RUSSELLVILLE FIRE DEPARTMENT

NEW CENTRAL FIRE STATION PROJECT

Revised: August 2013

File: E/RFD/Fire Stations/New Central Fire Station Project/Presentations/2013 PP Presentation
J. Cochran

OVERVIEW

Russellville Firemen, circa 1922

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Overview

Functions of a Central Fire Station

Serves as the headquarters/nerve center of a fire department.

- Administration
  - Office of fire chief and other senior staff, fire prevention bureau, training bureau, support staff, etc.
- Primary fire station supporting outlying satellite stations
  - Living quarters for firefighters, fitness room, housing for assigned fire apparatus.
- Reserve/auxiliary apparatus
  - Spare pumpers/ladder trucks, rescue/Hazmat, staff cars.
- Training center
  - Training officers' office
  - Classroom
  - Training props, etc.
- Emergency response coordination
  - Emergency operations room
- Support services, i.e., apparatus/equipment repair
- Supply & equipment depository

Overview

1. Why the need for a new Central Fire Station?
2. Who will benefit from the project?
3. What are the design and spatial needs?
4. What are the projected costs?
5. Where will the station be located?

Current Central Fire Station
203 West 2nd Street

Overview

- Included within the 2014 City Sales Tax renewal.
- Contribute to the sustainability of City's Class 3 fire insurance rating.
- Estimated cost: $6-8 Million.
- Estimated square footage: 18-20,000
- Recent media-based public feedback indicates public support.
- Will improve programs and services provided to the citizens of Russellville.
- Enhance efficiency and effectiveness of operations and services.
- Improve working and living conditions of Russellville firefighters.

Recent New Central Fire Station Projects

Newark, CA

Maitland, FL

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Overview

Comparison with Similar Arkansas Communities:

City	Population	Year Built	Original Construction Cost/ 2013 Conversion	Square Footage	Stories	Bays	Architect
Russellville	**28,000**		**$4,500,000-$5,500,000**	**18-20,000**	**2**	**4-5**	
Searcy	20,000	2007-8		18,000	1	6	Jackson, Brown, & Palculict
Hot Springs	35,000	1996	$2,900,000/ 4,317,580	34,940	2	5	Jackson, Brown, & Palculict
Rogers	58,800	1997		24,000	1	11	Crafton Tull
Springdale	73,000				2	6	
Bentonville	39,000	2008	$5,608,000/	31,026	2	7	Jackson, Brown, & Palculict
Benton	32,000				2	4	Black , Corley, Owens & Hughes
Conway	62,000				2	4	Jackson, Brown, & Palculict

Overview

City:	Searcy
Population:	20,000
Year Constructed:	2007
Total Cost:	
2013 Conversion:	
Square Feet:	18,000
Number of Bays:	6

City:	Hot Springs
Population:	35,000
Year Constructed:	1996
Total Cost:	2,900,000
2013 Conversion:	
Square Feet:	18,000
Number of Bays:	6

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Overview

City:	Rogers
Population:	58,000
Year Constructed:	1997
Total Cost:	2,900,000
2013 Conversion:	
Square Feet:	24,000
Number of Bays:	11

City:	Springdale
Population:	73,000
Year Constructed:	
Total Cost:	
2013 Conversion:	
Square Feet:	
Number of Bays:	6

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Overview

City:	Bentonville
Population:	36,000
Year Constructed:	2008
Total Cost:	
2013 Conversion:	
Square Feet:	
Number of Bays:	7

City:	Benton
Population:	31,000
Year Constructed:	2008
Total Cost:	
2013 Conversion:	
Square Feet:	
Number of Bays:	5

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Overview

City:	Conway *
Population:	60,000
Year Constructed:	2000
Total Cost:	
2013 Conversion:	
Square Feet:	
Number of Bays:	4

* Renovation of existing building.

Russellville Fire Station, circa 1927

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1. Why the need For a new Central Fire Station?

A. Fire Insurance Rating. Current facility may adversely affect Fire Department's ability in the future to sustain its current fire insurance rating due to non-compliance with referenced standards.

B. Expanded Services and Programs. Expanding fire department mission including services and programs requires increased spatial needs.

C. Safety & Health. Not compliant with current safety, health, building and ADA regulations.

D. Increased Personnel. Greater spatial needs due to an increase in day staff and shift personnel.

E. Inferior Design. Inadequate design/functional features.

F. Reduced Space. Loss of office and storage space due to City Hall renovation.

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1. Why the need For a new Central Fire Station?

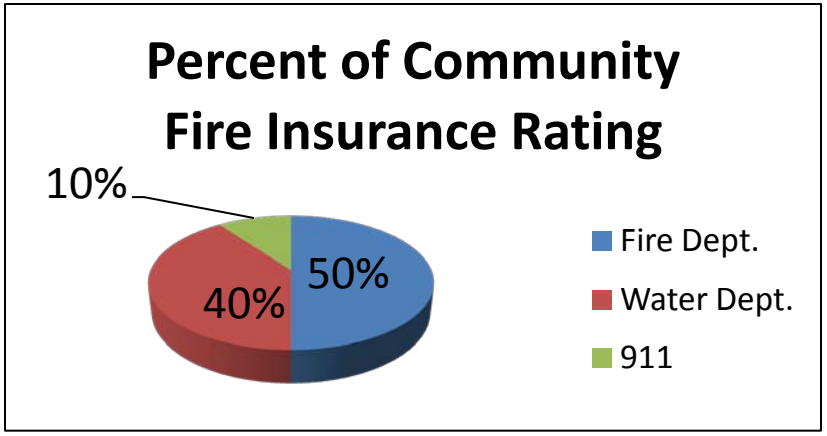
A. Fire Insurance Rating. Current facility may adversely affect Fire Department's ability to sustain its current Insurance Services Office (ISO) community fire insurance rating due to non-compliance with referenced standards.

ISO's *Fire Suppression Rating Schedule Guidebook* takes into account several nationally recognized standards related to fire stations of the National Fire Protection Association (NFPA):

- NFPA 101, *Life Safety Code*
- NFPA Standard 1201, *Standard for Providing Fire and Emergency Services to the Public*
- NFPA Standard 1500, *Standard on Fire Department Occupational Safety and Health Program*
- OSHA, 29 CFR 1910, *Occupational Safety and Health Standards*

" Governmental authorities may use the National Fire Protection Association's Standard 1201, Standard for Providing Fire and Emergency Services to the Public."

Fire Suppression Rating Schedule Guide, Section 107 – Minimum facilities for applying this Schedule.



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1. Why the need For a new Central Fire Station?

B. Expanded Services and Programs. Expanding fire department mission including services and programs requires increased spatial needs.

Program/Service	1977	2013
Fire Suppression (Structural, Wildland, Other)	✓	✓
EMT/Paramedic First-Responder	—	✓
Vehicle Rescue/Extrication	—	✓
Technical/Rope/Confined Space Rescue	—	✓
Hazardous Material Spills	—	✓
Fire code enforcement	—	✓
Pre building/development construction review	—	✓
Fire scene investigation	—	✓
Public education	✓	✓


Fire Suppression


EMT/Paramedic


Vehicle Extrication


Fire Investigation


Swift Water Rescue


Confined Space


Hazardous Materials


Fire Inspections

1. Why the need For a new Central Fire Station?

C. Safety & Health. Current station is not compliant with current safety, health, building and ADA regulations.

Examples of Deficiencies:

- Life Safety
  - emergency egress
  - fire sprinklers/detection and security systems
  - no enclosed fire stairs/elevator
- Building Design/Systems/Structure
  - unsafe exiting & backing of large fire apparatus
  - Not designed for newer apparatus
  - decaying plumbing and drainage
  - leaking roofs and cracked walls
  - antiquated HVAC system components
  - non compliant with ADA
- Inadequate Work/Living Space
  - lack of adequate office, living, apparatus, and storage/repair space
  - Engine room cramped and inefficient
  - No employee health and fitness facilities

Non-ADA compliant

Cramped quarters

Limited space

Structural integrity

1. Why the need For a new Central Fire Station?

D. Increased Personnel. Greater spatial needs due to an increase in day staff and shift personnel.

Full-time Staff Assigned to Central Fire Station	1977	2013
• Full-time Fire Chief	—	1
• Assistant Fire Chief/Training Officer	—	1
• Administrative Assistant (Civilian)	—	1
• Fire Marshal (Captain)	—	1
• Assistant Fire Marshal (Captain)	—	1
• Fleet/Facilities Support (Firefighter/Driver)	—	1
• Shift/fire personnel *	2-3	5-8
• Civilian Intern(s)	—	1-2
Total	2-3	14-16

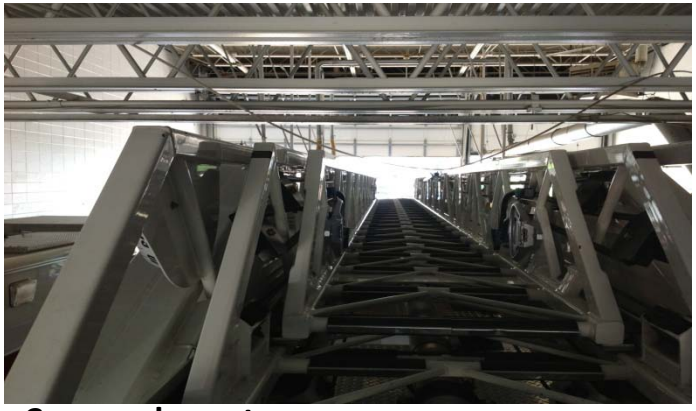
* Represents number of firefighters on duty per shift. There are three 24 hour shifts.

Russellville Volunteer Fire Department, circa, 1960

1. Why the need For a new Central Fire Station?

E. Inferior Design. Inadequate design/functional features for today's mission and workforce.

- Tight quarters/short front apron.
- Lack of energy efficiency.
- Engine room/bay not compatible with today's modern apparatus.
- No adjacent drill area.
- No spatial areas for future growth.



Cramped quarters

Decaying infrastructure


2. BENEFITS
Russellville Fire Station, circa 1937

2. Who Benefits?

Local Citizens and Commuters

- Improved response capability.
- More efficient effectiveness and efficiency of programs and services.

Local Commerce and Industry

- Improved flexibility of resources to address ever-changing conditions of fire risks and associated programs and services.

Russellville Firefighters

- Improved administrative staff workspace, safer apparatus access and maneuverability, storage and other support spaces, and living space conditions.

3. DESIGN

Russellville Fire Station, circa 1954

3. Design/Spatial Needs

DESIGN/SPACE ISSUES:

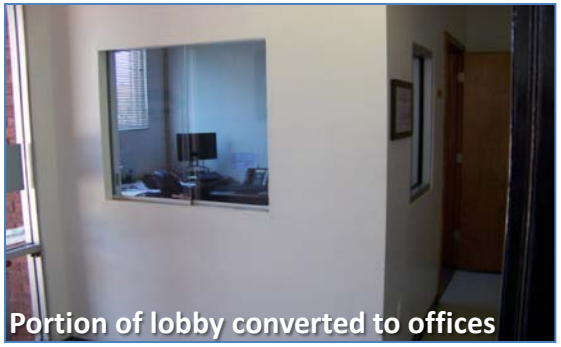
- **Minimal Space.** There was a loss of office and storage space when City Hall was renovated – decreasing the already cramped work/training area.
- **Non-Flexibility.** Current building will not allow, even if re-modeled, adequate space to house apparatus and equipment needed to meet existing and future needs.
- **Square Footage:**
  - Current – 6,050
  - Needed – 18,000-20,000
- **Bay Doors**
  - Current – 3
  - Needed – 5
- **Stories**
  - Current – 2
  - Needed – 2-3

3. Design/Spatial Needs

Public Areas

- **Lobby Area.** Practically no public waiting/lobby area.
  - Converted from original front entrance way.
  - Significant portion converted from open entrance way to offices.
- **Public Restroom**. No restrooms are available.
- **ADA Compliant**. Facility was built 15 years before enactment of the American with Disabilities Act.
  - No handicap access to the second floor.

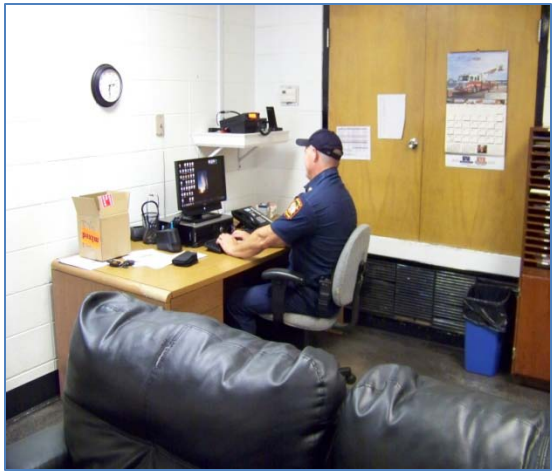

Minimal Public Space


Portion of lobby converted to offices

Hall widths not ADA compliant

3. Design/Spatial Needs

- **Administration**
- **Offices.** Insufficient number of offices.
  - Assistant Chief and Station Captain do not have enclosed offices.
  - Fire Marshal and Assistant Fire Marshal offices are not located within the facility.
- **Cramped Quarters.** All office are of insufficient dimensions.
  - Cramped spaces.
  - Limited functionality.
- **No Secure Printer/Office Supply Storage.** Facility does not have space for secured space for printer and supplies.

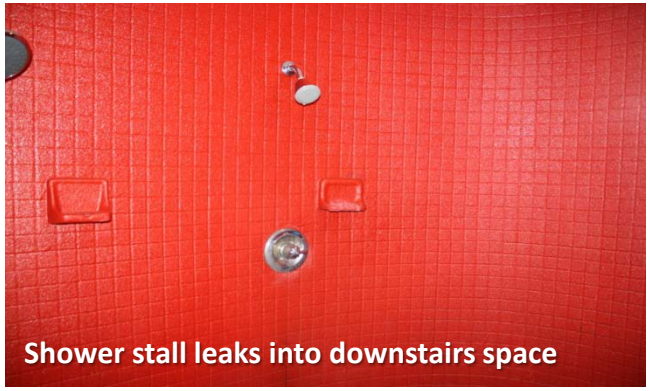


- Some office spaces lack privacy and security and are located in open public areas.

3. Design/Spatial Needs

- **Shift Personnel/Living Quarters**
- **Lavatories.** Designed for 2-3 personnel vs. the 10-14 of today.
  - Fixtures and plumbing infrastructure inferior and decaying.
- **Sleeping Quarters.** All dorm rooms are of insufficient dimensions.
  - Insufficient number of rooms
  - Inferior HVAC system.
- **Female Personnel.** No sleeping or lavatory facilities for female personnel.


Upstairs lavatory and laundry

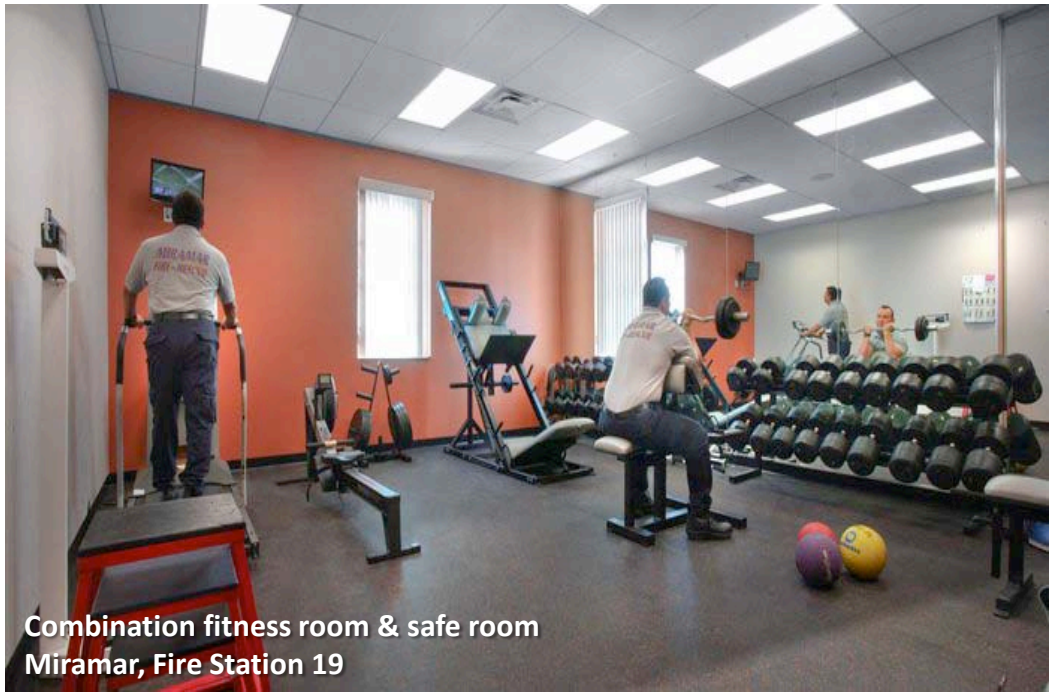

Shower stall leaks into downstairs space


Dorm rooms do not met minimum standards

3. Design/Spatial Needs

Fitness/Safe Room

- **Fitness Facilities.** No space for physical fitness.
  - On duty members must drive to private fitness center and workout at their cost.
- **Safe Room.** No storm shelter exist within or near the structure.
  - Facility cannot be retrofitted with FEMA compliant safe room.
  - No space for exterior storm shelter.



Combination fitness room & safe room
Miramar, Fire Station 19

3. Design/Spatial Needs

Training Room

- **Classroom.** Limited accommodations for the number and type of training programs.
  - Current room cannot adequately serve number of students and training props.
- **Storage.** No storage space for training props and materials.

Classroom, Fire Station 4
Germantown, TN

3. Design/Spatial Needs

Engine Room/Apron

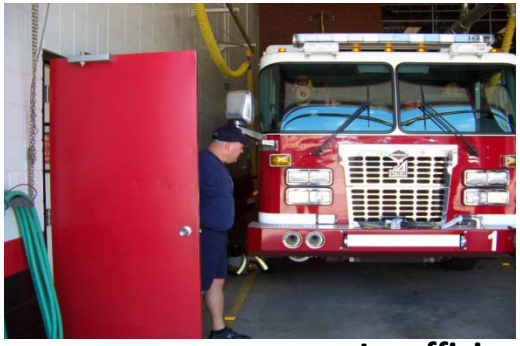
Bays. Current engine room only has three bays. Proposed station would need 4-5 bays.

Bay doors. Current doors are 12 feet wide & 14 feet tall. Minimum dimensions should be 14x14.

Stalls. Bay stalls are cramped for the dimensions of today's modern apparatus.

Ceiling height. Portion of engine room has inadequate clearance for aerial apparatus.

Narrow bay stalls.



Insufficient wall space.

Insufficient clearance.

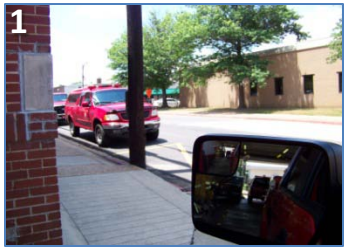
3. Design/Spatial Needs

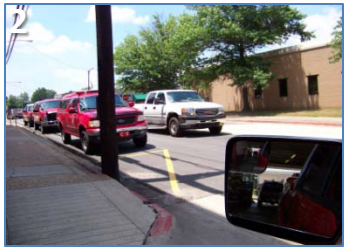
Front Apron. Current station is not set back far enough from street to insure safe exiting and backing into station.

- Poor clearance of exiting apparatus.
- Poor visibility of approaching vehicles.
- Blocked sidewalk.
- Apparatus parked in fire lane creates visibility hazards for vehicles exiting nearby city streets and businesses.
- Fire apparatus must use private parking lot entrances when backing into bay.
- Side street must be blocked to conduct certain maintenance procedures.

Exiting

Poor Visibility





Blocked Sidewalks

3. Design/Spatial Needs

Rear Apron/Drive. Rear drive is no longer accessible due to location of exterior storage container.

- Rear drive decaying beyond patch work repair.
- Drive floods during heavy rains with water runoff into station.
- Limited accessibility.

Easily floods

Decaying drive

Limited access

3. Design/Spatial Needs

Storage Space. The facility's storage space is woefully inadequate.

- Non-heated/air condition exterior cargo containers must be utilized.
- Limited original storage space.
- Critical supplies and equipment must be stored elsewhere throughout the city including rental space.

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3. Design/Spatial Needs

Building Systems/Structure.

- Wasted interior space creating excessive heating costs.
- Major roof problems requiring replacement of large sections of roof assembly.
- Aging plumbing requiring significant upgrade and repair.

Dead space in engine room causing excessive heating costs.

Decayed plumbing infrastructure.

Area of roof requiring replacement of materials down to roof joists.

3. Design/Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
ADMINISTRATIVE			
Main Entry/Reception	10 x 10 100	22 x 22 504	• Current facility virtually has no lobby/reception area for citizens that have business with the Department. • Original lobby converted into fire chief and administrative assistant offices.
Public lavatory	None	10 x 20 400	• No public restrooms exist in current facility. • Does not meet ADA guidelines.
Chief's Office	12 x 9 108	14 x 20 280	• Current office was converted from original front lobby of facility. • Does not meet minimum criteria as set forth in model fire station design guide. • Recommended – Class I office
Chief's Office Closets	None	3 x 4 12	• No closet space available • Recommended SF – 18
Administrative Asst. Office (2)	10 x 9 90	10 x 12 240 (2)	• Space does not exist in the current facility. • Cubicle space is being utilized in City Hall. • Offices should be of dimensions that will provide ample room for a variety of administrative support functions. • Recommended – Class II office.
Asst. Chief's Office	None	12 x 16 192	• Current facility does not provide office for the Assistant Chief/Training Officer. Currently a portion of the classroom is used as his space offering no security or privacy. • Recommended – Class II office.
Asst. Chief's Office Closet	None	3 x 4 12	• No closet space available • Recommended SF – 18
Fire Marshal Office	None	12 x 18 216	• No office space available in the current facility. Space being utilized on the first floor of City Hall. • Recommended – Class II office.
Fire Marshal Office Closets	None	3 x 4 12	• No closet space available • Recommended SF – 18
Asst. Fire Marshal Office (2)	None	10 x 12 240	• No office space available in the current facility. Space being utilized on the first floor of City Hall. • Recommended – Class II office.

3. Design/Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
Asst. Fire Marshal Office Closets	None	3 x 4 12	• No closet space available • Recommended SF – 18
Public Info Storage/Supplies	None	8 x 8 64	• Limited space available in the current facility. Bulk material must be stored in rented mini storage facility. • Recommended SF – 80
Evidence Closet	None	6 x 8 48	• No secure closet exist in current facility. • Recommended SF – 48
Fleet Service Administrator	6 x 14 84	10 x 12 120	• Current office is substandard and is shared with receptionist space and does not provide privacy from public space. • Recommended SF – 120 • Recommended – Class II office
Spare Office (s)	None	10 x 12 120	• Current facility does not provide for future office space needs. It is projected the Department will need additional office space within the next 5-10 years. • Recommended – Class II office
Cubicle Work Stations (6)	None	8 x 8 384	• No work areas are available in the current station for personnel assigned to special projects, modified/light duty, or civilian interns. The new facility will include a cubicle/bull pen type work area . • Recommended SF – Class IV
Conference room	None	16 x 24 384	• No conference room available in the current facility. • Recommend SF – 384
Break area alcove	None	10 x 12 120	• Current facility does not provide for separate break area for administrative staff. • Recommended SF – None
Admin. Lavatory (2)	None	6 x 6 144	• Current facility provides one unisex non-ADA compliant restroom on the first floor for administrative staff and shift personnel. Room is inconveniently located immediately adjacent to shift personnel kitchen area thus providing for limited privacy. • Recommended SF – 36 (per restroom)
Senior officer two-bed bunk room w/ lockers	None	10 x 12 120	• Current facility does not provide for a bedroom for chief officer staff that may need to sleep overnight in the event of major emergency. • It is recommended that private sleeping quarters be provided for senior officers that is separate from shift personnel. • Recommended SF – 120

3. Design/Spatial Needs

	Square Footage		Comments
	Current	Proposed	
Bunk room lavatory & shower	None	6 x 10 60	• Current facility does not provide for separate senior officer bedroom & lavatory/shower. • Recommended SF – 60
File Storage	None	10 x 12 120	• Current facility does not provide proper storage of files and archives. Most of the Department files are stored at city hall in the city attorney's file room , fire marshal's office, and rented space. • Additional file cabinets are stored in a free standing non-heated/cooled metal walk-in cargo ship/tractor trailer type storage box located behind the current station. • The Department needs adequate for the proper storing and filing of records, but future spatial needs as well. • Recommended SF – 120
Work/Fax/ Copy Room	None	8 x 10 80	• Current facility does not provide for separate area for copy machine and associated Administrative functions. • Current space is shared with Battalion chief's office, thus providing limited privacy for meetings and related daily functions. • Proposed space could be consolidated with file room and office supply areas. • Recommended SF – 80
Mail Counter	None	4 x 8 32	• Currently mail is delivered to the front lobby and in placed in a non-secure U.S. mail box. • Proposed space could be consolidated with file room and office supply areas. • Recommended SF – None
Office Supply Storage	None	4 x 6 24	• Additional file cabinets are stored in a free standing non-heated/cooled metal walk-in cargo ship/tractor trailer type storage box located behind the current station and rented storage space. • Proposed space could be consolidated with file room and office supply areas. • Recommended SF – 24
Area Total		**3700**	
SHIFT PERSONNEL/LIVING QUARTERS			
Battalion Chief Office (3 cubicles)	10 x 9 90	12 x 24 288	• Current office originally served as fire dispatcher sleeping room. • Space is cramped and shared with copier and related supplies. One small desk is shared by all three Bat. Chiefs. • Proposed space would allow for private work spaces thus allowing more than one Bat. Chief to conduct business at a t time. • Recommended SF – 360
Bat. Chief Office Closet (3)	None	3 x 6 54	• No closet space available • Recommended SF – 18 per position

3. Design/Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
Bat. Chief Dorm Room	None	10 x 12 120	• There are no separate sleeping quarters in the current facility. Bat. Chief's dorm room is located with the other dorm rooms used by shift personnel. • Chief officer dorm rooms should be separate from shift personnel sleeping facilities. • Recommended SF – 120
Bat. Chief Lavatory/shower	None	6 x 10 60	• Current facility does not provide for separate senior officer bedroom & lavatory/shower. • Recommended SF – 60
Captain Office	None	10 x 18 240	• Current facility does not provide for separate office with Captain's desk being located in the day room. • Due to the potential increase in personnel, it is foreseen that in addition to Engine Co. 1 being assigned a Captain, Aerial Truck 1 would also be staffed with a Captain at which time office accommodations would be necessary for the new position. • Recommended SF – 120
Day Room	24 x 13 312	20 x 24 480	• Current dayroom is limited in space with poor traffic circulation. • Recommended SF – 480 .
Day Room Storage	None	6 x 8 48	• Current facility does not provide for storage for dayroom functions. • Recommended SF – None
Kitchen	11 x 12 132	16 x 24 384	• Current facility provides limited kitchen space for current and future workforce. • Limited cabinet and food preparation space. • Recommended SF – 480
Pantries (3)	None	4 x 6 72	• No space is available in current facility. • Proposed facility would provide separate pantry spaces for each of the three shifts. • Recommended SF – None
Kitchen Storage Room (3)	None	2 x 4 24	• No space is available in current facility. • Proposed facility would provide separate pantry spaces for each of the three shifts. • Recommended SF – None
Dining Room	11 x 12 132	16 x 24 384	• Currently dinning area is an integral part of the kitchen area. • Proposed facility would incorporate kitchen, eating area and dayroom into one space. • Recommended SF – 360

3. Design/Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
Sleeping area/bunk rooms with 3 lockers per room (12)	10 x 7 70	10 x 12 1440	• Current facility was originally designed as a single dormitory for approximately 8-10 beds with wall lockers. • In recent years dormitory was modified with eight individual bedrooms. • Original HVAC system was not designed for individual rooms and therefore maintaining proper temperatures pose a continuous problem. • Proposed facility would provide for current and future needs. • Recommended SF – 120 per room
Sleeping area storage rooms (4)	None	2 x 4 32	• Current facility does not provide for storage areas. • Recommended SF – None
Men's Lavatory & Shower	8 x 23 184	10 x 24 240	• Current facility provides limited unisex lavatory facilities with only two sinks, one urinal, two toilets, and one single shower area with two heads. • Current facility does not meet ADA requirements. • Recommended SF – 36 SF per person.
Women's Lavatory /Shower	None	10 x 12 120	• Current facility does not provide separate facilities for female accommodations. • Recommended SF – 120
Laundry Room	None	10 x 12 120	• Current facility shares laundry facility with lavatory area. • Limited work space and storage. • Recommended SF – 120
Fitness Room/Safe room	None	16 x 20 320	• Current facility does not provide space for fitness area. Fire companies must conduct on-duty fitness workout at nearby subscription-based fitness center. • Recommended SF – 320
Area Total		**4390**	
TRAINING			
Training room office	None	10 X 12 120	• Current facility does not provide for office space for training staff and/or support staff. Assistant Fire Chief/Training Officer's desk is located in the classroom itself. • Recommended SF – 120
Training library/study	None	10 X 12 120	• Current facility does not provide for a training library/study area. • Library could be incorporated into classroom wall space permitting. • Recommended SF – 120

3. Design/Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
Training Room	26 x 30 780	30 X 40 1200	• Current classroom accommodates approximately 20 students. • Room should be large enough to easily accommodate seating for 30-40 with peripheral wall space for fire hydrant, pump, and related props. • Recommended SF – 1200
Training Room Storage	None	8 X 10 80	• Original training storage room converted to office space and medical supply room. • Recommended SF – 80
Chair storage area	None	8 X 10 80	• Current facility does not provide for storage of unused furniture such as chairs and/or tables. • Recommended SF – 80
Area Total		**1600**	
GENERAL BUILDING			
Main Distribution Power (MDP) Electrical Room	None	10 x 12 120	• Building/fire codes require separate MDP rooms. • Recommended SF – 120
Fire Riser Room	N/A	4 x 8 32	• Current station is not sprinkled. • New facility will be protected throughout with fire sprinkler system per current building/fire codes and NFPA/ISO guidelines. • Recommended SF – 32
Interim Data Frame (IDF) (2)	None	8 x 10 160	• Current facility does not accommodate proper/separate space for new IT technologies. • New facility will require one IDF room per floor. • Recommended SF – 80 per floor
Building Automation System (BAS)	None	8 x 10 80	• Current facility is provided with rudimentary in-house built makeshift system. • Proposed system will comply with current NFPA/ISO guidelines. • Recommended SF – 80
Mechanical, Electrical and Plumbing (MEP) (2)	4 x 8 32	8 x 10 160	• Current facility provides for limited mechanical systems. Much of the space needed mechanical systems are located in the open. • Recommended SF – 160

3. Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
Janitor Room (3)	None	4 x 6 72	• Current facility does not provide separate storage of janitorial related equipment or supplies. • Recommended SF – 24 per room
Elevator	None	8 x 10 80	• Current 2-story facility does not have an elevator in accordance with current building and ADA requirements. • Recommended SF – 80
Elevator Equipment Room	None	10 x 10 100	• See above. • Recommended SF – 100
Stairs # 1	4 x 13 52	10 x 24 480	• Current 2-story facility only has one set of stair well. This is non-compliant with current building/fire codes requiring enclosed stairs and providing for a least two means of egress from upper floors. • Recommended SF – 240 per stair tower.
Stairs # 2 & Drill Tower	None	10 x 24 480	• Current 2-story facility only has one set of stairs. This is non-compliant with current building/fire codes requiring enclosed stairs and providing for a least two means of egress from upper floors. • Proposed rear stair to serve as 4-story drill tower. • Recommended SF – 240 per stair tower.
Area Total		**2016**	
APPARATUS ROOM & SUPPORT AREAS			
Apparatus Room	36 x 49 1764	96 x 80 7680	• Current station provides for only three bays with limited depth. • Proposed facility would provide for 4-5 bays with ample space for storing front line apparatus as well as reserve and auxiliary vehicles. • Recommended SF – 7680
Work/Shop/Tool room	10 x 4 40	12 x 18 216	• Current facility provides for small workbench area with no separate protected space for work area off of the engine room floor. • No secured space for tools and equipment. • Recommended SF – 200

3. Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
Protective Clothing Storage	None	16 x 20 320	• Current facility does not prove for separate storage area. Rack area on engine room walls is used which creates very cramped quarters. • Protective clothing is exposed to diesel fumes and moisture. This creates premature aging of materials. • Recommended SF – 320
Washer/ Extractor	None	12 x 12 144	• Current facility does not provide for the cleaning of protective clothing. There is no space for extractor. • Space could be consolidated with protective clothing storage (See above) • Recommended SF – 144
General Supply Storage	None	12 x 14 168	• The current facility does not have space for general storage. • Free standing non-heated/cooled metal walk-in cargo ship/tractor trailer type storage box located behind the current station. • Recommended SF – 144
EMS Work/ Storage	None	10 x 12 120	• Training room storage room in current facility converted to medical supply storage. • Very limited space available. • Recommended SF – 120
Spare Hose Storage	6 x 4 24	8 x 12 96	• Current facility provides limited hose storage and no hose repair space. • Space could be consolidated with similar storage/shop space. • Recommended SF – 96
Self-contained Breathing Apparatus (SCBA)	None	10 x 12 120	• Current facility does not meet air filling and storage guidelines. Air compressor located in engine room with exposure to vehicle exhaust and other carcinogens producing exhaust byproducts. • Currently SCBA air filling, storage, and repair are conducted in three separate stations. • Recommended SF – 520
Equipment Storage	None	12 x 16 192	• Current facility provides little room for storage of spare/auxiliary equipment. • Spare equipment currently stored in a free standing non-heated/cooled metal walk-in cargo ship/tractor trailer type storage box located behind the current station. • Recommended SF –

3. Design/Spatial Needs

	Dimensions/ Square Footage		Comments
	Current	Proposed	
Haz Mat Storage	None	10 x 12 120	• Current facility provides no space for the storage of hazardous material response supplies and equipment. • Recommended SF – None
Engine Room/Work Area Lavatory	None	6 x 8 48	Proposed design would provide for a single unisex lavatory that would serve the engine room and related work areas. Recommended SF – 50
Area Total		**9224**	
EXTERIOR/SITE			
Front Drive/Apron	16 x 36 576	TBD	• Current facility is not set back far enough from the street to allow for safe exiting and turning radius of modern fire apparatus. • Recommended practice is to provide station with sufficient apron to allow for apparatus to park in front of station with bay door closed and no obstruction of sidewalk. • Proposed facility would provide sufficient front apron to allow for Improved visibility when exiting the station as well as greater turning radius. • Recommended minimum depth – 40 feet.
Rear Drive Through/Apron	24 x 26 624	TBD	• Current facility provides limited rear drill and drive area. • Rear yard should provide sufficient space for drill work/training, and apparatus maneuverability.
Employee/Guest Parking	6	15-20	• Current facility does not provide for secure parking of employee's personal vehicles. • Recommended practice is to provide ample parking for on-duty shift personnel and guest parking. • Preliminary site design would provide rear and/or side parking both employee and guest parking. • Needed spaces – 15-20
Staff Parking	2	8-10	• Current facility does not provide for on-site employee parking. • Day staff personnel must park city vehicles on street in a location that inhibits visibility of fire apparatus exiting the station. • Needed spaces – 8-10

4.COST

Russellville Fire Station, circa 1960

4. Projected Costs

Cost Area	Estimated
Hard costs @ $250 – $275 per sq. ft.	$4,500,000 – $5,775,000
Soft costs @ 20% of hard cost	$900,000 – $1,155,000
Contingencies @ 10% of overall project	$540,000 – $693,000
Property	$400,000
Site demolition/prep.	$25,000 – 40,000
Total estimate range	$6,365,000 – 8,063,000

Rendering of Modern Fire Station

Estimated costs based on:

- **Structure square footage of 18,000-20,000**
- **Site area of ½ of downtown city block**

4. Projected Costs

- **Hard construction costs** are sometimes referred to as the "bricks-and-mortar costs" and represent the actual amounts paid to the construction contractors to erect the building.
- Normally, all fixed and built-in equipment, including heating/ventilation/air conditioning (HVAC), food service equipment, built-in cabinets, etc., are considered part of the hard costs because they are provided under the prime construction contract.
- Generally, "moveable" furniture, furnishings, and special equipment are provided under separate nonprime contracts and, therefore, are not typically considered part of hard construction costs.

Hard Costs include materials & labor, building systems, and built-ins, etc.

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4. Projected Costs

Examples of Hard Construction Cost:

- Building Materials & Labor
- HVAC, Interior appliances, cabinetry, fixtures, etc.
- Traffic Singles
- Generator/ATS
- Site Furnishings
- Fire Detection/Suppression Systems
- Data/Com FF&E Equipment
- Data/Com Main Fiber Backbone
- Security Systems
- Radio/Communication
- Energy Management System Interface
- Safe room

Structural Materials

Building Systems

Cabinets and other built-ins

4. Projected Costs

- **Soft Cost** is a construction industry term for an expense item that is not considered direct construction cost. Soft costs include architectural, engineering, financing, and legal fees, and other pre- and post-construction expenses.
- Soft costs differ from “hard costs” in both labor and materials; they are generally not considered to be exclusively related to physical construction. Rather, they are commonly perceived to entail non-construction costs such as taxes, marketing expenses, interest payments, and finance charges.

Soft costs include architectural, engineering, and related design fees.

4. Projected Cost

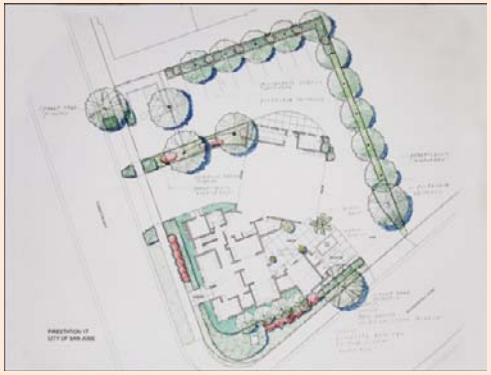
Examples of Soft Construction Cost:

- Environmental Survey
- Topographic Survey
- Geotechnical Survey
- A/E Fee Basic & Additional Services Fee 6-10%
- Civil/Landscape Architecture Engineering
- A/E + Owner Print Reimbursable Expenses
- LEED/ Building Commissioning/ Energy Modeling
- Moveable Furnishings
- Moveable Equipment
- Signs/Graphics
- Allowance for unknown Issues

Topographical Survey

Geo-technical Survey

Site and Landscape design



4. Projected Costs

- **Contingency Costs** are included when estimating the cost for a construction project due to there being always an uncertainty as to the precise content of all items in the estimate, how work will be performed, what work conditions will be like when the project is executed and so on.
- These uncertainties are risks to the project. Some refer to these risks as "known-unknowns" because the estimator is aware of them, and based on past experience, can even estimate their probable costs.
- Generally, new construction contingency costs are between ***10-15 percent***.

Weather delays.

Increased cost in materials.

Other unforeseen delays.

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4. Projected Costs

Property Costs include the purchase of property that will be adequate enough for the fire station, front apron and rear drive and parking.

- It is estimated that at least **one half of a city block** will be need for the station, front apron, and rear drive and parking.
- Estimated costs are in the +/- $400K range.

Demolition Costs are the cost incurred due to the need to remove preexisting buildings and other structures that may be located on the site.

In addition, demolition cost could also include the removal of asbestos, lead or other environmental hazards.

Purchase of property.

Demolition Costs.

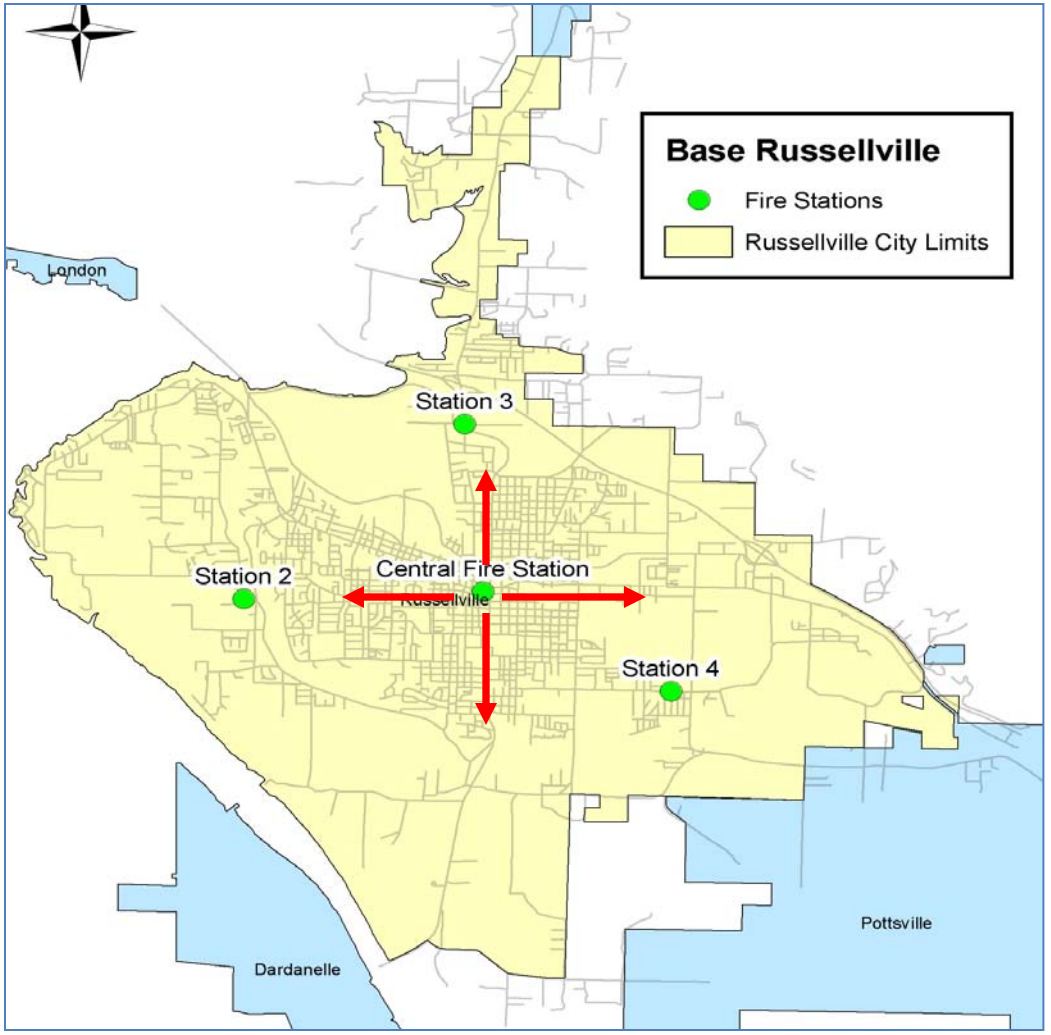
Hazard abatement.


5. SITE
Russellville Fire Station, circa 2000

5. Site/Location

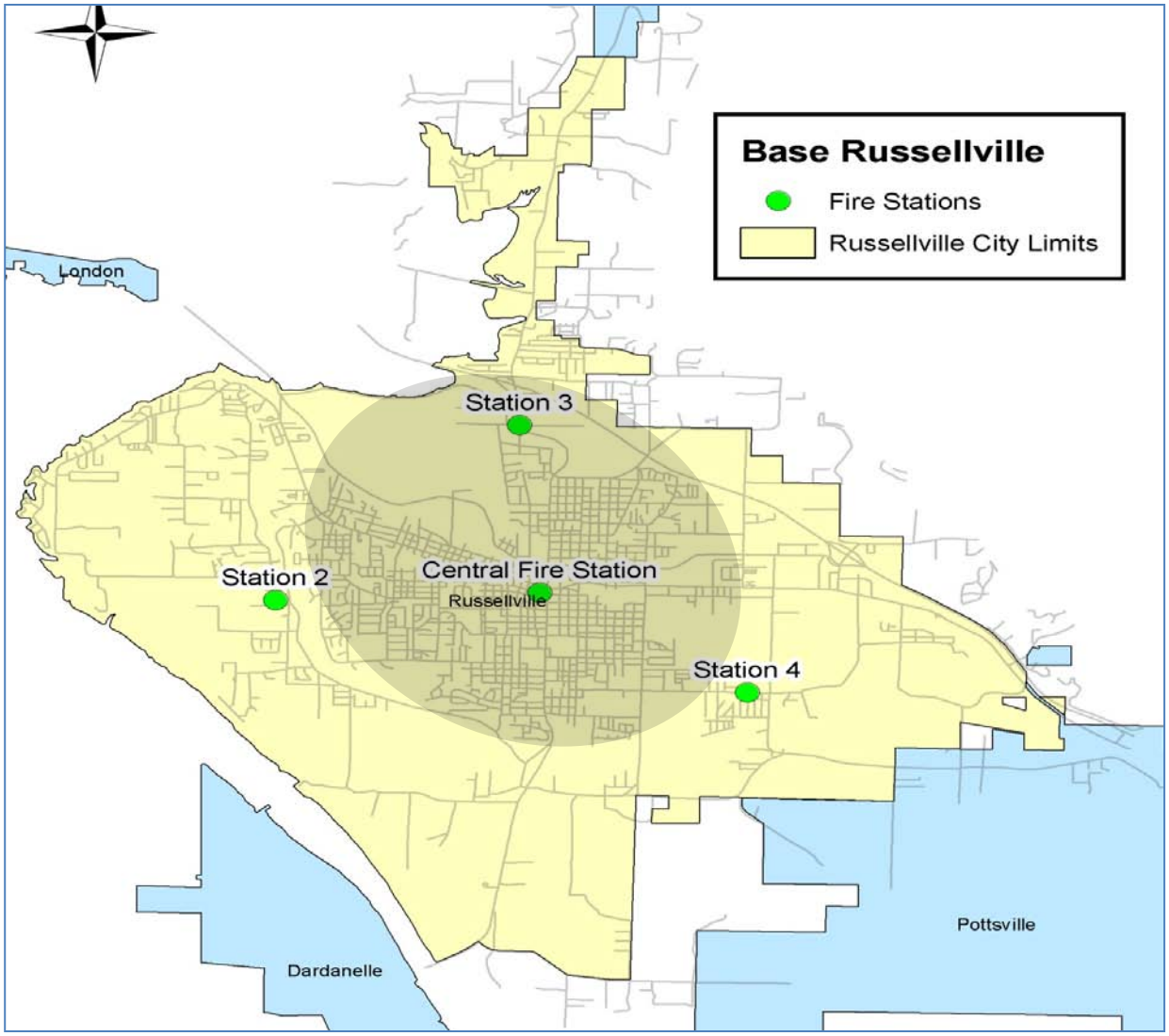
Site location should consider the following:

- Remain within 4-5 blocks from current facility.
- Remain at city's cross roads and close to major arterial streets for quick deployment.
- Not be located on dead-end streets or close to railroad tracks.
- Not located next to creek beds or similar areas susceptible to flooding.
- Strategically serves as back-up to other three fire stations.
- Not at corner of intersections where traffic is regularly blocked by traffic backed up due to traffic lights or similar circumstances.
- Away from large overhead power lines.
- Centered where the bulk of responses occur.



5. Site/Location

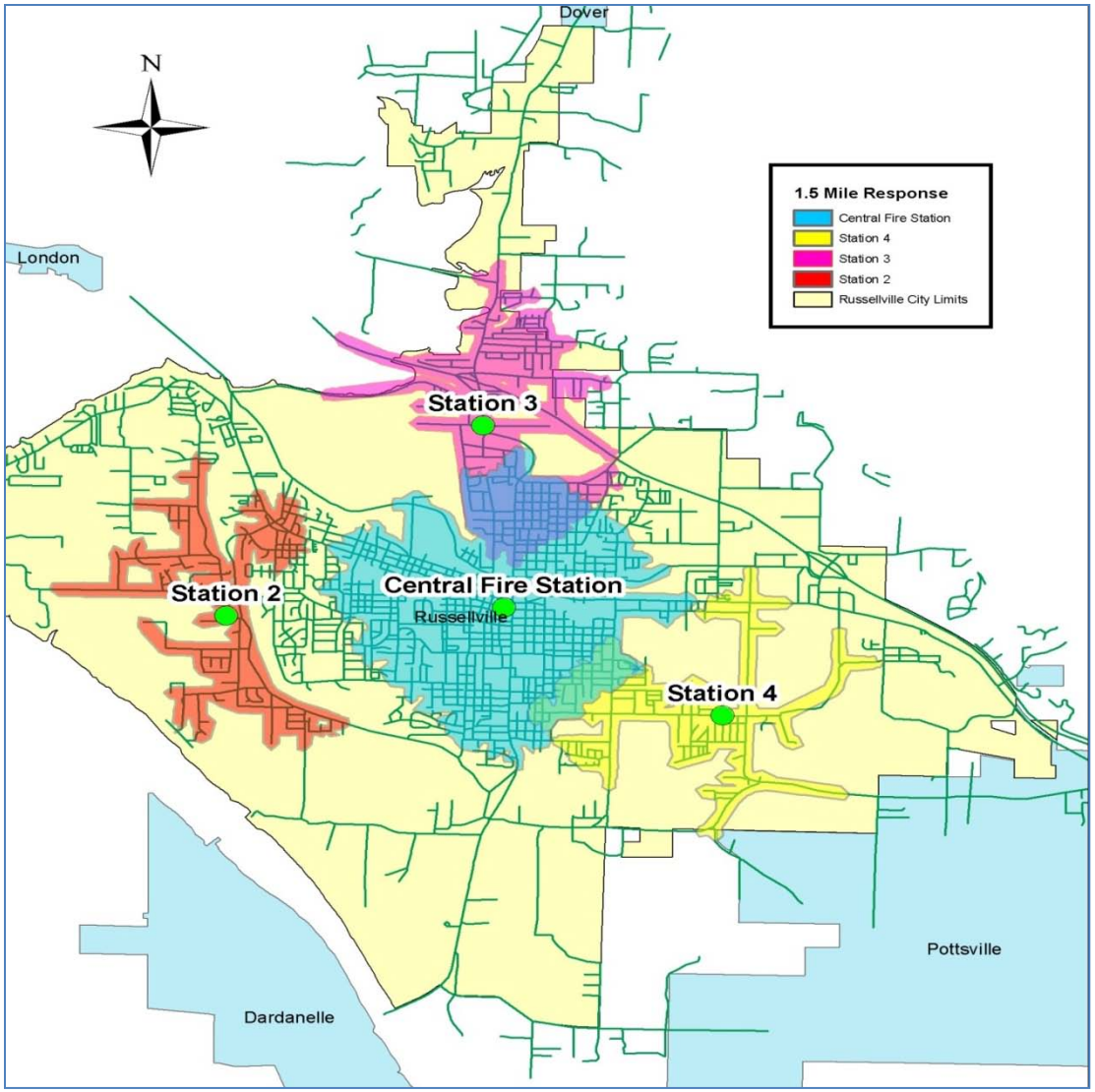
- Current area located where the bulk of responses occur due to:
  - Highest density
  - Aging structures
  - Older population
  - Greater concentration of fire and associated risks



5. Site/Location

Falls within Insurance Services Office guidelines for:

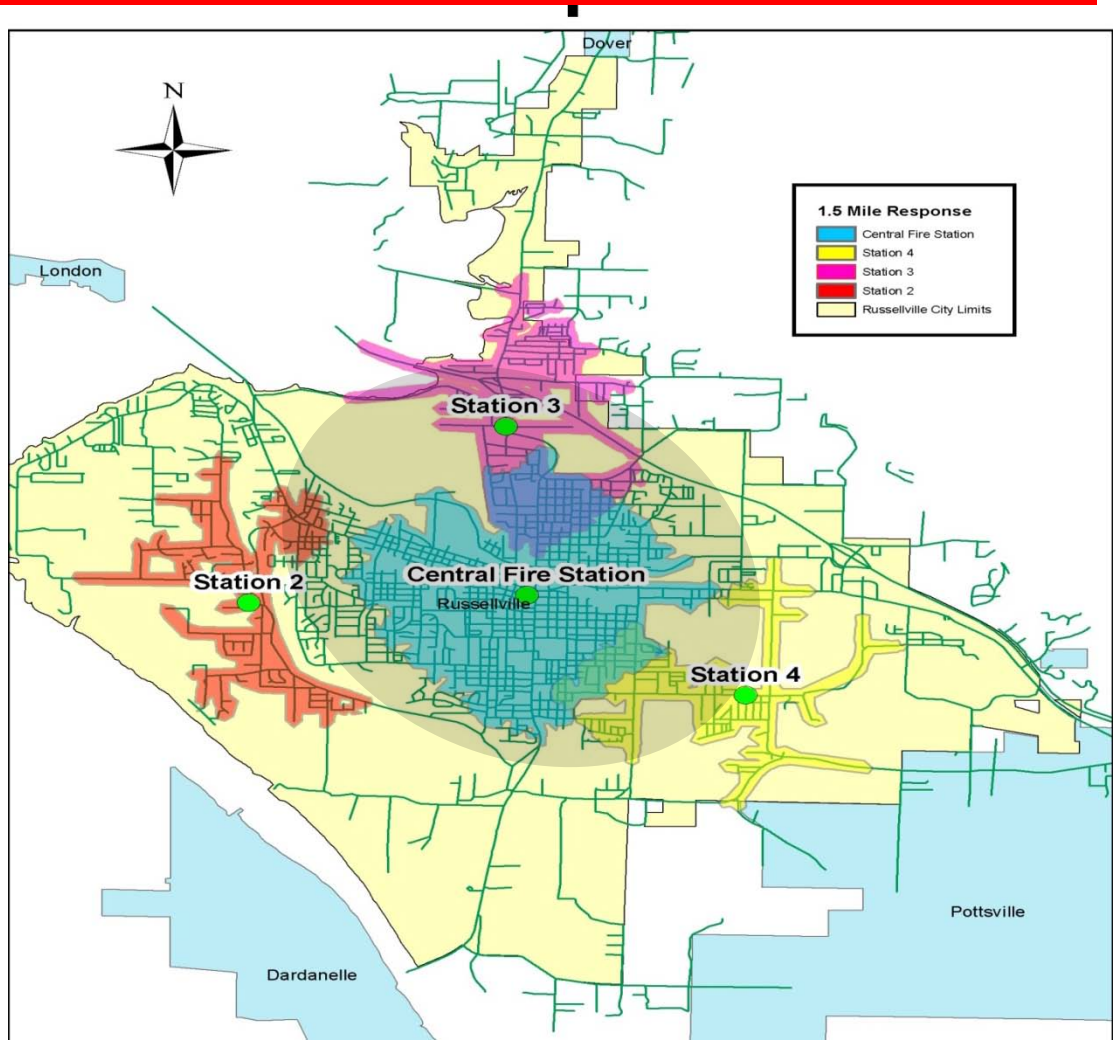
- 1.5 miles for Engine/Pumper distribution.
- 2.5 miles for Ladder Truck distribution



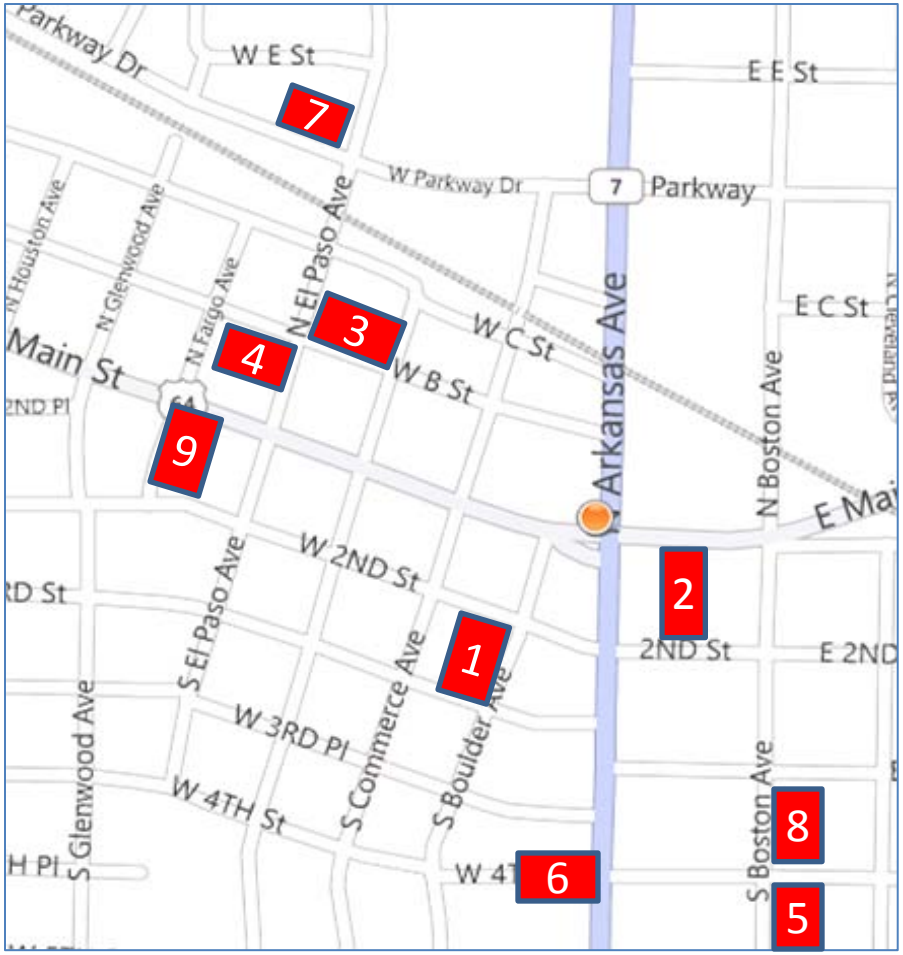
5. Site/Location

Fire station response areas with call volume overlay.

- Current Central Fire Station location ideally suited for response to high volume areas.
- Provides optimum ISO fire station/fire company distribution credit in conjunction with other stations.
- Insures quick backup to other stations.



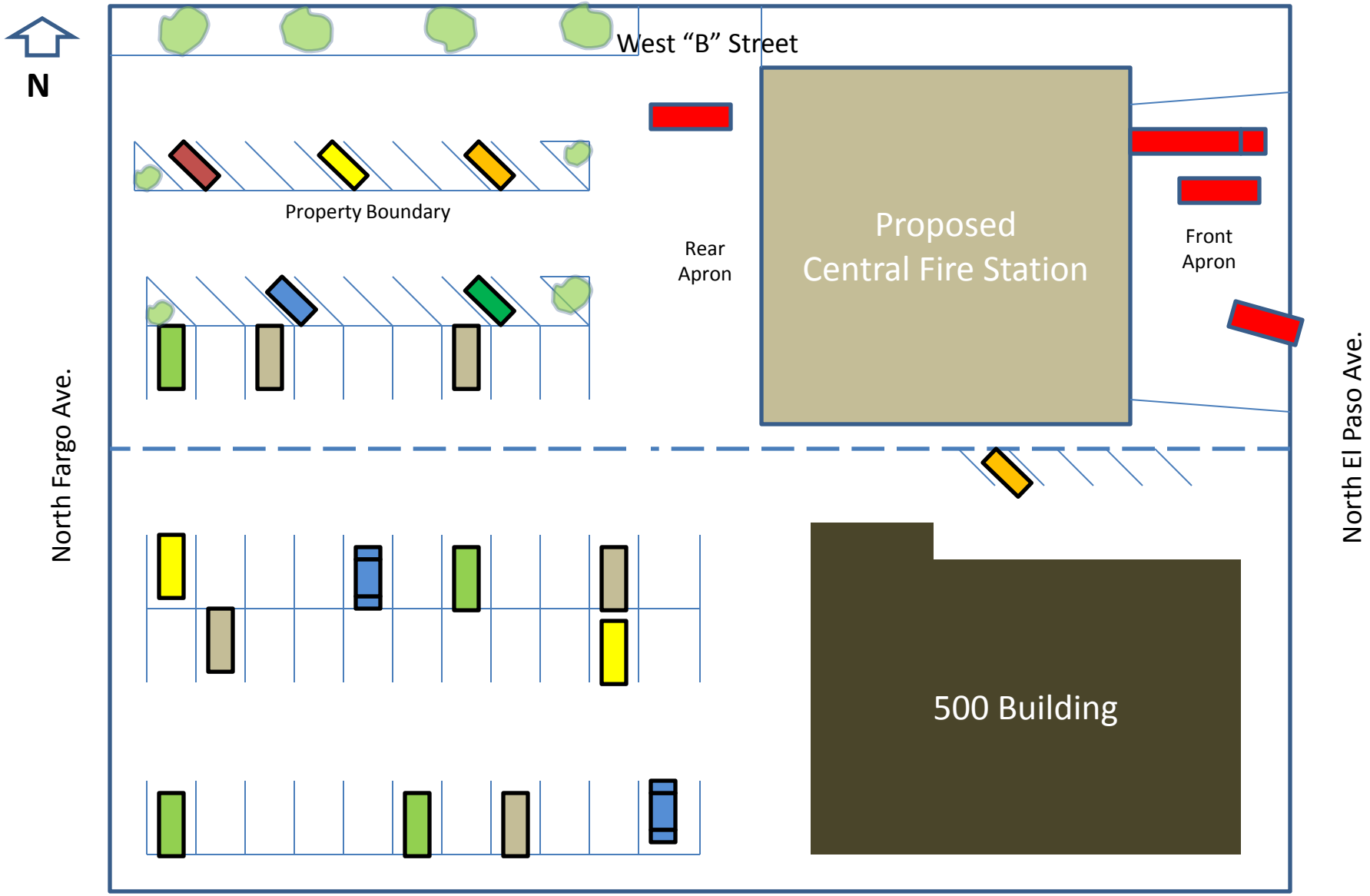
5. Site/Location



PROPOSED NEW CENTRAL FIRE STATION POTENTIAL SITES STUDIED

1. Southwest corner of West 2nd St. & South Boulder Ave.
2. 100 Block East 2nd St.
3. West B St. between North El Paso Ave. and North Denver Ave.
4. West B St. between North El Paso and North Fargo Ave.
5. Southeast Corner of West 4th St. and South Boston
6. South Arkansas Ave. at West 4th St.
7. Northwest corner of North El Paso and West Parkway Drive
8. Northeast corner of East 4th St. and South Boston Ave.
9. Southeast corner of West Main Street and South Fargo Avenue.

5. Site/Location



Site 4 - West "B" Street & South El Paso Avenue

5. Site/Location

Site must take into considerations of a wide range of potential drawbacks.

Traffic congestion

Flooding

Utilities

Dead end streets

Railroad right-of-ways

2012 Flooding
West 2nd Street Between
Boulder and Arkansas Avenues

Review

1. Why the need for a new Central Fire Station?
   - Fire Insurance Rating, expanded services, safety/health/increased staffing, poor functionality, and lack of space.
2. Who will benefit from the project?
   - The firefighters and the public.
3. What are the design and spatial needs?
   - 18-20,000 square ft., 4-5 bays, 2-3 stories, ½ of city block.
4. What are the projected cost?
   - $6-8,000,000
5. Where will the station be located?
   - Within 4-6 blocks from current facility.

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QUESTIONS