-08	MECH ROOM 203	ENDSTATION - A	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-09	MECH ROOM 203	ENDSTATION - A	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EA-203-ST-10	MECH ROOM 203	ENDSTATION - A	VE	1680	12 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-01	MECH ROOM 203	ENDSTATION - B	EXPERIMENT EG.	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-02	MECH ROOM 203	ENDSTATION - B	CLEANING AREA	840	12 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-03	MECH ROOM 203	ENDSTATION - B	VEA	8,400	30 X 36 X 84	0.20	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-04	MECH ROOM 203	ENDSTATION - B	INSPECTION	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-05	MECH ROOM 203	ENDSTATION - B	MECH. RM	2,200	18 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-06	MECH ROOM 203	ENDSTATION - B	RETURN	8,400	32 X 32 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-07	MECH ROOM 203	ENDSTATION - B	RETURN	4,200	24 X 24 X 84	0.12	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-08	MECH ROOM 203	ENDSTATION - B	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-09	MECH ROOM 203	ENDSTATION - B	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
L-EB-203-ST-10	MECH ROOM 203	ENDSTATION - B	VE	1680	12 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	

AIR INLET & OUTLET SCHEDULE

UNIT NO	DESCRIPTION	FACE SIZE	NECK SIZE IN X IN	CONSTRUCTION	MANUFACTURER/ MODEL NO	REMARKS
HF-1	HEPA FILTER	48 X 24	12" Ø	STEEL	AMERICAN AIR FILTER PHARMA-GEL PGA-83	5" DEEP FILTER, (1), (2)
HF-2	HEPA FILTER	24 X 24	10" Ø	STEEL	AMERICAN AIR FILTER PHARMA-GEL PGA-43	5" DEEP FILTER, (1), (2)
CD-1	CEILING DIFFUSER	24 X 24	(3)	ALUMINUM	TITUS POS	W/OBD
CD-2	CEILING DIFFUSER	N/A	(3)	ALUMINUM	TITUS TMR-4A	W/BUTTERFLY DAMPER
RR-1	RETURN REGISTER	(3)	N/A	ALUMINUM	TITUS 3FL	W/OBB
RR-2	RETURN REGISTER	(3)	N/A	ALUMINUM	TITUS 4EL	W/OBB
RG-1	RETURN GRILLE	24 X 24	N/A	ALUMINUM	TITUS 8F	
RG-2	RETURN GRILLE	(3)	(3)	ALUMINUM	TITUS 3552RL	
SR-1	SUPPLY REGISTER	(3)	(3)	ALUMINUM	TITUS 300F	W/OBD

(1) PROVIDE WITH HANGING TAPS, STAINLESS STEEL TRIM, 1 1/2" INSULATION WITH ALUMINUM FOIL
 (2) INITIAL PRESSURE DROP = 0.50" WC, REPLACEMENT PRESSURE DROP = 2.0" WC
 (3) SEE PLANS

VIBRATION ISOLATOR SCHEDULE

UNIT NO	NAME	LOCATION	(2) ISOLATOR TYPE	(3) SPRING DEFLECTION (INCH)	(2) FRAME TYPE	(2) SEISMIC RESTRAINT	REMARKS
L-CS-107-SF-01, 02, 03, 04	VANE AXIAL FAN	CORNER STATION	B	1.0	G	SL	(TYP 4) FANS
L-CS-107-SF-05, 06	VANE AXIAL FAN	CORNER STATION	B	1.0	G	SL	(TYP 2) FANS
L-EA-203-SF-01, 02	VANE AXIAL FAN	END STATION-A	B	1.0	G	SL	(TYP 2) FANS
L-EB-203-SF-01, 02	VANE AXIAL FAN	END STATION-B	B	1.0	G	SL	(TYP 2) FANS
L-CS-190-CH-01, 02, 03	AIR-COOLED WATER CHILLER	CORNER STATION	C	1.0	-	(1)	(TYP 3) CHILLERS
L-EA-200-CH-01, 02	AIR-COOLED WATER CHILLER	END STATION-A	C	1.0	-	(1)	(TYP 2) CHILLERS
L-EB-200-CH-01, 02	AIR-COOLED WATER CHILLER	END STATION-B	C	1.0	-	(1)	(TYP 2) CHILLERS
L-CS-190-WP-01, 02, 03	CHILLED WATER PUMP	CORNER STATION	C	1.0	G	SL	(TYP 3) PUMPS
L-EA-200-WP-01, 02	CHILLED WATER PUMP	END STATION-A	C	1.0	G	SL	(TYP 2) PUMPS
L-EB-200-WP-01, 02	CHILLED WATER PUMP	END STATION-B	C	1.0	G	SL	(TYP 2) PUMPS
L-CS-107-AC-01, 02	AIR COMPRESSOR	CORNER STATION	C	1.0	G	SL	(TYP 2) COMPRESSORS
L-EA-203-AC-01, 02	AIR COMPRESSOR	END STATION-A	C	1.0	G	SL	(TYP 2) COMPRESSORS
L-EB-203-AC-01, 02	AIR COMPRESSOR	END STATION-B	C	1.0	G	SL	(TYP 2) COMPRESSORS
L-CS-160-AH-04	PACKAGED AIR HANDLER	CORNER STATION	B	1.0	G	SL	
L-CS-149-EF-01	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	-	SC	
L-CS-137-EF-02	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	-	SC	
L-CS-168-EF-03	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	-	SC	
L-CS-169-EF-04	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	-	SC	
L-EA-208-EF-01	IN-LINE EXHAUST FAN	END STATION-A	D	1.0	-	SC	
L-EB-208-EF-01	IN-LINE EXHAUST FAN	END STATION-B	D	1.0	-	SC	
L-CS-107-GP-01	GLYCOL FEED PUMP	CORNER STATION	C	1.0	G	SL	
L-EA-203-GP-01	GLYCOL FEED PUMP	END STATION-A	C	1.0	G	SL	
L-EB-203-GP-01	GLYCOL FEED PUMP	END STATION-B	C	1.0	G	SL	
L-CS-195-FP-01	FIRE PUMP	CORNER STATION	C	1.0	G	SL	
L-CS-195-FP-02	FIRE PUMP	CORNER STATION	C	1.0	G	SL	
L-CS-195-JP-03	JOCKY PUMP	CORNER STATION	C	1.0	G	SL	
L-CS-196-DP-04	DOMESTIC WATER PUMP	CORNER STATION	C	1.0	G	SL	
L-CS-196-DP-05	DOMESTIC WATER PUMP	CORNER STATION	C	1.0	G	SL	
L-CS-196-AH-05	PACKAGED AIR HANDLER	CORNER STATION	D	1.0	-	SC	

(1) ISOLATOR HOUSING INCLUDES SEISMIC RESTRAINTS
 (2) SEE SPECIFICATIONS FOR CODE LETTER
 (3) STATIC DEFLECTION 3 HZ

NOTES:


1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEETS LA-H-001 AND LA-H-002.

any other way, except by written consent from PARSONS to the borrower. They are loaned only with the borrower's expressed written agreement that they will

ISSUED FOR CONSTRUCTION	CLP	11-15-96
DRAWN	MN	10-25-96
CHECKED	AA	10-23-96
ENGINEER	TDM	11-15-96
PROJ		

AS-BUILT DRAWINGS

NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
2	8-7-98	DJB	AA	AA	WJW	ISSUED FOR AS-BUILT
1	3-20-97	WJK	AA	AA	TDM	REVISED DUCT SILENCER SCHEDULE



100 WEST WALNUT STREET
PASADENA, CALIFORNIA



CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LIGO-D960965-02-O

LASER INTERFEROMETER
GRAVITATIONAL-WAVE OBSERVATORY
SITE NO.2 - LIVINGSTON, LOUISIANA

TITLE	SCALE	CONTRACT NUMBER	PROJECT NUMBER
HVAC EQUIPMENT SCHEDULES SHEET 4	NONE	PP150969	8094
SHEET NUMBER		REVISIONS	
LA-H-006			