City of Sparta, Wisconsin

Sparta Police Station
Space Needs Analysis Report

Submitted By
The Blue Ribbon Committee

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FINAL

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SPD Space Needs Analysis Team

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Sparta Police Station
Space Needs Analysis Report

1.0 Introduction and Background

COMMITTED TO EXCELLENCE, COMMITTED TO COMMUNITY

The City of Sparta was incorporated in 1883 and the Sparta Police Department (SPD) developed a short while after. The Department is currently located at 121 E. Oak Street in a building constructed in 1953 that was originally designed to serve as a Fire Station, Police Station and Jail. The Department has twenty one (21) full-time employees, nineteen (19) of which are sworn, and responds to approximately 20,000 calls for service annually.

While the interior of the building has been extensively remodeled in the past ten (10) years, expansion of the facility has not been considered due to the buildings construction and lack of space.

The City of Sparta initiated a ***Space Needs Analysis*** of its existing Police Department facility in order to adequately consider their future needs. The intent of the SPD Space Needs Analysis is to help the City of Sparta consider the following;

- ✓ **What is the recommended size of the SPD facility to sustain future growth for 30 years?**
- ✓ **What is the feasibility of remodeling the existing SPD facility?**
- ✓ **Is the current location of the SPD facility suitable for modernization and or expansion?**
- ✓ **What is the additional lot size that would be needed for modernization and/or expansion, if any within the current SPD property?**
- ✓ **What is the recommended lot size needed for a new SPD facility if the existing SPD site is vacated?**
- ✓ **Is there any other pertinent information which would be relevant for making informed decisions based on past experience with similar police facility projects?**

Sparta Police Station
Space Needs Analysis Report

2.0 Evaluation of Existing Facility

Sparta Police Station ***121 E. Oak Street***

Fig. 2.1

BUILDING AUDIT

A police building should be considered a law enforcement tool. As with other equipment, productivity, safety and service are reduced when it is inadequate. The existing Sparta Police Department Facility was constructed in 1953. It was originally designed to serve as a Fire Station, Police Station and Jail. The Station contains three floors which totals approximately 11,264 gross square feet (gsf). The intent of the building audit was to help determine if the existing Sparta Police Station could be re-purposed as part of the new facility solution or is the facility inadequate and demolition should be considered. (Fig. 2.1)

The building audit included the following activities;

1. Existing Space Inventory; The Planning Team measured each of the spaces within the existing SPD to determine the facilities square footage. (Fig. 2.2 - 2.5)

2. Operational Audit; The Planning Team met with the various Sparta Police Department representatives to identify how the facility might be negatively impacting the staffs work responsibilities and overall productivity.

3. Physical Condition Audit; The Planning Team conducted a visual inspection of the existing Sparta Police Station. The assessment is based on those conditions that could be visually observed. No exploratory work involving cutting or patching of building components or systems was performed as this effort is beyond the scope of this assignment, and therefore there may be conditions that exist but were hidden from view. The condition assessment included building and infrastructure components such as general conditions, architectural, fire protections, plumbing, HVAC, electrical systems, and fire alarm systems.

1. Existing Space Inventory – Total gsf = 11,264

	Existing Spaces	Existing Square Feet		
Calls For Service		19867		
Sparta Population		9,645		
Year		2014-15		
Category	Space Name	Qty. of Spaces	Size of Space	Total NUSF
OFFICE	Chief's Office (1)	1	246	246
	Lieutenant's Office (1)	1	152	152
	Detectives Office (1)	1	114	114
	Detectives Office w/Storage Closet (1)	1	144	144
	Sergeants Office w/Closet (4) Workstations	1	208	208
	Patrol Officers Area (11) Workstations	1	281	281
	Administrative / Records Area (1) Workstation	1	204	204
	Administrative Reception Area (1) Workstation	1	206	206
ENTRY	Public Lobby	1	85	85
CONFERENCE	Squad Briefing Room	1	406	406
SUPPORT	Vehicle Garage (6-7 vehicles)	1	1938	1938
	Evidence - Storage Room/Drugs (Secure)	1	24	24
	Evidence - Storage Room/Bulk (Secure)	1	69	69
	Evidence - Storage Room/Workstation (Secure)	1	212	212
	Evidence - Processing Room (Secure)	1	95	95
	Tools Area	1	46	46
	Primary Interview Room	1	138	138
	Small Interview Room	1	45	45
	Weapon Cleaning Area	1	38	38
	Firing Range	1	894	894
	ICAC Computer Room (Secure room)	1	80	80
	Server Room	1	45	45
	Departmental Restroom #1 (M/F) 1st Floor	1	63	63
	Departmental Restroom #2 w/ Closet(M/F) 2nd Floor	1	58	58
	Boiler Room	1	150	150
	Mechanical Room - Basement	1	113	113
	Mechanical Closet - Basement	1	40	40
	Mechanical /Electrical Room 1st Floor	1	82	82
	Hall Connectors	1	1399	1399
STORAGE	Active Records File Storage Room	1	243	243
	Vehicle Storage Area (tires etc.)	1	38	38
	General Building Storage Room (garage area)	1	73	73
	Armory/Firearms/Ammo Storage Vault	1	14	14
	Administrative Storage Closet	1	16	16
	General Storage Closet - Second Floor	1	32	32
	General Storage/Old Kitchen - Basement	1	48	48
	General Storage Locker - Basement	1	32	32
	Recovered Bicycle Storage Area (Indoor)	1	46	46
	Storage Room/Roof Access	1	58	58
STAFF	Employee Break Room / Kitchen	1	67	67
	Locker Rooms Entry	1	34	34
	Men's Lockers/Toilets/Showers	1	172	172
	Women's Lockers/Toilets/Showers	1	53	53
	Existing Total Area			8,501

	Provided by SPD	Take-Offs
First Flr. gsf	6365	5719
Second Flr. gsf	2890	2833
Basement gsf	2890	2712
Total Existing G	12145	11264
		-881

NUSF X 1.25 = 10626 NSF X 1.07 = 11370 GSF

Fig. 2.2

1. Existing Space Inventory - Basement Level = 5719 gsf

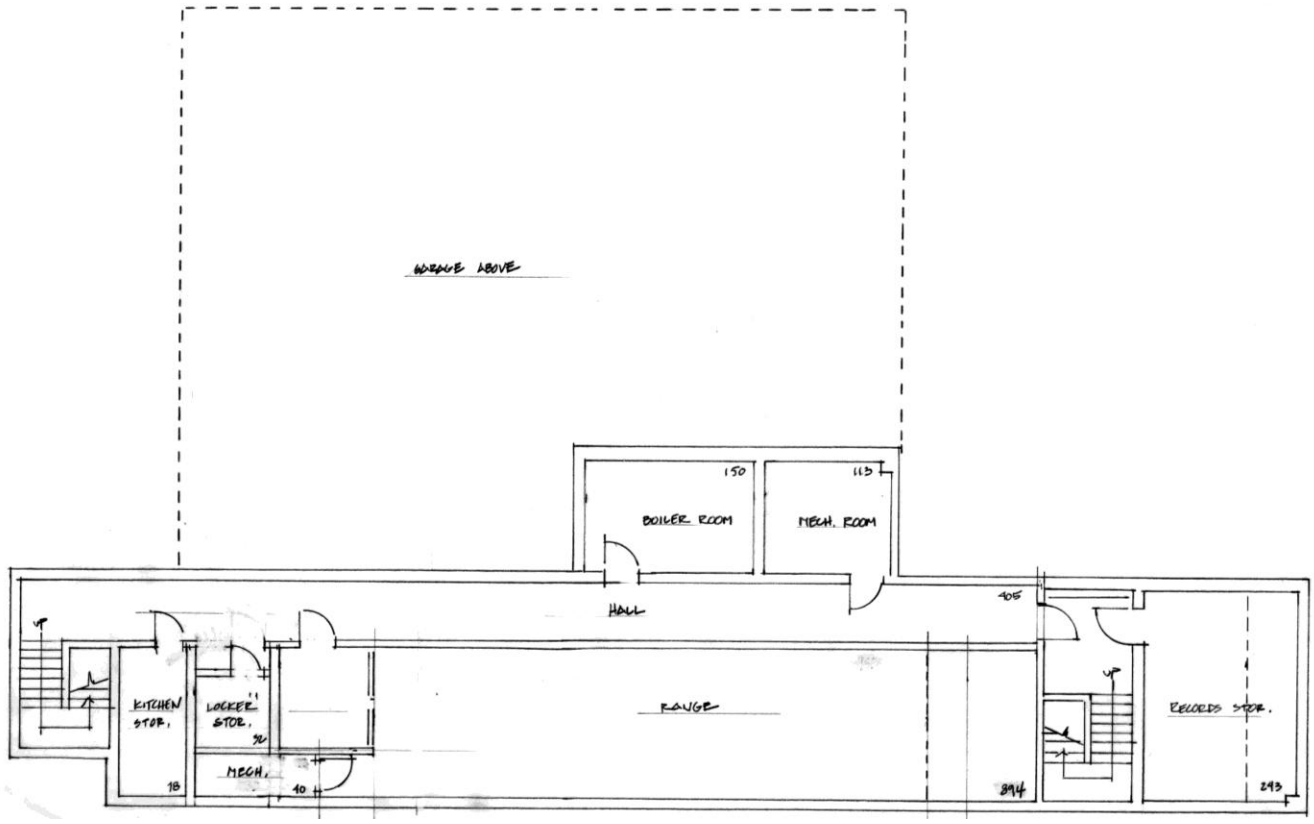


Fig. 2.3

The basement level contains the records storage room, firing range and the main mechanical/electrical rooms.

1. Existing Space Inventory - First Floor = 2833 gsf

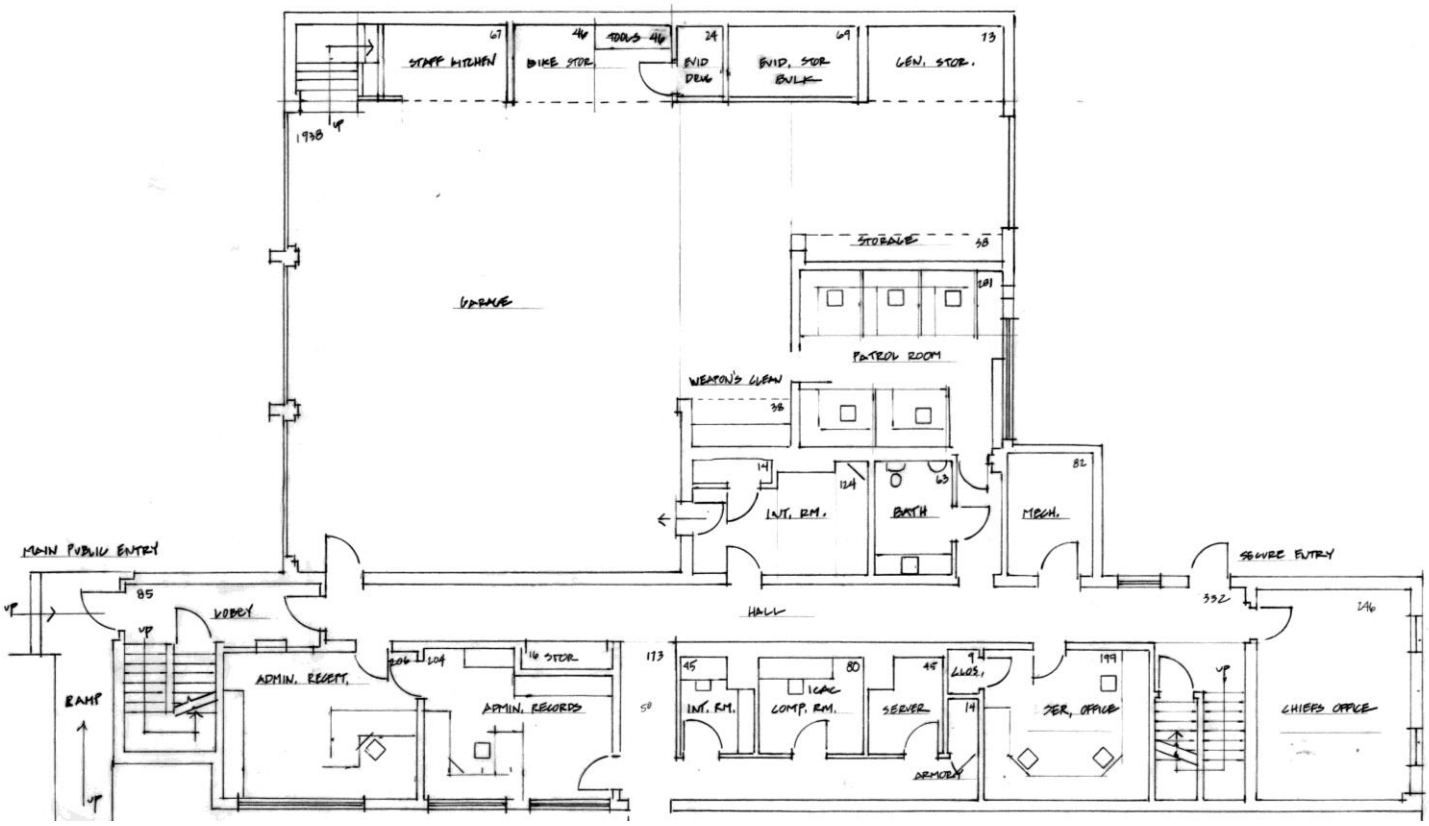


Fig. 2.4

The ground level floor contains the main public lobby, chiefs and sergeants offices, patrol officer workstations, administrative areas, soft/hard interview rooms, evidence storage, records storage, armory, vehicle garage, staff break area and mechanical room.

1. Existing Space Inventory - Second Floor = 2712 gsf

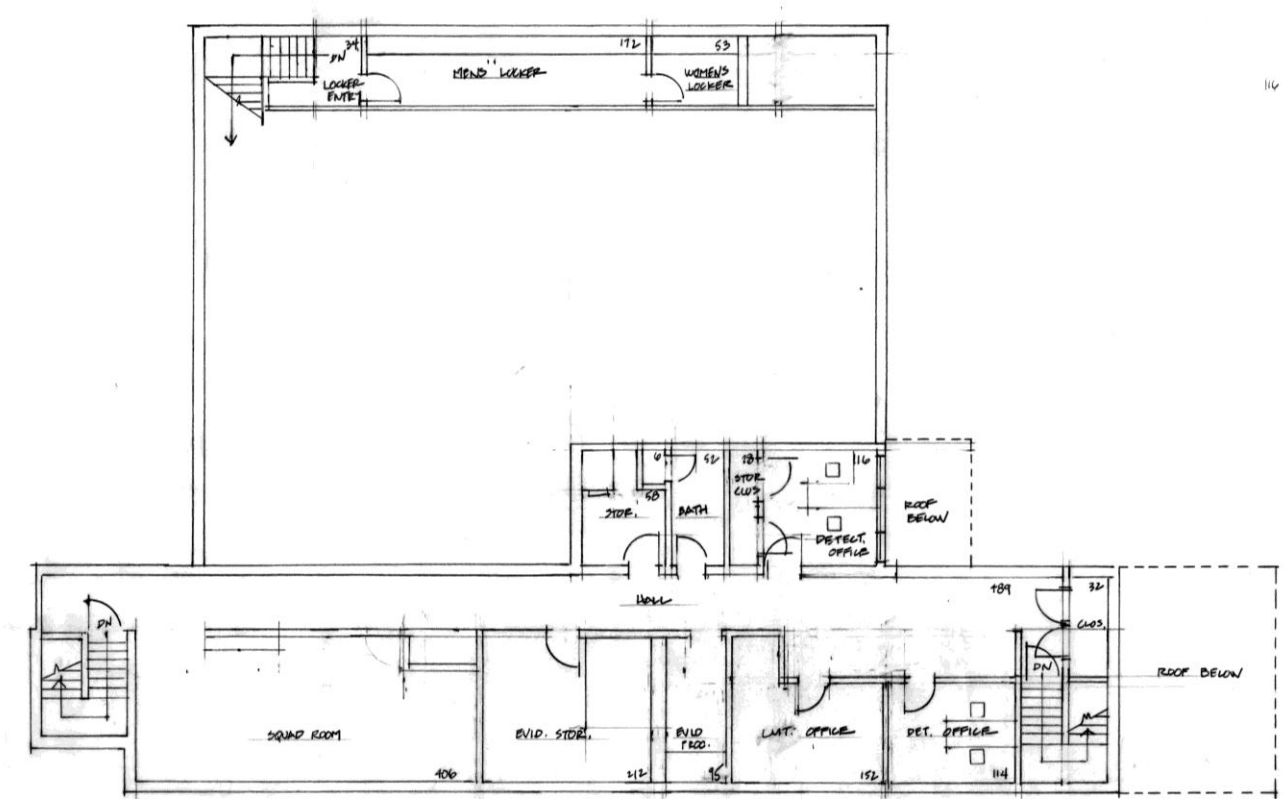


Fig. 2.5

The second floor contains the squad room, detective and lieutenants offices, evidence processing, storage rooms, the men's and women's lockers/showers, (accessible from the first floor) and mechanical rooms.

2. Operational Audit

As part of the building audit the planning team met with members of the SPD staff to gain an understanding of how the existing SPD facility was supporting or interfering with the staffs daily work roles and responsibilities.

The key operational issues impacting staff productivity include;



- **Consumer Friendly**
  - Front door image is not customer friendly or "welcoming"
  - No seating or waiting area for the public
- **Time Inefficiencies**
  - Off-**s**ite impound garage location causes officers to take multiple trips back and forth
  - Dispersed vs. consolidated evidence rooms leads to work inefficiencies as well as conducting poor evidence processing
  - Dispersed rather than consolidated record storage rooms, that are directly adjacent to the administrative area, is significantly handicapping productively
  - Inappropriate storage areas has caused the staff to become disorganized
  - Inadequate outdoor parking space for squad cars has caused officers to continually move cars
- **Workstations**
  - The size of the Patrol officers workstations causes them to be cluttered and disorganized
  - The workstation layout provides minimal privacy with high noise levels
  - Assigned and limited space for operational items has forced the staff to place important daily work related items throughout the facility which makes it hard to find "helter/ skelter"
- **Technology Upgrades**
  - Transmitting & receiving through the walls is poor
  - Having to run wires / cables is very difficult if not impossible at times
  - The server room is too small for all the equipment
  - The server room is not climate controlled, excessive heat buildup and cold cause problems with the equipment
  - Getting surveillance and interview recording equipment to work properly is very difficult. poor audio, mounting problems and transmitting problems
  - Equipment is not all centralized or in one room, it is spread out in different areas of the building

3. Physical Audit

As part of the master planning process the planning team conducted a Facilities Condition Evaluation. At the time of the evaluation, no drawings of the existing facility were available. The following comments are based on casual field observations. Conditions hidden from view can only be inferred.



GENERAL CONDITION

The building has undergone multiple undocumented alterations in the last 61 years since it was built in 1953.The final result has been a patchwork approach to space planning as the functions within the building have changed. ***Overall, the building has reached the end of its usefulness in its existing condition***. A major renovation would be needed to upgrade the facility and its systems to meet current building codes and operational procedures of the Department.

ARCHITECTURAL

- **BUILDING CODE ITEMS**
  Although some building elements are grandfathered due to their age, their deviation from the current code should be noted:
  - The stairwells should exit directly to the exterior of the building, not into the first floor.
  - Stair handrail configuration is outdated. However, stair tread rise/run does comply with current code.
  - Being that the building is not fire sprinkler protected, the interior corridors should be 1 hour fire rated.
  - 2 exit doors are required in the garage area. Overhead door cannot be considered exits.

- **ACCESSIBILITY CODE ITEMS**
  Generally, the building does not meet ANSI 117.1 (ADA), the building accessibility code. Attempts have been made to upgrade the facility, work is still needed.

- An elevator is required to access all 3 levels.
- Proper door clear areas are not present.
- Steps into the Garage, and at the rear exit, are not allowed.
- The grade up to the front door, even though it is ramped, appears too steep.
- The front Service Counter is too high.
- Door handles should be lever acting, not round.
- Toilet facilities are lacking in several categories.
- The employee locker facilities located in the Garage mezzanine is not code compliant in the areas of structural material, fire exiting, stair construction, and ADA accessibility.

- **Thermal Envelope**
  - The building's wall insulation needs to be field verified. However, buildings of this era may only have had 1/2" to 3/4" of wall insulation between the exterior brick and the interior of the concrete block. The roof insulation is separating from the concrete deck below and appears to be only 2" thick. The roof membrane appears at the end of its useful life. The concrete roof structure extends from the cold exterior of the building at the roof overhangs, to the interior of the building to create a thermal bridge which wicks heat out of the building in the winter. The aluminum windows do contain double pane glass panels, but it's not know if they are thermally broken frames, or if the void space in the glass contains argon gas insulation.
- **Building Structure**
  - The 12" concrete plank floor and roof decks are worthy of note. Although, only structural calculations can confirm their allowable loading strength, the fact that the floors supported steel plate jail cells, suggest that they have capacity for normal office and storage usage.
  - The existing remaining steel plate jail cells and the old plumbing chases need to be removed in order to gain the extra square footage and floor plan flexibility.
  - The most significant issue with the building structure is the low floor to floor heights which yield the following vertical clearances: Basement 8'-5", First Floor 7'-10", and 2nd floor 7'-7". These are extremely thin floor plates, which still need to allow for HVAC ductwork and light fixtures. At the time it was built, there appear to have been no drop ceilings, as evident by the old recessed light fixtures in the floor/ceiling structure. The finished ceiling on the 1s and 2nd floors is now acoustic suspended panels at 7'-5". 1" lower than today's code minimum for ceiling heights.
  - The CMU walls surrounding the generator room are deteriorating and should be rebuilt and the room insulated.

- **Finishes**
  - The 2nd floor Evidence Storage room contains 9"x 9" composite floor tile with a blackish adhesive. Both the tile and the adhesive could contain asbestos and should be tested by a qualified lab. It's not known how much more existing tile is in the building and covered by carpeting. The accurate identification and locations of asbestos containing material is beyond the scope of this review.

CONCLUSION/RECOMMENDATIONS

- The thin floor to floor heights and the thermal envelope are the most significant issues that would need to be overcome if the building is to be renovated up to current code compliance. Any renovation of the building that would include over 50% of the floor area would require that everything within the building be upgraded to meet today's code. A long narrow building with a single loaded corridor does not offer much flexibility for future space planning. Extensive renovations of the existing building might not yield an improvement in building operations. Therefore other solutions should be explored.

FIRE PROTECTION

- The building does not have an automatic sprinkler system. Fire protection consists of a Class II standpipe with a hose cabinet located on the second floor. Class II systems are for use by trained building personnel or the fire department. This location was to serve the old detention cells. The age of the fire hose is unknown. It is also unclear if the fire hose has been tested every 3 years as required by NFPA 1962.
- The building appears to have two fire department connections. One is located inside the garage area and was the original connection location before the garage was built. There is a pipe connected to one of the hose connections. It is unclear if this is active and still connected to the standpipe system. It is still labeled as a fire department connection.
- The second fire department connection is located outside of the garage and is assumed to be the active connection. There are no labels indicating what part of the building is served with this connection.
- The standpipe system does not meet the current codes. The standpipes are to be located in each exit stairwell and serve all the floors unless approved by the local fire marshal.

CONCLUSION/RECOMMENDATIONS

- The fire hose needs to be tested. If the hose is unlined it needs to be replaced per NFPA.

- To avoid confusion, the fire department connection within the garage needs to be removed and/or modified to insure it is not connected to the standpipe system.
- The second fire department connection should be labeled as to which portion of the building it serves.
- The present system is not adequate and it should either be removed and taken out of service or replaced to meet today's code.

PLUMBING

- **Sanitary**
  - Sanitary sewer is primarily cast iron with a galvanized vent system. Existing sanitary stacks previously serving jail cells have been left in place and capped within the secure piping chases. Stacks remain visible at the basement level. Cell vent stacks and vent thru roof locations remain.
  - The garage is served by two trench drains with galvanized grates. The trenches are piped to a fully recessed solids interceptor and then discharges to the City sewer in Oak Street. It has been reported that it "backs up frequently" and the interceptor gets pumped out at least once a year. Piping in to and exiting the interceptor is extremely corroded and in poor condition. The vent piping from the solids interceptor appears to be piped above finished floor and is open to the space which is not code compliant.
  - Repairs and small sections of sanitary piping have been replaced with PVC.

- **Storm**
  - There are (2) roof drains located over the garage with exposed cast iron piping dropping down at the exterior wall and is piped to an exterior catch basin which "bubbles" over in a rain event. The rainwater then sheet drains to the street. The remaining roof area sheet drains on to the lower garage roof area and a small lower level roof area.

- **Supply**
  - The water service comes from E. Oak Street and is metered in the basement corridor. Supply piping is copper and is uninsulated in several locations. The water pressure within the building after meter is 55 PSI which is adequate for the relatively small load the facility requires at this time. The majority of the supply piping is copper. There are some modifications/additions that have PEX tubing installed. Supplies to lavatories are plastic tubing.
  - A 40 gallon electric water heater, which was installed in 2003, located in the basement, supplies the domestic hot water system.
  - An old "Supreme" water conditioning unit is located next to the water heater and operation is questionable at best. Unsure if it is operational or not.

- There is a city water sampling system located in the basement that the city water officials get a "sample" from every morning at the start of the work day. Free flowing water is metered and then dumped to an open stand pipe and discharged to the sanitary system.

- **Plumbing Fixtures**
  - There are two "unisex" toilet rooms, one located on first floor and one located on second floor. Each have a tank type water closet that is 1.6 gpf and an oval counter set lavatory and manual lever faucet. The first level toilet room also has a stall type urinal with a manual 1.0 gpf flush valve which does not meet ADA for control height.
  - An electric water cooler with push bars is located at the front entrance and has a spout height of 32" and a water machine with cup holder is located next to the unit.
  - There are two wheel handle interior hose bibs located within the garage area.
  - One exterior hose bib located on the West side of the building has a broken off spout and handle.
  - A ¾" PEX tubing piped from the copper supply system in the basement and is piped thru a filter, Watts 9D backflow preventer and a Watts bronze high capacity feed water pressure regulator to serve the boilers.
  - Floor drains located in the shooting range in the basement have been duct-taped shut.

CONCLUSION/RECOMMENDATIONS

- Site clear abandoned sanitary stacks which served removed jail cells. Cell vent stack penetrate the roof, which have greater potential for roof leaks, could then be removed and reroofed.
- Recessed garage interceptor should be replaced and repiped. Interceptor venting should be piped up thru the roof to exterior.
- The existing storm sewer serving the garage should be repiped and connected to the cities storm sewer system. Piping should be insulated to avoid condensation build-up and dripping.
- Insulated exposed copper supply piping and label.
- Replace the Watts 9D backflow preventor with a current code required reduced pressure principle backflow preventor for boiler applications.
- Label PEX piping as "non-potable" supply downstream of backflow preventor for boilers located in lower level Mechanical Room.
- The existing water heater is 11 years old and could possibly require more maintenance in the near future.
- Existing water softener should be replaced. Water analysis should be done to determine need.
- Stall urinal manual flush valve should be changed to a sensor operated flush valve to meet the requirements of ADA (Americans with Disabilities Act) for reach and control operation.

- Unused floor drains in the shooting range should be properly removed and piping capped or plugged to avoid sewer gases from leaking into the area through torn duct tape which covers the grates.
- Provide threaded on backflow preventer on one or two garage interior hose bibs.

HVAC

- **General**
  - The listed items described in detail herein are not current code compliant, but can be considered as "grandfathered", and do not require rework to make current code compliant. Building additions, modifications, and remodeling will require addressing these issues.
- **Offices, Reception, Interview Rooms, Lobby, and Briefing / Conference Rooms**
  - In accordance with the International Mechanical Code (IMC) and Wisconsin Administrative Code, these occupied spaces shall be ventilated by natural means or mechanical means.
  - The spaces do not have mechanical systems and controls that could provide ventilation through duct systems.
  - The minimum openable areas (windows) to the outdoors do not meet the 4 percent of floor area being ventilated to comply with natural ventilation.
  - If windows met minimum openable area for natural ventilation, they would not meet intake opening location. They are located less than 10 feet horizontally from an alley or parking lot.
- **Vehicle Garage and Locker Room**
  - In accordance with the IMC and Wisconsin Administrative Code, these spaces shall be ventilated with mechanical systems and controls that provide a method of supply air and exhaust.
- **Hot Water Heating Piping**
  - In accordance with the International Energy Conservation Code (IECC) and Wisconsin Administrative Code, all hot water heating piping shall be thermally insulated. The boiler room contains insulated heating piping. The rest of the building does not.
- **Indoor Shooting Range**
  - Provided lead bullets are discharged in Shooting Range, EPA requires High-Efficiency Particulate Air (HEPA) filtration to the outdoors. The current exhaust system discharges directly to the outdoors without HEPA filtration.

- Air is not exhausted high and directly in back of range to cover shooting area. Improper ventilation may cause occupational over exposure to lead and non-compliance with OSHA 29 CFR 1910 regulations.
- Outlet of Range exhaust system is at grade level, so it does not comply with the IMC and Wisconsin Administrative Code. The outlet shall be a minimum of 10 feet above adjoining grade, 3 feet from exterior walls and roofs and 10 feet from operable openings into building.
- Outdoor air intake for a make-up air system is located at grade adjoining an alley. The height and location of the intake do not comply with the IMC and Wisconsin Administrative Code.

BUILDING SYSTEMS

- **Heating**
  - Hot water finned pipe radiation or radiators provide heat to the Offices, Reception Area, Lobby, Storage / Evidence Rooms on the First and Second Floors.
  - Two (2) suspended hot water unit heaters serve the Vehicle Garage.
  - A natural gas-fired Reznor duct furnace provides make-up air for the Shooting Range exhaust system. The heating section for the unit does not work properly, causing the Range to be cold when used during winter.
  - A Locker Room includes two (2) electric convectors.
  - Radiation and unit heaters for the building are served by three (3) Weil-McLain Ultra boilers. The hot water distribution system utilizes a Taco inline pump, including a stand-by pump for rotation, with seven (7) small Grundfos inline pumps each serving a zone on the First and Second Floors.
  - The hot water heating system piping is insulated in the Boiler Room, but not insulated elsewhere.
  - There is branch piping in the Basement that is disconnected from the system, but not terminated properly.
- **Air Conditioning**
  - Reception, Offices, Locker Room, Briefing Room, and Biological Evidence Room have window / wall type residential air conditioners installed to provide cooling.
  - Two Offices on the Second Floor share a window / wall type residential air conditioner that is located in an adjacent Corridor.
  - A portable air conditioner provides cooling for the First Floor Main Interview Room.

- **Ventilation/Exhaust**
  - Each Toilet Room is served by a residential style ceiling exhaust fan that is ducted to the exterior of the building. The fans are activated by the associated Toilet Room light switch.
  - The Indoor Shooting Range is served by an old centrifugal exhaust fan that is recessed on the side of the Range, and ducted to the adjacent alley.
- **Ventilation/Exhaust**
  - Each heating zone is served by an electronic programmable thermostat.
  - Controls are integral with the air-conditioners.
  - Lack of individual temperature control for Offices and Reception causes occupant discomfort.
- **Heating and Air Conditioning Controls**
  - Each heating zone is served by an electronic programmable thermostat.
  - Controls are integral with the air-conditioners.
  - Lack of individual temperature control for Offices and Reception causes occupant discomfort.

CONCLUSION/RECOMMENDATIONS

- The boilers and pumps installed seven years ago are in good condition. If there will be additions or alterations to the existing building, additional heating loads may not be supported in capacity by the existing hot water heating system and would have to be upgraded.
- There are complaints some of the hot water heating zones do not provide proper heat to the space. This may be due to excessive heat loss through the building envelope, improper water flow to radiation or insufficient insulation covering the piping. The hot water heating piping throughout the building is recommended to be properly insulated to prevent heat loss from the pipes and reduce utility costs.
- Other than the finned pipe radiation in the Lobby, it currently does not have a vestibule or the means to heat the space rapidly from infiltration through the entrance door. A hot water cabinet unit heater or electric heating element wall heater with a fan would supplement the heat loss.
- The gas meter that is located on the east side of the building is next to parking and does not have a means of protection. Bollards near the meter and gas piping are recommended to prevent damage that could cause gas leaks, fire or explosion from vehicle collision.
- The current systems seem to be inadequate for the occupants of this building. The only location to bring fresh air into the building, in compliance with the Code, appears to be from the roof. Unfortunately, the building architecture prohibits a feasible means to accomplish alternative methods of heating, ventilating and air-conditioning, complying with Codes and Regulations, without sacrificing useable space.

ELECTRICAL

- **General**

  - The listed items described in detail herein are not current code compliant, but can be considered as "grandfathered", and do not require rework to make current code compliant. Building additions, modifications, and remodeling will require addressing these issues.

- **Generator Set Room**

  - As per NFPA 110, paragraph 7.2.1.2, "No other equipment, including architectural appurtenances, except those that serve this space, shall be permitted in this room." Ductwork for exhaust fan is routed within room, exiting at rear wall. To make code compliant, either remove this duct, or enclose within minimum 2-hour fire rated construction.
  - As per NFPA 110, paragraph 7.2.3, "The rooms, shelters, or separate buildings housing Level 1 or Level 2 EPSS equipment shall be designed and located to minimize the damage from flooding, including that caused by the following: (1) Flooding resulting from firefighting (2) Sewer water backup (3) Similar disasters or occurrences."
    - Level 1 Equipment: Installed where failure to perform could result in loss of human life or serious injuries
    - Level 2 Equipment: Installed where failure to perform is less critical to human life and safety
    - EPSS: "Emergency Power Supply System"
  - Battery-pack emergency lighting unit not installed as per NFPA 110, paragraph 7.3.1, "The Level 1 or Level 2 EPS equipment location(s) shall be provided with battery-powered emergency lighting. Etc."
  - Generator set mounts directly to floor slab. As per NFPA 110, paragraph 7.4.1.1, "Such foundations or structural bases shall raise the engine at least 150 mm (6 in.) above the floor or grade level and be of sufficient elevation to facilitate lubricating-oil drainage and ease of maintenance."

- **Automatic Lighting Control**

  - Current energy code requires automatic lighting control. Occupancy sensor installations required in most rooms.

- **Exterior Egress Lighting**

  - Current life safety code requires emergency exterior lighting at building exits. Exit adjacent to Chief's Office missing exterior lighting.

POWER DISTRIBUTION

- **Main Service**

  - Electrical Utility: Xcel Energy
  - Rating / Capacity: 120 / 240V AC, 3-phase Delta (High Leg), 400A service
  - Manufacturer: Panel board manufactured by Westinghouse, consisting of a single section with distribution circuit breakers.
  - Condition: Equipment is 61 years old and obsolete. Refurbished, compatible circuit breakers available, but mounting space is not.
  - Maximum Recorded Demand Load: 18.85 kW (45.3 amp @ 240V AC, 3-phase)
  - Service Equipment Capacity: Additional capacity of approximately 355 amps is available, with recommendation of not loading beyond 80% (284 A.).

- **Branch Panel boards**

  - Panel boards located in the basement and first floors are manufactured by Westinghouse, and consist of a single section with branch circuit breakers. A few, newer panels added over the years are as manufactured by Cutler Hammer, but are rated 100A or less.
  - Condition: Original equipment is 61 years old and obsolete. Refurbished, compatible circuit breakers available, but mounting space is not.

- **Emergency Power**

  - Generator: Manufacturer: Onan, 55 kW (191 amps with 0.8 P.F.), 120 / 208V AC 3-phase, natural gas, installed in 1953 (original) with 4884 hours indicated on run meter - approximately 80 hours per year.
  - Generator furnishes back-up power for the entire building via manual transfer switch. The service rated, 400A transfer switch allows manual transfer from the incoming service to the gen set when normal power is lost.
  - Condition: Gen set is 61 years old and obsolete. Gen set is located in room with structural defects that may require gen set relocation.

CONCLUSION/RECOMMENDATIONS

- Service capacity appears to be sufficient to handle significant additional load, but is limited to the gen set capability of 191 amps with recommendation of not loading beyond 80% (153 amps), unless the incoming main service and gen set power outputs are separated.
- Because the main distribution panel, branch panel boards, and associated feeders are obsolete and 61 years old, replaced them with new.

- If new distribution equipment installed, provide new service of 120 / 208V, 3-phase 4-wire to replace the 120 / 240V, 3-phase Delta (High Leg) service. Service capacity is dependent on building modifications and new HVAC systems.
- If additional loads added to existing building that result in a greater load than present set gen set capabilities, provide a new, larger gen set located in a more secure area meeting requirements of NFPA 110.

LIGHTING AND CONTROLS

- **Luminaires**

  - The original 1953 interior lighting replaced with new, but the units with ballast had lamps removed, ballast disconnected, and left in place. Typically, these ballasts will have PCB content.
  - Basement: Luminaires are surface mounted wraparounds. Storage and maintenance areas served with surface mounted strips. Lamp type varies, with T12 fluorescent lamps used in storage rooms and shooting range, with T8 fluorescent lamps in corridor.
  - First Floor - Office: Lighting consists of T8 fluorescent, 3 or 4-lamped, 2' x 4' prismatic lensed troffers and surface wraparounds in general areas, and 3-lamped parabolic lensed units in open office area and Chief's Office.
  - First Floor - Garage: Lighting consists of T12 fluorescent, 4-lamped, surface mounted open luminaires.
  - Second Floor - Office: Office lighting consists of T8 fluorescent, 3 or 4-lamped 2' x 4' prismatic lensed troffers or surface mounted wraparounds. Corridor lighting consists of T8 fluorescent; 2-lamped 2' x 4' prismatic lensed troffers.
  - Exterior: Surface mounted HID canopy luminaire mounted at main entrance, HID down lights located in front of garage's overhead doors; stem mounted HID luminaire mounted at side exit, and HID wall bracket mounted at building's rear.
  - Condition: Luminaires lamped with T8 fluorescent appear in good to fair condition. Stem mounted HID luminaire appears to be original equipment.
  - Illumination Levels: Overall illumination levels appear to be adequate with some deficiencies in stairways.

- **Exits**

  - Various exit light types throughout building range from original incandescent (basement) to LED with emergency MR11 heads (stair to mezzanine locker rooms).
  - Condition: Exit light conditions range from good to poor. Older units have uneven illumination of faces. Some new units added, and some original exit lights removed and replaced.

- **Emergency Egress Lighting**

  - Because entire building's electrical load supported with generator set power, dedicated emergency egress lighting not required
  - Battery-operated, two-head unit equipment provides egress lighting in first floor office corridor and at stair leading to Mezzanine Locker Rooms.
  - Condition: Good

- **Lighting Control**

  - Typically, the manual ON / OFF switch (es) located at each room's entry controls the lighting.

CONCLUSION/RECOMMENDATIONS

- Remove abandoned 1953 luminaires with ballasts containing PCB's. Follow Federal and State regulations for their disposal.
- Dependent on areas of proposed remodeling, existing lighting with fluorescent lamping to remain as-is. Affected areas will require new luminaires, lamped with T8 fluorescent or LED's.
- Lighting control is not current code-compliant. To make current code-compliant requires adding occupancy sensors in most occupied rooms.
- For new and remodeled areas, provide LED type exit lights to reduce both maintenance costs and energy consumption.
- Replace basement exit lights with new LED type.
- Current code requires exterior, emergency illumination at exit doors. To make egress lighting current code-compliant, provide new, exterior LED lamped unit at exit adjacent to Chief's Office.

FIRE ALARM SYSTEM

- **General**

  - Building has no centralized fire alarm system.
  - Basement area has a few battery-operated smoke detectors.

CONCLUSION/RECOMMENDATIONS

- Based on present occupancy, a fire alarm system is not required.

TELECOM / DATA SYSTEMS

- **General**

  - Telecom cabling routed in basement not routed / supported properly.
  - Wall and floor penetrations for routing cabling through / into spaces are not smoke and fire-sealed properly.

CONCLUSION/RECOMMENDATIONS

- Provide J-hook support every 4’ on center, with less than 6” cable sag
- Provide fire-seal around wall and floor penetrations.

Sparta Police Station
Space Needs Analysis Report

3.0 Site Assessment

SITE OPPORTUNITIES/CONSTRAINTS

The intent of the site assessment was to help determine whether or not the 30 year staff and space requirements for the SPD could be accommodated at the current location, 121 E. Oak Street, or should the City consider alternative site options.

The existing site is 75' x 150' equaling 11,250 feet or .2 acres. (Fig. 3.1 Green Area) The red dashed line indicates the footprint of the existing 3 level SPD facility which contains approximately 11,264 gsf. The property is bounded to the east by a Co-op facility and three retail establishments to the west. The properties east and west of the SPD may be considered for acquisition. (Fig. 3.2)

Fig. 3.1

Fig. 3.2

CENTRALIZED LOCATION

The existing SPD site, designated by the red star, is centrally located within the Sparta city limits (Fig. 3.3). The central location provides for prompt responses to all Police service calls while also providing the public with easy access within the downtown Sparta central business district.

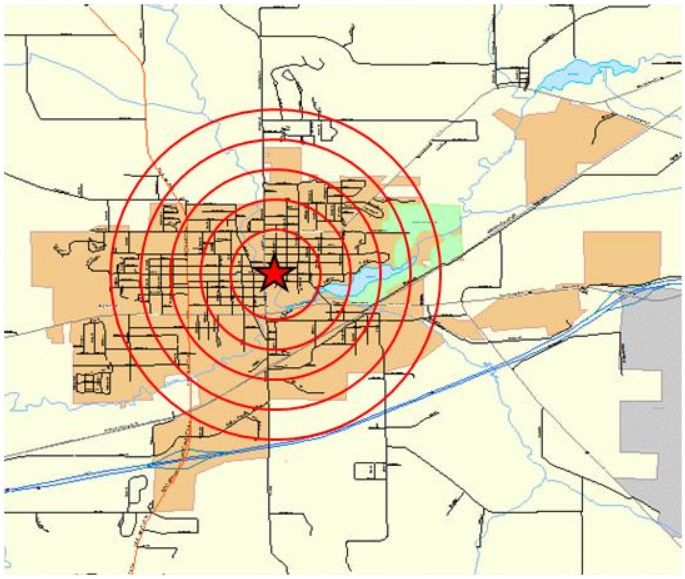


Fig. 3.3

SITE EVALUATION

The existing SPD site (121 E. Oak Street) was evaluated to see how appropriate is was to accommodate the programmatic requirements that were forecasted to the year 2040. A total of fifteen evaluation criteria were developed (see appendix for detail description of each criteria) to objectively compare the current SPD location with other sites that the city of Sparta may consider.

The site evaluation scoring for the 121 E. Oak site appears on the matrix. (Fig.3.4) Each of the criteria was given a poor, fair, good or excellent rating. The outcome of the site evaluation indicated that a majority of the criteria received a good or excellent scoring showing that the 121 E. Oak Street site is a viable consideration for the future SPD facility.

The site size and parking availability received a poor rating due to the anticipated amount of growth the SPD facility needs to meet its staff and space requirements for the year 2040 and the amount of buildable area the current site provides.

VALUE SCALE	1	2	3	4
EVALUATION CRITERIA				
1. Size/Adequate Area	■			
2. Expansion				■
3. Construability			■	
4. Public Acceptance			■	
5. Parking	■			
6. Zoning				■
7. Utilities				■
8. Storm/Water Drainage				■
9. Site Cost		■		
10. Availability				■
11. Accessibility				■
12. Location				■
13. Proximity to Services			■	
14. Identifiable Site			■	
15. Environmental Concerns				■
1=Poor, 2=Fair, 3=Good, 4=Excellent				

Fig. 3.4

Sparta Police Station
Space Needs Analysis Report

4.0 Staff/Facility Space Requirements

STAFF FORECASTS

The SPD staff forecast was conducted in order to estimate the total number of full-time and full time equivalent personnel (Sworn and Civilian) expected to use the SPD facility at the time of occupancy. The SPD currently has 21 total staff, 19 sworn officers and 2 civilian staff and is projected to grow to 27 by the year 2040.

The most defendable method of projection is to establish the current ratio of personnel to population served and then multiply it by an acceptable estimate of population for the year of occupancy. The projection dates established for the SPD staff forecasting model are 2015, 2020, 2025, 2030 and 2040. (Fig. 4.1 shows the historical, existing and forecasted staff projections for the SPD.)

It is assumed that the ratio of personnel per 1000 residents will remain constant. Population data reported for Sparta from the US Census Bureau is shown on the table below. Using the historical census counts and continuing the average growth rate produces the estimated population numbers.

The staff projections appear on the spread sheet which followings (Fig. 4.2). Under the office category each staff position is listed, the quantity of staff and type of office space. The staff projections were discussed and developed with the SPD interim Chief.

						Historical								Existing		Forecast			
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013-14	2015	2020	2025	2030	2040
Sparta Population	8648	8718	8700	8656	8810	8905	8940	8981	9015	9067	9522	9641	9600	9645	10113	10822	11079	11482	
FTE LEE/Officers	24/15	24/15	24/15	17/15	18/16	18/16	19/17	19/17	20/18	20/18	20/18	19/17	19/17	21/19	22/20	24/22	24/22	25/23	
Officers per 1000 residents				1.73	1.85	1.85	1.97	1.87	2.00	2.04	1.98	1.78	1.77	2.20	2.20	2.20	2.20	2.20	
WI Ave.				2.37	2.33	2.36	2.35	2.32	2.33	2.32	2.31	2.24	2.22						
CFS							15608		19591	20331	18412	17279	15110	19867					

Fig. 4.1

SPACE FORECASTS

The spread sheet on the following page (Fig. 4.2) also identifies the spaces required for a functionally adequate police station. The spaces were reviewed and discussed with members of the SPD staff and interim Chief. The quantity (number) of spaces and their size (square footage) are based upon the planning teams experience with similar police station projects and confirmation from the SPD staff.

The space requirements are as follows;

YEAR		SQAURE FOOTAGE	INCREASE IN SPACE FROM EXISTING
Existing	2014/2015	= 11,264gsf	
Forecast	2020	= 17,940gsf	+ 6676
Forecast	2025	= 18,230gsf	+ 290
Forecast	2030	= 19,000gsf	+ 770
Forecast	2040	= 19,600gsf	+ 600

Sparta Police Station
Space Needs Analysis

4.0 Staff/Facility Space Requirements

FORECAST

		Sparta Population US Census			10822 (12.2% inc.)			11079 (2.31% inc.)			11482 (3.50% inc.)			TBD		
		Staff Forecast			25			25			26			27		
		Planning Year			2020			2025			2030			2040		
Category	Space Name	Existing SF	Growth	Second Flr	Qty. of Spaces	Size of Space	Total NUSF	Qty. of Spaces	Size of Space	Total NUSF	Qty. of Spaces	Size of Space	Total NUSF	Qty. of Spaces	Size of Space	Total NUSF
OFFICE	Chief's Office (1)				1	240	240	1	240	240	1	240	240	1	240	240
	Captains Office				1	150	150	1	150	150	1	150	150	1	150	150
	Lieutenant's Office				1	150	150	1	150	150	1	150	150	1	150	150
	Detectives Office				2	120	240	2	120	240	2	120	240	2	120	240
	Sergeants Office				4	120	480	4	120	480	4	120	480	4	120	480
	Patrol Officers Workstations				11	48	528	11	48	528	12	48	576	13	48	624
	Administrative Reception Workstation				1	96	96	1	96	96	1	96	96	1	96	96
	Administrative Reception Assistant Workstation				1	64	64	1	64	64	1	64	64	1	64	64
	Administrative / Records Workstation				1	96	96	1	96	96	1	96	96	1	96	96
	Code Compliance/Evidence Officer Workstation				1	48	48	1	48	48	1	48	48	1	48	48
	SRO Workstation (in patrol division)				1			1			1			1		
					25			25			26			27		
ENTRY	Public Entry Vestibule				1	56	56	1	56	56	1	56	56	1	56	56
	Public Lobby				1	200	200	1	200	200	1	200	200	1	200	200
	Public Waiting Area (4)				1	90	90	1	90	90	1	90	90	1	90	90
	Public Toilets				2	66	132	2	66	132	2	66	132	2	66	132
	Public Counseling/Media Room				1	132	132	1	132	132	1	132	132	1	132	132
CONFERENCE	Executive Conference Room (10)				1	250	250	1	250	250	1	250	250	1	250	250
	Squad Briefing Room (8)				1	300	300	1	300	300	1	300	300	1	300	300
	Officers Report Writing Area				3	12	36	3	12	36	3	12	36	3	12	36
	SPD Training Room(30)				1	700	700	1	700	700	1	700	700	1	700	700
SUPPORT	Administrative Reception Area				1	120	120	1	120	120	1	120	120	1	120	120
	Administrative Records Area				1	120	120	1	120	120	1	120	120	1	120	120
	Administrative - Copy/Work/Mail/Supply Room				1	180	180	1	180	180	1	180	180	1	180	180
	Patrol Officers - Copy/Work/Supply/equipment Area				1	110	110	1	110	110	1	110	110	1	110	110
	Adult Interview Room - Large (4)				1	120	120	1	120	120	2	120	240	2	120	240
	Adult Interview Room - Medium (3)				1	100	100	1	100	100	1	100	100	2	100	200
	Child Interview Room - Soft (2)				1	120	120	1	120	120	1	120	120	1	120	120
	Vehicle Garage - Squad Car Parking (5 Vehicles)				1	2650	2650	1	2650	2650	1	2650	2650	1	2650	2650
	Vehicle Garage - Subject Processing Room				1	50	50	1	50	50	1	50	50	1	50	50
	Vehicle Garage - Sally Port (1 Vehicle) Secure				1	360	360	1	360	360	1	360	360	1	360	360
	Evidence - Drug Drop Room (Secure)				1	35	35	1	35	35	1	35	35	1	35	35
	Evidence - Drug Storage Room (Secure)				1	40	40	1	40	40	1	40	40	1	40	40
	Evidence - Packaging/Processing Lab (Secure)				1	150	150	1	150	150	1	150	150	1	150	150
	Evidence - Property Storage Room w/workstation (Secure)				1	500	500	1	500	500	1	700	700	1	700	700
	Evidence - Hazard Storage Room (Secure)				1	64	64	1	64	64	1	64	64	1	64	64
	Evidence - Temp. Storage Room (Secure)				2	35	70	2	35	70	2	35	70	2	35	70
	Evidence - Bulk Storage Room (Secure)				1	70	70	1	70	70	1	70	70	1	70	70
	I.T. /Data-Server Room				1	100	100	1	100	100	1	100	100	1	100	100
	Laundry Area (small- washer/dryer)				1	30	30	1	30	30	1	50	50	1	50	50
	Tool Area				1	40	40	1	40	40	1	40	40	1	40	40
	Weapon Cleaning Area				1	40	40	1	40	40	1	40	40	1	40	40
	Armory/Firearms/Ammo Storage Vault (Secure)				1	150	150	1	150	150	1	150	150	1	150	150
	Janitor's Closet / Cleaning Supplies				1	54	54	1	54	54	2	54	108	2	54	108
	Electrical Room				1	63	63	1	63	63	1	63	63	1	63	63
	Mechanical Room				1	600	600	1	600	600	1	600	600	1	600	600
STORAGE	Active/Current Records File Storage Room				1	200	200	1	300	300	1	300	300	1	350	350
	Central Archives Records Storage Room				1	300	300	1	400	400	1	400	400	1	450	450
	Recovered Bicycle Storage Area (Indoor)				1	80	80	1	80	80	1	80	80	1	80	80
	Vehicle Storage Area (tires etc.)				1	80	80	1	80	80	1	80	80	1	80	80
	General Building Storage Room (garage area)				1	200	200	1	200	200	1	300	300	1	450	450
	Property Storage Area (Lost/Found)				1	25	25	1	25	25	1	25	25	1	25	25
	Officer Squad Equipment Storage Area/boot wash (bins)				1	80	80	1	80	80	1	80	80	1	100	100
STAFF	Physical Training Room				1	300	300	1	300	300	1	300	300	1	300	300
	Men's Lockers/Toilets/Showers				1	650	650	1	650	650	1	650	650	1	650	650
	Women's Lockers/Toilets/Showers				1	350	350	1	350	350	1	350	350	1	350	350
	Employee Break Room / Kitchen				1	200	200	1	200	200	1	200	200	1	200	200
	Staff Restrooms				2	84	168	2	84	168	2	84	168	2	84	168
	Total NUSF	**8501**					**12,557**			**12757**			**13299**			**13717**
	% increase from existing						47.7%			50.1%			56.4%			61.4%
10/17/2014	**Total GSF**	**11,370**				70%	**Eff. Factor** **17,940**			**18,230**			**19,000**			**19,600**
Space Increase From Existing							6,570			6,860			7,630			8,230
Space Increase From Previous Planning Date							6,570			290			770			600
Evidence Impound Garage (6-10 vehicles, bikes, etc.) =3500SF																

Surface Lot Parking Area

Public	5 spaces =	1625 SF
PD Employees	21 spaces =	6825 SF
PD Squad Cars	4 spaces =	1300 SF
Total Surface Lot Parking Area =		**9750 SF**

Fig. 4.2

GROWTH FORECAST

The diagrams below graphically illustrate the space requirement forecasts for the SPD (Fig. 4.3 and Fig. 4.4). The red box (Fig. 4.3) indicates the gsf of the existing SPD while the blue boxes indicate how much space is added for each of the planning forecast dates 2020 to 2040. The grey box (Fig. 4.4) indicates the amount of parking square feet required.

The most significant increase in square footage occurs from the existing SPD facility (11,264gsf) to the 2020 planning date (17,940gsf). The 6,570 gsf increase can be attributed to the inadequacies of the current SPD facility.

From the years 2020 to 2040 the square foot increase is modest at 1,660 gsf. With the modest increase in square footage it is recommended to build new or renovate the SPD facility to the end planning date 2040 for 19,600 gsf.

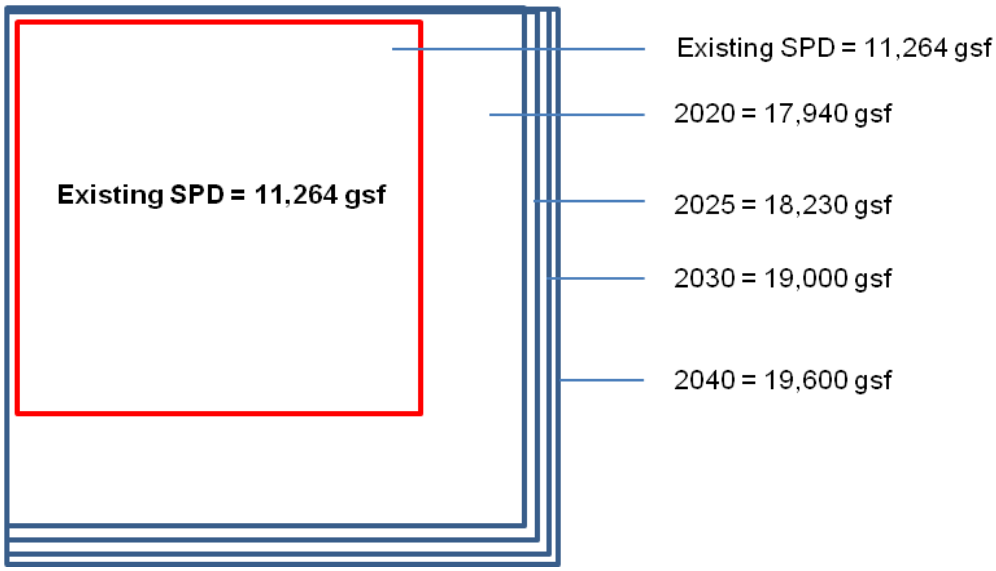


Fig. 4.3

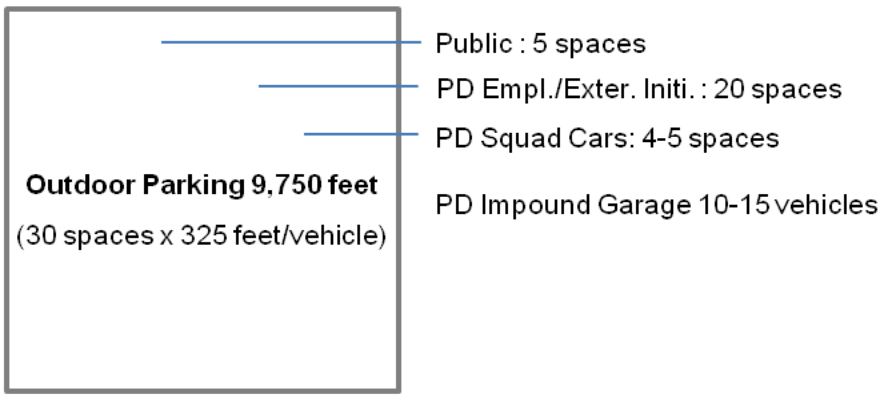


Fig.4.4

Sparta Police Station
Space Needs Analysis Report

5.0 Facility Alternatives

121 E .OAK STREET SITE FIT STUDY

In order to determine if the current SPD property could be used as a potential site for a new and expanded SPD facility a site fit study was conducted. The projected space requirement for the year 2040 of 19,600gsf was used for the study. Both a single and 2 story facility alternatives were evaluated.

The aerial photo below (Fig. 5.1) shows the location of the current SPD on 121 E. Oak Street. The red dashed line indicates the property line of the existing SPD while the blue dashed line indicates the adjacent Co-op property line.

The outcome of the site fit study indicates that **the current SPD site will not accommodate the year 2040 space requirements projection of 19,600 gsf** and **additional property adjacent to the current site would be required.** (Fig. 5.2 - Fig. 5.3)

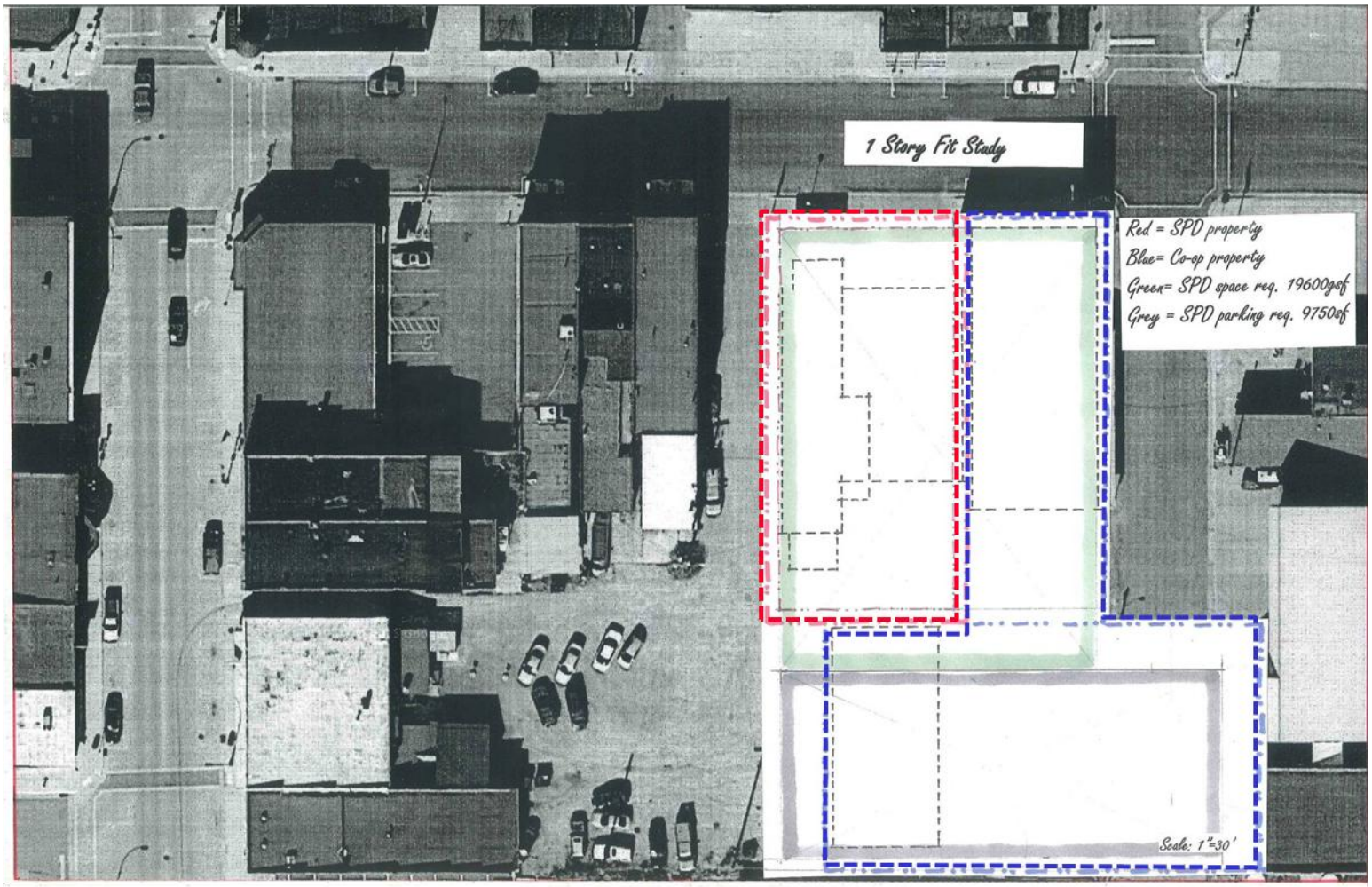


Fig. 5.1

121 E .OAK STREET SITE FIT STUDY - One Story Fit Study

Fig. 5.2 illustrates a one story facility site fit study. Using the forecasted 19,600 gsf for the SPD, the facility footprint (green line) and parking requirement of 9750 feet (grey line) exceeds the current SPD property line (red dashed line). The site fit study indicates that to use the existing site for a single story SPD facility would require property acquisition.

The red dashed line indicates the buildable area of the existing SPD site
The blue dashed line indicates the property line of the adjacent Co-op property

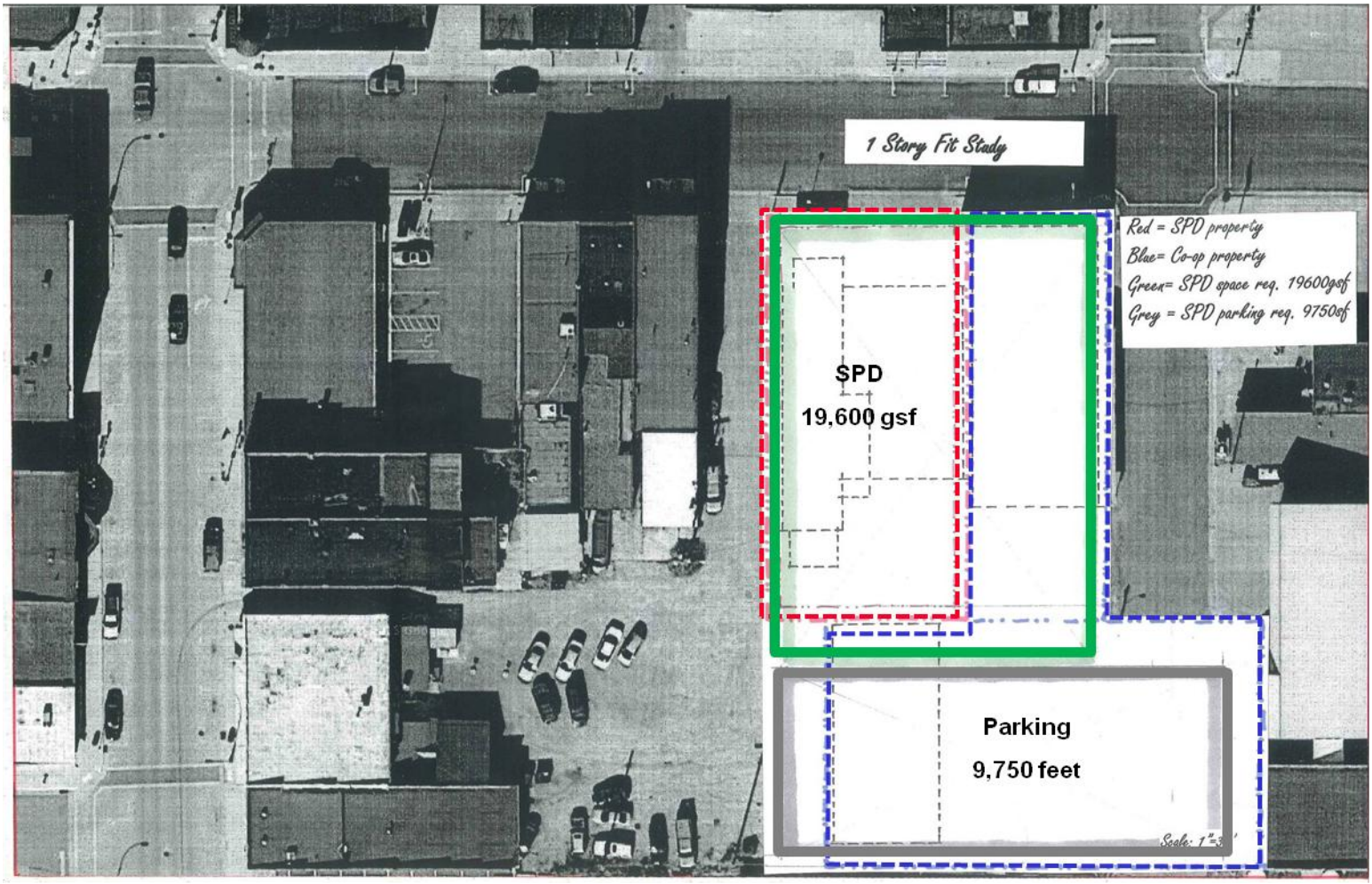


Fig.5.2

121 E .OAK STREET SITE FIT STUDY -Two Story Fit Study

Fig. 5.3 illustrates a two story facility site fit study. Using the forecasted 19,600 gsf for the SPD, the facility footprint/9800sf per floor (green line) and parking requirement of 9750 feet (grey line) also exceeds the current SPD property line (red dashed line). The site fit study indicates that to use the existing site for a two story SPD facility would require property acquisition.

The red dashed line indicates the buildable area of the existing SPD site
The blue dashed line indicates the property line of the adjacent Co-op property

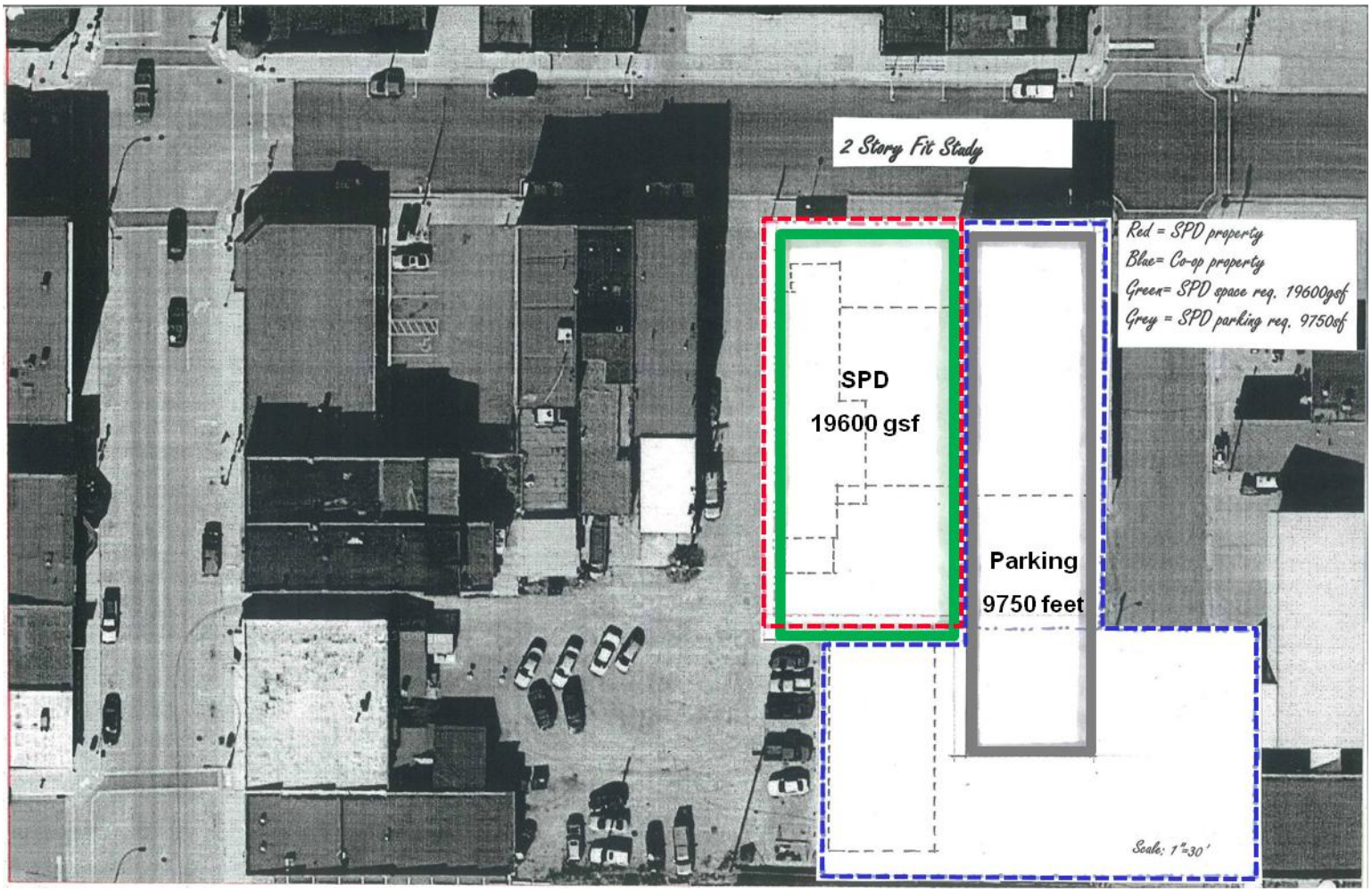


Fig. 5.3

121 E. OAK STREET SITE - SITE/FACILITY MASTER PLAN ALTERNATIVES

The following site/facility master plan alternatives were developed to test the viability of using the existing SPD 121 E. Oak Street property. The five alternatives included;

Alternative 1
New Construction / Partial Renovation of Existing SPD / Acquire Co-op Property

Alternative 2
New Construction / Acquire Co-op Property

Alternative 3
New Construction / Acquire 3 Retail Parcels West of Existing SPD Facility

Alternative 4
New Construction / Combine SPD Facility with City Hall to form a Law Enforcement Center/Acquire Co-op and Retail Parcels

Alternative 5
New Construction on Green Field Site – 2 story

ALTERNATIVE 1 – Description

New Construction / Partial Renovation of Existing SPD / Acquire Co-op Property

Alternative 1 (Fig 5.4) develops 16,600gsf of new construction and re-utilizes 3000gsf of the existing SPD vehicle garage totaling 19,600 gsf. The alternative would be developed in the following phases.

Phase 1 - Purchase/Demo Co-op
Phase 2 - Renovate existing SPD vehicle garage
Phase 3 - Build new 2 ½ story SPD facility
Phase 4 - Demo current SPD facility

Advantages/Disadvantages

+ Minimal disruption to existing operation
+ Existing Co-op garage can be used as enclosed impound garage
+ Sufficient on-site parking
+ Prominent corner presence
+ Good vehicular access to and from the site

- Buildable site area will require lower level plus 2 stories, which may compromise operational efficiencies
- Future expansion would require additional property acquisition
- Phased construction
- Property acquisition cost

ALTERNATIVE 1 – Site/Facility Master Plan

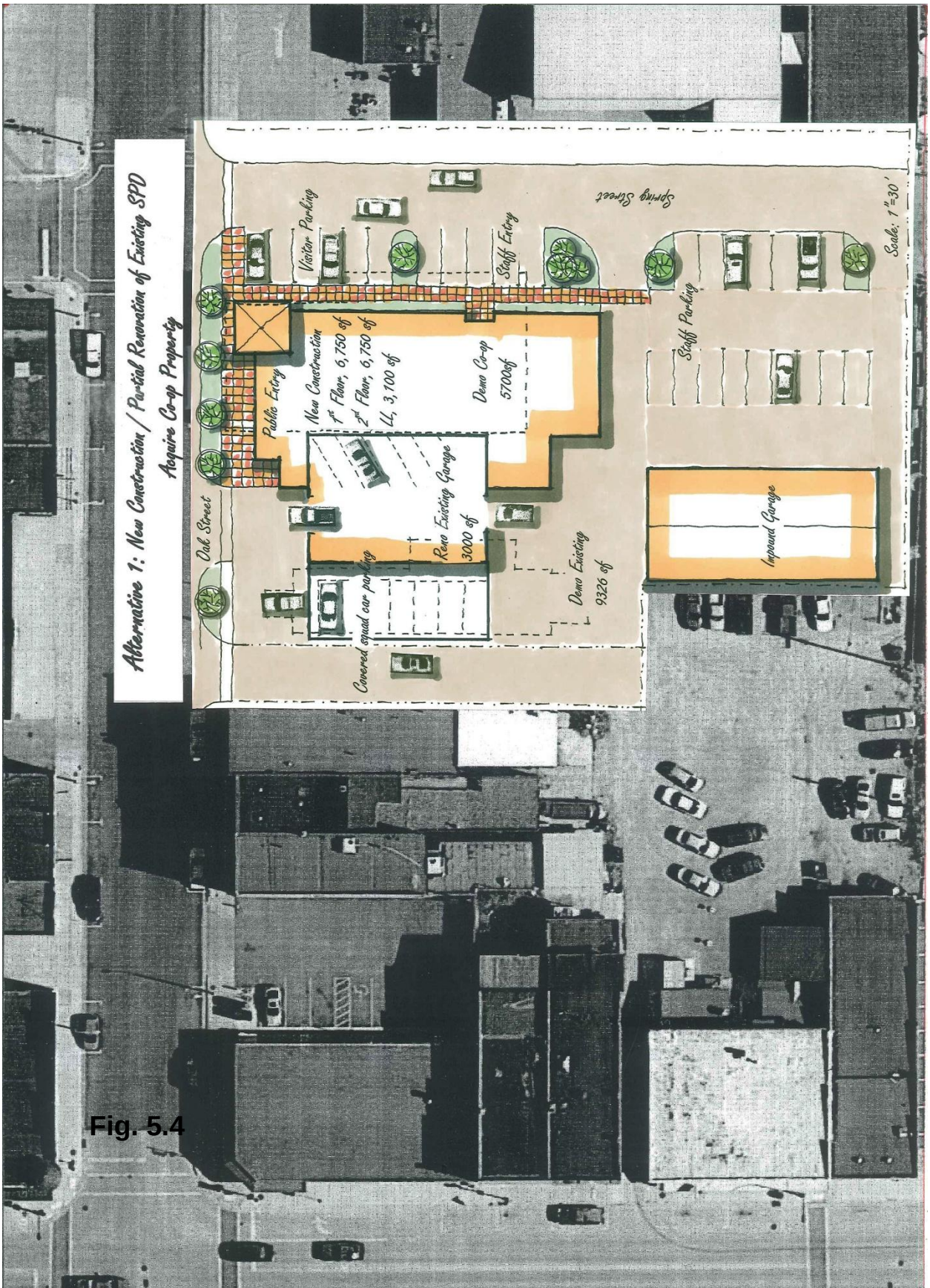


Fig. 5.4

ALTERNATIVE 2 - Description

New Construction / Acquire Co-op Property

Alternative 2 (Fig.5.5) develops 19,600gsf of new construction. The alternative would be developed in the following phases.

Phase 1 - Purchase/Demo Co-op
Phase 2 - Demo existing SPD vehicle garage
Phase 3 - Build new 2 story SPD facility
Phase 4 - Move from existing SPD facility into the new SPD facility
Phase 5 - Demo existing SPD facility

Advantages/Disadvantages

+ Minimal disruption to existing operation
+ Existing Co-op garage can be used as enclosed impound garage
+ Sufficient on-site parking
+ Prominent corner presence
+ Easy phased construction
+ Building footprint conducive to easy/flexible space planning
+ Location of existing SPD could be used for expansion space
+ Good vehicular access to and from the site

- Property acquisition cost
- Temporally no vehicle garage

ALTERNATIVE 2 – Site/Facility Master Plan

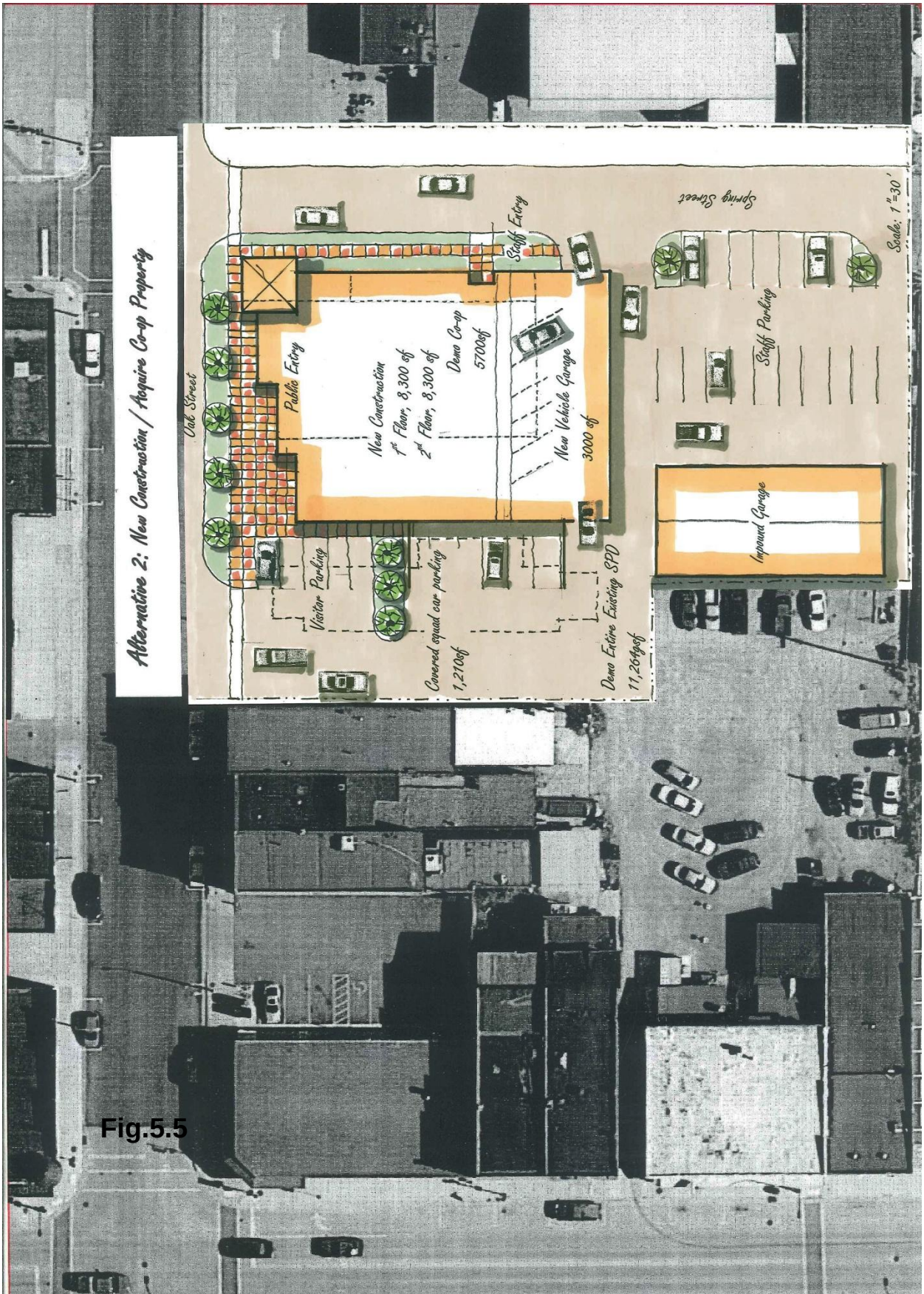


Fig.5.5

ALTERNATIVE 3 - Description

New Construction / Acquire 3 Retail Parcels West of Existing SPD Facility

Alternative 3 (Fig.5.6) develops 19,600gsf of new construction. The alternative would be developed in the following phases.

Phase 1 - Acquire three retail parcels west of existing SPD facility
Phase 2 - Demo retail parcels
Phase 2 - Build new 2 story SPD facility
Phase 2 - Demo existing SPD facility
Phase 4 - Build new SPD vehicle garage

Advantages/Disadvantages

+ Minimal disruption to existing operation
+ Sufficient on-site parking
+ Easy phased construction
+ Property acquisition cost

- Fair vehicular access to and from the site
- Impound garage off-site
- Building footprint not conducive to easy/flexible space planning
- Minimal expansion area

ALTERNATIVE 3 – Site/Facility Master Plan

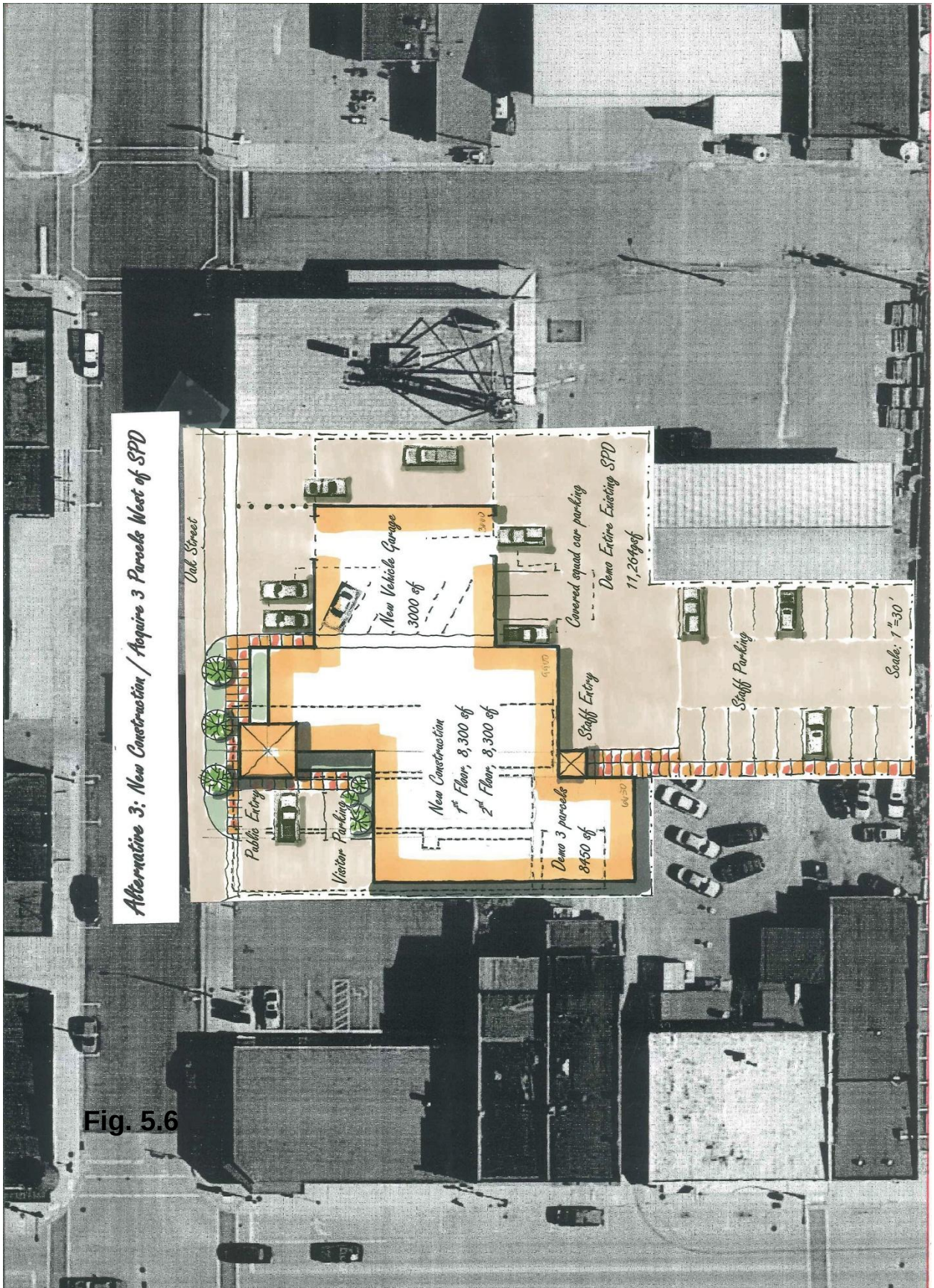


Fig. 5.6

ALTERNATIVE 4 - Description

New Construction / Combine SPD and City Hall to form Law Enforcement Center/Acquire Co-op and Retail Parcels

Alternative 4 (Fig.5.7) develops 19,600gsf of new construction for the SPD and 13,000gsf for the Sparta City Hall. The alternative would be developed in the following phases.

Phase 1 - Purchase/Demo Co-op and retail parcels
Phase 2 - Demo existing SPD vehicle garage
Phase 3 - Build new 2 story SPD facility
Phase 4 - Move from existing SPD facility into the new SPD/LEC facility
Phase 5 - Demo existing SPD facility
Phase 6 - Build New City Hall
Phase 7 - Move from existing City Hall into the new LEC

Advantages/Disadvantages

+ Minimal disruption to existing operation
+ Existing Co-op garage can be used as enclosed vehicle garage
+ Sufficient on-site parking
+ Prominent corner presence
+ One stop shop for SPD and City Hall activities
+ Easy phased construction
+ Building footprint conducive to easy/flexible space planning
+ Good vehicular access to and from the site
+ Project savings by combining projects, sharing common and mechanical type spaces

- Property acquisition cost
- Minimal expansion space beyond the year 2040

ALTERNATIVE 4 – Site/Facility Master Plan

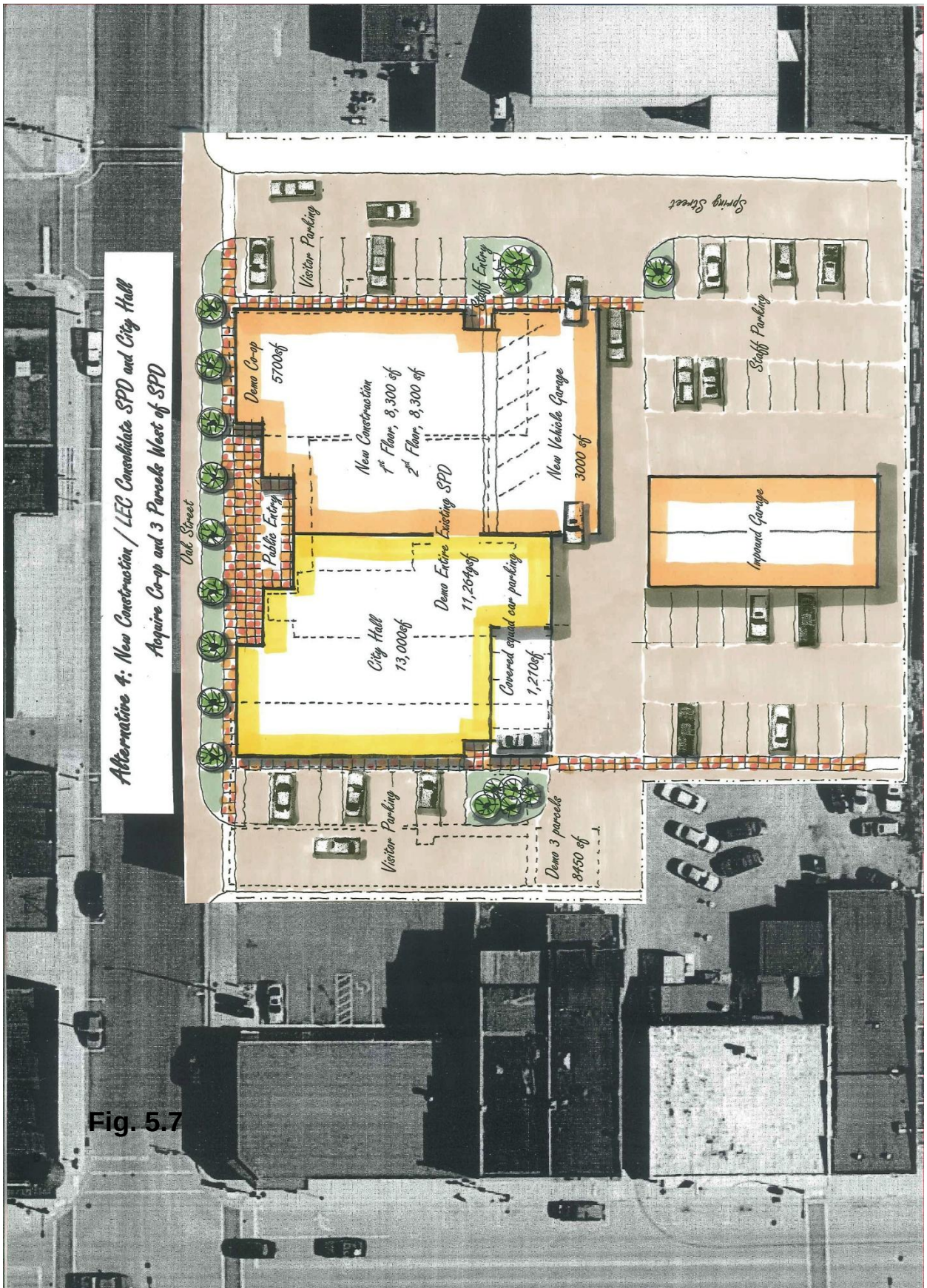


Fig. 5.7

ALTERNATIVE 5 - Description

New Construction on "Green Field" Site

Alternative 5, (Fig. 5.8 and Fig. 5.9) new construction on a "Green Field" site have been developed in the event that the City of Sparta determines that the existing 121 E. Oak Street SPD site is not a good fit. The following one and two story police station alternatives were developed to demonstrate what the site requirements would be for a "Green Field" facility approach.

A police station proto-type concept was developed with the SPD staff to establish the security, and space adjacency requirements between the different facility components. The proto-type concept (Fig. 5.7) was used to generate the two "Green Field" site/facility land use plan alternatives.

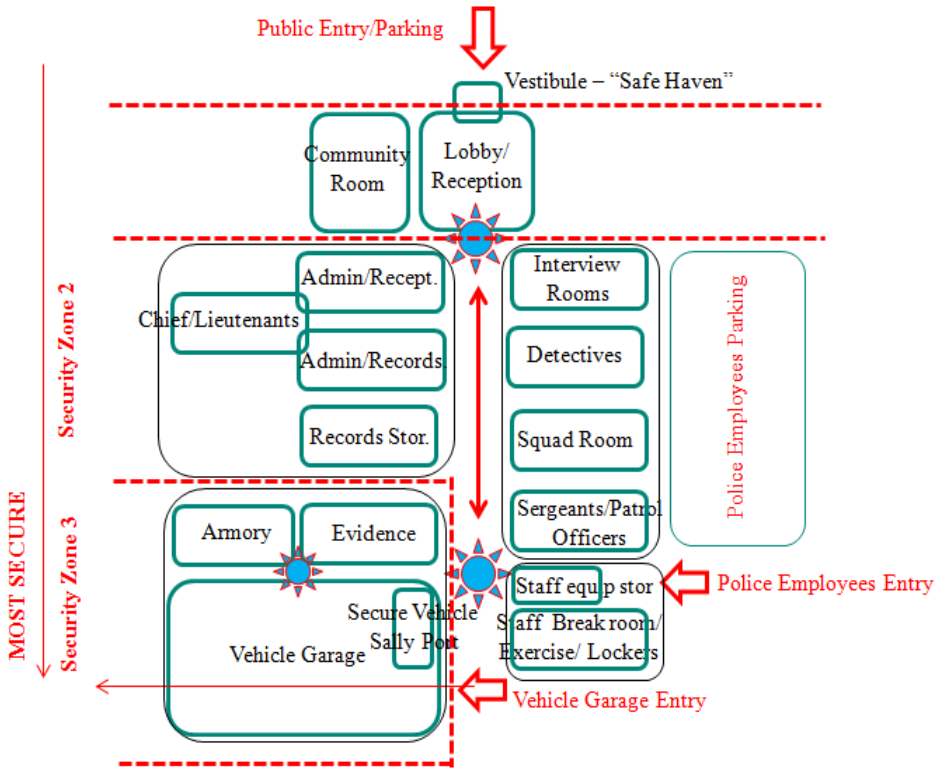


Fig. 5.7

The "Green Field" site study determined that the following lot sizes would be needed;

1 STORY FACILITY ALTERNATIVE

Building gsf = 19,600 gsf
Parking Area = 9,750 feet
Total Lot Size = 72,000 feet or 1.5 – 1.6 acres

2 STORY FACILITY ALTERNATIVE

Building gsf = 19,600 gsf or 9,800 gsf/flr
Parking Area = 9,750 feet
Total Lot Size = 55,200 feet or 1.0 – 1.2 acres

ALTERNATIVE 5 – Site/Facility Master Plan (1 Story)

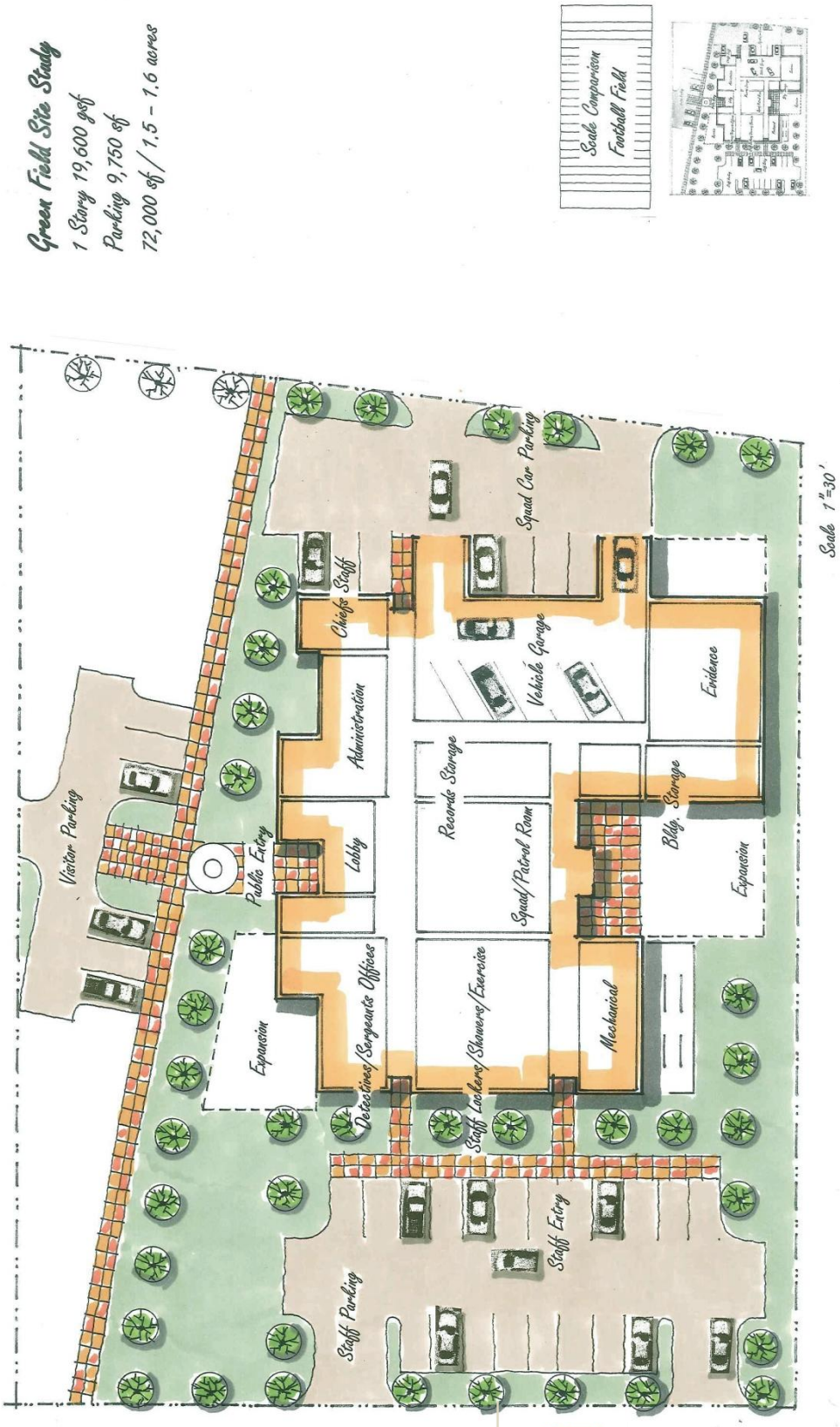


Fig.5.8

ALTERNATIVE 5 – Site/Facility Master Plan (2 Story)

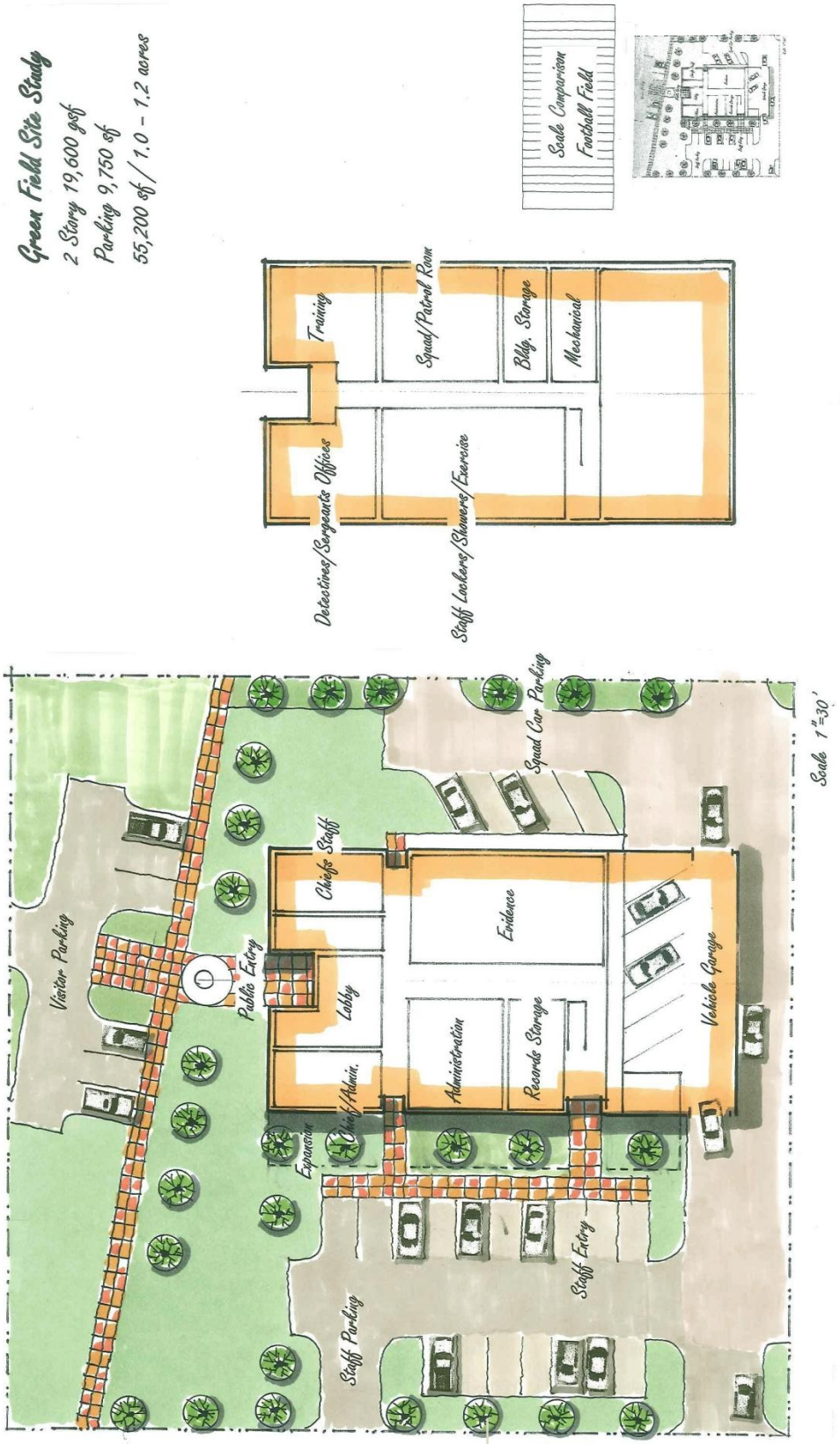


Fig. 5.9

Sparta Police Station
Space Needs Analysis Report

6.0 Recommendations

SPD SPACE NEEDS ANALYSIS FINDINGS

The intent of the ***SPD Space Needs Analysis*** was to help the City of Sparta consider a number of issues;

- ✓ **What is the recommended size of the SPD facility to sustain future growth for 30 years?**
- ✓ **What is the feasibility of remodeling the existing SPD police facility?**
- ✓ **Is the current location of the SPD facility suitable for modernization and or expansion?**
- ✓ **What is the additional lot size that would be needed for modernization and/or expansion, if any within the current SPD facility property?**
- ✓ **What is the recommended lot size needed for a new SPD facility, if the existing SPD site is vacated?**
- ✓ **Is there any other pertinent information which would be relevant for making informed decisions based on past experience with similar police facility projects?**

The outcome of the *SPD Space Needs Analysis* has developed the following recommendations;

- **Recommended size of the SPD facility to sustain future growth for 30 years**

  The staff and space forecasts were developed with SPD representatives. **The recommendation is to build to the 2040 forecast date of 19,600gsf.**

Year	Staff	Space
Existing 2014/2015	21	11,264gsf
2020	25	17,940gsf
2025	25	18,230gsf
2030	26	19,000gsf
2040	**27**	**19,600gsf** (a 8,230 gsf increase in space)

- **Feasibility of remodeling the existing SPD facility**

  Overall, the building has reached the end of its usefulness in its existing condition. A major renovation would be needed to upgrade the facility and its systems to meet current building codes and operational procedures of the Department. **The existing vehicular garage could be considered for renovation.**

Based upon the projected staff and space needs, **the long and narrow footprint of the existing SPD facility would not support a floor plan which improves the organizational, operational or functional requirements** of the SPD.

The existing SPD facility has also had a **negative impact on the staff's overall productivity**. Critical operational issues include;

- **Consumer Friendly**; as a public facility there are minimal spaces which support the public visitor
- **Time Inefficiencies;** with the insufficient amount of space in areas and improper adjacencies between space types, the staff is experiencing an abundance of non productive time
- **Workstations;** small workstation sizes and the lack of support spaces adjacent to the officers workstation has resulted in a disorganized work environment
- **Technology Upgrades;** the age and construction type of the existing facility will not allow for technology systems to be upgraded and more user friendly

- **Additional lot size that would be needed for modernization and/or expansion, if any within the current SPD facility property?**

The existing buildable area of the current SPD is 10,150 feet. Using the year 2040 forecast date requiring 19,600gsf for the facility and 9,750 feet for parking would require **the current site to be increased by 19,200 feet or .4 acres.**

- **Current location's suitability for modernization and or expansion**

The current SPD site is 75'x150' equaling 11,250 feet, minus a 5' setback from the property lines equals 10,150 feet of buildable area. It is recommended that a new SPD facility be build for the year 2040 forecast date, which needs 19,600gsf. **Any modernization or expansion would require property acquisition either east or west of the current property.**

The assessment of the existing 121 E. Oak Street SPD property concluded that the site is in a very good location for both service call response times as well as for easy access by the public if needed. Although the current property is not large enough to accommodate the projected year 2040 space needs (19,600gsf) the availability for **property acquisition both east and west of the current SPD site exists.**

- **Current location's suitability for modernization and or expansion**

The current SPD site offers various site/facility master plan alternatives. (Fig. 6.1 – 6.4)

Alternative 1. New construction / partial renovation of existing SPD / acquire Co-op property

Advantages/Disadvantages:

+ Minimal disruption to existing operation
+ Existing Co-op garage can be used as vehicle impound garage
+ Sufficient on-site parking
+ Prominent corner presence
+ Good vehicular access to and from the site
+ Existing infrastructure in place

- Buildable site area will require lower level plus 2 stories, which may compromising operational efficiencies
- Future expansion would require additional property acquisition
- Phased construction
- Property acquisition cost

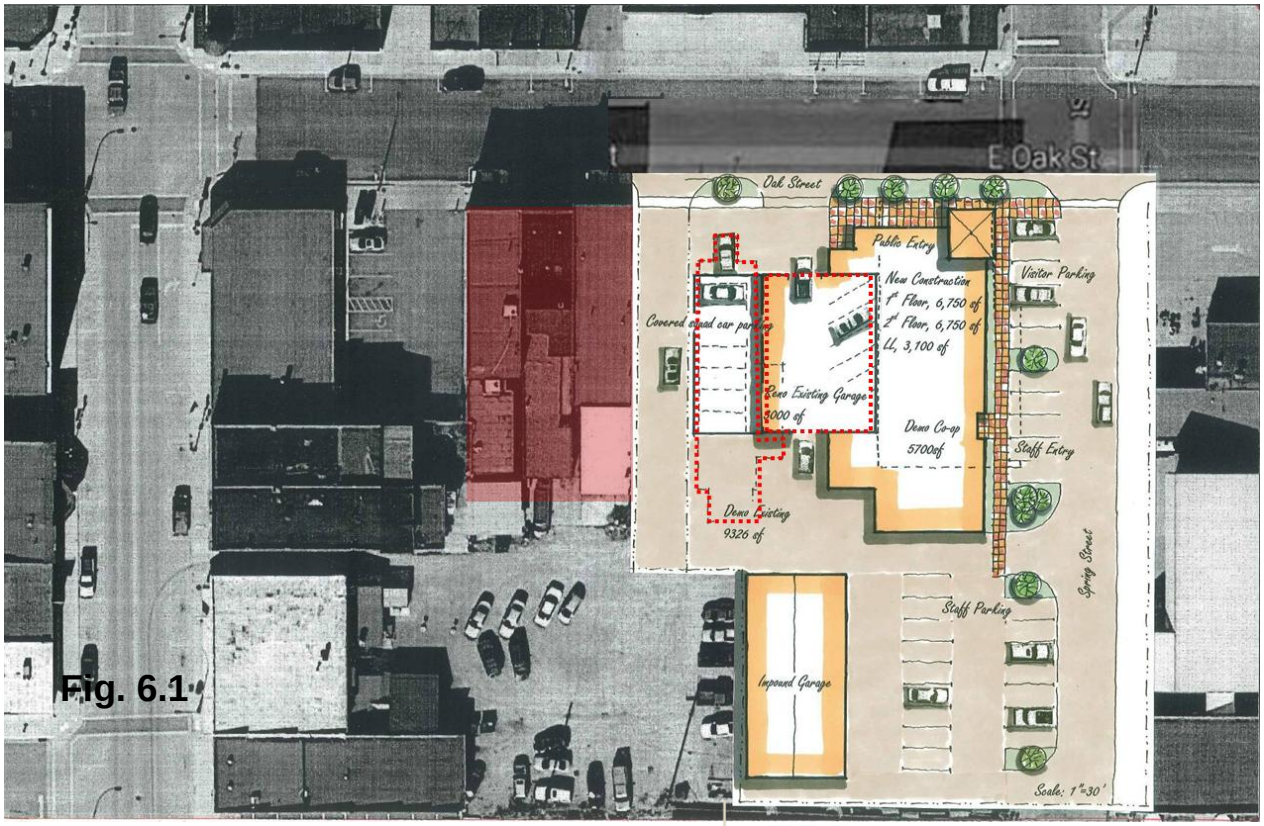


Fig. 6.1

Alternative 2. New construction / acquire Co-op property

Advantages/Disadvantages:

+ Minimal disruption to existing operation
+ Existing Co-op garage can be used as vehicle impound garage
+ Sufficient on-site parking
+ Prominent corner presence
+ Easy phased construction
+ Building footprint conducive to easy/flexible space planning
+ Location of existing SPD could be used for expansion space
+ Good vehicular access to and from the site
+ Existing infrastructure in place

- Property acquisition cost
- Temporally no vehicle garage

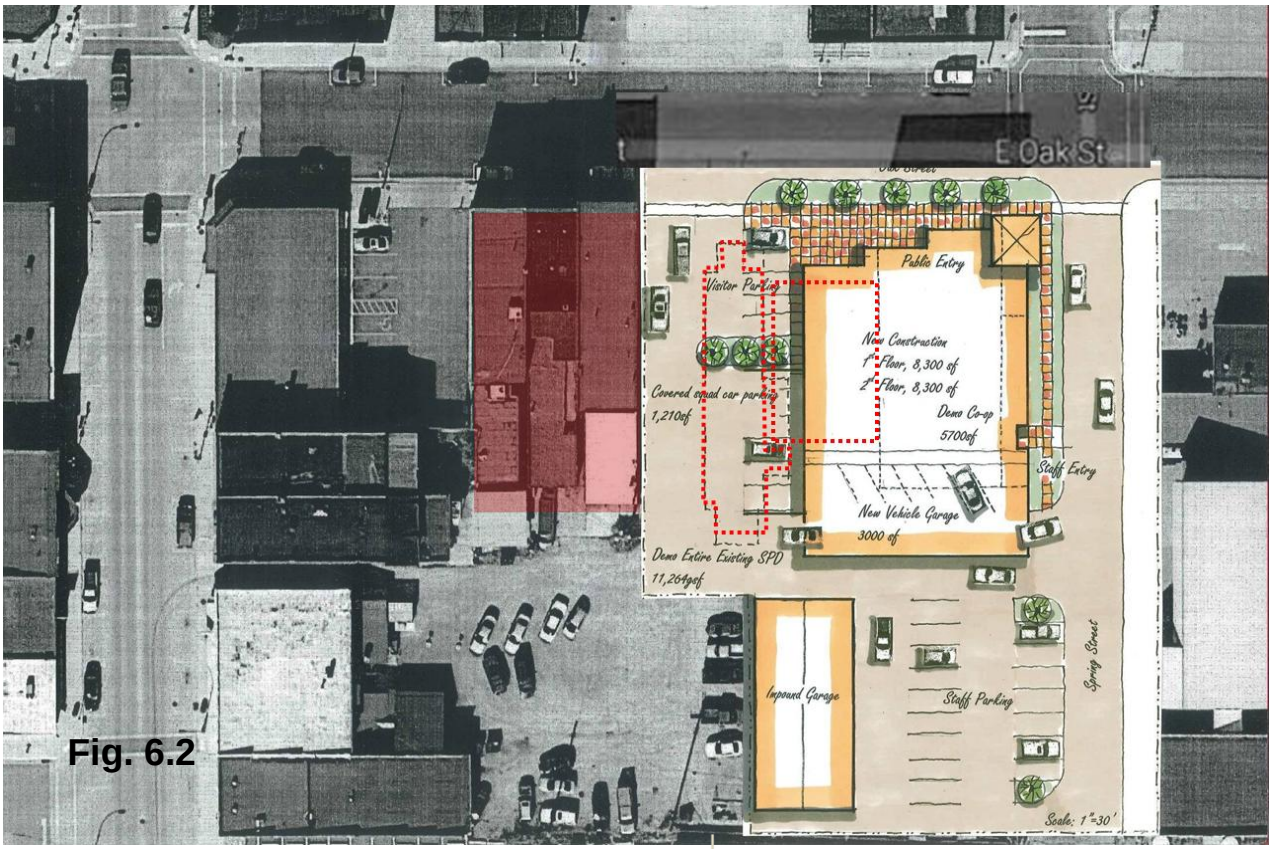


Fig. 6.2

Alternative 3. New construction / acquire 3 retail parcels west of the existing SPD

Advantages/Disadvantages:

+ Minimal disruption to existing operation
+ Sufficient on-site parking
+ Easy phased construction
+ Property acquisition cost
+ Existing infrastructure in place

- Fair vehicular access to and from the site
- Vehicle Impound garage off-site
- Building footprint not conducive to easy/flexible space planning
- Minimal expansion area

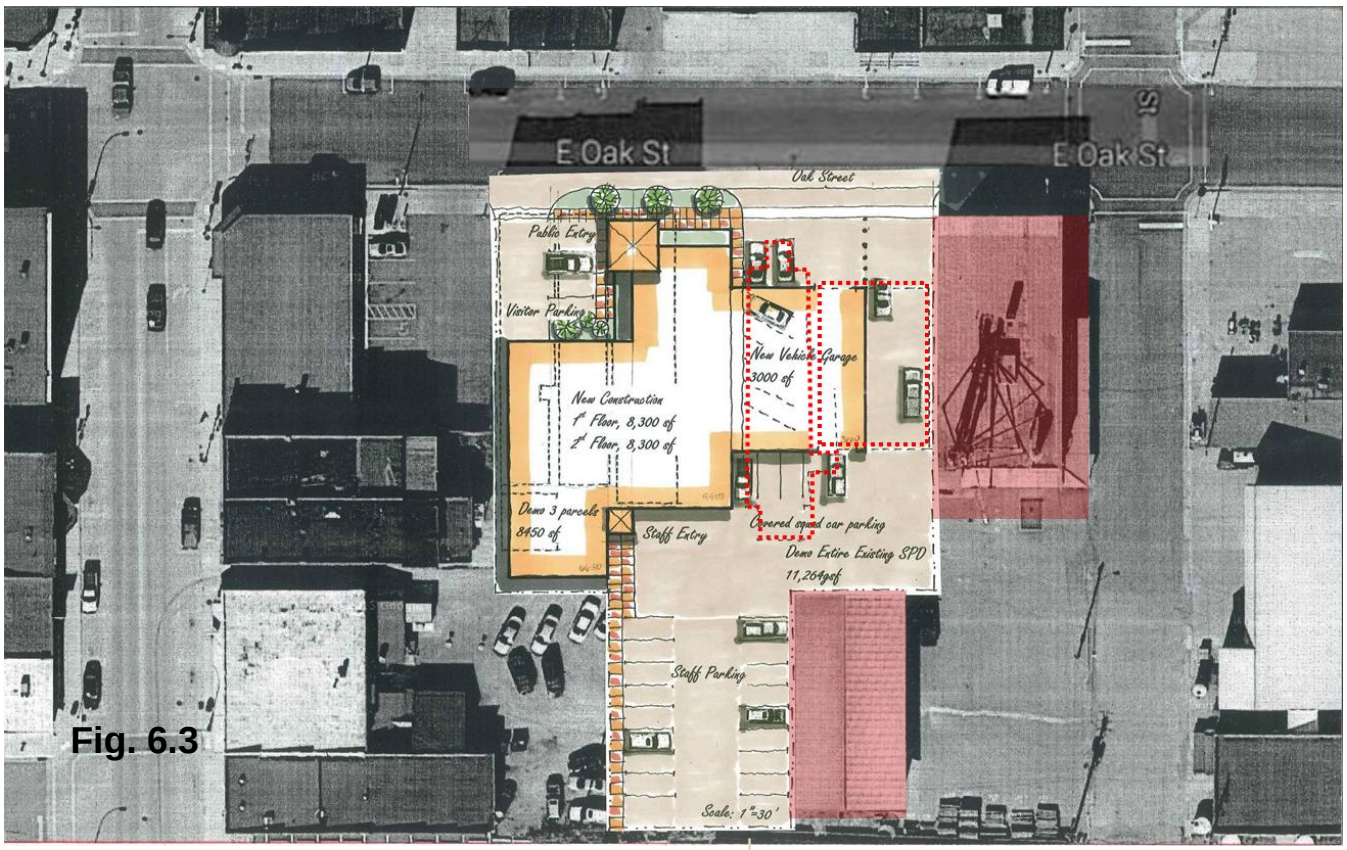


Fig. 6.3

Alternative 4. New construction / LEC consolidate SPD and existing City Hall / acquire Co-op and 3 retail parcels west of the existing SPD

Advantages/Disadvantages:

+ Minimal disruption to existing operation
+ Existing Co-op garage can be used as vehicle impound garage
+ Sufficient on-site parking
+ Prominent corner presence
+ One stop shop for SPD and City Hall activities
+ Easy phased construction
+ Building footprint conducive to easy/flexible space planning
+ Good vehicular access to and from the site
+ Existing infrastructure in place

- Property acquisition cost
- Minimal expansion space beyond the year 2040

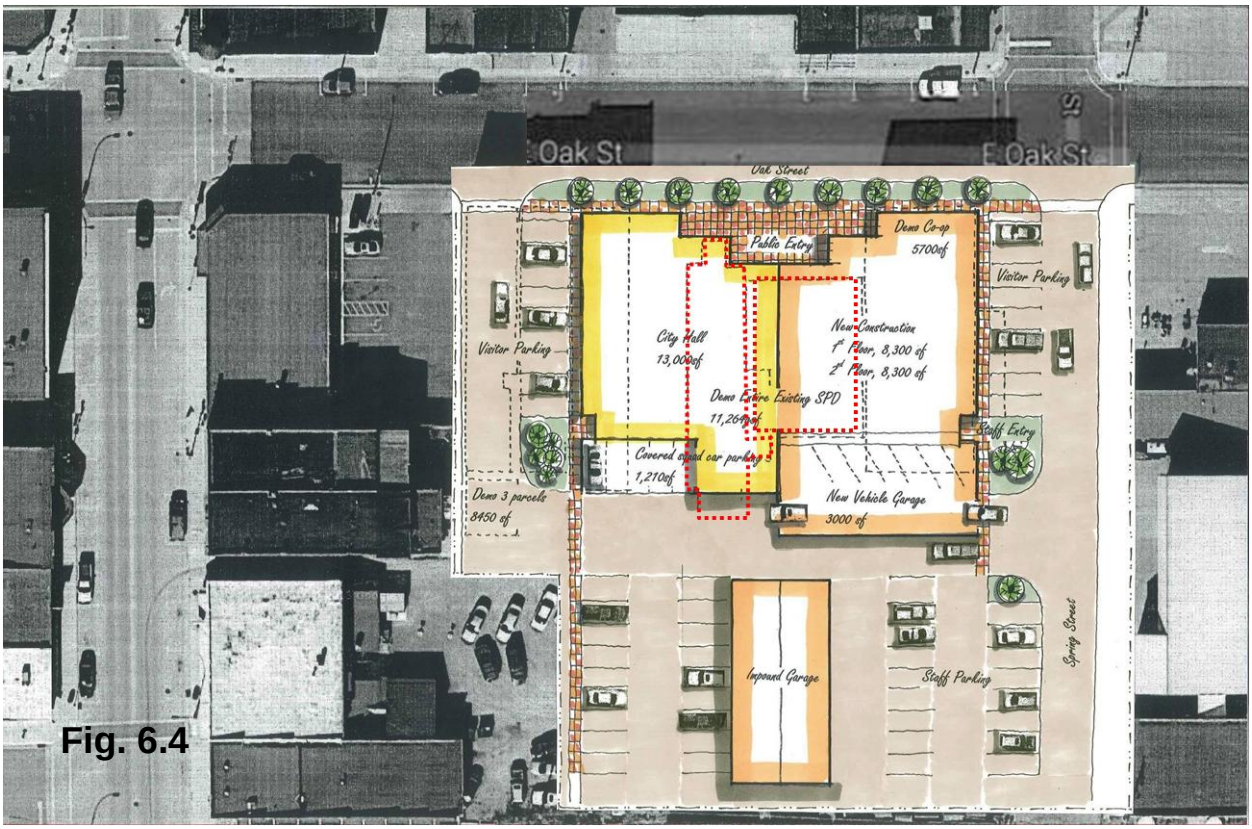


Fig. 6.4

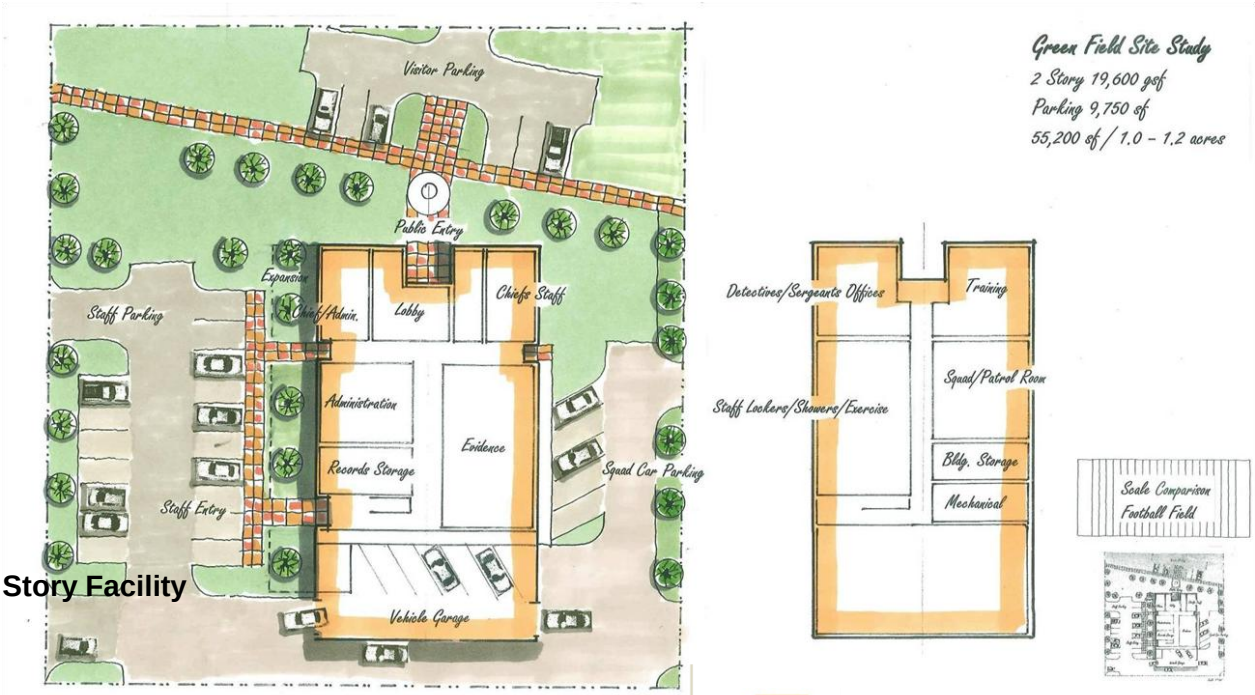
- **Recommended lot size needed for a new SPD facility, if the existing SPD site is vacated?**

  If the SPD would relocate to a "Green Field" site the following property requirements are needed;

1 STORY FACILITY ALTERNATIVE
Building gsf = 19,600gsf
Parking Area = 9,750 feet
Total Lot size = 72,000 feet or 1.5 – 1.6 acres

2 STORY FACILITY ALTERNATIVE
Building gsf = 19,600gsf or 9,800gsf/floor
Parking Area = 9,750 feet
Total Lot Size = 55,200 feet or 1.0 – 1.2 acres

1 Story Facility



2 Story Facility

- **Any other pertinent information deem relevant for making informed decisions based on past experience with similar projects**

The matrix below (Fig. 6.5) provides an Opinion of Probable Project Cost (OPPC) ranges for each of the site/facility master plan alternatives. The estimates are based off of the ***conceptual site/facility master plan alternatives*** not ***detailed architectural drawings***, thus the estimates need to be refined when an alternative direction is chosen.

An Opinion of Probable Project Cost is an estimation of a project's level of effort and cost to complete. An OPPC estimate takes place very early in a project's life cycle — during the project selection and approval period and prior to the project initiation in most cases. The main purpose of the OPPC estimate is to provide the City of Sparta's decision-makers with the information necessary to make a decision on whether it makes sense to move forward with the project based on the estimated level of effort, in terms of completion time and cost. The point is to provide a "ballpark" estimate using the information available at the time.

An OPPC estimate's variance is rather large, but it should not dissuade you from making an attempt. Remember that some information is better than no information. Also remember that the estimate is based on the information available at the time of developing the OPPC estimate. As the project moves forward, expect to further improve the estimate, when more information is obtained and requirements are further refined during the initiation and planning and design phases of the project.

The OPPC estimates represent 2016 dollars. Also the OPPC estimate numbers are for ***all project related costs***, not just actual building construction.

	OPINION of PROBABLE PROJECT COST		
	Alternatives Project Cost Ranges		
SITE/FACILITY MASTER PLAN ALTERNATIVES	Low	Mid	High
1. New Construction/Partial Renovation of Existing SPD/Aquire Co-op	$4,391,700	$4,891,700	$5,391,700
2. New Construction/Acquire Co-op Property	$4,593,100	$5,093,100	$5,593,100
3. New Construction/Acquire Retail Parcels West of SPD	$4,751,900	$5,251,900	$5,751,900
4. New Construction of SPD and City Hall/Aquire Co-op and Retail Parcels	$7,813,200	$8,313,200	$8,813,200
5. New Construction On Green Field Site - two story	$4,316,400	$4,816,400	$5,316,400

Fig. 6.5

- The clear cut trends in the construction of future police facilities are in the area of building security systems, reinforcing structures (Target Hardening) and using “green” architecture to satisfy environmental concerns of the future.

- The square foot cost for police stations can range anywhere from $161., (generally site work, equipment not included) $212., (site work not included) $270./square foot. (Both equipment and site work included) RSMeans Building Construction Cost Data

- 40 - 60 years is the approximate useful life-expectancy of a public building. As a practical matter a “planning horizon” of about 20 years provides a reasonable degree of longevity, funding likelihood, and predictability of operational requirements.

Sparta Police Station
Space Needs Analysis Report

7.0 Appendix

- **Alternatives OPPC Estimates**
- **Site Evaluation Criteria**
- **Building Audit Questionnaire**
- **Building Evaluation Forms**
- **Zoning Code 17.10**

Sparta Police Station
Space Needs Analysis

7.0 Appendix – Alternative Opinion Cost Estimate

ALTERNATIVE 1 - New Construction/Partial Renovation of Existing SPD/Acquire Co-op Property

	Opinion of Probable Cost							
A.	**Building**		**SF**	**Cost/SF**	**Subtotal**			
1	New Construction		16,600	$ 155	$ 2,573,000			
2	Renovate Existing Garage		3,000	$ 110	$ 330,000			
3	Elevator			$ 70,000	$ 70,000			
4	**Total Programmatic GSF**		**19,600**	**GSF**				
5	Subtotal Building Construction				$ 2,973,000			
6	Design Contingency	10%			$ 297,300			
7	Construction Contingency	5%			$ 148,650			
	Building Construction Cost Opinion					**$**	**3,419,000**	
B.	**Sitework**	39	Cars					
1	Earthwork		50,000	$ 3.00	$ 150,000			
2	Parking Lots		11,000	$ 2.00	$ 22,000			simple repaving, minor regrading
3	Access Drives		8,500	$ 2.00	$ 17,000			simple repaving, minor regrading
4	Demolition / Abatement / Soils Remediation / Landfill		9,400	$ 5.00	$ 47,000			area for Police building only
5	Concrete Walks / Curbs		1,500	$ 8.00	$ 12,000			
6	Exterior Lighting Allowance		1	$ 30,000	$ 30,000			
7	Storm / Sanitary / Water Utility Allowance		1	$ 30,000	$ 30,000			reuse existing, minor new work
8	Electric Utility Allowance		1	$ 15,000	$ 15,000			reuse exsting overhead service
9	Stormwater Retention Pond		0	$ -	$ -			
10	Landscaping Allowance		1	$ 10,000	$ 10,000			basic landscaping only
11	Outbuildings		0	$ -	$ -			
12	Demolition of Co -Op		0	$ -	$ -			
13	Subtotal Sitework				$ 333,000			
14	Design Contingency	10%			$ 33,300			
15	Construction Contingency	5%			$ 16,650			
16	**Sitework Budget**					**$**	**383,000**	
17	Enter Number of Acres	1.20						
18	Sitework expressed as Cost Per Acre		$ 319,167					
C.	**Total Construction Cost Opinion**					**$**	**3,802,000**	
	Construction Cost Per Square Foot		**$193.98**	/SF				
D.	**Miscellaneous Building Related Soft Costs**							
1	A/E Fees	7.50%			$ 285,150			
2	State Approvals / Reimbursables Allowance		1	$ 20,000	$ 20,000			
4	Geotechnical	Owner	6	$ 2,000	$ 12,000			
5	Boundary & Topographic Survey	Owner	1	$ 3,500	$ 3,500			
7	Telephone System Allowance	Owner	1	$ 50,000	$ 50,000			
8	Computer / Technology Systems Allowance	Owner	1	$ 50,000	$ 50,000			
9	Sound System Allowance	Owner	1	$ -	$ -			part of phone system
10	Artwork Allowance	Owner	1	$ -	$ -			
11	Furniture & Equipment Allowance	Owner	1	$ 75,000	$ 75,000			
12	Security Systems Allowance	Owner	1	$ 50,000	$ 50,000			
13	Signage Allowance	Owner	1	$ 10,000	$ 10,000			
						$	**555,700**	
						$	**4,357,700**	
E.	**Miscellaneous Owner Soft Costs**							
3	Property Acquisition (Co-Op)	Owner	1	$ 200,000	$ 200,000			
14	Relocation Costs Allowance	Owner	1	$ 10,000	$ 10,000			limited to files. No furniture
16	Construction Financing	Owner	1	$ 85,500	$ 85,500			
17	Performance & Labor & Material Payment Bonds		0.75%	Rating	$ 28,515			
18	Builder's Risk Insurance Allowance	Owner	1	$ 10,000	$ 10,000			
19	Sales Tax Exemption Credit on Partial Materials		1.5%	Construction	$ (57,030)			
20	Inflation / Escalation to Year 2016		1.03	Annual Rate	$ 231,542			
22	Subtotal Miscellaneous				$ 508,527			
23	Owner's Soft Cost Contingency	Owner	5%		$ 25,426			
24	**Miscellaneous Budget**					**$**	**534,000**	
F.	**Total Project Opinion of Probable Cost**					**$**	**4,891,700**	
	Total Project Cost Per Square Foot		**$249.58**	/SF				

Sparta Police Station
Space Needs Analysis — 7.0 Appendix – Alternative Opinion Cost Estimate

ALTERNATIVE 2 – New Construction/Acquire Co-op Property

	Opinion of Probable Cost							
A.	**Building**		**SF**	**Cost/SF**	**Subtotal**			
1	New Construction		19,600	$ 155	$ 3,038,000			
2	Elevator			$ 70,000	$ 70,000			
3	Renovate - none		0	$ 110	$ -			
4	**Total Programmatic GSF**		**19,600**	**GSF**				
5	Subtotal Building Construction				$ 3,108,000			
6	Design Contingency	10%			$ 310,800			
7	Construction Contingency	5%			$ 155,400			
8	**Building Construction Cost Opinion**					**$**	**3,574,200**	
B.	**Sitework**	39	Cars					
1	Earthwork		52,100	$ 3.00	$ 156,300			
2	Parking Lots		11,000	$ 2.00	$ 22,000			simple repaving, minor regrading
3	Access Drives		8,500	$ 2.00	$ 17,000			simple repaving, minor regrading
4	Demolition / Abatement / Soils Remediation / Landfill		11,500	$ 5.00	$ 57,500			area for Police building only
5	Concrete Walks / Curbs		1,500	$ 8.00	$ 12,000			
6	Exterior Lighting Allowance		1	$ 30,000	$ 30,000			
7	Storm / Sanitary / Water Utility Allowance		1	$ 30,000	$ 30,000			reuse existing, minor new work
8	Electric Utility Allowance		1	$ 15,000	$ 15,000			reuse exsting overhead service
9	Stormwater Retention Pond		0	$ -	$ -			
10	Landscaping Allowance		1	$ 10,000	$ 10,000			basic landscaping only
11	Outbuildings		0	$ -	$ -			
12	Demolition of Co-Op		0	$ -	$ -			
13	Subtotal Sitework				$ 349,800			
14	Design Contingency	10%			$ 34,980			
15	Construction Contingency	5%			$ 17,490			
16	**Sitework Budget**					**$**	**402,300**	
17	Enter Number of Acres	1.20						
18	Sitework expressed as Cost Per Acre		$ 335,250					
C.	**Total Construction Cost Opinion**					**$**	**3,976,500**	
	Construction Cost Per Square Foot		**$202.88**	/SF				
D.	**Miscellaneous Building Related Soft Costs**							
1	A/E Fees	7.50%			$ 298,238			
2	State Approvals / Reimbursables Allowance		1	$ 20,000	$ 20,000			
4	Geotechnical	Owner	6	$ 2,000	$ 12,000			
5	Boundary & Topographic Survey	Owner	1	$ 3,500	$ 3,500			
7	Telephone System Allowance	Owner	1	$ 50,000	$ 50,000			
8	Computer / Technology Systems Allowance	Owner	1	$ 50,000	$ 50,000			
9	Sound System Allowance	Owner	1	$ -	$ -			part of phone system
10	Artwork Allowance	Owner	1	$ -	$ -			
11	Furniture & Equipment Allowance	Owner	1	$ 75,000	$ 75,000			
12	Security Systems Allowance	Owner	1	$ 50,000	$ 50,000			
13	Signage Allowance	Owner	1	$ 10,000	$ 10,000			
						$	**568,700**	
						$	**4,545,200**	
E.	**Miscellaneous Owner Soft Costs**							
3	Property Acquisition (Co-Op)	Owner	1	$ 200,000	$ 200,000			
14	Relocation Costs Allowance	Owner	1	$ 10,000	$ 10,000			limited to files. No furniture
16	Construction Financing	Owner	1	$ 89,500	$ 89,500			
17	Performance & Labor & Material Payment Bonds		0.75%	Rating	$ 29,824			
18	Builder's Risk Insurance Allowance	Owner	1	$ 10,000	$ 10,000			
19	Sales Tax Exemption Credit on Partial Materials		1.5%	Construction	$ (59,648)			
20	Inflation / Escalation to Year 2016		1.03	Annual Rate	$ 242,169			
22	Subtotal Miscellaneous				$ 521,845			
23	Owner's Soft Cost Contingency	Owner	5%		$ 26,092			
24	**Miscellaneous Budget**					**$**	**547,900**	
F.	**Total Project Opinion of Probable Cost**					**$**	**5,093,100**	
	Total Project Cost Per Square Foot		**$259.85**	/SF				

Sparta Police Station
Space Needs Analysis

7.0 Appendix – Alternative Opinion Cost Estimate

ALTERNATIVE 3 – New Construction/Acquire 3 Retail Parcels West of the Existing SPD

	Opinion of Probable Cost							
A.	**Building**		**SF**	**Cost/SF**	**Subtotal**			
1	New Construction		20,000	$ 155	$ 3,100,000			
2	Renovate - none		0	$ 110	$ -			
3	Elevator			$ 70,000	$ 70,000			
3	**Total Programmatic GSF**		**20,000**	**GSF**				
4	Subtotal Building Construction				$ 3,170,000			
5	Design Contingency	10%			$ 317,000			
6	Construction Contingency	5%			$ 158,500			
7	**Building Construction Cost Opinion**					**$ 3,645,500**		
B.	**Sitework**	20	Cars					
1	Earthwork		51,000	$ 3.00	$ 153,000			
2	Parking Lots		8,500	$ 2.00	$ 17,000		simple repaving, minor regrading	
3	Access Drives		9,000	$ 2.00	$ 18,000		simple repaving, minor regrading	
4	Demolition / Abatement / Soils Remediation / Landfill		11,500	$ 5.00	$ 57,500		area for Police building only	
5	Concrete Walks / Curbs		2,000	$ 8.00	$ 16,000			
6	Exterior Lighting Allowance		1	$ 30,000	$ 30,000			
7	Storm / Sanitary / Water Utility Allowance		1	$ 30,000	$ 30,000		reuse existing, minor new work	
8	Electric Utility Allowance		1	$ 15,000	$ 15,000		reuse exsting overhead service	
9	Stormwater Retention Pond		0	$ -	$ -			
10	Landscaping Allowance		1	$ 20,000	$ 20,000		basic landscaping only	
11	Outbuildings		0	$ -	$ -			
12	Demolition of west buildings Allowance		1	$ 60,000	$ 60,000		for compelte removal, project ready site	
13	Subtotal Sitework				$ 416,500			
14	Design Contingency	10%			$ 41,650			
15	Construction Contingency	5%			$ 20,825			
16	**Sitework Budget**					**$ 479,000**		
17	Enter Number of Acres	0.68						
18	Sitework expressed as Cost Per Acre		$ 704,412					
C.	**Total Construction Cost Opinion**					**$ 4,124,500**		
	Construction Cost Per Square Foot		**$206.23**	/SF				
D.	**Miscellaneous Building Related Soft Costs**							
1	A/E Fees	7.50%			$ 309,338			
2	State Approvals / Reimbursables Allowance		1	$ 20,000	$ 20,000			
4	Geotechnical	Owner	6	$ 2,000	$ 12,000			
5	Boundary & Topographic Survey	Owner	1	$ 3,500	$ 3,500			
7	Telephone System Allowance	Owner	1	$ 50,000	$ 50,000			
8	Computer / Technology Systems Allowance	Owner	1	$ 50,000	$ 50,000			
9	Sound System Allowance	Owner	1	$ -	$ -		part of phone system	
10	Artwork Allowance	Owner	1	$ -	$ -			
11	Furniture & Equipment Allowance	Owner	1	$ 75,000	$ 75,000			
12	Security Systems Allowance	Owner	1	$ 50,000	$ 50,000			
13	Signage Allowance	Owner	1	$ 10,000	$ 10,000			
						$ 579,800		
						$ 4,704,300		
E.	**Miscellaneous Owner Soft Costs**							
3	Property Acquisition (west buildings)	Owner	1	$ 188,500	$ 188,500			
14	Relocation Costs Allowance	Owner	1	$ 10,000	$ 10,000		limited to files. No furniture	
16	Construction Financing	Owner	1	$ 92,800	$ 92,800			
17	Performance & Labor & Material Payment Bonds		0.75%	Rating	$ 30,934			
18	Builder's Risk Insurance Allowance	Owner	1	$ 10,000	$ 10,000			
19	Sales Tax Exemption Credit on Partial Materials		1.5%	Construction	$ (61,868)			
20	Inflation / Escalation to Year 2016		1.03	Annual Rate	$ 251,182			
22	Subtotal Miscellaneous				$ 521,548			
23	Owner's Soft Cost Contingency	Owner	5%		$ 26,077			
24	**Miscellaneous Budget**					**$ 547,600**		
F.	**Total Project Opinion of Probable Cost**					**$ 5,251,900**		
	Total Project Cost Per Square Foot		**$262.60**	/SF				

Sparta Police Station
Space Needs Analysis 7.0 Appendix – Alternative Opinion Cost Estimate

ALTERNATIVE 4 – New Construction/Combine Police and City Hall into Law Enforcement Center

	Opinion of Probable Cost							
A.	**Building**		**SF**	**Cost/SF**	**Subtotal**			
1	New Construction		32,600	$ 155	$ 5,053,000			
2	Elevator		0	$ 70,000	$ 70,000			
3	**Total Programmatic GSF**		**32,600**	**GSF**				
4	Subtotal Building Construction				$ 5,123,000			
5	Design Contingency	10%			$ 512,300			
6	Construction Contingency	5%			$ 256,150			
7	**Building Construction Cost Opinion**					**$**	**5,891,500**	
B.	**Sitework**	52	Cars					
1	Earthwork		71,600	$ 3.00	$ 214,800			
2	Parking Lots		15,000	$ 2.00	$ 30,000			simple repaving, minor regrading
3	Access Drives		10,000	$ 2.00	$ 20,000			simple repaving, minor regrading
4	Demolition / Abatement / Soils Remediation / Landfill		11,500	$ 5.00	$ 57,500			area for Police building only
5	Concrete Walks / Curbs		2,500	$ 8.00	$ 20,000			
6	Exterior Lighting Allowance		1	$ 60,000	$ 60,000			
7	Storm / Sanitary / Water Utility Allowance		1	$ 50,000	$ 50,000			reuse existing, minor new work
8	Electric Utility Allowance		1	$ 50,000	$ 50,000			reuse exsting overhead service
9	Stormwater Retention Pond		0	$ -	$ -			
10	Landscaping Allowance		1	$ 10,000	$ 10,000			basic landscaping only
11	Outbuildings		0	$ -	$ -			
12	Demolition of West Bldg's Allowance		1	$ 60,000	$ 60,000			for compelte removal, project ready site
13	Subtotal Sitework				$ 572,300			
14	Design Contingency	10%			$ 57,230			
15	Construction Contingency	5%			$ 28,615			
16	**Sitework Budget**					**$**	**658,100**	
17	Enter Number of Acres	1.37						
18	Sitework expressed as Cost Per Acre		$ 480,365					
C.	**Total Construction Cost Opinion**					**$**	**6,549,600**	
	Construction Cost Per Square Foot		**$200.91**	/SF				
D.	**Miscellaneous Building Related Soft Costs**							
1	A/E Fees	7.50%			$ 491,220			
2	State Approvals / Reimbursables Allowance		1	$ 25,000	$ 25,000			
4	Geotechnical	Owner	12	$ 2,000	$ 24,000			
5	Boundary & Topographic Survey	Owner	1	$ 3,500	$ 3,500			
7	Telephone System Allowance	Owner	1	$ 50,000	$ 50,000			
8	Computer / Technology Systems Allowance	Owner	1	$ 75,000	$ 75,000			
9	Sound System Allowance	Owner	1	$ -	$ -			part of phone system
10	Artwork Allowance	Owner	1	$ -	$ -			
11	Furniture & Equipment Allowance	Owner	1	$ 100,000	$ 100,000			
12	Security Systems Allowance	Owner	1	$ 75,000	$ 75,000			
13	Signage Allowance	Owner	1	$ 10,000	$ 10,000			
						$	**853,700**	
						$	**7,403,300**	
E.	**Miscellaneous Owner Soft Costs**							
3	Property Acquisition (Co-Op and west buildings	Owner	1	$ 388,500	$ 388,500			
14	Relocation Costs Allowance	Owner	1	$ 20,000	$ 20,000			limited to files. No furniture
16	Construction Financing	Owner	1	$ 147,400	$ 147,400			
17	Performance & Labor & Material Payment Bonds		0.75%	Rating	$ -			
18	Builder's Risk Insurance Allowance	Owner	1	$ 10,000	$ 10,000			
19	Sales Tax Exemption Credit on Partial Materials		1.5%	Construction	$ (98,244)			
20	Inflation / Escalation to Year 2016		1.03	Annual Rate	$ 398,871			
22	Subtotal Miscellaneous				$ 866,527			
23	Owner's Soft Cost Contingency	Owner	5%		$ 43,326			
24	**Miscellaneous Budget**					**$**	**909,900**	
F.	**Total Project Opinion of Probable Cost**					**$**	**8,313,200**	
	Total Project Cost Per Square Foot		**$255.01**	/SF				

Sparta Police Station
Space Needs Analysis

7.0 Appendix – Alternative Opinion Cost Estimate

ALTERNATIVE 5 – New Construction on Green Field Site, 2 Story

	Opinion of Probable Cost							
A.	**Building**		**SF**	**Cost/SF**	**Subtotal**			
1	New Construction		19,600	$ 155	$ 3,038,000			
2	Renovate - none		0	$ 110	$ -			
3	Elevator			$ -	$ -			
3	**Total Programmatic GSF**		19,600	GSF				
4	Subtotal Building Construction				$ 3,038,000			
5	Design Contingency	10%			$ 303,800			
6	Construction Contingency	5%			$ 151,900			
7	**Building Construction Cost Opinion**					**$**	**3,493,700**	
B.	**Sitework**	32	Cars					
1	Earthwork		33,350	$ 3.00	$ 100,050			
2	Parking Lots		9,750	$ 2.00	$ 19,500			
3	Access Drives		2,000	$ 2.00	$ 4,000			
4	Demolition / Abatement / Soils Remediation / Landfill		0	$ 5.00	$ -			
5	Concrete Walks / Curbs		2,000	$ 8.00	$ 16,000			
6	Exterior Lighting Allowance		1	$ 60,000	$ 60,000			
7	Storm / Sanitary / Water Utility Allowance		1	$ 50,000	$ 50,000			
8	Electric Utility Allowance / Transformer		1	$ 50,000	$ 50,000			
9	Stormwater Retention Pond Allowance		0	$ 50,000	$ 50,000			
10	Landscaping Allowance		1	$ 20,000	$ 20,000			
11	Outbuildings		0	$ -	$ -			
12	Demolition of buildings		0	$ -	$ -			
13	Subtotal Sitework				$ 369,550			
14	Design Contingency	10%			$ 36,955			
15	Construction Contingency	5%			$ 18,478			
16	**Sitework Budget**					**$**	**425,000**	
17	Enter Number of Acres	1.50						
18	Sitework expressed as Cost Per Acre		$ 283,333					
C.	**Total Construction Cost Opinion**					**$**	**3,918,700**	
	Construction Cost Per Square Foot		**$199.93**	/SF				
D.	**Miscellaneous Building Related Soft Costs**							
1	A/E Fees	7.50%			$ 293,903			
2	State Approvals / Reimbursables Allowance		1	$ 20,000	$ 20,000			
4	Geotechnical	Owner	6	$ 2,000	$ 12,000			
5	Boundary & Topographic Survey	Owner	1	$ 3,500	$ 3,500			
7	Telephone System Allowance	Owner	1	$ 50,000	$ 50,000			
8	Computer / Technology Systems Allowance	Owner	1	$ 50,000	$ 50,000			
9	Sound System Allowance	Owner	1	$ -	$ -			part of phone system
10	Artwork Allowance	Owner	1	$ -	$ -			
11	Furniture & Equipment Allowance	Owner	1	$ 75,000	$ 75,000			
12	Security Systems Allowance	Owner	1	$ 50,000	$ 50,000			
13	Signage Allowance	Owner	1	$ 10,000	$ 10,000			
						$	**564,400**	
						$	**4,483,100**	
E.	**Miscellaneous Owner Soft Costs**							
3	Property Acquisition	Owner	1	$ -	$ -			assume city owned
14	Relocation Costs Allowance	Owner	1	$ 10,000	$ 10,000			limited to files. No furniture
16	Construction Financing	Owner	1	$ 88,200	$ 88,200			
17	Performance & Labor & Material Payment Bonds		0.75%	Rating	$ 29,390			
18	Builder's Risk Insurance Allowance	Owner	1	$ 10,000	$ 10,000			
19	Sales Tax Exemption Credit on Partial Materials		1.5%	Construction	$ (58,781)			
20	Inflation / Escalation to Year 2016		1.03	Annual Rate	$ 238,649			
22	Subtotal Miscellaneous				$ 317,459			
23	Owner's Soft Cost Contingency	Owner	5%		$ 15,873			
24	**Miscellaneous Budget**					**$**	**333,300**	
F.	**Total Project Opinion of Probable Cost**					**$**	**4,816,400**	
	Total Project Cost Per Square Foot		**$245.73**	/SF				

1. Size/Adequate Area

Can the site accommodate the overall building program, including architectural area required and adequate parking facilities?

2. Expansion

Provides consideration for future growth expansion of the required facilities and parking areas. Can expansion be easily accommodated on this site in building form, as well as support functions and parking?

3. Constructability

Evaluation of site constraints that may cause difficulty in constructing the facility programmed, such as flood plains, unsuitable soils for bearing of foundations, rock closely underlying the ground. As most sites are construable to some fashion or another, the constructability a site has large cost implications.

4. Public Acceptance

This criterion evaluates the acceptance of the public as to the location of this facility and adjacent surrounding land uses, such as residential housing, proper zoning, etc.

5. Parking

Is parking available on or near the site to provide easy public access from parking areas to the proposed building?

6. Zoning

Is the zoning of the particular property compatible or easily re-zoned to a governmental use and is this use then compatible with the surrounding area?

7. Utilities

Proper public utilities of gas, electric, water, and sewer are extremely important in the development of facilities of this type. If these public utilities are not located on or near the site, major costs could be incurred to provide such facilities.

8. Storm/Water Drainage

Can the site be easily drained either by on-site or public utility facilities.

9. Site Cost

Can the site be purchased by the city for reasonable amount of money? Site cost must be carefully evaluated, as the least expensive property may not always be the most buildable or appropriate. Often times, low cost property has drawbacks, such as no utilities, flood plains difficulty in constructability, as opposed to high cost sites may require little to no site preparation to commence a building program.

10. Availability

An important factor in determining a site to be appropriate is either if the property is currently up for sale or if the owner is willing to sell the property to the City. This prevents the city from having to enter an imminent domain procedure in the Court system.

11. Accessibility

It is important that sites of governmental buildings which serve the public are easily accessible to all segments of the population, including those that are physically handicapped and those who must use form of public transportation.

12. Location

Is the location of the facility close to other governmental facilities and public services and easily accessible and identifiable to the general public?

13. Proximity to Services

A building such as a police station cannot stand alone in the community. Numerous criminal justice professional, health services providers, social workers, clergy, etc. must have easy accessibility and proximity to the projected building site.

14. Identifiable Site

An important factor of a governmental facility is its indemnity. It is very common, especially in cities that are county seats, that the most identifiable architectural elements of the community are the government facilities, especially the historic county courthouse. An appropriate site must be identifiable to the public so that it may be easily recognized.

15. Environmental Concerns

Concerns such as traffic impact, noise, water pollution, etc., must be carefully analyzed as to not adversely affect the local environment that previously exists within the community.

Sparta Police Station
Space Needs Analysis 7.0 Appendix – Building Audit Questionnaire

Your SPD facility is the largest piece of law enforcement equipment you have. The SPD personnel use it every day in their work. Complete this checklist to rate your building.

Scoring: If you had between 5 and 14 “no’s”, then your building needs attention. If you had more than 14, your structure is significantly handicapping productivity.

YES	NO	NA	CRITERIA
	x		The building is located for reasonable public access
	x		Parking is adequate
	x		The exterior has appropriate dignity
	x		The site is secure, e.g., parked cars are safe
x			There are separate entrances for the public and personnel use
	x		The lobby has space for waiting plus public toilets
	x		Records and other service units are in or near the lobby
	x		Adequate space is available for public meetings
	x		There are adequate conference rooms
	x		Internal access control provides appropriate security
	x		There are usually enough interview rooms
x			Each patrol officer has his own, properly-sized locker
x			Dispatching is separate and secure
x			All investigators have a desk and some filing space
	x		There is space and equipment for proper physical training
	x		Building features allow the chain-of-evidence to be protected
	x		Space for evidence and property storage is usually adequate
	x		There is a vehicular sally port for prisoner intake
	x		The prisoner processing space is adequate and safe
		x	Cells allow easy viewing and are reasonably suicide-resistant
	x		Building features generally comply with ADA requirements
			Fire egress conditions probably meet the local code provisions
	x		Floor, wall and ceiling finishes are in good condition
	x		Artificial and natural lighting are adequate throughout
	x		Heating, cooling, and air quality are usually adequate
	x		The building is reasonably energy-efficient, e.g., double-glazing
	x		There are an appropriate number of toilets, in good condition
	x		When unused items are discarded, there is enough storage space
	x		Specific walls were built to allow confidential discussions
	x		Emergency power and related systems are dependable
	x		There are enough outlets for power, phone, and computer uses
x			The buildings condition justifies regular maintenance and repair
	x		Overall, building space is adequate
	x		Internal functions are located for overall effectiveness
5	25	3	TOTALS

BUILDING EVALUATION FORM

Project Number:	6511	Date of Evaluation:	9/9/2014		
Owner Name:	Sparta Police Department Station	Age of Building			
Building Location:	121 E. Ok Street	Oldest Section:	61 Years		
	Sparta Wi.	Last renovation:	2004		
Building Contact:	David Kilderer	Drawing Records?	Yes	No	X
Title:	Interim Chief	Photo Records?	Yes	No	X
Phone Number:		Utility Records?	Yes	No	X

ARCHITECTURAL / STRUCTURAL

Description	Condition: Good	Fair	Poor	Commentary	N/A
1. Asphalt Paving		X		Typical cracking from age	
2. Exterior Concrete	X				
3. Exterior Railings	X				
4. Signage	X				
5. Site Drainage			X	Roof drainage appears to sheet drain across sidewalk	
6. Masonry	X			Very unique brick size coursing	
7. Exterior Finishes	X			Except generator addition which should be rebuilt	
8. Windows	X				
9. Roofing			X	Needs new insulation and EPDM roof membrane	
10. Flashings			X	Appears to still have origional copper roof flashings	
11. Entrances	X				
12. Hardware		X			
13. Interior Doors			X	Door latch sets should be upgraded to level handels	
14. Interior Finishes					
Floors	X	X		Overall good. Evidence storage tile could contain asbestos	
Walls	X				
Ceilings	X				
15. Handicap Access				ADA Survey Needed?	
Entrances		X			
Toilets		X			
16. Stairways					
Treads/Risers	X				
Railings	X				
17. Elevator(s)				None	
Manufacturer					
Type/Size					
18. Structural Systems				Building Code Classification: Business / Type III-B Unsprinkled	
Walls		X			
Roof		X			
Floors		X			
Foundations		X			

Additional Comments:

BUILDING EVALUATION FORM

Project Number:	6511	Date of Evaluation:	9/9/2014		
Owner Name:	Justice Solutions Group - Sparta	Age of Building	61		
Building Location:	121 E. Ok Street	Oldest Section:	61 Years		
	Sparta Wi.	Last renovation:	2004		
Building Contact:	David Kilderer	Drawing Records?	Yes		No X
Title:	Interim Chief	Photo Records?	Yes X		No
Phone Number:		Utility Records?	Yes		No X

PLUMBING

Description	Condition			Spec.		Commentary	N/A
	Good	Fair	Poor	Size	Matl		
1. Sanitary System		X			C.I.		
2. Water Pressure	X						
3. Water Hardness						Unknown without a water analysis	
4. Recirculating Pump						None	X
5. Water Heater		X				Installed in 4-17-2003	
6. Insulation		X				Several pipe locations missing insul.	
7. Stops & Tailpieces		X				Wheel Handle/poly tubing supply	
8. Backflow Protection		X				Filter & Watts 9D for Boiler Supply	
9. Pipe Hangers		X					
10. Shower Heads							X
11. Water Closets		X					
12. Lavatories		X				Counter oval.	
13. Floor Drains		X					
14. Urinals		X				1 stall w/manual fl. va. Not ADA for control height	
15. Sinks		X	X			Basement "old kitchen unit"/2nd fl. St. St. sink	
16. Drinking Fountains		X				1st level EWC meets ADA w/water machine	
17. Wall Hydrants			X			1 exterior HB broken off	
18. Roof Drains		X				RD's over garage dumps to catch basin overflow	
19. Fire Protection				3"	copper	Standpipe/2nd fl.hose cabinet	
20. Catch Basins							X
21. Interceptors			X			Solids interceptor in Garage piping corroded	
22. Water Softener			X			Unknown is it works or used. Very Old	
23. Dilution Basin							X
24. HVAC Connections		X				PEX Tubing to boilers w/9D	
25. Valves		X				Operation quesitonable due to age	
26. Ejector							X
27. Sump Pump							X
28. Draintile							X
29. Receiver							X
30. Hose Cabinets			X			1 located on 2nd level - Original 1953?	
31. Other							
32.							
33.							
34.							

Additional Comments:

BUILDING EVALUATION FORM

Project Number:	6511		Date of Evaluation:	9/9/2014		
Owner Name:	Sparta Police Department Station		Age of Building			
Building Location:	121 E. Ok Street		Oldest Section:	61 Years		
	Sparta Wi.		Last renovation:	2004		
Building Contact:	David Kilderer		Drawing Records?	Yes	No	X
Title:	Interim Chief		Photo Records?	Yes	No	X
Phone Number:			Utility Records?	Yes X	No	

HEATING, VENTILATING AND AIR CONDITIONING

Description	Condition Good	Fair	Poor	Commentary	N/A
1. Boiler(s)	X			Three Weil McLain Ultra Boilers, installed in 2007	
2. Combustion Air	X			Sealed comb. PVC pipes up through existing chimney	
3. Heat Exchanger					X
4. Traps					X
5. Condensate Pump					X
6. Piping Systems		X		Piping is only insulated in Boiler Room.	
7. Piping Insulation	X		X	System includes a stand-by pump and seven (7) zone pumps	
8. Circulating Pumps	X			All isolation and temp. control valves are located in Boiler Rm.	
9. Valves	X				
10. Coils					X
11. Rooftop Units					X
12. Air Handling Units					X
13. Ductwork		X			
14. Ductwork Insulation		X			
15. Cabinet Unit Heaters					X
16. Convectors					X
17. Unit Heaters					X
18. Unit Ventilators			X		
19. Dampers		X			
20. Louvers		X			
21. Exhaust Fans		X			
22. Grilles		X			
23. Chiller(s)					X
24. Cooling Tower(s)					X
25. Air-Cooled Cond.					X
26. Refrigeration Equip.	X			Thru-wall or window air cond. Installed throughout 1st & 2nd Flr	
27. Temp. Controls		X	X	Stand alone, programmable	
28. Make-up Air Unit			X	Unit does not heat properly.	
29.					
30.					

Additional Comments:

BUILDING EVALUATION FORM

Project Number:	6511	Date of Evaluation:	9/9/2014			
Owner Name:	Sparta Police Department Station	Age of Building				
Building Location:	121 E. Ok Street	Oldest Section:	1953	61 Years		
	Sparta Wi.	Last renovation:	2004			
Building Contact:	David Kilderer	Drawing Records?	Yes		No	X
Title:	Interim Chief	Photo Records?	Yes		No	X
Phone Number:		Utility Records?	Yes	X	No	

ELECTRICAL

Description	Condition Good	Fair	Poor	Commentary	N/A
1. Service Entrance		X		Elect. Utility: Xcel Energy; 120/240V, 400A, 3-ph delta, o.h. service entrance	
2. Primary Switchgear					X
3. Primary Grounding					X
4. Transformers					X
5. Sec. Switchgear					X
6. Sec. Grounding					X
7. Dist. Feeders				Not exposed - not reviewed	
8. Distribution Pnlbds.			X	Westinghouse (1953): Obsolete	
9. Lighting Pnlbds.			X	Westinghouse (1953): Obsolete	
10. Power Pnlbds.			X	Westinghouse (1953): Obsolete; Added panels in good condition	
11. Emerg. Generator		X		Onan (1953), 120/208V, 55 kW, 3-ph, natural gas, w/4884 hours total run time	
12. Emerg. Grounding				Not Reviewed	
13. Transfer Switch	X			Cutler Hammer manual transfer switch, 240V, 400A, 3-ph	
14. Test Records				Did not see	
15. Emerg. Pnlbds.					X
16. Emerg. Lighting		X		Entire building backed up with gen set power, but does have some battery packs	
17. Exit Signs			X	Basement exits have discolored faces w/uneven illumination	
18. Egress Lighting					X
19. Stair Lighting			X	Insufficient illumination; Luminaire location at high ceiling impacts maintenance	
20. General Lighting		X		Luminaires replaced with T8 lamped units during remodeling; Garage units lamped with T12.	
21. Task Lighting					X
22. Receptacle Outlets		X		Receptacle quanity and condition Fair to Good in remodeled areas.	
23. Elevator Electrical					X
24. Plumbing Electrical				Not reviewed	
25. HVAC Electrical				Not reviewed	
26. Fire Alarm System					X
27. Smoke Detectors				Some battery operated smoke detectors located in basement	X
28. Telephone System		X		Telecom cabling not routed/supported properly	
29. Intercom System					X
30. Paging System					X
31. TV Outlet System					X
32. Doorbell System					X
33. Security System				Door hardware (keypads) provides building entrance security.	X
34. Other					

Additional Comments:

- Present interior lighting control not with occupancy sensors.
- Largest recorded demand (last 3 years): 18.85 kW, 9/21/13 (45.3A @ 240V, 3-phase)
- Original 1953 lighting replaced with new, but the units with ballast were only disconnected and left in place. Ballasts most likely have PCB content and will require special handling and disposal.
- City of Sparta's main server located in first floor Server Room, backed up with dedicated UPS.

17.10 SPECIAL DISTRICTS REQUIREMENTS

(1) Special District Purposes

The special districts are established to provide protection to unique resources and features in the community that are not included within other standard zoning classifications.

(2) CU Civic Use District

(a) Intent: The intent of the CU USE District is to provide a district that recognizes the unique characteristics of civic uses designed to serve the community.

(b) Permitted Uses: - Civic Uses without outdoor storage including;

- Community Center
- Public Library
- Public Art Gallery
- Public Recreation
- Post Office
- Fire Station
- Public Botanical Garden
- Government Buildings
- Places of Instruction
- Places of Worship
- Civic Uses with Screened Outdoor Storage
- Community Garage
- Government Service maintenance Building
- Public Works Yard

(c) Minimum Lot Size: 4,000 square feet

(d) Minimum Lot Width: 50 feet

(e) Minimum Yard Setbacks

- Front Yard 5 feet
- Rear Yard 5 feet
- Side Yard 5 feet
- Flanking Street Side Yard 5 feet

(f) Maximum Height: 60 feet