DUCTWORK S	SYMBOLS	DUC	TWORK SYMBOLS	l l	PIPING SYMI	BOLS		PI	IPING SYMBOLS		ABBREVIATIONS		ABBREVIATIONS		ABBREVIATIONS
SYMBOL DES	SCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESC	RIPTION		SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	INGLE-LINE RECTANGULAR R INDICATES SIDE IN VIEW IN				EXISTING			<u></u>	HOSE END DRAIN	°F	DEGREE FARENHEIT DIAMETER OR PHASE	EDB EER	ENTERING DRY BULB TEMPERATURE ENERGY EFFICIENCY RATIO	OA OAD	OUTSIDE AIR OUTSIDE AIR DAMPER
	IMBER INDICATES SIDE IN		FAN - ROOF MOUNTED - MUSHROOM		NEW (LINETYPE VARIES	PER SYSTEM)			STRAINER Y-TYPE	AAV	AUTOMATIC AIR VENT	EF	EXHAUST FAN	OBD	OPPOSED BLADE DAMPER
DOUBLE-LINE AND SII				G	ELBOW TURN DOWN		<u> </u>	${\Delta}$	AIR VENT, AUTOMATIC	ABAN ABV	ABANDON ABOVE	EFF EG	EFFICIENCY EXHAUST GRILLE	OC OD	ON CENTER OUTSIDE DIAMETER
→ 120 → INCHES			FAN - ROOF MOUNTED - UPBLAST		TEE TURN DOWN					AC ACC	AIR CONDITIONING UNIT	EJ	EXPANSION JOINT	OPNG OPWT	OPENING WEIGHT
32x20(L2) ACOUSTICAL LINED D GIVEN ARE CLEAR IN: INCHES					PIPE TURN UP TEE TURN UP			<u> </u>	AIR VENT, MANUAL	ACCU	AIR COOLED CONDENSING UNIT	ELEC ENT	ELECTRICAL ENTERING	P	OPERATING WEIGHT PUMP
RorD INCLINED RISE OR DR	DOD IN			<u> </u>	CAPPED PIPE			VB	VACUUM BREAKER	AD AFF	ACCESS DOOR ABOVE FINISHED FLOOR	EQ ER	EQUAL EXHAUST REGISTER	PA PCF	PIPE ANCHOR POUNDS PER CUBIC FOOT
RorD DIRECTION OR AIR FL			FAN - CENTRIFUGAL		INSULATED PIPE				FLEXIBLE CONNECTION (BRAIDED HOSE)	AHU	AIR HANDLING UNIT	ES	ELECTRIC SUPPLY	PD	PRESSURE DROP
EXISTING DUCTWORK	K L			XXXX	XXXX - SERVICE TYPE. S	SEE ABBREVIATIONS	<u> </u>		FLEXIBLE CONNECTION (SPHERICAL RUBBER)	AMB AP	AMBIENT ACCESS PANEL	ESP ET	EXTERNAL STATIC PRESSURE EXPANSION TANK	PEN PERF	PENETRATION PERFORATED
				<u> </u>	PITCH OF PIPE (RISE)				THERMOSTATIC RADIATOR	APPROX ARCH	APPROXIMATE ARCHITECTURAL	EWBT EWT	ENTERING WET BULB TEMPERATURE ENTERING WATER TEMPERATURE	PF	PRE-FILTER PRESSURE GAUGE
FLEXIBLE CONNECTION	ON		FAN - CENTRIFUGAL PLUG/PLENUM	<u></u> → D	PITCH OF PIPE (DROP)			<u> </u>	THERMOWELL	AS	AIR SEPARATOR	EXP	EXPANSION	PH	PHASE
DIRECTION OF AIR FL	LOW				CONCENTRIC REDUCER	₹/EXPANDER			FLOW METER	ATM ATMV	ATMOSPHERE ATMOSPHERIC VENT	EXT F	FAN FAN	PL POC	PLATE POINT OF CONNECTION
TRANSITION (PERUO	O.F.D.		FANL AVIAL	FOB	FOOENTDIA DEDUCED	EVDANDED		- T	TEGT DOUG	AWT	AVERAGE WATER TEMPERATURE BOILER	F/O FA	FLAT OVAL FROM ABOVE	PRV PSI	PRESSURE REDUCING VALVE POUNDS PER SQUARE INCH
TRANSITION / REDUC	JER		FAN - AXIAL	FOT	ECCENTRIC REDUCER/E	:XPANDER	-		TEST POINT	BAS	BUILDING AUTOMATION SYSTEM	FAI	FRESH AIR INTAKE	PSIA	POUNDS PER SQUARE INCH (ABS)
RADIUS ELBOW WITH MITERED ELBOW WITH			FILTER - BAG		PIPE ANCHOR				PRESSURE GAUGE	BDD BFP	BACKDRAFT DAMPER BACKFLOW PREVENTER	FB FCU	FROM BELOW FAN COIL UNIT	PSIG RA	POUNDS PER SQUARE INCH (GAUGE) RETURN AIR
		$\overline{\wedge \wedge \wedge \wedge}$	FILTER - PLEATED	<u> </u>	omen semin					ВНР	BRAKE HORSEPOWER	FCV	FLOW CONTROL VALVE	RAD	RETURN AIR DAMPER
VANED ELBOW OR RA VANED ELBOW WHER	RE SPACE WILL NOT				FLANGED JOINT			 	THERMOMETER	BLDG BLDWN	BUILDING BLOWDOWN	FD FDR	FIRE DAMPER FLOOR DRAIN	RC RCHWR	REHEAT COIL RADIANT CHILLED WATER RETURN
DUCT - END CAP	LONG RADIUS ELBOW)		FILTER - CARBON					—⊗—	STEAM TRAP	BLW BM	BELOW BEAM	FF FLA	FINAL FILTER FULL LOAD AMP	RCHWS RD	RADIANT CHILLED WATER SUPPLY RETURN DIFFUSER
		<	HUMIDIFIER					Fs	FLOW OR PRESSURE SWITCH	BOT	ВОТТОМ	FMD	FLOW MEASURING DEVICE	RDR	ROOF DRAIN
RECTANGULAR DUCT	T BRANCH		LOUVER		PIPE ALIGNMENT GUIDE		 		PUMP	BSMT BTU	BASEMENT BRITISH THERMAL UNIT	FPM FPT	FEET PER MINUTE FAN POWERED TERMINAL	REFG REFGR	REFRIGERATION SYSTEM REFRIGERATION RETURN
<u> </u>		< √	AIR HANDLING UNIT ACCESS SECTION				<u> </u>		FLOW INDICATOR	BTUH	BTU PER HOUR	FSD	COMBINATION FIRE/SMOKE DAMPER	REFGS	REFRIGERATION SUPPLY
CIRCULAR DUCT BRA	ANCH	<u> </u>	AIR HANDLING UNIT PLENUM SECTION				—— 		-	C/C	CONVERTER CENTER TO CENTER	FSS FT	FLOW SENSING SWITCH FEET	RG RH	RETURN GRILL RELATIVE HUMIDITY
	PLY AIR DUCT (UP AND DOWN)		COIL - PRE-HEAT				— <u>-</u>			CAV CC	CONSTANT AIR VOLUME COOLING COIL	FTR GA	FINNED TUBE RADIATION GAUGE	RHG RHHWR	REFRIGERANT HOT GAS RADIANT HEATING HOT WATER RETURN
RECTANGULAR RETU	JRN AIR DUCT (UP AND DOWN)				TRESSORE RESSORE			GENERA	L SYMBOLS AND TAGS	CD	CEILING DIFFUSER	GAL	GALLON	RHHWS	RADIANT HEATING HOT WATER SUPPLY
RECTANGULAR EXHA	AUST AIR DUCT (UP AND DOWN)	¥ 0	COIL - RE-HEAT			ALVE (CLOSING)		SYMBOL	DESCRIPTION	CFM CFP	CUBIC FEET PER MINUTE CHEMICAL FEED PUMP	GALV GND	GALVANIZED GROUND	RL RPM	REFRIGERANT LIQUID LINE REVOLUTIONS PER MINUTE
	SIDE AIR DUCT (UP AND DOWN)		COIL - COOLING						— EQUIPMENT TYPE	CG CH	CEILING GRILL CHILLER	GPM	GALLON PER MINUTE GRILLE	RR	RETURN REGISTER REFRIGERANT SUCTION LINE
ROUND SUPPLY AIR [DUCT (UP AND DOWN)	C	COIL - HEATING	─ ₩─				AHU		CHW	CHILLED WATER	GRL GSNK	GOOSENECK		SLAB
	DUCT (UP AND DOWN)	V V	COIL - DX	──		NCING VALVE)		8	S FOLUDATIVE TAG NUMBER	CHWR CHWS	CHILLED WATER RETURN CHILLED WATER SUPPLY	H HC	HUMIDITY HEATING COIL	SA SAD	SUPPLY AIR SEE ARCHITECTURAL DRAWINGS
	R DUCT (UP AND DOWN)					TING VALVE			EQUIPMENT TAG NUMBER	CJ	CONSTRUCTION JOINT	HFD	HORIZONTAL FIRE DAMPER	SCHW	SECONDARY CHILLED WATER
ROUND OUTSIDE AIR	R DUCT (UP AND DOWN)		FAN COIL UNIT					<u> </u>	LINE BREAK	CL CLG	CENTERLINE CEILING	HHW HHWR	HEATING HOT WATER HEATING HOT WATER RETURN	SCHWR SCHWS	SECONDARY CHILLED WATER RETURN SECONDARY CHILLED WATER SUPPLY
VOLUME DAMPER							——————————————————————————————————————		ELECTRIC HEAT TRACING	CLR CND	CLEAR CONDENSER WATER	HHWS HORIZ	HEATING HOT WATER SUPPLY	SD	SMOKE DAMPER SUPPLY DIFFUSER
			UNIT HEATER					- <i>/</i> - <i>/</i> - <i>/</i> - <i>/</i> - <i>/</i> -	EXISTING TO BE REMOVED	CNDR	CONDENSER WATER RETURN	HP	HORIZONTAL HORSEPOWER	SEER	SEASONAL ENERGY EFFICIENCY RATIO
MOTORIZED DAMPER	R		UNIT HEATER - CEILING - PLAN							CNDS	CONDENSER WATER SUPPLY CARBON MONOXIDE	HPC HPS	HIGH PRESSURE CONDENSATE HIGH PRESSURE STEAM	SF SG	SUPPLY FAN SUPPLY GRILLE
BDD BACKDRAFT DAMPER	R		UNIT HEATER - CEILING - FLAN						POINT OF NEW CONNECTION TO EXISTING WORK	CO2	CARBON DIOXIDE	HTG	HEATING HEAT TRANSFER PACKAGE	SP	STATIC PRESSURE
FD FD			VAV BOX - SINGLE DUCT					\	POINT OF DISCONNECTION OF WORK TO BE	COL	COLUMN CONCRETE	HTP HX	HEAT EXCHANGER	SPD SQ FT	SEE PLUMBING DRAWINGS SQUARE FEET
FIRE DAMPER				十	SAFETY RELIEF VALVE				REMOVED (XXX - SERVICE REFERENCE. SEE ABBREVIATIONS)	COND	CONDENSATE CONDENSOR	HZ IN	HERTZ INCHES	SR SS	SUPPLY REGISTER STAINLESS STEEL
SD SD			VAV BOX - FAN ASSISTED - PARALLEL		BACKFLOW PREVENTER	?				CONN	CONNECTION	KW	KILOWATT	SST	STAINLESS STEEL
SMOKE DAMPER										CONT	CONTINUATION / CONTINUOUS CONVECTOR	(L1)	1 ACOUSTICAL DUCT LINING	ST	SOUND TRAP (ATTENUATOR) SURFACE TEMPERATURE
FSD COMBINATION FIRE/S	SMOKE DAMPER		SOUND ATTENUATOR							COP	COEFFICIENT OF PERFORMANCE CONTROL PANEL	(L2)	2 ACOUSTICAL DUCT LINING LINED DUCTWORK	STL STM	STEEL STEAM
	SWORE BAINTER	仝								CPF	CHEMICAL POT FEEDER	LAT	LEAVING AIR TEMPERATURE	STRUCT	STRUCTURAL
DUCT SMOKE DETECT	CTOR G	 	AID SEDADATOD		GENFRAI [LAM YTUC	MUAI	AND CON	NTROL VALVES	CRP CSR	CONDENSATE RETURN PUMP CURRENT SENSING RELAY	LB LD	POUND LINEAR DIFFUSER	T	TEMPERATURE TRANSFER AIR
h			AIR SEPARATOR		BOL (WITH OPERA		i		DESCRIPTION	CT	COOLING TOWER	LDB	LEAVING DRY BULB TEMPERATURE	TA	TO LEVEL ABOVE
TYPE AIR TERMINAL - SIDEN (AIRFLOW DIRECTION	WALL GRILLE/REGISTER N AND TYPE SHOWN)				CYLINDER DIAPHRAGM		OLENOID		DESCRIPTION	CU FT CU IN	CUBIC FEET CUBIC INCHES	LL	LOW LEVEL LOW PRESSURE CONDENSATE	TB TG	TO LEVEL BELOW TRANSFER GRILLE
TYPE AIR TERMINAL - CEILI (CFM) (AIRFLOW DIRECTION							(S) a			DB DC	DRY BULB DRY AIR COOLER	LPS LWBT	LOW PRESSURE STEAM LEAVING WET BULB TEMPERATURE	THK TNL	THICK TUNNEL
TYPE AIR TERMINAL - CEILI	ING RETURN		PLATE AND FRAME HEAT EXCHANGER	<u></u> ->>> -	S S			2-PORT SHUT-OFF VAL	_VE (S)	DDC	DIRECT DIGITAL CONTROL	LWT	LEAVING WATER TEMPERATURE	TYP	TYPICAL
						(M) T (1)	S _T	2-PORT THROTTLING V	VALVE (T)	DEGF DEMO	DEGREE FAHRENHEIT DEMOLITION	MAT MAX	MIXED AIR TEMPERATURE MAXIMUM	UFD UGND	UNDERFLOOR DUCT UNDERGROUND
(CFM) (AIRFLOW DIRECTION	N AND TYPE SHOWN)	(E)	TEMPERATURE SENSOR							DET	DETAIL DOOR GRILLE	MBH MBTU	THOUSAND BTUH THOUSAND BTU	UH	UNIT HEATER UNLESS OTHERWISE NOTED
AIR TERMINAL - CEILI (AIRFLOW DIRECTION		R	RELATIVE HUMIDITY SENSOR					3-WAY GATE VALVE		DG	DOMESTIC WATER HEATER	MCA	MINIMUM CIRCUIT AMPACITY	VAV	VARIABLE AIR VOLUME
TYPE (CFM) AIR TERMINAL - CEILI (AIRFLOW DIRECTION	ING RETURN - ROUND N AND TYPE SHOWN)	©PS)	DIFFERENTIAL PRESSURE CARBON MONOXIDE SENSOR				(\$)			DHW DIA	DOMESTIC HOT WATER DIAMETER	MCC MD	MOTORIZED CONTROL CENTER MOTORIZED DAMPER	VC VB	VACUUM BREAKER VENT COIL
AIR TERMINAL - CEILI (AIRFLOW DIRECTION	ING EXHAUST - ROUND N AND TYPE SHOWN)	©2)	CARBON DIOXIDE SENSOR CARBON DIOXIDE SENSOR					ANGLE VALVE		DIM	DIMENSION	MECH	MECHANICAL	VD .	VOLUME DAMPER
LINEAR DIFFUSER (AI		0	OCCUPANCY SENSOR				\$ (GLOBE VALVE		DLV DMPR	DOOR LOUVER DAMPER	MEZZ MFSD	MEZZANINE MODULATING FIRE SMOKE DAMPER	VFD VIF	VARIABLE FREQUENCY DRIVE/CONTROLLER VERIFY IN FIELD
AND TYPE SHOWN) ACCESS DOOR		T)	THERMOSTAT	->->-			- 	OLODE VMEVE		DP	DEWPOINT DIFFERENTIAL PRESSURE SENSOR	MIN	MINIMUM MISCELLANEOUS	W/O WB	WITHOUT WET BULB
		H	HUMIDITY SENSOR	-				3-WAY GLOBE VALVE		DR	DRAIN	MPC	MED PRESSURE CONDENSATE	WC	WATER COLUMN
TRANSFER DUCT WIT	TH GRILLES	(SP)	STATIC PRESSURE SENSOR	T		T				DS DT	DISCONNECT SWITCH DRAW THROUGH	MPS MV	MED PRESSURE STEAM MANUAL VENT	WF WFR	WATER FILTER WATER FILTER RETURN
UNDERCUT DOOR		XX-YY	SENSOR - SEE ABBREVIATIONS FOR TYPE			$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		BALL VALVE		DW	DOMESTIC WATER	(N)	NEW	WFS	WATER FILTER SUPPLY
l uc	STIDDI V	XX-YY	SENSOR (DUCT MOUNTED) - SEE ABBREVIATIONS				(S)			DWG (E)	DRAWING EXISTING	NA NC	NOT APPLICABLE NORMALLY CLOSED	WG	WATER GAUGE OR WALL GRILLE WIRE MESH SCREEN
→ AIR FLOW ARROW (SI	,		FOR TYPE		니슈ト 니슈ト	→ <u></u> ⊢	⊣Ŭ⊢	PLUG VALVE		EA EA	EXHAUST AIR EACH	NFA NIC	NET FREE AREA NOT IN CONTRACT	WS	WATER SOFTENER WEIGHT
UP _	· · · · · · · · · · · · · · · · · · ·		ROOF EXHAUST FAN (PLAN)			(M) (<u>\$</u>	BUTTERFLY VALVE		EAD	EXHAUST AIR DAMPER	NO	NUMBER	WI WW	WELL WATER
I SLOPE DIRECTION AS	KROW \		NOOL ENTINOST LAIN (FEAIN)	<u> </u>		<u> </u>	⊣ Ĭ⊢			EAT ED	ENTERING AIR TEMPERATURE EXHAUST DIFFUSER	NOPN NTS	NORMALLY OPEN NOT TO SCALE		
DN SEGIE BIKESTIONAL		I								, 		⊣ •	-1	————	-1
DN		L (SQ.FT.)	LOUVER (DOOR AND WALL) AND LOUVER FREE AREA	-			-Ğ- ¹	DIAPHRAGM VALVE	1						

	MECHANICAL DRAWING LIST											
DRG NO.	DRAWING TITLE	SCALE										
WT-2-M.0.00	MECHANICAL - SYMBOLS, ABBREVIATIONS, AND DRAWING LIST	NTS										
WT-2-M.0.01	MECHANICAL - GENERAL NOTES	NTS										
WT-2-M.1.00	MECHANICAL - OVERALL PLAN - BASEMENT	1/16" = 1'-0"										
WT-2-M.2.10	MECHANICAL - SEGMENT ONE - BASEMENT - FLOOR PLAN	1/8" = 1'-0"										
WT-2-M.4.00.1	MECHANICAL - SINGLE LINE DIAGRAM - SHEET 1	NTS										
WT-2-M.4.00.2	MECHANICAL - SINGLE LINE DIAGRAM - SHEET 2	NTS										
WT-2-M.5.00.1	MECHANICAL - BASEMENT - SCHEDULES - SHEET 1	NTS										
WT-2-M.7.00.1	MECHANICAL - BASEMENT - PARTIAL PLANS NEW	1/4" = 1'-0"										
WT-2-M.8.01	MECHANICAL - DETAILS - SHEET 1	NTS										
WT-2-M.8.02	MECHANICAL - DETAILS - SHEET 2	NTS										
WT-2-M.8.03	MECHANICAL - DETAILS - SHEET 3	NTS										
WT-2-M.8.04	MECHANICAL - DETAILS - SHEET 4	NTS										

Issue for Bid 01/09/18

WORTHAM
THEATER
REHABILITATION
501 Texas Ave
Houston, TX 77002

Hougtonfirst

HarrisonKornberg/ARUP

701 Avenida de las Americas Houston, TX 77010

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Interim Review

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Written dimensions on these drawings shall have precedence over scale dimensions. Contractors shall be responsible for all dimensions and conditions on the job. HarrisonKornberg Architects, LLC must be notified of any variation from the dimension and conditions shown by these drawings.

Revisions

Date Description

Project Team

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Walker Parking
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ACOUSTICS / AV / IT

Jaffe Holden

Contact: Garth Hemphill
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Key Plan

PACKAGE 2

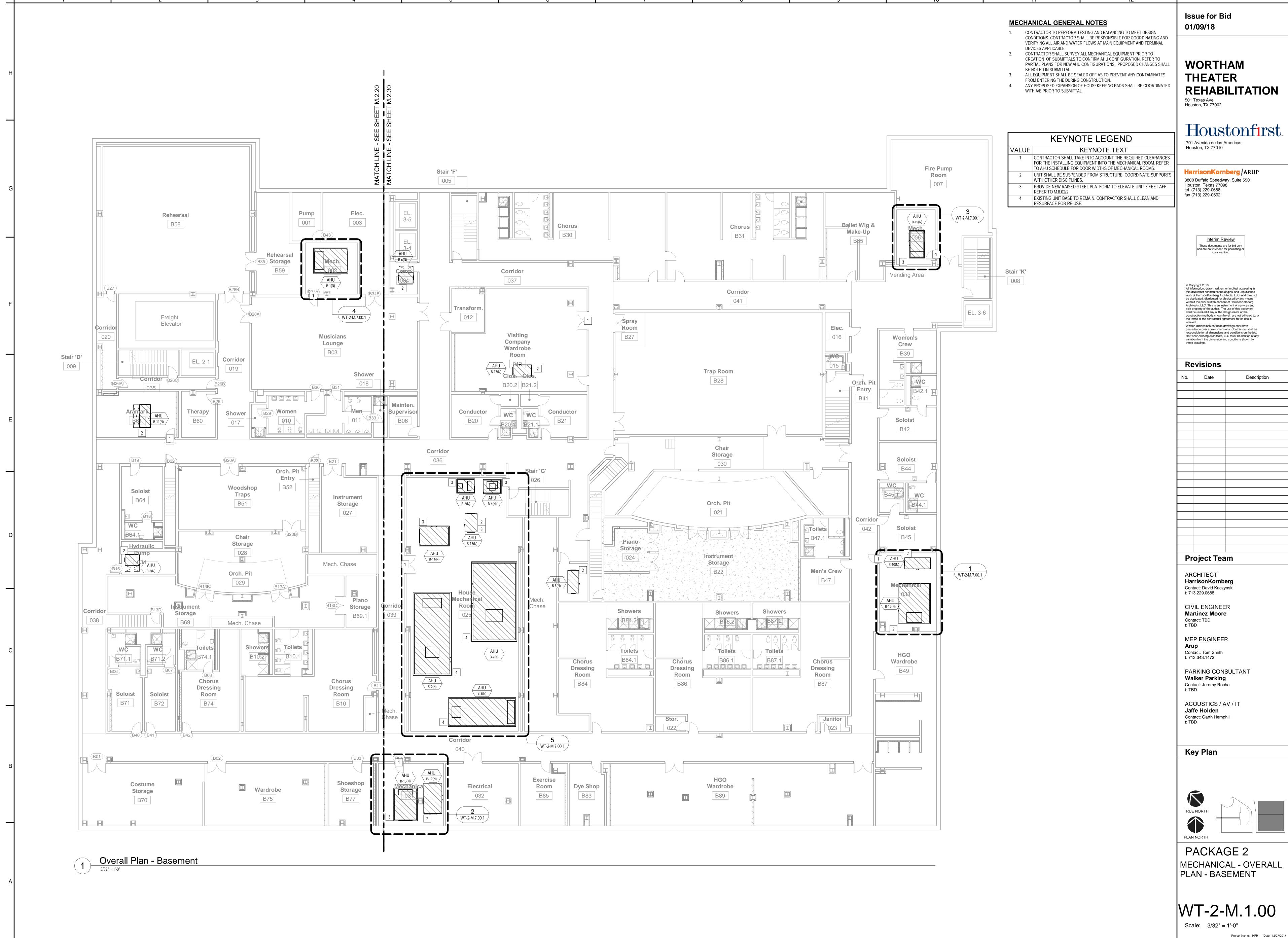
MECHANICAL - SYMBOLS,
ABBREVIATIONS, AND
DRAWING LIST

WT-2-M.0.00 Scale: 12" = 1'-0"

" = 1'-0"

Project Name: HFR Date: 12/27/2017

	DEMOLITICAL MOTES	Issue for Bid
GENERAL NOTES	DEMOLITION NOTES 1. DEMOLITION PLANS ARE PROVIDED TO SHOW GENERAL CONCENTRATION OF DEMOLITION WORK. ADDITIONAL	01/09/18
 ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION. 	DEMOLITION WORK MAY BE NECESSARY IN AREAS WHERE NO DEMOLITION WORK IS INDICATED. ITEMS TO REMAIN AND POINTS OF DISCONNECTIONS/CONNECTIONS ARE SHOWN ON NEW PLANS. 2. CONTRACTOR SHALL REMOVE ANY EXISTING PIPING IN CONFLICT WITH THE ERECTION OF NEW WALLS AND RELOCATE	
2. PROVIDE AN INSULATED SHEET METAL DRAIN PAN BELOW ALL CEILING HUNG FAN COIL UNITS. DRAIN PAN SHALL BE 4" DEEP AND SHALL EXTEND 6" BEYOND THE EDGE OF THE FAN COIL. PROVIDE TRAP AND DRAIN PIPING.	TO MAINTAIN SERVICE. 3. EACH BIDDER PRIOR TO BID SHALL VISIT THE SITE TO EXAMINE EXISTING CONDITIONS AND BECOME INFORMED OF THE	WORTHAM THEATER
THIS CONTRACTOR SHALL INSTALL DUCT MOUNTED SMOKE DETECTORS FURNISHED BY THE ELECTRICAL CONTRACTOR. PROVIDE AN INSULATED SHEET METAL DRAIN PAN BELOW ALL CEILING HUNG FAN COIL UNITS. DRAIN PAN SHALL BE 4" PROFESSION OF THE FAN COIL PROVIDE TRAIN AND REAL BRIDING.	EXTENT AND CHARACTER OF WORK REQUIRED. NO ADDITIONAL COMPENSATION WILL BE APPROVED DUE TO FIELD CONDITIONS.	REHABILITATIO
DEEP AND SHALL EXTEND 6" BEYOND THE EDGE OF THE FAN COIL. PROVIDE TRAP AND DRAIN PIPING. 5. CONTRACTOR SHALL COORDINATE INSTALLATION OF EQUIPMENT WITH ALL SERVICES AND TRADES.	 ALL COSTS RESULTING FROM TEMPORARY SHUTDOWNS OF SERVICES SHALL BE BORN BY THIS CONTRACTOR. CONTRACTOR SHALL MAINTAIN FULL SERVICE TO EXISTING AREAS THAT ARE TO REMAIN. CONTRACTOR SHALL VISIT THE PREMISES TO ASCERTAIN EXISTING CONDITIONS AND AREAS TO REMAIN IN SERVICE. 	501 Texas Ave Houston, TX 77002
6. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE BUILDING CODE REQUIREMENTS AND PROVIDE ALL REQUIRED CONTROLLED INSPECTIONS FOR HIS WORK.	6. DEMOLITION WORK, NEW WORK AND CONNECTIONS TO EXISTING SHALL BE PROVIDED WITH MINIMUM INTERFERING WITH THE OPERATION OF THE FACILITY. SERVICE SHUTDOWNS OR INTERFERENCE WITH THE ACTIVE AREAS.	TTourstonfin
 FOR PIPING REQUIREMENTS NOT INDICATED ON PLANS, SEE RELATED CONNECTION DETAILS AND DIAGRAMS. PROVIDE REDUCER FITTINGS FOR CHANGE IN PIPE SIZE AND FOR FINAL CONNECTION AT EQUIPMENT AND AS REQUIRED TO PERMIT DRAINAGE AND VENTING. 	7. SHALL NOT BE PERMITTED WITHOUT PERMISSION OF THE OWNER. NOTIFICATION OF THE OWNER IN ADVANCE IN WRITING IS REQUIRED PRIOR TO ANY SHUTDOWN. MAKE TEMPORARY CONNECTIONS IF NECESSARY TO INSURE CONTINUOUS OPERATION.	Houstonfirs 701 Avenida de las Americas
9. PROVIDE MANUAL AIR VENTS, DRAINS AND RELIEF VALVES. AS REQUIRED AT THE HIGH AND LOW POINTS IN THE SYSTEM.	8. IN THE PROCESS OF DEMOLITION, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PREVENT DAMAGE TO ARCHITECTURAL SURFACES AND MATERIALS.	Houston, TX 77010
 10. COORDINATE INSTALLATION OF NEW PIPES IN THE CEILING WITH NEW AND EXISTING SERVICES. 11. CONNECTION OF NEW WORK SHALL BE COORDINATED WITH THE BUILDING ENGINEER SO AS TO NOT DISRUPT BUILDING 	9. VERIFY MEASUREMENTS AND SERVICE ARRANGEMENTS AS SHOWN ON THE DRAWINGS. INFORM OWNER'S REPRESENTATIVE OF DISCREPANCIES IN FORM OF WRITTEN DESCRIPTION AND SKETCHES.	HarrisonKornberg / ARUP 3800 Buffalo Speedway, Suite 550
OPERATIONS AND SERVICES. IF TEMPORARY SHUTDOWNS ARE REQUIRED THEY SHALL BE COORDINATED WITH BUILDING ENGINEER AND SCHEDULED AS REQUIRED. ALL SHUTDOWNS MUST BE ACCOMPLISHED AFTER NORMAL WORKING HOURS. ALL REQUIRED OVERTIME LABOR SHALL BE INCLUDED IN THE BASE BID.	 VERIFY THAT SERVICES DESIGNATED FOR ABANDONMENT SERVES ONLY EQUIPMENT OR FACILITIES TO BE ABANDONED. DEMOLITION DRAWINGS, NOTE AND DETAILS ARE BASED ON FIELD OBSERVATION AND AVAILABLE RECORD DOCUMENTS. 	Houston, Texas 77098 tel (713) 229-0688 fax (713) 229-0692
12. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE ALL WORK WITH ALL NEW AND EXISTING WORK OF ALL OTHER TRADES. THE SHOP DRAWINGS PREPARED BY THIS CONTRACTOR SHALL INDICATE SPACE ALLOWANCES FOR ALL WORK OF ALL OTHER TRADES AND SHALL BE SIGNED OFF BY ALL OTHER CONTRACTORS.	REPORT DISCREPANCIES TO THE OWNER'S REPRESENTATIVE BEFORE DISTURBING EXISTING INSTALLATION. 12. REMOVE MECHANICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL. REFER TO	
13. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE BUILDING CODE REQUIREMENTS AND PROVIDE ALL REQUIRED CONTROLLED INSPECTIONS FOR HIS WORK.	ARCHITECTURAL DRAWINGS. 13. COORDINATE ALL DEMOLITION WITH THE WORK OF OTHER DIVISIONS TO ENSURE ALL ELECTRICITY, WATER, DRAINAGE, ETC. SERVING THE SERVICES SCHEDULED FOR DEMOLITION ARE SHUT-OFF AND SAFELY ISOLATED BEFORE BEGINNING	
 14. THESE NOTES APPLY TO ALL SYSTEMS. 15. CONTRACTOR SHALL VERIFY ON-SITE ALL CONDITIONS AND MEASUREMENTS SHOWN ON CONTRACT. 	DEMOLITION. 14. THE CONTRACTOR SHALL IDENTIFY ALL DEMOLITION OR RE-ROUTING OF EXISTING SERVICES NECESSARY TO ALLOW	Interim Review These documents are for bid only
16. CONTRACTOR SHALL PROVIDE DETAILS AND LOCATIONS OF SUPPORTS FOR ALL PIPING, AND EQUIPMENT WITH LOAD CALCULATIONS FOR REVIEW BY THE STRUCTURAL ENGINEER.	PHASING OF THIS WORK AND INFORM THE OWNER'S REPRESENTATIVES AS EARLY AS POSSIBLE. 15. FOR THE CONTINUED OPERATION OF OTHER PARTS OF THE BUILDING NOT INCLUDED UNDER THIS CONTRACT THE	and are not intended for permitting or construction.
17. ALL SUPPORTS FOR MECHANICAL EQUIPMENT ARE BASED ON PRELIMINARY INFORMATION FROM ONE MANUFACTURER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING SIZES FROM CERTIFIED DRAWINGS OF EQUIPMENT BEING SUBMITTED AND SHALL MAKE ANY STRUCTURAL MODIFICATIONS REQUIRED WITHOUT ANY ADDITIONAL COST TO THE	CONTRACTOR SHALL ENSURE THAT ANY SYSTEM SHUTDOWN IN ANY PART OF THE BUILDING DOES NOT PREVENT THE CONTINUED OPERATION OF OTHER PARTS OF THE BUILDING UNLESS AGREED BY THE OWNER. WHERE NOT AGREED BY THE OWNER, THE CONTRACTOR SHALL PROVIDE, AT NO INCREASE IN THE CONTRACT SUM, ALTERNATIVES TO THE SERVICES REQUIRED TO BE INTERRUPTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AS	
OWNER. 18. PRIOR TO ISSUING BID PRICE COORDINATE WITH BUILDING ENGINEER TO DETERMINE EXTENT OF WORK WHICH IS	EARLY AS POSSIBLE ALL SERVICES THAT MAY NEED TO BE INTERRUPTED AND TO AGREE THEIR INTERRUPTION, A SCHEDULE FOR INTERRUPTION AND PROVISION OF ALTERNATIVES WITH THE OWNER'S REPRESENTATIVE AND THE OWNER.	© Copyright 2018 All information, drawn, written, or implied, appearing in this document constitutes the original and unpublished work of HarrisonKornberg Architects, LLC. and may not be duplicated, distributed, or disclosed by any means
REQUIRED TO BE PERFORMED AFTER NORMAL OPERATING HOURS OR DURING THE WEEKENDS AND INCLUDE FOR SUCH WORK IN BID PRICE.	16. WHERE ITEMS ARE TO BE REMOVED FROM THE BUILDING THE CONTRACTOR SHALL RENDER THESE ITEMS SUITABLE FOR REMOVAL AND DISPOSE OF THEM IN AN ENVIRONMENTALLY FRIENDLY MANNER. REFER TO PROJECT SPECIFICATIONS.	without the prior written consent of HarrisonKornberg Architects, LLC. This is an instrument of services and sole property of the author. The use of this document shall be revoked if any of the design intent or the construction methods shown herein are not adhered to, or
 19. CONTRACTOR SHALL IDENTIFY ANY WORK WHICH MAY BE REQUIRED TO BE PERFORMED ON OVERTIME IN ORDER NOT TO DISTURB OCCUPIED SPACES WHICH ARE NOT IN CONTRACT. 20. THE CONTRACTOR SHALL BEAR ALL COSTS FOR UTILITY SHUTDOWNS. 	17. DISCONNECT AND REMOVE ABANDONED MECHANICAL SERVICES. REMOVE BRACKETS, HANGERS, AND OTHER ACCESSORIES.	the terms of the contractual agreement for its use is violated. Written dimensions on these drawings shall have precedence over scale dimensions. Contractors shall be responsible for all dimensions and conditions on the job.
	18. DISCONNECT AND STORE EXISTING EQUIPMENT TO BE RELOCATED. REPLACE EQUIPMENT IF DAMAGED, NON-FUNCTIONAL OR DOES NOT MEET SPECIFIED CAPACITY.	HarrisonKornberg Architects, LLC must be notified of any variation from the dimension and conditions shown by these drawings.
	 REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS, WHICH REMAIN ACTIVE. MODIFY INSTALLATION AND PROVIDE ACCESS PANEL AS APPROPRIATE. 	Revisions
	21. EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING MECHANICAL INSTALLATIONS OR AS SPECIFIED.	No. Date Description
	22. THE HVAC CONTRACTOR SHALL COORDINATE REPAIRING, RESTORING AND FINISHING OF ALL CUT OPENINGS, CLOSING UP OF EXISTING OPENINGS AND REMOVING AND RESTORING THE AFFECTED SECTIONS OF THE SUSPENDED CEILINGS AND WALLS THAT ARE IMPACTED BY HVAC WORK.	
	23. UPON COMPLETION, REMOVE ALL TEMPORARY PIPING AND EQUIPMENT, SHORING, SCAFFOLDS, ETC., AND LEAVE ALL AREAS CLEAN AND FREE FROM MATERIAL AND DEBRIS RESULTING FROM WORK PERFORMED UNDER THIS SECTION.	
	PROVIDE ROUGH PATCHING IN AREAS SHOWN. 24. CLEAN AND REPAIR EXISTING MATERIALS AND EQUIPMENT, WHICH REMAIN OR ARE TO BE USED.	
	25. DEMOLITION PLANS ARE PROVIDED TO SHOW GENERAL CONCENTRATION OF DEMOLITION WORK. ADDITIONAL DEMOLITION WORK MAY BE NECESSARY IN AREAS WERE NO DEMOLITION WORK ARE INDICATED. ITEMS TO REMAIN AND POINT OF DISCONNECTIONS/CONNECTIONS ARE SHOWN ON THE NEW PLANS.	
	26. DEMOLITION WORK INCLUDES ALL WORK ASSOCIATED WITH ALL TEMPORARY WORK REQUIRED TO KEEP EXISTING SYSTEMS OPERATIONAL.	
	27. REMOVE ALL ABANDONED AND UNSERVICEABLE EQUIPMENT INCLUDING ALL ASSOCIATED DUCTWORK, PIPING, AND ELECTRICAL DEVICES.	
		Project Team
		ARCHITECT
		HarrisonKornberg Contact: David Kaczynski t: 713.229.0688
		CIVIL ENGINEER
		Martinez Moore Contact: TBD t: TBD
		MEP ENGINEER
		Arup Contact: Tom Smith t: 713.343.1472
		PARKING CONSULTANT Walker Parking
		Contact: Jeremy Rocha t: TBD
		ACOUSTICS / AV / IT Jaffe Holden
		Contact: Garth Hemphill t: TBD
		Key Plan
		PACKAGE 2 MECHANICAL - GENEI
		NOTES
		WT-2-M.0.0
		Scale: 12" = 1'-0"
		Project Name: HFR Date:



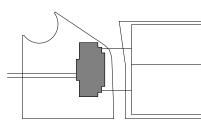
Issue for Bid KEYNOTE LEGEND 01/10/18 KEYNOTE TEXT VALUE PROVIDE NEW RAISED STEEL PLATFORM TO ELEVATE UNIT 3 FEET AFF. REFER TO M.8.02/2 CONTRACTOR SHALL TAKE INTO ACCOUNT THE REQUIRED CLEARANCES FOR THE INSTALLING EQUIPMENT INTO THE MECHANICAL ROOM. REFER TO AHU SCHEDULE FOR DOOR WIDTHS OF MECHANICAL ROOMS. UNIT SHALL NOT EXCEED EXISTING CURB SIZE IN MECH ROOM. REFER TO UNIT SCHEDULE FOR CURB SIZES. WORTHAM **THEATER** 501 Texas Ave Houston, TX 77002 701 Avenida de las Americas Houston, TX 77010 HarrisonKornberg/ARUP 3800 Buffalo Speedway, Suite 550 Houston, Texas 77098 tel (713) 229-0688 fax (713) 229-0692 Interim Review These documents are for bid only and are not intended for permitting or construction. © Copyright 2018

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Written dimensions on these drawings shall have precedence over scale dimensions. Contractors shall be responsible for all dimensions and conditions on the job. HarrisonKornberg Architects, LLC must be notified of any variation from the dimension and conditions shown by these drawings. Revisions **Project Team** ARCHITECT HarrisonKornberg Contact: David Kaczynski t: 713.229.0688 CIVIL ENGINEER **Martinez Moore** Contact: TBD t: TBD MEP ENGINEER 14 Arup
Contact: Tom Smith
t: 713.343.1472 - |---PARKING CONSULTANT Walker Parking Contact: Jeremy Rocha t: TBD ACOUSTICS / AV / IT Jaffe Holden Contact: Garth Hemphill t: TBD 12 **Key Plan** TRUE NORTH PACKAGE 2 JJ KK HH FLOOR PLAN WT-2-M.2.10 BASEMENT - SEGMENT ONE
1/8" = 1'-0"

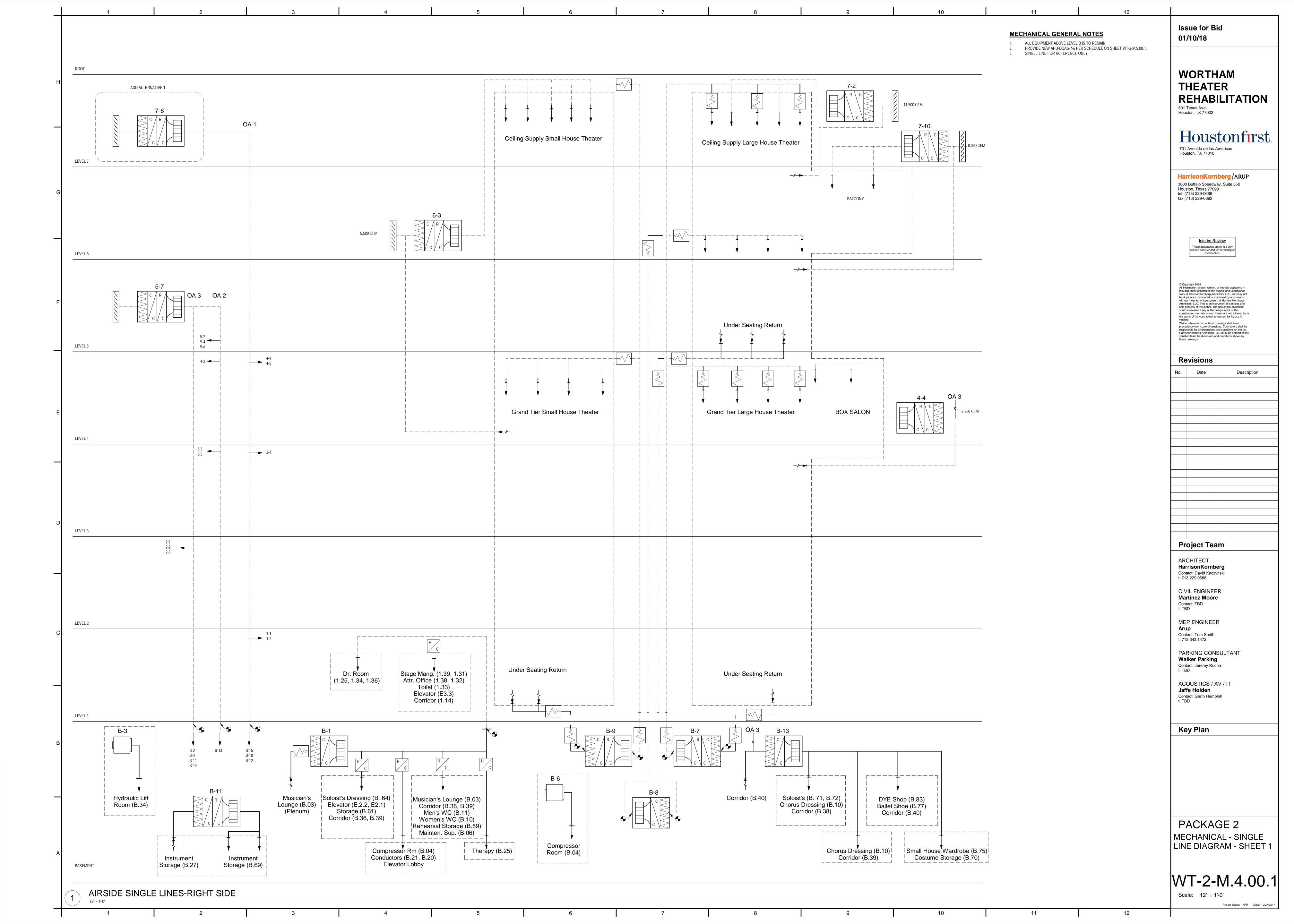
REHABILITATION

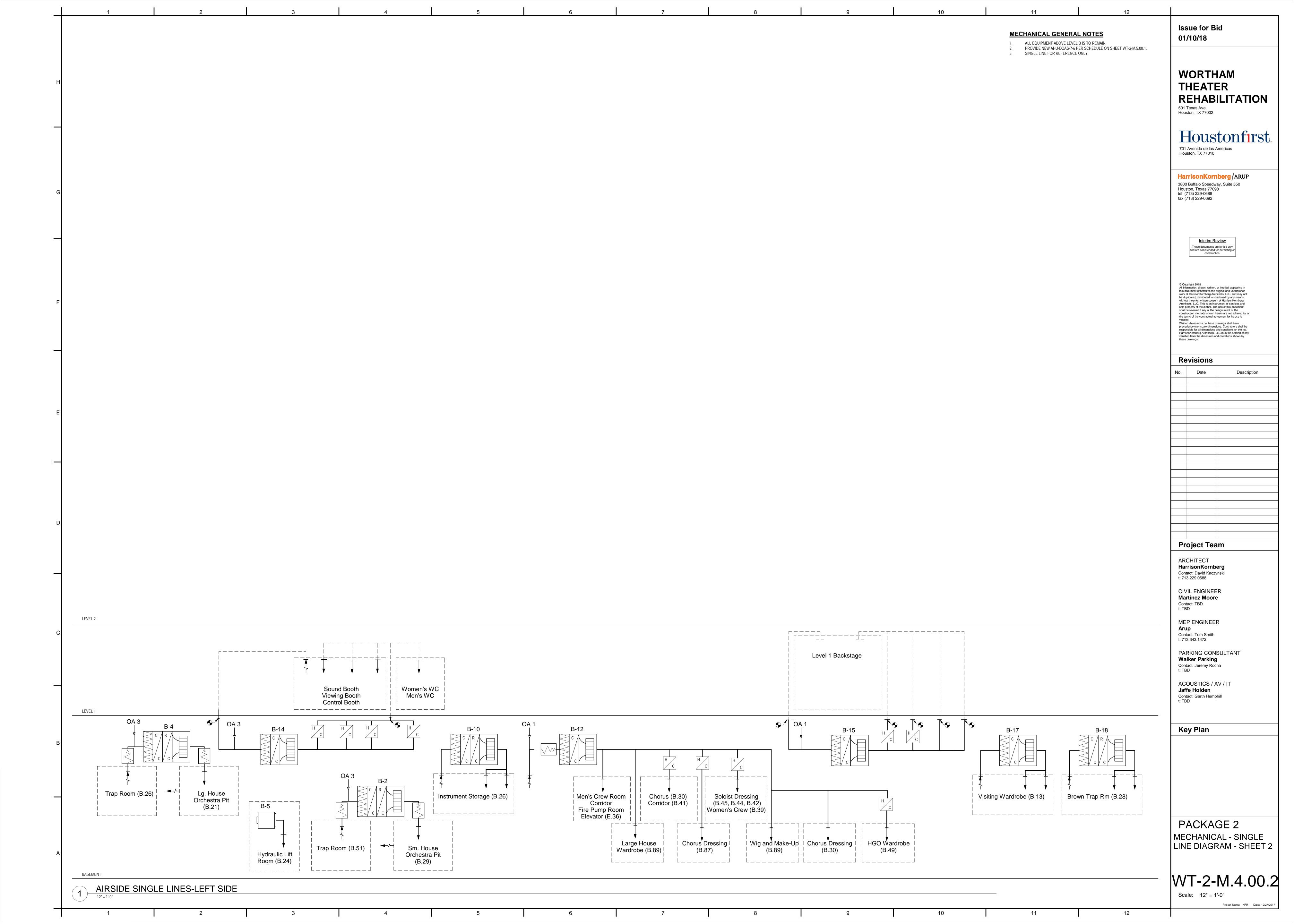
Description



MECHANICAL - SEGMENT ONE - BASEMENT -

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





TITEM No. LOCATION AREA SERVED LOCA															AIR I	HANDLI	NG UNI	T SCHED	ULE													
Design Part	ITEM																															
Supply S							MOT	TOR DATA					I		AIR				CHILLED	WATER			HOT	WATER				 				
APE No.					OUTSIDE						MIN					ENT	LVG						HHW							OPERATING		
AFU Series Seri						S.P. [II						1			MAX VEL																	
Mil 1970 6.06 See Instruction 1970 1980 1980 1970 1980 19	TYPE NO.	LOCATIO	N AREA SERVED	[CFM]	[CFM]	W.C.]] HP V(OLT PH H	Z TYPE	CONTROL	ROWS	FPI	[MBTU]	[MBTU]	[FPM]	DB [°F]	DB [°F]	[GPM]	TEMP [°F]] TEMP [°F]	[FT. HD.]	CAP [KBTU]	[GPM]	TEMP [°F]] TYPE	DEFL. [IN]	(IN)	(IN)	(IN)	[LBS]	CLEARANCE	NOTES
Fig.	AHU B-1(N)	B.37	Segment 2- Right	10,000	2,890	1.8	15	460 3 6	0 VAV	VFD	6	10	387	304	500	82	52	56	42	56	10	0	0	0	SPRING	0' - 2"	9' - 0"	12' - 8"	10' - 1"	4,018	3' - 10"	1-14
AHU B490 B.82 Large Huston Chembral PH - B-77 5.000 6.00 1.1 7.5 7.6 7.5 7	, ,			· ·	250	1.1	5 4	460 3 6	0 SINGLE ZONE	VFD	6	10	60.9	48.3	.00	77	53	9	42	56	10	32.8	2	175						2,000		1-13
Red Bell B				_	0	1.1	0.5	460 3 6	0 FCU	N/A	6	10	41	32		65		2	42	56	10	0	0	0						600		1-13
AHU BANG BOB Corpressive Room 1.500 0 1.1 10 40 40 3 40 FOU NA 6 10 85.4 76.8 500 100 52 6.1 42 55 10 0 0 0 SPRING 0.2 7 16.4 9 7.10 500 2.10 1.13 1.13 1.14 BANG BANG BANG BANG BANG BANG BANG BANG	· · · · ·		<u> </u>	· ·	600	1.1	7.5	460 3 6	0 SINGLE ZONE	VFD	8	10	165.3	137		78	53	24	42	56	10	87.5	5	175				6' - 5"		3,500		1-13
A-HU B-7(P) B.08 Large-House Theories - Inderforce Species	, ,		Hydraulic Pump Room	·	0	1.1	1 4	460 3 6	0 FCU	N/A	6	10	41	32		88		11	42	56	10	0	0	0						500		1-13
AHU B-8(N) B.08 Grand Tier Large Theater 10,000 0 18 20 460 3 60 SINGLE ZONE VFD 8 10 374 259 400 78 53 54 42 56 10 0 0 0 0 0 SPRING 0 - 2" 9 -1" 22 -0" 112 -4" 7,500 5 -6" ALL AHU B-10(N) B.08 Single Thuse Theater Underfloor 0 20,000 0 0 1.8 1.8 40 3 60 SINGLE ZONE VFD 8 10 0 44 550 400 78 53 99 42 56 10 0 281 14 175 SPRING 0 - 2" 11 -8" 29 -1" 12 -4" 15,000 5 -6" ALL AHU B-10(N) B-10(N			<u>'</u>		0	1.1	10 4	460 3 6		N/A	6	10		76.8		100	JZ	61	42	56	10	0	0	0						500		1-13
AHU B-9(N) B.08 Small House Theafer- Underfloor 20,000 0 1.5 40 46 3 60 SINGLE ZONE VFD 8 10 694 590 400 78 53 99 42 56 10 281 14 175 SPRING 0 2' 11' 8' 29' 1' 12' 4' 15,000 5 5-6' ALL ALL B-10(N) B.09 Instrument Storage 1,000 90 18 15 40 3 60 SINGLE ZONE NA 6 10 44 32 400 80 50 6 42 56 10 0 0 SPRING 0 2' 3' 8' 7' 6' 11' 8' 10' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1' 1' 1,050 2' 10' 11' 8' 10' 1' 1' 1' 1' 1,050 2' 10' 11' 11' 1' 1' 10' 1' 1' 1' 1' 1,050 2' 10' 11' 11' 1' 1' 1' 1' 1' 1' 1' 1' 1' 1'	1 1		3		0	1	48 4	460 3 6		VFD	8	10		771		78	33	182	42	56	10	517	26	175								ALL
AHU B-10(N) B 30 Instrument Storage 1,000 90 1.8 1.5 460 3 60 SINGLE ZONE N/A 6 10 44 32 400 80 50 6 42 56 10 0 0 0 SPRING 0'-2' 5'-2' 5'-4' 10'-1' 1.650 2'-10' 1.13 AHU B-12(N) B 20 SPRING 0'-2' 1.860 5.000 1.6 32 460 3 60 SINGLE ZONE N/A 6 10 74 52 400 80 50 6 42 56 10 0 0 0 SPRING 0'-2' 15'-6' 11'-6' 10'-1' 1.850 2'-10' 1.13 AHU B-13(N) B 80 Level 1-Stand Booth 5.000 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	` '		<u> </u>	·	0		20 4	460 3 6		VFD	8	10				78		54	42	56	10	0	0	0						,		ALL
AHU B-11(N) B.24 Instrument Storage 1,000 90 0.9 1.5 460 3 60 SINGLE ZONE N/A 6 10 41 32 400 80 50 6 42 56 10 0 0 0 SPRING 0'-2" 3'-8" 7'-6" 3'-0" 1,500 2'-10" 1.3 400 1.3 40 1.					0		40 4	460 3 6		VFD	8	10	694	590		78	53	99	42	56	10	281	14	175								ALL
AHU B-12(N) B.30 Section 3 21,860 5,000 1.6 32 460 3 60 VAV VFD 8 10 738.2 582.9 500 78 52 105 42 56 10 0 0 SPRING 0'-2" 15'-6" 11'-8" 50' 11'-	` '			· ·	90	1.8	1.5	460 3 6		N/A	6	10	44	32		80	50	6	42	56	10	0	0	0						,		1-13
AHU B-13(N) B.04 Segment 2 - Left 8,200 880 1.7 10 460 3 60 VAV VFD 6 10 284.8 224.6 500 78 52 41 42 56 10 0 0 0 N SPRING 0'-2" 9'-3" 11'-0" 10'-9" 3,900 2'-10" 1-14 AHU B-14(N) B.08 Level 1 - Sound Booth 5,200 500 1 7.5 460 3 60 VAV VFD 6 10 239 179.7 450 82 50 14 42 56 10 0 0 N SPRING 0'-2" 10'-0" 8'-0" 12'-4" 3,200 5'-6" 1-14 AHU B-15(N) B.06 Level 1 - Sound Booth 5,200 500 500 1 1 5 5 460 3 60 VAV VFD 6 10 99 88 450 79 52 14 42 56 10 0 N SPRING 0'-2" 10'-0" 8'-0" 12'-4" 3,200 5'-6" 1-14 AHU B-15(N) B.04 Tunnel 5,600 540 1.2 7.5 460 3 60 SINGLE ZONE VFD 8 10 99 88 450 79 52 14 42 56 10 0 N SPRING 0'-2" 16'-0" 13'-0" 12'-4" 13'-0" 12'-4" 13'-0" 12'-4" 13'-0" 12'-4" 13'-0" 12'-4" 13'-0" 11'-13'-14'-14'-14'-14'-14'-14'-14'-14'-14'-14	` '				90	0.9	1.5	460 3 6		IV/A	6	10	41	32		80	50	6	42	56	10	0	0	0						.,,,,,,		1-13
AHU B-14(N) B.08 Level 1- Sound Booth 5,200 500 1 7.5 460 3 60 VAV VFD 6 10 239 179.7 450 82 50 34 42 56 10 0 0 0 SPRING 0'-2" 10'-0' 8-0" 12'-4" 3,200 5'-6" 1-14 AHU B-15(N) B.06 Level 1- Backstage 3,900 490 1.1 5 460 3 60 VAV VFD 6 10 99 88 450 79 52 14 42 56 10 0 0 SPRING 0'-2" 6'-6" 9'-4" 12'-4" 2,600 2'-10" 1-13 AHU B-15(N) B.13 Visiting Company Wardrobe 2,700 300 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B-18(, ,					1.0	32 2	460 3 6		1 1 1	8	10				78	52	105	42	56	10	0	0	0				11 - 8		-,		1-14
AHU B-15(N) B.06 Level 1- Backstage 3,900 490 1.1 5 460 3 60 VAV VFD 6 10 99 88 450 79 52 14 42 56 10 0 0 SPRING 0'-2" 6'-6" 9'-4" 12'-4" 2,600 2'-10" 1-13 AHU B-16(N) B.04 Tunnel 5,600 540 1.2 7.5 460 3 60 SINGLE ZONE VFD 8 10 222 163 50 10 10 118.3 Visiting Company Wardrobe 2,700 300 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 42 56 10 48 3 175 SPRING 0'-2" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13 AHU B-18(N) B-1	, ,		<u> </u>	<u> </u>		1./	10 2	400 3 6		11.5	0	10				/8	52	41	42	50	10	U	U	0				11 - U		0,700		1-14
AHU B-16(N) B.04 Tunnel 5,600 540 1.2 7.5 460 3 60 SINGLE ZONE VFD 8 10 106 6 175 SPRING 0'-2" 8'-4" 7'-4" 13'-0" 2,400 2'-10" 1-13 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1	` '					1 1 1	7.5	460 3 6			0	10	239	179.7		70	30	34	42	50	10	0	0	0						•		1-14
AHU B-17(N) B.13 Visiting Company Wardrobe 2,700 300 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 91.2 72.9 500 78 52 61 42 56 10 91.2 72.9 500 78 52 61 42 56 10 91.2 72.9 500 78 52 61 42 56 10 91.2 72.9 500 78 50 2'-10" 41-3 AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 2'-10" 4'-0" 6'-0" 3'-0" 500 2'-10" 1-13				· ·		1.1	7.5	400 3 0 460 2 4		VED	0	10	722	162		77	32	22	42	56	10	106	6	175						,	2' 10"	1-13
AHU B-18(N) B.08 Brown Trap - B.28 3,200 0 1.3 5 460 3 60 SINGLE ZONE VFD 6 10 118.3 102 500 78 52 78 41 - 0" 61 - 0" 500 78 52 78 11 - 13	\ ,			•		1.2	7.0	400 3 0 460 3 6		VED	6	10				78		61	42	56	10	0	0	1/3						500		1-13
					0	1.3	5 /	460 3 6		VED	6	10				70	52	70	12	56	10	10	3	175						500		1-13
	AHU B-19(N)	B.04	New Electrical Gear Room	7,500	0	1.3	10 /	460 3 6	0 SINGLE ZONE	VFD	6	10	409	380	500	82	52	58	42	56	10	0	0	0	SPRING	0 - 2	6' - 0"	10' - 0"	4' - 3 1/2"	3 600	5' - 6"	1-13

																				Interim Review
							AIR H	ANDLIN	G UNIT	SOUND	SCHED	ULE								These documents are for bid only and are not intended for permitting or
IT	ΞΜ			MAXIMUM SOUND AT INLET MAXIMUM SOUND AT DISCHARGE													construction.			
YPE	NO.	LOCATION	AREA SERVED	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 kHz	
\HU	B-1(N)	B.37	Segment 2- Right	77	80	91	84	79	79	78	68	67	78	76	76	72	71	68	59	
HU	B-2(N)	B.08	Small House Orchestra Pit - B.17	70	67	90	90	95	95	95	95	87	72	92	95	95	95	95	95	
HU	B-3(N)	B.16	Hydraulic Pump Room	76	77	81	85	78	75	71	65	88	92	94	96	91	90	86	78	© Copyright 2018
l U	B-4(N)	B.08	Large House Orchestra Pit - B.72	70	72	75	75	79	78	74	64	77	90	84	82	86	84	81	74	All information, drawn, written, or implied, appear this document constitutes the original and unpubl
IU	B-5(N)	B.24	Hydraulic Pump Room	74	76	80	85	76	74	70	64	87	91	92	95	89	89	84	76	work of HarrisonKornberg Architects, LLC. and m be duplicated, distributed, or disclosed by any me
U	B-6(N)	B.04	Compressor Room	74	76	80	85	76	74	70	64	87	91	92	95	89	89	84	76	without the prior written consent of HarrisonKornl Architects, LLC. This is an instrument of services
łU	B-7(N)	B.08	Large House Theater- Underfloor	80	91	87	89	87	86	83	80	89	83	90	83	82	77	72	62	sole property of the author. The use of this docur shall be revoked if any of the design intent or the
IU	B-8(N)	B.08	Grand Tier LargeTheater	67	60	67	80	78	77	75	72	84	77	84	76	74	70	65	55	construction methods shown herein are not adhe the terms of the contractual agreement for its use
U	B-9(N)	B.08	Small House Theater- Underfloor	71	69	76	87	86	85	81	77	90	84	90	84	83	78	72	61	violated. Written dimensions on these drawings shall have
łU	B-10(N)	B.30	Instrument Storage	73	75	79	85	76	74	70	64	87	91	92	95	89	89	84	76	precedence over scale dimensions. Contractors s responsible for all dimensions and conditions on the
łU	B-11(N)	B.24	Instrument Storage	74	75	80	85	76	74	70	64	87	91	92	95	89	89	84	76	HarrisonKornberg Architects, LLC must be notifie
I U	B-12(N)	B.30	Section 3	82	85	90	85	83	87	81	72	80	81	84	78	76	74	68	59	variation from the dimension and conditions show these drawings.
l U	B-13(N)	B.04	Segment 2 - Left	75	93	81	80	86	80	77	111	72	68	78	77	77	72	68	101	
HU	B-14(N)	B.08	Level 1 - Sound Booth	75	79	79	81	75	76	78	72	75	80	72	66	63	62	62	58	
HU	B-15(N)	B.06	Level 1- Backstage	79	78	86	78	72	75	71	64	79	78	71	63	61	59	54	47	Revisions
HU	B-16(N)	R 04	Tunnel	81	86	79	76	80	81	78	68	96	93	88	85	89	88	84	78	KENIZIONS

GENERAL KEY NOTES

1. SCHEDULE IS BASED ON A PERFORMANCE SPEC. NEW EQUIPMENT SHALL MEET OR EXCEED VALUES.

ALL UNITS SHALL BE QUIET UNITS. REFER TO SPECIFICATIONS FOR SOUND CRITERIA AND CONSTRUCTION MINIMUMS. ALL CONTROLS, WIRING, RELAYS, AND MISCELLANEOUS DEVICES SHALL BE PROVIDED BY DIVISION 23.

PROVIDE STAINLESS STEEL CASING AND RACKS ON CHW COILS. PROVIDE WITH INTERNAL SPRING VIBRATION ISOLATORS SIZED FOR MINIMUM STATIC DEFLECTION OF 2" WITH NEOPRENE PADS UNDER UNIT.

PROVIDE WITH DOUBLE SLOPE STAINLESS STEEL CONDENSATE DRAIN PAIN.

EACH FAN MOTOR SHALL HAVE ITS OWN VFD ENCLOSURE. PROVIDE WITH FACTORY WIRED LIGHTS AND CONVENIENCE RECEPTACLE.

PROVIDE SINGLE POINT POWER CONNECTION (460V/3PH/60HZ + 120V/1PH/60HZ). CONFIRM REQUIRED CLEARANCES BEFORE ORDERING UNITS. COORDINATE WITH CONTRACTOR IF WALL REMOVAL IS REQUIRED FOR UNIT INSTALLATION.

REMOVE EXISTING ISOLATION PADS AND PLACE UNITS ON EXISTING HOUSE KEEPING PADS WITH RAISED PLATFORM. REFER TO DETAILS 2/M.8.02 AND 3/M.8.02. UNITS SHALL BE INTERNALLY ISOLATED UNLESS OTHERWISE NOTED. SUSPENDED UNIT WEIGHT AND VIBRATION SHALL BE COORDINATED WITH STRUCTURAL ENGINEER.

HP SHALL BE AS NOTED OR AS REQUIRED TO MEET ESP.

UNITS SHALL HAVE FAN WALL. INLET/ OUTLET DUCT SHALL HAVE FLEXIBLE ISOLATION JOINT.

CAULK JOINTS ALONG PERIMETER CONCRETE CURB. JOINTS SHALL BE WATER-TIGHT AT MATING SURFACE ADJACENT TO COIL AND FILTER SECTION.

STAINLESS STEEL SPACERS PROVIDED FOR AIR FLOW BLANK OFFS AT SIDES AND TOP OF COIL AND FILTER SECTION. COOLING COIL 42" MAX HEIGHT PER SECTION.

STAINLESS STEEL DRAIN PAN PROVIDED AT EACH COIL SECTION TO EXTEND 4" BEYOND COIL ON INLET SIDE AND 10 ON OUTLET SIDE. DRAIN HEADER (2" MIN.) EXTEND OUTSIDE OF UNIT HOUSING. PROVIDE TRAP OUTSIDE OF UNIT AND RUN TO FLOOR DRAIN.

FAN SHALL BE PROVIDED WITH INTERNAL ISOLATION SPRINGS.

														DOAS	UNIT S	CHEDU	LE													
ITEM	1				SUPF	PLY FAN								COOLIN	IG COIL						REHI	EAT COIL			IAL VIBRATION IN FOR ALL FANS	MAXIMU	M UNIT DIM	ENSIONS		
				DESIGN		МОТО	OR DAT	Α				NED COIL RMANCE		AIR CHILLED WATER					≣R		HOT \	WATER								
			SUPPLY	OUTSIDE	EXT				MIN					ENTE	RING	LEA'	VING			LVG	COIL	HHW							ROOM	
			AIRFLOW	AIRFLOW	S.P. [IN			SPEE	COIL		TOTAL	SENS CA	P MAX VEL					CHW FLOW	ENT	TEMP	PERFORMANCE	FLOW	ENT		MIN. STATIC	HEIGHT	WIDTH	LENGTH	ENTRY	
TYPE N	NO. LOCATION	AREA SERVED	[CFM]	[CFM]	W.C.]	HP VOL	T PH	HZ CONTR		COIL FP	CAP [BTU]	[BTU]	[FPM]	DB [°F]	WB [°F]	DB [°F]	WB [°F]	[GPM]	TEMP [°F]	[°F]	CAP [KBTU]	[GPM]	TEMP [°F]	TYPE	DEFL. [IN]	[IN]	[IN]	[IN]	CLEARANCE N	OTES
AHU DO	DAS 7-6 LEVEL 7	FRESH AIR SEGMENT 3	12,500	12,500	2.12	20 480	3	60 VFD	8	10	1,136	545	500	94	97	60	54	162	42	56	762	37	175	SPRING	0' - 2"	5' - 0"	10' - 0"	11' - 0"	5' - 4"	

TOTAL STATIC PRESSURE SHALL INCLUDE EXT. S.P. LISTED AND ALLOWANCE FOR CABINET, COILS, DISCHARGE DAMPER AND 0.5" W.C. FOR DIRTY FILTERS.

COILS SHALL HAVE FREEZE PROTECTION PUMP. UNIT SHALL ACT AS FRESH AIR SUPPLY AND BUILDING PRESSURIZATION.

ALTERNATIVE IS FOR MAKE-UP AIR FOR INCREASED LOCKER ROOM EXHAUST RATES IN BASEMENT LEVEL. UNIT IS LOCATED ON LEVEL 7

Project Team

Issue for Bid

WORTHAM

REHABILITATION

THEATER

701 Avenida de las Americas

HarrisonKornberg/ARUP

3800 Buffalo Speedway, Suite 550 Houston, Texas 77098 tel (713) 229-0688

Description

Date

Houston, TX 77010

fax (713) 229-0692

501 Texas Ave Houston, TX 77002

01/11/18

ARCHITECT HarrisonKornberg Contact: David Kaczynski t: 713.229.0688

CIVIL ENGINEER **Martinez Moore** Contact: TBD t: TBD MEP ENGINEER

Arup

Contact: Tom Smith t: 713.343.1472 PARKING CONSULTANT Walker Parking

ACOUSTICS / AV / IT Jaffe Holden Contact: Garth Hemphill

Contact: Jeremy Rocha t: TBD

Key Plan

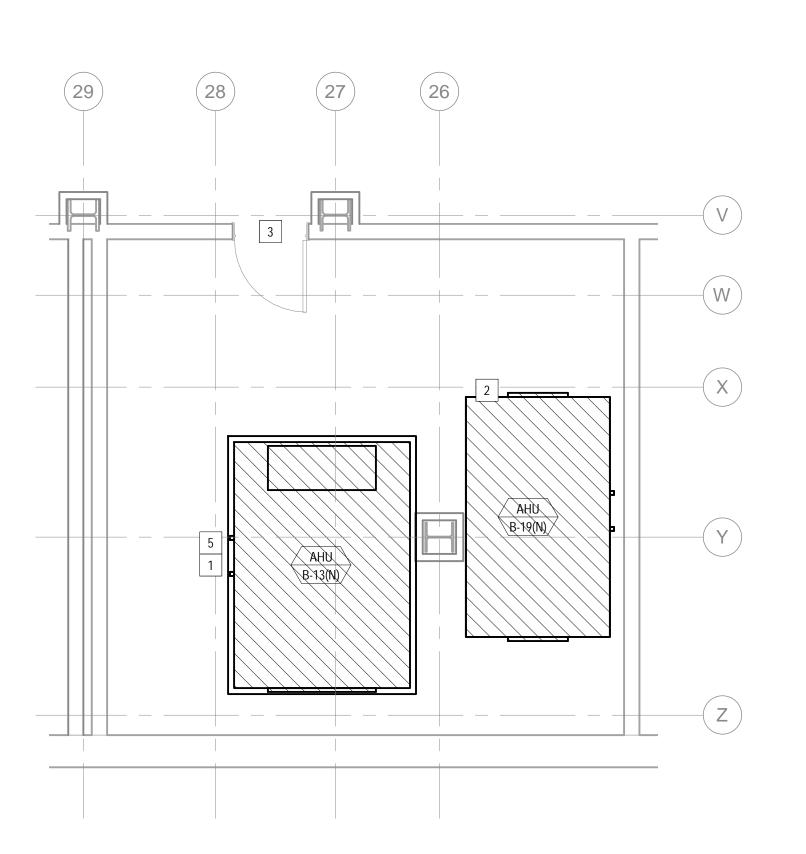
PACKAGE 2 MECHANICAL -BASEMENT - SCHEDULES - SHEET 1

WT-2-M.5.00.1

Scale:

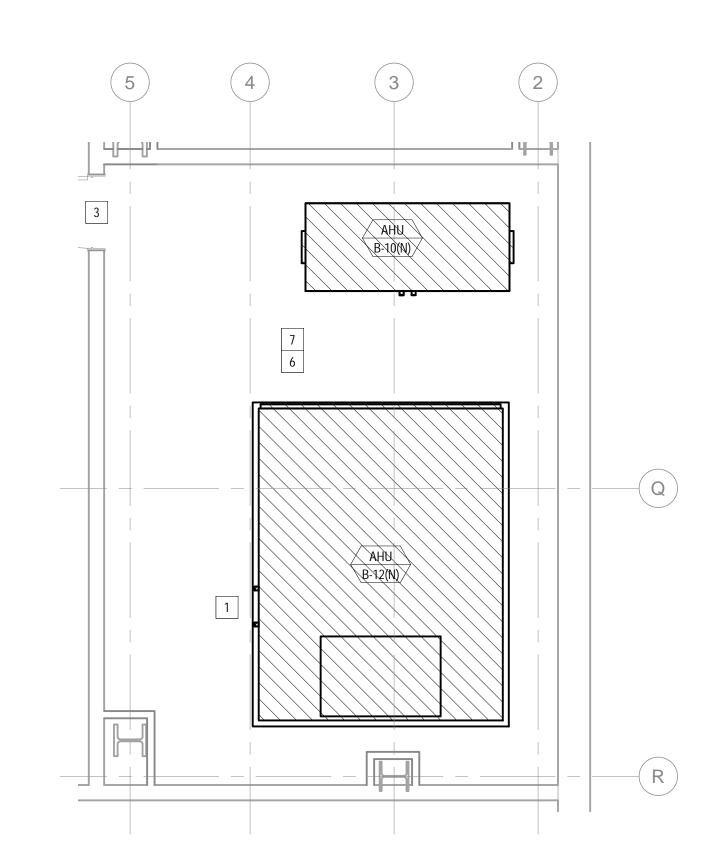
27) (26) (25) (24) (23) (22) (24) (33) (22) (33) (34) (35) (35) (35) (35) (35) (35) (35) (35	
(34) (33) (32) (31) (AHU) (B.14(0))	
3	—(E
	F
4 Mechanical Room 02 - B-1	
4 3 2 s.	
D AHU B-5(N) B-8(f)	
Machanias Dann On in	
Mechanical Room 25 - Theater Service (PACKAGE 2) 1/4" = 1'-0" Mechanical Room 06 - B-15 (PACKAGE 1/4" = 1'-0" 1 2 3 4 5 6 7 8	2)

KEYNOTE LEGEND KEYNOTE TEXT VALUE REPLACE CHILLED AND HEATING HOT WATER LINES TO BRANCH SHUTOFF VALVE. PROVIDE PIPING INSULATION TO 2015 ENERGY UNIT SHALL BE SUSPENDED FROM STRUCTURE. COORDINATE SUPPORTS WITH OTHER DISCIPLINES. CONTRACTOR SHALL TAKE INTO ACCOUNT THE REQUIRED CLEARANCES FOR THE INSTALLING EQUIPMENT INTO THE MECHANICAL ROOM. REFER TO AHU SCHEDULE FOR DOOR WIDTHS OF MECHANICAL ROOMS. UNIT SHALL BE PLACED ON 3 FOOT RAISE PLATFORM. REFER TO M.8.02/2 PROVIDE NEW RAISED STEEL PLATFORM TO ELEVATE UNIT 3 FEET AFF. REFER TO M.8.02/2 REPLACE SUBMERGED CHILLED WATER AND HEATING HOT WATER MODULATING VALVES WITH LIKE KIND AND SIZE. COORDINATE POWER AND BMS TIE IN WITH MC. CONTRACTOR SHALL PERFORM ALL TESTING AND BALANCING PRIOR TO COMPLETING WORK. COORDINATE POWER REMOVAL AND RECONNECTION LOCATIONS WITH ELECTRICAL CONTRACTOR



Mechanical Room 31 - B-13 (PACKAGE 2)

1/4" = 1'-0"



Mechanical Room 33 - B-12 (PACKAGE 2)

Issue for Bid 01/10/18

WORTHAM **THEATER REHABILITATION** 501 Texas Ave Houston, TX 77002

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> Interim Review These documents are for bid only and are not intended for permitting or construction.

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Written dimensions on these drawings shall have precedence over scale dimensions. Contractors shall be responsible for all dimensions and conditions on the job. HarrisonKornberg Architects, LLC must be notified of any variation from the dimension and conditions shown by these drawings.

Revisions

Description

Project Team

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MEP ENGINEER **Arup**Contact: Tom Smith t: 713.343.1472

PARKING CONSULTANT Walker Parking Contact: Jeremy Rocha t: TBD

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Key Plan

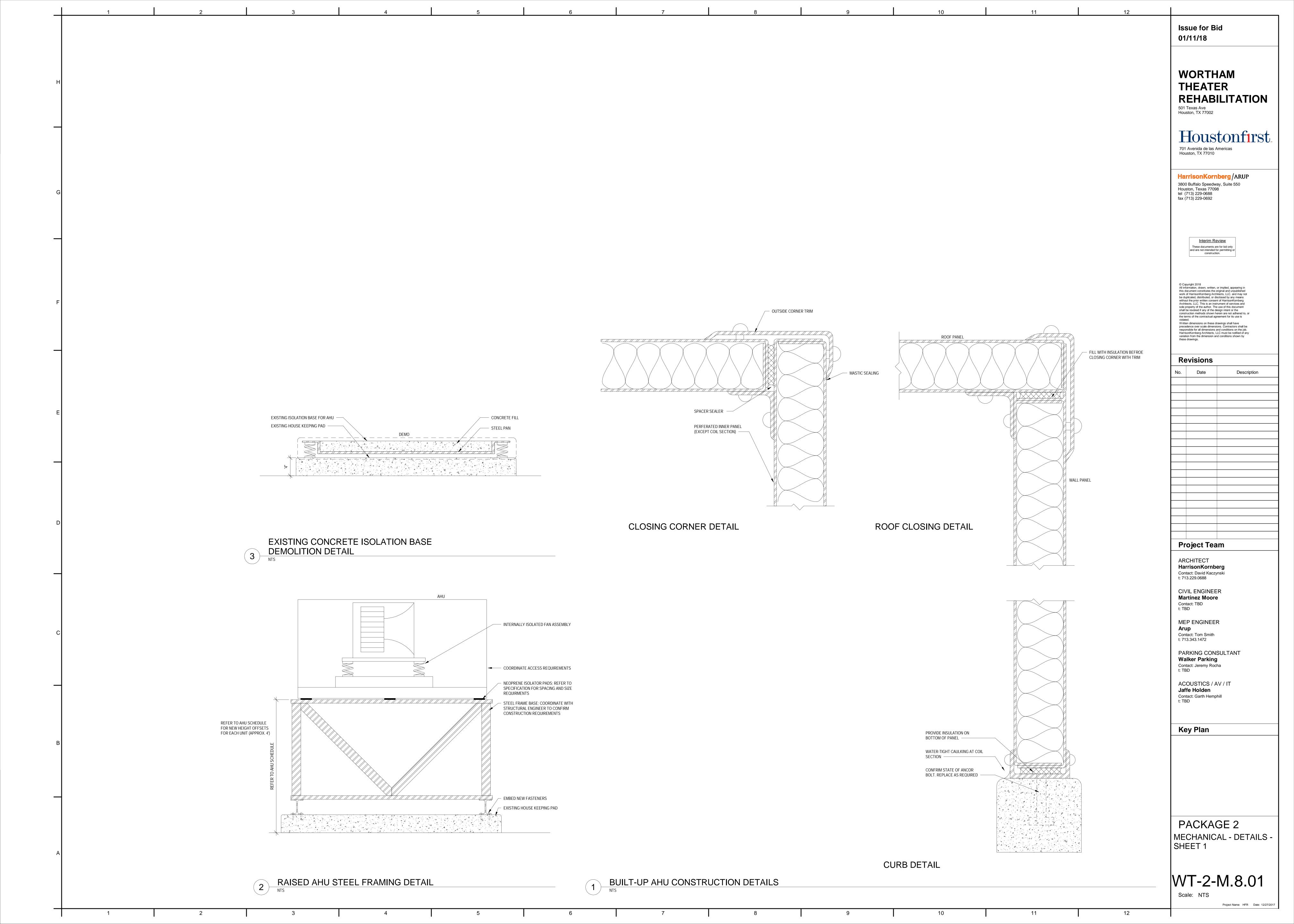


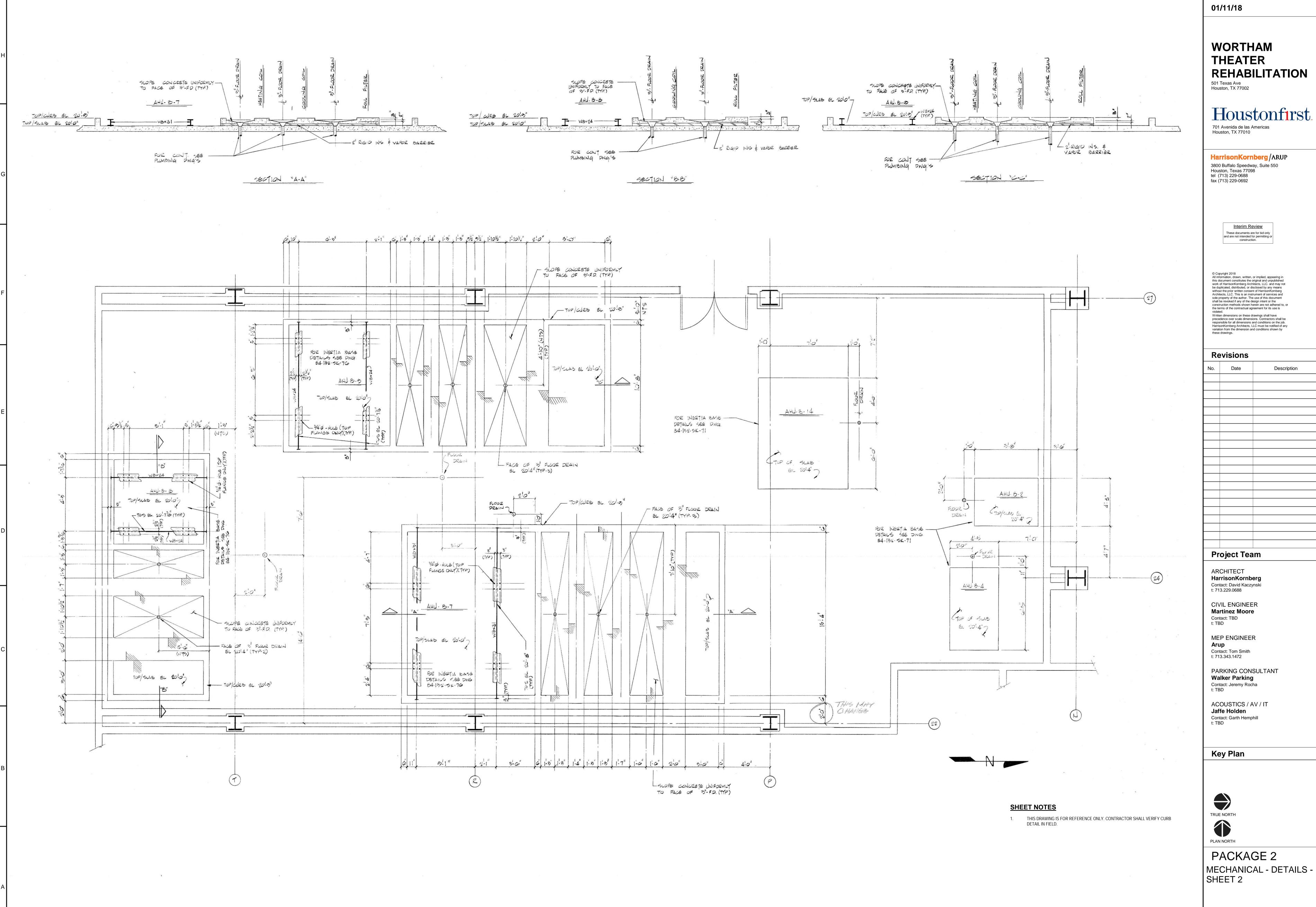
PACKAGE 2

MECHANICAL -BASEMENT - PARTIAL PLANS NEW

WT-2-M.7.00.1

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





Issue for Bid

Houstonfirst.

WT-2-M.8.02 Scale:



