

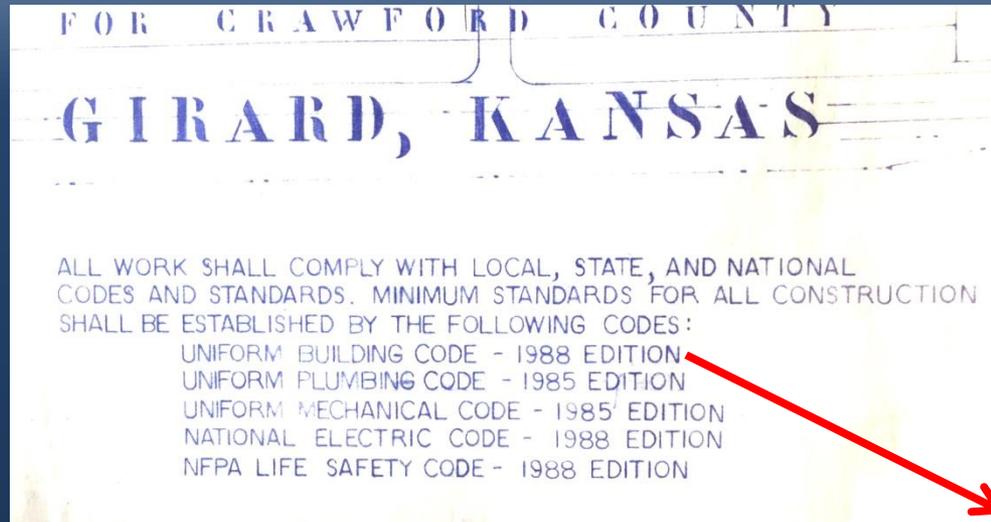
ARCHITECT'S ANALYSIS



DISCUSSION POINTS:

- 1. ARCHITECTURAL ISSUES AT THE GIRARD ATC**
- 2. CONSTRUCTION COST ESTIMATE PROCEDURE**
- 3. AREA PROJECTIONS FOR GIRARD FACILITY**
- 4. AREA PROJECTIONS FOR PITTSBURG FACILITY**
- 5. APPLICATION OF COST ESTIMATES**

1. ARCHITECTURAL ISSUES AT THE GIRARD FACILITY



**UNIFORM
BUILDING
CODE™**

1988 Edition

1. ARCHITECTURAL ISSUES AT THE GIRARD FACILITY

Chapter 12

REQUIREMENTS FOR GROUP R OCCUPANCIES

Group R Occupancies Defined

Sec. 1201. Group R Occupancies shall be:

- X **Division 1.** Hotels and apartment houses.
Convents and monasteries (each accommodat
- Division 2.** Not used.
- X **Division 3.** Dwellings and lodging houses.

Chapter 10

REQUIREMENTS FOR GROUP I OCCUPANCIES

Group I Occupancies Defined

Sec. 1001. Group I Occupancies shall be:

- X **Division 1.** Nurseries for the full-time care of children under the age of six (each accommodating more than five persons).

Hospitals, sanitariums, nursing homes with nonambulatory patients and similar buildings (each accommodating more than five persons).

- **Division 2.** Nursing homes for ambulatory patients, homes for children six years of age or over (each accommodating more than five persons).

- X **Division 3.** Mental hospitals, mental sanitariums, jails, prisons, reformatories and buildings where personal liberties of inmates are similarly restrained.

For occupancy separations, see Table No. 5-B.

EXCEPTION: Group I Occupancies shall not include buildings used only for private residential purposes for a family group.

TABLE NO. 5-C—BASIC ALLOWABLE FLOOR AREA FOR BUILDINGS ONE STORY IN HEIGHT¹
(In Square Feet)

1988 EDITION

OCCUPANCY	TYPES OF CONSTRUCTION										
	I		II		III		IV	V			
	F.R.	F.R.	ONE-HOUR	N	ONE-HOUR	N	H.T.	ONE-HOUR	N		
A-1	Unlimited	29,900	Not Permitted								
A) 2-2.1	Unlimited	29,900	13,500	Not Permitted	13,500	Not Permitted	13,500	10,500	Not Permitted		
A) 3-4 ²	Unlimited	29,900	13,500	9,100	13,500	9,100	13,500	10,500	6,000		
B) 1-2-3 ³	Unlimited	39,900	18,000	12,000	18,000	12,000	18,000	14,000	8,000		
B-4	Unlimited	59,900	27,000	18,000	27,000	18,000	27,000	21,000	12,000		
E	Unlimited	45,200	20,200	13,500	20,200	13,500	20,200	15,700	9,100		
H-1	15,000	12,400	5,600	3,700	Not Permitted						
H-2 ⁴	15,000	12,400	5,600	3,700	5,600	3,700	5,600	4,400	2,500		
H-3-4-5 ⁴	Unlimited	24,800	11,200	7,500	11,200	7,500	11,200	8,800	5,100		
H-6-7	Unlimited	39,900	18,000	12,000	18,000	12,000	18,000	14,000	8,000		
I) 1-2	Unlimited	15,100	6,800	Not Permitted ⁵	6,800	Not Permitted	6,800	5,200	Not Permitted		
I-3	Unlimited	15,100	Not Permitted ⁵								
M ⁶	See Chapter 11										
R-1	Unlimited	29,900	13,500	9,100 ⁷	13,500	9,100 ⁷	13,500	10,500	6,000 ⁷		
R-3	Unlimited										

¹For multistory buildings, see Section 505 (b).

²For limitations and exceptions, see Section 602 (a).

³For open parking garages, see Section 709.

⁴See Section 903.

⁵See Section 1002 (b).

⁶For agricultural buildings, see also Appendix Chapter 11.

⁷For limitations and exceptions, see Section 1202 (b).

⁸In hospitals and nursing homes, see Section 1002 (a) for exception.

N—No requirements for fire resistance
F.R.—Fire Resistive
H.T.—Heavy Timber

5-C

88888

Allowable Area Increases

Sec. 506. (a) General. The floor areas specified in Section 505 may be increased by one of the following:

1. **Separation on two sides.** Where public ways or yards more than 20 feet in width extend along and adjoin two sides of the building, floor areas may be increased at a rate of 1¼ percent for each foot by which the minimum width exceeds 20 feet, but the increase shall not exceed 50 percent.

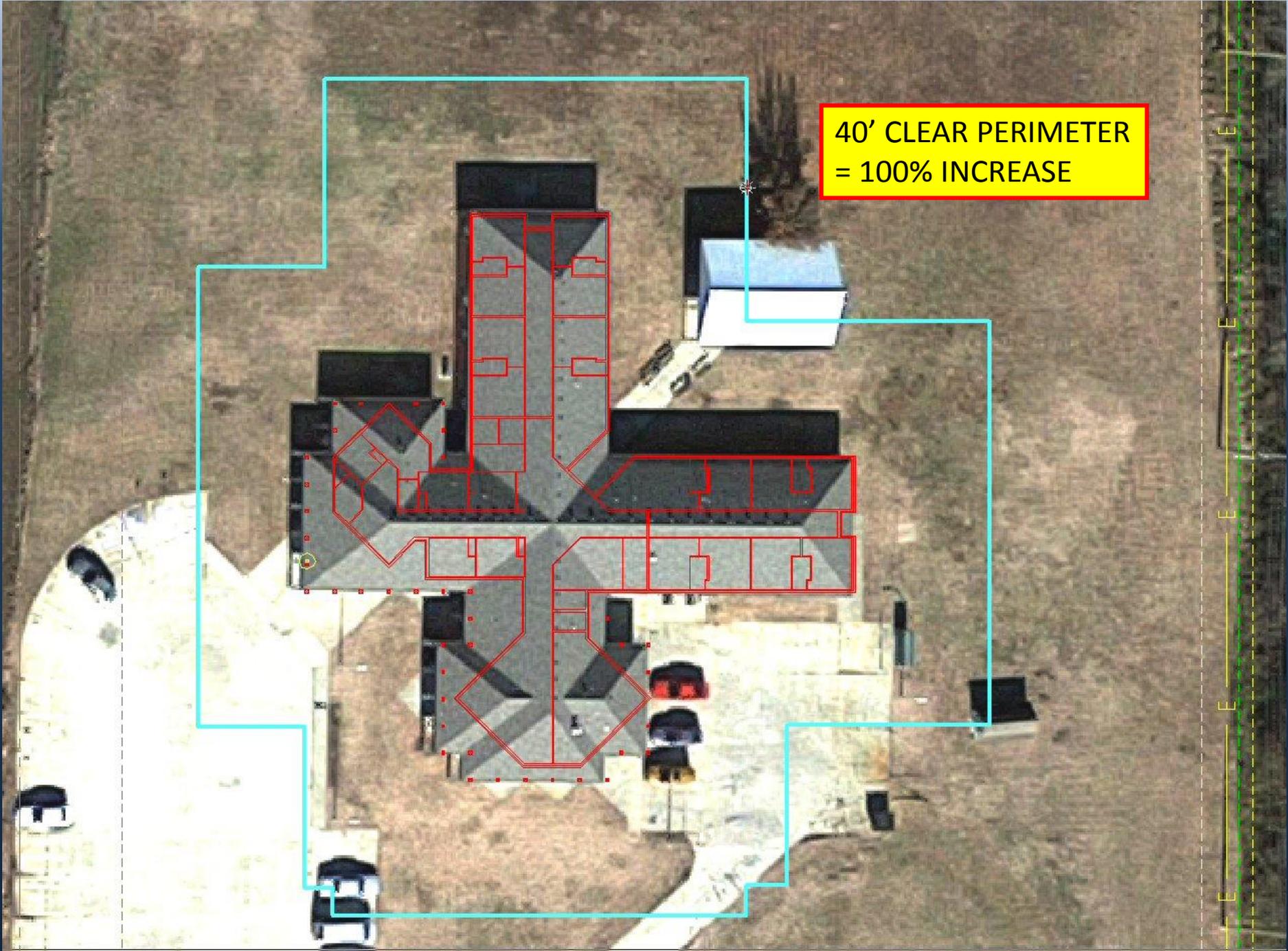
2. **Separation on three sides.** Where public ways or yards more than 20 feet in width extend along and adjoin three sides of the building, floor areas may be increased at a rate of 2½ percent for each foot by which the minimum width exceeds 20 feet, but the increase shall not exceed 100 percent.

3. **Separation on all sides.** Where public ways or yards more than 20 feet in width extend on all sides of a building and adjoin the entire perimeter, floor areas may be increased at a rate of 5 percent for each foot by which the minimum exceeds 20 feet. Such increases shall not exceed 100 percent, except that greater increases shall be permitted for the following occupancies:

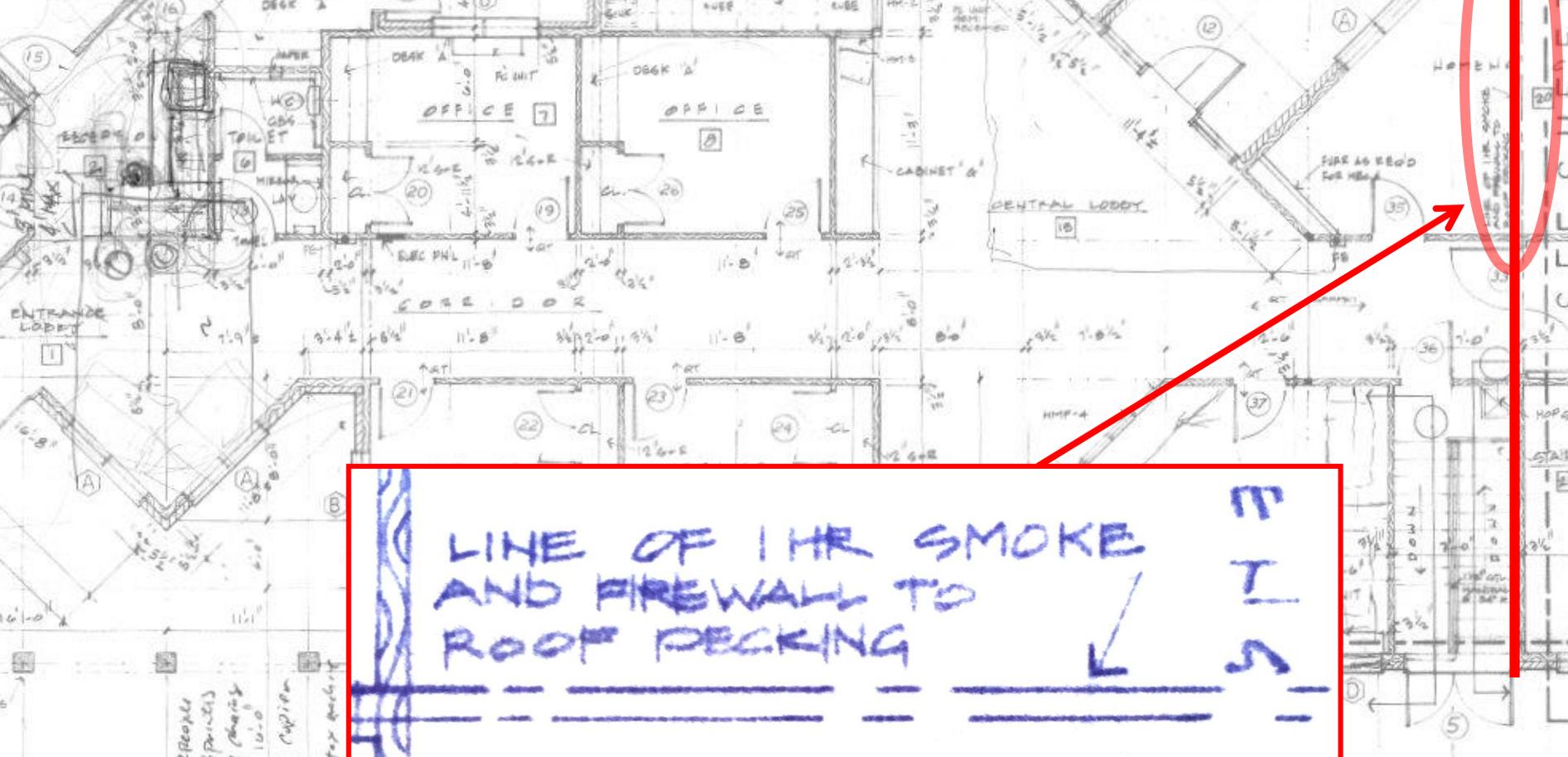
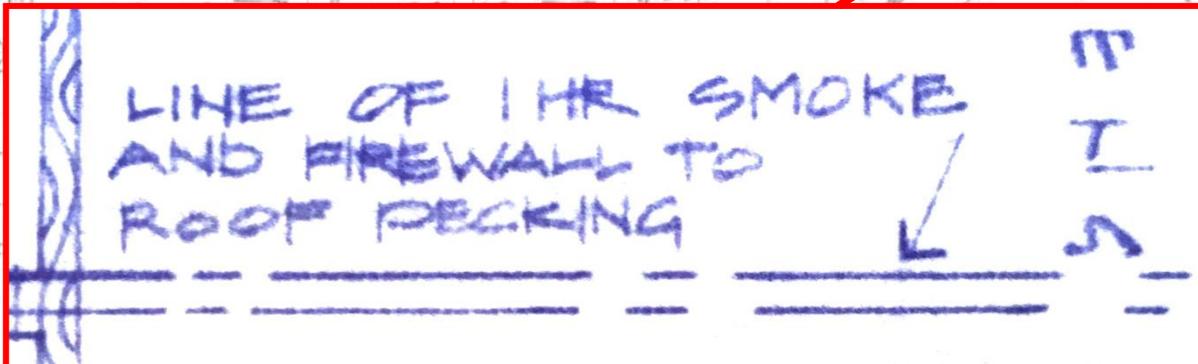
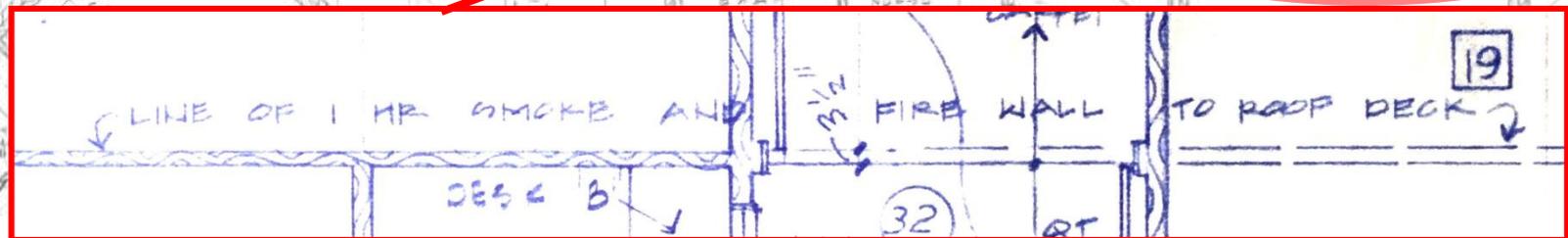
- A. Group B, Division 3 aircraft storage hangars not exceeding one story in height.
- B. Group B, Division 4 Occupancies not exceeding two stories in height.
- C. Group H, Division 5 aircraft repair hangars not exceeding one story in height. Area increases shall not exceed 500 percent for aircraft repair hangars except as provided in Section 506 (b).

(b) **Unlimited Area.** The area of any one- or two-story building of Group B and Group H, Division 5 Occupancies shall not be limited, if the building is provided with an approved automatic sprinkler system throughout, as specified in Chapter

40' CLEAR PERIMETER
= 100% INCREASE



MEN GROUP



1. ARCH

FACILITY

(e) **Area Separation Walls.** Each portion of a building separated by one or more area separation walls may be considered a separate building, provided the area separation walls meet the following requirements:

1. Area separation walls shall be not less than four-hour fire-resistive construction in Types I, II-FR., III and IV buildings and two-hour fire-resistive construction in Types II One-hour, II-N or V buildings. The total width of all openings in such walls shall not exceed 25 percent of the length of the wall in each story. All openings shall be protected by a fire assembly having a three-hour fire-protection rating in four-hour fire-resistive walls and one and one-half-hour fire-protection rating in two-hour fire-resistive walls.

2. Area separation walls shall extend to the outer edges of horizontal projecting elements such as balconies, roof overhangs, canopies, marquees or architectural projections.

EXCEPTION: When horizontal projecting elements do not contain concealed spaces, the area separation wall may terminate at the exterior wall.

When the horizontal projecting elements contain concealed spaces, the area separation wall need only extend through the concealed space to the outer edges of the projecting elements.

The exterior walls and the projecting elements above shall be of not less than one-hour fire-resistive construction for a distance not less than the depth of the projecting elements on both sides of the area separation wall. Openings within such widths shall be protected by fire assemblies having a fire-protection rating of not less than three-fourths hour.

3. Area separation walls shall extend from the foundation to a point at least 30 inches above the roof.

EXCEPTIONS: 1. Area separation walls may terminate at the underside of the roof sheathing, deck or slab, provided the roof-ceiling assembly is of at least two-hour fire-resistive construction.

2. Two-hour area separation walls may terminate at the underside of the roof sheathing, deck or slab, provided:

A. Where the roof-ceiling framing elements are parallel to the walls, such framing and elements supporting such framing shall be of not less than one-hour fire-resistive construction for a width of not less than 5 feet on each side of the wall.

B. Where roof-ceiling framing elements are perpendicular to the wall, the entire span of such framing and elements supporting such framing shall be of not less than one-hour fire-resistive construction.

C. Openings in the roof shall not be located within 5 feet of the area separation wall.

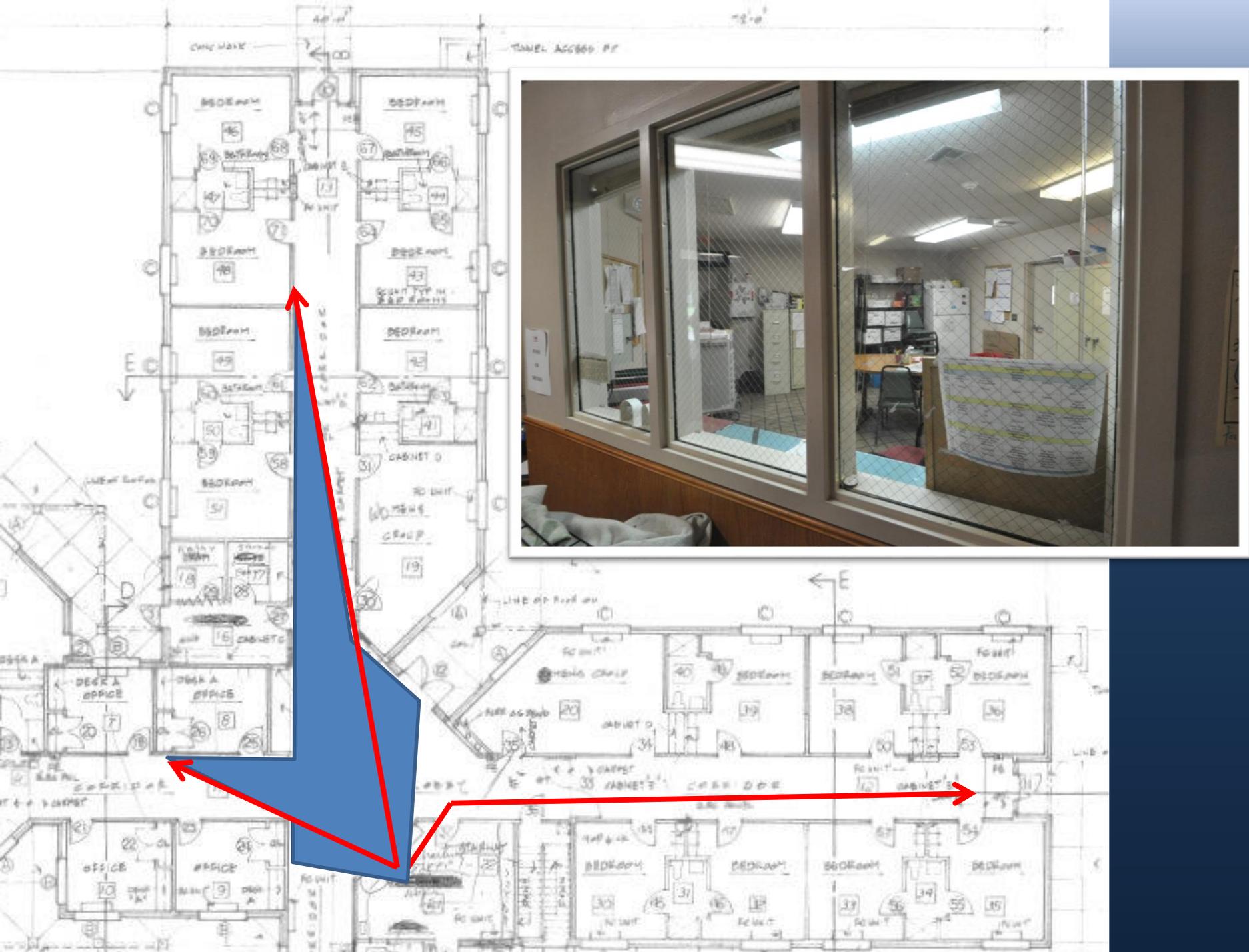
D. The entire building shall be provided with not less than a Class B roof covering as specified in Table No. 32-A or a special purpose roof complying with Section 3204 (e).

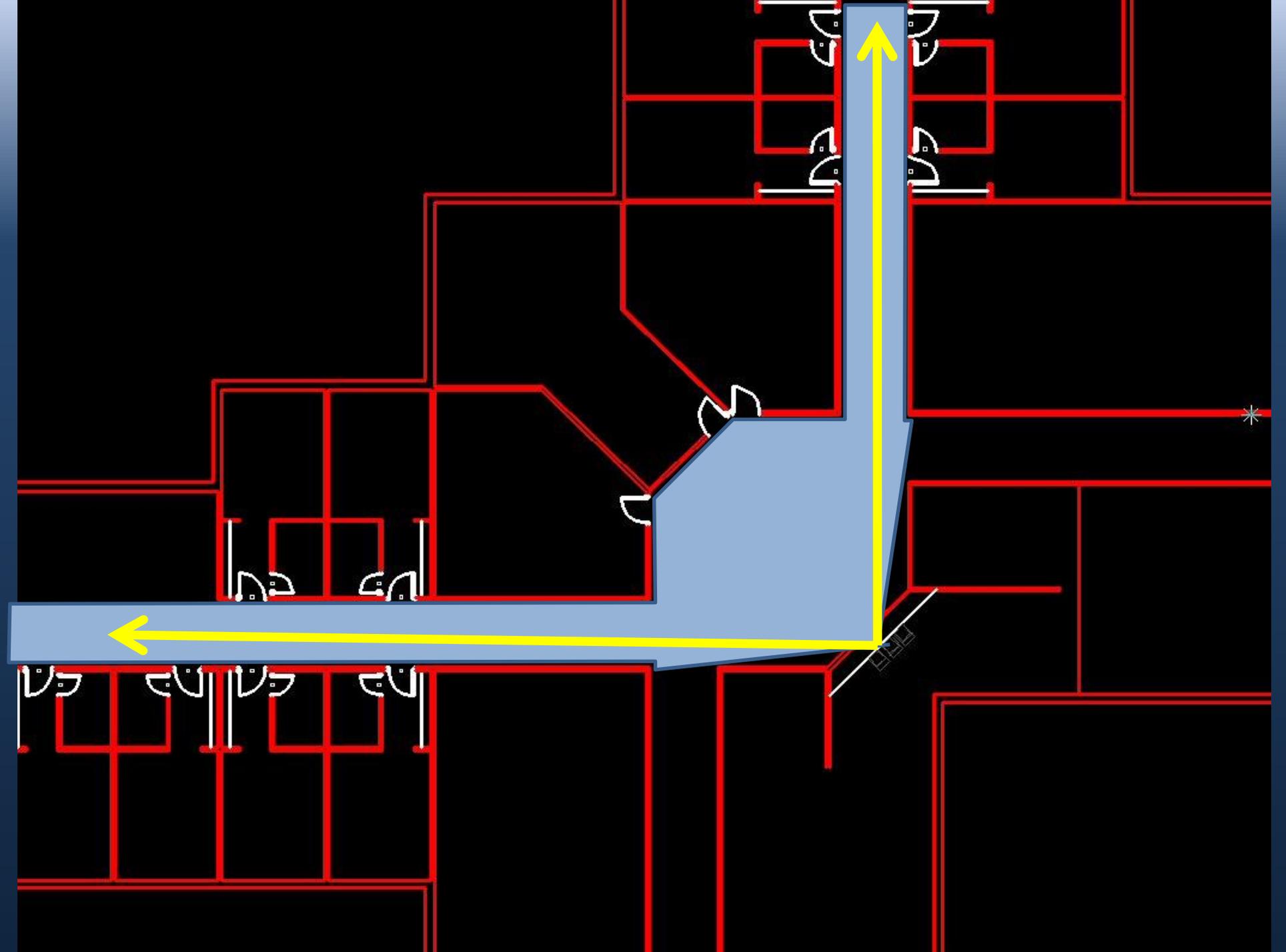
3. Two-hour area separation walls may terminate at roofs of entirely noncombustible construction.

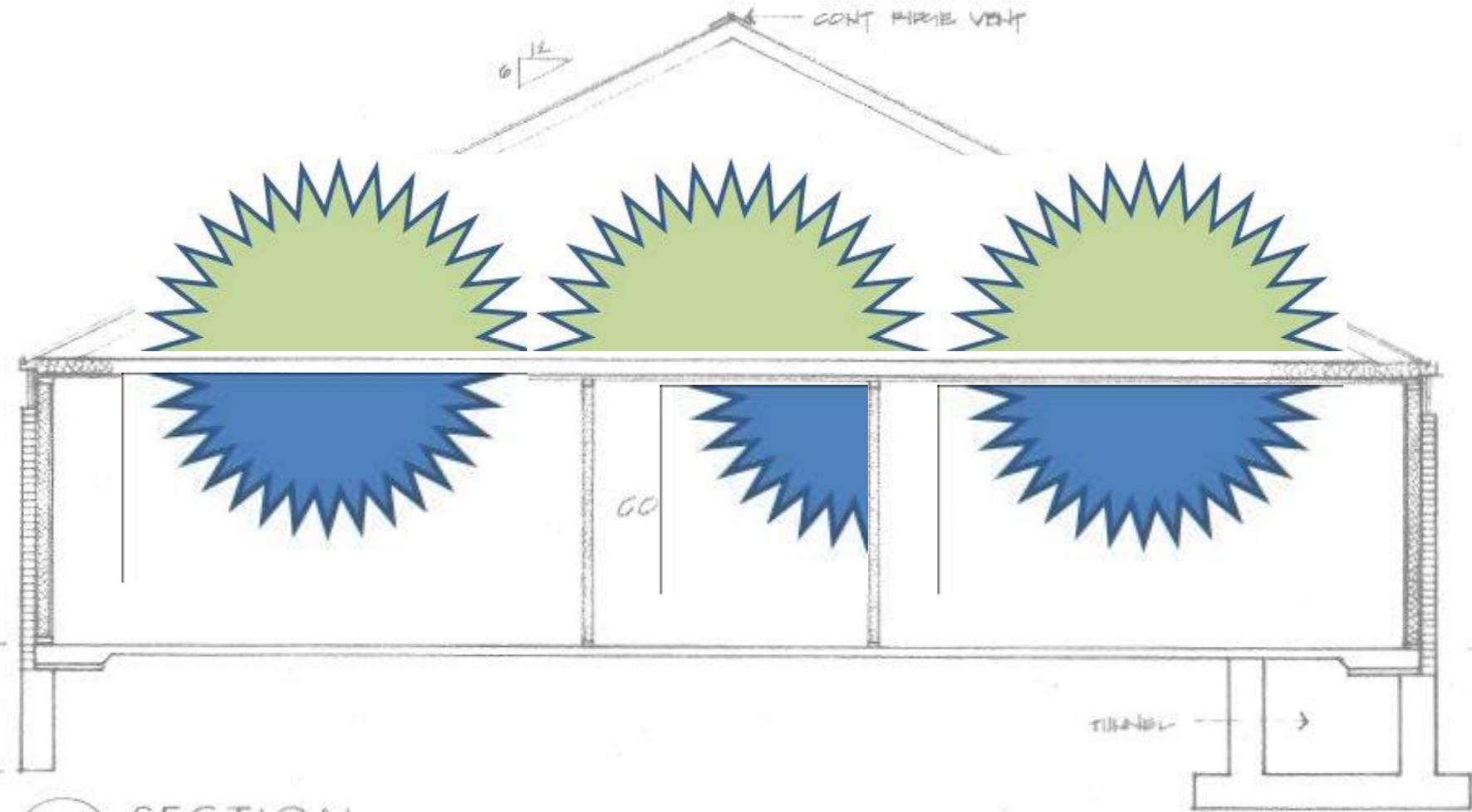


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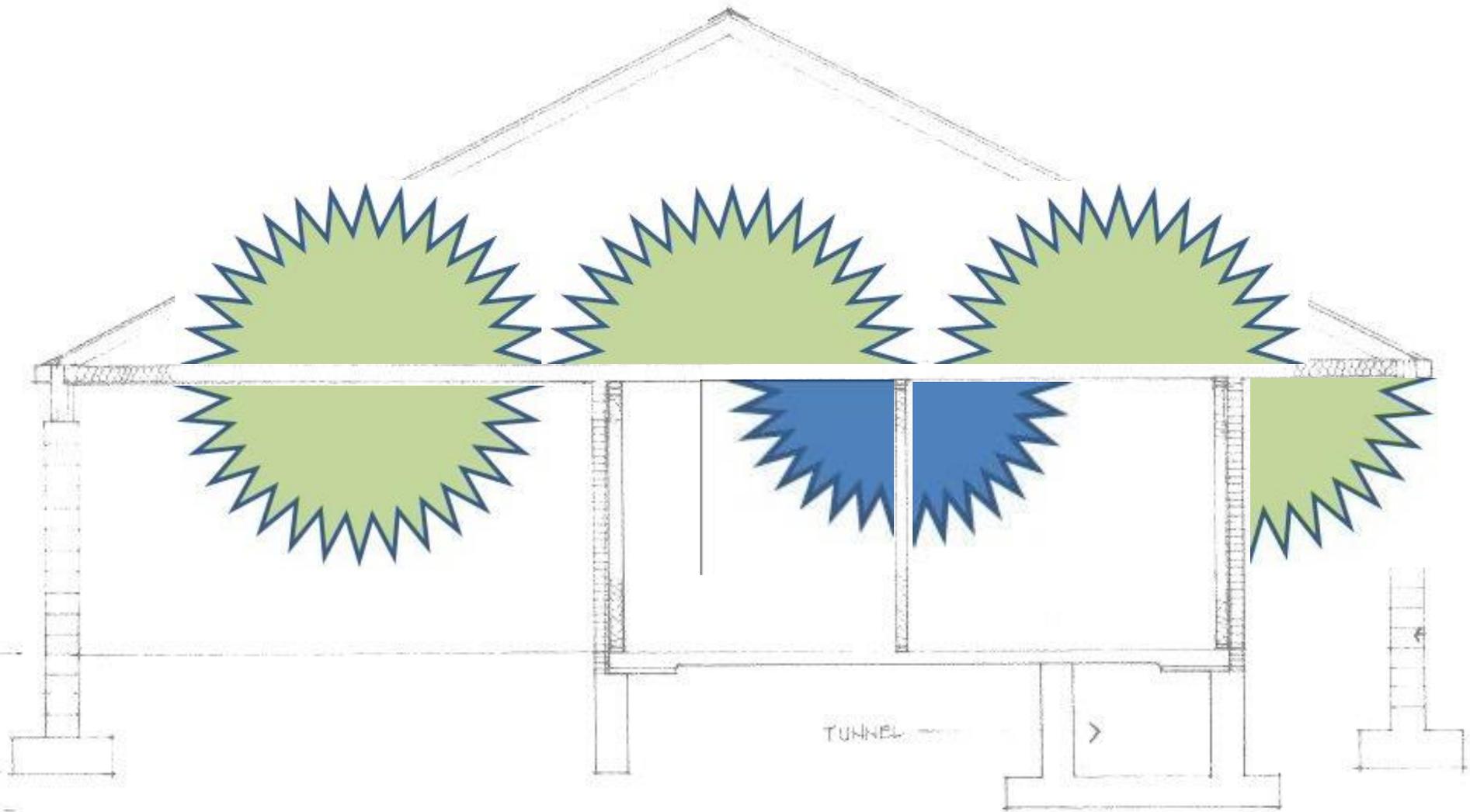


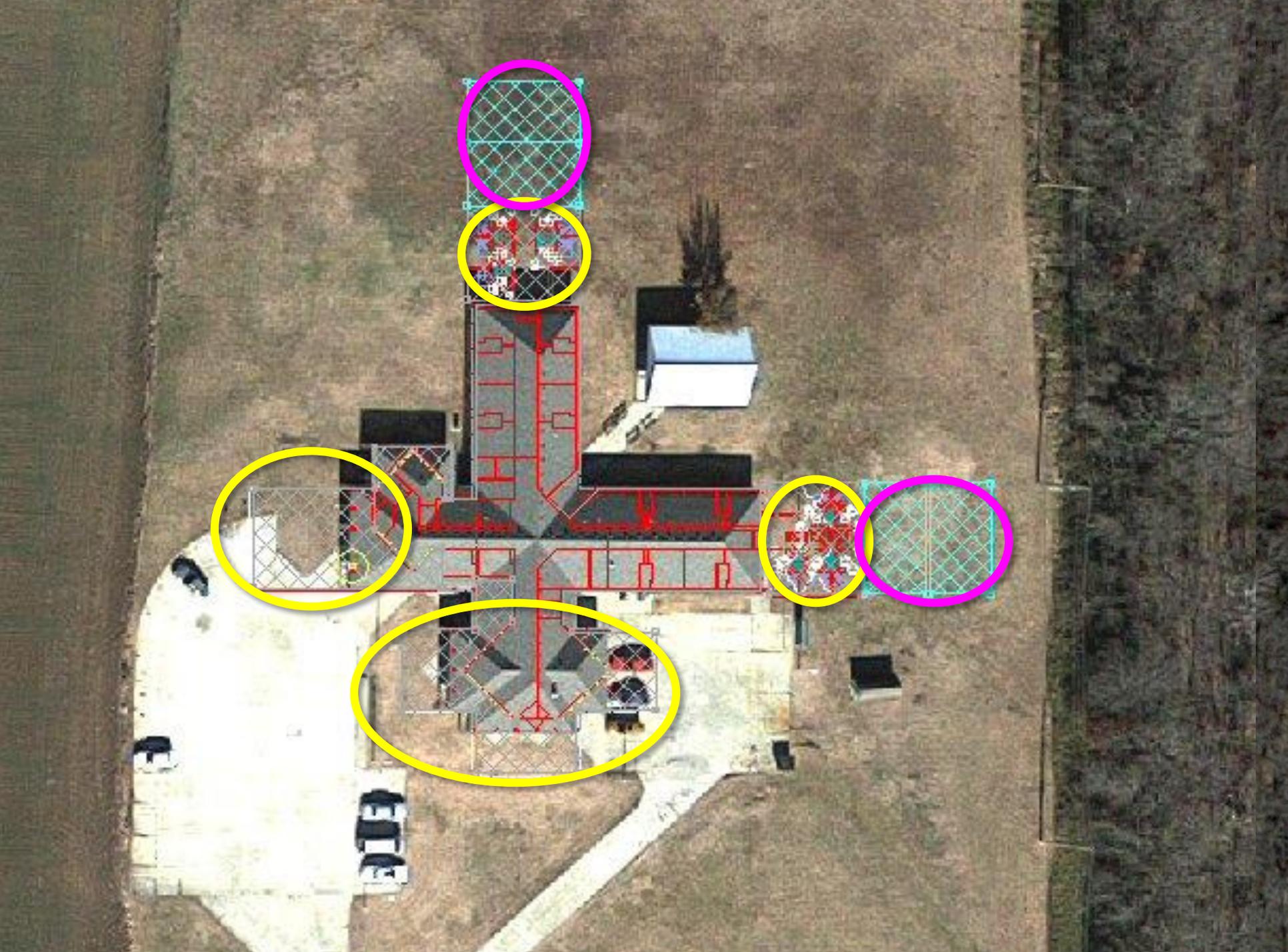
EE SECTION
 1/4" = 1'-0"

SKYLIGHT

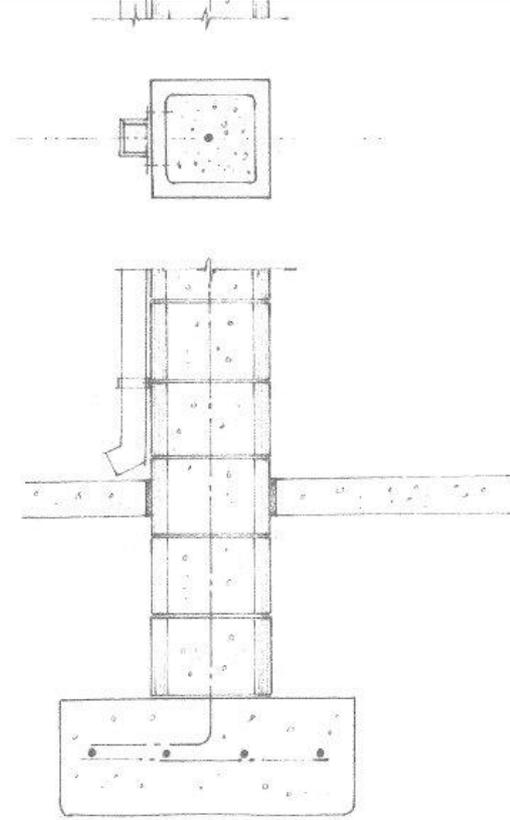
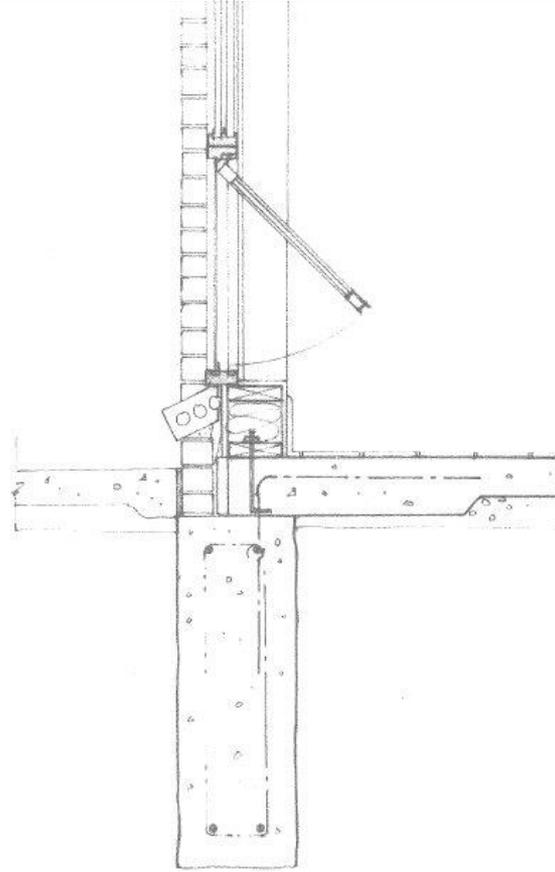
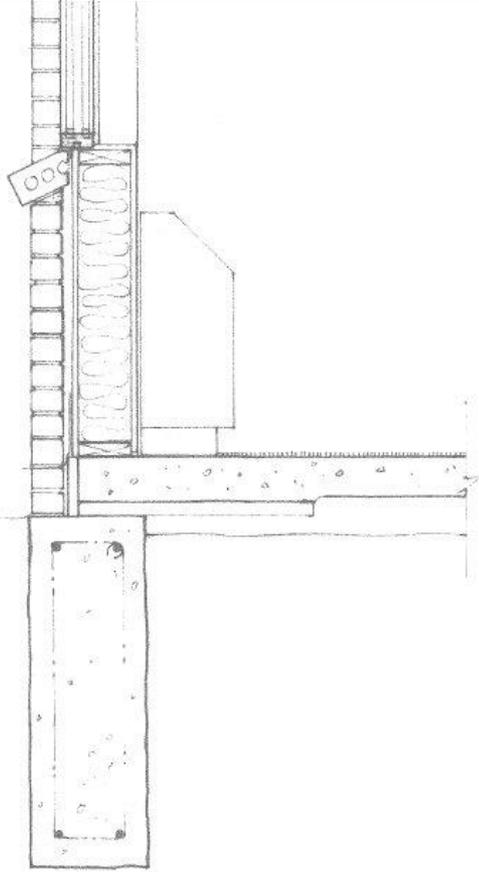


4'-0"

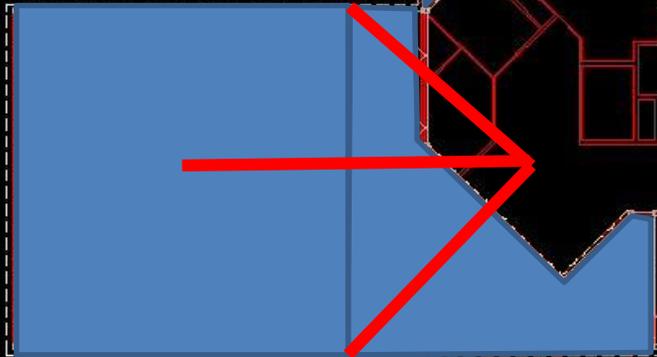




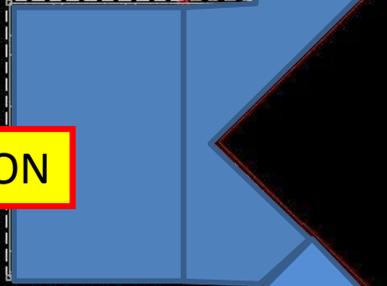




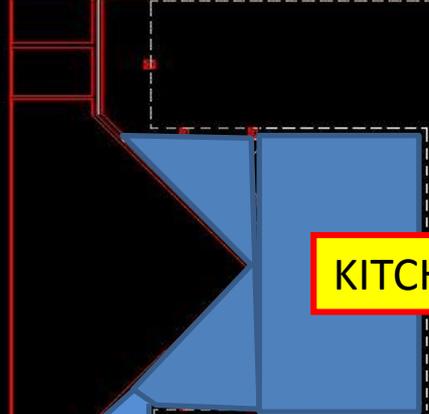
OFFICES



COMMON

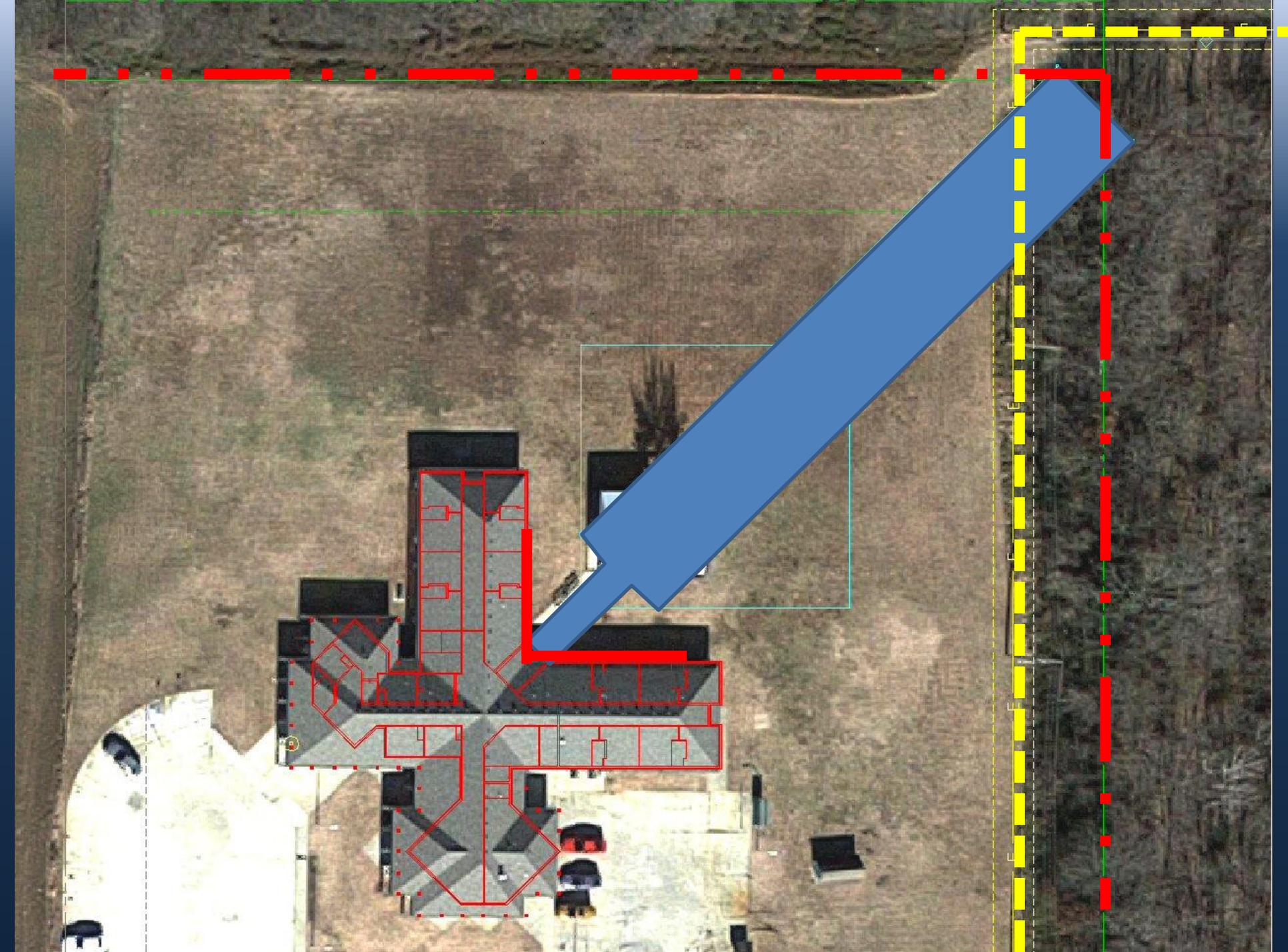


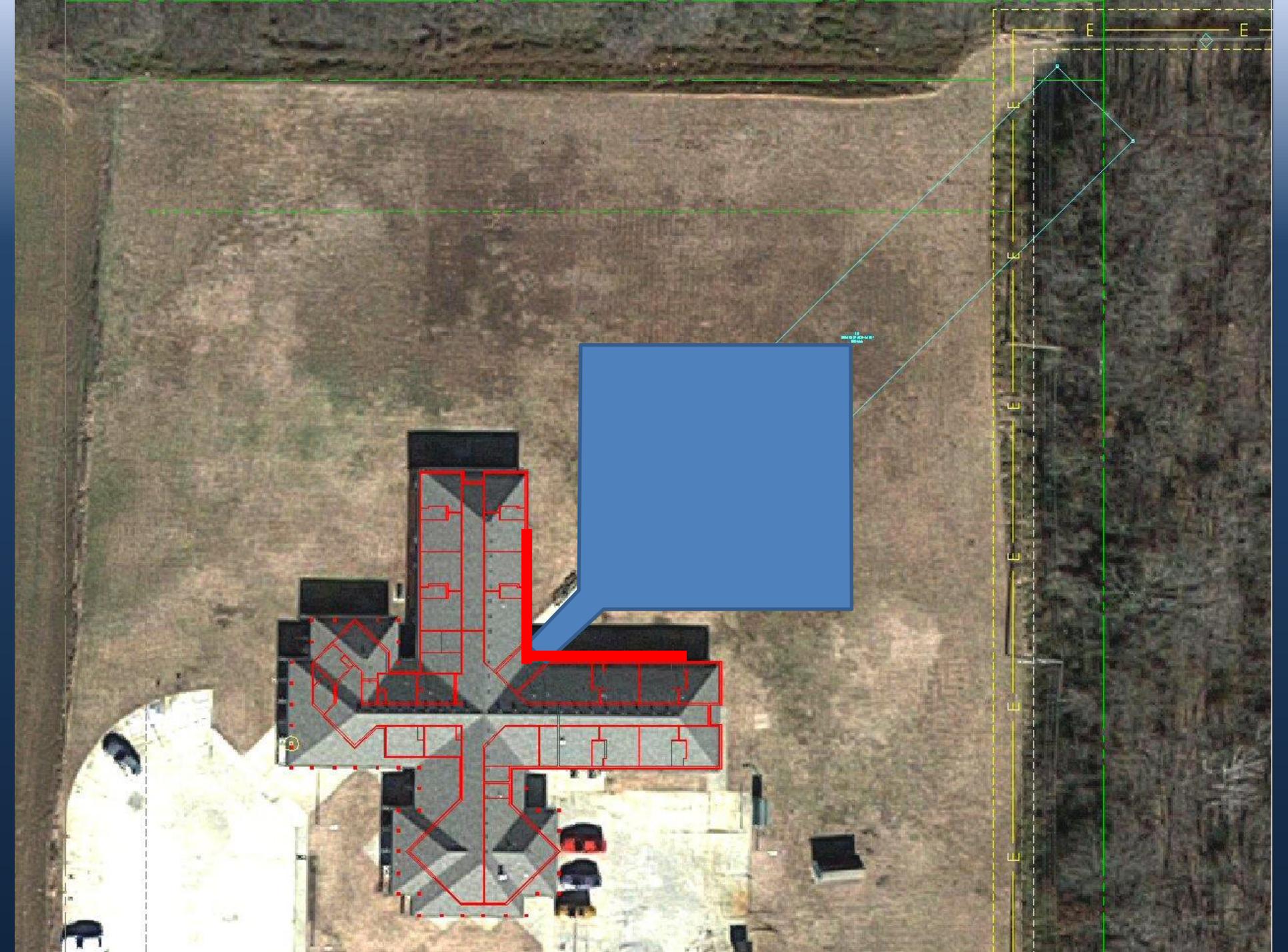
KITCHEN



DINE







2. CONSTRUCTION COST ESTIMATE PROCEDURE

BuildingJournal.com		Kansas									National Ave						
10% overhead		Topeka			Wichita			Kansas City									
5% profit		Low	Med	High	Low	Med	High	Low	Med	High	Low	Med	High				
1% bond																	
		85%			132%			86%			132%			85%		132%	
Standard																	
	Apt, 1-3 story	49.79	58.24	76.99	50.16	58.66	77.55	56.62	66.22	87.55	58.81	68.79	90.94				
Bed/baths														\$60 - \$80			
Meeting	Motel	60.96	71.30	94.26	61.41	71.83	94.95	69.33	81.08	107.19	72.01	84.22	111.34				
Offices																	
Rec/Common	Office, 1-3 story	68.38	79.98	105.73	68.88	80.56	106.50	77.76	90.94	120.23	80.77	94.47	124.89				
Specialized																	
	Day Care	72.94	85.31	112.78	73.48	85.94	113.61	82.95	97.01	128.25	86.16	100.77	133.22	\$85 - \$100			
Detox																	
Nursing	Community Center	77.59	90.75	119.97	78.16	91.41	120.85	88.23	103.19	136.42	91.65	107.19	141.71				
	Junior High School	81.24	95.02	125.61	81.83	95.71	126.53	92.38	108.05	142.84	95.96	112.23	148.37				
	Nursing Home	84.05	98.30	129.96	84.66	99.02	130.91	95.58	111.78	147.78	99.28	116.11	153.50				
Specific																	
	Restaurant	115.38	134.95	178.40	116.22	135.93	179.71	131.20	153.45	202.86	136.29	159.40	210.72	\$135 - \$150			
Kit/Dine																	

2. CONSTRUCTION COST ESTIMATE PROCEDURE

BuildingJournal.com		Kansas									National Ave								
	10% overhead	Topeka			Wichita			Kansas City											
	5% profit	Low	Med	High	Low	Med	High	Low	Med	High	Low	Med	High						
	1% bond																		
		85%			132%			86%			132%			85%			132%		
Standard																			
	Apt, 1-3 story	49.79	58.24	76.99	50.16	58.66	77.55	56.62	66.22	87.55	58.81	68.79	90.94						
Bed/baths															\$60 - \$80				
Meeting	Motel	60.96	71.30	94.26	61.41	71.83	94.95	69.33	81.08	107.19	72.01	84.22	111.34						
Offices																			
Rec/Common	Office, 1-3 story	68.38	79.98	105.73	68.88	80.56	106.50	77.76	90.94	120.23	80.77	94.47	124.89						
Specialized																			
	Day Care	72.94	85.31	112.78	73.48	85.94	113.61	82.95	97.01	128.25	86.16	100.77	133.22	\$85 - \$100					
Detox																			
Nursing	Community Center	77.59	90.75	119.97	78.16	91.41	120.85	88.23	103.19	136.42	91.65	107.19	141.71						
	Junior High School	81.24	95.02	125.61	81.83	95.71	126.53	92.38	108.05	142.84	95.96	112.23	148.37						
	Nursing Home	84.05	98.30	129.96	84.66	99.02	130.91	95.58	111.78	147.78	99.28	116.11	153.50						
Specific																			
	Restaurant	115.38	134.95	178.40	116.22	135.93	179.71	131.20	153.45	202.86	136.29	159.40	210.72	\$135 - \$150					
Kit/Dine																			

3. AREA ANALYSIS FOR GIRARD FACILITY

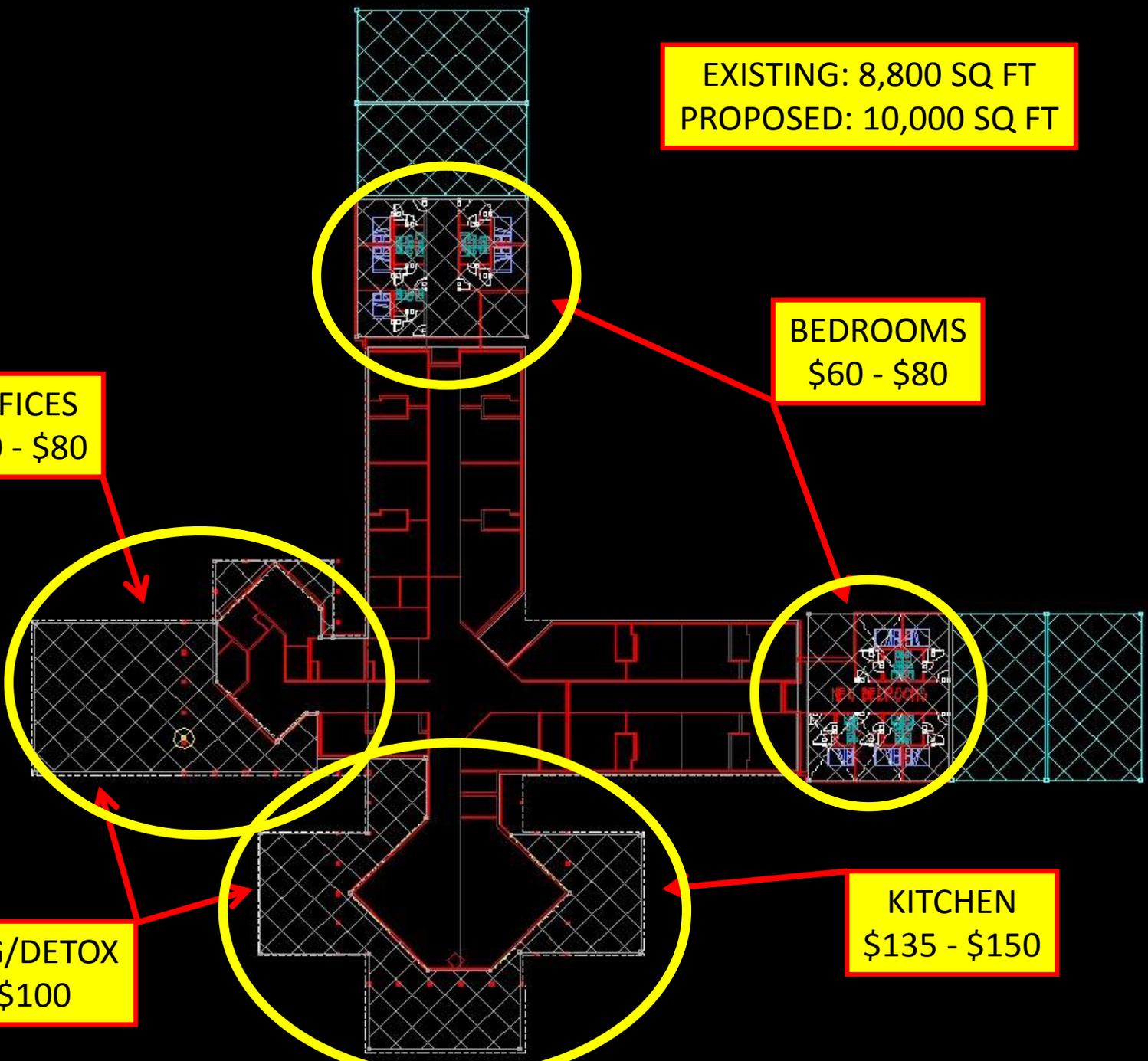
EXISTING: 8,800 SQ FT
PROPOSED: 10,000 SQ FT

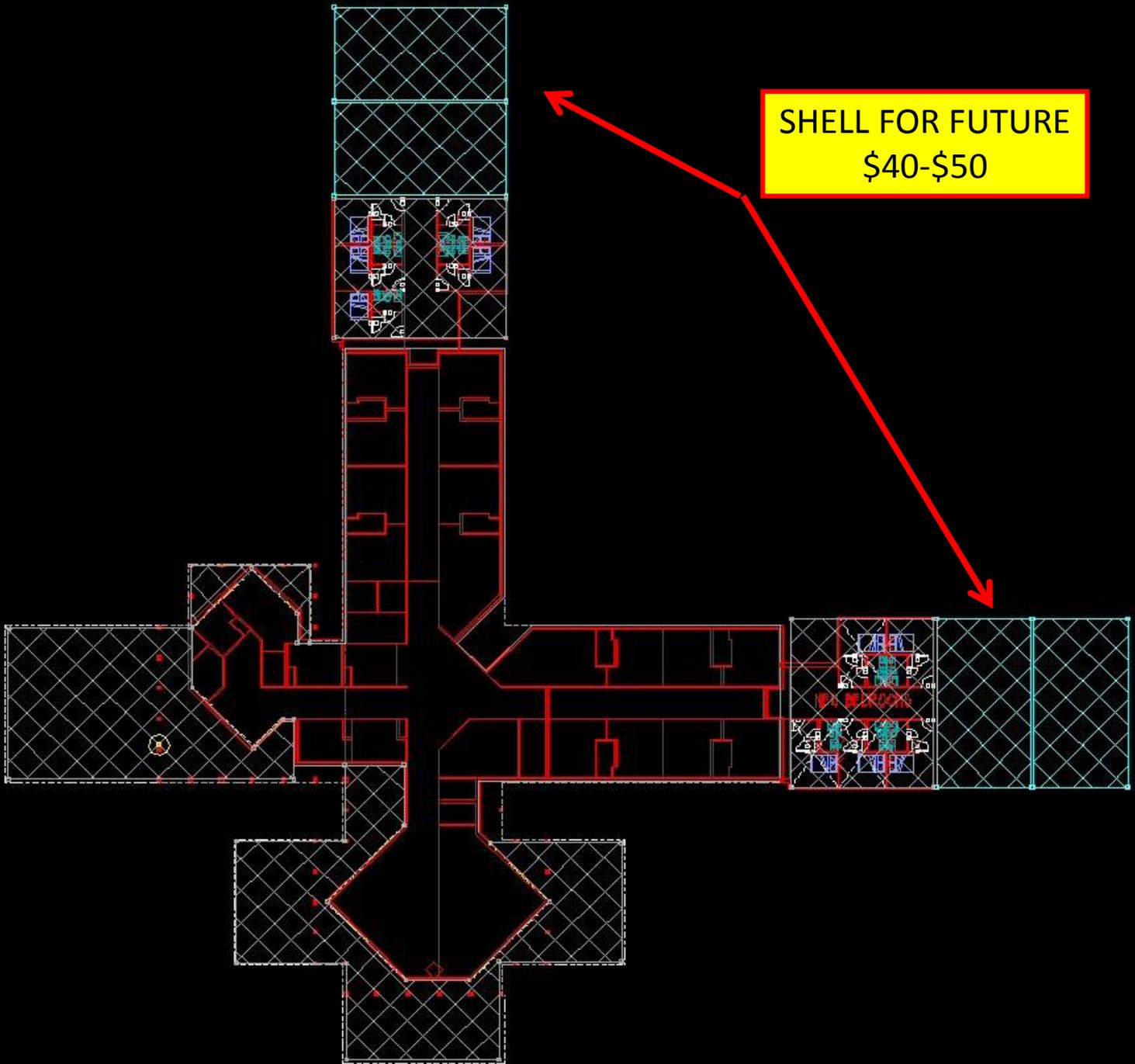
BEDROOMS
\$60 - \$80

OFFICES
\$60 - \$80

NURSING/DETOX
\$85 - \$100

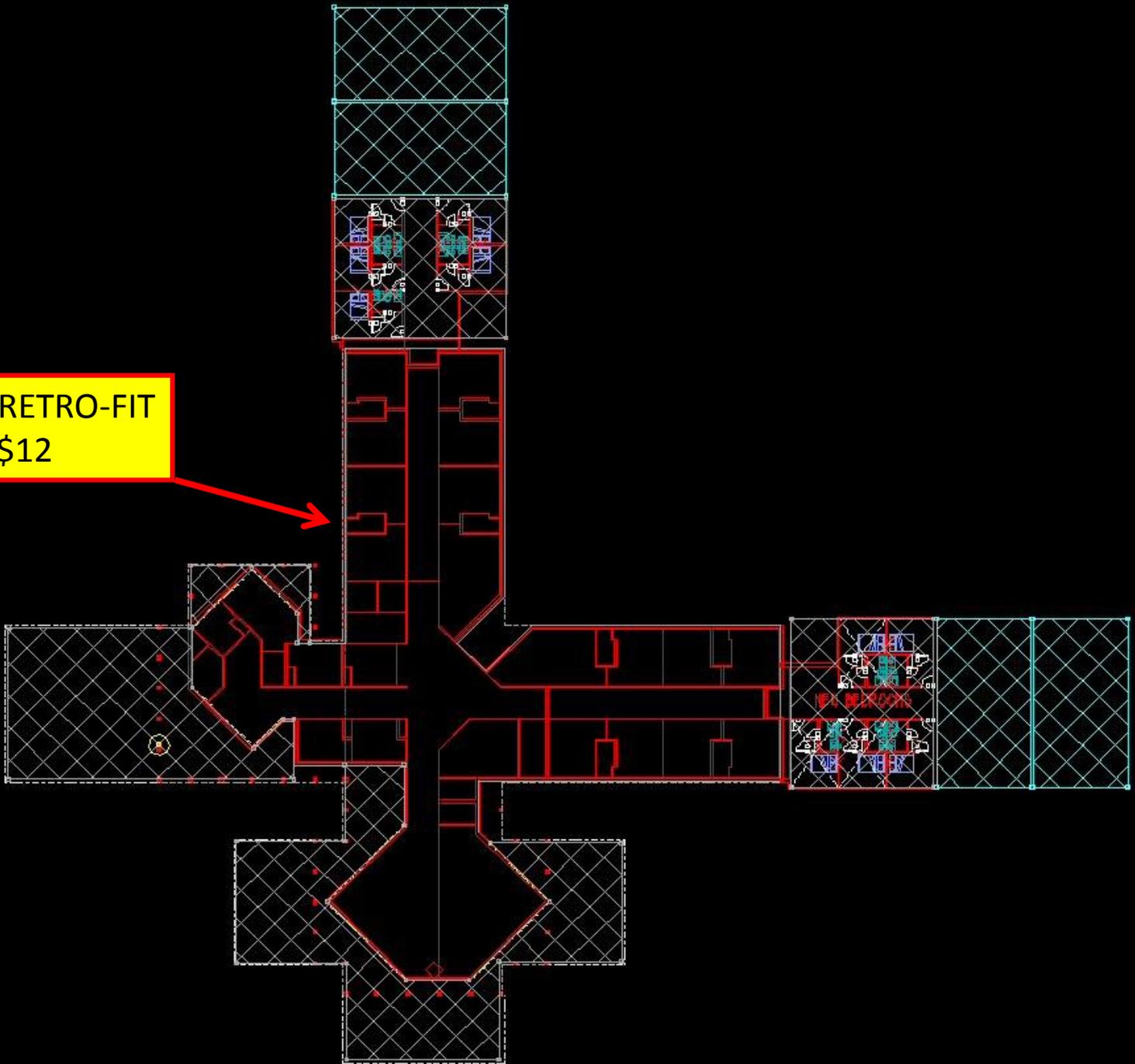
KITCHEN
\$135 - \$150





SHELL FOR FUTURE
\$40-\$50

**SPRINKLER RETRO-FIT
\$10-\$12**



4. AREA PROJECTIONS FOR PITTSBURG FACILITY

SHELL FOR FUTURE

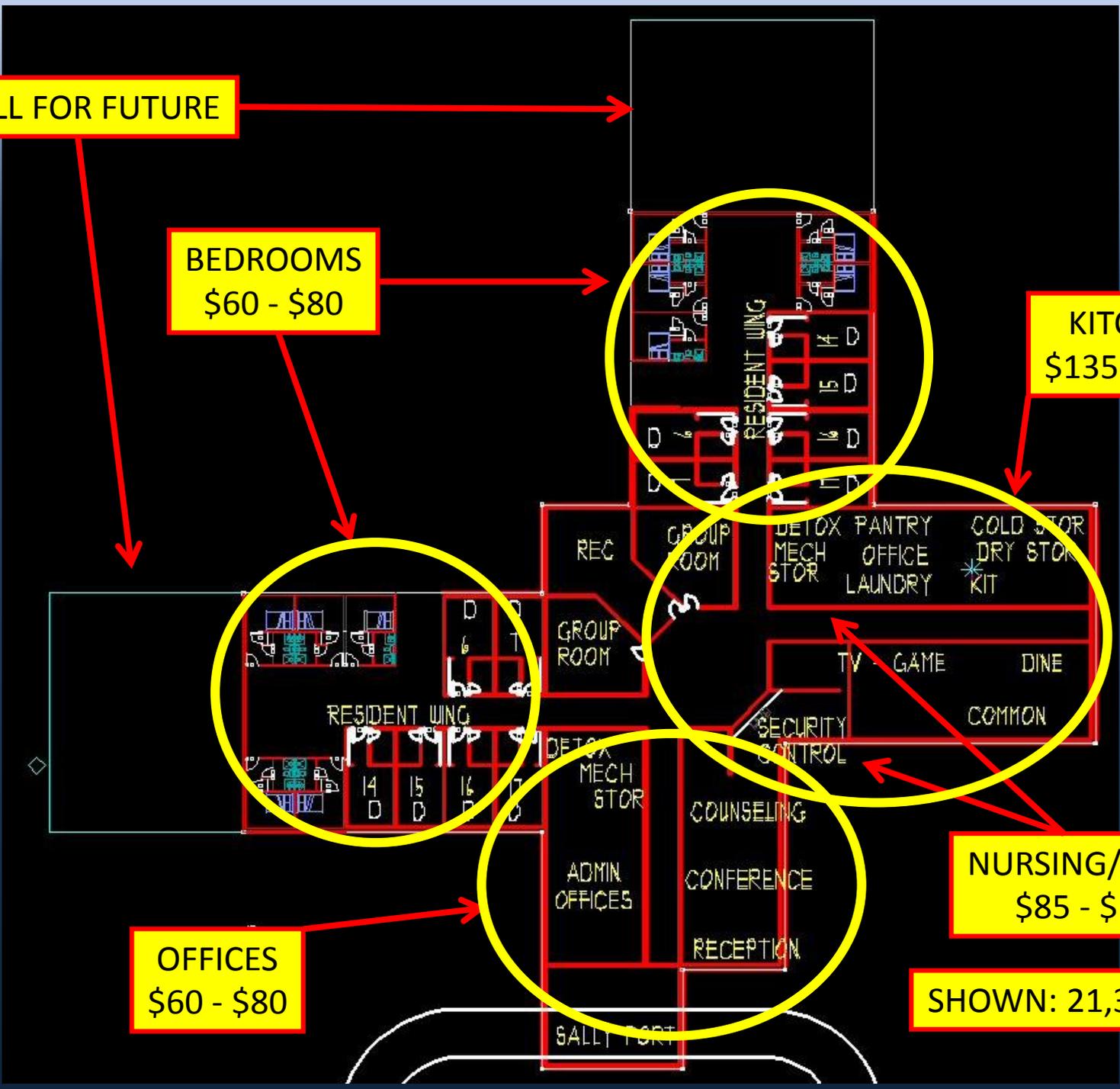
BEDROOMS
\$60 - \$80

KITCHEN
\$135 - \$150

NURSING/DETOX
\$85 - \$100

OFFICES
\$60 - \$80

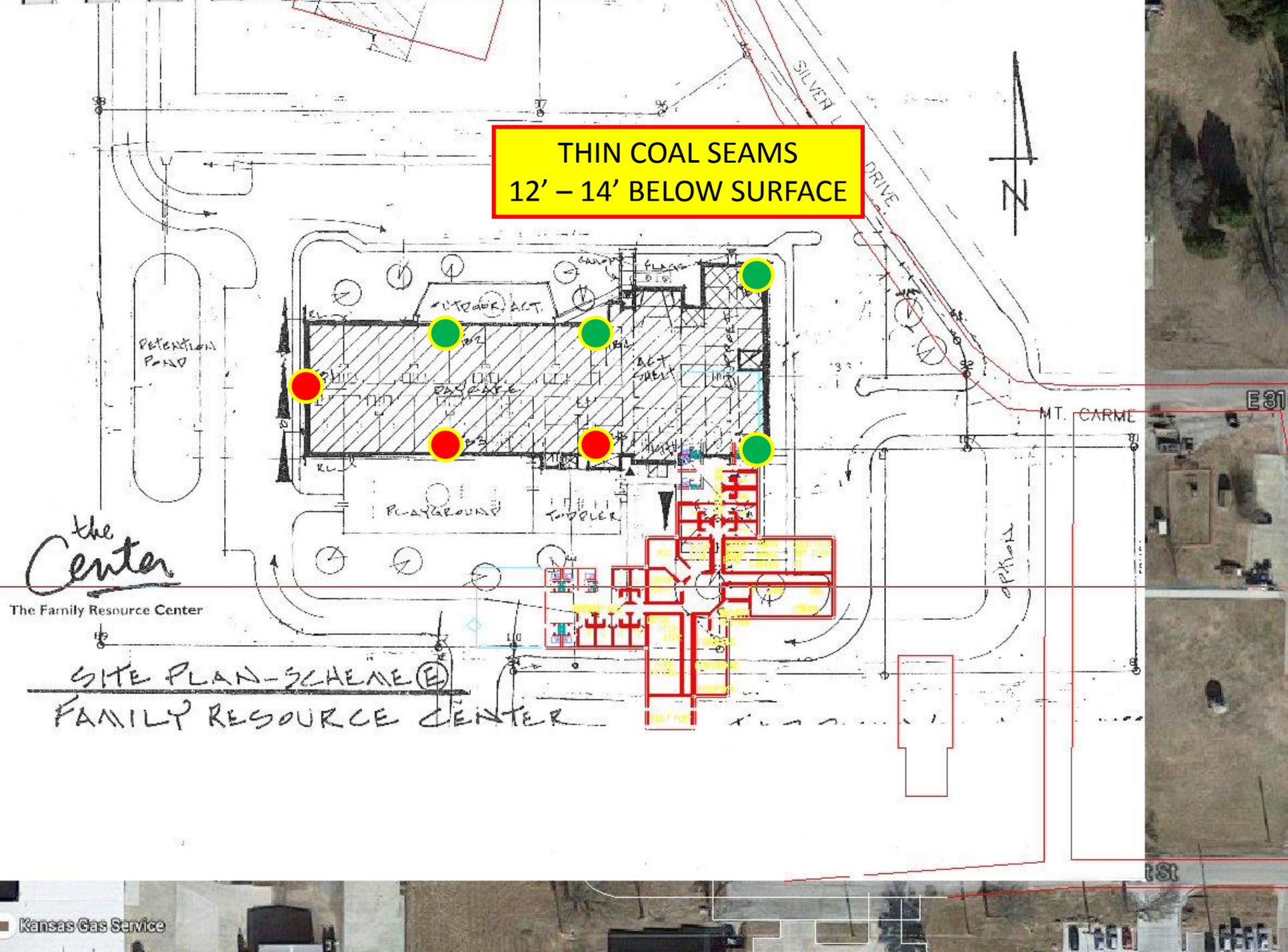
SHOWN: 21,300 SQ FT



THIN COAL SEAMS
12' – 14' BELOW SURFACE

the
Center
The Family Resource Center

SITE PLAN - SCHEME (E)
FAMILY RESOURCE CENTER





5. APPLICATION OF COST ESTIMATES

GIRARD (existing + addition)			Existing	Addition New	+10 bedrooms			Total
Capacity					Area	\$/sf cost range		
			24	10				34
Functions:	Each	Existing Areas:	sf/person		New Areas:			
Dbl Bed/bathrooms	24		2740	114				
Single bed/bathrooms				215	10	2150	60 80	\$ 129,000 \$ 172,000
Admin offices	2	223	445	19	1	223	60 80	\$ 13,350 \$ 17,800
Counselling offices	3	117	350	15	4	467	60 80	\$ 28,000 \$ 37,333
Counselor			260	11	1	200	60 80	\$ 12,000 \$ 16,000
Dining			685	29	20	571	135 150	\$ 77,063 \$ 85,625
Kitchen			510	21	20	425	135 150	\$ 57,375 \$ 63,750
Public RRs			100	4	2	400	85 100	\$ 34,000 \$ 40,000
Nurse Charting			60 120	3 5	1	100	85 100	\$ 8,500 \$ 10,000
Exam			60	3				
Storage			105	4	20	88	60 80	\$ 5,250 \$ 7,000
Laundry			150	6				
Detox			450	19	1	200	85 100	\$ 17,000 \$ 20,000
Recreation			270	11	20	225	60 80	\$ 13,500 \$ 18,000
Group			700	29	20	583	60 80	\$ 35,000 \$ 46,667
Corridors			2240	93	20	1867	60 80	\$ 112,000 \$ 149,333
Future Bedrooms	16			215	16	3440		
Sprinkler system	retro fit						10 12	\$ 130,130 \$ 156,156
	new roof area	13,013					4 5	\$ 43,750 \$ 54,688
Walls, corridors			1210	50	20			
			10455			10938		\$ \$715K - \$894K
					Tot SF:	21393		

PITTSBURG (relocation)

Capacity		Existing		New		Area			\$/sf cost range		Total	
Functions:	Original:	Each	Areas:	sf/person	New:	Areas:						
Single Bed/bathrooms			2740	215	10	2150	60	80	\$	129,000	\$	172,000
Double Bed/bathrooms				150	24	3600	60	80	\$	216,000	\$	288,000
Admin offices	2	223	445	19	3	668	60	80	\$	40,050	\$	53,400
Counselling offices	3	117	350	15	7	817	60	80	\$	49,000	\$	65,333
Counselor	1	260	260	11	1	260	60	80	\$	15,600	\$	20,800
Dining			685	29	34	970	135	150	\$	131,006	\$	145,563
Kitchen			510	21	34	723	135	150	\$	97,538	\$	108,375
Public RRs	2	50	100	4	4	200	85	100	\$	17,000	\$	20,000
Nurse	1	60	60	3	2	120	85	100	\$	10,200	\$	12,000
Charting	1	120	120	5	1	120	85	100	\$	10,200	\$	12,000
Exam	1	60	60	3	1	60	85	100	\$	5,100	\$	6,000
Storage	1	105	105	4	34	149	60	80	\$	8,925	\$	11,900
Laundry	1	150	150	6	1	150	85	100	\$	12,750	\$	15,000
Detox	2	225	450	19	2	450	85	100	\$	38,250	\$	45,000
Recreation	1	270	270	11	34	383	60	80	\$	22,950	\$	30,600
Group	2	350	700	29	34	992	60	80	\$	59,500	\$	79,333
Corridors			2240	93	34	3173	60	80	\$	190,400	\$	253,867
Future Bedrooms												
Sprinkler system	new						4	5	\$	84,573	\$	105,717
Walls, corridors			1210	140	44	6160		120		\$1.14M - \$2.18M		
			10455			21143						

DISCUSSION POINTS:

- 1. ARCHITECTURAL ISSUES AT THE GIRARD ATC
SEVERAL CODE / FUNCTIONAL ISSUES TO RESOLVE**
- 2. CONSTRUCTION COST ESTIMATE PROCEDURE
VICINITY COST AVERAGES ARE TABULATED**
- 3. AREA PROJECTIONS FOR GIRARD FACILITY
10,000 SF NEW SPACE TO EXPAND FUNCTIONS**
- 4. AREA PROJECTIONS FOR PITTSBURG FACILITY
20,000 SF NEW CONSTRUCTION TO MATCH FUNCTIONS**
- 5. APPLICATION OF COST ESTIMATES
APPROX \$715K - \$894K TO EXPAND GIRARD FACILITY
APPROX \$1.14M - \$2.18M TO RELOCATE TO PITTSBURG**