
Permit Number

Checked By/Date

Envelope Compliance Certificate 2001 IECC

COMcheck-EZ Software Version 3.0 Release 1a
Data filename: E:\06sales\065259\5259.cck

Section 1: Project Information

Project Name: Harman Dentist office
Designer/Contractor: _____
Telephone: _____
Document Author: _____
Telephone: _____
Date: _____
Notes: 065259

Section 2: General Information

Building Location (for weather data): Osage City, Kansas
Climate Zone: 10b
Heating Degree Days (base 65 degrees F): 4856
Cooling Degree Days (base 65 degrees F): 1414
Project Type: New Construction
Window / Wall Ratio: 0.12

<u>Building Type</u>	<u>Floor Area</u>
Medical and Clinical Care	4126

Section 3: Requirements Checklist

Bldg. |
Dept. |
Use |

Air Leakage, Component Certification, and Vapor Retarder Requirements

- [] | 1. All joints and penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
[] | 2. Windows, doors, and skylights certified as meeting leakage requirements.
[] | 3. Component R-values & U-factors labeled as certified.

Climate-Specific Requirements

<u>Component Name/Description</u>	<u>Gross Area</u>	<u>Cavity R-Value</u>	<u>Cont. R-Value</u>	<u>Proposed U-Factor</u>	<u>Budget U-Factor</u>
Roof 1: All-Wood Joist/Rafter/Truss	4126	38.0	0.0	0.028	0.056
Exterior Wall 1: Wood Frame, Any Spacing	743	19.0	0.0	0.068	0.102
5)3050: Vinyl Frame:Double Pane, Clear, SHGC 0.66	75	---	---	0.320	0.638
Exterior Wall 2: Wood Frame, Any Spacing	743	19.0	0.0	0.068	0.102
6(3050: Vinyl Frame:Double Pane, Clear, SHGC 0.66	120	---	---	0.320	0.638
Door 1: Glass, Clear, SHGC 0.87	20	---	---	0.490	0.638
Exterior Wall 3: Wood Frame, Any Spacing	450	19.0	0.0	0.068	0.102
2)3050: Vinyl Frame:Double Pane, Clear, SHGC 0.66	30	---	---	0.320	0.638
Exterior Wall 4: Wood Frame, Any Spacing	450	19.0	0.0	0.068	0.102
2)3050: Vinyl Frame:Double Pane, Clear, SHGC 0.66	30	---	---	0.320	0.638
Door 2: Glass, Clear, SHGC 0.36	20	---	---	0.490	0.638
Floor 1: All-Wood Joist/Truss	4126	11.0	0.0	0.075	0.064

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

Envelope PASSES: Design 17% better than code

Section 4: Compliance Statement

The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2001 IECC, Chapter 8, requirements in *COMcheck-EZ* Version 3.0 Release 1a and to comply with the mandatory requirements in the Requirements Checklist.

Principal Envelope Designer-Name

Signature

Date

Permit Number

Checked By/Date

Lighting Compliance Certificate 2001 IECC

COMcheck-EZ Software Version 3.0 Release 1a
Data filename: E:\06sales\065259\5259.cck

Section 1: Project Information

Project Name: Harman Dentist office
Designer/Contractor: _____
Telephone: _____
Document Author: _____
Telephone: _____
Date: _____
Notes: 065259

Section 2: General Information

Building Use Description by: Whole Building Type
Project Type: New Construction

<u>Building Type</u>	<u>Floor Area</u>
Medical and Clinical Care	4126

Section 3: Requirements Checklist

Bldg. |
Dept. |
Use |
[] | **Interior Lighting**
| 1. Total actual watts must be less than or equal to total allowed watts
| Allowed Watts Actual Watts Complies(Y/N)
| 6602 4496 YES
|
| **Exterior Lighting**
[] | 2. Efficacy greater than 45 lumens/W
| *Exceptions:*
| Specialized lighting highlighting features of historic buildings; signage; safety or security lighting;
| low-voltage landscape lighting.
|
| **Controls, Switching, and Wiring**
[] | 3. Independent controls for each space (switch/occupancy sensor).
| *Exception:* Areas that must be continuously illuminated.
[] | 4. Master switch at entry to hotel/motel guest room.
[] | 5. Two switches or dimmer in each space to provide uniform light reduction capability.
| *Exceptions:*
| Only one luminaire in space; An occupant-sensing device controls the area;

- | The area is a corridor, storeroom, restroom, or lobby; Areas that must be continuously illuminated;
- | Areas greater than 250 sq. ft.
- [] | 6. Automatic lighting shutoff control in spaces greater than 250 sq. ft in buildings larger than 5,000 sq. ft.
- [] | 7. Photocell/astronomical time switch on exterior lights.
- | *Exceptions:* Areas requiring lighting during daylight hours
- [] | 8. Tandem wired one-lamp and three-lamp ballasted luminaires.
- | *Exceptions:*
- | Electronic high-frequency ballasts; Luminaires not on same switch

Section 4: Compliance Statement

The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2001 IECC, Chapter 8, requirements in *COMcheck-EZ* Version 3.0 Release 1a and to comply with the mandatory requirements in the Requirements Checklist.

Principal Lighting Designer-Name

Signature

Date

Lighting Application Worksheet

2001 IECC

COMcheck-EZ Software Version 3.0 Release 1a

Section 1: Allowed Lighting Power Calculation

A	B	C	D
		Total	
	Floor	Allowed	Allowed
	Area	Watts	Watts
<u>Building Type</u>	<u>(ft²)</u>	<u>(watts/ft²)</u>	<u>(B x C)</u>
Medical and Clinical Care	4126	1.6	6602
Total Allowed Watts =			6602

Section 2: Actual Lighting Power Calculation

A	B	C	D	E	F
Fixture	Fixture Description /	Lamps/	# of	Fixture	
<u>ID</u>	<u>Lamp Description / Wattage Per Lamp / Ballast</u>	<u>Fixture</u>	<u>Fixtures</u>	<u>Watt.</u>	<u>(D x E)</u>
1	48" T12 ES 32W / Electronic	2	17	64	1088
2	48" T12 ES 32W / Electronic	3	13	96	1248
3	Incandescent 60W	1	20	60	1200
4	Incandescent 60W	1	16	60	960
Total Actual Watts =				4496	

Section 3: Compliance Calculation

If the *Total Allowed Watts* minus the *Total Actual Watts* is greater than or equal to zero, the building complies.

Total Allowed Watts = 6602
 Total Actual Watts = 4496
 Project Compliance = 2106

Lighting PASSES: Design 32% better than code

Permit Number

Checked By/Date

Mechanical Compliance Certificate 2001 IECC

COMcheck-EZ Software Version 3.0 Release 1a
Data filename: E:\06sales\065259\5259.cck

Section 1: Project Information

Project Name: Harman Dentist office
Designer/Contractor: _____
Telephone: _____
Document Author: _____
Telephone: _____
Date: _____
Notes: 065259

Section 2: General Information

Building Location (for weather data): Osage City, Kansas
Climate Zone: 10b
Heating Degree Days (base 65 degrees F): 4856
Cooling Degree Days (base 65 degrees F): 1414
Project Type: New Construction

Section 3: Mechanical Systems List

<u>Quantity</u>	<u>System Type & Description</u>
1	HVAC System 1: Cooling: Split System, Capacity ≥ 65 - < 90 kBtu/h, Air-Cooled Condenser / Single Zone
1	HVAC System 3: Cooling: Split System, Capacity ≥ 65 - < 90 kBtu/h, Air-Cooled Condenser / Single Zone
1	Water Heating 1: Service Water Heater

Section 4: Requirements Checklist

Bldg. |
Dept. |
Use |
| **Requirements Specific To: HVAC System 1**
[] | 1. Equipment minimum efficiency:
| Split System: 10.3 EER
[] | 2. Integrated air economizer required
|
| **Requirements Specific To: HVAC System 3**
[] | 1. Equipment minimum efficiency:
| Split System: 10.3 EER

[] | 2. Integrated air economizer required

| **Requirements Specific To: Water Heating 1**

[] | 1. Heat traps in inlet/outlet fittings

[] | 2. 1/2-in. insulation on 8 ft of inlet/outlet piping if no integral heat traps

| **Generic Requirements: Must be met by all systems to which the requirement is applicable**

[] | 1. Load calculations per 1997 ASHRAE Fundamentals

[] | 2. Plant equipment and system capacity no greater than needed to meet loads

| - Exception: Standby equipment automatically off when primary system is operating

| - Exception: Multiple units controlled to sequence operation as a function of load

[] | 3. Minimum one temperature control device per system

[] | 4. Minimum one humidity control device per installed humidification/dehumidification system

[] | 5. Automatic Controls: Setback to 55 deg. F (heat) and 85 deg. F (cool); 7-day clock,
2-hour occupant override, 10-hour backup

| - Exception: Continuously operating zones

| - Exception: 2 kW demand or less, submit calculations

[] | 6. Automatic shut-off dampers on exhaust systems and supply systems with airflow >3,000 cfm

[] | 7. Outside-air source for ventilation; system capable of reducing OSA to required minimum

[] | 8. R-5 supply and return air duct insulation in unconditioned spaces

| R-8 supply and return air duct insulation outside the building

| R-8 insulation between ducts and the building exterior when ducts are part of a building assembly

| - Exception: Ducts located within equipment

| - Exception: Ducts with interior and exterior temperature difference not exceeding 15 deg. F.

[] | 9. Ducts sealed - longitudinal seams on rigid ducts; transverse seams on all ducts;
UL 181A or 181B tapes and mastics

[] | 10. Mechanical fasteners and sealants used to connect ducts and air distribution equipment

[] | 11. Hot water pipe insulation: 1 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in.

| Chilled water/refrigerant/brine pipe insulation: 1 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in.

| Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.

| - Exception: Piping within HVAC equipment

| - Exception: Fluid temperatures between 55 and 105 deg. F

| - Exception: Fluid not heated or cooled

| - Exception: Runouts <4 ft in length

[] | 12. Operation and maintenance manual provided to building owner

[] | 13. Balancing devices provided in accordance with IMC 603.15

[] | 14. Newly purchased service water heating equipment meets the efficiency requirements

[] | 15. Water heater temperature controls: 110 deg. F for dwelling units or 90 deg. F
for other occupancies

[] | 16. Stair and elevator shaft vents are equipped with motorized dampers

Section 5: Compliance Statement

The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2001 IECC, Chapter 8, requirements in COMcheck-EZ Version 3.0 Release 1a and to comply with the mandatory requirements in the Requirements Checklist.

Principal Mechanical Designer-Name

Signature

Date

Mechanical Requirements Description

2001 IECC

COMcheck-EZ Software Version 3.0 Release 1a

Data filename: E:\06sales\065259\5259.cck

The following list provides more detailed description of the requirements in Section 4 of the Mechanical Compliance Certificate.

Requirements Specific To: HVAC System 1

1. The specified heating and/or cooling equipment is covered by ASHRAE 90.1 Code and must meet the following minimum efficiency: Split System: 10.3 EER
2. An integrated air economizer is required for individual cooling systems over 65 kBtu/h in the selected climate. An integrated economizer allows simultaneous operation of outdoor-air and mechanical cooling.

Requirements Specific To: HVAC System 3

1. The specified heating and/or cooling equipment is covered by ASHRAE 90.1 Code and must meet the following minimum efficiency: Split System: 10.3 EER
2. An integrated air economizer is required for individual cooling systems over 65 kBtu/h in the selected climate. An integrated economizer allows simultaneous operation of outdoor-air and mechanical cooling.

Requirements Specific To: Water Heating 1

1. Heat traps are required on noncirculating water heating systems on both inlet and outlet connections. Heat traps may be purchased or field-fabricated by creating a loop or inverted U-shaped arrangement on the inlet and outlet pipes.
2. Pipe insulation for the specified noncirculating service hot water system is required for all piping in the following categories:a) the first 8 ft of outlet piping from any constant-temperature, noncirculating storage systemb) the inlet piping between the storage tank and a heat trap in a noncirculating storage systemPipe insulation must be at least 1/2 in. and have a conductivity no $>0.28 \text{ Btu}\cdot\text{in}/(\text{h}\cdot\text{ft}^2\cdot^\circ\text{F})$.

Generic Requirements: Must be met by all systems to which the requirement is applicable

1. Design heating and cooling loads for the building must be determined using procedures equivalent to those in Chapters 27 and 28 of the ASHRAE Handbook of Fundamentals or an approved equivalent calculation procedure.
2. All equipment and systems must be sized to be no greater than needed to meet calculated loads. A single piece of equipment providing both heating and cooling must satisfy this provision for one function with the capacity for the other function as small as possible, within available equipment options.
 - Exception: The equipment and/or system capacity may be greater than calculated loads for standby purposes. Standby equipment must be automatically controlled to be off when the primary equipment and/or system is operating.
 - Exception: Multiple units of the same equipment type whose combined capacities exceed the calculated load are allowed if they are provided with controls to sequence operation of the units as the load increases or decreases.
3. Each heating or cooling system serving a single zone must have its own temperature control device.
4. Each humidification system must have its own humidity control device.
5. The system or zone control must be a programmable thermostat or other automatic control meeting the following criteria:a) capable of setting back temperature to 55 degree F during heating and setting up to 85 degree F during coolingb) capable of automatically setting back or shutting down systems during unoccupied hours using 7 different day schedulesc) have an accessible 2-hour occupant override) have a battery back-up capable of maintaining programmed settings for at least 10 hours without power.
 - Exception: A setback or shutoff control is not required on thermostats that control systems serving areas that operate continuously.
 - Exception: A setback or shutoff control is not required on systems with total energy demand of 2 kW (6,826 Btu/h) or less.
6. Outdoor-air supply systems with design airflow rates $>3,000 \text{ cfm}$ of outdoor air and all exhaust systems must have

dampers that are automatically closed while the equipment is not operating.

7. The system must supply outside ventilation air as required by Chapter 4 of the International Mechanical Code. If the ventilation system is designed to supply outdoor-air quantities exceeding minimum required levels, the system must be capable of reducing outdoor-air flow to the minimum required levels.
8. Air ducts must be insulated to the following levels:
 - a) Supply and return air ducts for conditioned air located in unconditioned spaces (spaces neither heated nor cooled) must be insulated with a minimum of R-5. Unconditioned spaces include attics, crawl spaces, unheated basements, and unheated garages.
 - b) Supply and return air ducts and plenums must be insulated to a minimum of R-8 when located outside the building.
 - c) When ducts are located within exterior components (e.g., floors or roofs), minimum R-8 insulation is required only between the duct and the building exterior.
 - Exception: Duct insulation is not required on ducts located within equipment.
 - Exception: Duct insulation is not required when the design temperature difference between the interior and exterior of the duct or plenum does not exceed 15 degree F.
9. All joints, longitudinal and transverse seams, and connections in ductwork must be securely sealed using weldments; mechanical fasteners with seals, gaskets, or mastics; mesh and mastic sealing systems; or tapes. Tapes and mastics must be listed and labeled in accordance with UL 181A or UL 181B.
10. Mechanical fasteners and seals, mastics, or gaskets must be used when connecting ducts to fans and other air distribution equipment, including multiple-zone terminal units.
11. All pipes serving space-conditioning systems must be insulated as follows:
 - Hot water piping for heating systems:
 - 1 in. for pipes \leq 1 1/2-in. nominal diameter
 - 2 in. for pipes $>$ 1 1/2-in. nominal diameter.
 - Chilled water, refrigerant, and brine piping systems:
 - 1 in. insulation for pipes \leq 1 1/2-in. nominal diameter
 - 1 1/2 in. insulation for pipes $>$ 1 1/2-in. nominal diameter.
 - Steam piping:
 - 1 1/2 in. insulation for pipes \leq 1 1/2-in. nominal diameter
 - 3 in. insulation for pipes $>$ 1 1/2-in. nominal diameter.
 - Exception: Pipe insulation is not required for factory-installed piping within HVAC equipment.
 - Exception: Pipe insulation is not required for piping that conveys fluids having a design operating temperature range between 55 degrees F and 105 degrees F.
 - Exception: Pipe insulation is not required for piping that conveys fluids that have not been heated or cooled through the use of fossil fuels or electric power.
 - Exception: Pipe insulation is not required for runout piping not exceeding 4 ft in length and 1 in. in diameter between the control valve and HVAC coil.
12. Operation and maintenance documentation must be provided to the owner that includes at least the following information:
 - a) equipment capacity (input and output) and required maintenance actions
 - b) equipment operation and maintenance manuals
 - c) HVAC system control maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions; desired or field-determined set points must be permanently recorded on control drawings, at control devices, or, for digital control systems, in programming comments
 - d) complete narrative of how each system is intended to operate.
13. Each supply air outlet or diffuser and each zone terminal device (such as VAV or mixing box) must have its own balancing device. Acceptable balancing devices include adjustable dampers located within the ductwork, terminal devices, and supply air diffusers.
14. Service water heating equipment must meet minimum Federal efficiency requirements included in the National Appliance Energy Conservation Act and the Energy Policy Act of 1992, which meet or exceed ASHRAE 90.1 Code. New service water heating equipment can be assumed to meet these requirements.
15. Water-heating equipment must be provided with controls that allow the user to set the water temperature to 110 °F for dwelling units and 90 °F for other occupancies. Controls must limit output temperatures of lavatories in public facility restrooms to 110 °F.
16. Stair and elevator shaft vents must be equipped with motorized dampers capable of being automatically closed during normal building operation and interlocked to open as required by fire and smoke detection systems. All gravity

outdoor air supply and exhaust hoods, vents, and ventilators must be equipped with motorized dampers that will automatically shut when the spaces served are not in use.

Exceptions:

- Gravity (non-motorized) dampers are acceptable in buildings less than three stories in height above grade.
- Ventilation systems serving unconditioned spaces.

065259 - DENTAL OFFICE HVAC LOAD ANALYSIS

for

KAN BUILD



Prepared By:

K.H. GIRARDIN

Kan Build INC.

NICHOLS RD. & HWY. 31

OSAGE CITY, KANSAS 66523

(785) 528-4163

03-06-2006



Project Summary

Design Data

Project Name: 065259 - DENTAL OFFICE
 Reference City: Topeka, Kansas
 Daily Temperature Range: Medium
 Latitude: 39 Degrees
 Elevation: 877 Feet

	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum.	Indoor Dry Bulb	Grains Difference
Winter:	5	N/A	N/A	72	N/A
Summer:	101	76	50%	75	33

Check Figures

Total Building Supply CFM: 2245
 Square feet of room area: 4,611
 CFM per square foot: 0.487
 Square feet per ton: 862.454

Building Loads

Total heating required with outside air: 115,778 Btuh 115.778 MBH
 Total sensible gain: 49,401 Btuh 79 %
 Total latent gain: 12,760 Btuh 21 %
 Total cooling required with outside air: 62,161 Btuh
 5.18 Tons (based on sensible + latent)
 5.346 Tons (based on 77% sensible capacity)

Notes

Calculations are based on 7th edition of ACCA Manual J.
 All computed results are estimates as building use and weather may vary.
 Be sure to select a unit that meets both sensible and latent loads.

Total Building Summary Loads

Component Description	Area Quan	Sen. Loss	Lat. Gain	Sen. Gain	Total Gain
1C Window Clear Glass Metal Frame	49	3,792	0	1,754	1,754
3B Window Double Pane Clear Glass TIM Frame	255	10,404	0	10,542	10,542
11E Door Metal Urethane Core	21	267	0	118	118
12H Wall R-19 + 1/2" Gypsum Board(R-0.5)	2,087	8,392	0	3,705	3,705
15E Wall 5' or More Below Grade 8/12" Blk+No Insulation	704	4,104	0	0	0
16H Ceiling R-38 Insulation	4,117	7,170	0	5,351	5,351
19F Floor Over Basement/Encl Crawl Carpet No Insulation	4,117	30,066	0	0	0
21A Basemt Floor 2' or More Below Grade	384	617	0	0	0
Subtotals for structure:	11,734	64,812	0	21,470	21,470
Active People:	29	0	6,670	8,700	15,370
Inactive People:	0	0	0	0	0
Appliances:	0	0	0	0	0
Lighting:	0	0		9,037	
Ductwork:	0	5,515	0	2,355	2,355
Infiltration: Winter CFM: 616.7, Summer CFM: 274.1	325	45,451	6,090	7,839	13,929
Ventilation: Winter CFM: 0.0, Summer CFM: 0.0	0	0	0	0	0
Sensible Gain Total:				49,401	
Temperature Swing Multiplier:				X1.00	
Building Load Totals:		115,778	12,760	49,401	62,161

Check Figures

Total Building Supply CFM:	2245	CFM per square foot:	0.487
Square feet of room area:	4,611	Square feet per ton:	862.454

Building Loads

Total heating required with outside air:	115,778 Btuh	115.778 MBH
Total sensible gain:	49,401 Btuh	79 %
Total latent gain:	12,760 Btuh	21 %
Total cooling required with outside air:	62,161 Btuh	5.18 Tons (based on sensible + latent)
		5.346 Tons (based on 77% sensible capacity)

Notes

Calculations are based on 7th edition of ACCA Manual J.
 All computed results are estimates as building use and weather may vary.
 Be sure to select a unit that meets both sensible and latent loads.

Room Load Summary Reports

System #1 Room Load Summary

Room No	Room Description	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Zone Adj Fact	Clg Adj CFM	Air Sys CFM
---Zone 1---											
1	Waiting	203	10,350	134	3-6	5,742	1,173	261	1.25	326	261
2	Lobby	217	17,124	222	3-6	6,011	1,712	273	1.00	273	273
3	File Room	107	1,216	16	1-6	635	0	29	1.00	29	29
4	Check In/Out	109	893	12	1-6	801	230	36	1.00	36	36
5	Mech	148	1,491	19	1-6	282	0	13	1.00	13	13
6	Stair	120	4,900	64	1-6	1,166	333	53	1.00	53	53
7	Business	123	1,026	13	1-6	1,000	230	45	1.00	45	45
8	Work	219	5,064	66	1-6	2,620	698	119	1.00	119	119
9	Consult	121	4,049	53	1-6	2,284	698	104	1.19	123	104
10	Exam 1	158	4,400	57	1-6	2,692	698	122	1.19	145	122
18	Toilet	62	779	10	1-6	169	0	8	1.00	8	8
19	Office 126	158	4,437	58	1-6	1,800	468	82	1.00	82	82
20	Women	80	759	10	1-6	109	0	5	1.00	5	5
21	Men	80	759	10	1-6	109	0	5	1.00	5	5
23	Pano	95	902	12	1-6	803	230	37	1.00	37	37
26	Hall 105	87	826	11	1-6	119	0	5	1.00	5	5
30	Claset 125	10	95	1	1-0	14	0	1	1.00	1	1
32	Basement	384	4,957	64	1-6	0	0	0	1.00	0	0
System 1 Totals		2481	64,027	832		26,356	6,470	1,198		1,306	1,198

*Main Trunk Size: 36x6 in.

*Main Trunk velocity constraints were not met due to duct schedule limitations.

Main Trunk Air Velocity = 1017 Feet/Minute

System #1 Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	2.735	80%/20%	26,356	6,470	32,826
Recommended:	2.852	77%/23%	26,356	7,872	34,228

System #1 Equipment Data

	<u>Heating System</u>	<u>Cooling System</u>
Type:	Natural Gas Furnace	Standard A/C
Model:	LENNOX	LENNOX
Efficiency:	80%	13 SEER

Room Load Summary Reports

System #2 Room Load Summary

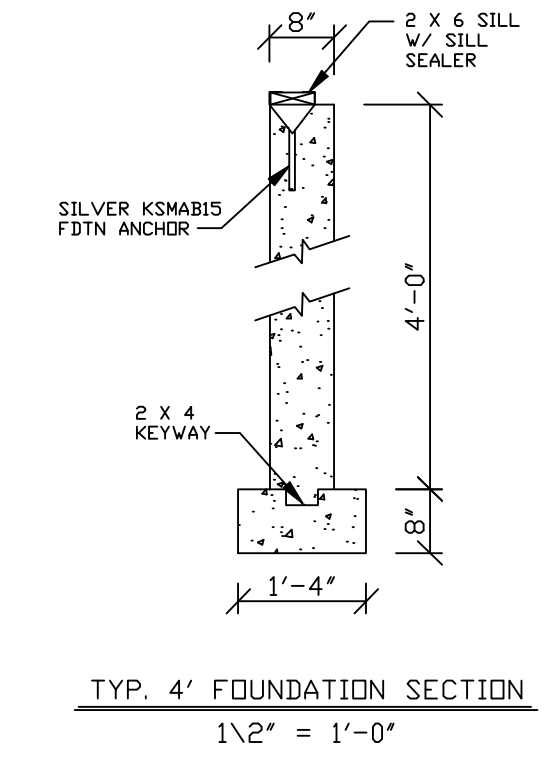
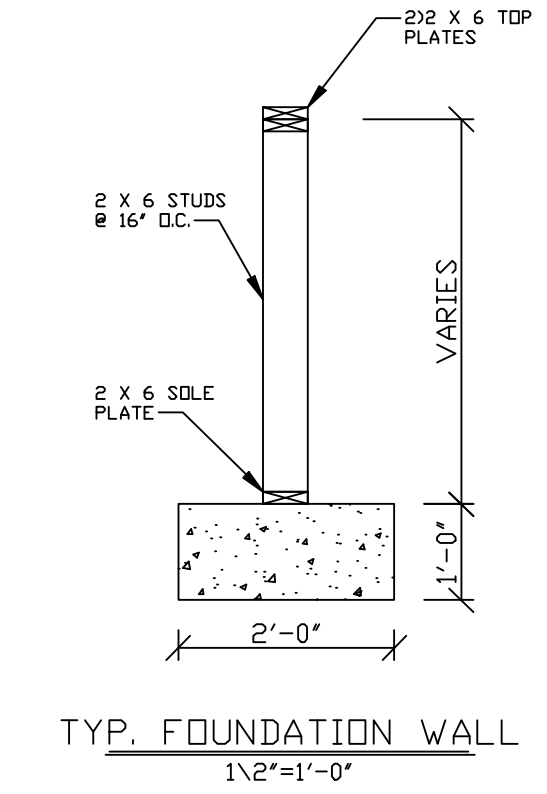
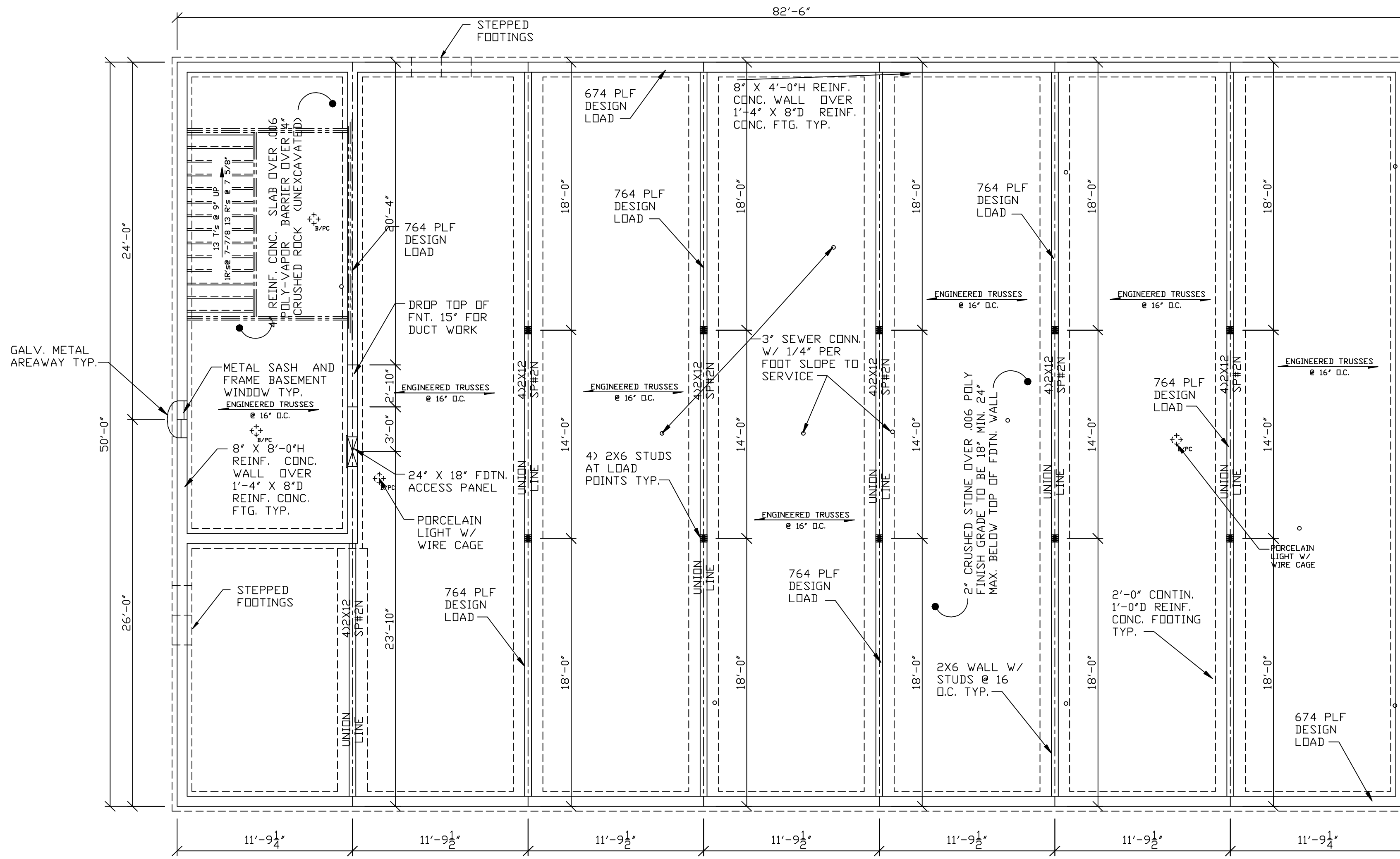
Room No	Description	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Zone Adj Fact	Clg Adj CFM	Air Sys CFM
---Zone 1---											
11	Exam 2	157	5,308	69	1-6	2,492	815	113	1.19	135	113
12	Exam 3	158	5,317	69	1-6	2,493	815	113	1.19	135	113
13	Exam 4	154	5,773	75	2-6	3,064	815	139	1.19	166	139
14	Procedue	160	1,975	26	1-6	1,408	460	64	1.00	64	64
15	Exam 5	154	5,773	75	2-6	2,828	815	129	1.00	129	129
16	Exam 6	158	5,317	69	1-6	2,615	815	119	1.00	119	119
17	Office 123	150	5,241	68	1-6	1,931	585	88	1.00	88	88
22	Lab	112	1,064	14	1-6	826	230	38	1.00	38	38
24	Mech 130	40	380	5	1-0	55	0	3	1.00	3	3
25	Sterile	159	1,510	20	1-6	890	230	40	1.00	40	40
27	Hall 111	311	6,505	84	1-6	2,132	355	97	1.05	102	97
28	Hall 118	86	817	11	1-6	118	0	5	1.00	5	5
29	Hall 116	311	6,505	84	1-6	2,132	355	97	1.05	102	97
31	Closet 120	20	266	3	1-0	61	0	3	1.00	3	3
System 2 Totals		2130	51,751	672		23,045	6,290	1,048		1,126	1,048

Main Trunk Size: 36x6 in.

System #2 Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	2.445	79%/21%	23,045	6,290	29,335
Recommended:	2.494	77%/23%	23,045	6,884	29,929

Kan Build Inc.		DATE:	13-Mar-06					
ELECTRICAL LOAD CALCULATION								
OTHER		MODEL:	OFFICE GOSHEN CO.					
		SALES ORDER:	XXXX					
CLASS	AREA							
OFFICE	4126	SQ. FT.	X	3.5	va =	14441	va	
		SQ. FT.	X	0	va =	0	va	
		SQ. FT.	X	0	va =	0	va	
		SQ. FT.	X	0	va =	0	va	
TOTAL LIGHT LOAD						14441	va	
Receptacle/Outlet number of	90	RCPT	X	180	va =	16200	va	
Total Receptacle Load 10KW @100% Remainder @50%						13100	va	
Electric Heat (per NEC. ART. 424-3 (b) at 125%)								
Electric Heat	0	*K/240	=	0	Amps	0		
Furnace Blower (@ 125%)	24	Amps	X	120	volts =	3600	va	
Electric Heat + Furnace Blower						3600	va	
AC or Heat Pump + Furnace Blower	63	Amps	X	240	volts =	18720	va	
(Compare electric heat against A/C load. Omit the smaller.)								
Heating Cooling Load						18720	va	
Other Continuous Loads								
		Amps	X	120	volts =	0	va	
		Amps	X	120	volts =	0	va	
		Amps	X		volts =	0	va	
		Amps	X		volts =	0	va	
		Amps	X		volts =	0	va	
		Amps	X		volts =	0	va	
		Amps	X		volts =	0	va	
Lighting + Other Continuous Loads @125%						18051	va	
Other Nocontinuous Loads								
		Amps	X	120	volts =	0	va	
	0	Amps	X	240	volts =	0	va	
	0	Amps	X	240	volts =	0	va	
	0	Amps	X	240	volts =	0	va	
	0	Amps	X	120	volts =	0	va	
		Amps	X	120	volts =	0	va	
ADJUSTMENT FOR 70% Demand Factors						0	va	
Total Nocntinuous Loads (RCPT+HVAC Others)						31820	va	
Total loads		208	Amps	X	240	volts =	49871	va



FOUNDATION PLAN
3/16"=1'-0"

NOTES:

- THIS DRAWING IS INTENDED TO PROVIDE OVERALL PLAN-VIEW DIMENSIONS ONLY. PIER, FOOTING, AND FOUNDATION DETAILS ARE BASED ON ASSUMED ALLOWABLE SOIL BEARING PRESSURES AND SOIL CONDITIONS AND SHOULD BE USED AS A GUIDE ONLY. IT SHALL BE THE FOUNDATION CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LOCAL SOIL CONDITIONS AND NOTIFY ALL-AMERICAN HOMES AND ITS ENGINEERS OF ANY DIFFERING SITE CONDITIONS. ALL PIERS, FOOTINGS, FOUNDATIONS, AND OTHER ON-SITE CONSTRUCTION SHALL COMPLY STRICTLY WITH ALL APPLICABLE STATE AND LOCAL CODES.
- SILVER KSMABIS FOUNDATION ANCHOR OR EQUAL SPACED AT 6'-0" MAXIMUM INTERVALS AND 2'-0" FROM CORNER TO ANCHOR. 2x6 SILL PLATE AROUND PERIMETER
- SEWER CONNECTIONS SHOWN ARE LOCATIONS PLUMB TO BY ALL-AMERICAN HOMES, BUILDING SEWER THAT ENTERS FOUNDATION BELOW BASEMENT SLAB MAY BE ROUGHED IN AT THESE LOCATIONS. BUILDING SEWER THAT ENTERS ABOVE BASEMENT SLAB SHALL BE EXTENDED BELOW FLOOR FROM THESE LOCATIONS TO BUILDING SEWER.
- FOR CRAWL SPACE FOUNDATIONS, INSTALL FOUNDATION VENTS TO PROVIDE VENTING PER UBC 1997 SEC. 2306.7
- DESIGN LOADS
DEAD LOAD - ACTUAL MATERIAL WEIGHT
FLOOR LOAD - 40 PSF
ROOF LOAD - 30 PSF
WIND LOAD - 20 PSF
SOIL BEARING CAP. - 2,500 PSF
SEISMIC ZONE- 2

NOTES:
OCCUPANCY GROUP B
CONSTRUCTION TYPE V-N

APPLICABLE CODES:
UBC - VOL. I,II&III - 1997 EDITION
UMC - 2003 EDITION
UPC - 2000 EDITION
NEC - 1999 EDITION
MEC - 2000 EDITION

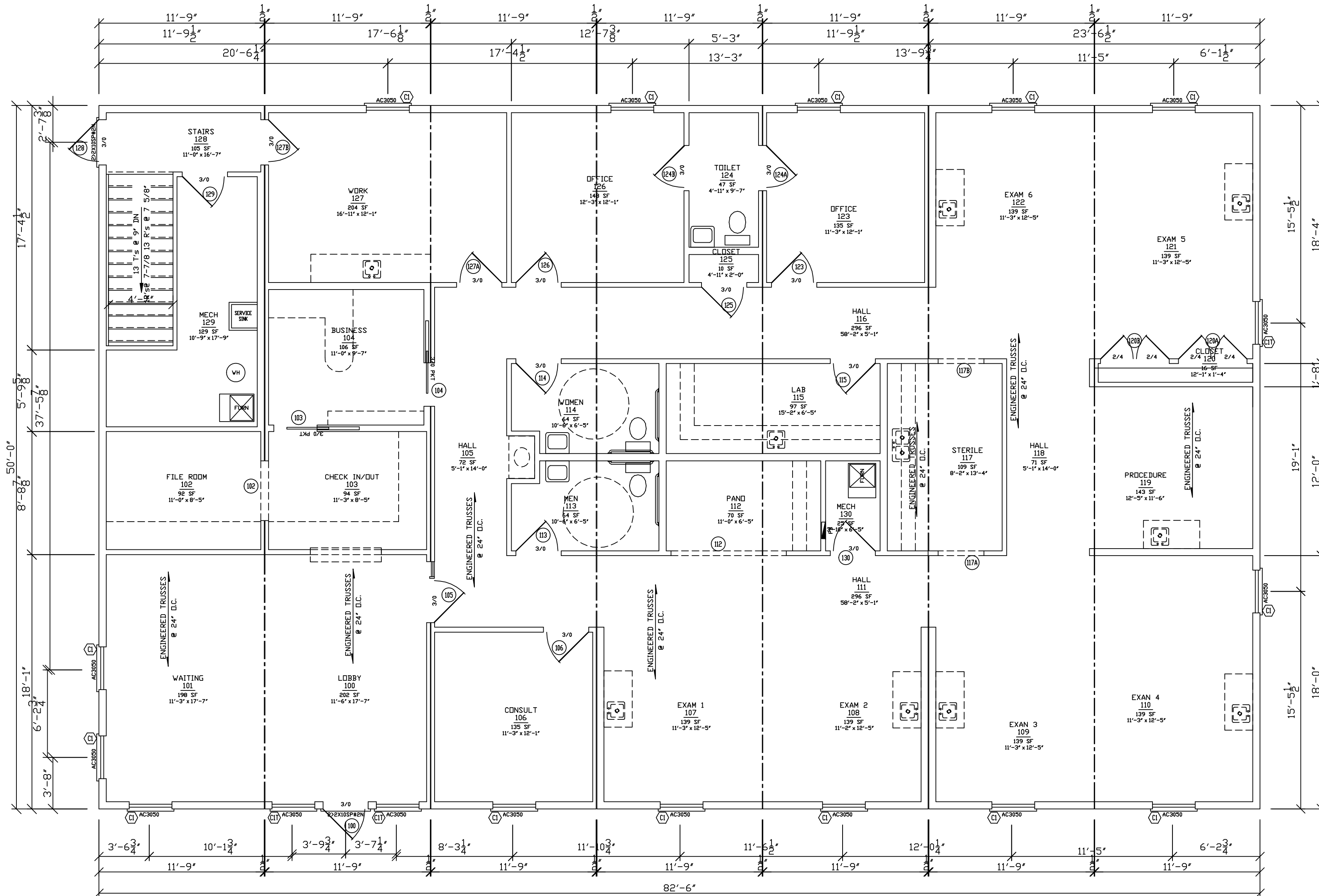
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NOTE:
DIMENSIONS SHOWN ARE OVERALL FOR MODULES, FOUNDATION DIMENSIONS SHALL BE INCREASED AS REQUIRED TO PROVIDED SUPPORT FOR BRICK / STONE VENEER AT LOCATIONS INDICATED BY OWNER.

STATE:	KANSAS
SCALE:	3/16" = 1'-0"
DATE:	02/23/06
DRAWN BY:	JOHN W. ANSTAETT
CHECKED BY:	
DESIGNER:	
PROJECT:	FOUNDATION
CLIENT:	DENTIST OFFICE
NO.:	

CLIENTS:	OSAGE CITY, KANSAS
PROJECT:	FOUNDATION
DESIGNER:	JOHN W. ANSTAETT
CHECKED BY:	
DATE:	02/23/06
NO.:	

CLIENTS:	OSAGE CITY, KANSAS
PROJECT:	FOUNDATION
DESIGNER:	JOHN W. ANSTAETT
CHECKED BY:	
DATE:	02/23/06
NO.:	
REVISIONS:	
PROJECT NUMBER:	065259
SHEET:	A1

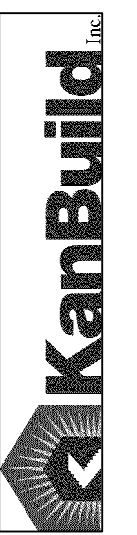


NOTES:
 ALL EXTERIOR OPENING HEADERS
 ARE 2" x 12 SP#2 N UNLESS
 NOTED OTHERWISE
 ALL INTERIOR PARTITIONS SHALL
 HAVE R-11 BATT INSULATION

FLOOR PLAN
 3/16"=1'-0"
 4125 SQ. FT.

NOTE:
 SAFETY GLAZING IN EXIT DOORS
 PER IBC SEC 2406.2
 SIGNAGE SHALL BE PROVIDED
 AT ACCESSIBLE ENTRANCES AND
 ACCESSIBLE TOILET FACILITIES
 PER ADA 4.1.2 AND 4.30 (BY OTHERS)
 HANDICAPPED RAMPS PER ADA
 ACCESSIBILITY GUIDELINES.
 ACTUAL LAYOUT MAY VARY DUE
 TO SITE CONDITIONS. (BY OTHERS)
 OPERATING MECHANISMS SHALL BE
 LOCATED PER ADA 4.27 CONTROLS
 AND OPERATING MECHANISMS.

ROOM FINISHES:
 WALLS 5/8" TYPE "X" GYPSUM
 BOARD. FLAME SPREAD
 RATING, 15.
 5/8" MOISTURE RESISTANT
 GYPSUM BOARD. FLAME SPREAD
 RATING, 15. (WET AREAS)
 CEILINGS 5/8" TYPE "X" GYPSUM
 BOARD. FLAME SPREAD
 RATING, 15.
 NOTES:
 FLOOR AND WALL COVERINGS
 PER IBC SECTIONS 1209.1 & 1209.2
 NOTE:
 DRINKING FOUNTAIN SHALL BE PROVIDED
 PER UPC TABLE 4-1 MINIMUM PLUMBING
 FACILITIES, BY OTHERS.



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STATE:	KANSAS
SCALE:	1/4" = 1'-0"
DATE:	02/23/06
DRAWN BY:	JOHN W. ANSTAETT
CHECKED BY:	
PROJECT:	DENTIST OFFICE FLOOR PLAN
DRAWING NUMBER:	

CLIENTS: KAN BUILD INC.
 OSAGE CITY, KANSAS
 PROJECT: ROBERT H. HARMON DDS
 OSAGE CITY, KANSAS

NO.	DATE	REVISION DESCRIPTION

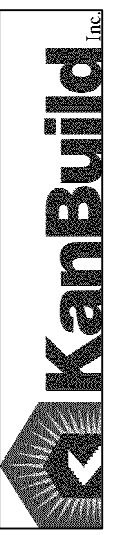
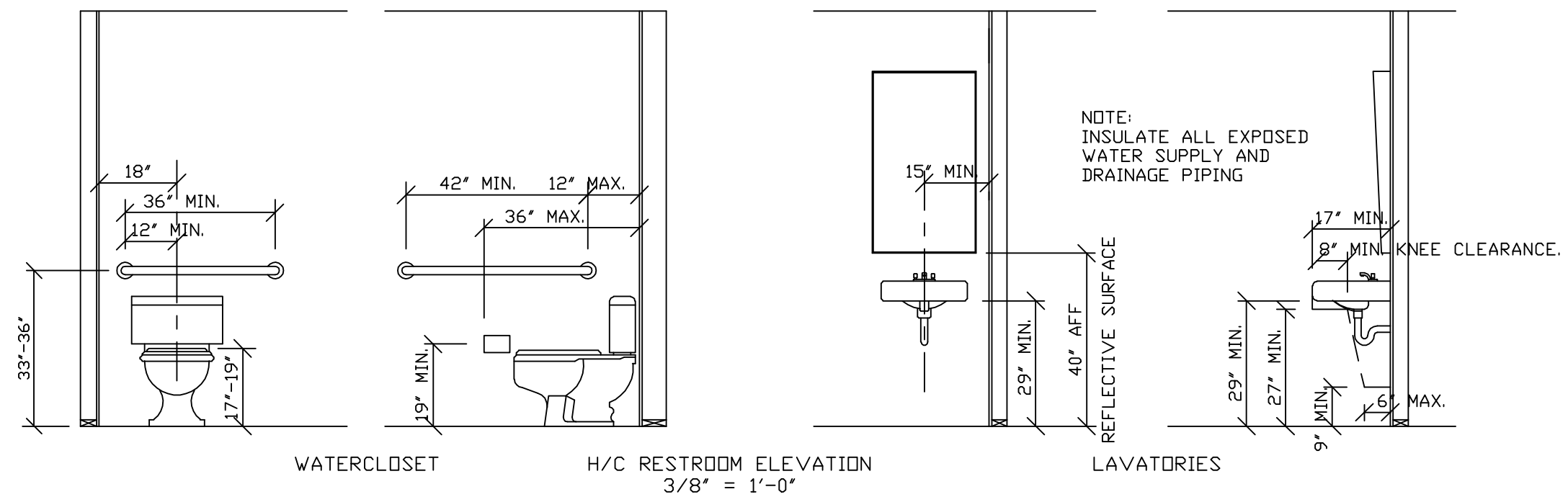
PROJECT NUMBER
 065259

WINDOW SCHEDULE

Label	Size	Detail	Glazing type	Light	Vent	Remarks	QTY
C1	AC3050		3/4" INSUL. LDW E	12.07	10.37	-	14
C1T	AC3050		3/4" INS. LDW E/T. G.	12.07	10.37	-	3

DOOR SCHEDULE

Label	Location	Size	Door	Frame	Hand	Type	Finish	Hinge	Closer	Qty
100	ENTRY DOOR	3'-0" x 7'-0"	BRONZE STOREFRONT OUT SWING	ALUM	RH	PANIC DEVICE	US15	PVT	YES	1
102	FILE ROOM	3'-0" x 6'-8"	CASE OPENING	WOOD	N/A	N/A	US15	N/A	N/A	1
103	BUSINESS OFFICE	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	N/A	POCKET	US15	PK	NO	1
104	BUSINESS OFFICE	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	N/A	POCKET	US15	PK	NO	1
105	LOBBY	3'-0" x 6'-8"	FULLTEX TEMPERED /SIDELITE	WOOD	RH	PASSAGE	US15	4X4	YES	1
106	CONSULT OFFICE	3'-0" x 6'-8"	FULLTEX TEMPERED	WOOD	LH	KEYED ENTRY	US15	4X4	YES	1
112	PANO	8'-0" x 6'-8"	CASE OPENING	WOOD	N/A	N/A	US15	N/A	N/A	1
113	MEN'S REST ROOM	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	LH	PRIVACY	US15	4X4	YES	1
114	WOMEN'S REST ROOM	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	RH	PRIVACY	US15	4X4	YES	1
115	LAB	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	LH	KEYED ENTRY	US15	4X4	YES	1
117A	STERILE	3'-0" x 6'-8"	CASE OPENING	WOOD	N/A	N/A	US15	N/A	N/A	1
117B	STERILE	3'-0" x 6'-8"	CASE OPENING	WOOD	N/A	N/A	US15	N/A	N/A	1
120A	CLOSET 120	4'-8" x 6'-8"	2) 2/4 6PL OAK 1-3/4" DOORS	WOOD	LR/RH	DUMMY	US15	4X4	YES	1
120B	CLOSET 120	4'-8" x 6'-8"	2) 2/4 6PL OAK 1-3/4" DOORS	WOOD	LR/RH	DUMMY	US15	4X4	YES	1
123	DOCTOR'S OFFICE	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	LH	KEYED ENTRY	US15	4X4	YES	1
124A	REST ROOM	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	LH	PRIVACY	US15	4X4	YES	1
124B	REST ROOM	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	LH	PRIVACY	US15	4X4	YES	1
125	HALL CLOSET	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	RH	KEYED ENRTY	US15	4X4	YES	1
126	DOCTOR'S OFFICE	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	LH	KEYED ENTRY	US15	4X4	YES	1
127A	WORK ROOM	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	RH	PASSAGE	US15	4X4	YES	1
127B	WORK ROOM	3'-0" x 6'-8"	FLUSH 18 GA. METAL 1 HOUR RATE	METAL 18 GA.	LH	PASSAGE	US15	4X4	YES	1
128	ENTRY DOOR	3'-0" x 7'-0"	BRONZE STORE FRONT OUT SWING	ALUM	RH	STORE FRONT	US15	4X4	YES	1
129	MECH. ROOM	3'-0" x 6'-8"	FLUSH 18 GA. METAL 1 HOUR RATE	METAL 18 GA.	RH	KEYED ENTRY	US15	4X4	YES	1
130	MECH. ROOM	3'-0" x 6'-8"	6PL OAK 1-3/4"	WOOD	RH	PASSAGE	US15	4X4	YES	1



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STATE:	KANSAS
SCALE:	HAS NOTED
CHECKED BY:	
DATE:	
BASE NO.:	
DRAWN BY:	JOHN W. ANSTAETT
DATE:	02/23/06
PROJECT:	FOUNDATION NOTES
REVISIONS:	

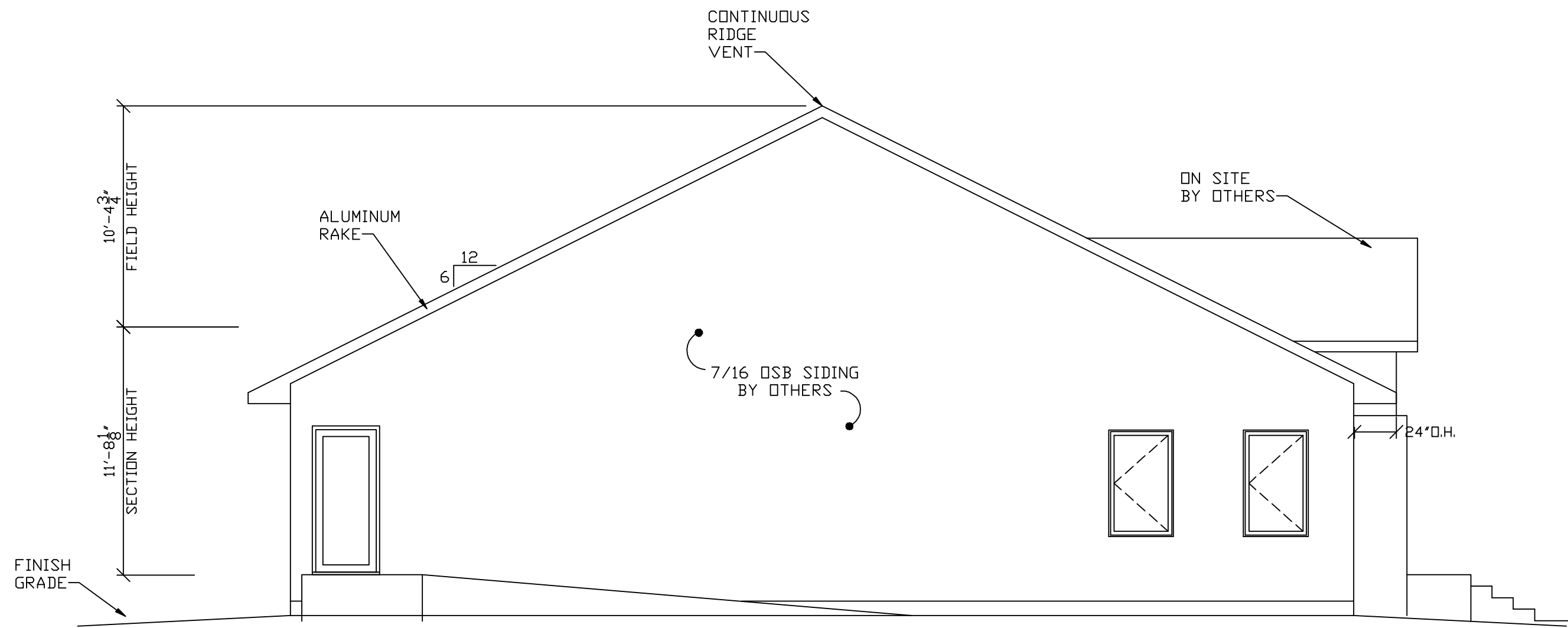
CLIENTS: KAN BUILD INC.
 OSAGE CITY, KANSAS
 PROJECT: ROBERT H. HARMON DDS
 OSAGE CITY, KANSAS

REVISIONS:	
DATE/REVISION DESCRIPTION	

PROJECT NUMBER
 065259

A3

SHEET

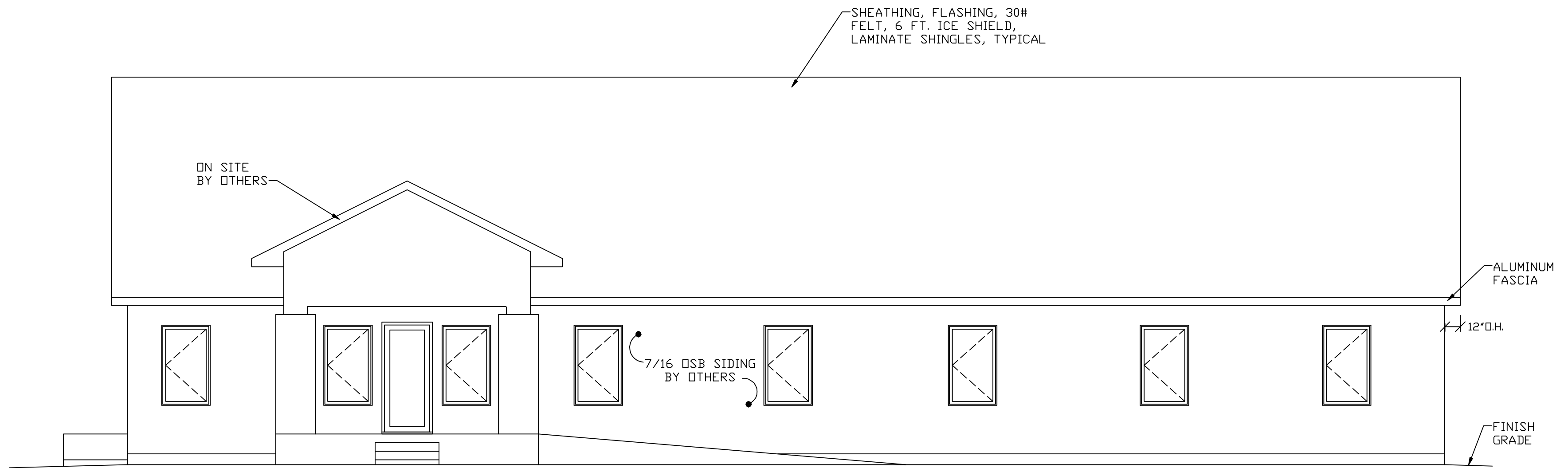


LEFT ELEVATION

3/16"=1'-0"

NOTE:
13.75 SQ. FT. OF
NET FREE ATTIC VENT

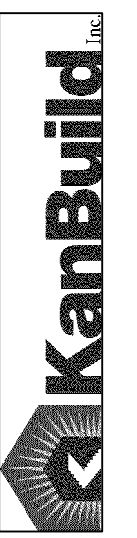
FLASHING OVER
WINDOWS AND
DOORS TYP.



FRONT ELEVATION

3/16"=1'-0"

- 112'- 9 5/8"
HINGE HEIGHT
- 110'- 3"
TOP OF WALL
- 108'- 0 3/4"
HEADER HEIGHT
- 101'- 3"
FINISH FLOOR
- 100'-0"
TOP OF FOUNDATION



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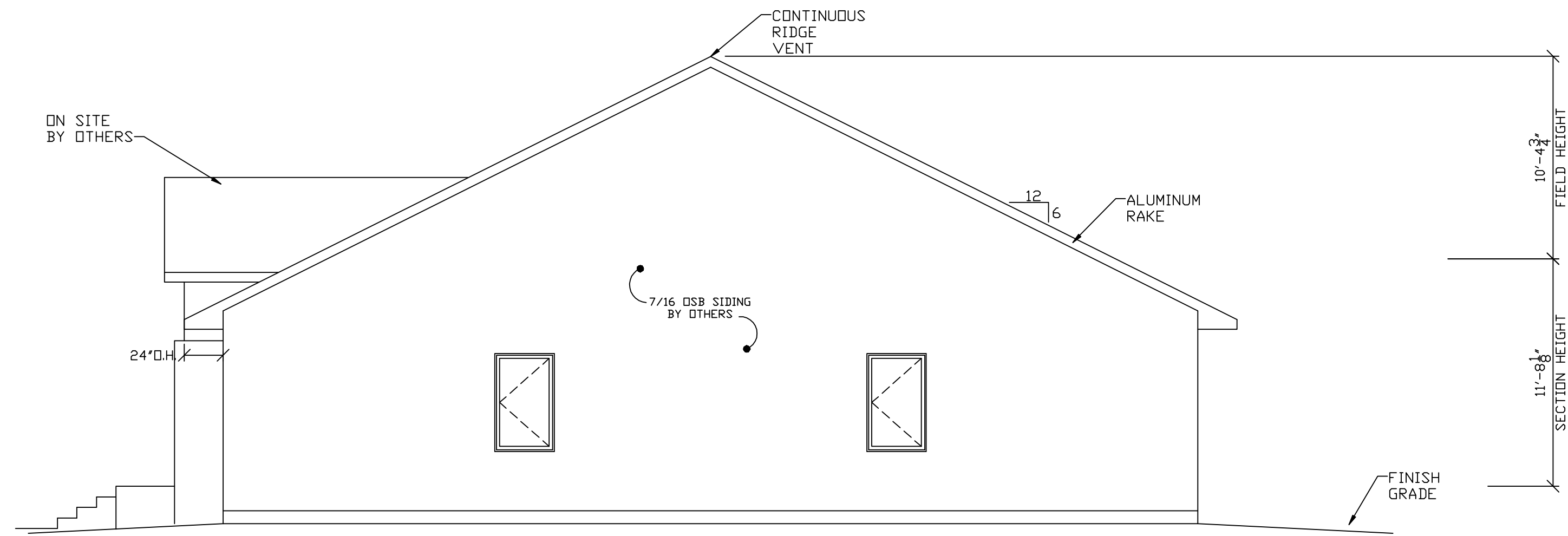
STATE:	KANSAS
SCALE:	3/16" = 1'-0"
CHECKED BY:	JOHN W. ANSTAETT
DATE:	02/23/06
PROJECT TITLE:	ELEVATIONS
DRAWN BY:	JOHN W. ANSTAETT
DATE:	02/23/06
OFFICE:	DENTIST OFFICE

CLIENTS: KAN BUILD INC.
OSAGE CITY, KANSAS
PROJECT: ROBERT H. HARMON DDS
OSAGE CITY, KANSAS

REVISIONS:	

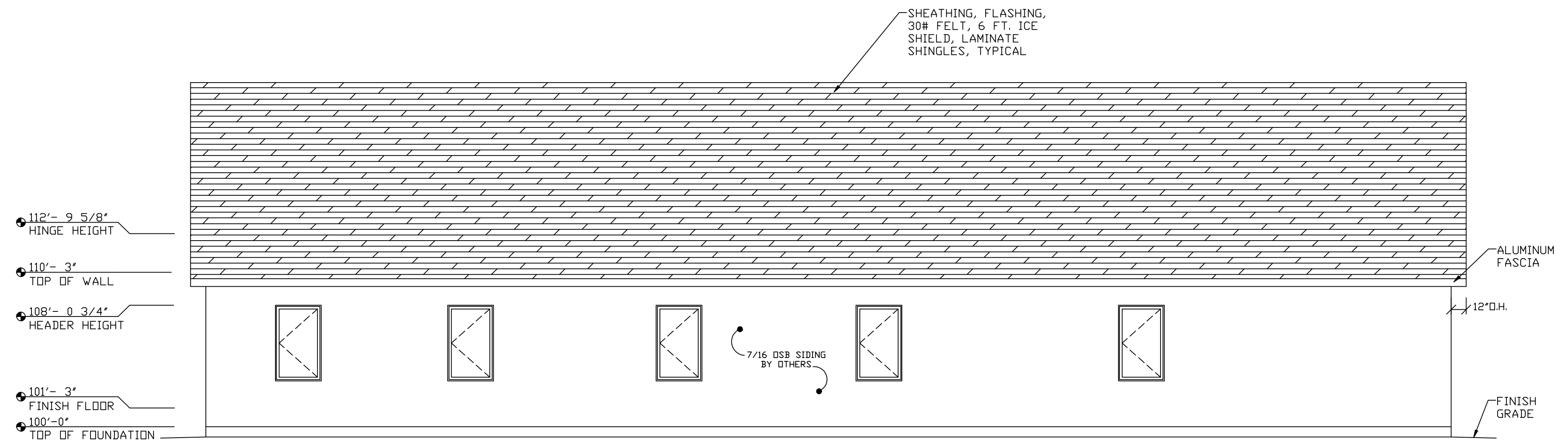
PROJECT NUMBER
065259

A5
SHEET



NOTE:
 13.75 SQ. FT. OF NET
 FREE ATTIC VENT
 FLASHING OVER
 WINDOWS AND DOORS
 TYP.

LEFT ELEVATION
 3/16"=1'-0"



112'- 9 5/8"
HINGE HEIGHT

110'- 3"
TOP OF WALL

108'- 0 3/4"
HEADER HEIGHT

101'- 3"
FINISH FLOOR

100'-0"
TOP OF FOUNDATION

REAR ELEVATION
 3/16"=1'-0"

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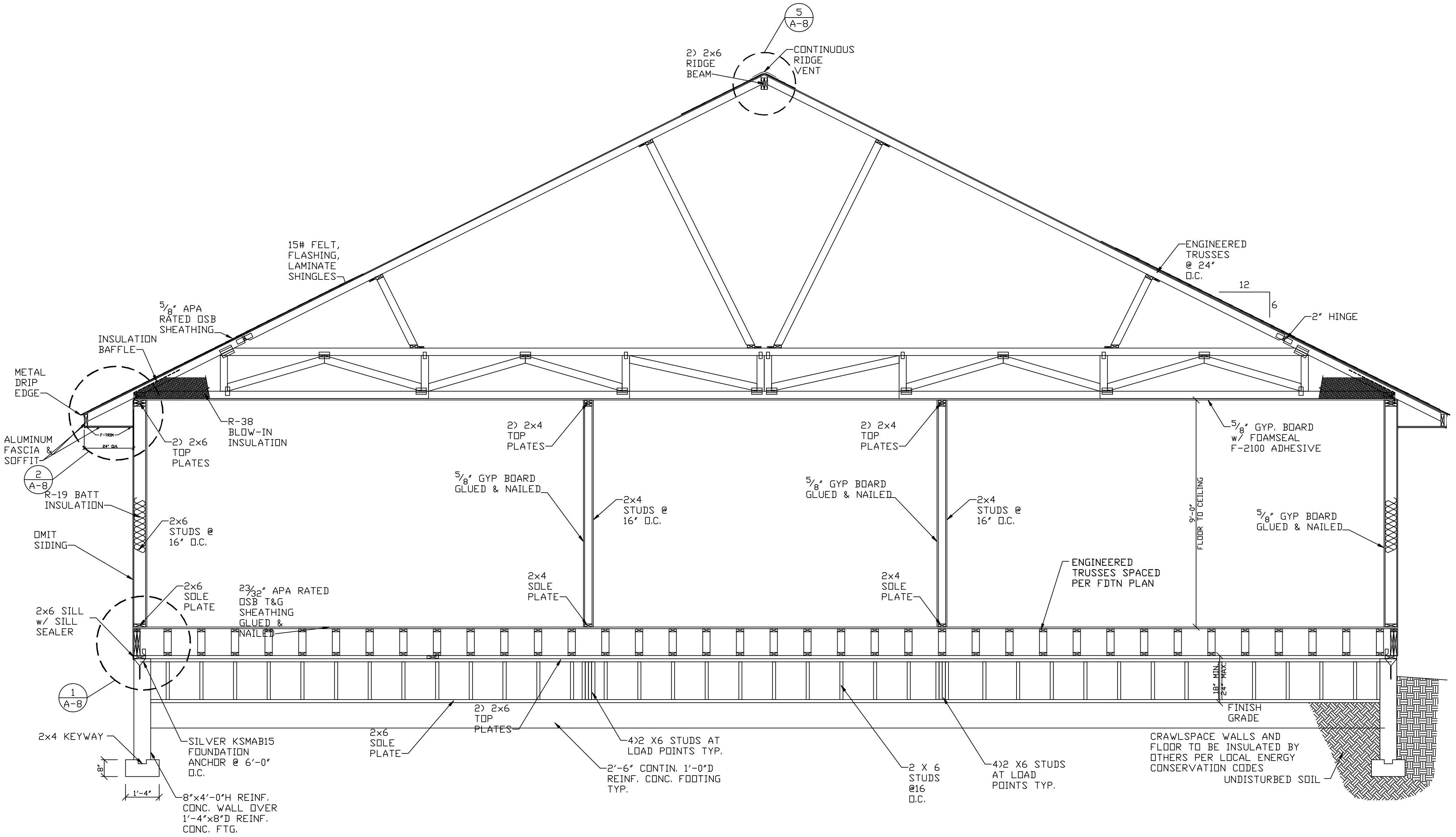
STATE:	KANSAS
SCALE:	3/16" = 1'-0"
DRAWN BY:	JOHN W. ANSTAETT
CHECKED BY:	
DATE:	02/23/06

CLIENTS:	KAN BUILD INC. OSAGE CITY, KANSAS
PROJECT:	ROBERT H. HARMON DDS OSAGE CITY, KANSAS

NO.	DATE	REVISION DESCRIPTION

PROJECT NUMBER
 065259

A4
 SHEET



STATE:	KANSAS
SCALE:	1/4" = 1'-0"
CHECKED BY:	
DATE:	

DRAWING NUMBER:	DENTIST OFFICE
SHEET TITLE:	CROSS SECTION
DRAWN BY:	
DATE:	

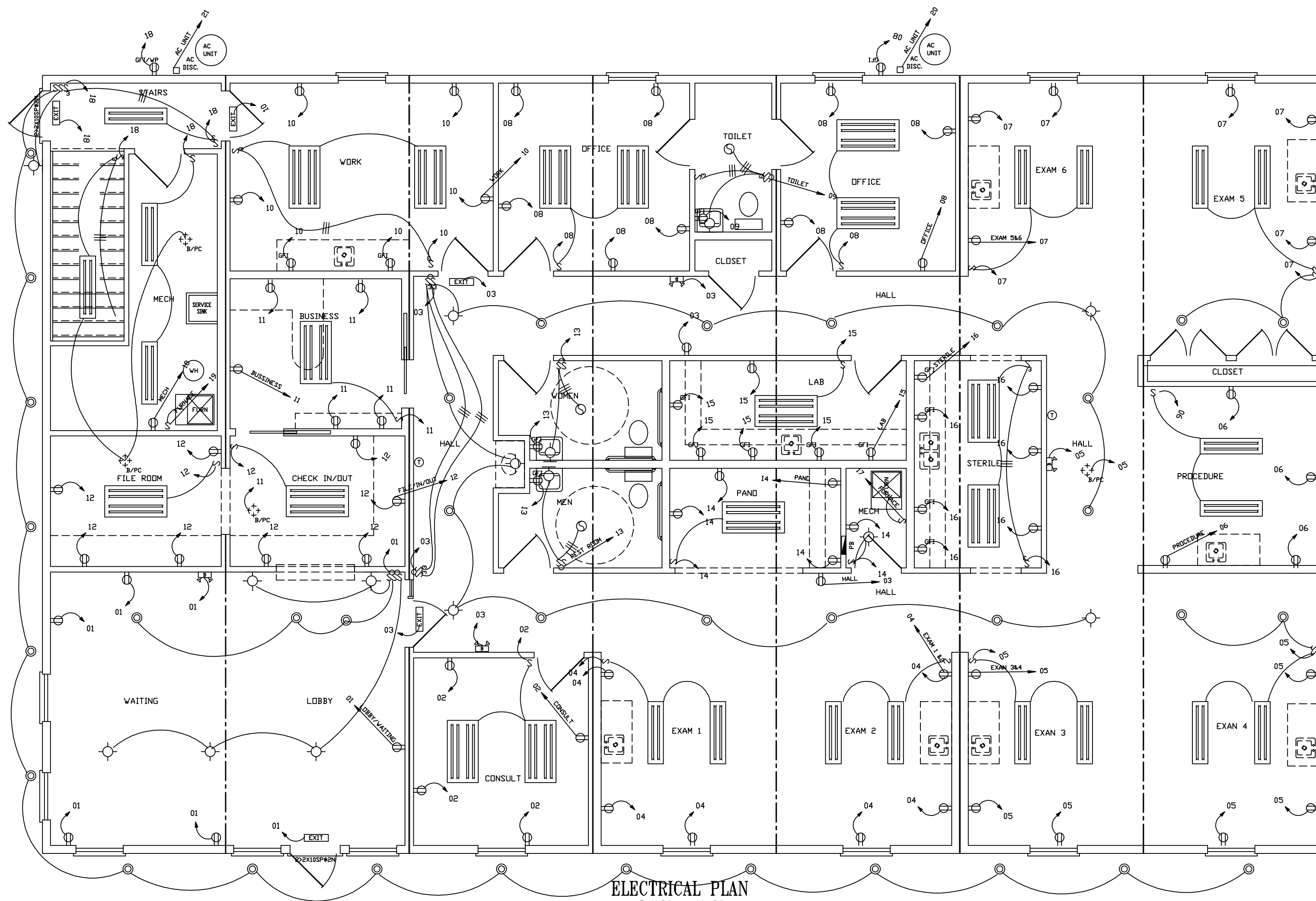
CLIENTS:	KAN BUILD INC. OSAGE CITY, KANSAS
PROJECT:	ROBERT H. HARMON DDS OSAGE CITY, KANSAS

REVISIONS:	
DATE/DATE/REVISION DESCRIPTION	
PROJECT NUMBER	045140

STATE:	KANSAS
SCALE:	1/4" = 1'-0"
DATE:	
PROJECT:	DENTIST OFFICE
SHEET TITLE:	ELECTRICAL PLAN
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	

CLIENTS:	KAN BUILD INC. OSAGE CITY, KANSAS
PROJECT:	ROBERT H. HARMON DDS OSAGE CITY, KANSAS

REVISIONS:	
DATE/REVISION DESCRIPTION	
PROJECT NUMBER	045140

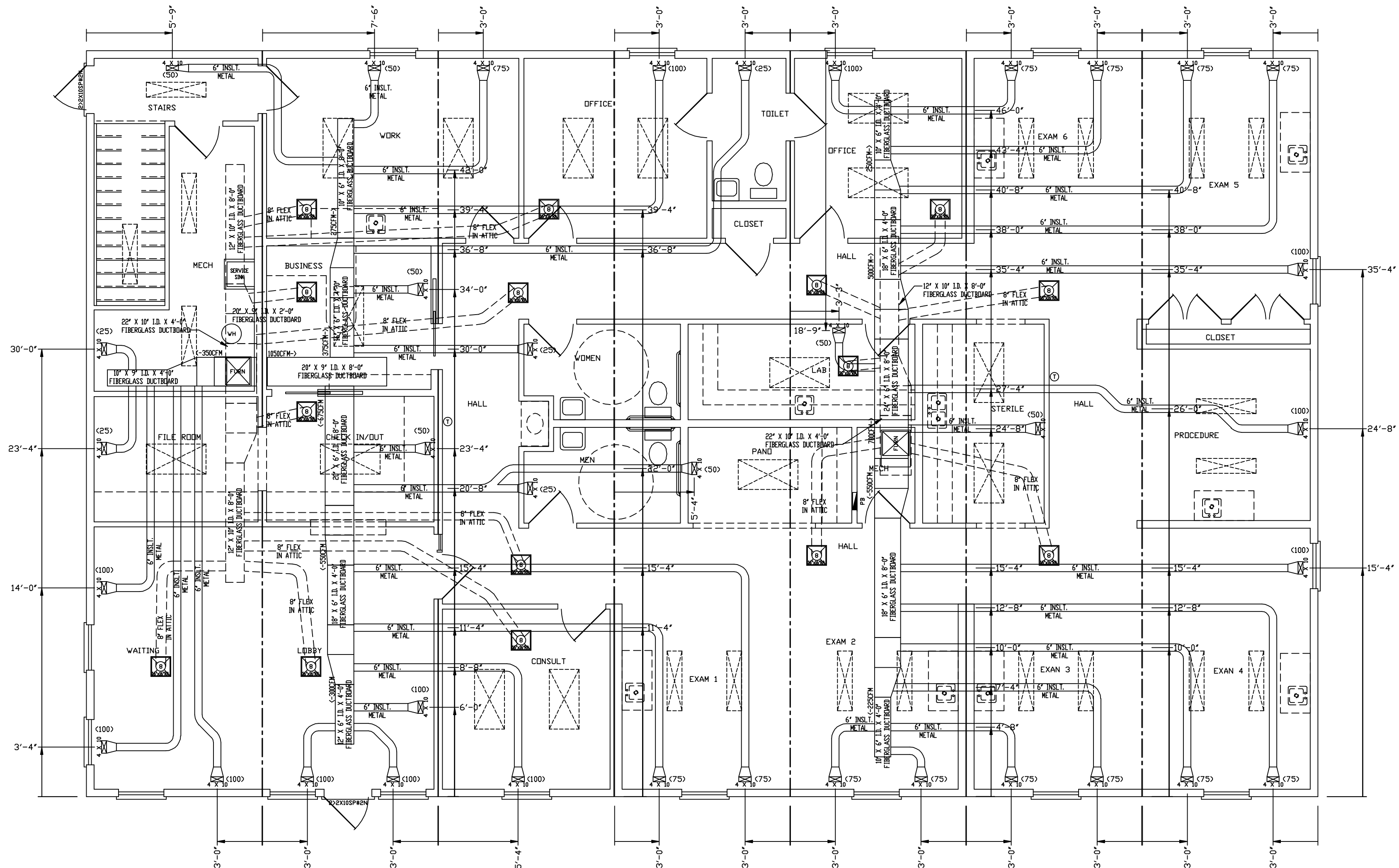


ELECTRICAL PLAN
3/16" = 1'-0"

PANEL SCHEDULE 200 AMP.					
CIRCUIT	WIRE SIZE	CIRCUIT DESCRIPTION	CIRCUIT	WIRE SIZE	CIRCUIT DESCRIPTION
01	1P20A	12-3 LOBBY/WAITING	02	1P20A	12-2 CONSULT
03	1P20A	12-2 HALL	04	1P20A	12-2 EXAM 1&2
05	1P20A	12-2 EXAN 3&4	06	1P20A	12-2 PROCEDURE
07	1P20A	12-2 EXAM 5&6	08	1P20A	12-2 OFFICE
09	1P20A	12-2 TOILET	10	1P20A	12-2 WORK
11	1P20A	12-2 BUSSINESS	12	1P20A	12-2 FILE/IN/OUT
13	1P20A	12-2 REST ROOMS	14	1P20A	12-2 PAND
15	1P20A	12-2 LAB	16	1P20A	12-2 STERILE
17	1P20A	12-2 FURNACE	18	1P20A	12-2 MECH
19	1P20A	12-2 FURNACE	20	2P30A	10-2 AC UNIT
21	2P30A	10-2 AC UNIT			

- ELECTRICAL NOTES:**
- CABLE TYPE: NON-METALIC SHEATHED; CONDUCTOR TYPE: COPPER, WITH GROUND
 - SERVICE AS PER PANEL SCHEDULE.
 - GROUND FAULT: USED PER APPLICABLE CODE
 - WIRE SIZE: 18-2 FOR CHIMES AND DOOR PUSH BUTTON
12-2 FOR GENERAL RECEPTACLES AND LIGHTING
12-3 USED FOR 3-WAY SWITCHES AND SMOKE ALARMS
10-3/WG USED FOR CLOTHES DRYERS
10-2 USED FOR WATER HEATER
6-3/WG USED FOR ELECTRIC RANGE HEATING AND COOLING EQUIPMENT AND SPECIALIZED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS.
 - MAIN PANEL: 200 AMP
 - MAIN PROTECTIVE DEVICE: 200 AMP 2 POLE BREAKERS
 - TESTING PROCEDURE: PER APPLICABLE CODE
 - BRANCH PROTECTIVE DEVICE: PER PANEL SCHEDULE.
 - FIXTURES ABOVE TUB/SHOWER SHALL BE MARKED SUITABLE FOR DAMP LOCATIONS.
 - ALL OUTLETS WITHIN BEDROOM ARE AFCI PROTECTED

ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE		SMOKE ALARM
	SWITCHED DUPLEX RECEPTACLE		CHIMES
	GROUND FAULT RECEPTACLE		DOOR BELL
	WATER PROOF GFI RECEPTACLE		TELEPHONE JACK
	240 RECEPTACLE (RANGE/DRYER)		CABLE TELEVISION JACK
	DUPLEX FLOOR RECEPTACLE		PANEL BOX
	CEILING FIXTURE		3 CONDUCTOR WIRE
	RECESSED FIXTURE		AIR CONDITIONER DISCONNECT
	FAN/LIGHT COMBINATION		BASEMENT PULLCHORD FIXTURE
	WALL MOUNT FIXTURE		BASEMENT SMOKEALARM
	FLOURESCENT FIXTURE		J BOX
	SINGLE POLE SWITCHED		THERMOSTAT
	THREE WAY SWITCH		CEILING FAN (WHEN DASHED WIRE AND BRACE ONLY)
	FOUR WAY SWITCH		
	AIR CONDITIONER CONDENSING UNIT		



STATE:	KANSAS
SCALE:	3/16" = 1'-0"
CHECKED BY:	
DATE:	

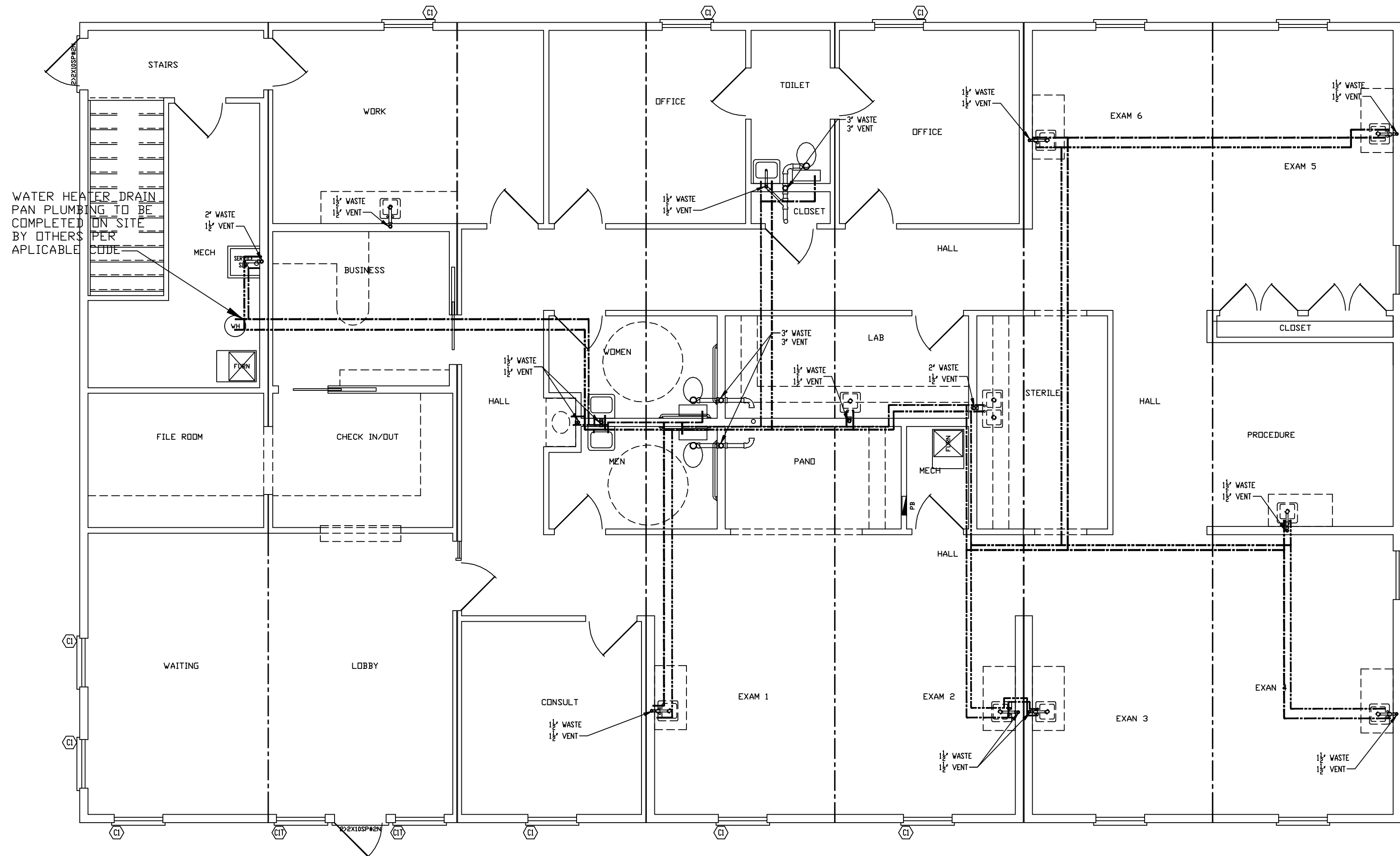
BASE MODEL NUMBER:	DENTIST OFFICE
SHEET TITLE:	MECHANICAL PLAN
DRAWN BY:	
DATE:	

CLIENTS:	KAN BUILD INC. OSAGE CITY, KANSAS
PROJECT:	ROBERT H. HARMON DDS OSAGE CITY, KANSAS

EQUIPMENT SCHEDULE

#	QNTY	MODEL	HEATING BTU/HR		COOLING BTU/HR	FAN CFM	DESCRIPTION
			INPUT	OUTPUT			
101	1	G51MP-36B-070 (48M46)	66,000	62,000		1,360	90% MULTI-POSITION FURNACES
102	1	13ACD-036-230 (88M72)			36,500		13 SEER AIR CONDENSING UNIT 3 TON
103	1	BV3236-APB16 (64X17)					EVAPORATOR COIL UP/DOWN FLOW 3 TON
104	1	29M80					LENNOX THERMOSTAT
105	1	60L46					CONCENTRIC ROOF VENT 3" (G51M)
106	1	73P56					EZ FILTER BASE G51MP (A B SIZE)
201	1	G51MP-36B-070 (48M46)	66,000	62,000		1,360	90% MULTI-POSITION FURNACES
202	1	13ACD-036-230 (88M72)			36,500		13 SEER AIR CONDENSING UNIT 3 TON
203	1	BV3236-APB16 (64X17)					EVAPORATOR COIL UP/DOWN FLOW 3 TON
204	1	29M80					LENNOX THERMOSTAT
205	1	60L46					CONCENTRIC ROOF VENT 3" (G51M)
206	1	73P56					EZ FILTER BASE G51MP (A B SIZE)

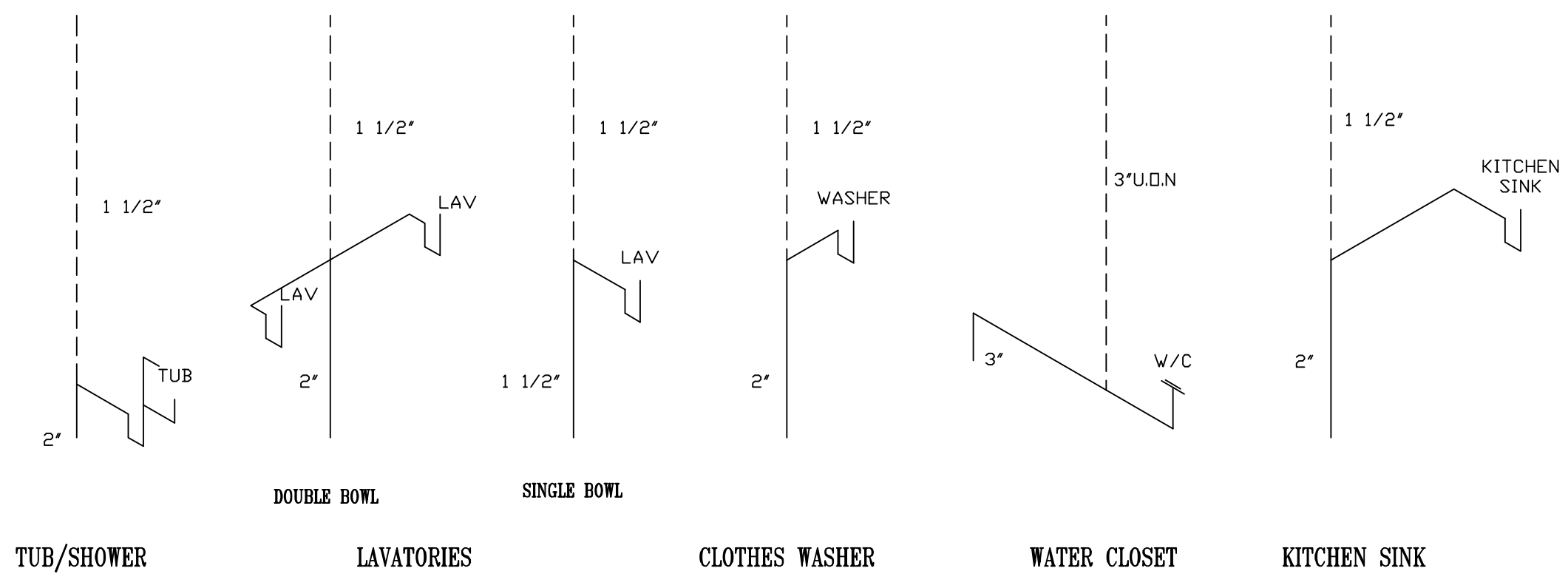
REVISIONS:	
DATE/DATE/REVISION DESCRIPTION	
PROJECT NUMBER	045140



PLUMBING PLAN
NOT TO SCALE

PLUMBING NOTES:

1. ALL DRAINAGE PIPE P.V.C. SCHEDULE 40 UNLESS OTHERWISE NOTED
2. P.V.C. HORIZONTAL PIPE SUPPORTS AT 4'-0" O.C. MAXIMUM FOR 3" DIA. PIPE, 3'-0" O.C. MAXIMUM FOR 2" DIA. PIPE OR SMALLER
3. ROOF STACKS TO BE 6" MIN. ABOVE ROOF PLANE.
4. ALL WATER LINES COPPER TYPE "M" UNLESS OTHERWISE NOTED
5. STRAPPING 3/4" WIDE MINIMUM.
6. ALL CONNECTIONS AND MATERIALS BELOW GROUND FLOOR ARE TO BE COMPLETED ON SITE.
7. PIPING AND FITTINGS FOR CONNECTIONS BETWEEN FIRST FLOOR/SECOND FLOOR, 2ND FLOOR/ROOF ARE SUPPLIED BY KAN BUILD INC.
8. A WATER TIGHT PAN SHALL BE INSTALLED BENEATH WATER HEATER WHEN IT IS LOCATED WHERE DAMAGE MAY RESULT FROM LEAKING PER 1997 IPC 504.8



TYPICAL RISERS

- NOTES:**
- 1) PROVIDED SHUT OFF VALVES AT EACH FIXTURE
 - 2) WATER SUPPLY SHALL BE 3/4" UNTIL 3 FIXTURES REMAIN
 - 3) HORIZONTAL TO HORIZONTAL AND HORIZONTAL TO VERTICAL WASTE PIPING SHALL BE MADE WITH LONG TURN FITTINGS.
 - 4) ALL VENT PIPING SHALL BE GATHERED IN THE ATTIC AND VENTED THROUGH THE ROOF WITH A CROSS SECTIONAL AREA EQUAL TO THE BUILDING SEWER
 - 5) MINIMUM VENT THROUGH ROOF SHALL BE 2"
 - 6) PROVIDE THERMAL EXPANSION CONTROL PER IPC 607.3

----- COLD WATER SUPPLY
----- HOT WATER SUPPLY

BASE NOBL. NUMBER:	STATE:	KANSAS
DENTIST OFFICE	SCALE:	1/4" = 1'-0"
SHEET TITLE:	DATE:	
PLUMBING PLAN	DATE:	
DRAWN BY:	CHECKED BY:	

CLIENTS: **KAN BUILD INC.**
OSAGE CITY, KANSAS
PROJECT: **ROBERT H. HARMON DDS**
OSAGE CITY, KANSAS

REVISIONS:	▲
DATE/REVISION DESCRIPTION	
PROJECT NUMBER	045140
SHEET	P1