Lee's Summit Fire Station 1 Feasibility Study

June 10, 2024

WSKF ARCHITECTS

AGENDA

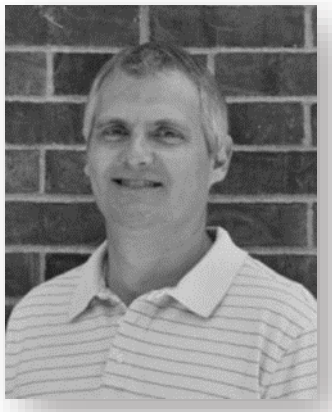
- Design Team | Roles & Responsibilities
- Why Our Team?
- Process Outline
- Existing Conditions
- Costs of Renovation vs. Replacement
- Recommendations & Next Steps

DESIGN TEAM | ROLES & RESPONSIBILITIES

Dalyn Novak
Principal-In-Charge
WSKF Architects

Rick Kuhl
Consulting Principal
WSKF Architects

James Lukacovic
Project Manager
WSKF Architects



Mike Raaf
MEP Engineer
PKMR Engineers

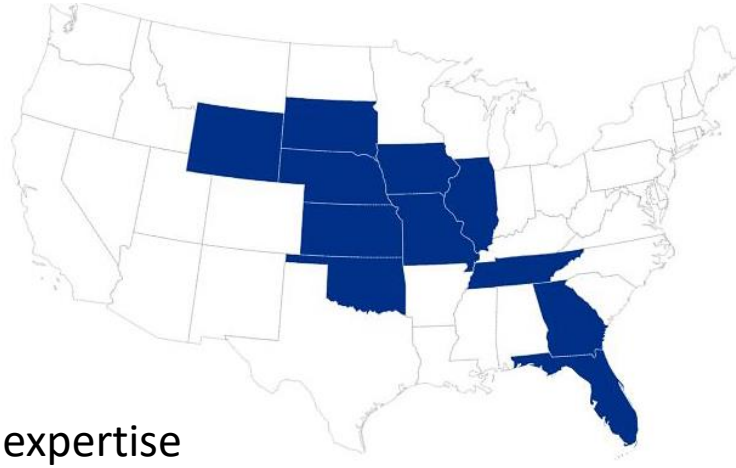
Pat Kullberg
Civil Engineer
McClure Engineering

Adam O'Kane
Structural Engineer
Leigh & O'Kane

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

1/25/24
rev. 1 2/2/24
rev. 2 3/25/24
rev. 3 4/3/24
rev. 4 4/25/24

A. LOBBY, ADMINISTRATION & SUPPORT SERVICES

RM. 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), baby box, open 24/7	8	8	64	G	call system to dispatch, door bell system thru station alerting, video sur., facing Douglas Street, what are the design implications of "safe havens"?
		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	13	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 overuse
		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 safely
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/lowers), space for training props on shelving	8	10	80	LL	do not need space to store tables and chairs, can push 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	~~Common Area/ Public Shelter~~	~~need to determine if this space is part of the project or not (currently sized as a 40 person training room), should this be hardened as ICC 500 rated?~~					~~this has been the large training room in the lower level of the existing fire station and serves the people of downtown Lee's Summit, if renovation or a new facility will this feature remain?~~
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	*look at 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	Safety Officer 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

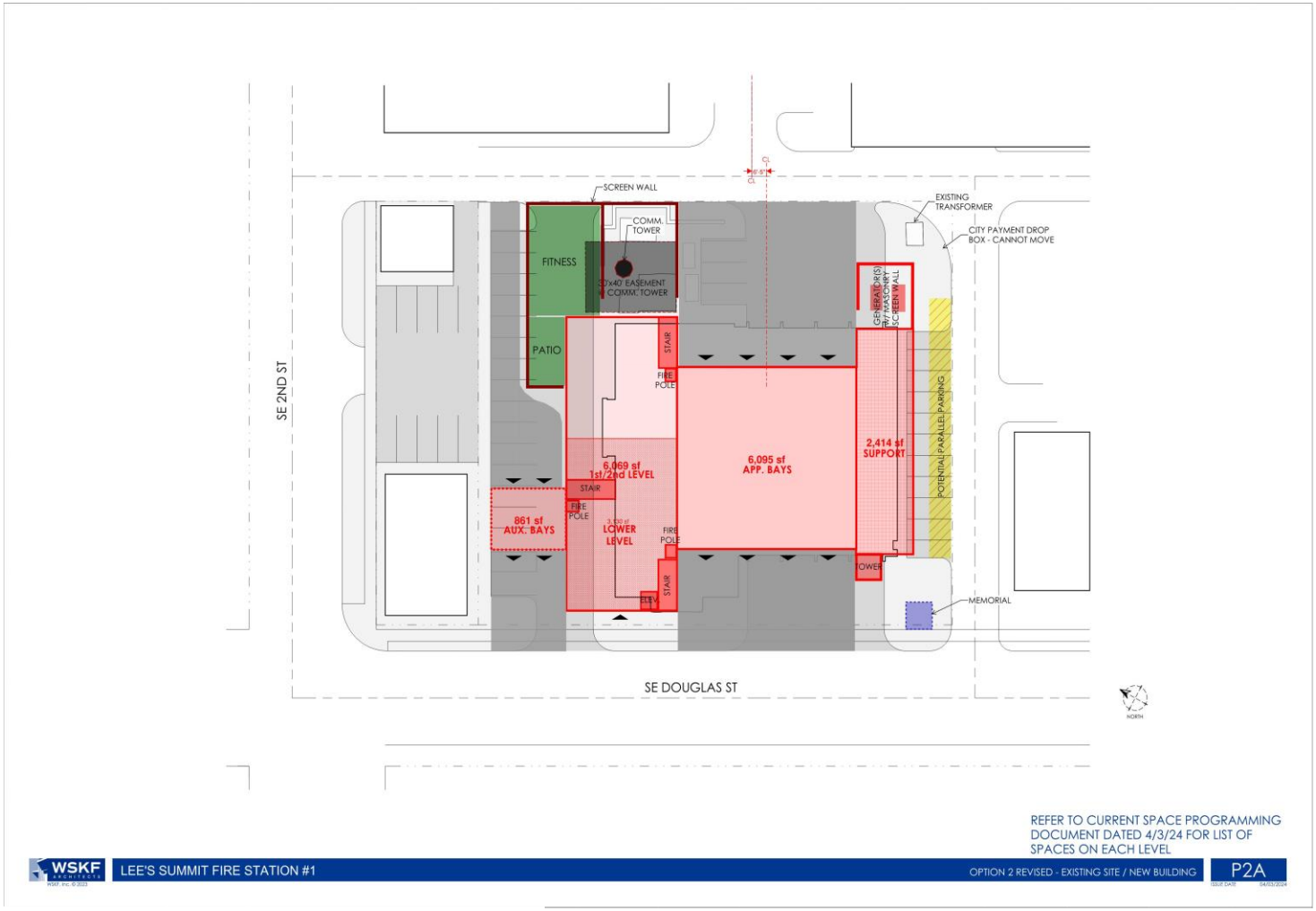
- Built as civil defense facility in 1974
- Renovated building in 2005 by WSKF Architects
- Facility Conditions
  - Architectural
  - Structural
  - MEP
- Design Best Practices
  - Functionality vs. Operational
  - Safety & Security
  - Code Compliance
    - Building Codes
    - NFPA Standards
  - Health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

NEWKIRK NOVAK CONSTRUCTION PARTNERS

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

WSKF ARCHITECTS

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!