Embrey Builders, LLC 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph : (210) 824-6044 Fax: (210) 824-7656

To: Heath Parnell Jordan & Skala Engineers, Inc. 14240 Midway Road, Suite 350 Dallas, TX 75244 Ph: 469/385-1616 Fax: 469/385-1615

Date: 7/27/2012 Job: EB-02 Keller Springs Lofts Phone: 877-777-5115

Subject: Air handlers and CFM columns

Drawing: M1.0 Cost Impact: None

Spec Section: Schedule Impact: None

Date Required: 7/31/2012 The HVAC subcontractor noticed what appears to be an error on the equipment schedule (M1.0). The A1,A2, B1A,B1B,B2A,B2B, AND E1 units show two ton drive air handlers (ACNF2406) but the cfm column list these units at 565 cfm which is more consistent with a 1-1/2 ton drive air handler. As can be seen, all the other units have the same drive air handler, but they are listed as 735 in the cfm column. The only thing that is different is the size of the outdoor unit which doesn't affect the cfm rating; it appears that either the air handler model number or the cfm column is incorrect. Please give direction on this.

RFI

Requested by: Bryan Pickler Embrey Partners, Ltd.

ACNF24 can be set on high and low settings to deliver two different air flows. The reason a 1-1/2 ton air handler is specified is due to the lack of external static a "pancake" air handler can provide at nominal cfm (600cfm for a 1.5 ton and 800 cfm for a 2.0 ton). In short, to deliver nominal cfm at 0.4" of external static, a 2.0 ton air handler is specified.

Corey Hewitt

Company

Answered by Jordan & Skala Engineers

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1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656

RFI

To: Jordan & Skala Engineers, Inc. 14240 Midway Road, Suite 350 Dallas, TX 75244 Ph: 469/385-1616 Fax: 469/385-1615 Date: 11/22/2011 Job: EB-02 Keller Springs Lofts

CC: David Gallagher (Embrey Build (Embrey Construction LLC)

Subject: Bathroom Exhaust fans

Spec Section:

Schedule Impact: None Cost Impact: None Date Required: 11/29/2011 Is it acceptable to substitute a Broan 80 CFM low sone (2sones) ILO of the 50 CFM fan shown on the plans for the bathrooms? If this is acceptable, the 80 CFM low sone will require a 4" duct which will not work in a 3 1/2" wall and we will need to make adjustments to wall mount locations. The 80 CFM fan was not not allowed at the collection, as it was stated that, that size fan would cause a negative pressure on the Requested by: Bryan Pickler Embrey Partners, Ltd. It is Jordan & Skala's recommendation to specify the 50 cfm fan to keep the building from being a negative pressure.

Corey Hewitt

Company

Answered by
Jordan & Skala Engineers

12-05-2011

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#### HVAC GENERAL NOTES

- 1. ALL MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE 2009 INTERNATIONAL MECHANICAL CODE, THE 2009 INTERNATIONAL BUILDING CODE, THE 2009 INTERNATIONAL ENERGY CODE, STATE AMENDMENTS, NFPA 90A, 101, UNDERWRITERS LABORATORIES (OR ETL), AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.
- PRIOR TO PURCHASING ANY MATERIALS OR STARTING ANY WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DUCTWORK SIZES AND LOCATIONS, EQUIPMENT, ETC. SHOWN ON THE DRAWINGS OR AFFECTING THIS WORK AND SHALL REPORT ANY DEVIATIONS TO THE ARCHITECT.
- 3. SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY MECHANICAL EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE: ALL EQUIPMENT SCHEDULED OR SPECIFIED ON THE DRAWINGS; DUCTWORK DRAWN TO 1/4" SCALE OR THE SCALE SHOWN ON THE DRAWINGS; REFRIGERANT PIPING AND CONTROL WIRING SCHEMATICS CERTIFIED BY THE AIR CONDITIONING EQUIPMENT MANUFACTURER. FAILURE TO SUBMIT REFRIGERANT PIPING DRAWINGS SHALL BE CAUSE FOR REJECTION OF THE ENTIRE SUBMITTAL. LONG LINE REFRIGERANT PIPING APPLICATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT SPLIT SYSTEM LONG—LINE APPLICATION GUIDELINE.
- 4. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- 5. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.
- 6. ALL HVAC COMPRESSORS SHALL HAVE EXTENDED 4 YEAR MANUFACTURER'S WARRANTY FOR A 5-YEAR TOTAL WARRANTY.
- 7. FOR EXACT LOCATION OF OUTDOOR AIR CONDITIONING UNITS, SEE ARCHITECTURAL DRAWINGS.
- INSTALL ROOF MOUNTED OUTDOOR AIR CONDITIONING EQUIPMENT LEVEL ON CURB (BY OTHERS). MOUNT ALL EQUIPMENT ON NEOPRENE PADS. ALL ROOFTOP MOUNTED EQUIPMENT SHALL BE INSTALLED PER DETAILS AND AS RECOMMENDED BY THE MANUFACTURER.
- MOUNT TOP OF THERMOSTATS AND HUMIDISTAT SENSORS 46" AFF UNLESS NOTED OTHERWISE. PROVIDE CLEAR LOCKING GUARD ASSEMBLIES FOR ALL PUBLIC AREA THERMOSTATS. COORDINATE THERMOSTAT LOCATIONS WITH OTHER TRADES. ALL THERMOSTATS SHALL BE ADA COMPLIANT.
- 10. ALL WORK SHALL BE COORDINATED AND PERFORMED WITH PRIOR APPROVAL FROM THE OWNER TO SUIT HIS OPERATING CONDITIONS.
- 11. AFTER CONSTRUCTION, THE ENTIRE HVAC SYSTEM SHALL BE CLEANED, TESTED AND ADJUSTED TO SATISFY EQUIPMENT SCHEDULE. DWELLING LIVING UNITS AND CLUB AREAS SHALL NOT REQUIRE AN AIR TEST AND BALANCE BE PERFORMED.
- 12. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT.
- 13. ALL PIPE AND DUCT PENETRATIONS OF FIRE AND/OR SMOKE-RATED ASSEMBLIES SHALL BE FIRE-STOPPED AS REQUIRED TO RESTORE THE ASSEMBLY TO ITS ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS SHALL BE AS MANUFACTURED BY TREMCO, HILTI, 3M OR APPROVED EQUAL.
- 14. MANUAL OVER-RIDE CONTROL (EMERGENCY SHUT-DOWN) SWITCHES FOR ALL HVAC UNITS SHALL BE LOCATED IN LOCKING COVER ADJACENT TO FIRE ALARM ANNUNCIATOR PANEL OR OTHER LOCATION APPROVED BY LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 92A.
- 15. PROVIDE ACCESS PANELS IN NON-ACCESSIBLE CEILINGS AND IN WALL STRUCTURE TO ALLOW ADEQUATE ROOM FOR MAINTENANCE OF EQUIPMENT AND BALANCING OF SYSTEMS. ACCESS PANELS IN CEILING AND WALLS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS OR NECESSARY TO ACCESS DAMPERS, VALVES, ETC. COORDINATE EXACT LOCATION OF ALL ACCESS PANELS WITH THE ARCHITECT DURING THE SHOP DRAWING PROCESS.
- 16. ALL MECHANICAL EQUIPMENT SHALL BE LABELED WITH A SEMI-RIGID PLASTIC LAMINATE NAMEPLATE WITH 2" HIGH WHITE LETTERS ON A BLACK BACKGROUND SECURELY AFFIXED TO THE EQUIPMENT. THE NAMEPLATE SHALL SHOW THE EQUIPMENT TAG USED ON THESE DRAWINGS. ON RESIDENTIAL PROJECTS, THE NAMEPLATE ON THE OUTDOOR EQUIPMENT SHALL INDICATE THE APARTMENT UNIT NUMBER IT SERVES AS WELL AS THE EQUIPMENT ID TAG.
- 17. REFER TO ARCHITECTURAL PLANS FOR ALL FURRDOWN CEILING AREAS.
- 18. PANCAKE STYLE AIR HANDLERS LOCATED ABOVE TOILET AREAS SHALL BE INSTALLED IN A MINIMUM 14-INCH DEEP INSIDE CLEAR FURRDOWN RETURN AIR PLENUM, REFERENCE ARCHITECTURAL PLANS.
- REFER TO ARCHITECTURAL PLANS FOR FLOOR AND CEILING ASSEMBLY UL RATINGS AND DETAILS.
- 20. GENERAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF WOOD TRUSS SHOP DRAWINGS AND FIELD TRUSSES TO AVOID WOOD TRUSSES CONFLICTING WITH VERTICAL SHAFTS AND INDIVIDUAL AIR HANDLING UNIT DISCHARGE PLENUMS.

#### MECHANICAL/ELECTRICAL COORDINATION:

- CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT OR SUBMITTING SHOP DRAWINGS, AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN THEREIN. SHOP DRAWING SUBMITTALS SHALL CLEARLY STATE THAT THE ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT HAS BEEN COORDINATED WITH THE ELECTRICAL CONTRACT DOCUMENTS AND THE ELECTRICAL CONTRACTOR.
- ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS AND THE ELECTRICAL DRAWINGS.
- ALL REQUIRED CONTROL WIRING (INCLUDING POWER WIRING REQUIRED FOR CONTROL PANELS, DEVICES, ETC.) NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE INCLUDED AS PART OF THE MECHANICAL WORK. WIRING IN HVAC PLENUM SPACES SHALL BE INSTALLED ACCORDING TO CODE REQUIREMENTS.
- UNLESS NOTED OTHERWISE, TRANSFORMERS, CONTROLS AND CONTROL WIRING REQUIRED FOR ALL MECHANICAL SYSTEMS SHALL BE FURNISHED WITH THE EQUIPMENT IT SERVES AND INSTALLED BY THE MECHANICAL CONTRACTOR. MOTOR STARTERS FOR HVAC EQUIPMENT SHALL BE FURNISHED WITH THE MOTOR OR APPARATUS WHICH IT OPERATES. MOTOR STARTER INSTALLATION SHALL BE BY THE DIVISION 16 CONTRACTOR.

#### DUCT SMOKE DETECTORS:

AH/CU-1

AH/CU-2

AH/CU-5

AH/CU-4

AH/CU-5

NOTES:

- 1A. ALL FANS SUPPLYING MORE THAN 2000 CFM OF AIR TO ANY SPACE SHALL BE INSTALLED WITH A SMOKE DETECTOR IN THE RETURN DUCTWORK, DUCT SMOKE DETECTORS SHALL BE INSTALLED IN THE RETURN AIR PATH OF AIR DISTRIBUTION SYSTEMS UTILIZING A COMMON SUPPLY AND/OR RETURN AIR PLENUM WITH A COMBINED DESIGN CAPACITY GREATER THAN 2000 CFM.
- 1B. THE SMOKE DETECTOR SHALL BE WIRED TO STOP THE FAN UPON DETECTION OF SMOKE, AND SIGNAL THE BUILDING FIRE ALARM CONTROL PANEL. THE SMOKE DETECTOR SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR, MOUNTED IN THE DUCT BY THE MECHANICAL CONTRACTOR, AND WIRED BY THE ELECTRICAL CONTRACTOR.

TOTAL ESP FAN CFM IN. W.G. HP

0.50"

HEATING

KW

(OUTPUT)

20.0

10.0

0.40" | 1/3 | 15.0 | 250

3/4

0.50" | 3/4 | 20.0

0.50" | 1/3 | 10.0

0.40" | 1/3 |

COMMON AREA SPLIT SYSTEM DX WITH ELEC. HEAT

#### AIR DISTRIBUTION:

- 1. SUPPLY, OA AND RETURN DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEETMETAL AS RECOMMENDED IN SMACNA DUCT CONSTRUCTION STANDARDS,
- ALTERNATE DUCTWORK 1" THICK FIBERGLASS DUCT BOARD (MINIMUM R-6 OR AS REQUIRED BY APPLICABLE ENERGY CODE), WITH GLASS FABRIC REINFORCED VAPOR BARRIER, JOHNS-MANVILLE TYPE 475 OR EQUAL. FIBERGLASS DUCTWORK AND TAPING SYSTEM SHALL BE U.L.-181 LISTED AND SHALL BEAR THE U.L. LABEL. ALL FIBERGLASS DUCTWORK AND ACCESSORIES SHALL BE FABRICATED BY A MANUFACTURER'S AUTHORIZED FABRICATOR, SHALL BE INSTALLED WITH THE FABRICATOR'S SUPERVISION AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, FIBERGLASS DUCTWORK SHALL NOT BE USED OUTDOORS.
- 4. ALL DUCTWORK SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. DUCT SUPPORTS AND ATTACHMENT TO STRUCTURE SHALL BE PER SMACNA STANDARDS.
- 7. FLEXIBLE DUCTWORK SHALL BE THERMAFLEX M-KE (U.L. 181 LISTED, CLASS 1 FLEXIBLE AIR DUCT) OR EQUAL. PROVIDE THERMAFLEX M-KE R-8 (R-VALUE - 8.0 MINIMUM OR AS REQUIRED BY LOCAL ENERGY CODE) IN ATTICS AND OTHER UNCONDITIONED SPACES. AIR CONNECTORS ARE NOT ACCEPTABLE. FLEX DUCT DIAMETER SHALL MATCH DEVICE NECK DIAMETER. FLEXIBLE DUCTWORK SHALL BE INSTALLED AS STRAIGHT AS POSSIBLE AND SHALL BE ROUTED AND SUPPORTED WITHOUT FORMING CRIMPS OR OTHER AIR FLOW RESTRICTIONS. PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS TO CONNECT TO AIR DEVICE NECK WHEN REQUIRED.
- 8. ROUND AND FLEXIBLE SUPPLY AIR DUCTWORK SHALL BE CONNECTED TO MAIN DUCTS WITH A TAB TYPE FITTING. THE DAMPER SHALL BE LOCATED AS SPECIFIED ON THE EQUIPMENT SCHEDULE.
- 9. TAPE, BED AND SEAL AIR TIGHT ALL PENETRATIONS FROM RETURN AIR PLENUMS TO NON RETURN AIR PLENUMS THAT ARE REQUIRED DUE TO DUCTWORK, PIPING OR OTHER ITEMS.
- DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.
- 11. EXTERNAL STATIC PRESSURE (ESP) DOES NOT INCLUDE COIL, CASING OR FILTER PRESSURE DROP.
- 12. INSTALL FIRE DAMPERS IN ALL RATED WALLS, FLOOR AND CEILING PENETRATIONS. FIRE DAMPERS SHALL BE THE DYNAMIC TYPE WITH BLADES OUT OF THE AIRSTREAM WHERE POSSIBLE, REFER TO THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RATED ASSEMBLIES. PROVIDE ACCESS DOORS IN DUCTWORK AT EACH FIRE DAMPER LOCATION. INSTALL SMOKE DAMPERS IN ALL DUCT PENETRATIONS THROUGH SMOKE RATED WALLS. WHERE DUCTS PENETRATE WALLS THAT CARRY BOTH FIRE AND SMOKE RATINGS, THE DAMPERS INSTALLED SHALL BE COMBINATION FIRE AND SMOKE DAMPERS. ALL DAMPERS SHALL BE U.L. 555 AND/OR 555S LABELED.
- 13. LOCATIONS OF GRILLES, REGISTERS, & DIFFUSERS SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE EXACT LOCATIONS WITH LIGHTS, CEILING

# INSULATIO

#### 1. DUCT INSULATION:

- DUCT WRAP SHALL BE UL LISTED FIBERGLASS BLANKET INSULATION WITH FOIL VAPOR BARRIER. PUNCTURES AND TEARS IN THE FOIL JACKET SHALL BE PATCHED WITH FOIL TAPE TO MAINTAIN THE INTEGRITY OF THE VAPOR BARRIER. INSULATE SHEET METAL DUCTWORK IN THE THICKNESSES AND
- SHEET METAL SUPPLY DUCTWORK IN NON-AIR CONDITIONED AREAS: 2" THICK, 1-1/2 LB/FT3 DENSITY.
- SHEET METAL SUPPLY DUCTWORK IN AIR CONDITIONED AREAS: 2" THICK, 3/4 LB/FT3 DENSITY.
- OUTSIDE AIR DUCTWORK: 2" THICK, 1-1/2 LB/FT3 DENSITY.
- RETURN DUCTWORK IN NON-AIR CONDITIONED AREAS: 2" THICK, 1-1/2 LB/FT3 DENSITY.
- ALL SUPPLY AND RETURN DUCTWORK WITHIN AN OPEN ATTIC SPACE: 2" THICK, 1-1/2 LB/FT3 DENSITY (MIN R-8). ELEVATOR RELIEF DUCTWORK SHALL BE WRAPPED USING A U.L. LISTED AND APPROVED FIRE WRAP OR ENCLOSED IN AN APPROVED ASSEMBLY. FIRE WRAP ASSEMBLY SHALL PROVIDE THE SAME RATING AS THE ELEVATOR HOISTWAY ASSEMBLY RATING.
- 2. DUCT LINER: LINE ALL SHEETMETAL DUCTWORK A MINIMUM OF 10'-0" (OR AS INDICATED) DOWNSTREAM OF ROOFTOP UNITS. DUCT LINER SHALL BE 1" THICK. 3 LB/FT3 DENSITY (MINIMUM R VALUE = 4.0 OR AS REQUIRED BY APPLICABLE ENERGY CODE); CERTAINTEED "TOUGHGARD 2" OR EQUAL BY KNAUF OR JOHNS-MANVILLE. THE LEADING EDGE OF THE DUCT LINER SHALL HAVE A SHEETMETAL NOSING.
- 3. PIPE INSULATION:
  - REFRIGERANT SUCTION PIPING SHALL BE INSULATED WITH 1/2 THICK FLEXIBLE ELASTOMERIC TUBING INSULATION, AP ARMAFLEX PIPE INSULATION MANUFACTURED BY ARMACEL OR EQUAL. INSULATION SHALL BE SLID OVER PIPING FROM ONE END BEFORE PIPE ENDS ARE JOINED AND SHALL NOT BE SLIT OR CUT. ALL JOINTS AND SEAMS SHALL BE SEALED WEATHER-TIGHT. FINISH COAT FOR FLEXIBLE ELASTOMERIC INSULATION INSTALLED OUTDOORS SHALL BE WATER-BASED LATEX ENAMEL DESIGNED FOR USE OVER ALL FORMS OF FLEXIBLE ELASTOMERIC INSULATION. FINISH COAT SHALL PROVIDE A PROTECTIVE FINISH SUITABLE TO BOTH INDOOR AND OUTDOOR APPLICATIONS, FORMULATED FOR COLD WEATHER FLEXIBILITY TO

### RESIST CRACKING AND WEATHER-RESISTANT TO ULTRAVIOLET (UV) AND OZONE. COATING SHALL BE ARMAFLEX WB FINISH OR EQUIVALENT.

- 4. REFRIGERANT PIPING SHALL BE TYPE L OR REFRIGERATION SERVICE COPPER TUBING WITH BRAZED JOINTS.
- CONDENSATE FROM ALL AIR CONDITIONING EQUIPMENT SHALL BE TRAPPED AND ROUTED TO THE NEAREST FLOOR DRAIN OR TO EXTERIOR DRY WELLS. CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC (EXCEPT INSULATED COPPER IN HVAC PLENUMS). CONDENSATE SHALL BE PUMPED AS REQUIRED.

## **DWELLING UNITS:**

ACOESSORIES.

. GRAVITY BACKDRAFT DAMPER.

- 1. DRYER FLEXIBLE DUCTWORK SHALL BE CONNECTED TO A MANUFACTURED DRYER WALL BOX (BY IN-O-VATE OR EQUAL). THE FLEXIBLE DUCTWORK SHALL CONNECT THE LAUNDRY DRYER TO THE BOX CONNECTION USING A C-CLAMP AND BE INSTALLED AS SHOWN ON PLANS. THE DRYER CONNECTION IN THE DWELLING UNIT SHALL BE BASED ON LAUNDRY DRYER TYPE AND COORDINATED IN THE FIELD.
- 2. DRYER VENT DUCTWORK SHALL BE 4 OR 5-INCH ROUND AND BE 26 GAUGE GALVANIZED STEEL INSTALLED WITH LONGITUDINAL SEAMS FACING UP. ROUTE DRYER VENT TO THE EXTERIOR WALL CAP AS DIRECT AS POSSIBLE. DO NOT SECURE DUCTWORK WITH SHEET METAL SCREWS.
- 3. TOILET AND LAUNDRY EXHAUST DUCTWORK SHALL BE FURNISHED WITH A BUILT-IN BACK-DRAFT DAMPER. TOILET EXHAUST SHALL INCLUDE INSECT SCREEN.
- 4. DWELLING UNIT KITCHEN RANGE HOODS SHALL BE VENTLESS, RECIRCULATING TYPE AND BE PROVIDED BY OTHERS.
- NATURAL VENTILATION PROVIDED VIA OPERABLE WINDOWS.

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TAG	MODEL	DUTY	CFM	E.S.P.	SONES	MOTOR SIZE	RPM	DRIVE	WEIGHT (LBS)	ACCESSORIES
EF-1(TYP.)	(B)670	TOILET EXHAUST	50	0.25"	3.5	FRACTIONAL	1050	DIRECT	15	1,2,3
EF-2	SP-B200	TOILET EXHAUST	150	0.375"	3.7	FRACTIONAL	902	DIRECT	25	1,2,3,4
EF-3	SP-B200	TOILET EXHAUST	150	0.375"	3.7	FRACTIONAL	902	DIRECT	25	1,2,3,4
EF-A(TYP.)	SBE-3L48	GARAGE VENTILATION	38,200	0.25"	36	7.5	642	BELT	450	6,7,8,9,10,11,12
EF-B(TYP.)	SE2-16-435-B	GARAGE VENTILATION	1,400	0.25"	17.5	1/6	1160	DIRECT	40	3,5,8,9,11
EF-C(TYP.)	KRU 12-4	ROOF VENTILATION	50	0.03"	3.0	FRACTIONAL	FRAC	DIRECT	60	1,3,4,13,14,15
EF-D(TYP.)	KRU 12-4	ROOF VENTILATION	75	0.03"	3.0	FRACTIONAL	FRAC	DIRECT	60	1,3,4,13,14,15
EF-E(TYP.)	KRU 12-4	ROOF VENTILATION	100	0.03"	3.0	FRACTIONAL	FRAC	DIRECT	60	1,3,4,13,14,15
EF-F(TYP.)	KRU 12-4	ROOF VENTILATION	120	0.03"	3.0	FRACTIONAL	FRAC	DIRECT	60	1,3,4,13,14,15
EF-G(TYP.)	KRU 12-4	ROOF VENTILATION	140	0.03"	3.0	FRACTIONAL	FRAC	DIRECT	60	1,3,4,13,14,15
EF-T(PIP.)	SP_8150	TRASH EXHAUST	75	<i>8.375</i> °	1.9	FRACTIONAL	676	DIRECT	<b>1</b> 5	1,3,4,16
SF-1	TD-100	SUPPLY FAN, MAINT.	30	0.125	2.0	FRACTIONAL	FRAC	DIRECT	2	1,3,5,9

13. 1/4" INSECT SCREEN.

- A. COOLING CAPACITIES ARE BASED ON 105°F AMBIENT, 80°F DB/67°F WB ENTERING AIR TEMPERATURE. COMPRESSOR MANUFACTURER SHALL PROVIDE A REFRIGERANT PIPING DIAGRAM APPROVED BY FACTORY FOR TYPICAL SYSTEMS SHOWING
- COMPONENTS SUCH AS SUCTION LINE ACCUMULATOR AND RECOMMENDED PIPE SIZES FOR PROPER OPERATION.

MBH TOT.

COOL COOL

3.5 | 37.7 | 28.5 | 1380 |

5.0 | 55.0 | 41.0 | 1805

2.0 | 23.1 | 19.2 | 750

5.0 | 55.0 | 41.0 | 1805

2.5 | 27.3 | 21.8 | 1050 |

TONS

MBH

SENS.

C. 13 SEER MINIMUM UNITS.

#### 7-DAY PROGRAMMABLE T-STAT PER 2009 IECC.

INDOOR

MODEL No.

ARUF3642

ARUF4860

ARUF1824

ARUF4860

ARUF3030

- REMOVEABLE/THROWAWAY FILTER IN FILTER RACK.
- INDOOR UNIT TO HAVE FACTORY MOUNTED THERMAL EXPANSION VALVE IF REQUIRED FOR 13.0 SEER RATING.
- EXTERNAL REFRIGERANT FILTER DRYER AT OUTDOOR CONDENSER UNIT IF REQUIRED BY MANUFACTURER. ROOF MOUNTED OUTDOOR UNITS SHALL BE INSTALLED PER PLANS.
- DISCONNECT FOR INDOOR UNITS BY DIVISION 15.
- DISCONNECT FOR OUTDOOR UNITS BY DIVISION 16 PRIMARY CONDENSATE SHALL BE TRAPPED AND ROUTED AS SHOWN ON PLUMBING PLANS. REFER TO UNIT
- PROVIDE FLOAT SAFE-T-SWITCH IN DRAIN PAN FOR SECONDARY CONDENSATE.
- FIELD INSTALLED PLECTRIC NEAT KUPFOR HEAT OUTPUT SPECIFIED ON SCHEDULE

OUTDOOR

MODEL No.

GSX13042

GSX13060

GSZ13024

GSX13060

GSX13030

PROVIDE SMOKE DETECTOR IN RETURN AIR PATH. SELECTIONS ARE BASED ON PRODUCTS BY: GOODMAN.

KFI 175 See Back OF Shees

ACCESSORIES

1,2,3,4,5,6,7,8,9,1**0** 

1,2,3,4,5,6,7,8,9,10

1,2,3,4,5,6,7,8,9,1**0**/4\

#### 4. COMBINATION THERMOSTATY HUMIDITY SENSOR SET AT 110'F (ADJ.) AND 40%RH (ADJ.). 2. WIRE INTO DEDICATED WALL SWITCH (COORDINATE WITH ELECTRICAL). 15. 14" ROOF CURB. 3. DISCONNECT BY DIV. 15. 16. WIRE INTO DEDICATED WALL SWITCH WITH INDICATOR LIGHT. 4. UNIT MOUNTED SPEED CONTROL SWITCH. 5. CONTINUOUS DUTY. MOUNT PLAQUE ABOVE SWITCH "TRASH EXHAUST" INTERLOCK TO CO2 CONTROLLER MOTORIZED DAMPER, INTERLOCKED TO FAN. FLUSH EXTERIOR WALL HOUSING. 9. DIACUL-705 POWER VENTIDAZORS". 10. HAND ON/OFF/AUTO (HOA) - COMBO STARTER AND DISCONNECT. 11. FAN GUARD. 12. BEARINGS WITH GREASE FITTINGS, ADJUSTABLE BELT DRIVE AND PULLEYS.

SELECTIONS ARE BASED ON PRODUCTS BY BROAN (EF-1), KANALFLAKT (EF-C,D,E,F,&G), S&P (SF-1) AND GREENHECK (ALL REMAINING FANS).

## LEGEND

SYMBOL	DESCRIPTION	ABBREVIATIONS	SYMBOL	DESCRIPTION	ABBREVIATIONS
	CEILING DIFFUSER W/FLEX DUCT	CD	©205 CFM	AIR DISTRIBUTION DEVICE TAG, BALANCE TO 205 CFM	
	CEILING RETURN GRILLE W/FLEX DUCT	RAG	◆ SD	SMOKE DETECTOR	SD
	SIDEWALL SUPPLY AIR GRILLE	S. REG		RETURN AIR	R.A
<b>—</b>	SIDEWALL RETURN AIR GRILLE	RAG		SUPPLY AIR	S.A.
<b>—</b>	FIRE DAMPER / CEILING RADIATION DAMPER	FD / CRD		ABOVE FINISHED FLOOR	AFF
	MANUAL VOLUME DAMPER	MVD		EXTERNAL STATIC PRESSURE (IN W.C.)	ESP
	EXHAUST FAN	EF		DRY BULB	DB
R R	RISE	R		WET BULB	WB
<b>D</b>	DROP	D		ENTERING AIR TEMPERATURE	EAT
T	THERMOSTAT	T-STAT		LEAVING AIR TEMPERATURE	LAT
	EQUIPMENT DESIGNATION			OUTSIDE AIR	OA
	TRANSFER GRILLE	TXR		RETURN AIR GRILLE	RAG
	OPPOSED BLADE DAMPER	OBD	SFD	COMBINATION SMOKE/FIRE DAMPER	SFD
	SEALED RA PLENUM FURRDOWN			ARCHITECTURAL FURRDOWN	

# APARTMENT SPLIT SYSTEM DX WITH ELEC. HEAT

TAG	INDOOR AH MODEL NO. (GOODMAN)	OUTDOOR CU MODEL NO. (GOODMAN)	NOM. TONS	MBH TOT. COOL	MBH SENS. COOL	TOTAL CFM	ESP	MAX. FAN HP	AUXILIARY HEATING KW (MIN. OUTPUT)	ACCESSORIES 4
AH/CU-A1	ACNF2406	GSX13018	1.5	15.2	12.0	565	0.4"	1/4	6.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-A1R	ACNF2408	GSX13024	2.0	19.1	15.0	735	0.4"	1/4	8.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-A2	ACNF2406	GSX13018	1.5	15.2	12.0	565	0.4"	1/4	6.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-A2SP	ACNF2408	GSX13024	2.0	19.1	15.0	735	0.4"	1/4	8.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-A3	ACNF2408	GSX13024	2.0	19.1	15.0	735	0.4"	1/4	8.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-A4	ACNF2408	GSX13024	2.0	19.1	15.0	735	0.4"	1/4	8.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-B1A	ACNF2406	GSX13018	1.5	15.2	12.0	565	0.4"	1/4	6.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-B1B	ACNF2406	GSX13018	1.5	15.2	12.0	565	0.4"	1/4	6.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-B2A	ACNF2406	GSX13018	1.5	15.2	12.0	565	0.4"	1/4	6.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-B2B	ACNF2406	GSX13018	1.5	15.2	12.0	565	0.4"	1/4	6.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-B3A	ACNF2408	GSX13024	2.0	19.1	15.0	735	0.4"	1/4	8.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-B3B	ACNF2408	GSX13024	2.0	19.1	15.0	735	0.4"	1/4	8.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-E1	ACNF2406	GSX13018	1.5	15.2	12.0	565	0.4"	1/4	6.0	1,2,3,4,5,6,7,8,9,10,11
AH/CU-E1R	ACNF2408	GSX13024	2.0	19.1	15.0	735	0.4"	1/4	8.0	1,2,3,4,5,6,7,8,9,10,11

- COOLING CAPACITIES ARE BASED ON 105°F AMBIENT, 75°F DB/63°F WB ENTERING AIR TEMPERATURE.
- COMPRESSOR MANUFACTURER SHALL PROVIDE A REFRIGERANT PIPING DIAGRAM APPROVED BY FACTORY FOR TYPICAL SYSTEMS SHOWING COMPONENTS SUCH AS SUCTION LINE ACCUMULATOR AND RECOMMENDED PIPE SIZES FOR PROPER OPERATION.
- C. 13 SEER MINIMUM UNITS.
- FACTORY-INSTALLED ELECTRIC HEAT WITH THERMAL OVERLOADS.
- 2. 7-DAY PROGRAMMABLE T-STAT.
- REMOVABLE/THROWAWAY FILTER IN RETURN GRILLE.
- INDOOR UNIT TO HAVE FACTORY MOUNTED THERMAL EXPANSION VALVE IF REQUIRED FOR 13.0 SEER RATING. FXTERNAL REFRIGERANT FILTER DRYER AT OUTDOOR CONDENSER UNIT IF REQUIRED BY MANUFACTURER.
- ROOF MOUNTED OUTDOOR UNITS SHALL BE INSTALLED PER PLANS.
- DISCONNECT FOR INDOOR UNITS BY DIVISION 16. DISCONNECT FOR OUTDOOR UNITS BY DIVISION 16.
- PRIMARY CONDENSATE SHALL BE TRAPPED AND ROUTED TO LAVATORY TAILPIECE.
- 10. SECONDARY CONDENSATE ROUTED ABOVE THE WITH ESCURCHEON PLATE.

  11. PROVIDE CEILING ACCESS PANEL FOR UNIT MAINTENANCE AND REMOVAL.

SELECTIONS ARE BASED ON PRODUCTS BY COODMAN.

RFI 175 See Back of Sheet

# GRILLES, REGISTERS & DIFFUSERS

TAG	SERIES	CFM	BLOW	DUTY	NECK	SIZE	DAMPER	MATERIAL
Α	A100	30-50	SEE PLANS	SUPPLY	4"ø	8x4	YES	ALUMINUM
В	A100	50-90	SEE PLANS	SUPPLY	5 <b>"</b> ø	8x6	YES	ALUMINUM
С	100	90-125	SEE PLANS	SUPPLY	6"ø	10x6	YES	STEEL
D	100	125-150	SEE PLANS	SUPPLY	7 <b>"</b> ø	12x6	YES	STEEL
E	100	150-200	SEE PLANS	SUPPLY	8 <b>"</b> ø	14x6	YES	STEEL
F	100	200-250	SEE PLANS	SUPPLY	9"ø OR 10"ø	14x8	YES	STEEL
G	A170	SEE DWGS.	SEĘ PLANS	RET/EXH/TRNSFR	SEE PLANS	SEE PLANS	(***)	STEEL 35° BLADES
H	A170	SEE DWGS.	SEE PLANS	RET/EXH/TRNSFR	SEE PLANS	SEE PLANS	(***)	ALUMINUM 35° BLADES
J	A170	SEE DWGS.	SEE PLANS	TRANSFER	18x8	20x10	NO	STEEL 35 BLADES
К	E240-V0	SEE DWGS.	SEE PLANS	SUPPLY	SEE PLANS	SEE PLANS	XES(QBD)	STEEL DOUBLE DEFLECTION
L	300RS	SEE DWGS.	SEE PLANS	SUPPLY	SEE PLANS	SEE PLANS	NO	STEEL DOUBLE DEFLECTION
М	350RL	SEE DWGS.	SEE PLANS	RETURN	SEE PLANS	SEE PLANS	Je Je	STEEL 35° BLADES

A. REFER TO ARCHITECTURAL DRAWINGS FOR TYPE OF CEILING AND/OR SUSPENSION SYSTEM. B. FINISH SHALL BE OF THE TYPE AND COLOR SELECTED BY ARCHITECT. SUBMIT FINISH CHART WITH SHOP DRAWINGS.

- C. SUPPLY REGISTERS TO HAVE 1/2" FIN SPACING.
- D. ALL SUPPLY DOUBLE DEFLECTION GRILLES TO HAVE OPPOSED BLADE DAMPER (SCREW DRIVER CONTROL).

I.E. A 8x4 'K' GRILLE WITH 4"Ø NECK ON THE PLANS WOULD BE RATED FOR 30-50 CFM.

- E. (\*\*\*) REFERENCE PLANS FOR ALL REQUIRED OPPOSED BLADE DAMPERS. F. 'K' GRILLE CFM'S SHALL BE EQUIVALENT TO CFM'S OF TYPE 'A' THROUGH 'F' DIFUSERS OF SAME FACE AND NECK SIZE FOR ALL DWELLING UNITS.
- SELECTIONS ARE BASED ON PRODUCTS BY: AIRMATE (A THRU K) AND TITUS (L AND M).





REVISIONS

/1\ 9-2-2011 1/2\ 9-13-2011 ANSI/FI COMMEN. /3\ 9-23-2011 1/4\ 10-17-2011 CONSTRUCTION

architects

1144 N. Central Expy Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

08 - 05 - 1**PROJECT** 

SHEET NUMBER

M-1.0 NOTES & **SCHEDULES** 

MECHANICAL

Embrey Builders, LLC 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph : (210) 824-6044 Fax: (210) 824-7656

RFI

To: Heath Parnell Jordan & Skala Engineers, Inc. 14240 Midway Road, Suite 350 Dallas, TX 75244

Date: 8/24/2012 Job: EB-02 Keller Springs Lofts

Phone: 877-777-5115

Ph: 469/385-1616 Fax: 469/385-1615

Subject: request to change route of exhaust and dryer duct

Drawing: M1.1

Request:

Spec Section: Schedule Impact: None

Cost Impact: None

Date Required: 8/27/2012 M-1.1 shows the top level exhaust fan detail and the top level dryer ducting detail to go down into the 3rd floor ceiling. Since we have a flat roof here we would like to run both of these through the 4th floor ceiling. The units with stackable washer and dryers make going down on the 4th floor extremely difficult with the dryer vent being located above the washer box. Need an answer ASAP for the crews to come back next week and start the rough in on the 4th floor..

Requested by: Bryan Pickler Embrey Partners, Ltd.

JSE: seal roof penetrations weather tight. Architect must also approve.

BGO: penetrating 4th floor ceiling is acceptable. Penetrating the roof is not acceptable. Make sure no stucco banding is penetrated. Coordinate so all units are the same.

Answered by: Heath Parnell

Jordan & Skala Engineers, Inc.

Answered date: August 27, 2012

Page 1 of 1

FINISHED FLOOR

4"ø OR 5"ø EXHAUST VENT DOWN

THRU FLOOR PLATE AND INTO

TRUSS SYSTEM, TRANSITION IN

TRUSS SYSTEM FROM A 4"ø TO

TOP LEVEL EXHAUST FAN DUCTING DETAIL

TOP PLATE SHALL BE

CUT AND FIRESTOPPED

STOP MATERIAL ----

USING UL APPROVED FIRE

DRYER VENT BOX, MODEL

425 BY IN-O-VATE, UL

RATED FOR 1-HR WALL, DETAIL W-L-7129 ---

INTERIOR PARTITION WALL

HAVING ADEQUATE DEPTH FOR

INSTALLATION OF VENT BOX ---

LOWER LEVELS

DRYER VENT DUCTING DETAIL

# DX PACKAGED ROOFTOP UNITS WITH GAS HEAT

TAC	MODEL N	NOMINAL	COOL/HEAT	TOTAL	MIN.		MAX	COOLING		G HEA		TING	400F000DIF0
TAG	MODEL No.	TONS	DUTY	CFM	O.A. CFM	ESP (IN.WG)	FAN BHP	MBH COOL. TOTAL	MBH COOL. SENSIBLE	EER	INPUT	OUTPUT	ACCESSORIES
RTU-1,2,3,4,5 6,7,8	48HCEB07	6.0	COOL/HEAT	2,400	615	1.0	1.96	70.8	53.0	12.0	90.0/125.0	103.0	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18

9. FACTORY—INSTALLED HUMIDIMIZER DEHUMIDIFICATION SYSTEM.

15. REMOTE THERMOSTAT SENSOR FOR DRY BULD AVERAGING AT

10. FIELD SUPPLIED BELT DRIVE.

13. BAROMETRIC RELIEF DAMPER.

14. ECONOMIZER.

SEE CALCS. BELOW

SEE CALCS BELOW

FOR DESIGN

LENGTH

INFORMATION

4" VERTICAL RISER / 5" HORIZONTAL

CODE PRESSURE LOSS => 25 FT. x 2.2 IN. W.G. / 100 FT. = 0.55 IN. W.G.

(TO BE USED WHEN 2009 IMC SECTION 506.4.1 CANNOT BE MET)

(1) CALCULATE ALLOWABLE DUCT PRESSURE LOSS PER 2009 IMC 506.4.1:

(2) ALTERNATE ENGINEERED DESIGN IS COMPOSED AS ILLUSTRATED ABOVE:

3. ONE (1) 4"-TO-5" ROUND TRANSITION INCREASER.

(3) FITTING PRESSURE LOSS DEDUCTIONS AND FRICTION FACTORS:

1: 0.55 IN. - 0.13 IN. - 0.11 IN. = 0.31 IN. W.G.

1: 0.31 IN. / (0.76 IN./100 FT.) = 40.8 EQUIVALENT FT.

VERTICAL LENGTH 1: 6'-0" OF 4" VERTICAL DUCT = 0.13 IN. W.G.

(4) CALCULATE THE MAXIMUM EQUIVALENT 5" ROUND HORIZONTAL DUCT LENGTH LIMITATIONS:

MAXIMUM EQUIVALENT 5" HORIZ. DUCT LENGTH = MAX. 5" PRESS. LOSS / f5 =>

ALTERNATE DRYER VENTING SUBJECT TO BUILDING OFFICIAL APPROVAL

— DRYER VENT BOX

COEFFICIENT OF FRICTION (f4) FOR 200 CFM THROUGH 4" ROUND DUCT = 2.2 IN. W.G. PER 100 FT.

1. A VERTICAL LENGTH OF 4" ROUND VENT DUCT STUBBED UP FROM A RECESSED DRYER VENT BOX.

2. ONE (1) 4" ROUND 90" ELBOW AT THE TOP OF THE VERTICAL DUCT WITHIN THE RATED FLOOR/CEILING ASSEMBLY.

THEREFORE ALTERNATE ENGINEERED DESIGN MUST NOT EXCEED 0.55 IN. W.G. PRESSURE LOSS THROUGH THE DRYER VENT SYSTEM.

4. A HORIZONTAL LENGTH OF 5" ROUND VENT DUCT ROUTED OUT THROUGH THE EXTERIOR WALL TO A WALL CAP.

FOR ALLOWABLE LENGTHS ————

5"ø HORIZONTAL VENT

WALL CAP

11. SMOKE DETECTOR IN RETURN AIR DUCT.

12. SUPPLY AIR FANS SHALL RUN CONTINUOUSLY.

LOWEST AND HIGHEST FLOORS SERVED.

7. MOTORIZED O TOOK OUTSIDE AIR BAMPE

18. POWERED EXHAUST. (RTU-1,3,5,7) ONLY

16. MINIMUM OF 2 STAGES OF GAS HEAT.

A. COOLING CAPACITY BASED ON 80'F DB/67'F WB ENTERING AIR TEMPERATURE AND 105'F DB OUTDOOR AIR TEMPERATURE. B. R-410a REFRIGERANT.

ACCESSORIES: HORIZONTAL CONFIGURATION WITH 14" MIN HIIGH ROOF CURB.

. 7-DAY PROGRAMMABLE COMBINATION THERMOSTAT/HUMIDISTAT WITH LOCKING COVER BY UNIT MANUFACTURER.

COMPRESSOR ANTI-RECYCLE CONTROLS. . UNIT SHALL SHUTDOWN UPON SIGNAL FROM BUILDING FIRE ALARM SYSTEM. PROVIDE SMOKE DETECTOR IN RETURN AIR DUCT.

4"ø ELBOW-

4"ø VERTICAL VENT —

<u>DRYER</u>

TRANSITION DUCT BY TENANT —

BASIS FOR ALTERNATE DESIGN:

PER CODE - 25 FT. EQUIVALENT

4" 90 DEGREE ELBOW = 0.11" 4"-T0-5" INCREASER = 0.00" WALL CAP TERMINATION = 0.00"

TYPICAL DRYER EXHAUST RATE - 200 CFM

**INCREASER** 

5. BELT DRIVE MOTOR. LOW AMBIENT OPERATION.

-4"ø OR 5"ø EXHAUST VENT DOWN

THRU FLOOR PLATE AND INTO

TRUSS SYSTEM, TRANSITION IN

- FINISHED FLOOR

TRUSS SYSTEM FROM A 4"Ø TO

. CRANKCASE HEATER. 8. SINGLE POINT POWER CONNECTION WITH DISCONNECT.

SELECTIONS ARE BASED ON PRODUCTS BY: CARRIER.

## GARAGE VENTILATION CONTROL SYSTEM

CARBON MONOXIDE DETECTION SYSTEM: PROVIDE (1) STAND ALONE GAS DETECTION SYSTEM WITH FIVE TO SIX REMOTE SENSORS PER PARKING GARAGE LEVEL MANUFACTURED BY CRITICAL ENVIRONMENT TECHNOLOGIES (RANDY BARNES AT BARTOS INDUSTRIES 214-350-6871). INCLUDED WITH THE CARBON MONOXIDE CONTROL SYSTEM WILL BE A WATER/DUST TIGHT CORROSION RESISTANT CONTROL PANEL ENCLOSURE AND AUTOMATIC RESETTING THERMAL CIRCUIT FUSE.

EVERY GAS DETECTION CONTROL PANEL AND REMOTE SENSOR SHALL BE INTERLOCKED TO THE FAN(S) AS NOTED ON THESE PLANS AND SCHEDULES. MECHANICAL VENTILATION SYSTEMS FOR ENCLOSED PARKING GARAGES ARE NOT REQUIRED TO OPERATE CONTINUOUSLY WHERE THE SYSTEM IS ARRANGED TO OPERATE AUTOMATICALLY UPON DETECTION OF A CONCENTRATION OF CARBON MONOXIDE OF 25 PARTS PER MILLION (PPM). THE SYSTEM SHALL NOT REDUCE THE VENTILATION RATE BELOW 0.05 CFM/SQFT OF FLOOR AREA AND SHALL BE CAPABLE OF PRODUCING A VENTILATION RATE OF 1.5 CFM/SQFT OF FLOOR AREA.

MODEL NUMBERS:

CO CONTROL PANEL: PDCA088 (LOCATE PANELS AS SHOWN ON PLANS)

REMOTE CO DETECTION SENSOR (TYP. 5): DST-MCO (LOCATE SENSORS AS SHOWN ON PLANS)

			and the second s		
TAG	MODEL No.	DESCRIPTION	HEAT CAPACITY	MOUNTING	ACCESSORIES
EH-A	AFA	WALL HEATER	4.0 kW	SEE DRAWINGS	1,2,3,4
 EH-B	AFA	WALL HEATER	3.0 kW	SEE DRAWINGS	1,2,3,4

A. UNIT INSTALLED MUST BE CAPABLE OF DELIVERING KW OUTPUT SPECIFIED AT AVAILABLE VOLTAGE AND PHASE.

ACCESSORIES:

1. TAMPER PROOF CONTROLS.

3. AUTO—RESET THERMAL OVERLOADS.

## DUCTLESS SPLIT SYSTEM HEAT PUMPS

TAG	MODEL NO. OUTDOOR/INDOOR	AIRFLOW (INDOOR UNIT) (CFM)	TOTAL COOLING (MBH)	TOTAL HEATING (MBH)	COOLING EAT (DB/WB)	ACCESSORIES
AH\HP-E1,E2	PUZ-A18NHA/PKA-A18GAL	425	18.0	19.0	80/67	1,2,3,4,5,6
AHY FIP-T	PUZ-A18NHA/PKA-A18GAL	425	18.0	19.0	80/67	1,2,3,4,5,6
AH\HP-M	PUZ-A18NHA/PKA-A18GAL	425	18.0	19.0	80/67	1,2,3,4,5,6
AH (HP-72	PUZ-A36NHA/PKA-A36GAL	990	34.2	37.0	80/67	1,2,3,4,5,6
AH\HP-FP	PUZ-A36NHA/PKA-A36GAL	990	34.2	37.0	80/67	1,2,3,4,5,6

B. ROUTE 3/4" AH CONDENSATE TO NEAREST PLUMBING DRAIN. SEE PLUMBING DRAWINGS.

ACCESSORIES:

MICROPROCESSOR CONTROL WITH NON-REMOVABLE MOUNTING BRACKET.

 DISCONNECT SWITCH FOR OUTDOOR UNIT SHALL BE BY DIVISION 16. 4. CONDENSATE PUMP W/CHECK VALVE ON INDOOR UNIT (FIELD MOUNTED)

## WALL LOUVERS

TAG	MODEL No.	DUTY	SIZE WxH (INCHES)	FREE AREA (SQ.FT.)	СҒМ	MAX. PRESS. DROP (IN. W.C.)	OPERATOR	ACCESSORIES
WL-A	EAH-690	RELIEF	72"x18"	3.0	SEE PLANS	0.05"	ELECTRIC	1,2,3,4
WL-B	EDJ-401	EXHAUST	24"x12"	0.60	SEE PLANS	0.05"	NONE	1,2
WL-C	EDJ-401	INTAKE	30x12"	0.75	SEE PLANS	0.05"	NONE	1,2

A. FINAL COLOR SELECTION SHALL BE MADE BY ARCHITECT AT TIME OF SHOP DRAWING APPROVAL.

ACCESSORIES:

1. BIRD SCREEN.

4. INTERLOCK TO FIRE ALARM SYSTEM / SMOKE DETECTOR.

2. INTEGRAL THERMOSTAT & DISCONNECT SWITCH.

4. WALL/CEILING MOUNTING BRACKET.

SELECTIONS ARE BASED ON PRODUCTS BY: RAYWALL

	TAG	MODEL NO. OUTDOOR/INDOOR	AIRFLOW (INDOOR UNIT) (CFM)	TOTAL COOLING (MBH)	TOTAL HEATING (MBH)	COOLING EAT (DB/WB)	ACCESSORIES
Ī	AH\HP-E1,E2	PUZ-A18NHA/PKA-A18GAL	425	18.0	19.0	80/67	1,2,3,4,5,6
7	AH(HP=T	PUZ-A18NHA/PKA-A18GAL	425	18.0	19.0	80/67	1,2,3,4,5,6
	AH\HP-M	PUZ-A18NHA/PKA-A18GAL	425	18.0	19.0	80/67	1,2,3,4,5,6
*	AH HP 72	PUZ-A36NHA/PKA-A36GAL	990	34.2	37.0	80/67	1,2,3,4,5,6
	AH\HP-FP	PUZ-A36NHA/PKA-A36GAL	990	34.2	37.0	80/67	1,2,3,4,5,6
ᆘ	NOTES	L.,,	<u> </u>	•			

A. COOLING CAPACITIES BASED ON 95°F AMBIENT COOLING, 80°F db/67°F wb ENTERING AIR TEMPERATURE AND 47°F AMBIENT HEATING.

C. 13 SEER MINIMUM UNITS.

DISCONNECT SWITCH FOR INDOOR UNIT SHALL BE BY DIVISION 16.

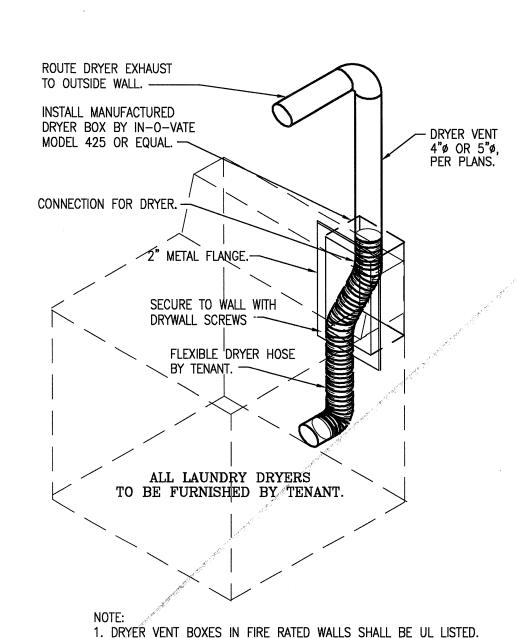
6. PRE-CHARGED REFRIGERANT LINE SET

SELECTIONS ARE BASED ON PRODUCTS BY: MITSUBISHI.

TAG	MODEL No.	DUTY	SIZE WxH (INCHES)	FREE AREA (SQ.FT.)	СҒМ	MAX. PRESS. DROP (IN. W.C.)	OPERATOR	ACCESSORIES
WL-A	EAH-690	RELIÈF	72"x18"	3.0	SEE PLANS	0.05"	ELECTRIC	1,2,3,4
WL-B	EDJ-401	EXHAUST	24"x12"	0.60	SEE PLANS	0.05"	NONE	1,2
WL-C	EDJ-401	INTAKE	30x12"	0.75	SEE PLANS	0.05"	NONE	1,2

2. BAKED ENAMEL FINISH.

SELECTIONS BASED ON GREENHECK!



2. INSTALL MANUFACTURED ONE HOUR RATED "DRYER BOX" BY

DRYER VENT BOX DETAIL

SCHEMATIC - NO SCALE

RATING. WWW.DRYERBOX.COM

3. Install per manufacturer's requirements to maintain fire

TOP LEVEL

DRYER VENT DUCTING DETAIL

EXHAUST FAN DUCTING DETAIL

INTERIOR PARTITION WALL HAVING ADEQUATE DEPTH FOR INSTALLATION OF VENT BOX —

DRYER VENT BOX, MODEL 4D

BY IN-O-VATE, UL RATED

FOR 1-HR WALL, DETAIL

CUT AND FIRESTOPPED

STOP MATERIAL ----

USING UL APPROVED FIRE

W-L-7129 ----

-4"ø OR 5"ø DRYER VENT OR 4"ø TOILET EXHAUST VENT.

> 1. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER 2. WALL CAP BY VENTCRAFT, OR APPROVED EQUAL. 3. PROVIDE CAP WITH PAINT GRIP COATING FOR FIELD PAINTING.

DRYER AND TOILET EXHAUST WALL CAP DETAIL

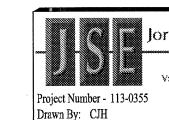
THEREFORE THE MAXIMUM EQUIVALENT 5" ROUND HORIZONTAL DUCT LENGTH IS 40.8 EQUIVALENT FT. AND THE TOTAL EQUIVALENT LENGTH IS 51.8 EQUIVALENT FT.

COEFFICIENT OF FRICTION (f5) FOR 200 CFM THROUGH 5" ROUND DUCT = 0.76 IN. W.G. PER 100 FT.

MAXIMUM 5" HORIZ. DUCT PRESS. LOSS = CODE PRESS. LOSS - 4" VERTICAL DUCT LOSS - 4" ELBOW =>

THEREFORE THE MAXIMUM ALLOWABLE PRESSURE DROP THROUGH THE 5" ROUND DUCT IS 0.31 IN. W.G.

CODE ALTERNATE DRYER VENT LENGTH DESIGN WITH VENT BOX SCHEMATIC - NO SCALE





Checked By: AHS

BGO

architects

4144 N. Central Expy. Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

08-05-1

11129

SHEET NUMBER

PROJECT

HON PAN WONG

.108965

2 9-13-2011 ANSI/FH

10-17-2011 CONSTRUCTION

COMMENT

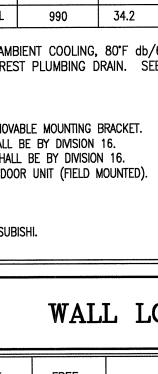
REVISIONS

ADDISON,

REVISIONS

/1\ 9-2-2011

/3\ 9-23-2011



# DX PACKAGED ROOFTOP UNITS WITH GAS HEAT

													<b>A</b>
RTU-1,2,3,4,5 6,7,8	48HCEB07	6.0	COOL/HEAT	2,400	615	1.0	1.96	70.8	53.0	12.0	90.0/125.0	103.0	1,2,3,4,5,6,7,8,9,10,11, 12,13,14,15,16,17,18
TAG	MODEL No.	TONS	DUTY	CFM	O.A. CFM	ESP (IN.WG)		MBH COOL. TOTAL	MBH COOL. SENSIBLE	EER	INPUT	OUTPUT	ACCESSORIES
TAC	MODEL N	NOMINAL	COOL/HEAT	TOTAL	MIN.	LCD	MAX	-	COOLING		HEAT	TING	400F000DUF0
11	1	ĺ	ł .	1	1								

A. COOLING CAPACITY BASED ON 80°F DB/67°F WB ENTERING AIR TEMPERATURE AND 105°F DB OUTDOOR AIR TEMPERATURE. B. R-410a REFRIGERANT.

ACCESSORIES:

. HORIZONTAL CONFIGURATION WITH 14" MIN HIIGH ROOF CURB. 2. 7-DAY PROGRAMMABLE COMBINATION THERMOSTAT/HUMIDISTAT WITH LOCKING COVER BY UNIT MANUFACTURER.

COMPRESSOR ANTI-RECYCLE CONTROLS 4. UNIT SHALL SHUTDOWN UPON SIGNAL FROM BUILDING FIRE ALARM SYSTEM. PROVIDE SMOKE DETECTOR IN RETURN AIR DUCT.

5. BELT DRIVE MOTOR. 6. LOW AMBIENT OPERATION.

7. CRANKCASE HEATER. 8. SINGLE POINT POWER CONNECTION WITH DISCONNECT.

SELECTIONS ARE BASED ON PRODUCTS BY: CARRIER.

9. FACTORY-INSTALLED HUMIDIMIZER DEHUMIDIFICATION SYSTEM. 10. FIELD SUPPLIED BELT DRIVE. 1. SMOKE DETECTOR IN RETURN AIR DUCT.

13. BAROMETRIC RELIEF DAMPER. 14. ECONOMIZER. 15. REMOTE THERMOSTAT SENSOR FOR DRY BULD AVERAGING AT

12. SUPPLY AIR FANS SHALL RUN CONTINUOUSLY.

16. MINIMUM OF 2 STAGES OF GAS HEAT. 17. MOTORIZED 0-100% OUTSIDE AIR DAMPER.

LOWEST AND HIGHEST FLOORS SERVED.

18. POWERED EXHAUST. (RTU-1,3,5,7) ONLY

# GARAGE VENTILATION CONTROL SYSTEM

CARBON MONOXIDE DETECTION SYSTEM: PROVIDE (1) STAND ALONE GAS DETECTION SYSTEM WITH FIVE TO SIX REMOTE SENSORS PER PARKING GARAGE LEVEL MANUFACTURED BY CRITICAL ENVIRONMENT TECHNOLOGIES (RANDY BARNES AT BARTOS INDUSTRIES 214-350-6871). INCLUDED WITH THE CARBON MONOXIDE CONTROL SYSTEM WILL BE A WATER/DUST TIGHT CORROSION RESISTANT CONTROL PANEL ENCLOSURE AND AUTOMATIC RESETTING THERMAL CIRCUIT FUSE.

EVERY GAS DETECTION CONTROL PANEL AND REMOTE SENSOR SHALL BE INTERLOCKED TO THE FAN(S) AS NOTED ON THESE PLANS AND SCHEDULES. MECHANICAL VENTILATION SYSTEMS FOR ENCLOSED PARKING GARAGES ARE NOT REQUIRED TO OPERATE CONTINUOUSLY WHERE THE SYSTEM IS ARRANGED TO OPERATE AUTOMATICALLY UPON DETECTION OF A CONCENTRATION OF CARBON MONOXIDE OF 25 PARTS PER MILLION (PPM). THE SYSTEM SHALL NOT REDUCE THE VENTILATION RATE BELOW 0.05 CFM/SQFT OF FLOOR AREA AND SHALL BE CAPABLE OF PRODUCING A VENTILATION RATE OF 1.5 CFM/SQFT OF FLOOR AREA.

MODEL NUMBERS:

CO CONTROL PANEL: PDCA088 (LOCATE PANELS AS SHOWN ON PLANS) REMOTE CO DETECTION SENSOR (TYP. 5): DST-MCO (LOCATE SENSORS AS SHOWN ON PLANS)

#### ELECTRIC HEATERS MOUNTING **ACCESSORIES** DESCRIPTION HEAT CAPACITY 1,2,3,4 SEE DRAWINGS WALL HEATER

3.0 kW

SEE DRAWINGS

1,2,3,4

A. UNIT INSTALLED MUST BE CAPABLE OF DELIVERING KW OUTPUT SPECIFIED AT AVAILABLE VOLTAGE AND PHASE.

WALL HEATER

**ACCESSORIES:** 

EH-A

EH-B

1. TAMPER PROOF CONTROLS. 2. INTEGRAL THERMOSTAT & DISCONNECT SWITCH.

MODEL No.

AFA

AFA

3. AUTO-RESET THERMAL OVERLOADS. 4. WALL/CEILING MOUNTING BRACKET.

SELECTIONS ARE BASED ON PRODUCTS BY: RAYWALL

#### DUCTLESS SPLIT SYSTEM HEAT PUMPS COOLING ACCESSORIES AIRFLOW TOTAL TOTAL OUTDOOR/INDOOR (INDOOR UNIT) COOLING HEATING (MBH) (DB/WB) (MBH) (CFM) AH\HP-E1 PUZ-A18NHA/PKA-A18GAL 1,2,3,4,5,6 425 18.0 19.0 80/67 PUZ-A18NHA/PKA-A18GAL 1,2,3,4,5,6 18.0 19.0 80/67 425 1,2,3,4,5,6 AH\HP-M PUZ-A18NHA/PKA-A18GAL 18.0 425 19.0 80/67 1,2,3,4,5,6 PUZ-A36NHA/PKA-A36GAL 990 34.2 37.0 80/67

NOTES
A. COOLING CAPACITIES BASED ON 95 F AMBIENT COOLING, 80 F db/67 F wb ENTERING AIR TEMPERATURE AND 47 F AMBIENT HEATING. B. ROUTE 3/4" AH CONDENSATE TO NEAREST PLUMBING DRAIN. SEE PLUMBING DRAWINGS.

NUZ-A36NUMPKA-A38GAL 990 24.2 37.0 80/67 1,2,34/5,6

C. 13 SEER MINIMUM UNITS. ACCESSORIES:

MICROPROCESSOR CONTROL WITH NON-REMOVABLE MOUNTING BRACKET. 2. DISCONNECT SWITCH FOR INDOOR UNIT SHALL BE BY DIVISION 16.

 DISCONNECT SWITCH FOR OUTDOOR UNIT SHALL BE BY DIVISION 16 . CONDENSATE PUMP W/CHECK VALVE ON INDOOR UNIT (FIELD MOUNTED). 5. WASHABLE FILTER.

6. PRE-CHARGED REFRIGERANT LINE SET.

SELECTIONS ARE BASED ON PRODUCTS BY: MITSUBISHI AND CARRIER (E1,E2,E3).

# WALL LOUVERS

TAG	MODEL No.	DUTY	SIZE WxH (INCHES)	FREE AREA (SQ.FT.)	CFM	MAX. PRESS. DROP (IN. W.C.)	OPERATOR	ACCESSORIES
WL-A	EAH-690	RELIEF	72"x18"	3.0	SEE PLANS	0.05"	ELECTRIC	1,2,3,4
WL-B	EDJ-401	EXHAUST	24"x12"	0.60	SEE PLANS	0.05"	NONE	1,2
WL-C	EDJ-401	INTAKE	24"x12"	0.75	SEE PLANS	0.05"	NONE	1,2

A. FINAL COLOR SELECTION SHALL BE MADE BY ARCHITECT AT TIME OF SHOP DRAWING APPROVAL.

ACCESSORIES:

1. BIRD SCREEN. 2. BAKED ENAMEL FINISH.

3. SHALL BE NORMALLY CLOSED, BUT OPEN DURING LOSS OF POWER AND DURING FIRE ALARM.

4. INTERLOCK TO FIRE ALARM SYSTEM / SMOKE DETECTOR. SELECTIONS BASED ON GREENHECK.

## PACKAGED TERMINAL AIR CONDITIONERS

TAG	MODEL No.	MBH TOT. COOL	MBH INT. HEAT	MIN EER	TOTAL CFM	OA CFM	AUX. HEAT KW	ACCESSORIES	
PTAC-EL1,EL2,EL3	PTEC070	6.0	5.7	12.7	240	0	2.9	1,2,3,4	

COOLING CAPACITIES ARE BASED ON 95°F AMBIENT, 80°F DB/67°F WB ENTERING AIR TEMPERATURE.

7-DAY PROGRAMMABLE THERMOSTAT INSULATED WALL SLEEVE.

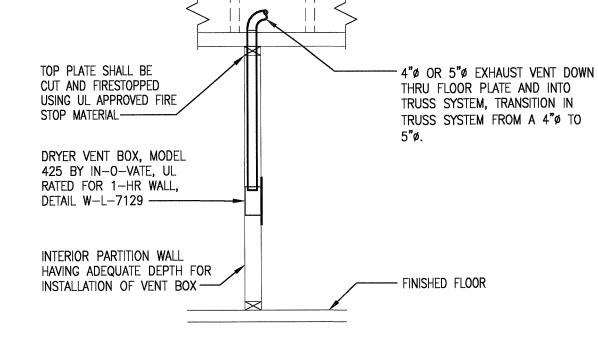
ARCHITECTURAL ALUMINUM LOUVER.

HARD WIRE KIT.

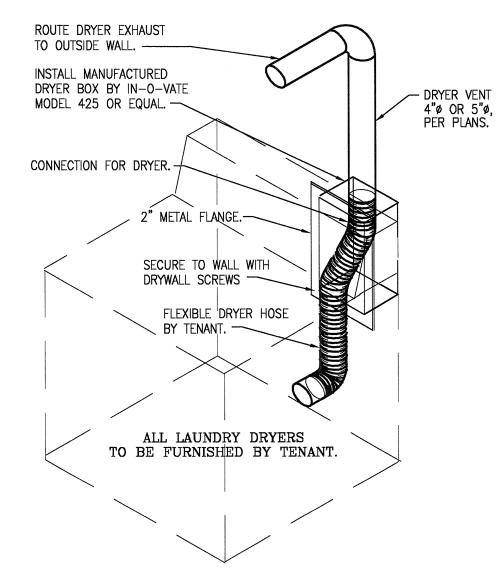
SELECTIONS ARE BASED ON PRODUCTS BY: TRANE

#### INTERIOR PARTITION WALL HAVING ADEQUATE DEPTH FOR INSTALLATION OF VENT BOX — DRYER VENT BOX, MODEL 4D BY IN-O-VATE, UL RATED FOR 1-HR WALL, DETAIL W-L-7129 ----- FINISHED FLOOR 4"ø OR 5"ø EXHAUST VENT DOWN THRU FLOOR PLATE AND INTO BOTTOM PLATE SHALL BE-CUT AND FIRESTOPPED TRUSS SYSTEM, TRANSITION IN USING UL APPROVED FIRE TRUSS SYSTEM FROM A 4"Ø TO



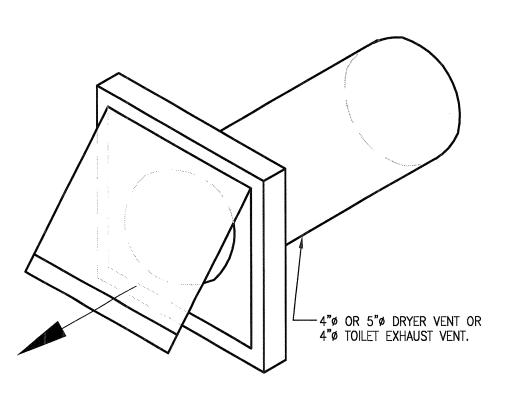


LOWER LEVELS DRYER VENT DUCTING DETAIL



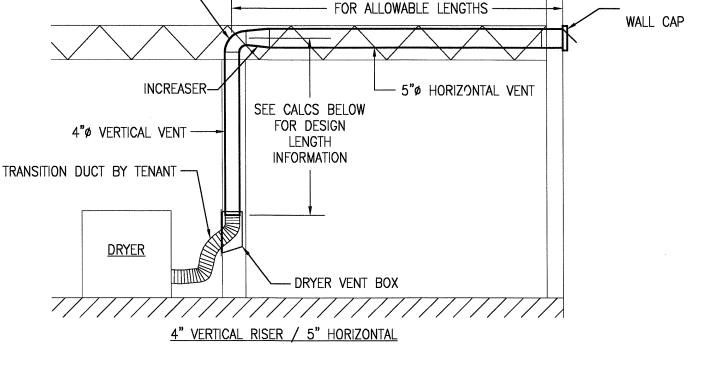
1. DRYER VENT BOXES IN FIRE RATED WALLS SHALL BE UL LISTED. 2. INSTALL MANUFACTURED ONE HOUR RATED "DRYER BOX" BY 3. INSTALL PER MANUFACTURER'S REQUIREMENTS TO MAINTAIN FIRE RATING. WWW.DRYERBOX.COM

DRYER VENT BOX DETAIL SCHEMATIC - NO SCALE



1. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER 2. WALL CAP BY VENTCRAFT, OR APPROVED EQUAL. 3. PROVIDE CAP WITH PAINT GRIP COATING FOR FIELD PAINTING.

DRYER AND TOILET EXHAUST WALL CAP DETAIL



SEE CALCS. BELOW

ALTERNATE DRYER VENTING SUBJECT TO BUILDING OFFICIAL APPROVAL

(TO BE USED WHEN 2009 IMC SECTION 506.4.1 CANNOT BE MET)

BASIS FOR ALTERNATE DESIGN:

4"ø ELBOW-

(1) CALCULATE ALLOWABLE DUCT PRESSURE LOSS PER 2009 IMC 506.4.1: PER CODE - 25 FT. EQUIVALENT

TYPICAL DRYER EXHAUST RATE - 200 CFM

COEFFICIENT OF FRICTION (f4) FOR 200 CFM THROUGH 4" ROUND DUCT = 2.2 IN. W.G. PER 100 FT. CODE PRESSURE LOSS => 25 FT. x 2.2 IN. W.G. / 100 FT. = 0.55 IN. W.G.

(2) ALTERNATE ENGINEERED DESIGN IS COMPOSED AS ILLUSTRATED ABOVE:

1. A VERTICAL LENGTH OF 4" ROUND VENT DUCT STUBBED UP FROM A RECESSED DRYER VENT BOX. 2. ONE (1) 4" ROUND 90" ELBOW AT THE TOP OF THE VERTICAL DUCT WITHIN THE RATED FLOOR/CEILING ASSEMBLY. 3. ONE (1) 4"-TO-5" ROUND TRANSITION INCREASER.

4. A HORIZONTAL LENGTH OF 5" ROUND VENT DUCT ROUTED OUT THROUGH THE EXTERIOR WALL TO A WALL CAP. THEREFORE ALTERNATE ENGINEERED DESIGN MUST NOT EXCEED 0.55 IN. W.G. PRESSURE LOSS THROUGH THE DRYER VENT SYSTEM.

(3) FITTING PRESSURE LOSS DEDUCTIONS AND FRICTION FACTORS:

VERTICAL LENGTH 1: 6'-0" OF 4" VERTICAL DUCT = 0.13 IN. W.G. 4" 90 DEGREE ELBOW = 0.11"

4"-T0-5" INCREASER = 0.00"

WALL CAP TERMINATION = 0.00" COEFFICIENT OF FRICTION (f5) FOR 200 CFM THROUGH 5" ROUND DUCT = 0.76 IN. W.G. PER 100 FT.

(4) CALCULATE THE MAXIMUM EQUIVALENT 5" ROUND HORIZONTAL DUCT LENGTH LIMITATIONS: MAXIMUM 5" HORIZ. DUCT PRESS. LOSS = CODE PRESS. LOSS - 4" VERTICAL DUCT LOSS - 4" ELBOW => 1: 0.55 IN. - 0.13 IN. - 0.11 IN. = 0.31 IN. W.G.

THEREFORE THE MAXIMUM ALLOWABLE PRESSURE DROP THROUGH THE 5" ROUND DUCT IS 0.31 IN. W.G. MAXIMUM EQUIVALENT 5" HORIZ. DUCT LENGTH = MAX. 5" PRESS. LOSS / f5 => 1: 0.31 IN. / (0.76 IN./100 FT.) = 40.8 EQUIVALENT FT.

THEREFORE THE MAXIMUM EQUIVALENT 5" ROUND HORIZONTAL DUCT LENGTH IS 40.8 EQUIVALENT FT. AND THE TOTAL EQUIVALENT LENGTH IS 51.8 EQUIVALENT FT.

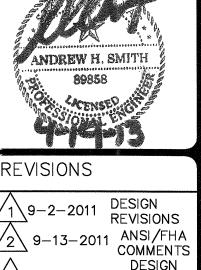
CODE ALTERNATE DRYER VENT LENGTH DESIGN WITH VENT BOX



Dallas, TX 75287-6857

Checked By: AHS

Texas Firm Registration #F-4990



1\9-2-2011 DESIGN /2\ 9-13-2011 ANSI/FHA 9-23-2011 REVISIONS

10-17-2011 12-21-2011 REVISION: 6\ 1-17-2012 REVISIONS

7\ 2-15-2012 REVISIONS 8 3-27-2012 CLUBHOUS REVISIONS

4-17-2012 COORDINATION

COORDINATIO COORDINATIO 6-01-12 LIGHTING REVISIONS △ 6-29-12 SITE COORDINATION

CLUB 9-05-12 REVISIONS EL. LOBBY REVIONS



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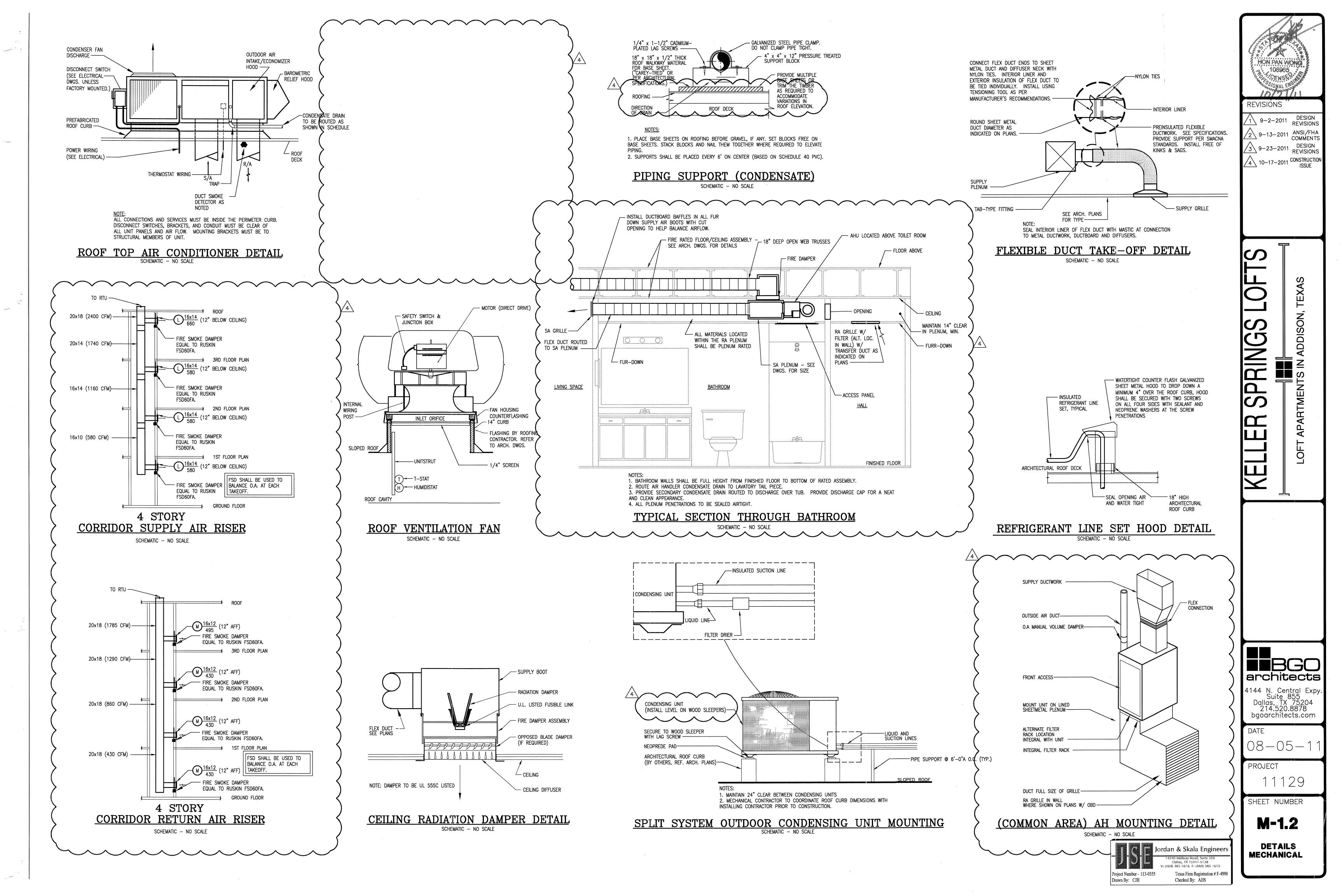
bgoarchitects.com

08-05-1

PROJECT

SHEET NUMBER

M-1.1 **DETAILS & SCHEDULES** MECHANICAL



San Antonio, TX 78209
Ph: (210) 824-6044 Fax: (210) 824-76
•

**To:** Trent Perkins
Parkin Perkins Olsen

RFI #: 115 Date: 5/14/2012
Job: EB-02 Keller Springs Lofts Phone: 877-777-5115

9330 LBJ Freeway, Suite 1055 Dallas, TX 75243 Ph: (214)221-2220 Fax: (214)221-2252

CC: Erik Earnshaw (Beeler Guest Owens Architects), Heath Parnell (Jordan & Skala Engineers, Inc.)

Subject: HVAC Supply Duct and Return Air Duct Locations

Drawing: M2.1, M2.2, M2.4, M2.6 and corresponding Spec Section:
Structural sheets
Cost Impact: None Schedule Impact: No

Schedule Impact: None

RFI

Date Required: 5/22/2012 In the A1, A2, A4 and B2 unit types, there are either supply ducts or return air ducts terminating in a load bearing wall. Please provide a way to get around this issue. Requested by: David Miller Embrey Builders LLC

Response:

Refer question to Architect and/or Mechanical Engineer for additional requirements necessary for penetrating a load-bearing wall.

R. Trent Perkins, P.E.

Parkin-Perkins-Olsen Consulting Engineering, Inc.

May 28, 2012

Provide a type A header where duct penetration will not fit between the stud wall framing.

R. Trent Perkins, P.E.

Parkin-Perkins-Olsen Consulting Engineering, Inc.

May 29, 2012

Answered by

Company

Page 1 of 1

Embrey Builders, LLC

1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph : (210) 824-6044 Fax: (210) 824-7656

RFI

To: Heath Parnell Jordan & Skala Engineers, Inc. 14240 Midway Road, Suite 350 Dallas, TX 75244

RFI #: 158 Date: 6/15/2012 Job: EB-02 Keller Springs Lofts Phone: 877-777-5115

CC: Ryan Faulds (B.G.O. Architects, Inc.)

Ph: 469/385-1616 Fax: 469/385-1615

Subject: Fur down in A2-SP units

Drawing: 4/M-2.2, sheet 2.3A Cost Impact: None

Spec Section: Schedule Impact: None

Date Required: 6/22/2012 4/M-2.2 shows no fur down over washer/dryer unit in A2-SP, sheet 2.3A shows A2-SP with fur down. Please clarify and advise.

Embrey Partners, Ltd.

Requested by: Bryan Pickler

No furrdown is required over the washer/dryer.

Heath Parnell Answered by

Company

Jordan & Skala

8/01/12 Date

Page 1 of 1

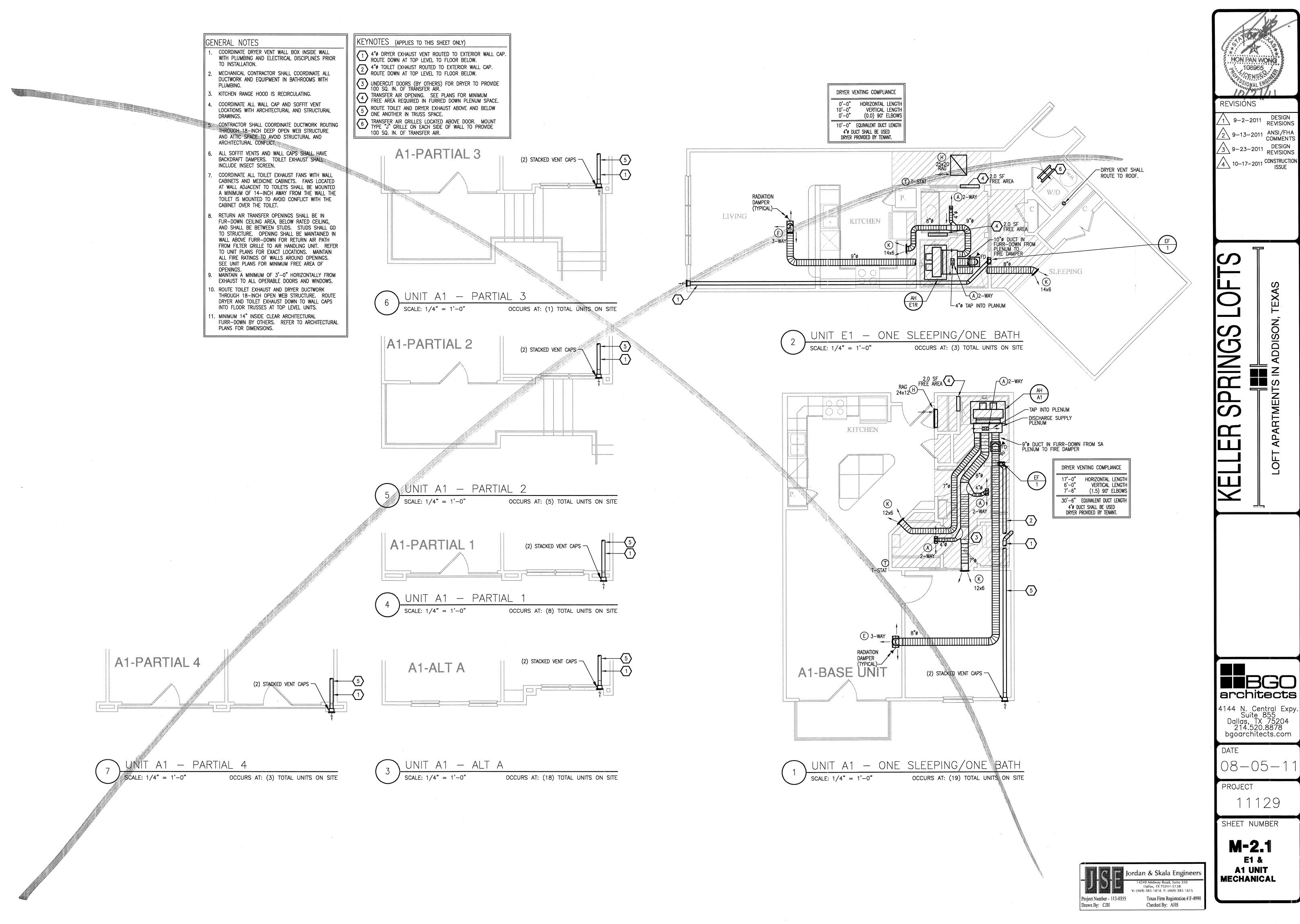
1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656 RFI To: Trent Perkins Parkin Perkins Olsen Date: 5/14/2012 9330 LBJ Freeway, Suite 1055 Job: EB-02 Keller Springs Lofts Dallas, TX 75243 Phone: 877-777-5115 Ph: (214)221-2220 Fax: (214)221-2252 CC: Erik Earnshaw (Beeler Guest Owens Architects), Heath Parnell (Jordan & Skala Engineers, Inc.) Subject: HVAC Supply Duct and Return Air Duct Locations **Drawing:** M2.1, M2.2, M2.4, M2.6 and corresponding Spec Section: Structural sheets Schedule Impact: None Cost Impact: None Date Required: 5/22/2012 In the A1, A2, A4 and B2 unit types, there are either supply ducts or return air ducts terminating in a load bearing wall. Please provide a way to get around this issue. Requested by: David Miller Embrey Builders LLC Refer question to Architect and/or Mechanical Engineer for additional requirements necessary for penetrating a load-bearing wall. May 28, 2012 R. Trent Perkins, P.E. Parkin-Perkins-Olsen Consulting Engineering, Inc. Provide a type A header where duct penetration will not fit between the stud wall framing. May 29, 2012 R. Trent Perkins, P.E. Parkin-Perkins-Olsen Consulting Engineering, Inc.

EMBREY BUILDERS, LLC.

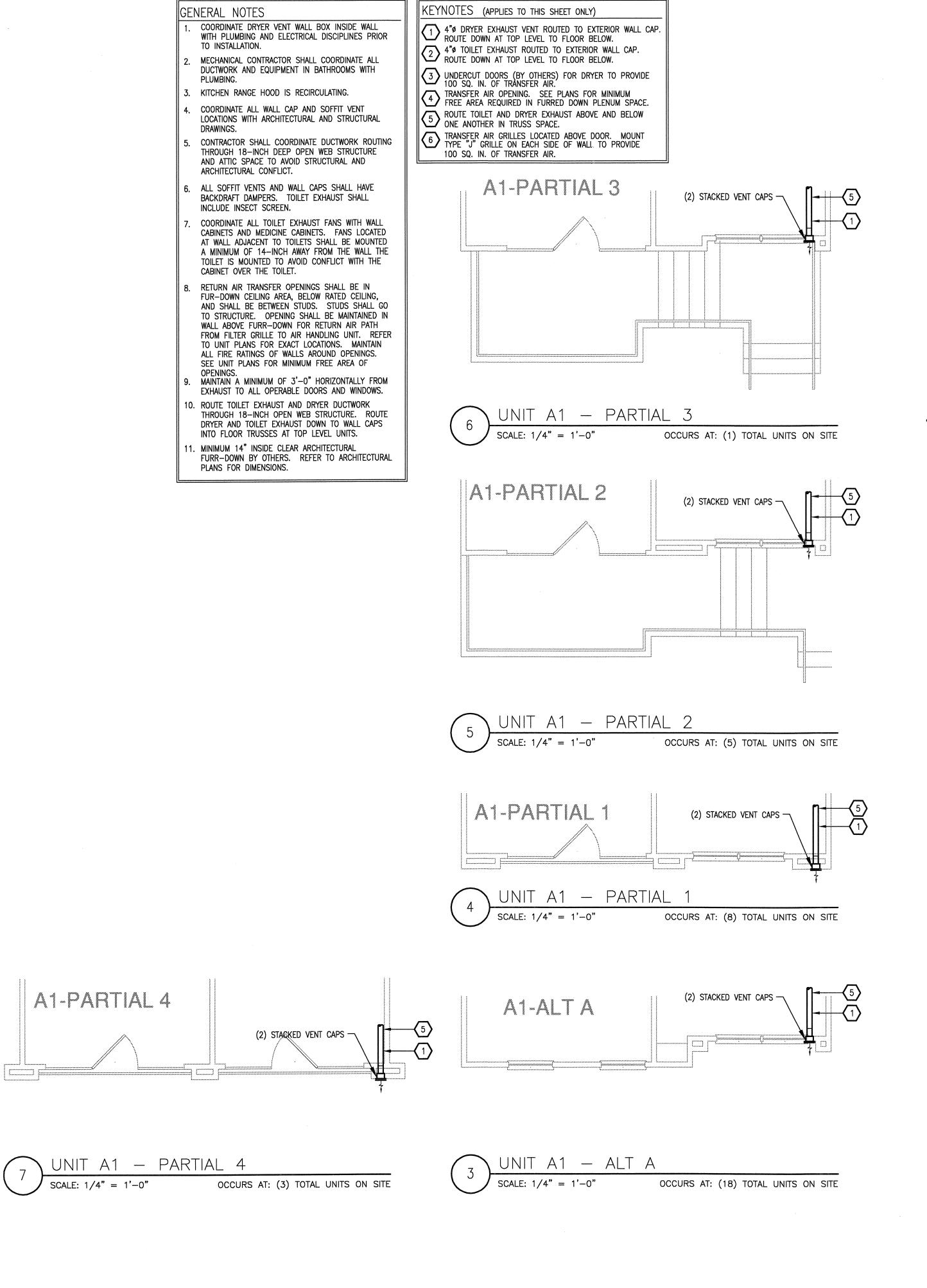
Answered by

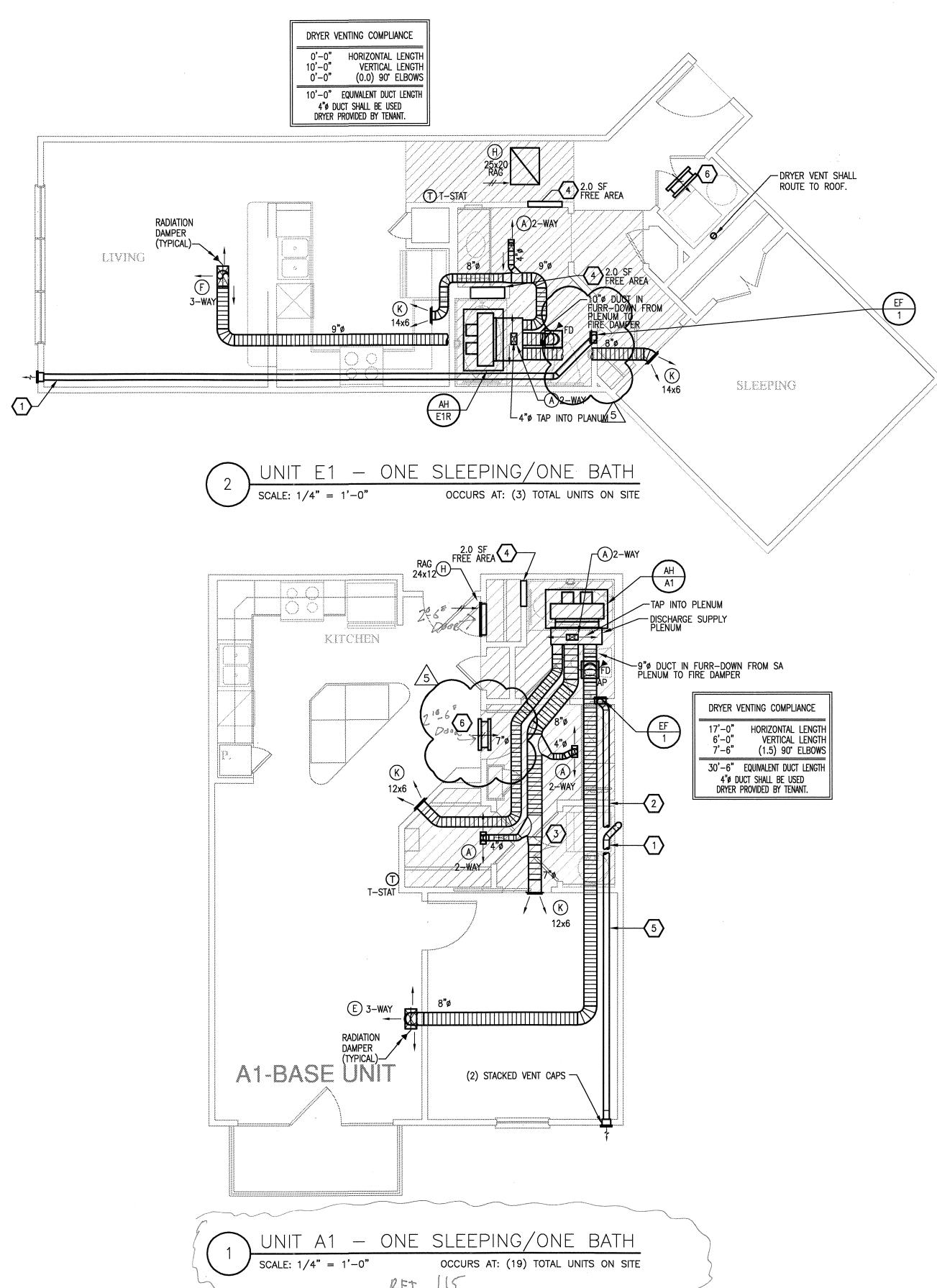
Company

Page 1 of 1



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HON PAN WONG

108965

1 9-2-2011 DESIGN REVISIONS

2 9-13-2011 ANSI/FHA

3 9-23-2011 DESIGN REVISIONS

4\ 10-17-2011 CONSTRUCTION

5 12-21-2011 DESIGN REVISIONS

COMMENTS

TEXAS

ADDISON,

BGO architects

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08-05-1

11129

SHEET NUMBER

M-2.1

MECHANICAL

E1 & A1 UNIT

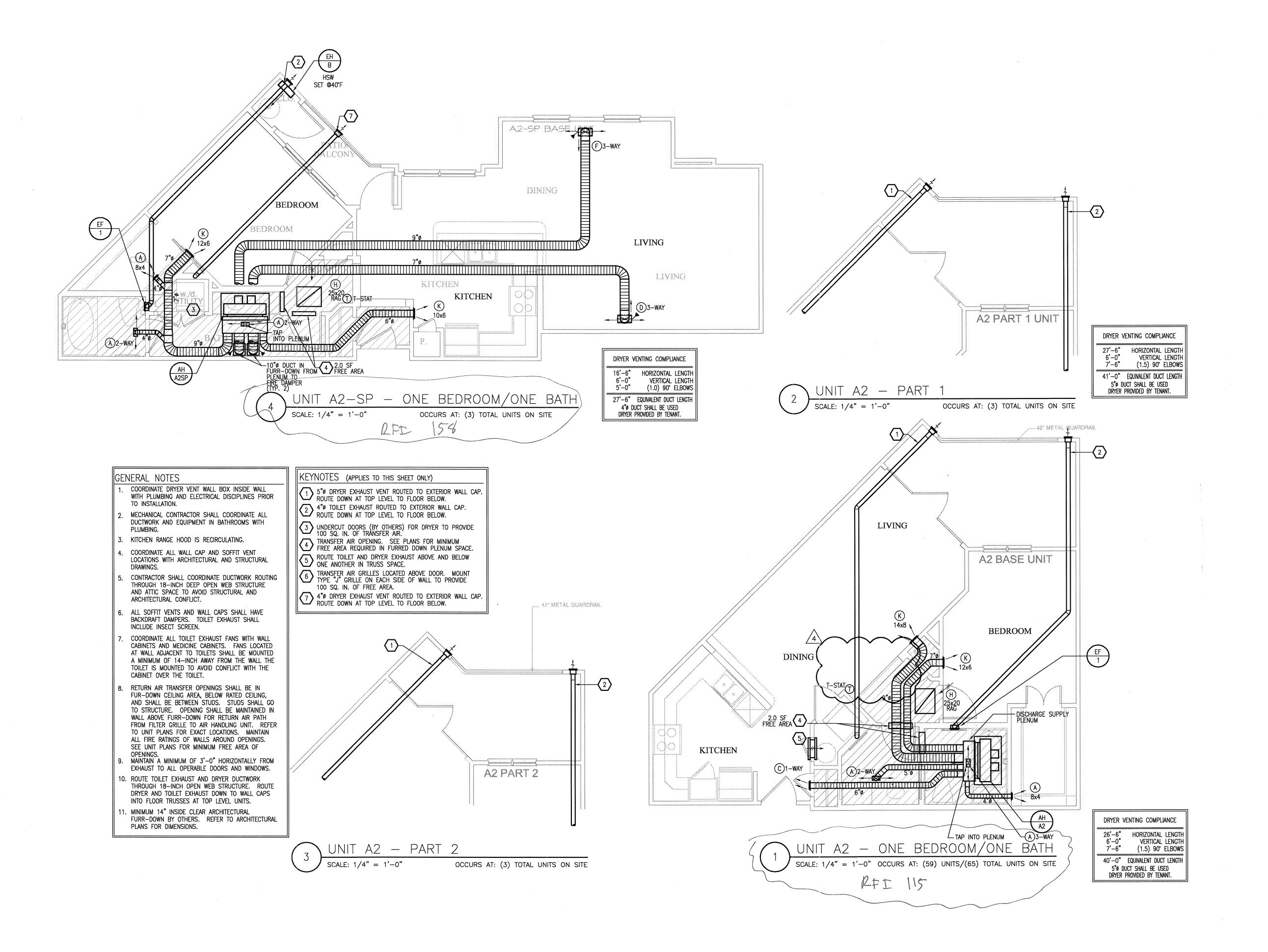
PROJECT

REVISIONS

**Embrey Builders, LLC** 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656 RFI To: Heath Parnell RFI #: 157 Jordan & Skala Engineers, Inc. Date: 6/15/2012 14240 Midway Road, Suite 350 Job: EB-02 Keller Springs Lofts Dallas, TX 75244 Phone: 877-777-5115 Ph: 469/385-1616 Fax: 469/385-1615 **CC:** Erik Earnshaw (Beeler Guest Owens Architects) Subject: Misprint unit type Drawing: M-2.3 Spec Section: Cost Impact: None Schedule Impact: None Date Required: 6/22/2012 Sheet M-2.3 shows designation A2-SP unit but the floor plans designate an A3 unit. Please revise sheet M-2.3 to show the title A3 unit and not the A2-SP unit. Requested by: Heath Parnell Jordan & Skala Engineers, Inc. See attached for updated sheet title Answered by: Heath Parnell Answered date: August 02, 2012

Jordan & Skala Engineers, Inc.

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REVISIONS

9-2-2011 DESIGN REVISIONS

2 9-13-2011 ANSI/FHA COMMENTS

3 9-23-2011 DESIGN REVISIONS

4 10-17-2011 CONSTRUCTION ISSUE

BBGO architects

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DATE

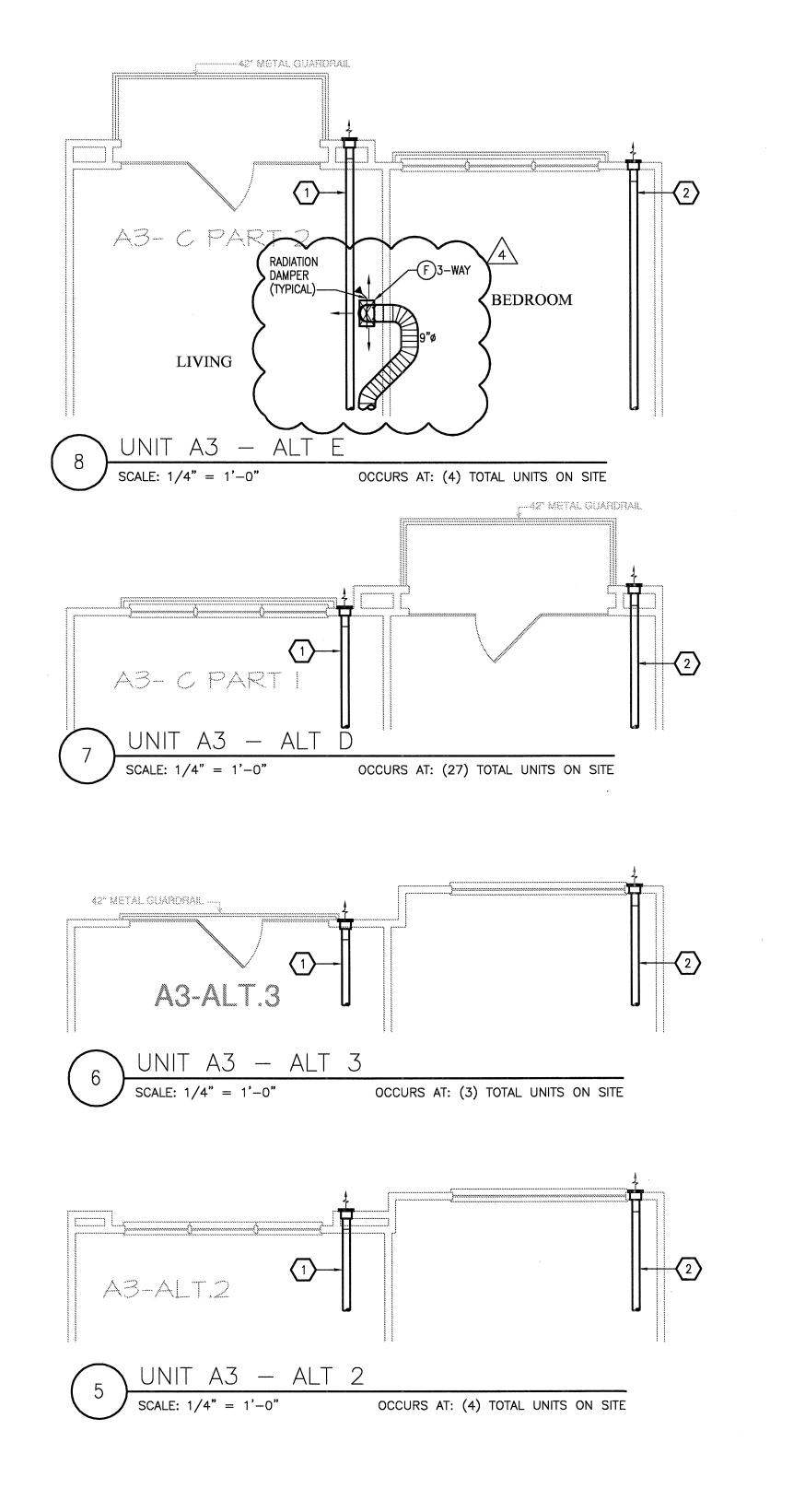
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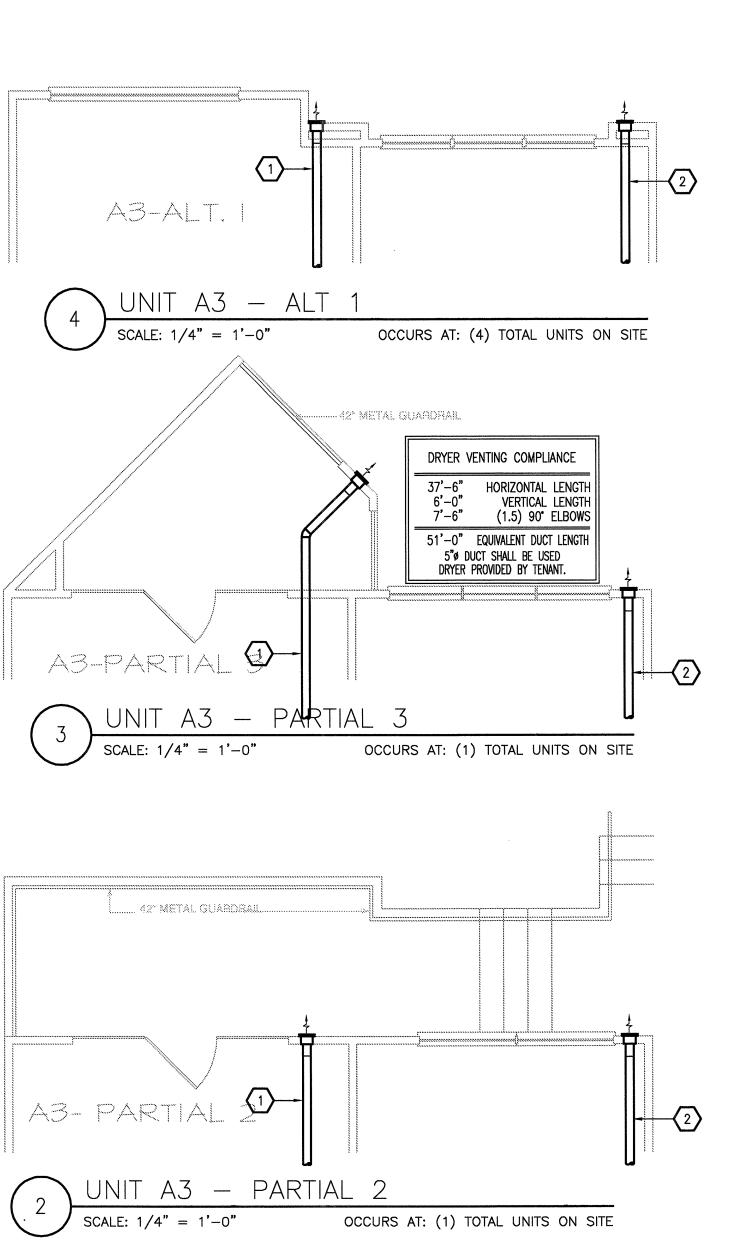
PROJECT

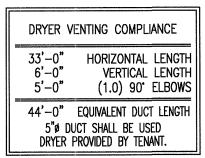
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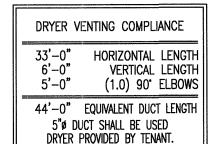
SHEET NUMBER

M-2.2
A2 &
A2-SP UNIT
MECHANICAL









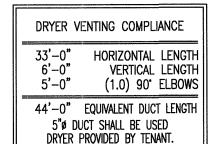
KEYNOTES (APPLIES TO THIS SHEET ONLY)

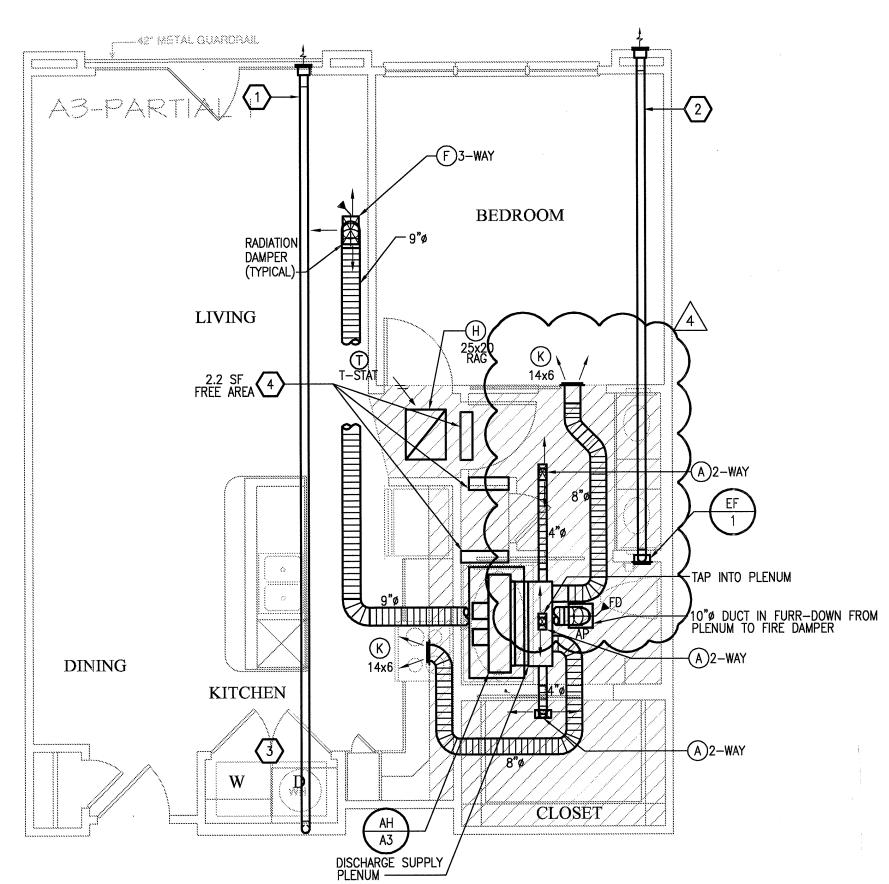
5" DRYER EXHAUST VENT ROUTED TO EXTERIOR WALL CAP. ROUTE DOWN AT TOP LEVEL TO FLOOR BELOW.

UNDERCUT DOORS (BY OTHERS) FOR DRYER TRANSFER AIR. TO PROVIDE 100 SQ. IN. OF FREE AREA.

TRANSFER AIR OPENING. SEE PLANS FOR MINIMUM FREE AREA REQUIRED IN FURRED DOWN PLENUM SPACE.

4"ø TOILET EXHAUST ROUTED TO EXTERIOR WALL CAP. ROUTE DOWN AT TOP LEVEL TO FLOOR BELOW.





GENERAL NOTES

PLUMBING.

TO INSTALLATION.

COORDINATE DRYER VENT WALL BOX INSIDE WALL

MECHANICAL CONTRACTOR SHALL COORDINATE ALL

DUCTWORK AND EQUIPMENT IN BATHROOMS WITH

COORDINATE ALL WALL CAP AND SOFFIT VENT LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL

5. CONTRACTOR SHALL COORDINATE DUCTWORK ROUTING

THROUGH 18-INCH DEEP OPEN WEB STRUCTURE

AND ATTIC SPACE TO AVOID STRUCTURAL AND

6. ALL SOFFIT VENTS AND WALL CAPS SHALL HAVE

BACKDRAFT DAMPERS. TOILET EXHAUST SHALL

COORDINATE ALL TOILET EXHAUST FANS WITH WALL CABINETS AND MEDICINE CABINETS. FANS LOCATED AT WALL ADJACENT TO TOILETS SHALL BE MOUNTED A MINIMUM OF 14-INCH AWAY FROM THE WALL THE TOILET IS MOUNTED TO AVOID CONFLICT WITH THE

RETURN AIR TRANSFER OPENINGS SHALL BE IN

FUR-DOWN CEILING AREA, BELOW RATED CEILING,

AND SHALL BE BETWEEN STUDS. STUDS SHALL GO TO STRUCTURE. OPENING SHALL BE MAINTAINED IN

WALL ABOVE FURR-DOWN FOR RETURN AIR PATH FROM FILTER GRILLE TO AIR HANDLING UNIT. REFER TO UNIT PLANS FOR EXACT LOCATIONS. MAINTAIN ALL FIRE RATINGS OF WALLS AROUND OPENINGS.

SEE UNIT PLANS FOR MINIMUM FREE AREA OF

10. ROUTE TOILET EXHAUST AND DRYER DUCTWORK

MINIMUM 14" INSIDE CLEAR ARCHITECTURAL

PLANS FOR DIMENSIONS.

MAINTAIN A MINIMUM OF 3'-0" HORIZONTALLY FROM EXHAUST TO ALL OPERABLE DOORS AND WINDOWS.

THROUGH 18-INCH OPEN WEB STRUCTURE. ROUTE DRYER AND TOILET EXHAUST DOWN TO WALL CAPS INTO FLOOR TRUSSES AT TOP LEVEL UNITS.

FURR-DOWN BY OTHERS. REFER TO ARCHITECTURAL

3. KITCHEN RANGE HOOD IS RECIRCULATING.

ARCHITECTURAL CONFLICT.

INCLUDE INSECT SCREEN.

CABINET OVER THE TOILET.

OPENINGS.

WITH PLUMBING AND ELECTRICAL DISCIPLINES PRIOR

UNIT A3 - ONE BEDROOM/ONE BATH SCALE: 1/4" = 1'-0"OCCURS AT: (8) UNITS/(49) TOTAL A3 UNITS ON SITE



REVISIÔNS

1 9-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA 3 9-23-2011 DESIGN REVISIONS 4 10-17-2011 CONSTRUCTION

ADDISON, 图

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08-05-1

PROJECT 11129

SHEET NUMBER

M-2.3

A2-SP-UNIT MECHANICAL

RFI 157

Drawn By: CJH

Jordan & Skala Engineers

Texas Firm Registration # F-4990

Checked By: AHS

EMBREY BUILDERS, LLC. 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656

1	

To: Trent Perkins
Parkin Perkins Olsen 9330 LBJ Freeway, Suite 1055 Dallas, TX 75243

RFI #: 115 Date: 5/14/2012 Job: EB-02 Keller Springs Lofts Phone: 877-777-5115

CC: Erik Earnshaw (Beeler Guest Owens Architects), Heath Parnell (Jordan & Skala Engineers, Inc.)

Subject: HVAC Supply Duct and Return Air Duct Locations

Ph: (214)221-2220 Fax: (214)221-2252

Drawing: M2.1, M2.2, M2.4, M2.6 and corresponding Spec Section:

Structural sheets Cost Impact: None Schedule Impact: None

Date Required: 5/22/2012 In the A1, A2, A4 and B2 unit types, there are either supply ducts or return air ducts terminating in a load bearing wall. Please provide a way to get around this issue.

Requested by: David Miller Embrey Builders LLC

Refer question to Architect and/or Mechanical Engineer for additional requirements necessary

for penetrating a load-bearing wall.

R. Trent Perkins, P.E. Parkin-Perkins-Olsen Consulting Engineering, Inc. May 28, 2012

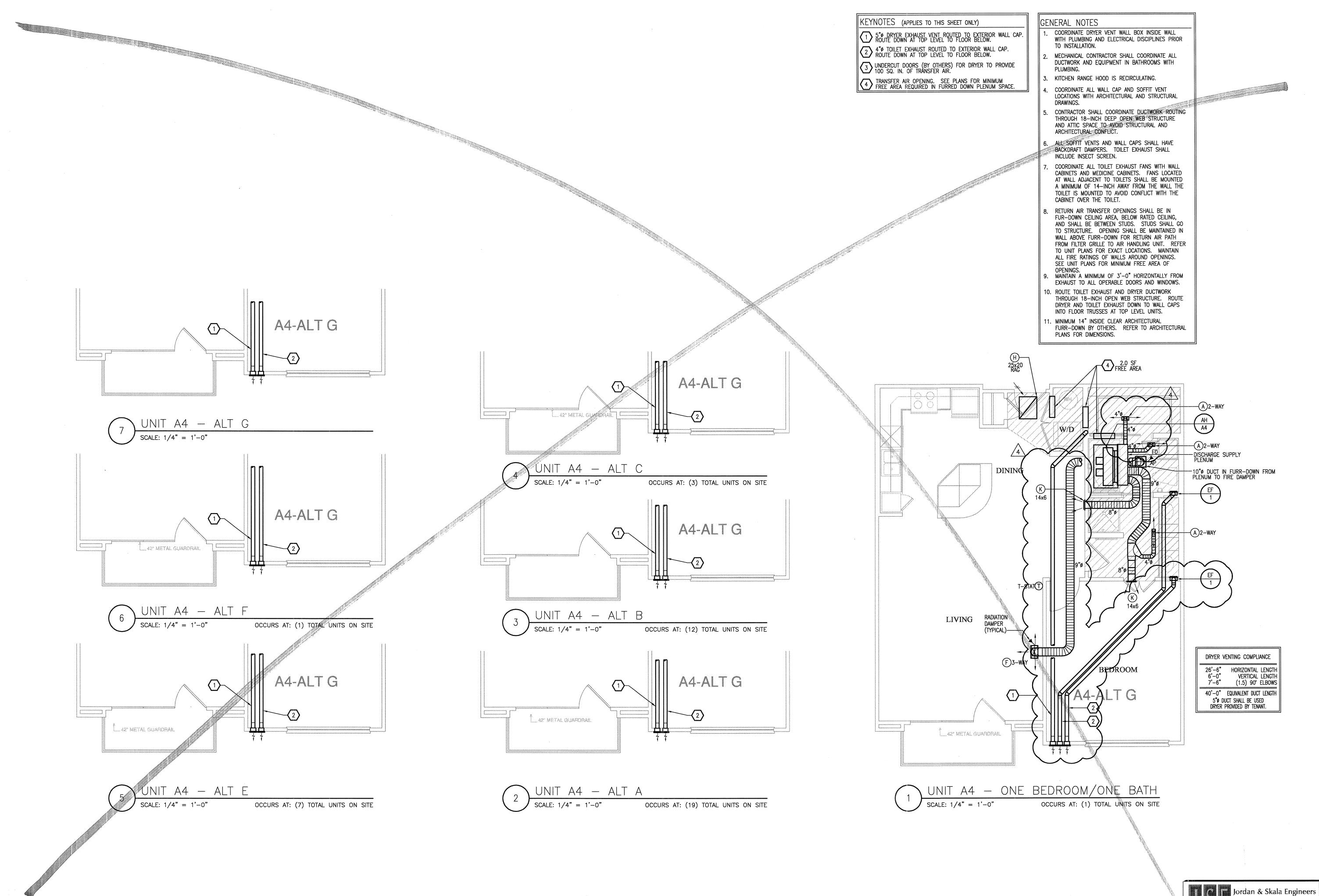
Provide a type A header where duct penetration will not fit between the stud wall framing.

R. Trent Perkins, P.E. Parkin-Perkins-Olsen Consulting Engineering, Inc. May 29, 2012

Answered by

Company

Page 1 of 1



108985

REVISIÕNS

1 9-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA COMMENTS

3 9-23-2011 DESIGN REVISIONS 4 10-17-2011 CONSTRUCTION ISSUE

**BBGO** architects

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08-05-1

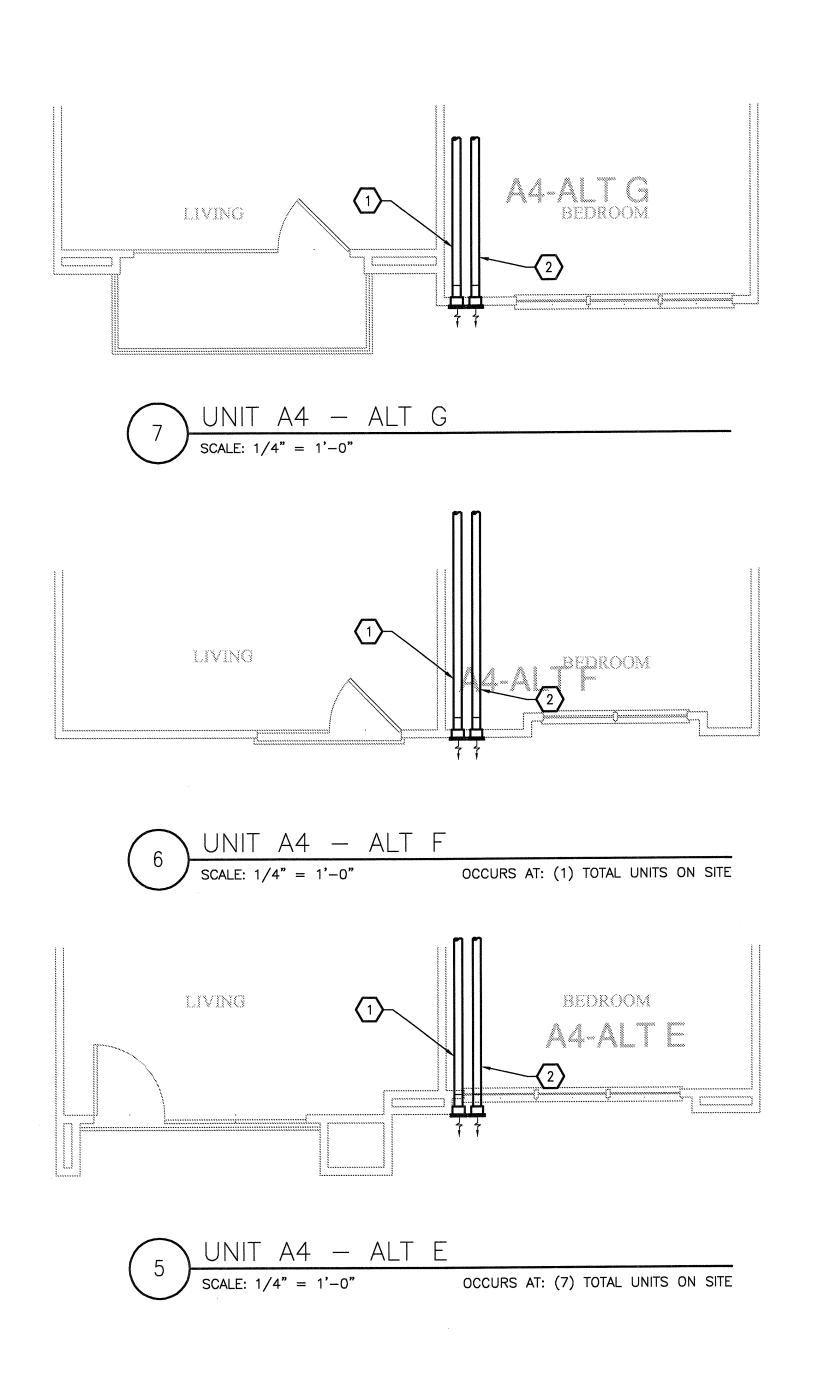
PROJECT

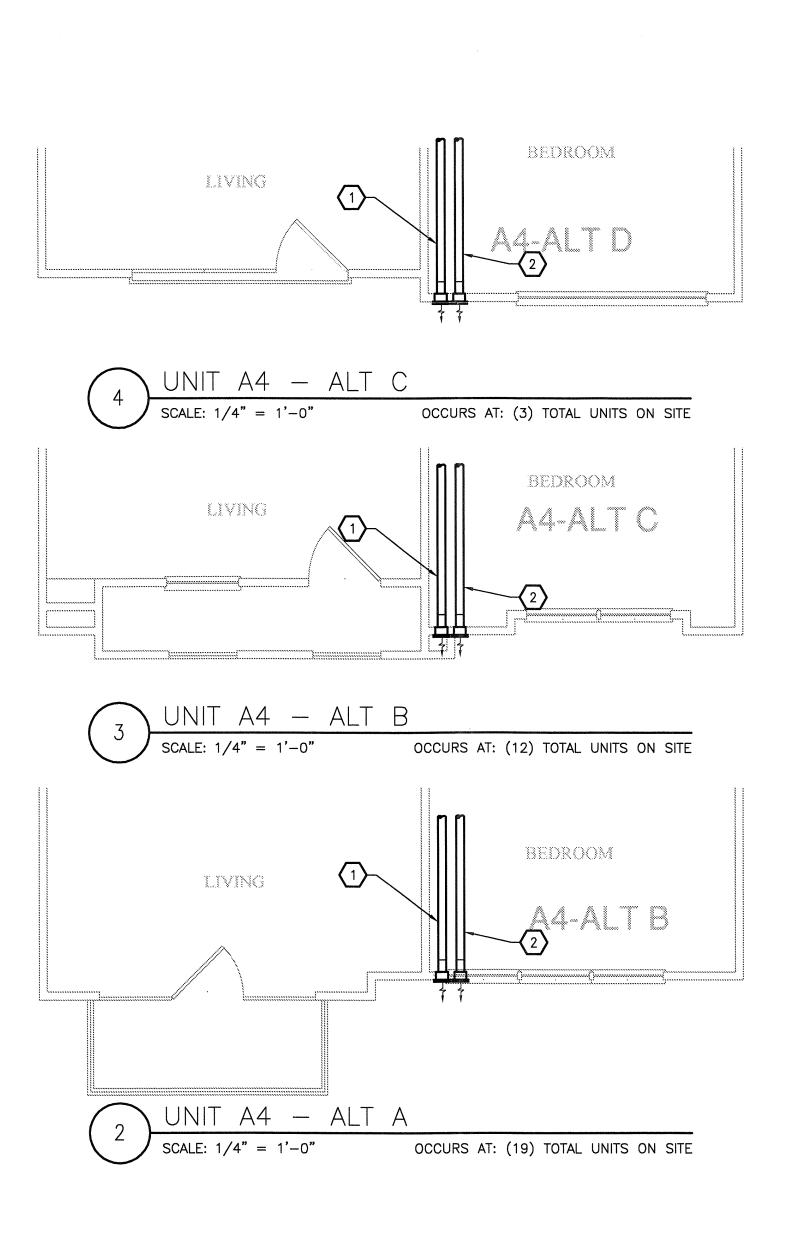
11129 SHEET NUMBER

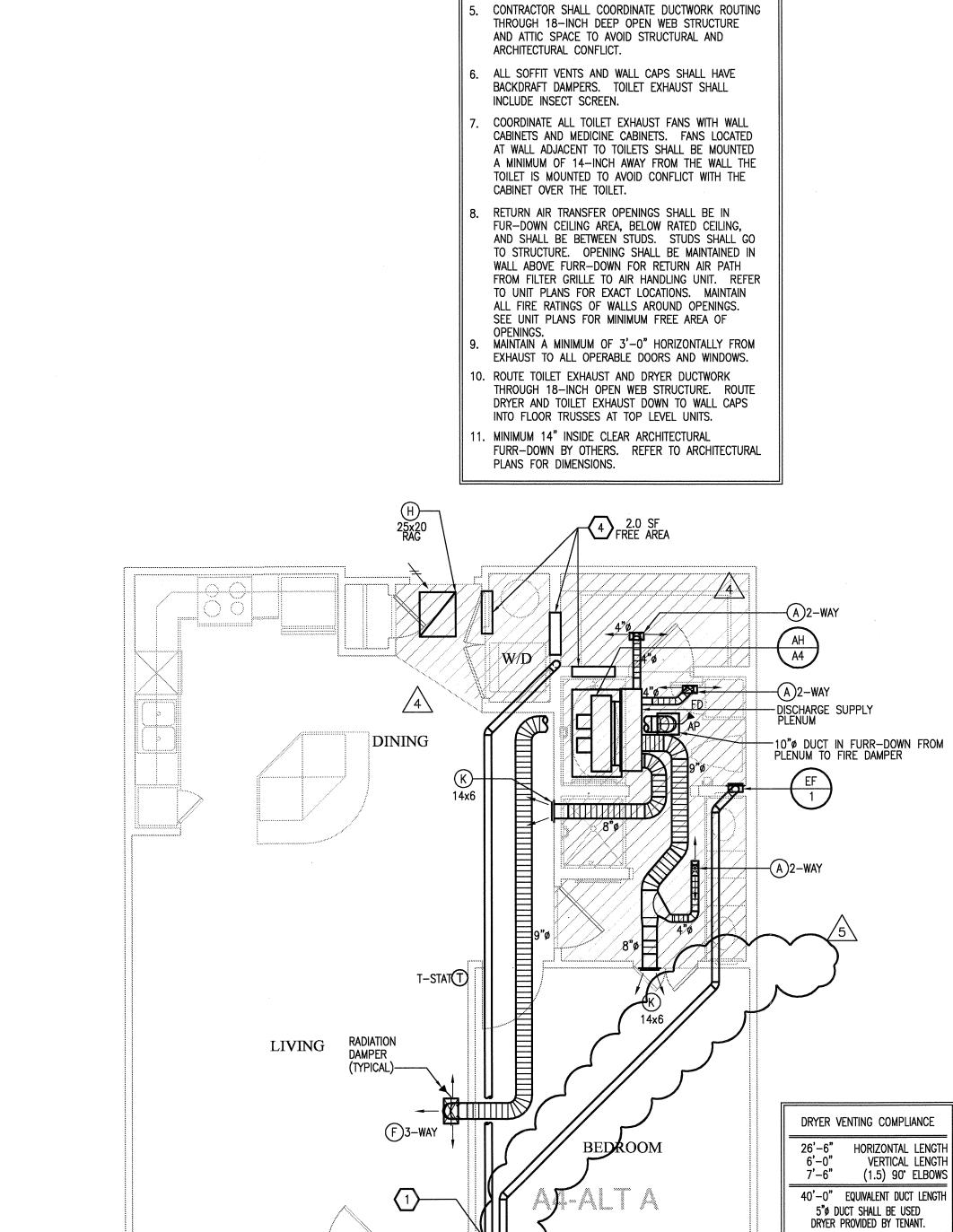
M-2.4

A4 UNIT MECHANICAL

14240 Midway Road, Sulto 350 Dallas, TX 75244-5138 V: (469) 385-1616 F: (469) 385-1615 Texas Firm Registration # F-4990 Checked By: AHS







UNIT A4 - ONE BEDROOM/ONE BATH

OCCURS AT: (1) TOTAL UNITS ON SITE

GENERAL NOTES

TO INSTALLATION.

COORDINATE DRYER VENT WALL BOX INSIDE WALL WITH PLUMBING AND ELECTRICAL DISCIPLINES PRIOR

MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK AND EQUIPMENT IN BATHROOMS WITH

COORDINATE ALL WALL CAP AND SOFFIT VENT LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL

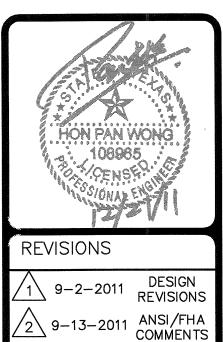
3. KITCHEN RANGE HOOD IS RECIRCULATING.

KEYNOTES (APPLIES TO THIS SHEET ONLY)

4"ø TOILET EXHAUST ROUTED TO EXTERIOR WALL CAP. ROUTE DOWN AT TOP LEVEL TO FLOOR BELOW.

UNDERCUT DOORS (BY OTHERS) FOR DRYER TO PROVIDE 100 SQ. IN. OF TRANSFER AIR.

TRANSFER AIR OPENING. SEE PLANS FOR MINIMUM FREE AREA REQUIRED IN FURRED DOWN PLENUM SPACE.



3 9-23-2011 DESIGN REVISIONS

4 10-17-2011 CONSTRUCTIO

5 12-21-2011 DESIGN REVISIONS

ADDISON, O.

**BBGO** architects

4144 N. Central Expy. Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

DATE

08-05-1

PROJECT

11129

SHEET NUMBER

M-2.4

A4 UNIT MECHANICAL



EMBREY BUILDERS, LLC. 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656

To: Trent Perkins Parkin Perkins Olsen 9330 LBJ Freeway, Suite 1055 Dallas, TX 75243 Ph: (214)221-2220 Fax: (214)221-2252

RFI #: 115 Date: 5/14/2012 Job: EB-02 Keller Springs Lofts Phone: 877-777-5115

CC: Erik Earnshaw (Beeler Guest Owens Architects), Heath Parnell (Jordan & Skala Engineers, Inc.)

Subject: HVAC Supply Duct and Return Air Duct Locations

Drawing: M2.1, M2.2, M2.4, M2.6 and corresponding Spec Section:
Structural sheets

Schedule Impact: None Cost Impact: None

Date Required: 5/22/2012 Request: In the A1, A2, A4 and B2 unit types, there are either supply ducts or return air ducts terminating in a load bearing wall. Please provide a way to get around this issue.

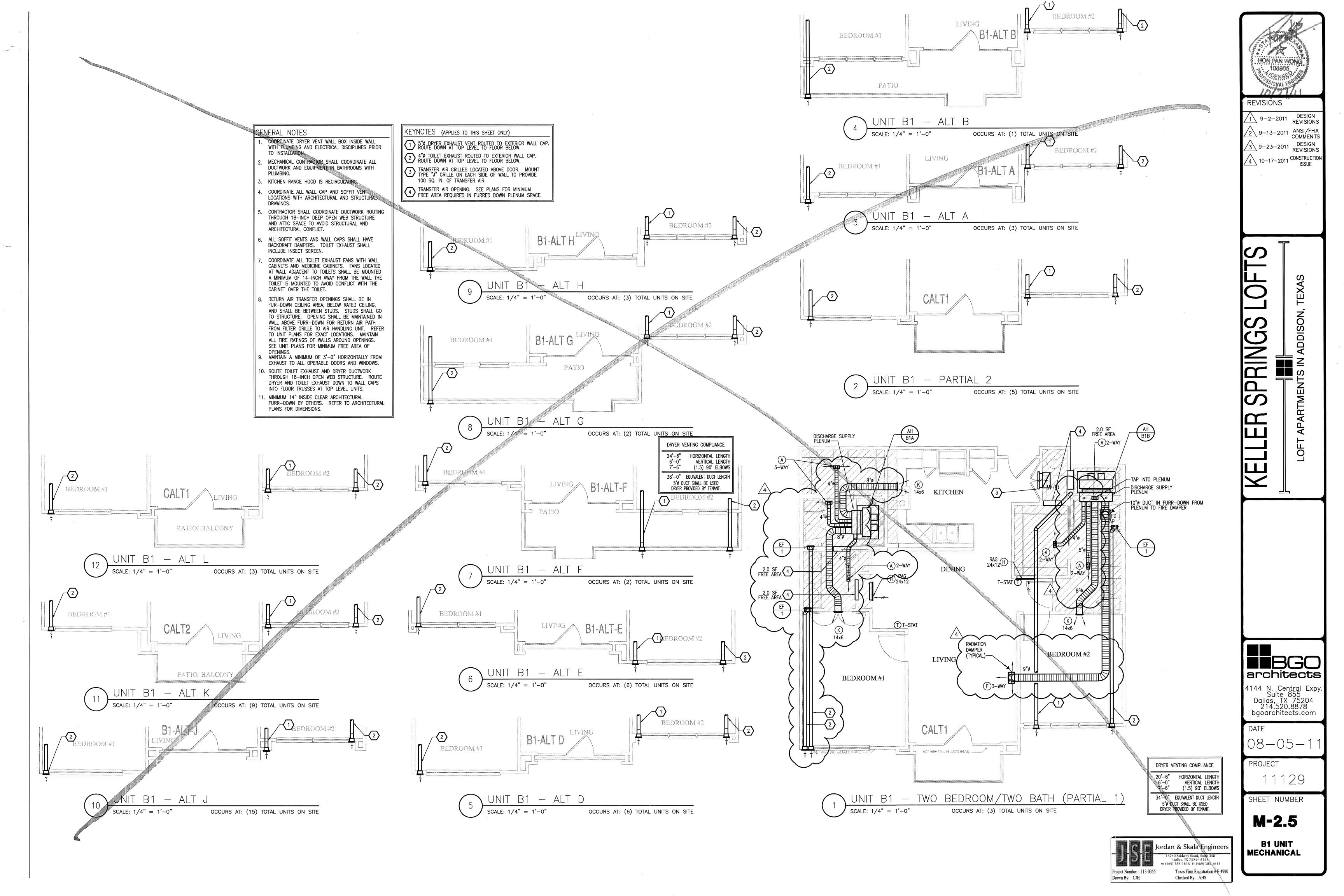
Requested by: David Miller

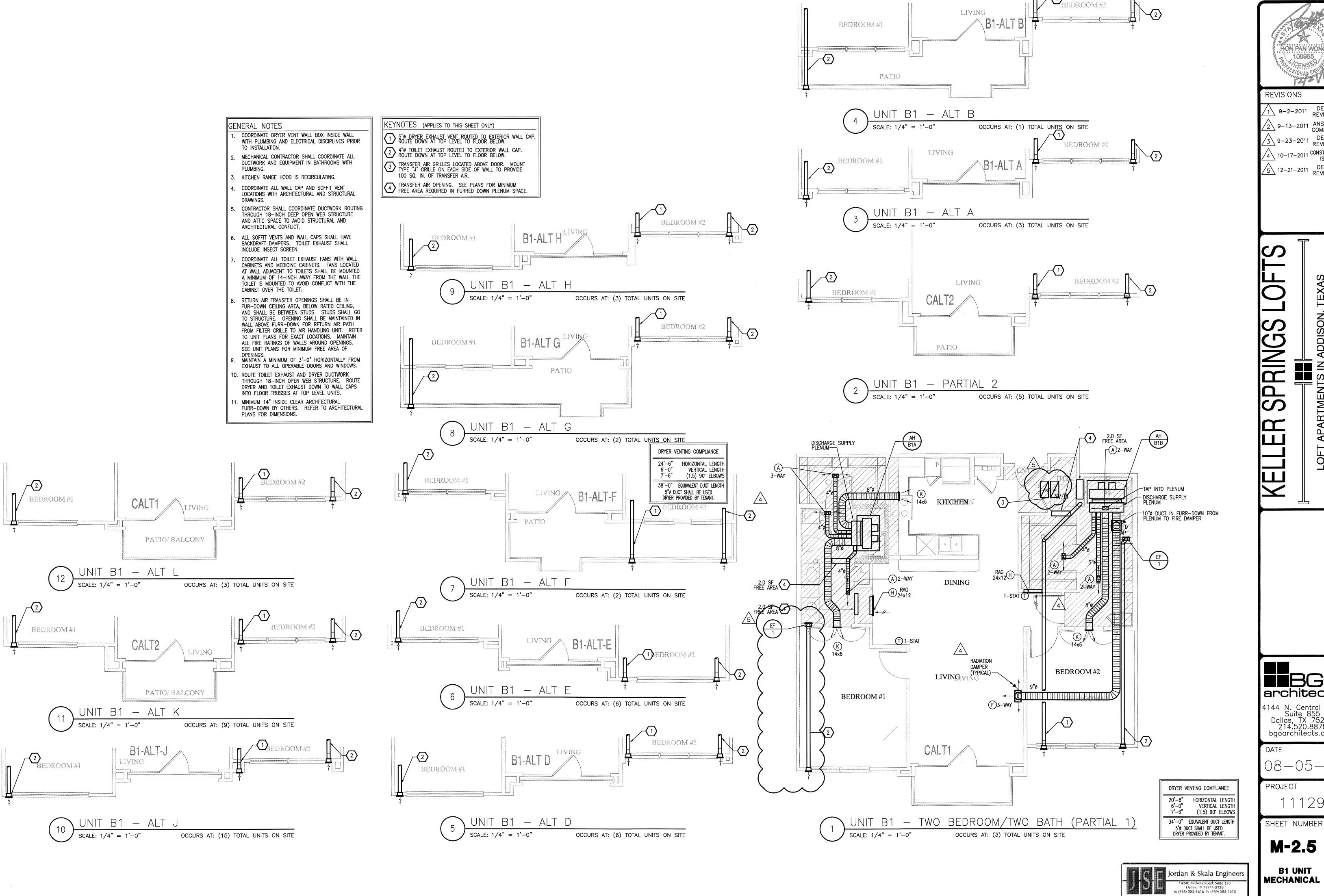
Embrey Builders LLC	
esponse:	
Refer question to Architect and/or Mechanical Engineer for additional refor penetrating a load-bearing wall.	equirements necessary
R. Trent Perkins, P.E.	May 28, 2012
Parkin-Perkins-Olsen Consulting Engineering, Inc.	
	atual well freezeige
Provide a type A header where duct penetration will not fit between the	stud wall framing.
Trovido d typo / moduli miero da persona	
R. Trent Perkins, P.E.	May 29, 2012
Parkin-Perkins-Olsen Consulting Engineering, Inc.	
The state of the s	
Answered by	

Page 1 of 1

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REVISIONS

1 9-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 DESIGN REVISIONS 10-17-2011 CONSTRUCTION 5 12-21-2011 DESIGN REVISIONS

ADDISON,

**APARTME** 

**BBGO** architects

4144 N. Central Expy. Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

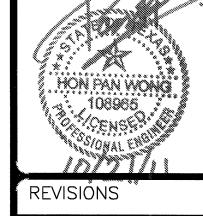
08-05-1

PROJECT

M-2.5

**B1 UNIT** MECHANICAL

Texas Firm Registration # F-49 Checked By: AHS



1 9-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 DESIGN REVISIONS 4 10-17-2011 CONSTRUCTION ISSUE

BGO architects

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DATE

08-05-1

PROJECT

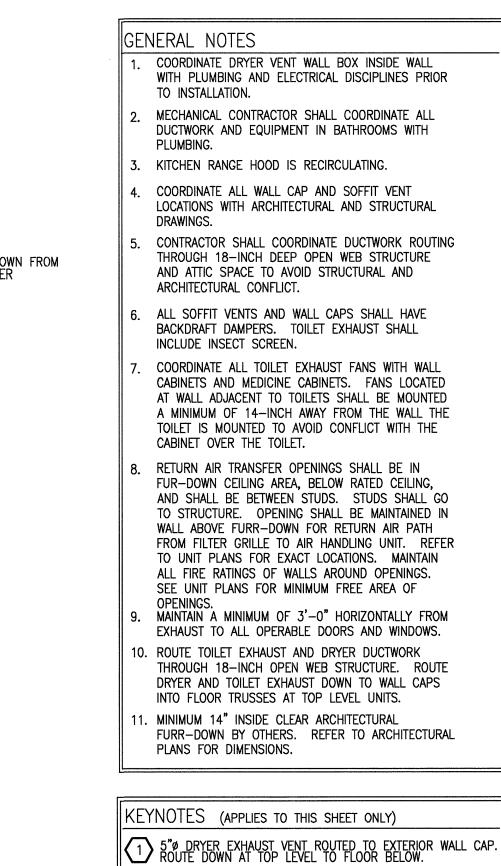
SHEET NUMBER

M-2.6

**B2 UNIT** 

**MECHANICAL** 

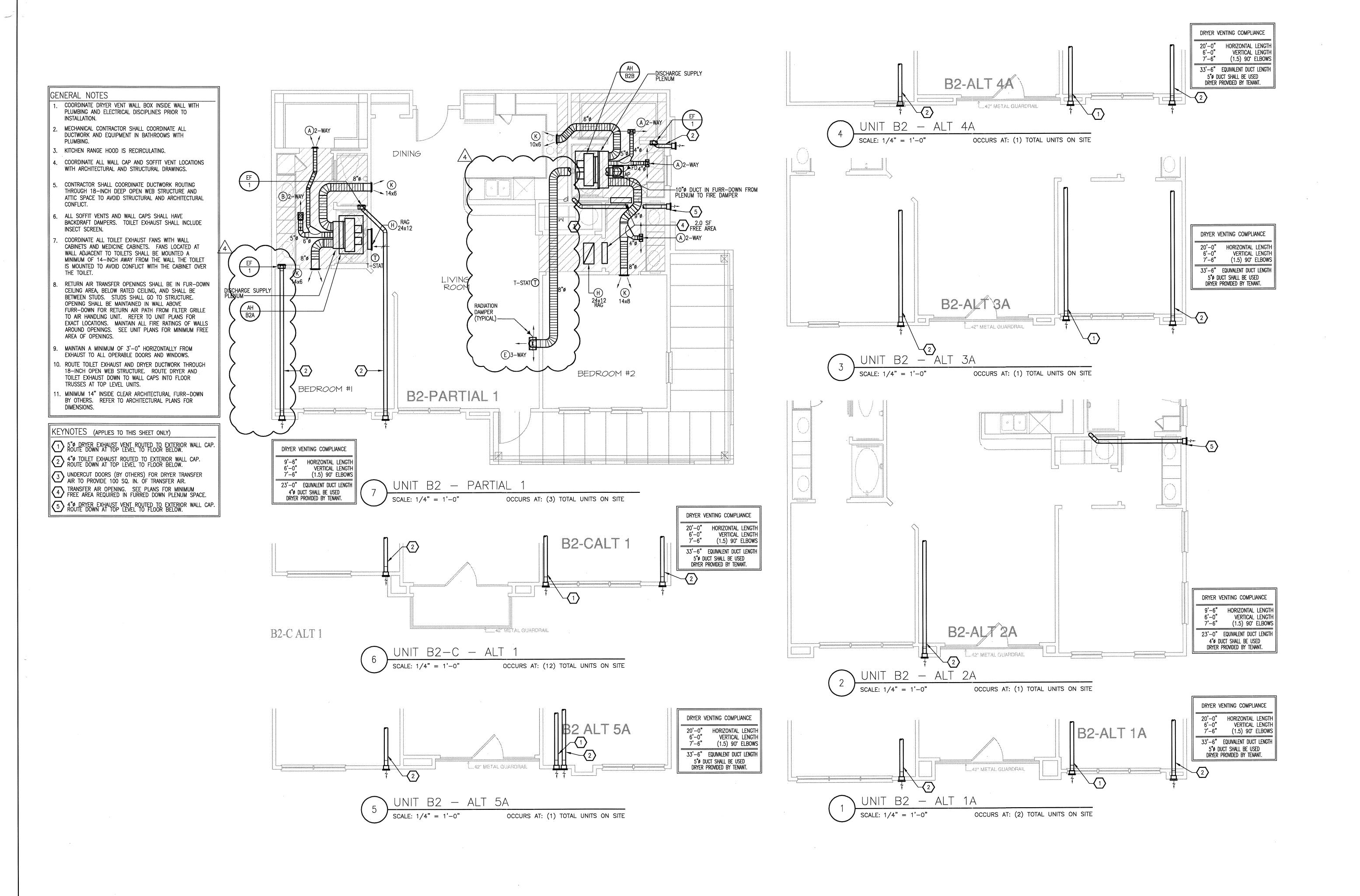
Jordan & Skala Engineers 4240 Midway Road, Suite 350 Dallas, TX 75244-5138 V: (469) 385-1616 F: (469) 385-1615 Project Number - 113-0355 Texas Firm Registration # F-4990 Drawn By: CJH Checked By: AHS

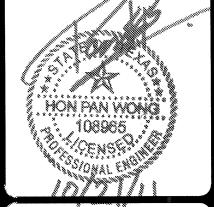


4"ø TOILET EXHAUST ROUTED TO EXTERIOR WALL CAP. ROUTE DOWN AT TOP LEVEL TO FLOOR BELOW.

UNDERCUT DOORS (BY OTHERS) FOR DRYER TRANSFER AIR. 3 AIR TO PROVIDE 100 SQ. IN. OF TRANSFER AIR.

TRANSFER AIR OPENING. SEE PLANS FOR MINIMUM FREE AREA REQUIRED IN FURRED DOWN PLENUM SPACE.





REVISIONS

1 9-2-2011 DESIGN REVISIONS /2\ 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 DESIGN REVISIONS 4 10-17-2011 CONSTRUCTION ISSUE

BBGO architects

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DATE 08-05-1

PROJECT

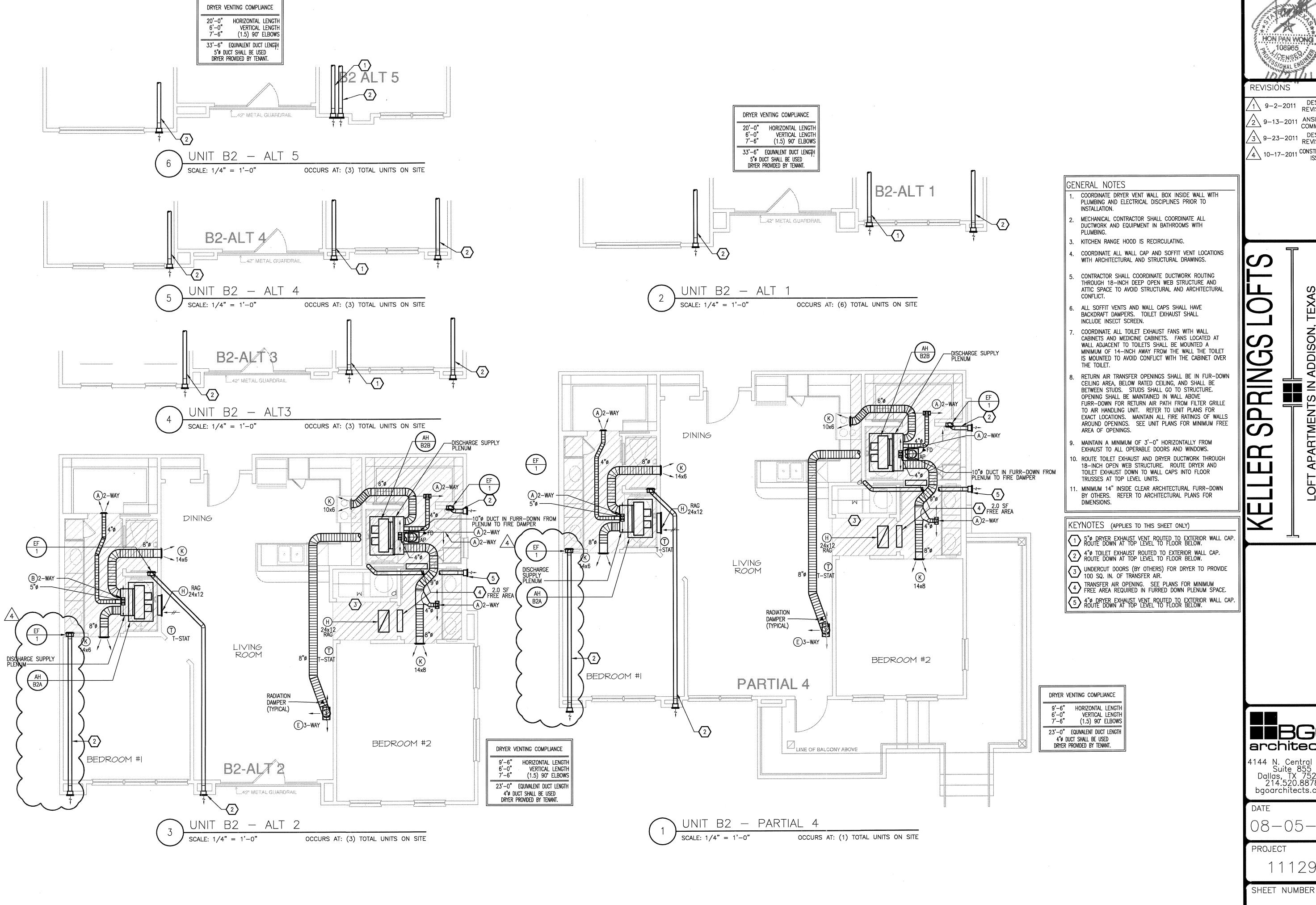
11129

M-2.7

SHEET NUMBER

B2 ALT UNIT MECHANICAL

14240 Midway Road, Suite 350 Dallas, TX 75244-5138 V: (469) 385-1616 F: (469) 385-1615 Texas Firm Registration #F-4990 Project Number - 113-0355 Drawn By: CJH Checked By: AHS



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REVISIÔNS

1 9-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 DESIGN REVISIONS 4 10-17-2011 CONSTRUCTION ISSUE

ADDISON,

architects

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PROJECT

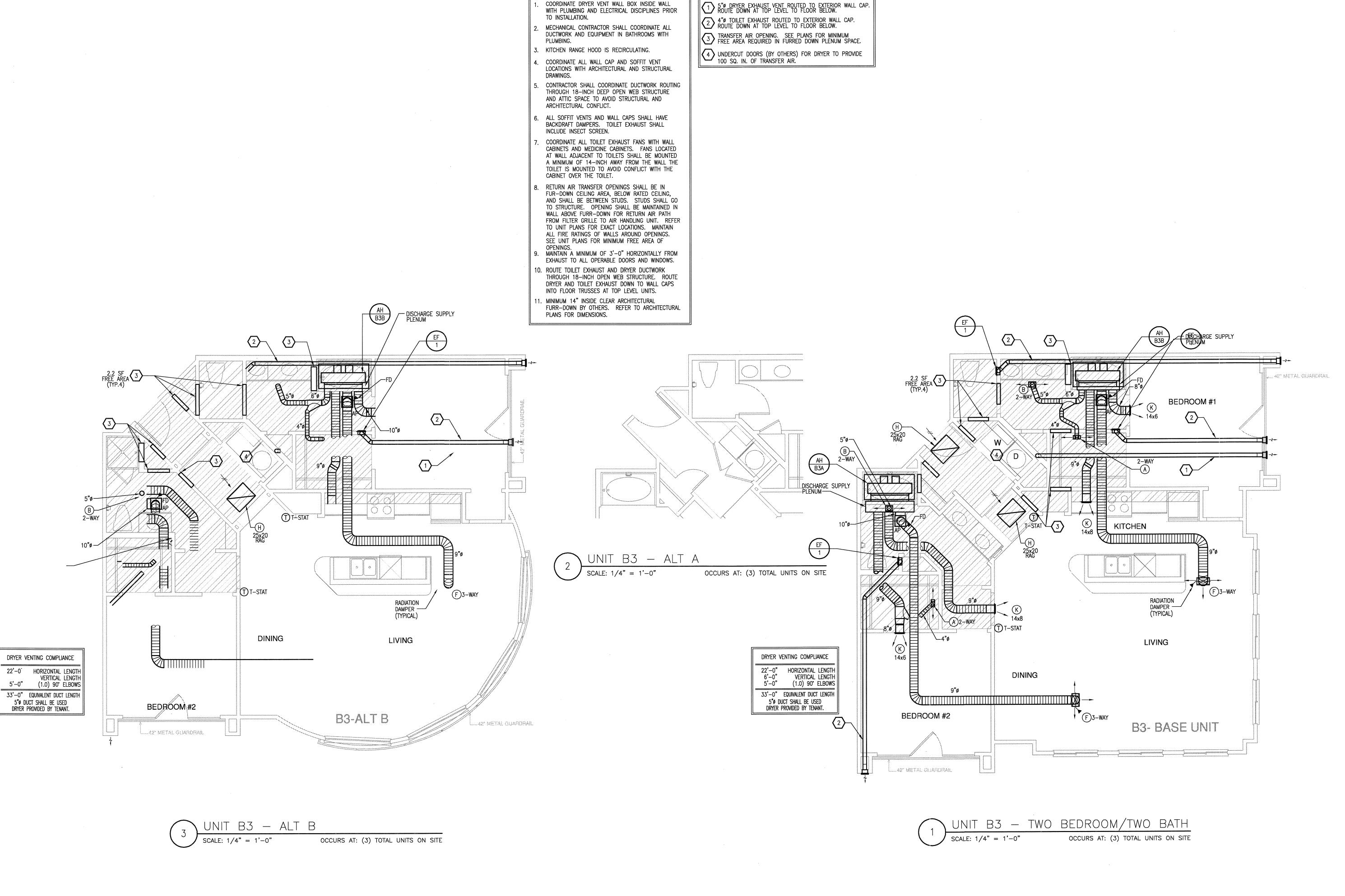
**M-2.8 B2 & B2 ALT UNIT** MECHANICAL

(469) 383-1616 E: (469) 385-1615 Texas Firm Registration # F-499

Checked By: AHS

Project Number - 113-0355

Drawn By: CJH



KEYNOTES (APPLIES TO THIS SHEET ONLY)

GENERAL NOTES

COORDINATE DRYER VENT WALL BOX INSIDE WALL

HON PAN WONG 100905 1/5/751/1

REVISIONS

1 9-2-2011 DESIGN REVISIONS /2\ 9-13-2011 ANSI/FHA  $\sqrt{3}$  9-23-2011 DESIGN REVISIONS 4\ 10-17-2011 CONSTRUCTION

architects

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PROJECT

SHEET NUMBER

M-2.9 B3 & B3 ALT UNIT Mechanical

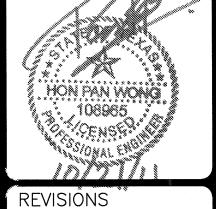
ordan & Skala Engineers 14240 Midway Road, Suite 350 Dallas, TX 75244-5138 V: (469) 385-1615 - F: (469) 385-1615 Texas Firm Registration # F-4990 Checked By: AHS

GENERAL NOTES

- COORDINATE DRYER VENT WALL BOX INSIDE WALL WITH PLUMBING AND ELECTRICAL DISCIPLINES PRIOR TO
- MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK AND EQUIPMENT IN BATHROOMS WITH PLUMBING.
- KITCHEN RANGE HOOD IS RECIRCULATING.
- COORDINATE ALL WALL CAP AND SOFFIT VENT LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- CONTRACTOR SHALL COORDINATE DUCTWORK ROUTING THROUGH 18-INCH DEEP OPEN WEB STRUCTURE AND ATTIC SPACE TO AVOID STRUCTURAL AND ARCHITECTURAL
- ALL SOFFIT VENTS AND WALL CAPS SHALL HAVE BACKDRAFT DAMPERS. TOILET EXHAUST SHALL INCLUDE INSECT SCREEN.
- COORDINATE ALL TOILET EXHAUST FANS WITH WALL CABINETS AND MEDICINE CABINETS. FANS LOCATED AT WALL ADJACENT TO TOILETS SHALL BE MOUNTED A MINIMUM OF 14-INCH AWAY FROM THE WALL THE TOILET IS MOUNTED TO AVOID CONFLICT WITH THE CABINET OVER THE TOILET.
- RETURN AIR TRANSFER OPENINGS SHALL BE IN FUR-DOWN CEILING AREA, BELOW RATED CEILING, AND SHALL BE BETWEEN STUDS. STUDS SHALL GO TO STRUCTURE. OPENING SHALL BE MAINTAINED IN WALL ABOVE FURR-DOWN FOR RETURN AIR PATH FROM FILTER GRILLE TO AIR HANDLING UNIT. REFER TO UNIT PLANS FOR EXACT LOCATIONS. MAINTAIN ALL FIRE RATINGS OF WALLS AROUND OPENINGS. SEE UNIT PLANS FOR MINIMUM FREE AREA OF OPENINGS.
- MAINTAIN A MINIMUM OF 3'-0" HORIZONTALLY FROM EXHAUST TO ALL OPERABLE DOORS AND WINDOWS.
- 10. ROUTE TOILET EXHAUST AND DRYER DUCTWORK THROUGH 18-INCH OPEN WEB STRUCTURE. ROUTE DRYER AND TOILET EXHAUST DOWN TO WALL CAPS INTO FLOOR TRUSSES AT TOP LEVEL UNITS.
- . MINIMUM 14" INSIDE CLEAR ARCHITECTURAL FURR-DOWN BY OTHERS. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.

KEYNOTES (APPLIES TO THIS SHEET ONLY)

- 4"ø TOILET EXHAUST ROUTED TO EXTERIOR WALL CAP. ROUTE DOWN AT TOP LEVEL TO FLOOR BELOW.
- TRANSFER AIR OPENING. SEE PLANS FOR MINIMUM FREE AREA REQUIRED IN FURRED DOWN PLENUM SPACE.
- 4 UNDERCUT DOORS (BY OTHERS) FOR DRYER TO PROVIDE 100 SQ. IN. OF TRANSFER AIR.



1 9-2-2011 9-13-2011 ANSI/FHA COMMENTS /3\ 9-23-2011 4 10-17-2011 CONSTRUCTION ISSUE

**BBGO** architects

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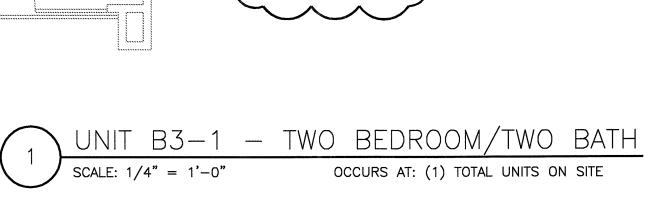
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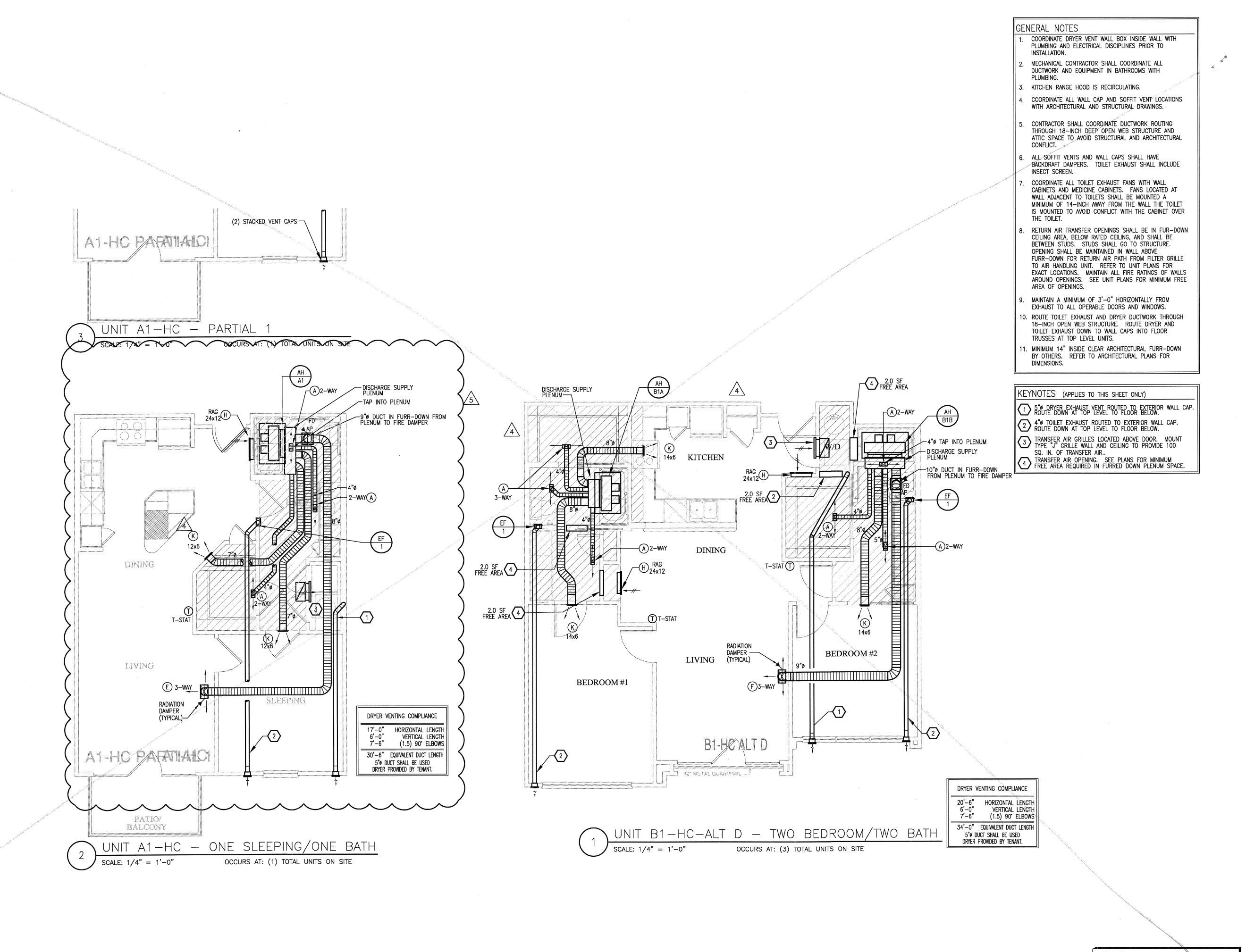
**M-2.10** 

**B3-1 UNIT** 

MECHANICAL







HON PAN WONG
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REVISION

9-2-2011 DESIGN REVISIONS

9-13-2011 ANSI/FHA COMMENTS

0-23-2011 DESIGN REVISIONS

10-17-2011 CONSTRUCTION ISSUE

12-21-2011 DESIGN REVISIONS

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BBGO architects
4144 N. Central Expy.

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DATE

08-05-1

PROJECT

11129 SHEET NUMBER

M-2.11

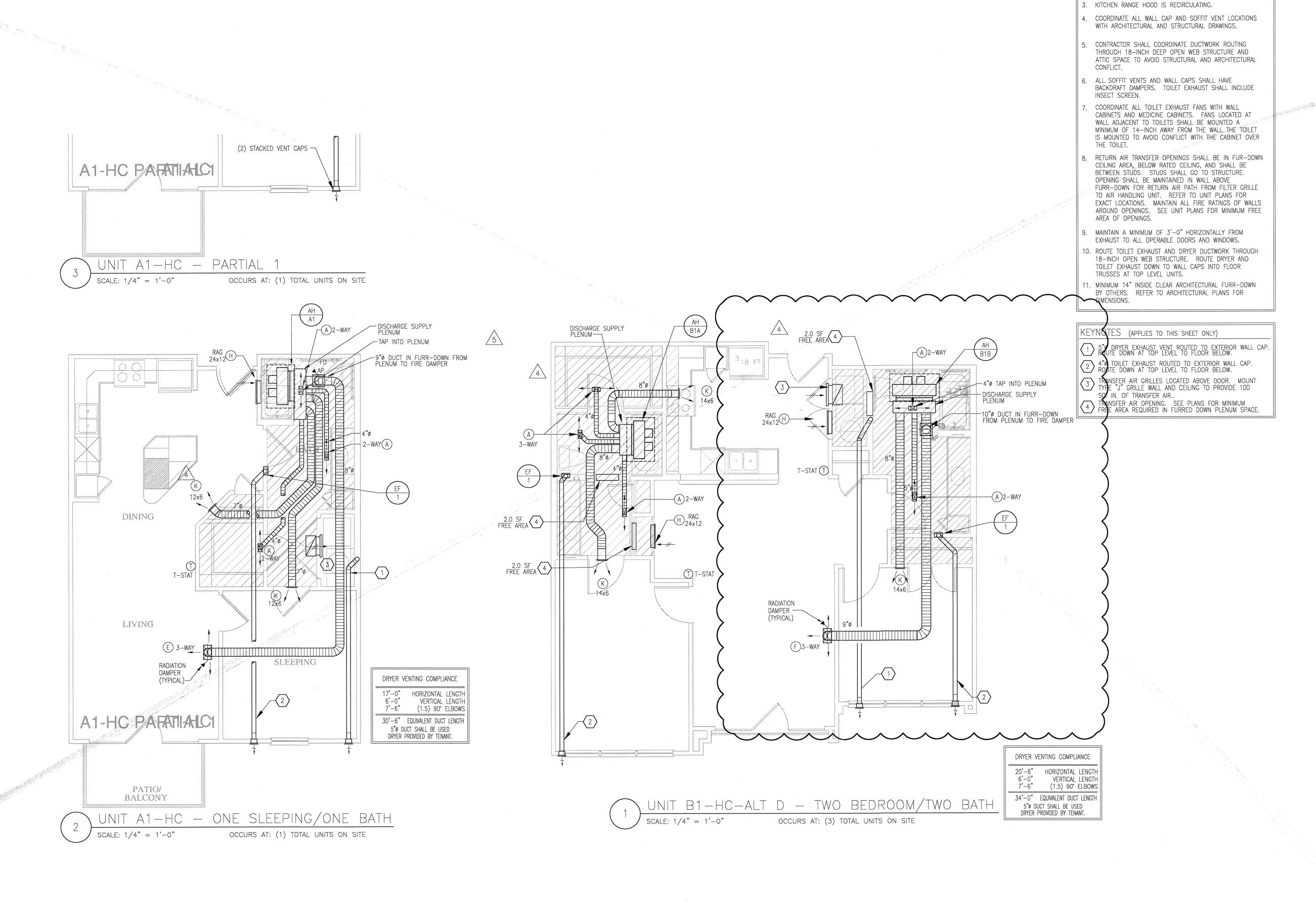
A1-HC & BA-HC UNIT MECHANICAL

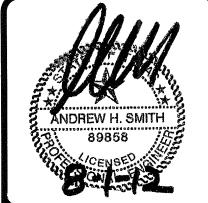
Jordan & Skala Engineers

A: (469) 383-1616 F: (469) 385-1619

Checked By: AHS

Texas Firm Registration # F-4990





REVISION

GENERAL NOTES

INSTALLATION.

PLUMBING.

COORDINATE DRYER VENT WALL BOX INSIDE WALL WITH PLUMBING AND ELECTRICAL DISCIPLINES PRIOR TO

MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK AND EQUIPMENT IN BATHROOMS WITH

19-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA COMMENTS DESIGN 3 9-23-2011 REVISIONS

4 10-17-2011 CONSTRUCTION ISSUE
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12-21-2011 REVISIONS
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2-15-2012 REVISIONS

8 3-27-2012 REVISIONS

4-17-2012

4-17-2012 COORDINATION

5-15-2012
COORDINATION
5-30-2012
SITE
COORDINATION
6-01-12
LIGHTING
REVISIONS

REVISIONS
6-29-12 SITE
COORDINATION



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DATE

08-05-1

PROJECT

11129
SHEET NUMBER

M-2.11

Jordan & Skala Engineers

Checked By: AHS

Drawn By: CJH

Texas Firm Registration # F-4990

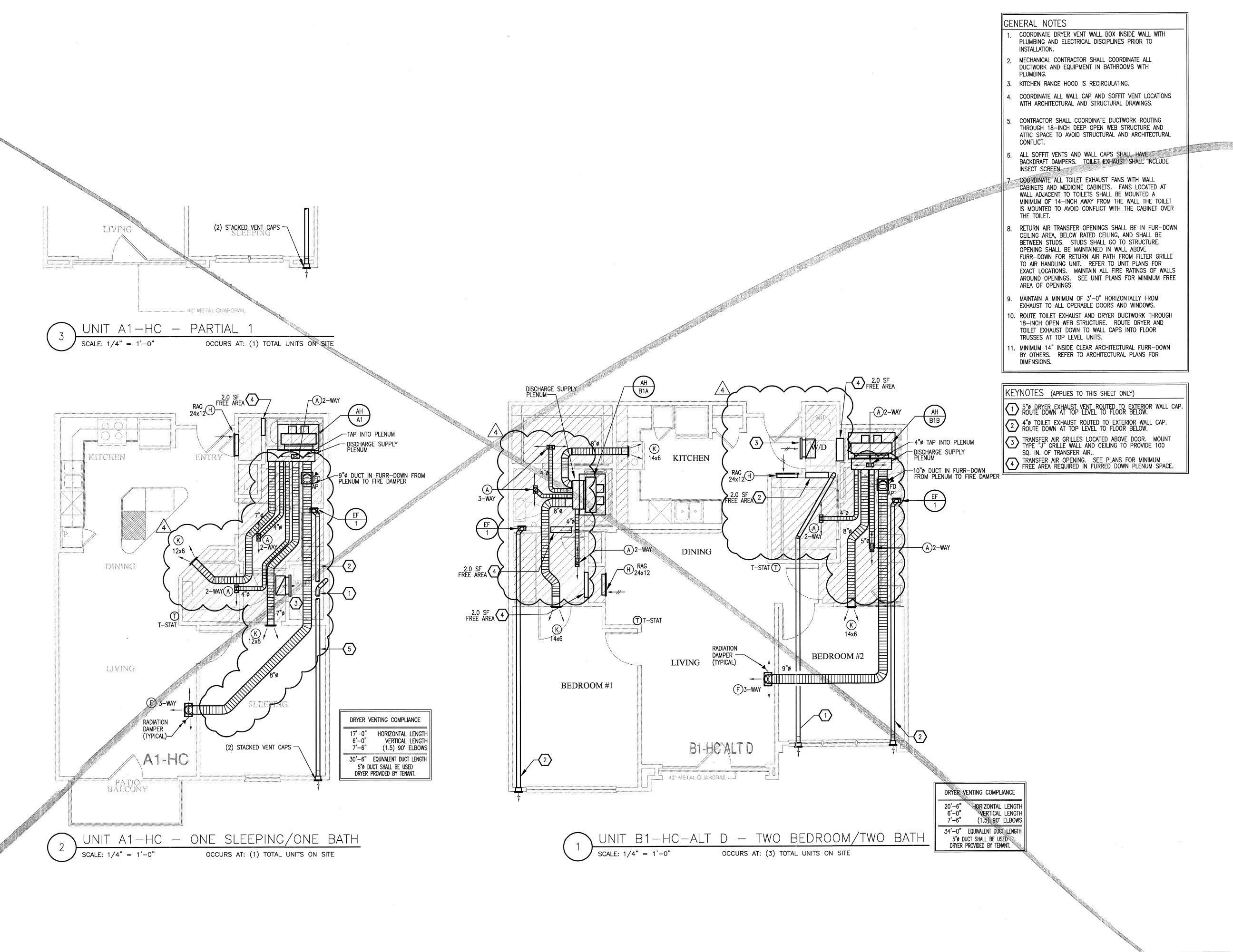
A1-HC & BA-HC UNIT MECHANICAL

	) 824-6044 Fax.	(210) 824-7656	
			RFI
			RFI #: 116
o:	Heath Parne	I. Frankraara Inc	Date: 5/14/2012
	Jordan & Ska	ala Engineers, Inc.	Job: EB-02 Keller Springs Lofts
	Dallas, TX 7	ay Road, Suite 350	Phone: 877-777-5115
	Ph: 469/385	1616 Fax: 469/385-16	
CC:	Erik Earnsha	aw (Beeler Guest Owen:	s Architects)
		al Plans Do Not Match	
	ring: M2.11 &		Spec Section:
Cost	Impact: No	ne	Schedule Impact: None
JJ01			Date Required: 5/22/2012
Rem	ıest:		een revised and doesn't match the floorplan of the B1-HC unit on A2.6HC. Please revis
and	reply.		
Req	uested by: D	avid Miller mbrey Builders LLC	
	ponse:	Lite d plan	
See	attached for u	ipdated plan	
1			
1			
			Anawarad date: August 23, 2012
A	nswered by:	Heath Parnell Jordan & Skala Engine	Answered date: August 23, 2012

Page 1 of 1

Embrey Builders, LLC

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REVISIÔNS

9-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 DESIGN REVISIONS

4 10-17-2011 CONSTRUCTION ISSUE 

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PROJECT

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SHEET NUMBER

M-2.11

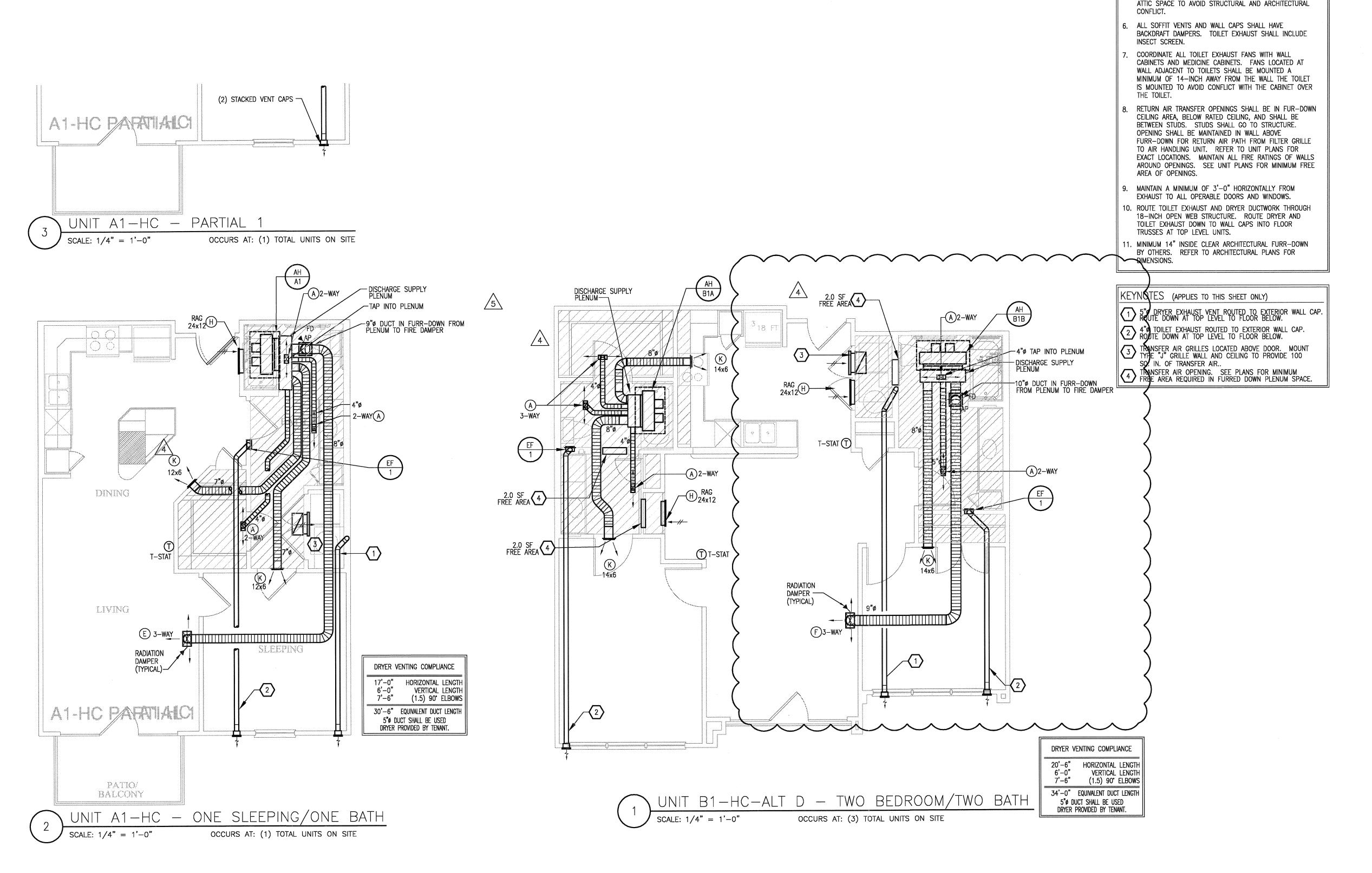
Jordan & Skala Engineers

Checked By: AHS

Project Number - 113-0355

Texas Firm Registration # F-4990

A1-HC & **BA-HC UNIT** MECHANICAL





REVISIONS

GENERAL NOTES

INSTALLATION.

PLUMBING.

COORDINATE DRYER VENT WALL BOX INSIDE WALL WITH PLUMBING AND ELECTRICAL DISCIPLINES PRIOR TO

COORDINATE ALL WALL CAP AND SOFFIT VENT LOCATIONS

WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

CONTRACTOR SHALL COORDINATE DUCTWORK ROUTING THROUGH 18-INCH DEEP OPEN WEB STRUCTURE AND

MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK AND EQUIPMENT IN BATHROOMS WITH

KITCHEN RANGE HOOD IS RECIRCULATING.

9-2-2011 DESIGN REVISIONS 2 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 REVISIONS 4 10-17-2011 CONSTRUCTION ISSUE 5 12-21-2011 REVISIONS 6 1-17-2012 REVISIONS TRANSFORME 7\ 2-15-2012 REVISIONS

8 3-27-2012 CLUBHOUSE REVISIONS 4-17-2012 COORDINATION

ADDISON,

5-15-2012 Co COORDINATIO 5-30-2012 SITE COORDINATION 6-01-12 LIGHTING REVISIONS 6-29-12 SITE COORDINATION

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**BBGO** architects

4144 N. Central Expy. Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

DATE

08-05-11

PROJECT

11129

SHEET NUMBER

M-2.11
A1-HC &
BA-HC UNIT
MECHANICAL Jordan & Skala Engineer Texas Firm Registration # F-4990

Drawn By: CJH

Checked By: AHS

Embrey Builders, LLC

1020 N. E. Loop 410, Suite 700
San Antonio, TX 78209
Ph: (210) 824-6044 Fax: (210) 824-7656

RFI

To: Erik Earnshaw
BGO Architects
4144 N. Central Expressway
Suite 855
Dallas, TX 75205
Ph: (214)520-8878

RFI #: 128

Date: 5/29/2012

Job: EB-02 Keller Springs Lofts

Phone: 877-777-5115

cc: Heath Parnell (Jordan & Skala Engineers, Inc.)

Subject: Corridor duct issues

Drawing:

Cost Impact: None

Spec Section:
Schedule Impact: None

Request:

We are laying out the corridor duct that run through the shafts from the roof and have found some conditions that need addressing. The attached drawings and the following narrative should clarify these items:

1. The curved corridor wall at section C needs to be flat or have flat areas to mount the grilles.

2. The corridor wall at the shaft works well on floors 2-4 but changes on the first floor and creates a problem. Suggest using the upper floor configuration on the first floor.

Requested by: Bryan Pickler
Embrey Partners, Ltd.

Response:

1- For air grills being installed in curved walls, I recommend popping the grill 2-3 inches off of the wall to allow for gypsum board to wrap around the grill where it protrudes from the wall.

2- The upper floors will not work due to the ramp and handrail. See next pages for possible solution.

Ryan Faulds BGO architects June 28, 2012

Answered by

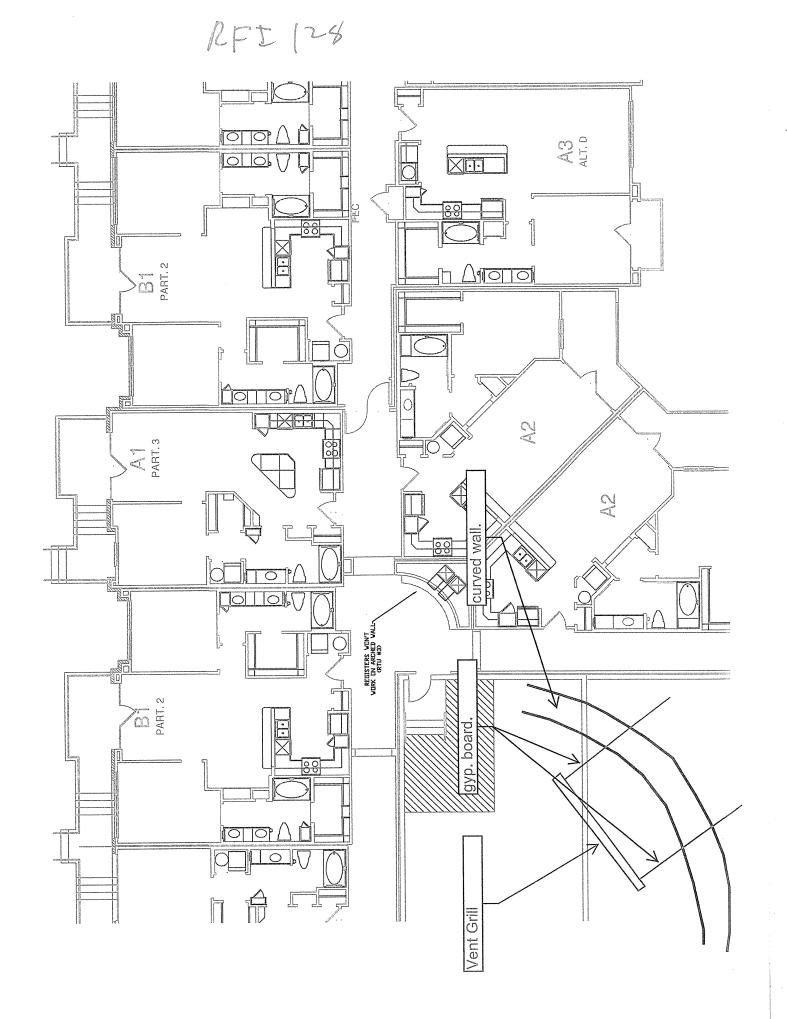
Company Date

add wall to help support handrail ramp from wobbling.

STAIRVELL

STAIRVELL

That's fine.



Embrey Builders, LLC 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656

Page 1 of 1

To:	Erik Earnshaw	RFI #: 134 Date: 5/30/2012
	Beeler Guest Owens Architects 4245 N. Central Expressway	Job: EB-02 Keller Springs Lofts
	Suite 300	Phone: 877-777-5115
	Dallas, TX 75205	
	Ph: 214/520-8878 Fax: 214/520-8879	
cc:		
Subj	ect: First Floor Grills Near Elevator #2	
	ring: A3.1D, M3.1, Detail 7/M4.2	Spec Section:
Cost	Impact: None	Schedule Impact: None
Requ	uest:	Date Required: 6/7/2012
floors	<ul> <li>This additional wall will cause issues with</li> </ul>	evator #2), there is an added wall on the first floor that is not shown on the other the grill located in that area. Detail 7/M4.2 shows the walls as they will be on floo o give the HVAC sub room for his grill? Please see attached sketch.
Requ	uested by: David Miller Embrey Builders LLC	
Door	This sketch looks to be who	at was proposed on RFI-128. GC to verify they are the same
Kest	solution. I take no exceptio	n to this solution.
	Ryan Faulds	
1	BGO architects	
	June 28, 2012	
Ans	wered by	
_		Date

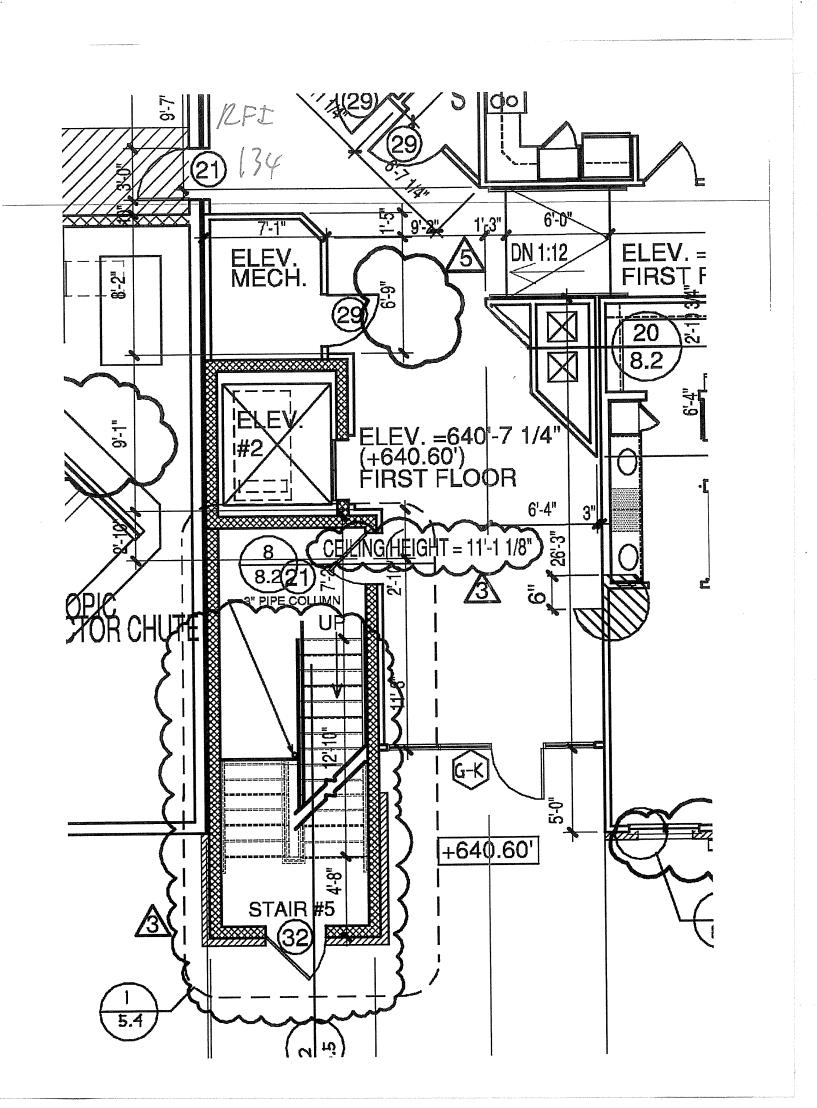
Embrey Builders, LLC 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656

Heath Parnell

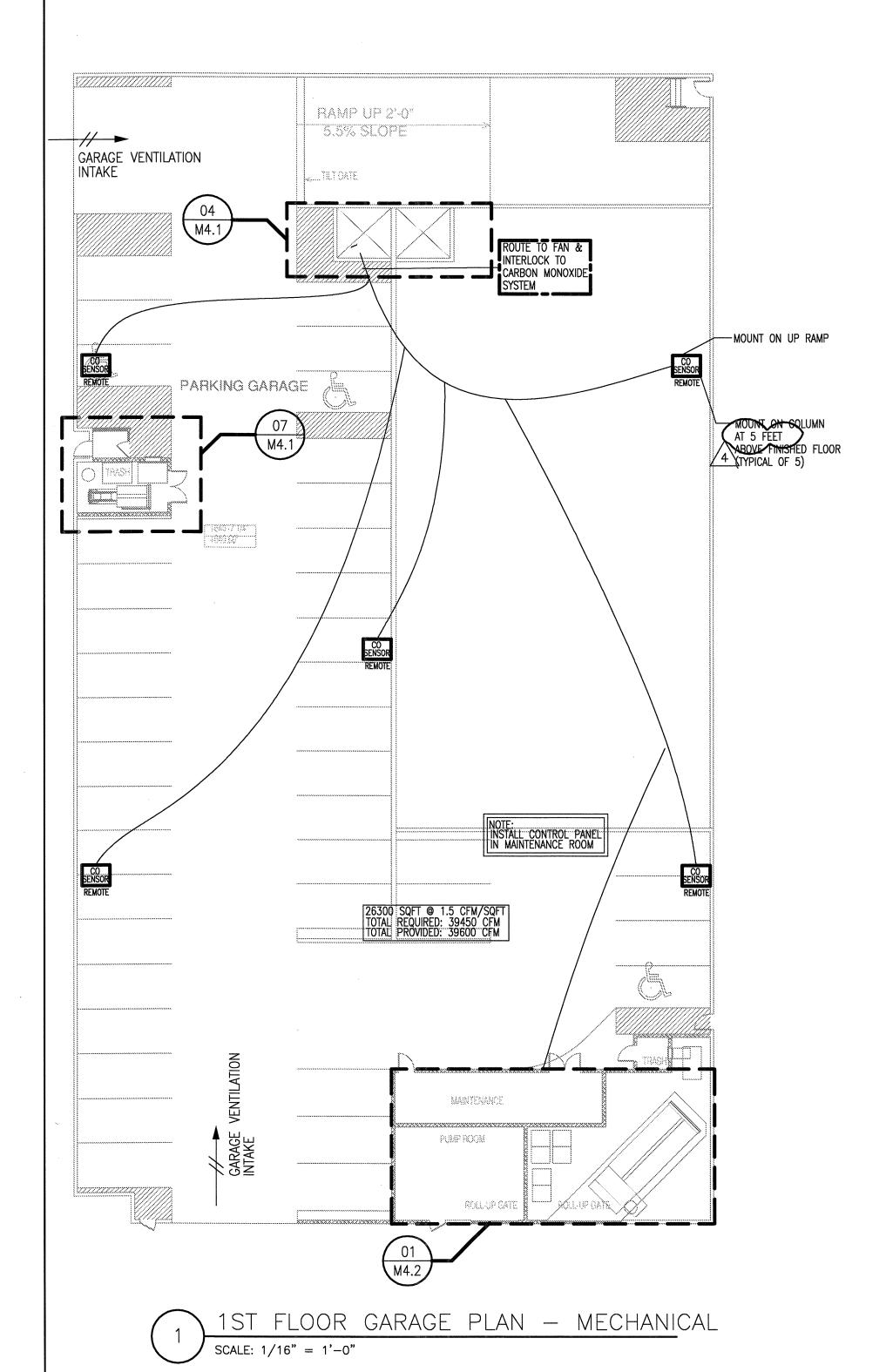
Answered by Jordan & Skala

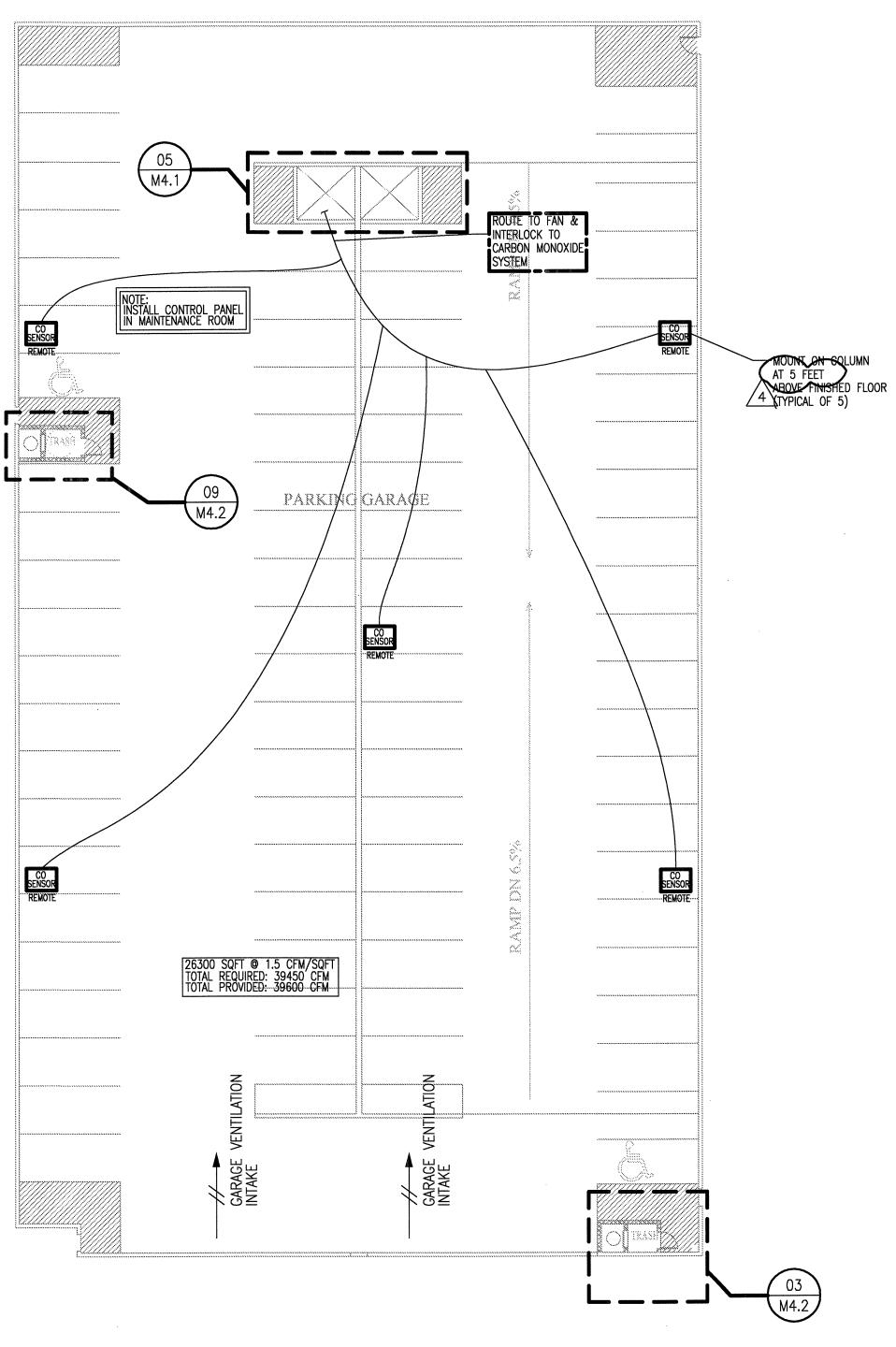
RFI RFI#: 133 To: Heath Parnell Jordan & Skala Engineers, Inc. Date: 5/30/2012 Job: EB-02 Keller Springs Lofts 14240 Midway Road, Suite 350 Dallas, TX 75244 Phone: 877-777-5115 Ph: 469/385-1616 Fax: 469/385-1615 cc: Erik Earnshaw (Beeler Guest Owens Architects) Subject: Supply and Return Air Grills on All Floors Drawing: M3.1, M3@, A3.1C, A3.2C, A3.3C, A3.4C Spec Section: Schedule Impact: None Cost Impact: None Date Required: 6/7/2012 The supply and return air grills will not work on the curved walls on each floor as shown on A3.1C, A3.2C, A3.3C and A3.4C. A portion of the wall will need to be straight for the grills. Requested by: David Miller Embrey Builders LLC Based on correspondence between Ryan Faulds at BGO and David Miller with Embrey via email on Thursday July 12th, the walls will be updated to provide flat areas for the supply and return grilles.

Page 1 of 1

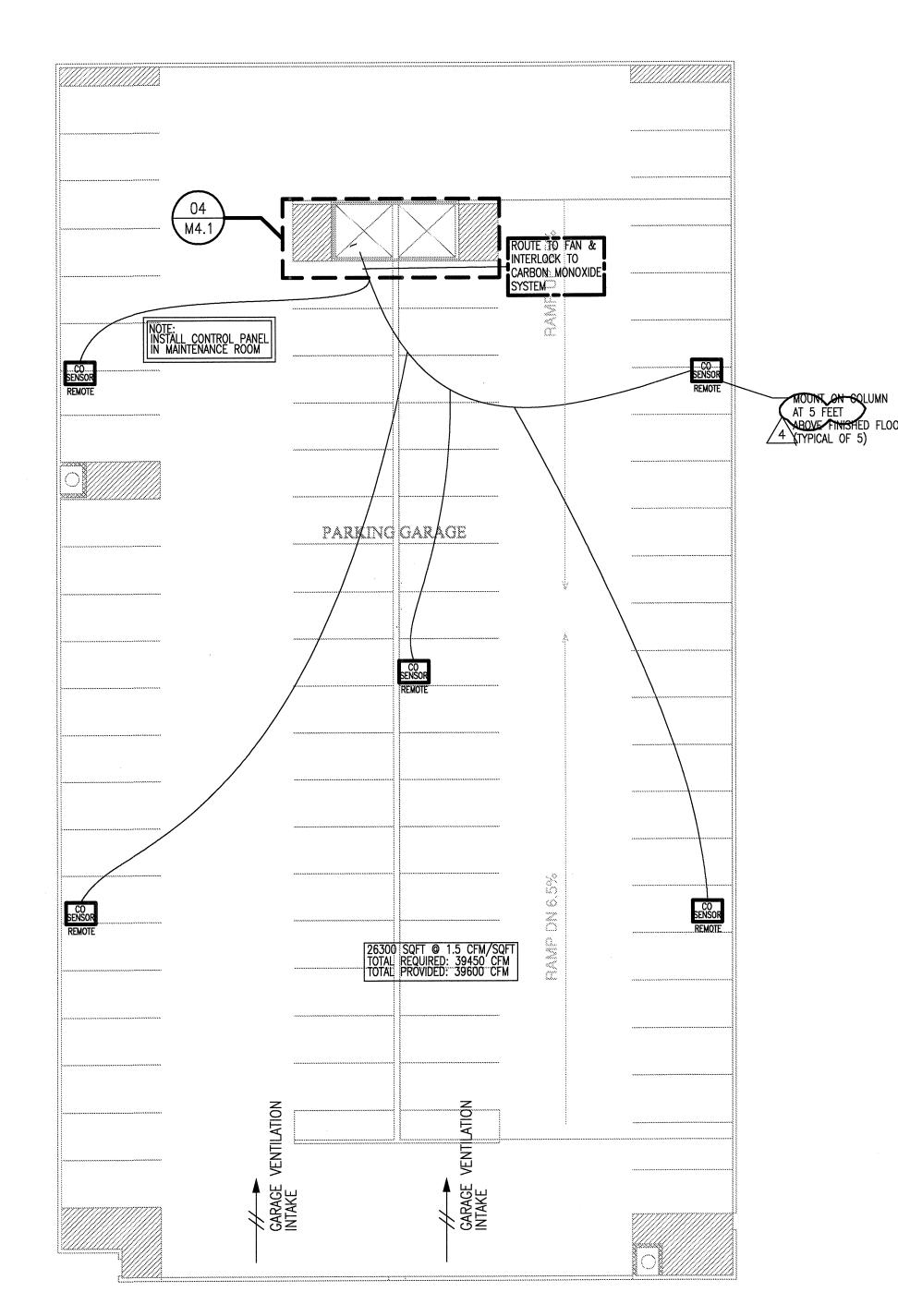


Heath Parnell





2 2ND FLOOR GARAGE PLAN — MECHANICAL scale: 1/16" = 1'-0"



3 3RD FLOOR GARAGE PLAN — MECHANICAL scale: 1/16" = 1'-0"

7th FLOOR IS OPEN ABOVE, NO MECHANICAL VENTING IS REQUIRED.





9-2-2011 DESIGN REVISIONS

9-13-2011 ANSI/FHA COMMENTS

3 9-23-2011 DESIGN REVISIONS

10-17-2011 CONSTRUCTION ISSUE

LLER SPRINGS LOFTS

BGO architects

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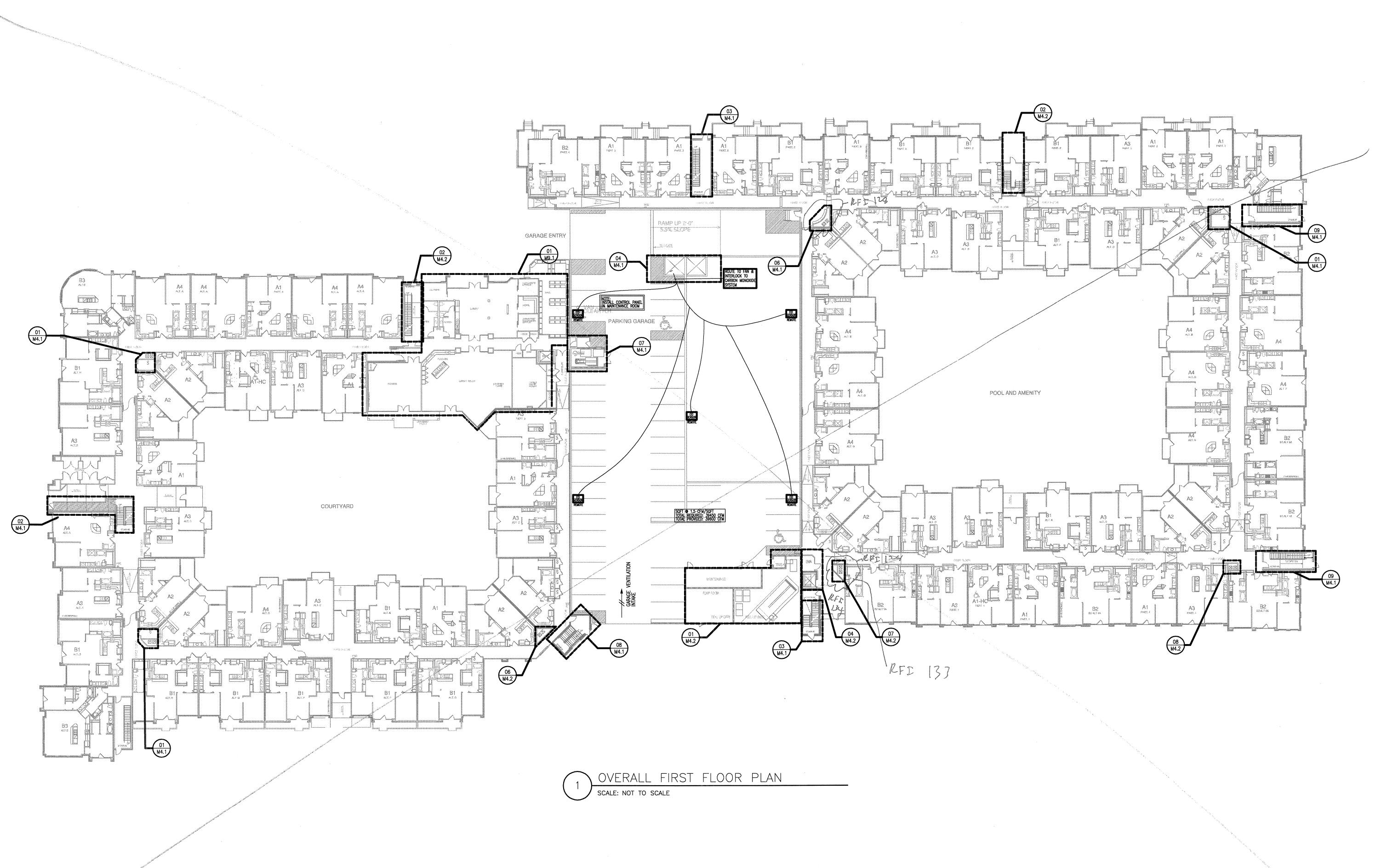
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PROJECT 11129

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SHEET NUMBER

GARAGE MECHANICAL



REVISIÕNS

1 9-2-2011 DESIGN REVISIONS 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 DESIGN REVISIONS 4 10-17-2011 CONSTRUCTION ISSUE

SPRINGS

TEXAS APARTMENT

**IIBGO** architect

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DATE

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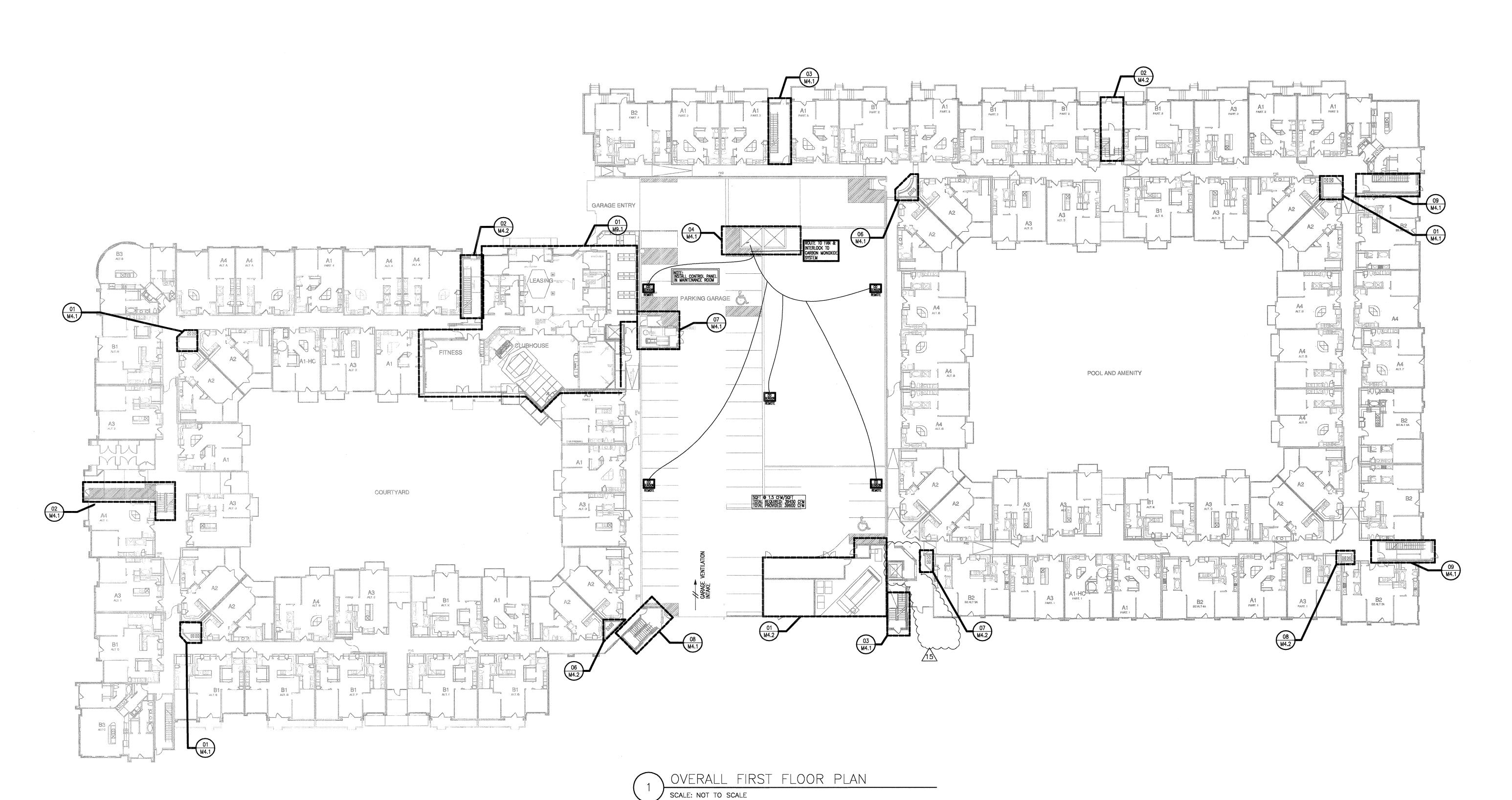
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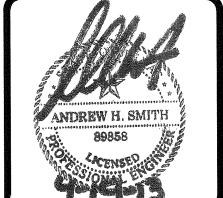
11129

SHEET NUMBER

**M-3.1** FIRST FLOOR BUILDING MECHANICAL

ordan & Skala Engineers 14240 Midway Road, Suite 350 Dallas, EX 75244-5138 V: (469) 383-1616 F: (469) 383-1613 Texas Firm Registration # F-4990 Checked By: AHS Project Number - 113-0355 Drawn By: CJH





REVISIONS

9-2-2011 DESIGN REVISIONS 9-13-2011 ANSI/FHA COMMENTS DESIGN  $\sqrt{3}$  9-23-2011 REVISIONS 5 12-21-2011 REVISIONS 6 1-17-2012 DESIGN REVISIONS TRANSFORMER 7 2-15-2012 REVISIONS 8 3-27-2012 CLUBHOUSE REVISIONS

4-17-2012 COORDINATION

5-15-2012 COORDINATION 5-30-2012 SITE
COORDINATION

5-30-2012 SITE
COORDINATION

6-01-12 LIGHTING
REVISIONS

6-29-12 SITE
COORDINATION COORDINATION' CLUB REVISIONS 4-19-13 EL. LOBBY REVIONS



4144 N. Central Expy. Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

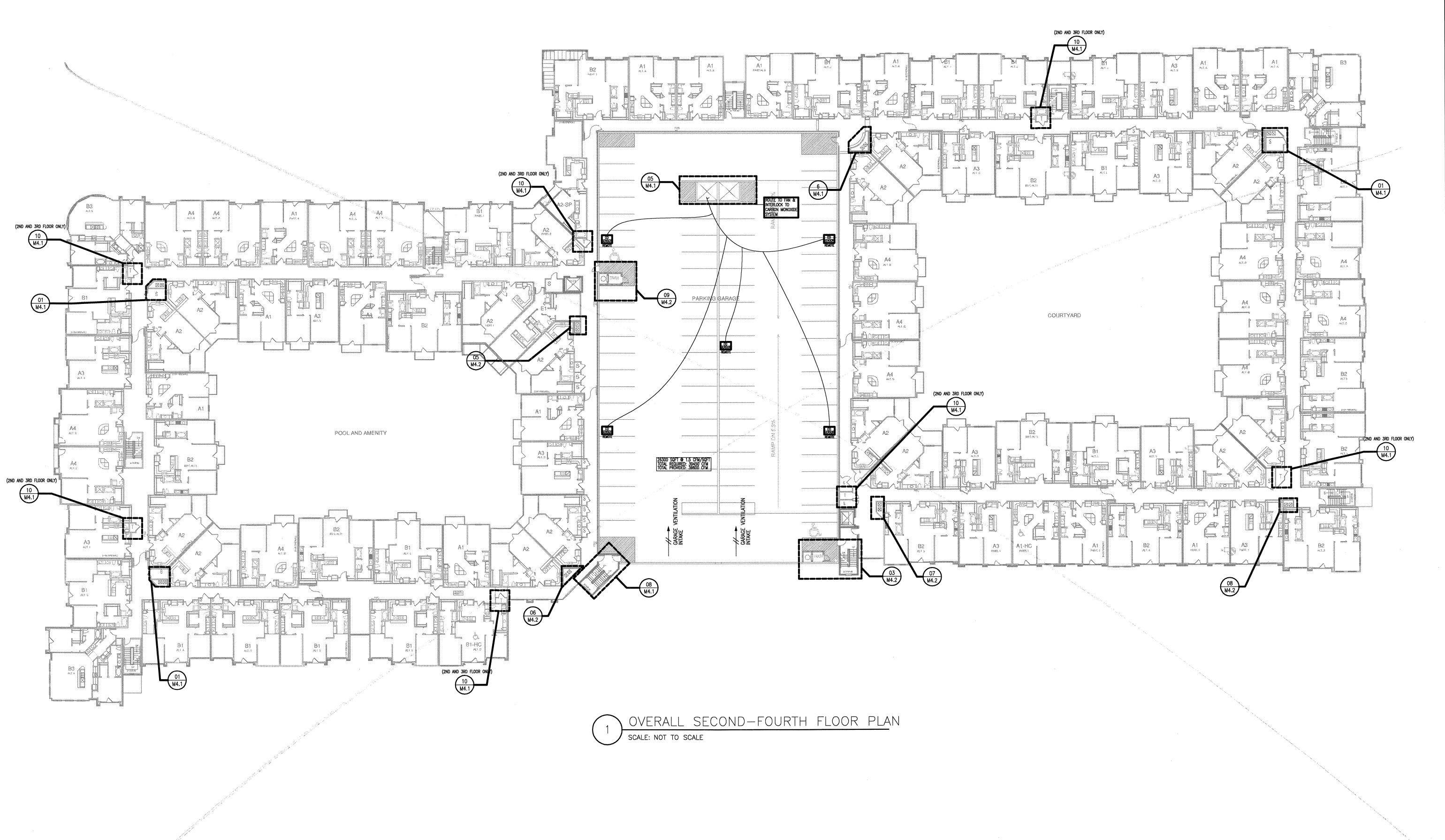
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M-3.1 FIRST FLOOR BUILDING MECHANICAL





REVISIÔNS

9-2-2011 DESIGN REVISIONS

9-13-2011 ANSI/FHA COMMENTS

3 9-23-2011 DESIGN REVISIONS

4 10-17-2011 CONSTRUCTION ISSUE

PARTMENTS IN ADDISON, TEXAS

BBGO architects

4144 N. Central Expy. Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

DATE

08-05-11

PROJECT

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SHEET NUMBER

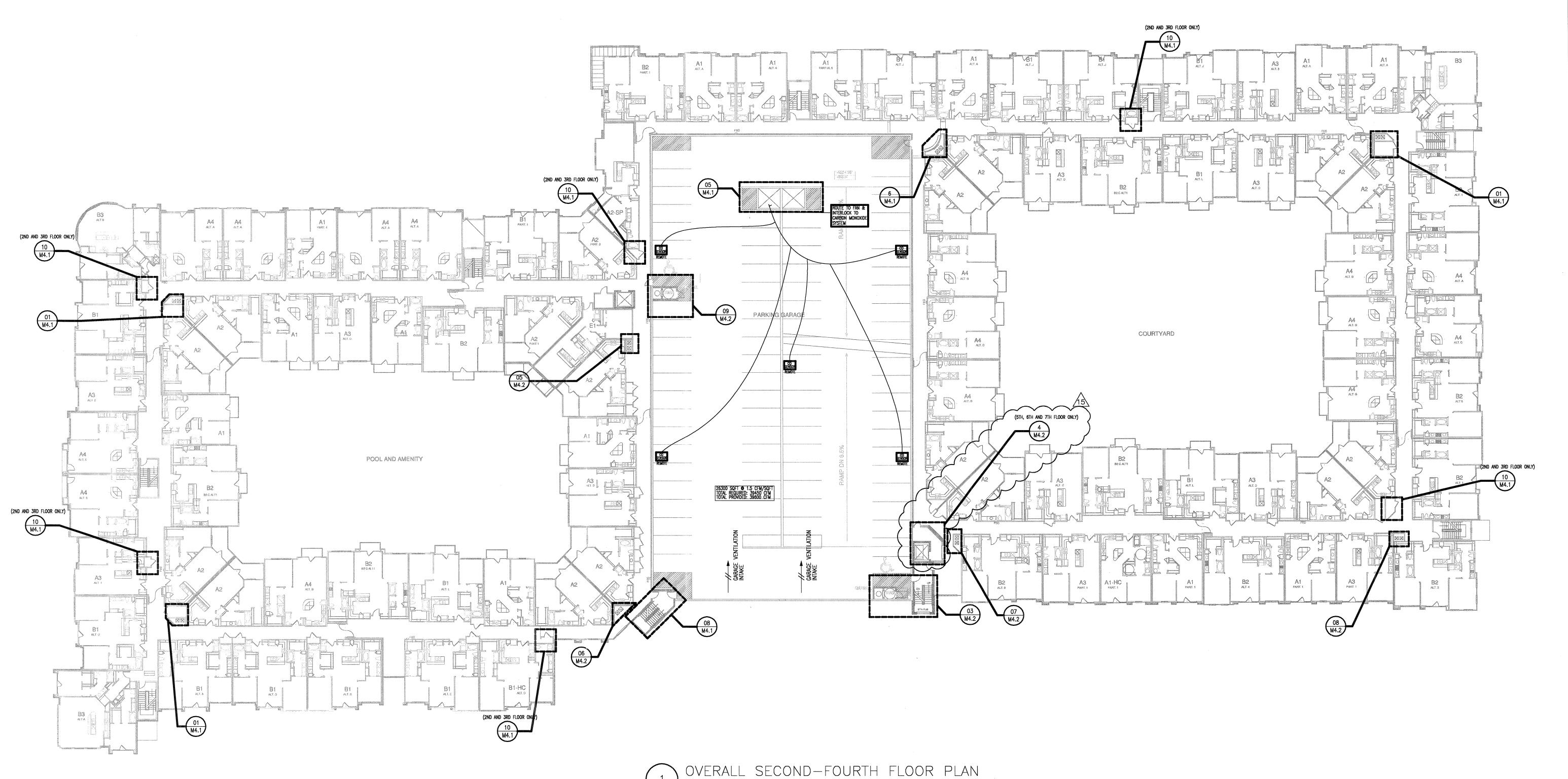
M-3.2
SECOND FLOOR
BUILDING
MECHANICAL

Jordan & Skala Engineers

14240 Midway Road, Stilte 350
Dallas, TX 75244-5138
V: (469) 385-1616 F: (469) 385-1615

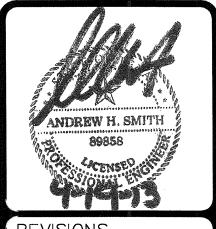
Project Number - 113-0355
Drawn By: CJH

Checked By: AHS



SCALE: NOT TO SCALE





REVISIONS

9-2-2011 DESIGN
REVISIONS
2 9-13-2011 ANSI/FHA
COMMENTS
DESIGN
P-23-2011 REVISIONS 10-17-2011 CONSTRUCTION 6 1-17-2012 REVISIONS 7 2-15-2012 REVISIONS

3-27-2012 CLUBHOUSE REVISIONS 4-17-2012 COORDINATION

5-15-2012 COORDINATION 5-30-2012 SITE COORDINATION 6-01-12 LIGHTING REVISIONS SITE COORDINATION

CLUB REVISIONS 4-19-13 EL. LOBBY REVIONS



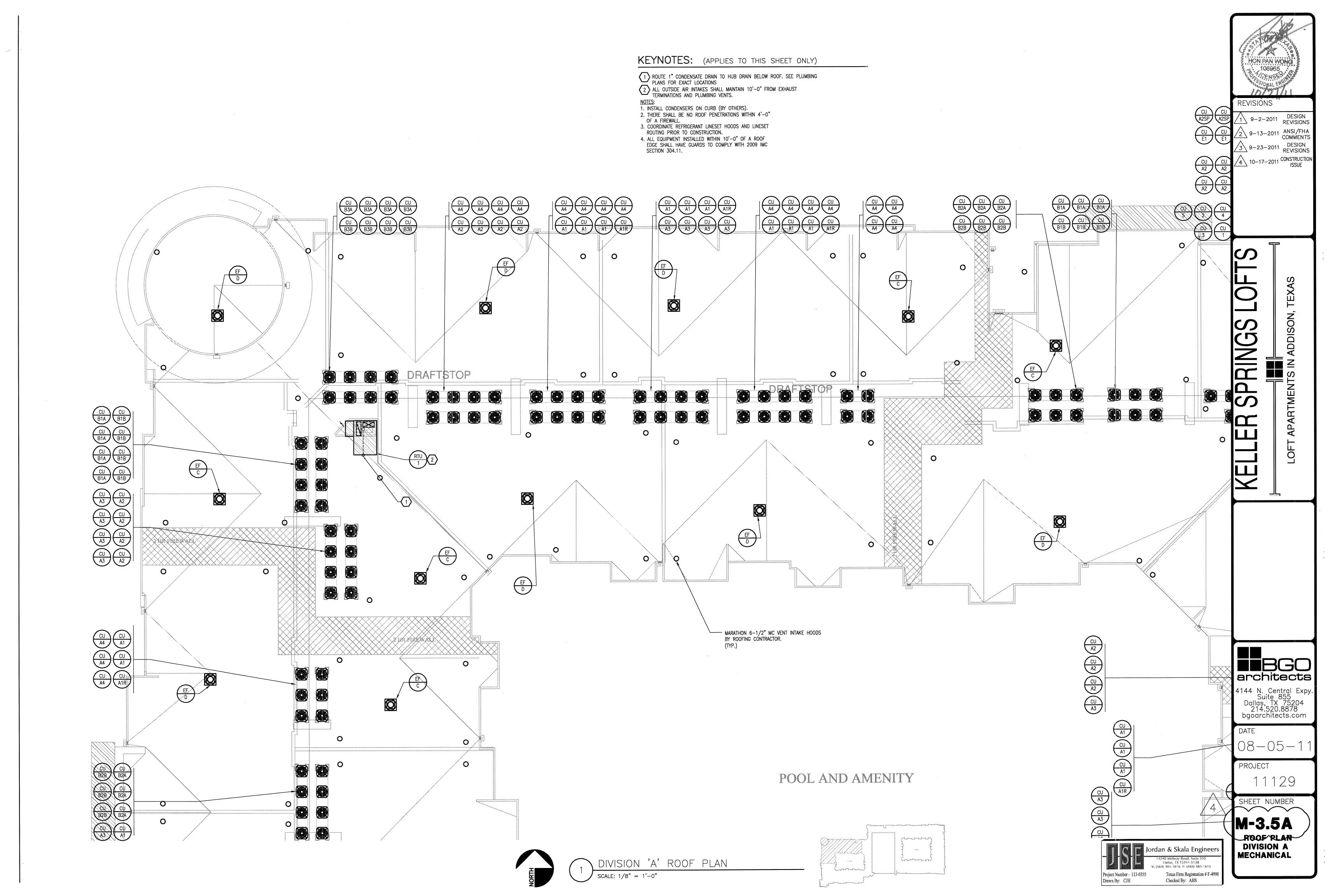
4144 N. Central Expy. Suite 855 Dallas, TX 75204 214.520.8878 bgoarchitects.com

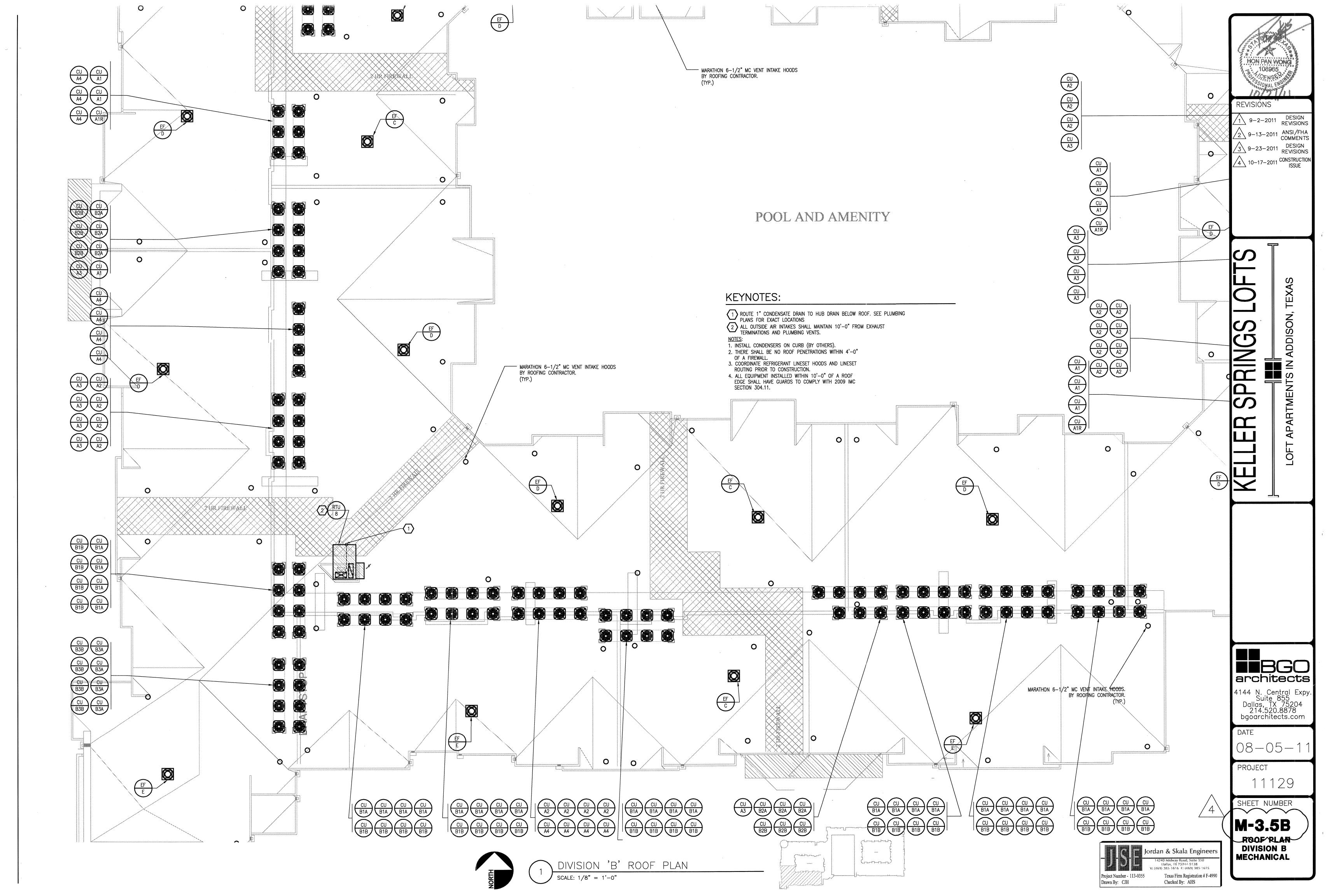
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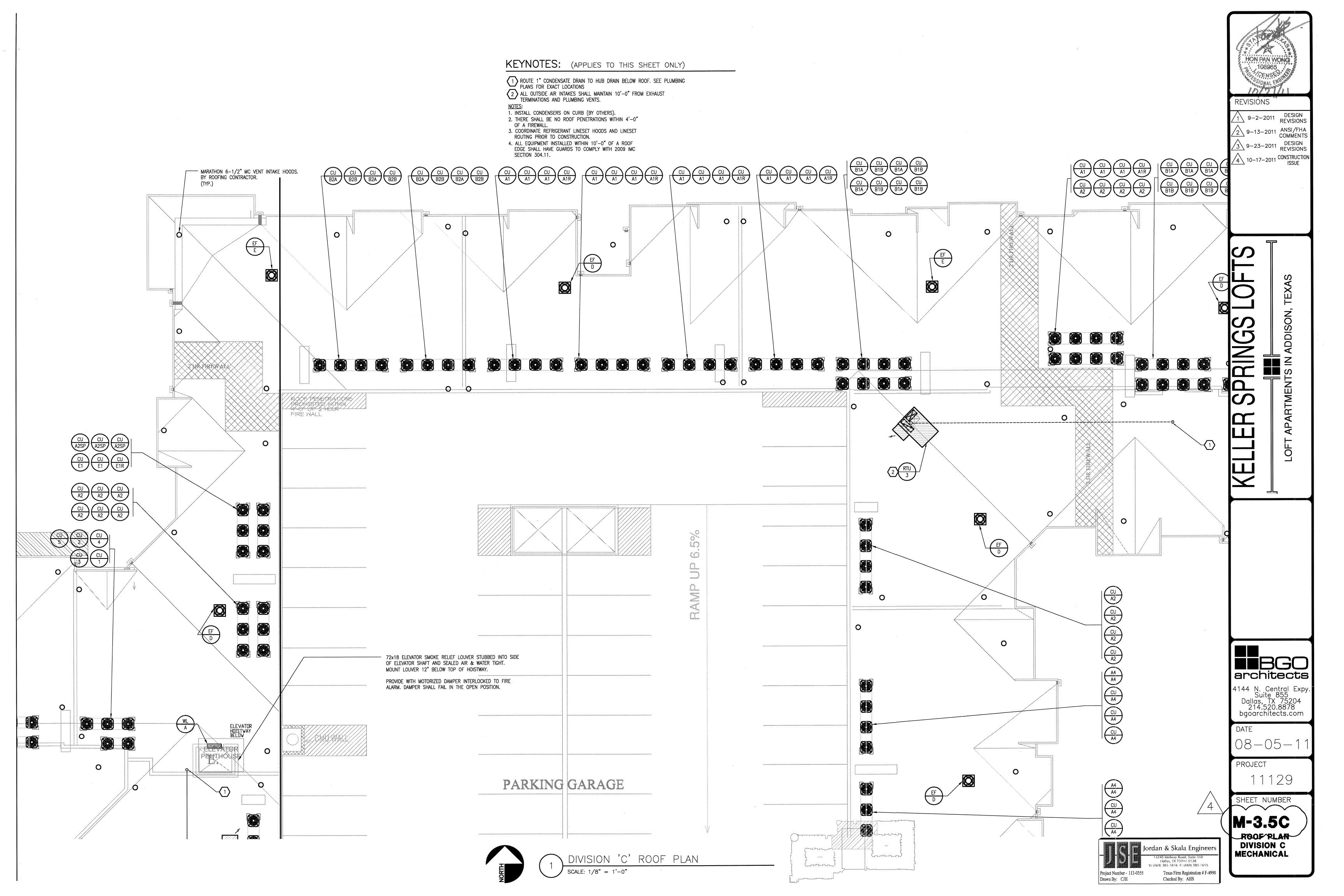
PROJECT

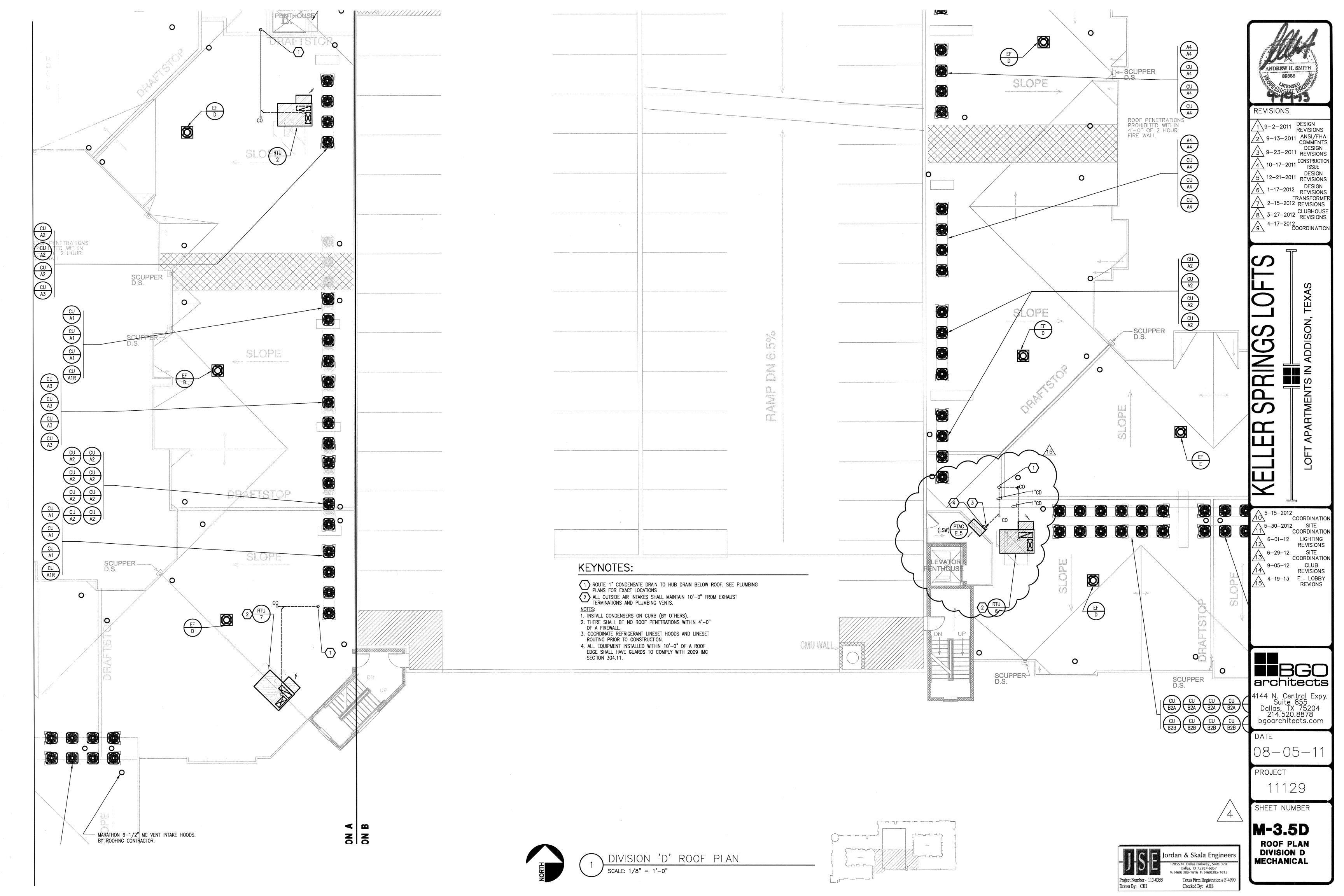
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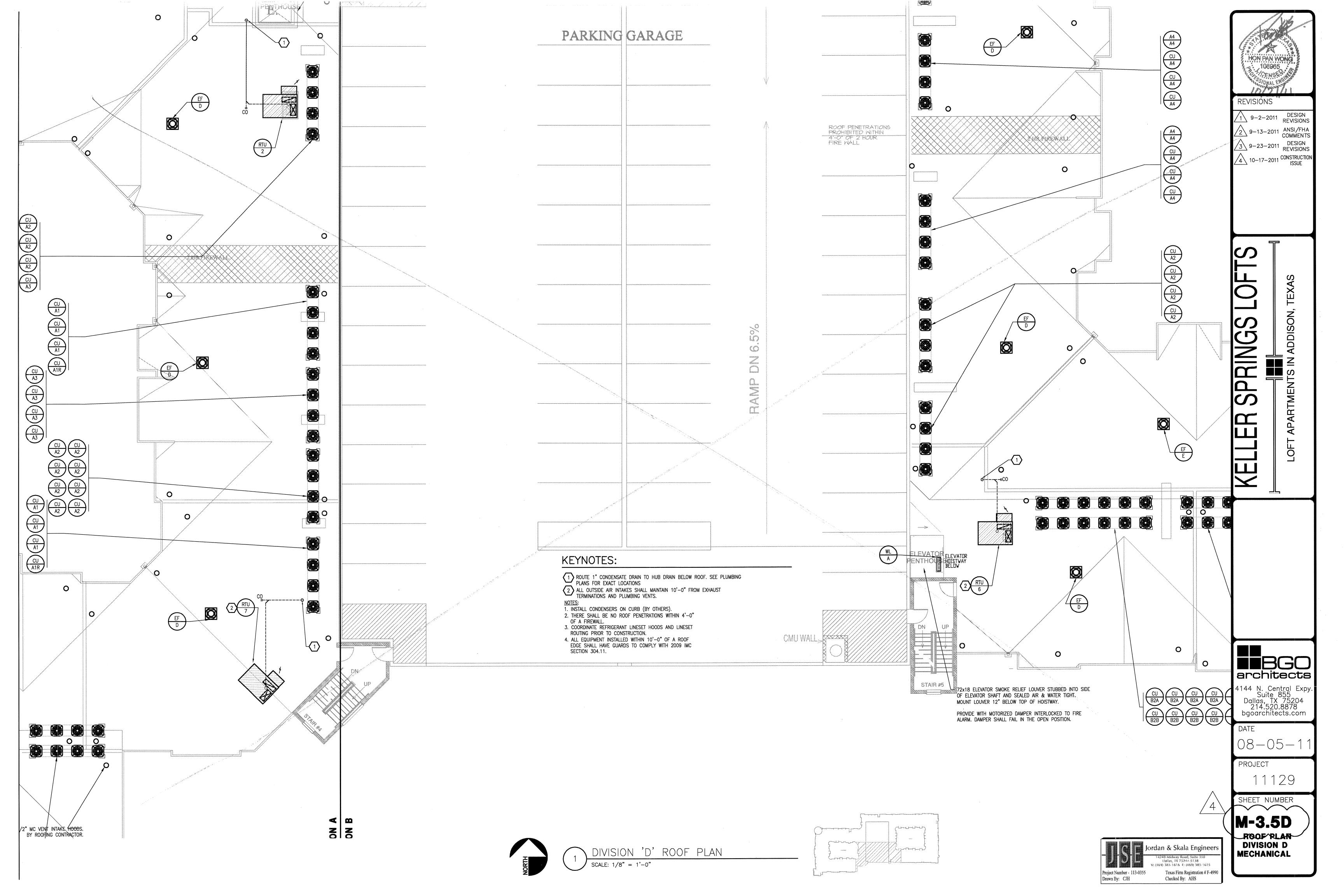
M - 3.2SECOND FLOOR BUILDING MECHANICAL

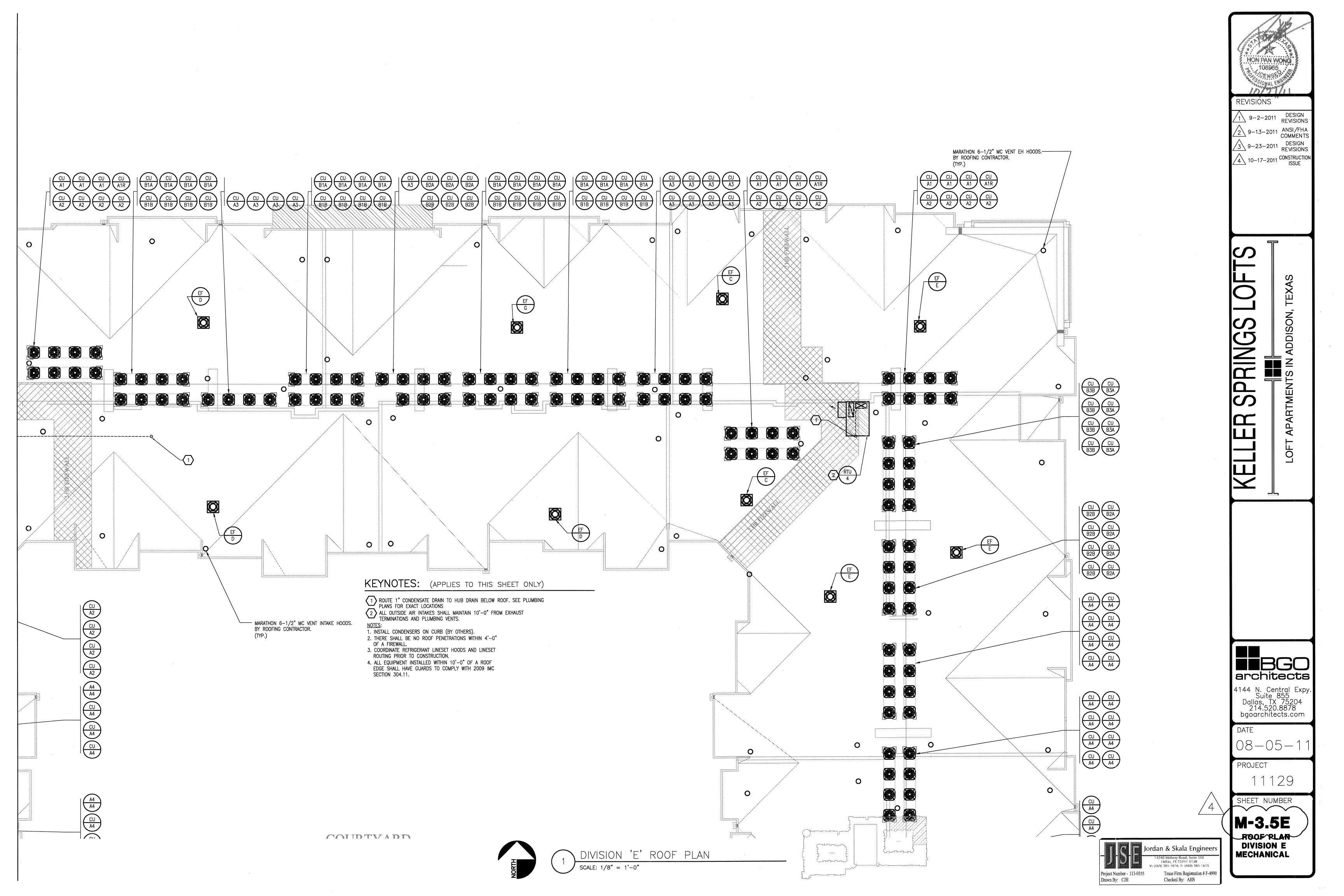


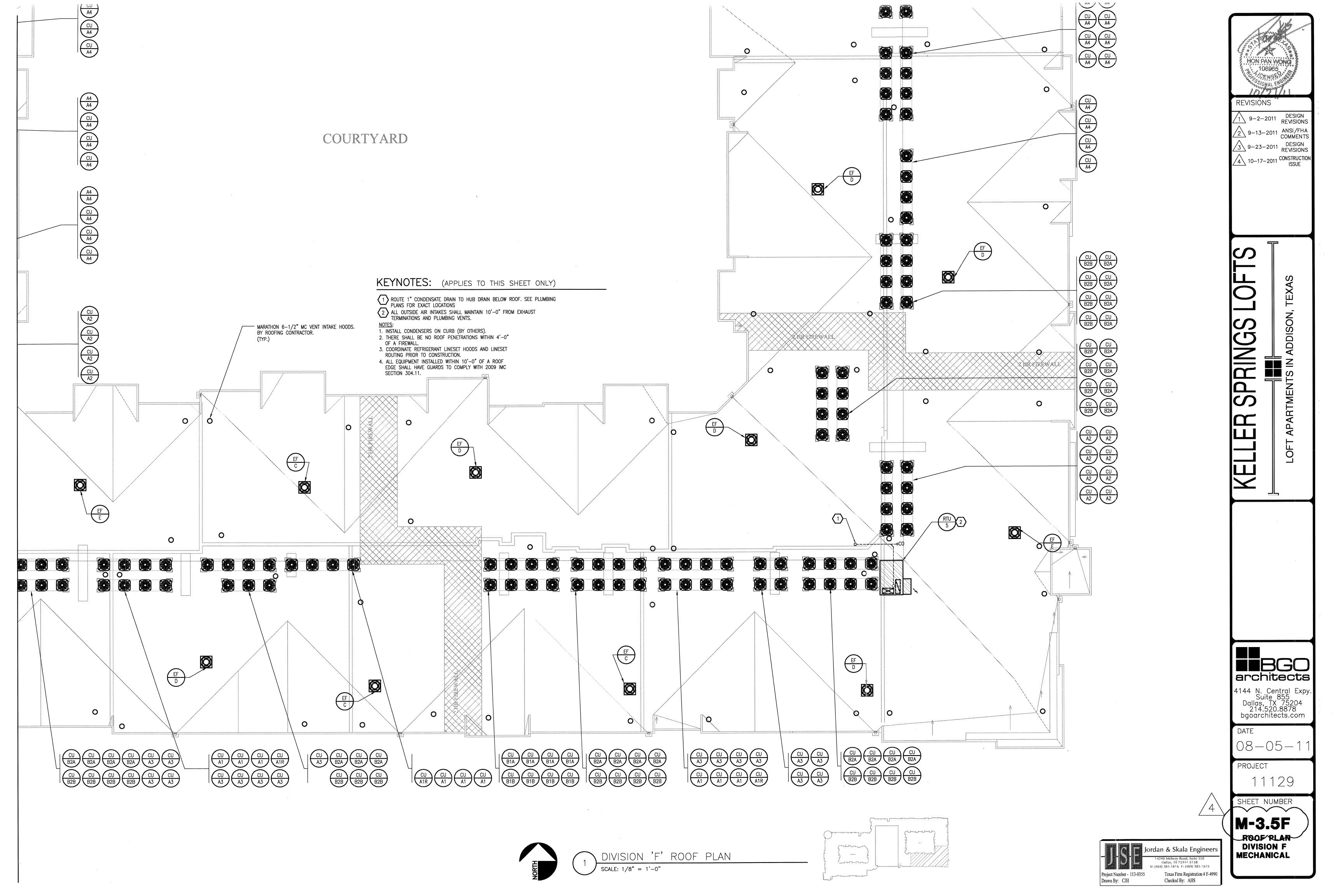














- **KEYNOTES:**
- 1) 3/4"CD ROUTED DOWN TO FLOOR BELOW.
- 3/4"CD ROUTED FROM PTAC ABOVE. TIE CD FROM LEVEL 6 AND LEVEL 7 INTO A 1"CD RISER.
  3/4"CD ROUTED FROM PTAC TO CD RISER. ROUTE RISER DOWN TO ROOF BELOW.
- 72x18 ELEVATOR SMOKE RELIEF LOUVER STUBBED INTO SIDE OF ELEVATOR SHAFT AND SEALED AIR & WATER TIGHT. MOUNT LOUVER 12" BELOW TOP OF HOISTWAY. PROVIDE WITH MOTORIZED DAMPER INTERLOCKED TO FIRE ALARM.

  DAMPER SHALL FAIL IN THE OPEN POSITION.





9-2-2011 DESIGN REVISIONS 9-13-2011 ANSI/FHA COMMENTS 3 9-23-2011 DESIGN REVISIONS 10-17-2011 CONSTRUCTION 5 12-21-2011 DESIGN REVISIONS 6 1-17-2012 DESIGN REVISIONS TRANSFORMER
7 2-15-2012 REVISIONS 8 3-27-2012 CLUBHOUSE REVISIONS

COORDINATION 5-30-2012 SITE COORDINATION 6-01-12 LIGHTING REVISIONS COORDINATION CLUB REVISIONS 4-19-13 EL. LOBBY REVIONS

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PROJECT

11129

SHEET NUMBER

M-3.6 LEVEL 6 & 7 GARAGE **MECHANICAL** 

Jordan & Skala Engineers 17855 N. Dallas Parkway., Suite 320 Dallas, TX 75287-6857 V: (469) 385-1616 F: (469)385-1615

Texas Firm Registration # F-499

Checked By: KAN

TH FLOOR GARAGE PLAN — MECHANICAL

EMBREY BUILDERS, LLC. 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209 Ph: (210) 824-6044 Fax: (210) 824-7656

To: Jordan & Skala Engineers, Inc. 14240 Midway Road, Suite 350

RFI#: 66 Date: 2/24/2012

RFI

Dallas, TX 75244 Job: EB-02 Keller Springs Lofts Ph: 469/385-1616 Fax: 469/385-1615 Phone: 877-777-5115

CC: David Gallagher (Embrey Build (Embrey Construction LLC)

Subject: HVAC requirements for elevator shaft

Drawing: M-4.2 detail #4, M-9.1 Spec Section: Cost Impact: None Schedule Impact: None

Date Required: 3/2/2012

Heath below is a RFI requested by our HVAC subcontractor TDIndustries.

This morning, Jay Bitner with Schindler Elevator indicated that they would not be using the two rooms designated on the plans for elevator equipment (EMR) for their elevator machinery. The elevator machinery will actually be located in the elevator shaft. I have 2

Should we eliminate the two ductless split system for the two rooms designated EMR? These rooms are shown on sheets M-4.2, detail #4 and M-9.1. 2. Is there now a requirement for HVAC at the elevator shaft? See item #26 on the attached information supplied by Jay.

As a side note, Jay indicated that Schindler has installed several systems of this type and has not seen the shafts conditioned and has not seen a problem with over-heating. I mentioned that TDIndustries is installing HVAC in the shaft of a different project currently under construction. However, that elevator shaft is located in a parking garage, which may have necessitated the HVAC. Another elevator located within the building on the same project did not require HVAC. Since both of Keller Springs elevators are located within the building, I'm thinking that conditioning of the elevator shafts will not be necessary. However, I will defer to the others to

Requested by: Bryan Pickler Embrey Partners, Ltd.

Response: 1. HVAC may be removed from the elevator machine room.

2. Per Schindler's recommendations, HVAC to be added or not required for the elevator shaft.

Corey Hewitt

Answered by Jordan & Skala Engineers

2012-02-28

Page 1 of 1

Embrey Builders, LLC 1020 N. E. Loop 410, Suite 700 San Antonio, TX 78209

Ph: (210) 824-6044 Fax: (210) 824-7656

To: Erik Earnshaw Beeler Guest Owens Architects 4245 N. Central Expressway

> Dallas, TX 75205 Ph: 214/520-8878 Fax: 214/520-8879

Subject: First Floor Grills Near Elevator #2

Drawing: A3.1D, M3.1, Detail 7/M4.2 Cost Impact: None

Spec Section: Schedule Impact: None

RFI

RFI #: 134

Date: 5/30/2012

Phone: 877-777-5115

Job: EB-02 Keller Springs Lofts

Request: Date Required: 6/7/2012 Due to the ramp at the mechanical shaft (near elevator #2), there is an added wall on the first floor that is not shown on the other floors. This additional wall will cause issues with the grill located in that area. Detail 7/M4.2 shows the walls as they will be on floors 2, 3 and 4. Can the additional wall be modified to give the HVAC sub room for his grill? Please see attached sketch.

Requested by: David Miller Embrey Builders LLC

Response: This sketch looks to be what was proposed on RFI-128. GC to verify they are the same solution. I take no exception to this solution.

Ryan Faulds BGO architects June 28, 2012

Answered by

Company

Page 1 of 1

Embrey Builders, LLC 1020 N. E. Loop 410, Suite 700

Ph: (210) 824-6044 Fax: (210) 824-7656

RFI

To: Erik Earnshaw **BGO** Architects 4144 N. Central Expressway Suite 855 Dallas, TX 75205

Ph: (214)520-8878

Date: 5/29/2012 Job: EB-02 Keller Springs Lofts Phone: 877-777-5115

cc: Heath Parnell (Jordan & Skala Engineers, Inc.)

Subject: Corridor duct issues

Cost Impact: None

Spec Section: Schedule Impact: None

Date Required: 6/5/2012 We are laying out the corridor duct that run through the shafts from the roof and have found some conditions that need addressing. The attached drawings and the following narrative should clarify these items: The curved corridor wall at section C needs to be flat or have flat areas to mount the grilles. 2. The corridor wall at the shaft works well on floors 2-4 but changes on the first floor and creates a problem. Suggest using the

Requested by: Bryan Pickler Embrey Partners, Ltd.

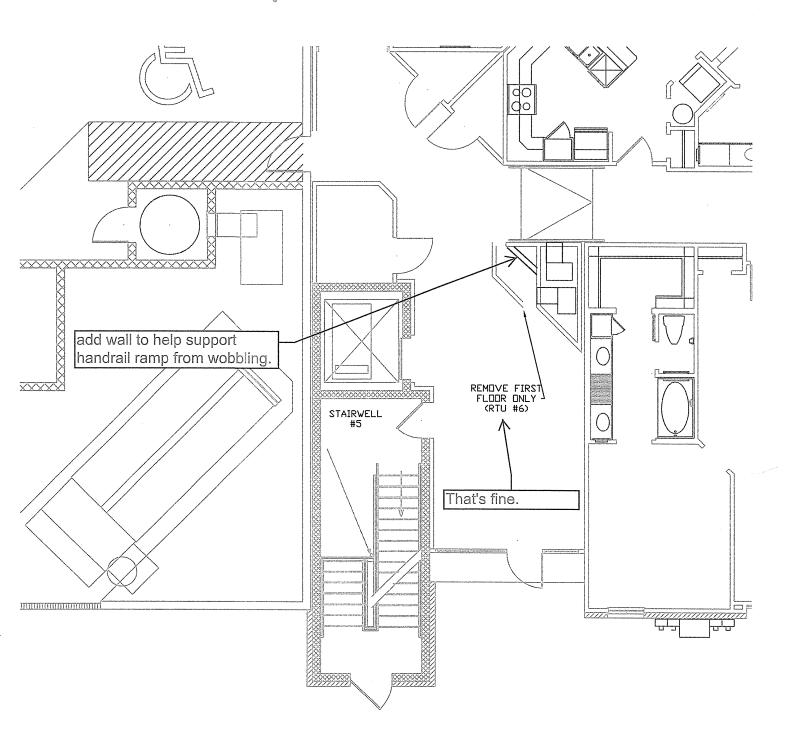
upper floor configuration on the first floor.

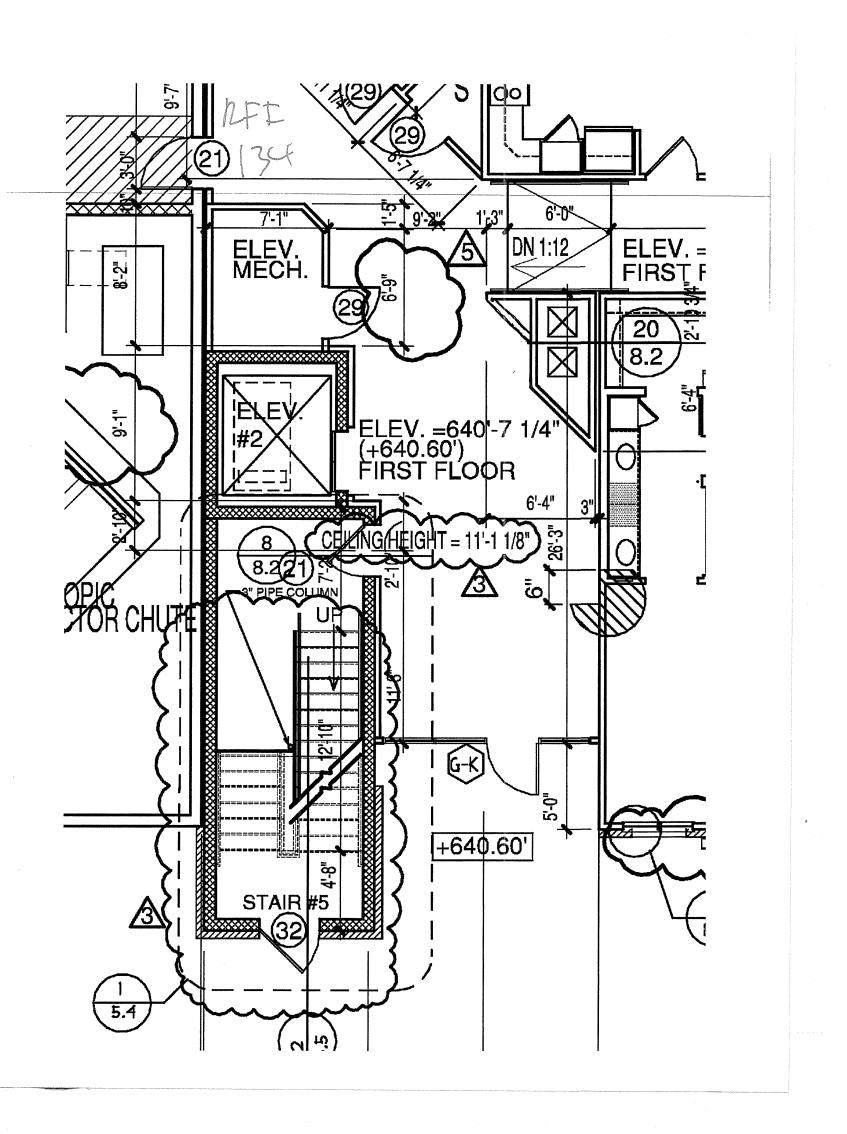
1- For air grills being installed in curved walls, I recommend popping the grill 2-3 inches off of the wall to allow for gypsum board to wrap around the grill where it protrudes from the

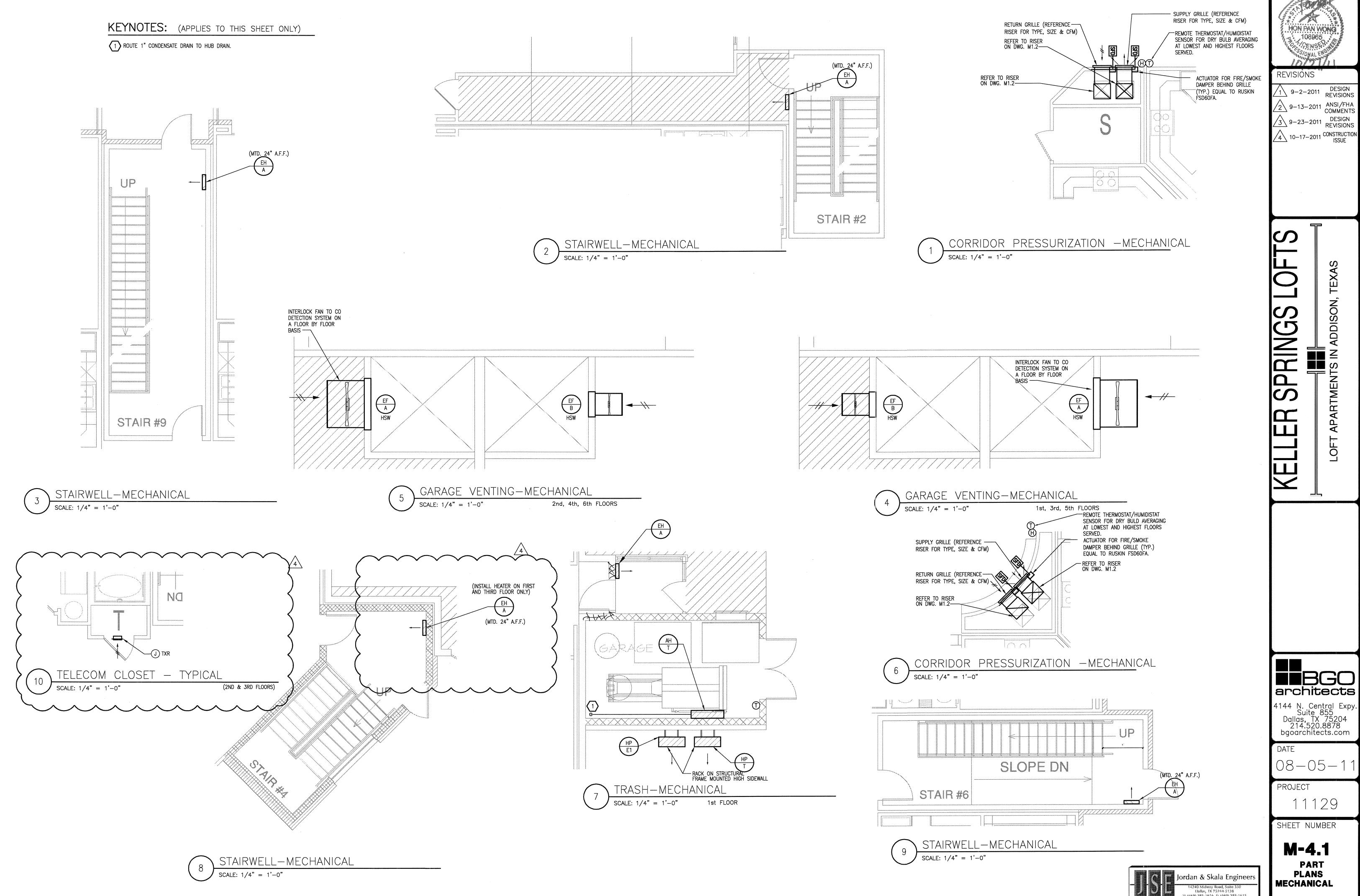
2- The upper floors will not work due to the ramp and handrail. See next pages for possible

Ryan Faulds **BGO** architects June 28, 2012

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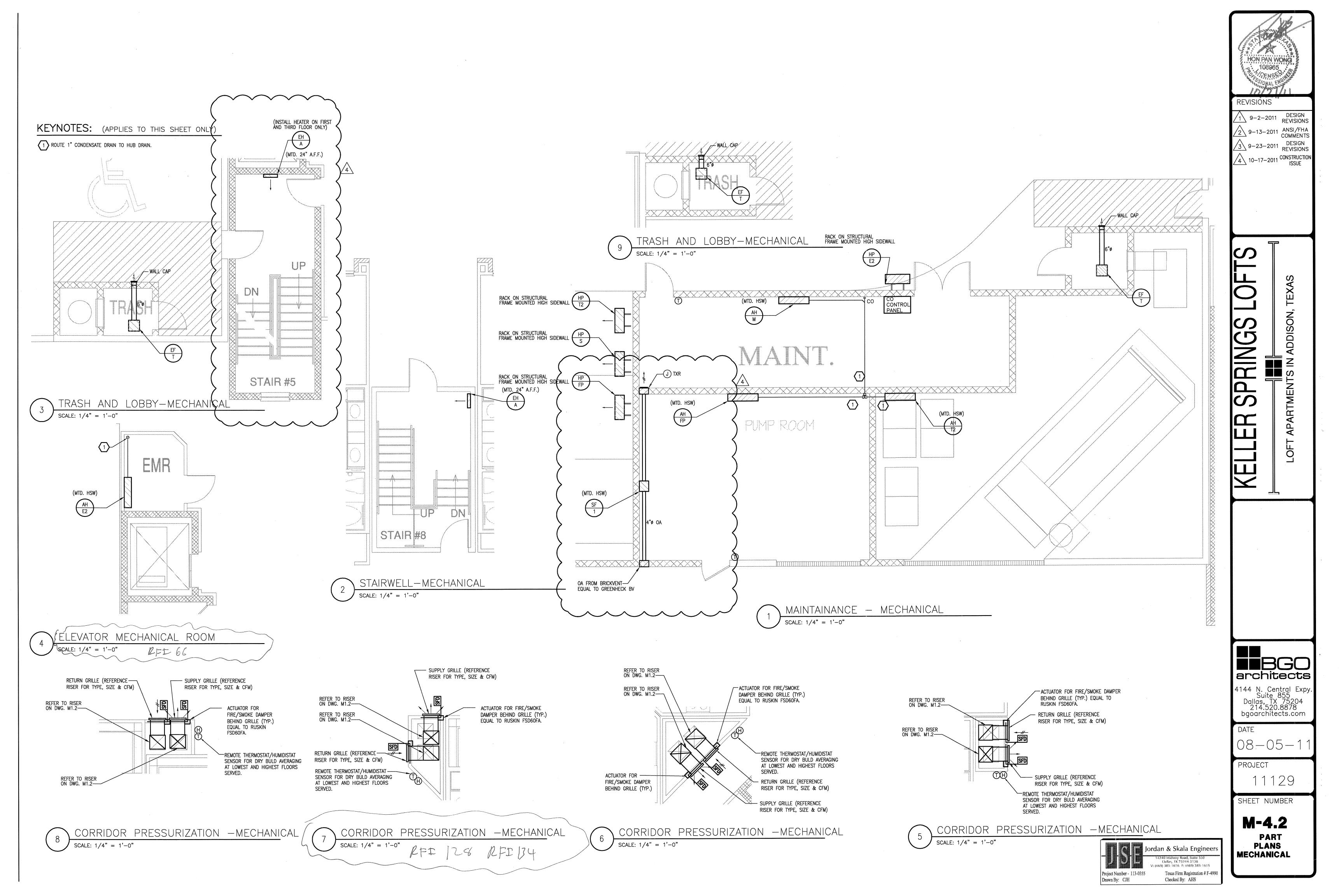


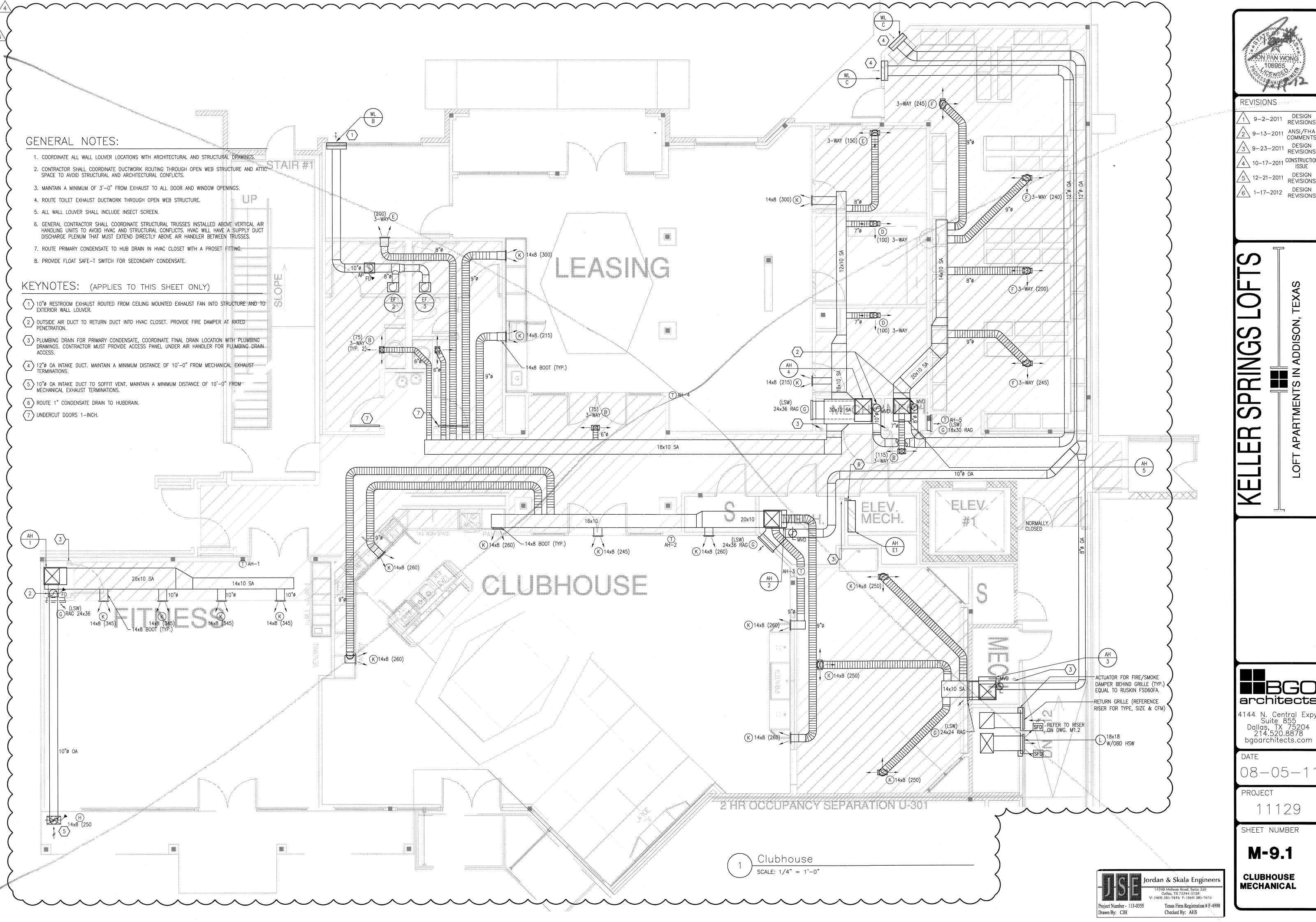
4 10-17-2011 CONSTRUCTION ISSUE

**BBGO** architects

Dallas, FX 75244-5138 V: (469) 385-1616 - F: (469) 385-1615 Texas Firm Registration # F-4990

Project Number - 113-0355 Checked By: AHS



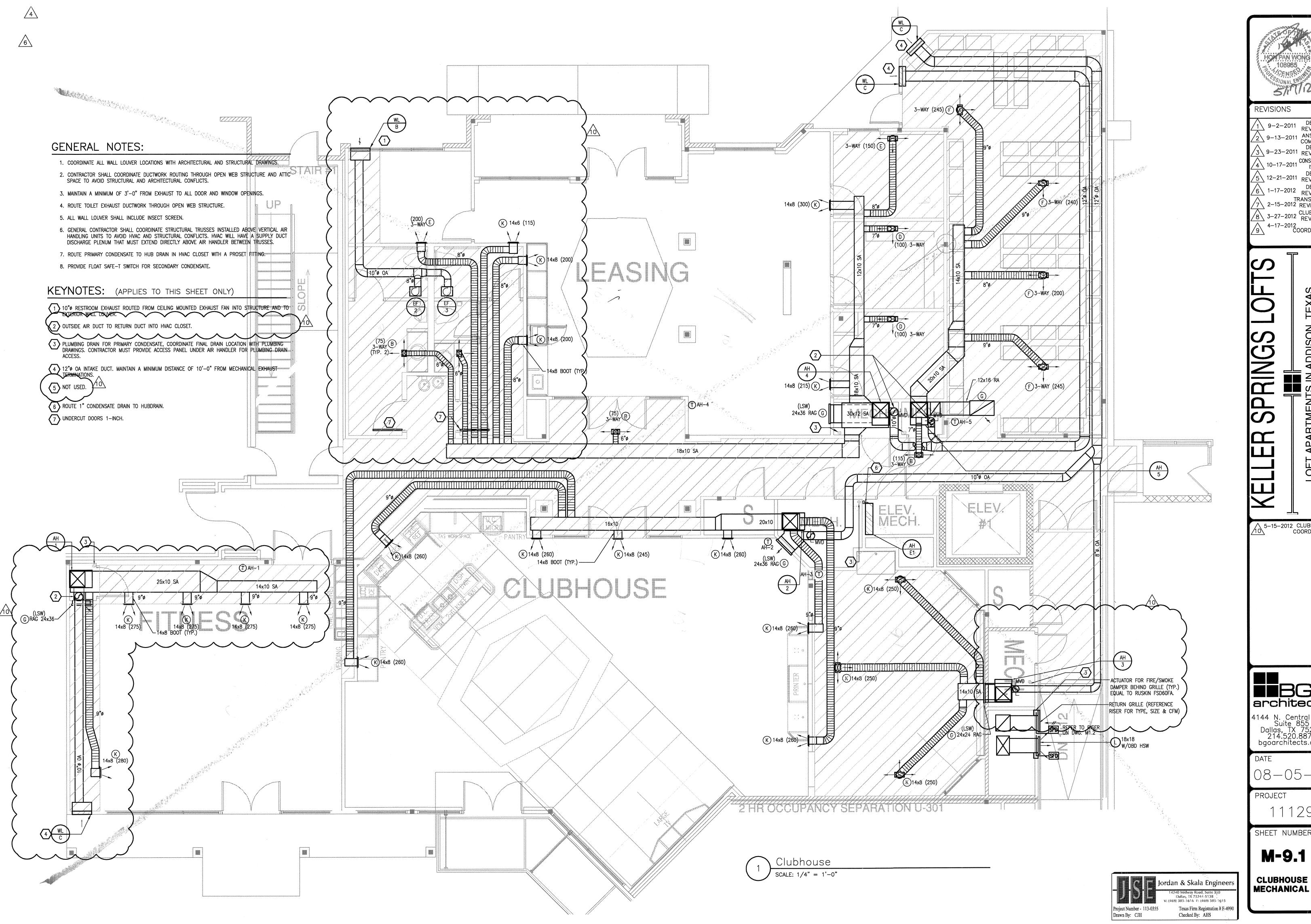


4 10-17-2011 CONSTRUCTION ISSUE

5 12-21-2011 DESIGN REVISIONS 6 1-17-2012 DESIGN REVISIONS

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REVISIONS

9-2-2011 DESIGN REVISIONS 9-13-2011 ANSI/FHA  $\sqrt{3}$  9-23-2011 REVISIONS 10-17-2011 CONSTRUCTION ISSUE

5 12-21-2011 DESIGN REVISIONS 6 1-17-2012 DESIGN REVISIONS TRANSFORME 7 2-15-2012 REVISIONS

8 3-27-2012 CLUBHOUSE REVISIONS 4-17-2012 COORDINATION

5-15-2012 CLUBHOUSE COORDINATION

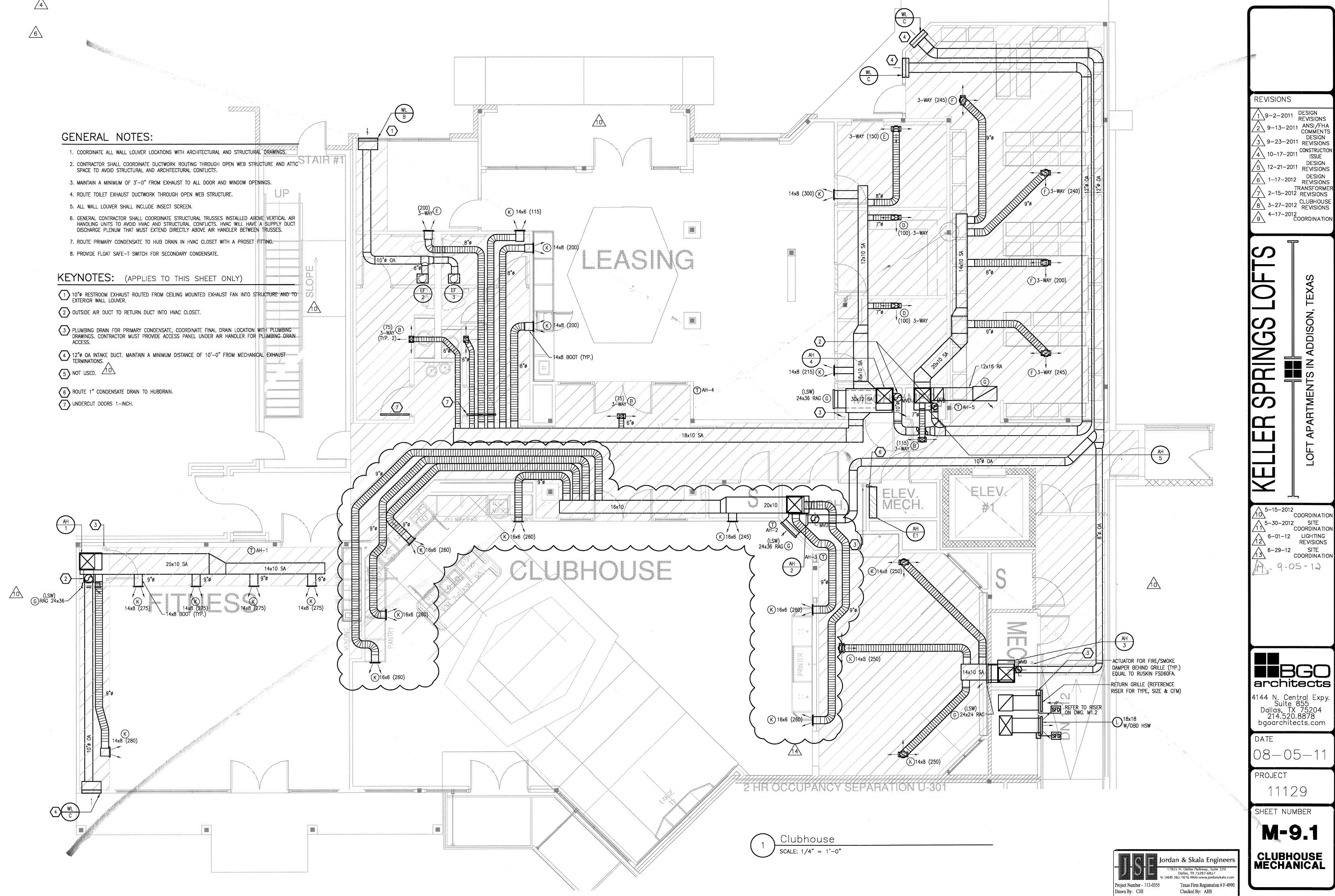
BGO architects

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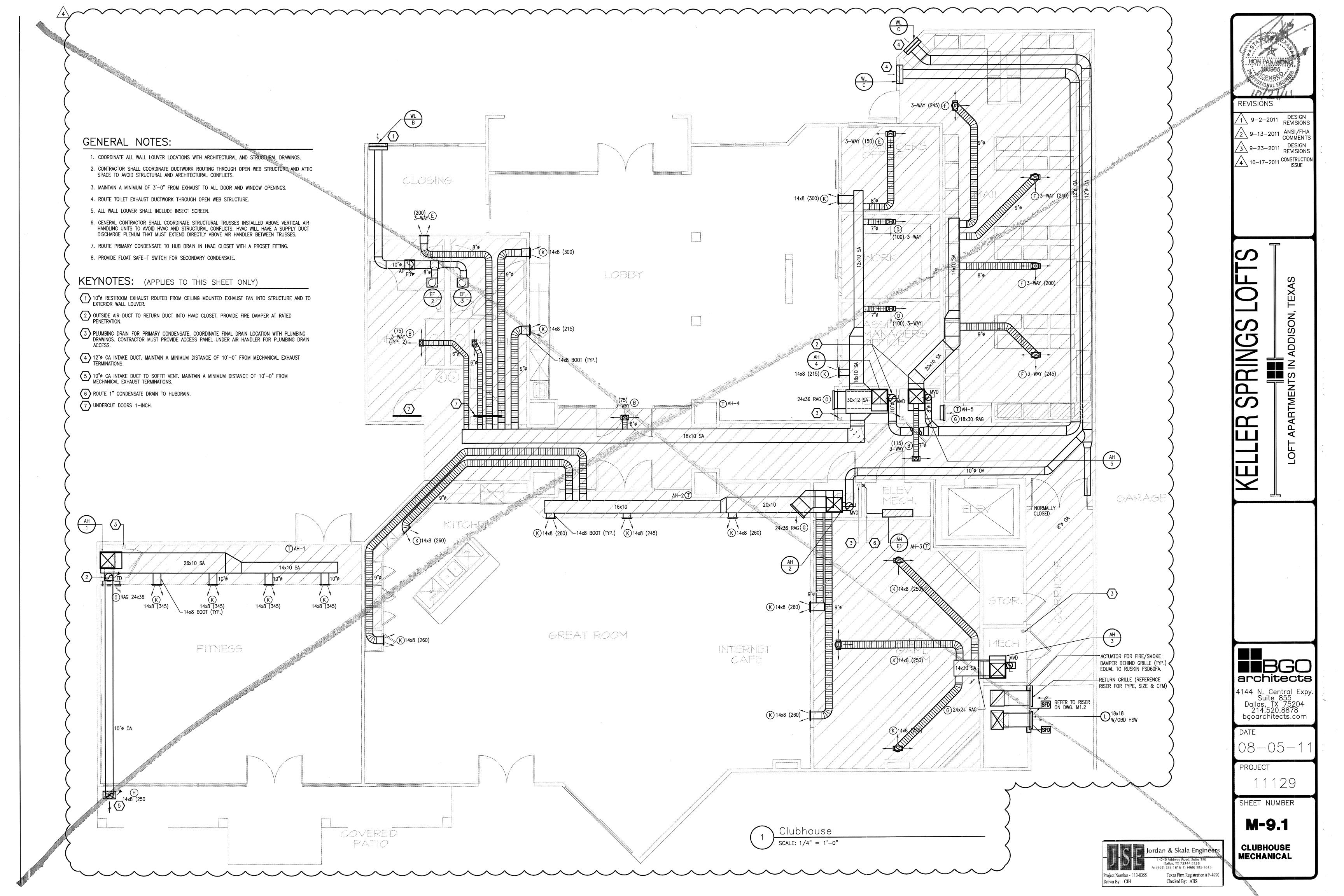
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11129

SHEET NUMBER



COORDINATION COORDINATION



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



REVISIONS

1 9-2-2011 DESIGN REVISIONS
2 9-13-2011 ANSI/FHA COMMENTS DESIGN REVISIONS
3 9-23-2011 REVISIONS
4 10-17-2011 CONSTRUCTION ISSUE DESIGN REVISIONS
5 12-21-2011 DESIGN REVISIONS
6 1-17-2012 DESIGN REVISIONS
7 2-15-2012 REVISIONS
8 3-27-2012 REVISIONS

3-27-2012 CLUBHOUSE REVISIONS
4-17-2012 COORDINATION

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5-15-2012
COORDINATION

5-30-2012
SITE
COORDINATION

12
6-01-12
LIGHTING
REVISIONS

6-29-12
SITE
COORDINATION

9-05-12
CLUB
REVISIONS



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DATE

08-05-11

PROJECT 11129

SHEET NUMBER

M-9.1

CLUBHOUSE MECHANICAL

Jordan & Skala Engineers

7855 N. Dallas Parkway, Suite 320 Dallas, TX 75287-6857

Checked By: AHS

Texas Firm Registration # F-4990