



Lee's Summit Fire Station 1 Feasibility Study

June 10, 2024



AGENDA

- Design Team | Roles & Responsibilities
- Why Our Team?
- Process Outline
- Existing Conditions
- Costs of Renovation vs. Replacement
- Recommendations & Next Steps



DESIGN TEAM | ROLES & RESPONSIBILITIES



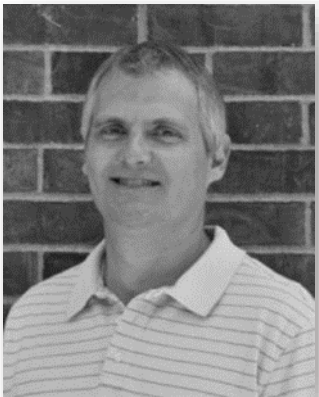
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PKMR Engineers



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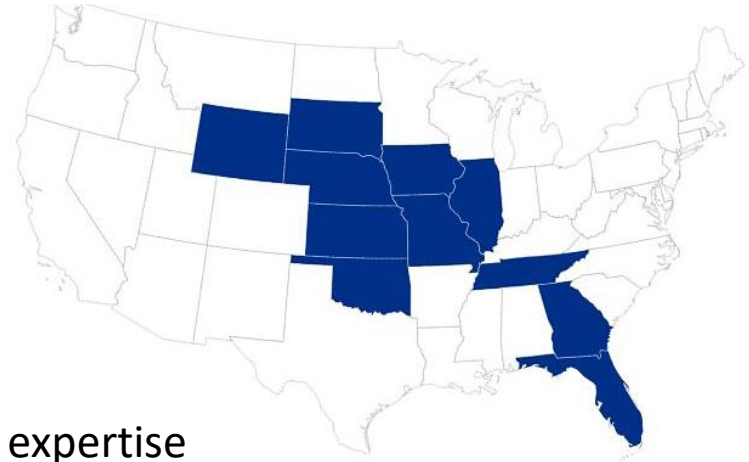


WHY OUR TEAM?



\$180 million/11 states

Regional Leader in Fire/EMS facility design, innovation, proven collaboration record



McClure Engineering

Longtime WSKF collaborator, expertise in site design and development standards



PKMR Engineers

25 station/public safety projects with WSKF, design for health & wellness



Leigh + O'Kane

3 current station/public safety projects with WSKF, expertise in structural design



STUDY PROCESS

Space Programming

- User group meeting

Conditions Assessment

- Building & site assessment
- Adjacent off-site buildings/structures
- Testing & reports
 - Phase 1 Environmental Assessment, Hazardous Materials Testing, Geotechnical Report, Site Survey, Title Report

Feasibility Study

- Confirm existing building plans
- Conceptual design options & narratives

Cost Analysis

- Newkirk Novak Construction Partners – Project CMr

Feasibility Report

- Compile findings into report



SPACE PROGRAMMING

Visioning for the New Station

- Serve Lee's Summit for the next 50 years
- Standalone fire station
- Today's best practices in fire station design

WSKF Architects LEE'S SUMMIT FIRE STATION #1
Lee's Summit, MO 10/24
rev. 1 2/2018
rev. 2 2/2018
rev. 3 8/2018
rev. 4 4/2024

A. NO.	ROOM NAME	DESIGN REQUIREMENTS	RM. SIZE (L)	RM. SIZE (W)	PROPOSED AREA	LEVEL	NOTES
A-1	Vestibule	safe haven (locking after entry, if needed); bunk box open 24/7	8	8	64	G	call system to dispatch, door bell system thru station alarm, video sur., facing Douglas Street, what are the design implications of "safe haven"?
Area above is accessible by the public 24/7							
A-2	Lobby	open area for circulation	8	14	112	G	
A-3	Flex Space/Meeting Room	12 people, movable tables and chairs, large monitor, wireless & HDMI connection, sink, plumbed water for coffee, lower cabinetry.	19	25	325	LL	near the front door, meeting space to host downtown meetings, facing Douglas Street
A-4	Public Restroom	accessible, unisex	7	8	56	G	not for general public use due to location downtown and potential for graffiti
Area above is accessible by the public when allowed							
A-5	Watch Room	Small space overlooking lobby, include bullet resistant walls/glass, pass thru window	7	7	49	G	this space is not planned to be staffed but meant to welcome people to the station lobby
A-6	Training Classroom	20 people (24), movable tables and chairs, large monitor, wireless & HDMI connection	25	32	800	LL	near dayroom/living space, doesn't need to be near the front door
A-7	Training Storage	cabinets (upper/lower), space for training props on shelving	8	10	80	LL	do not need space to store tables and chairs, can go with tables and chairs to one side of the Training Classroom
A-8	Crew Office/Report	2 workstations for report writing, HIPAA concerns so privacy needed	7	9	63	G	near dayroom, similar to LS #3
A-9	Company Area/ Public Shelter	desk w/ credenza, 2 guest chairs, 4 person table & chairs <i>note: this space is not planned to be staffed but meant to welcome people to the station lobby</i>	12	22	264	G	part of a suite with bunk/restroom, similar to chief suite in LS #3
A-10	Company Officer 1	desk, guest chair, small table with 3-4 chairs	11	17	187	G	similar to LS #3
A-11	Company Officer 2	desk, guest chair, small table with 3-4 chairs	11	17	187	G	similar to LS #3
A-12	Operations Chief Office	desk w/ credenza, 2 guest chairs, 4 person table & chairs	12	22	264	G	part of a suite with bunk/restroom, similar to chief suite in LS #3
A-13	Bunk	bed, recliner, tv, 4 lockers, no ceiling fans	12	16	192	2	Ask all ways to place lockers for all three together in one area outside of the bunks
A-14	Bunk Restroom	sink, toilet, shower (easy access controls), shelving, robe hooks	7	11	77	2	
A-15	Shift Inspector Office	desk w/ credenza, 2 guest chairs, 4 person table & chairs	12	22	264	G	part of a suite with bunk/restroom, similar to chief suite in LS #3, captain level position
A-16	Bunk	bed, recliner, tv, 4 lockers, no ceiling fans	12	16	192	2	
A-17	Bunk Restroom	sink, toilet, shower (easy access controls), shelving, robe hooks	7	11	77	2	
A-18	Shift Inspector Office	desk w/ credenza, 2 guest chairs, 4 person table & chairs	12	22	264	G	part of a suite with bunk/restroom, similar to chief suite in LS #3
A-19	Bunk	bed, recliner, tv, 4 lockers, no ceiling fans	12	16	192	2	
A-20	Bunk Restroom	sink, toilet, shower (easy access controls), shelving, robe hooks	7	11	77	2	
A-21	Suite Kitchenette	small kitchenette space that would serve the three office suites above, include table for 4 people	12	12	144	G	
A-22	Ice Machine	commercial size with water connection and floor drain	5	7	35	G	locate near the bays
A-23	General Storage	small space for office supplies	3	7	21	LL	near offices
A-24	Janitor 1	first floor - mop sink, shelving, mop hooks	5	7	35	G	located as req'd per building layout

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DESIGN / SPACE NEEDS SUMMARY

A. LOBBY, ADMINISTRATION & SUPPORT SERVICES	5,566
B. LIVING QUARTERS	8,448
C. APPARATUS BAYS	8,906
D. DECONTAMINATION PROTOCOL	2,064

Building Total 24,984 ~25,000 Target



CONDITIONS ASSESSMENT

- Built as civil defense facility in 1974
- Renovated building in 2005 by WSKF Architects
- Facility Conditions
 - Architectural
 - Structural
 - MEP
- Design Best Practices
 - Functionality vs. Operational
 - Safety & Security
 - Code Compliance
 - Building Codes
 - NFPA Standards
 - Health & Wellness
 - Discussions with City & Fire Staff
- NFPA Standards / Code Compliance



BEFORE



AFTER



DESIGN OPTIONS

- Option 1 – Renovate Existing Facility
- Option 2 – Replace & Build New



COSTS OF RENOVATION vs. REPLACEMENT

Lee's Summit Fire Station #1
 Lee's Summit, MO
 April 26, 2024
 Concept Estimates
 Construction Cost Summary



Description	Quantity	Cost	Unit Cost	Included In Totals						
				GenReq	PBI	Construction Contingency	Design Contingency	Owner Contingency	Escalation	Fee
Option #1 Site	1 LS	\$ 1,388,096	\$ 49	\$ 111,048	\$ 64,824	\$ 67,318	\$ 89,757	\$ 33,659	\$ 47,571	\$ 27,829
Option #1 Renovation**	25,170 SF	\$ 12,924,323	\$ 513	\$ 904,703	\$ 603,566	\$ 626,784	\$ 835,712	\$ 313,392	\$ 442,927	\$ 259,112
Option #1 Addition	3,292 SF	\$ 5,401,835	\$ 1,641	\$ 432,147	\$ 252,266	\$ 238,807	\$ 796,024	\$ 119,404	\$ 168,757	\$ 98,723
Construction Subtotal		\$ 19,714,255		\$ 1,447,897	\$ 920,656	\$ 932,909	\$ 1,721,493	\$ 466,454	\$ 659,256	\$ 385,664

** Structural modifications are likely not fully accounted for in the above cost.

Description	Quantity	Cost	Unit Cost	Included In Totals						
				GenReq	PBI	Construction Contingency	Design Contingency	Owner Contingency	Escalation	Fee
Option #2 Site	1 LS	\$ 1,719,838	\$ 70	\$ 171,984	\$ 80,316	\$ 83,406	\$ 111,208	\$ 41,703	\$ 58,940	\$ 34,480
Option #2 Building	24,638 SF	\$ 16,579,293	\$ 673	\$ 1,120,964	\$ 774,253	\$ 817,248	\$ 817,248	\$ 408,624	\$ 577,522	\$ 337,850
Construction Subtotal		\$ 18,299,132	\$ 743	\$ 1,292,948	\$ 854,569	\$ 900,654	\$ 928,456	\$ 450,327	\$ 636,462	\$ 372,330

- Option 1 – Renovate Existing Facility
 - Estimate: \$19,714,255
- Option 2 – Replace & Build New
 - Estimate: \$18,299,132

Difference of \$1,415,123



RECOMMENDATIONS & NEXT STEPS

Recommendation: Option 2 - Replace & Build New... but why?

- New needs don't align with existing building layout
- Renovation will be more costly
- Extended construction time
 - Selective demolition
 - Poor structural integrity
- Functionality Concerns
 - Efficient use of space, reduce turnout time, health & wellness, etc.
- Operational Concerns
 - building systems, materials, maintenance/repair, deficiencies, etc.
- Fire Station Best Practices
 - Apparatus bay dimensions
 - Apparatus rear apron
 - Health & wellness
- Code Compliance & NFPA Concerns





QUESTIONS?





THANK YOU!

