Facilities Study for

City of Platteville Fire Department

Platteville, WI

Public Administration Associates. LLC

Five Bugles Design™

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Introduction

This report is a comprehensive analysis of the City of Platteville Fire Department according to the specifications defined in the Request for Proposals (RFP) issued by the City. On June 23, 2000 the Platteville Common Council selected the team of Public Administration Associates, LLC (PAA) and Five Bugles Design to conduct the study. Public Administration Associates will address sections 1-5 of the RFP and Five Bugles Design will address sections 6-8 of the RFP. The eight sections in the RFP are listed below.

1. Future Service Delivery – The Study should review the current means by which service is provided by our Fire Department and project what the future entails for the delivery of service. This item should also address the format by which service is provided in order to consider various options such as full-time staffing, regional district creation, higher license threshold of emergency care, shared/joint department, etc. as applicable to the service listed. The Study should consider projects not fewer than 3 years nor more than 20 years into the future based upon the recommendation of the consultant.

2. Operational Alternatives – This item should review current services to make suggestions on the current operational delivery of service alternatives. Essentially, what are possible changes that could be made to current operations that help streamline service delivery, align services with best practices, and make suggestions that help with Fire Safety delivery.

3. Right Size – The Study should bring together necessary data and demographics to objectively demonstrate the facility needs to support Fire Safety Services. Types of data to be reviewed would include but not limited to personnel, equipment, consideration of adjacent communities, population, geographic growth, height of buildings, and our service responsibilities in relationship to other jurisdictions both municipal, county, and state.

4. Operating Costs – Based on what the future may hold for these services, the study should review, and project operating costs based upon the future staffing projections considered.

5. Location – This item would assist in trying to figure out what is the best and most ideal location in order to locate a Fire Safety Facility, regardless of current land uses and property ownership. The intent is to create a radius around this point based upon certain distances to assist in finding suitable sites to locate such a facility. The desire would be to consider response times, volunteer response ability, ISO minute coverage maps as available, and all other information as might be applicable. This should also review locations based on the idea that the Fire Safety facility would be a joint facility as well as a standalone fire station. This item should also account for the city's growth pattern as it expands through new development and annexations.

6. Fire Station Conversion – The current fire station was constructed in 1964 and due to updates in technology, equipment and truck modifications increased space needs have become more challenging. Numerous discussions have occurred regarding the potential for future expansion of the current facility. Given the needs of Fire Safety Services and their future projections, this item would review whether that idea remains feasible.

7. Garage Space – This item would review the vehicle and equipment needs for fire services over the course of the next 50 years. This item should further study how these needs coincide with current space availability and possible options for expansion.

8. Shared Facility – This item should review the feasibility of a shared Fire Safety Facility that houses Fire, Training Center, and potential retail/commercial space. Obviously, each of the three has different needs regarding their facilities and the study should consider whether it is realistic of the city to consider all three within one facility.

To accomplish the goals of this analysis, PAA conducted interviews with the Fire Chief, Chief Officers (3), Captains (2), Lieutenants (2), Fire Fighters (6), Chapter 181 Officers, Police Chief, and Director of Southwest Health Emergency Medical Services. In addition, PAA reviewed and analyzed relevant information related to organizational structure, operations, work practices, ordinances, policies and guidelines, capital budgets, incident response data and comprehensive planning documents.

PAA compared department operations to consensus standards, best practices, and state law. Neighboring departments also were surveyed for operation and staffing models.

Our primary observations are as follows:

(1) The demographics of the region are changing very slowly and will not be a factor driving change in the department.

(2) The department is functioning at a high level of performance in meeting national standards.

(3) The legal status of the department must be properly clarified.

(4) Budgeting reporting and procedural rules need to be clarified.

(5) The department clearly needs a new fire station.

PART A

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I. DEMOGRAPHIC TRENDS

The city of Platteville is in the southwest portion of Wisconsin in Grant County. The current population of Platteville is 12,268. Platteville is the largest city in the county and surrounded by mostly rural areas with a few small neighboring communities within a 2.5 to 3-mile range. The city is serviced by State Highways 80 and 81 and US Highway 151, as well as the Platteville Municipal Airport. The city is home to the University of Wisconsin-Platteville, the Mining and Rollo Jamison Museums, the Stone Cottage, and the historic downtown Main Street. UW-Platteville, known for its engineering, industrial technology and agricultural programs, is the region's largest employer and has played a dominant role in shaping the community and region. The City is approximately 75 miles from Madison and 20 miles northeast of Dubuque, Iowa.

The fire department also provides service under contract to all or portions of the Townships of Platteville, Smelser, Lima, Harrison, Ellenboro, Elk Grove, and Belmont. With the exception of the Towns of Belmont and Elk Grove, which are in Lafayette County, all of the other communities are in Grant County. These townships add approximately 130 square miles of coverage area for the department. This area is primarily rural with a low population density. The estimated population served in the area outside of the City is approximately 4,097.

The geography of the city and surrounding townships consist of rolling hills with steep slopes and deep valleys as it is part of the "driftless" or unglaciated area that occupies much of southwestern Wisconsin. The Town of Platteville completely surrounds the City of Platteville. According to the 2000 Census, the Town of Platteville has a population of 1,343.

The city's three largest employers are UW Platteville, the Platteville School District, and Southwest Health Systems. The top two employment categories which make of 54% of employment in the City are management/professional occupations and sales/office occupations. The industrial/manufacturing sector makes up a small percentage of occupations in the community and surrounding areas and there are no specific target fire and emergency hazards of concern in this category. The surrounding townships are agricultural and residential in nature. The city, as a regional destination for the county, has well developed commercial and retail areas, especially for a community in this population range.

The industry standard for **fire risk** looks at structures from two perspectives, the *likelihood* of a fire occurring and the *consequences* of loss in life and/or property if a fire were to occur. The greatest areas of fire risk identified in the community are the historic downtown area and the high-density residential structures on and near UW Platteville. These areas were identified as the highest risk areas (not to discount other individual structures in the community) based on probability, consequence, and Occupancy Risk. The downtown area is a high hazard risk area due to the age, density, and type of construction of the buildings and to the occupant density (life hazard). The residential area on and near the campus area was identified due to the probability of fire occurrence and occupant density. Both of these areas share a high consequence of loss potential of life and property. The City of Platteville also contains 75% of the assessed value of property improvements (buildings) in the service area of the department. U.S Highway 151 is the greatest non-structural risk for the department

due to the volume and variety of vehicles and commodities that pass through the area on this route. [Note: the scope of this report did not include a complete fire risk analysis of the City and surrounding area.]

Table 1 illustrates several key items in the department service area identified by municipality. They are population, area, assessed value of property improvements, and percentage of the total value service area by municipality. It should be noted that the Towns of Harrison, Ellenboro, Elk Grove and Belmont are estimates based on the number of sections covered as listed in the current contracts for service.

The City and the Town of Platteville comprise 85% of the population and slightly over 81% of property value (improvement values in Table 1 does not include UW Platteville) in the area protected by the fire department. They comprise about 26% of the total area protected. In other words, most of the population and property value is concentrated in the urbanized area and its immediate outskirts.

Table 1 Characteristics of Participating Municipalities

Municipality	Population Protected	Percentage of Population Protected	Square Miles Protected	Value of Property Protected	Percentage of Value of Property Protected
City of Platteville	12,268	75%	6.178	$ 605,992,400.00	68.85%
Town of Platteville	1,567	10%	29	$ 111,492,600.00	12.67%
Town of Lima	804	5%	36	$ 45,594,100.00	6.67%
Town of Smelser	810	5%	12	$ 58,747,800.00	2.66%
Town of Harrison	305	2%	22	$ 23,375,733.00	2.66%
Town of Ellenboro	197	1%	13	$ 12,135,716.00	1.38%
Town of Elk Grove	145	1%	8	$ 8,401,650.00	0.95%
Town of Belmont	269	2%	10	$ 14,428,300.00	1.64%
Total	16,365	100%	136.178	$ 880,168,299.00	100%

Table 2 Future Municipal Population Projections

Municipality	2020	2021	2022	2023	2024
City of Platteville	12,300	12,800	13,180	13,470	13,810
Town of Platteville	1,620	1,685	1,725	1,765	1,805
Town of Lima	825	835	845	850	855
Town of Smelser	790	790	785	775	770
Town of Harrison	485	480	470	460	450
Town of Ellensboro	515	505	495	480	470
Town of Elk Grove	590	610	630	650	570
Town of Belmont	830	860	885	915	940

Source: Wisconsin Department of Administration, Population Division

During the next twenty years, all of the municipalities covered by the PFD are projected to grow approximately 9.9 percent. This is just less than one-half percent per year. The area has an exceptionally stable population. In addition, none of the individual municipalities are projected to have substantial growth rates.

As a consequence of this stable population, it should be noted that population growth will not be a driver of change in the department. Change will be driven by higher external standards, space and equipment needs, and the declining availability of volunteers. These factors will be dealt with later in the report.

II. HISTORY

The Fire Department has a long and proud history of serving the City of Platteville. This history is extensive and detailed and the report will cover only the highlights that are germane to this study. The first organized fire protection was established in 1874 when Platteville was a village. After a disastrous fire on the night of April 15, 1874, a paper was circulated and signed by some 60 village businessmen to meet and form an organization to protect the village against fire. On May 6, 1874, a committee met in the town clerk's office and drew up an application to the village board for the organization of the Hook & Ladder No. 1. On November 6, 1874, another meeting took place to form an additional fire company.

The engine company was organized as the Mound City Engine Company No. 1. Fire stations were constructed first as separate buildings and then as an addition to the City Hall in 1883. The City Hall and attached fire station were lost to fire in December, 1926. In 1927, a new City Hall was constructed with the north side of the building serving as Platteville's third fire station. This building is still in use as the City Hall.

On June 13, 1944, the first merger attempts of the two fire companies lost in a meeting of the Village Board on a 19 to 11 vote. Also discussed at that meeting was pay for the firefighters. In 1951, the Hook and Ladder Company and the Mound City Engine Company consolidated to form the Platteville Fire Department. On November 1, 1951 the **Platteville Fire Department, Incorporated** was officially formed as a non-stock, not for profit corporation as allowed under State of Wisconsin laws for fire department organization. The fire department remains established as a non-stock, not for profit corporation today and the original articles of incorporation remain in place.

In 1964, the fourth fire station was built. This station, on the corner of East Main Street and Ellen Street, still is in use today as the fire department. This building has had a second-floor addition and modifications to accommodate apparatus to fit into the station. There is currently only one fire station in use today.

The fire department members in their view, remain as volunteers. From a legal standpoint, they are "employed" by the Platteville Fire Department, Incorporated. Total membership is authorized at sixty, and on average it falls in the range of the mid-fifties. The Department has two full time positions that are to be employees of the City of Platteville. A full-time fire inspector/station custodian position was added to the department in 1999 due the increasing volume of fire inspections. The Fire Chief position was changed to full time status in 2018.

III. GOVERNANCE AND OVERSIGHT: Legal Status

Purpose and disclaimer

The purpose of this section is to analyze the relationship between the City of Platteville ("City') and Platteville Fire Department, Incorporated ("Corporation") as well as the relationship of both entities with third-party municipalities. This analysis should not be construed as legal advice. Should the City have questions, including but not limited to employment practices, liability, the drafting of new agreements and contracts or municipal actions to reorganize the Fire Department, it should seek the advice of its City Attorney.

This analysis is based on a review of the following documents: Platteville Fire Department Incorporated Articles of Incorporation (Articles of Incorporation), Platteville Code of Ordinances, posted online, current as of November 27, 2019, a Fire Services Agreement dated January 1, 2015 by and between the Town of Belmont ("Belmont"), the City and the Corporation ("Belmont Agreement"), as well as information included on the city's official website. If additional or more current documents exist, they may significantly change this analysis.

Background

In Wisconsin, municipal fire service can be organized as a municipal department or as an independent company organized under the authority of Chapter 213 of the Wisconsin Statutes. In general statutes provide clearer guidance for departments created by municipalities and staffed by municipal employees. Many departments throughout the state, however, are organized as independent corporations or consist of hybrid models involving a municipal department and a corporation.

Given the long history of volunteer fire service in Wisconsin, it is not uncommon for the relationship between the municipality and its volunteer firefighters to be unclear. The service simply developed over time to fill an important need. Unlike law enforcement, where paid municipal employees took on the policing role, a rich tradition of volunteerism flourished in the fire service. While this provided a significant economic advantage to municipalities, it also created uncertainty over time. Statutes, in some cases, do not clearly align or were not adequately developed to clarify the relationship between the municipality and the independent company serving its residents. Volunteers, more interested fighting fires than drafting legal documents, sometimes failed to update bylaws or, in extreme cases, even incorporate. Documents were lost over time. "Handshake deals" made over the years may never have been memorialized or, in other cases, important issues may never have been addressed.

In many cases this absence of clarity can go unnoticed for years. Elected officials and volunteers come and go over the years and the services continue without a problem until one arises. When an issue does arise, however, it can be significant, straining the relationship between volunteers and the community they serve or creating significant liability or employment issues for the municipality.

Three areas pertaining to volunteer fire companies that are clearly covered by the statutes include workers compensation coverage, liability and disbandment of volunteer companies. First, if the company does not procure workers compensation for its members, the political subdivision within which that company is organized is liable for that compensation. Sec 102.07(7) Wis. Stats. Second, liability for claims against volunteer companies is limited to $25,000 as opposed to the normal municipal limit of $50,000. Sec. 893.80(3) Wis. Stats. Third, the common council of any city or the board of trustees of any village in which any fire company may be located shall have power to disband any fire company for misconduct or when they consider it proper. Sec. 213.04 Wis. Stats.

Documents Reviewed

Articles of Incorporation. According to the Wisconsin Department of Financial Institutions (DFI), the Corporation is a Wisconsin non-stock corporation in good standing. Its registered agent is Brian K. Kitelinger and its principal office is 275 E Main Street, Platteville, WI 53818 (the current fire house). It is in good standing. There are two interesting footnotes to the Articles. First, the name of the organization, pursuant to the original bylaws, is Platteville Fire Department, Inc. It is listed on the DFI website, however, as Platteville Fire Department Incorporated. Second, the Articles state that the organization was incorporated under Chapter 182 of the Wisconsin Statutes as a non-stock corporation on November 1, 1951.

This is no longer the current statute under which a non-stock corporation would be organized. Chapter 181 is the current reference. During the time that the Corporation was formed, however, Wisconsin was rewriting its corporate laws. From 1951 until 1953 chapter 181 was moved to chapter 182 to facilitate the re-write. The reference, therefore, was appropriate at the time. The Articles of Incorporation are set forth as A

In addition to spelling out the broad powers of the corporation, the Articles establish and define duties of the following officers: Fire Chief, First Assistant Fire Chief, Second Assistant Fire Chief, Third Assistant Fire Chief, Secretary and Treasurer. A five-person board of directors is established. Selection of officers is not specified by the Articles nor are terms established for board members. State law provides that in the absence of any specified method, appointment of officers is by the board. Sec. 181.0840 Wis. Stats. Membership is gained to the corporation by a three-fourths vote of members present. Membership is limited to city residents, nineteen years or older. Expulsion is by majority vote of all members present.

Bylaws may provide additional details; however, none were provided to PAA for review.

Code of Ordinances. A municipal Fire Department is established by Platteville ordinances.

Section 3.02 of the Code states, "The Fire Department of the City is hereby established, and shall consist of such members, officers and employees as shall be authorized from time to time by the Common Council, or by the rules and regulations or bylaws of the department approved by the Council." PAA was not provided with any rules, regulations or bylaws of the municipal department to provide further clarification.

The office of Fire Chief is not explicitly created by the above-stated ordinance. The Chief of Police (3.01) and Director of Public Works (3.08) by contrast, are specifically created.

The "Fire Chief" is mentioned in various ordinances as are "fire officers," the "fire department" and the "Platteville Volunteer Fire Department."

Official City Website

Platteville has a Police and Fire Commission which, according to the City's official website, "is responsible for the appointment, promotion, investigation of complaints, determining discipline, and, in some cases, termination of all sworn members of the police and fire departments. In addition, this commission oversees testing for the purposes of establishing eligibility pools of candidates for entry level positions, as well as promotion to the ranks above the entry level positions."

A charter ordinance, which addresses the powers of the Village [City] Manager, refers to the commission as the Fire and Police Commission which would normally suggest an "optional powers" commission, however, the commission is not mentioned in any other ordinance.

The City's webpage states that "Fire Service in Platteville is provided by the Platteville Fire Department, Inc. The Fire Department is a volunteer organization comprised of sixty firefighters. The Chief and three Assistant Chiefs are elected by the membership and ratified

by the Platteville Police & Fire Commission. Only one member of the Fire Department, the Deputy Fire Inspector/Custodian, is a full-time City employee."

Belmont Agreement

The Belmont Agreement is illustrative of fire agreements entered into by the City. It obligates the City, "with its Fire Department," to respond to all fire and rescue calls and provide inspection services in the Town. The Corporation is obliged to provide personnel to respond to fire calls. The Agreement provides financial terms for the purchase of "Township equipment," "Equipment that is shared between the Township and the City," and contributions for the "cost of building, remodeling and maintaining the fire station." The Town is charged a fee for each call for service, a percentage of the actual yearly budget deficit of the "City of Platteville Fire Department," payment for major and unusual expenses, and inspection fees. The Agreement that was reviewed has an expiration date of December 31, 2019.

Issues raised

The first issue raised is a basic one: What is the Platteville Fire Department? Is it a non-stock, non-profit corporation or is it a municipal department? While the answer to this question may be clear in the minds of those involved, documents reviewed by PAA paint a picture that is less than clear. Having established a municipal fire department by ordinance, the personnel and physical assets that comprise that department are not defined. Content on the official website states that the city's fire service is provided by the Corporation. PAA has been provided with no agreement between the Corporation and the City. This dual status and the lack of clarity are important for at least two reasons.

Employment issues

Wisconsin statutes vest police and fire commissions with the duty and authority to, "…appoint the chief of the fire department…who shall hold their offices during good behavior, subject to suspension or removal by the board for cause." Section 62.13(3) Wis. Stats. The chief, in turn, "…shall appoint subordinates subject to approval by the board. Such appointments shall be made by promotion when this can be done with advantage, otherwise from an eligible list provided by examination and approval by the board and kept on file with the clerk." 62.13(4)(a) Wis. Stats. The discharge of subordinates, appointed by a municipal chief, are subject to a seven-step just cause standard forth in section 62.13 (5) (em) Wis. Stats.

The Corporation's bylaws, on the other hand, provide for discharge of any member by a majority vote and vests in the directors the ability to appoint the chief and assistant chiefs. This is confirmed by the City's website which states, as mentioned above, that, "the Chief and three Assistant Chiefs are elected by the membership and ratified by the Platteville Police & Fire Commission."

"Ratification" of company selected officers appears to be supported and even required by the statutes. Section 213.02(1) Wis. Stats. empowers a fire company only after the election of officers have been confirmed by the governing body of the city or village.

Potential employment issues include:

1. Discipline or discharge of the chief. Is this accomplished by a vote of the Corporation or by the Police and Fire Commission for "just cause?"
2. Selection of assistant chiefs;
3. Hiring of firefighters;
4. Discipline or discharge of firefighters.

Liability

Section 895.46 provides that the governmental unit must pay for judgments and damages rendered against officers and employees used in an individual or official capacity as long as the defendants were acting within the scope of their employment. In addition, the governmental unit must provide legal counsel or pay reasonable attorney fees unless the officer or employee was found not to be acting within the scope of employment. Liability under state law is capped for municipalities at $25,000 for fire companies and $50,000 for municipalities.

Potential liability issues include:

Is the City liable for the acts of Corporation members?

Are Corporation members defended and indemnified by the City?

Ownership of assets

A common issue that arises in municipalities that rely upon private fire companies is a simple one; who owns the various fire assets; both equipment and real property? The fire station of one Wisconsin municipality was owned by its volunteers. Construction of a new facility, which both the village and current firefighters favored, was halted. Bylaws of the company allowed disposition of the old station only upon the affirmative vote of retired "honorary members of the company." Honorary members of the organization were never recorded on a single roll and could not be located in time for a vote. The old firehouse, too small for modern equipment remains to this day.

Recommendations: Governance and Oversight

Altering the relationship between those individuals who have selflessly served their community is always sensitive issue, even when it works to the advantage of both volunteers and their municipality. Change is too often viewed as criticism. It can, however, be a win-win proposition for both the volunteers and community which it serves. As it stands now, there are too many grey areas in the relationship between the City and the Corporation. PAA recommends that the City either:

1. Clearly create a municipal fire department that includes current firefighters as employees and places hiring, discipline and discharge decisions under the authority of the Police & Fire Commission and operations under the authority of the Chief and Common Council. Human resources and administrative support can be provided by professional City staff. Position descriptions and hiring/promotional standards can

be adopted. An ordinance creating a Fire & Police Commission can be enacted, establishing the Commission as the Code establishes other committees and commissions in the City. The current Corporation could continue to function as a benevolent and fund-raising association.

2. Clearly separate the City from the Corporation. This could take a number of different forms; however, the clearest separation would be for the City to remove references to a City Fire Department from its ordinances and simply contract with the Corporation for fire protection. The Corporation would need to be prepared to take over the administrative functions currently provided by the City. Officers and firefighters would be elected and removed from the Corporation by its membership as provided in the Articles of Incorporation. The contract should spell out who owns what assets and how they will be acquired in the future.

IV. BUDGET AND FINANCE

In general, the funding for Platteville Fire Department Inc. (PFD Inc.) is provided through the Platteville City Budget. As with other aspects of the department, the financing and budget of the department are somewhat gray in certain areas based on lack of clarity or absence of official agreements. The understanding of the arrangement between the City and PFD Inc. is that the City provides the Station, apparatus and maintenance and PFD Inc. provides the personnel. This is actually clearly defined in the contracts between the City and the contracted Townships.

The primary focus of this review is based on the City of Platteville budget; however, Platteville Fire Department Inc. does fund certain areas of the "department". These areas are funded through fund raising efforts and funds provided as "contract expenditures from the City Budget. Contract expenditures are an annual nominal stipend or "member appreciation" payment to firefighters. The administrative fees for the Length of Service Award program (LOSA) also are paid for by PFD Inc. Other regular expenses provided by PFD Inc. include the provision of food and refreshments for members attending meetings and training events. Outside of these regular operating expenses, PFD Inc. raises funds for equipment purchases and replacement and a portion of fire apparatus. PFD Inc. also has provided the matching fund portion of Assistance to Firefighters grants for equipment provided through the Federal Emergency Management Agency.

Typically, a city or village contracting with a Chapter 181 department would show a single line item for contractual services for fire protection. A positive aspect to the City of Platteville's practice is that the majority of fire protection expenditures are transparent to the community and contracted area. Expenses listed in the budget are paid directly by the City to individual personnel, vendors or to PFD Inc. for contracted personnel expenses.

For the purposes of brevity, we have condensed the budget to three expenditure areas, (1) wages and benefits of two full-time city employees, (2), contract personnel costs for the volunteer members of PFD Inc. and (3) operating expenditures, which include utilities, maintenance of buildings and equipment, equipment replacement, training and insurance. These expenditures over the past five years are displayed in the table below.

Table 2 City Budget Expenditure by Areas

Year	2016	2017	2018	2019	2020
Personnel Cost Full Time	$ 97,752	$ 110,345	$ 132,868	$ 123,015	$ 174,572
LOSA for *Volunteers.	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ 6,000
PFD Member Appreciation	$ 15,500	$ 15,500	$ 15,500	$ 15,500	$ 15,500
Operations	$ 113,375	$ 104,837	$ 118,350	$ 129,020	$ 113,650
Total City Budget	**$ 232,627**	**$ 236,682**	**$ 272,718**	**$ 273,535**	**$ 309,722**

On review, the greatest increase in the budget occurred in 2020, with the transition of the Fire Chief position to full time. This has stabilized with the 2021 budget with the overall increase to the budget being just over $10,000.00 or 3.2%. Generally, expenditures for operations are reasonable or even conservative, most likely due to PFD Inc. providing for some routine expenditures as well as equipment replacement. It should be noted that for 2021 cost for full time personnel showed no increase and there was a small increase to the member appreciation fund and LOSA program, $3,615.00) the first increase for these funds in at least 5 years. One area that appears to be underfunded is the travel and conference budget, which in essence for fire departments is the outside training budget. At $4,000.00 this provides an average expenditure of approximately $72.00 per member annually.

City revenue for funding the department comes from several sources. The greatest source of revenue is fees for fire inspections. This fee is not typical for most departments in the state. When Act 10 was passed in 2013, any fees established after its passage had to be deducted from the tax levy. Platteville's fee, having been in place prior to passage of the Act was allowed to remain without triggering a tax levy reduction. The next largest revenue source for the City is "2% dues" from the State of Wisconsin. In Wisconsin 2% of fire insurance

premiums paid are primarily distributed back to fire departments to provide fire prevention and protection services as long as they are in substantial compliance state regulations pertaining to fire departments. The City of Platteville receives the fees for the City and townships or portions thereof served. These fees along with the 2% dues money received for the city and surrounding townships are estimated to generate $119,150 in 2020, which is 38% of the estimated total budget for the fire department.

The City also charges the township a fee of $750 per fire call in the individual township covered. At the end of the year, the difference between revenues and expenditures is divided proportionally among the municipalities of the protection area. The methodology of this formula is described in the contracts with the individual Townships. This is referenced in the City of Platteville's annual budget as Fire Department fixed cost revenue.

Finally, insurance payments provide a small additional revenue source. Some insurance companies will make a payment for certain services provided by fire departments, such as vehicle fires and extrication of victims from vehicle accidents.

A revenue not directly represented within the fire department budget, is State aid received for providing services to the University of Wisconsin Platteville. In 2019 this was calculated at $38,817.41. For clarity, this revenue is subtracted from final net cost of the Fire Department Operations before the balance of the remaining cost is calculated for the Townships.

The table below illustrates revenues for the fire department outside of property taxes for the past five years.

Table 3 Fire Department Revenues by Source

Year	2016	2017	2018	2019	2020
Fire Inspection Fees	$ 30,583	$ 34,000	$ 34,000	$ 34,250	$ 77,000
2% Dues City	$ 25,050	$ 30,500	$ 30,500	$ 30,500	$ 30,500
2% Dues Towns	$ 10,500	$ 11,196	$ 10,500	$ 10,750	$ 11,650
Fire Dept Fixed cost	$ 31,440	$ 32,726	$ 45,000	$ 40,000	$ 40,000
Insurance Payments	$ 2,855	$ 2,885	$ 0.00	$ 3,000	$ 3,000
Fire Calls	$ 4,000	$ 4,000	$ 4,000	$ 4,450	$ 4,450
Total	**$ 104,428**	**$ 115,307**	**$ 124,000**	**$ 122,950**	**$ 166,600**

The most significant increase in revenues was in the year 2020 based in an increase in the fee for fire inspections.

We compared net per capita expenditures for fire and emergency medical services to other communities in Wisconsin of similar population and characteristics such as being a stand-alone core with suburban and rural service areas, a primarily volunteer paid on call fire department and in two cases the presence of a state university. Data used for this comparison is compiled by the Wisconsin Public Policy Forum (formerly known as the Wisconsin Taxpayers Alliance). It should be noted that the Cities of Ripon and Baraboo have full time municipal paramedic ambulance services.

Table 3 Fire Service Costs Per Capita

Ripon	$ 92.00
Baraboo	$ 75.00
River Falls	$ 38.00
Monroe	$ 37.00
Plymouth	$ 32.00
Waupun	$ 31.00
Whitewater	$ 30.00
Platteville	$ 30.00
Stoughton	$ 24.00

Expenditures for the City of Platteville for fire protection are clearly within the range of similar cities in size and profile that provide similar types and levels of service.

Recommendations: Budget and Finance

1) When updating the contracts for service with townships, the City should move away from the fee for service and billing of services in arrears model. This is a somewhat unpredictable and difficult methodology for municipal budgeting. It should develop a formula for assigning cost to the contracted townships based on assessed value of property improvements, calls for service, and population protected.
2) Funding for Conference and Travel should be increased to provide more opportunities for outside training opportunities for department members.
3) Establish written budgetary rules with decision making and to include documentation.

VI. ORGANIZATION STRUCTURE

At the time of this study, the department has 53 personnel, two of which are full time and the remainder are on-call volunteers. The volunteer staff are truly volunteer and do not receive compensation for their labor on an hourly per event basis. Volunteer personnel receive an annual stipend as a member appreciation payment.

The two full time personnel are the Fire Chief and the Deputy Chief of Prevention/Fire Inspection. They work approximately a 40 hour week covering their assigned administrative and non-emergency duties, as well as providing emergency response during their designated station hours and responding on call outside of this time. The Fire Chief position transitioned into full time status in 2020. This was done based on an increase in demand of representation at City Meetings and communication with the City as well as workload and expectations for this position. The current Chief was in the position of Fire Chief prior to this transition to full time status. The fire inspector position has been in place for over 20 years. The current inspector has the rank of Deputy Chief and has been in this position for the past three years.

The Fire Chief, in addition to be being employed by the City, is the principal officer and Chief of PFD Inc. The board of directors of PFD Inc. includes the Chief, the First, Second and Third Assistant Chief, Secretary, Treasurer, and five additional directors. It should be noted that the organization of the department listed and described do not reflect the current known table of organization and titles used in the department. (Appendix B).

The table of organization that is currently used by the department is well defined and understood. It follows industry best practices for chain and unity of command from both operational and communication perspectives. While officers and chief officers have designated duties, the positions lack official and documented position descriptions.

The overall number of personnel is very good and the department and community should be commended. Many communities, both large and small, struggle immensely with staffing volunteer and paid on call departments. Recruitment and retention of volunteer firefighters is a concern across the nation and Wisconsin, even if not a crisis in many communities. The current makeup of the department in years of service is listed in Table 3 below.

Table 3 Volunteer Longevity

Less than 1 Year	9
1-5 Years	14
6-10 Years	4
11-15 Years	5
16-25 Years	11
0ver 25 Years	10
Total	**53**

While this chart shows that the department has done very well in recruitment, there are some signs of concern in the area of retention. The department's willingness to employ student members from UW Platteville should be commended. Many departments are unwilling to look at possible recruits who do not appear to be potential "lifelong" members. Being an autonomous City on the region along with abundant employment opportunities within the City is also a positive situation for recruitment and retention.

On the side of retention, there is a notable drop in membership in the range of 6-15 years, which appears to be more common in departments that PAA has studied. This not only has an impact on overall membership numbers, but in succession planning and in developing future officers of the department. This situation needs to be monitored closely in the immediate future and an exit interview system should be put into place to monitor factors contributing to the loss of personnel in this longevity bracket. This information then can be used to put practices in place to overcome the barriers of retaining membership beyond 5 years. There are a variety of factors that are affecting this phenomenon in the fire service. These issues range from societal changes, increases in training and education required to be firefighters, increases in call volume, and employers reluctant to allow personnel to leave for calls. These issues are not unique to Platteville and will require a variety of responses.

<u>Recommendations: Organizational Structure</u>

1) Develop position descriptions for all positions within the department.
2) If the department is going to continue as a Chapter 181 organization, update the articles of incorporation to reflect the current organizational practices and position titles used.
3) Continue the successful recruitment efforts that are in place and continue to monitor for effectiveness.
4) Put an exit interview program in place and monitor issues affecting retention of personnel and put mitigating efforts in place to retain personnel.

VII. LEVEL OF SERVICE

It is critical in this study to examine the level of service provided by the department. This examination can be done best by using performance measures established by national rating organizations. The first source are the standards and research material produced by the National Fire Protection Association (NFPA), an independent agency that develops model codes and standards for the fire service. This agency also conducts research and publishes the data. The other benchmark data used is from the Insurance Service Office (ISO), also a national rating organization. Fire departments are evaluated routinely by the ISO which provides information to insurance companies to use in setting fire insurance rates. This rating system is known as the Public Protection Classification Program and the ratings range from Class 1 which is the best possible score to Class 10 which is essentially no fire protection. This evaluation is broken down into three areas: Emergency Communication 10% (911 system and radios), Fire Department 50% (all fire department operations including training), and Water Supply (Municipal Water system) 40%.

The current ISO rating for Platteville is a Class 3, which is remarkable for an On Call/Volunteer Department. The rural area of the district protected by the Platteville fire department has a 6/10 rating. The primary reason for the lower rating is that there is not a municipal water supply in this area. The area with the Class 10 rating consists of the areas beyond five road miles of the fire station which are beyond the minimum rating standard of the ISO.

In its last ISO review, the City of Platteville department received a score of 34.21 points out of a possible 50 points. The two areas receiving the least credit were personnel which scored 6.38 out of a possible 15 points. It should be noted that to achieve maximum credit all companies would need to be staffed with 4 or more full time personnel which is a high benchmark. The other area with a lower score was training, receiving 3.9 of a possible 9 points. This score was primarily due to the fact that the department does not have a fire training facility. For personnel and training, the department only received 5.95 of the possible 35 points for the training section.

There are some areas that could be improved by the department that would raise the ISO score, but probably not enough to move the rating to the next classification level of 2.

With regard to emergency response, the department operates primarily as a volunteer on-call department. Other than during weekday normal business hours when the two full time staff are available in the station or within the response area, staffing for response is by on-call members. This categorizes the department in the category of “mostly volunteer” which is typical as noted by the data in the table 4 below which was also garnered form the 2018 NFPA survey.

Table 4 Department Size by Fire Fighter type

Population	All Career	Mostly Career	Mostly Volunteer	All Volunteer
10,000-24,999	26%	25%	36%	13%
5,000-9,999	9%	12%	41%	39%

Table 5 breaks down calls by municipality in the district over the past two years. As one would expect, the City of Platteville has the highest incidence of calls for service. This is expected with the combination of population, population density and number of structures protected. The Town of Platteville is next highest in demand and includes the interface between the City and rural area. The townships fall within roughly the same demand range with no significant or distinguishing demand.

Table 5 Call Location by Municipality

Municipality	2019	%	2020	%	Avg.
City of Platteville	155	69%	128	64%	67%
Belmont Township	7	3.10%	12	6.00%	5%
Elk Gove Township	3	1%	1	0.50%	1%
Ellenboro township	19	8%	8	4%	6%
Harrison Township	6	3%	3	1%	2%
Lima Township	9	4%	11	5%	5%
Platteville Township	22	10%	32	16%	13%
Smelser Township	5	2%	6	3%	3%

One of the primary questions of this study is, does the department in its current form have the capacity to meet the demand for the service area. Demand and response data were reviewed for the past five years. Data for emergency response demand is presented in Table 6 below.

Table 6 Calls for Service by General Category

Call Type	2016	2017	2018	2019	2020*
Fire:					
Building Fire	16	11	13	13	10
Cooking Fire	1	3	2	5	8
Vehicle Fire	7	8	10	6	6
Outdoor Fire	7	5	15	6	12
Rescue:					
Vehicle Accident	37	28	37	38	28
Assist EMS	4	2	2	5	4
Rescue Other	6	3	6	4	6
Hazardous Condition:					
CO Alarm	14	9	16	43	32
Gas Leak	14	4	14	10	20
Wire Down	2	0	3	5	2
Haz Mat Spill/Leak	4		4	4	4
False Alarms:					
Alarm, no fire, false	35	46	45	46	42
Sprinkler malfunction	4	0	3	4	3
Smoke Scare	8	5	5	6	8
Service Call:					
Cancelled Enroute	9	13	21	18	15
Misc. Service Call	12	16	18	12	12
Total Calls	**180**	153	214	225	212

Call volume has varied from year to year but as in most communities and with growth of the community, call volume is likely to continue to increase. The average call volume for the last three years is .6% per day or slightly more than one call per two days. This is well within the demand mean of an on-call department. The trend has been an increase of 3% per year averaged over five years. Using this trend data and assuming the same growth rates of the

community, the demand is likely to grow to an average of one call per day within the 15 to 20-year range. This level of demand could put a strain on a primarily on call/volunteer force.

In addition to the volume of calls, the amount of time spent on calls is a consideration in all departments, but particularly with on call/volunteer departments. One must also consider that additional time is spent returning to the station and placing fire apparatus and equipment back into service which can easily add an extra 50% or more to the time commitment per call. Table 7 below shows the average time on call average commitment by the department over the last five years. The average time per call is roughly one hour, the time has gone down slightly, most likely by the increase in CO alarm calls and other minor incidents which increase volume but usually, take less time per incident.

Table 7 Average Time on Calls

Year	Time in minutes
2016	64
2017	58
2018	50
2019	52
2020	49

The call trend by time of day, outlined in Table 8 below are typical of most communities with the majority of demand occurring during daytime hours which is clearly the case in Platteville. Currently for minor non-emergent calls that are in the category of most increased demands such as CO alarms and smoke detector alarms, the Chief and Assistant Chief respond during daytime hours and handle these calls without a full response. The Department employs an on-call group schedule for hours outside of normal business hours to avoid the paging of all personnel for these small incidents. This is an excellent practice for several reasons. These incidents do not require a full response force and it is an inefficient use of resources to do so. Secondly, these lower urgency calls are growing and will continue to do so and could create demand burnout of on call members.

Table 8 Calls by Time of Day

Year	2016	2017	2018	2019	2020
0700-1700	46%	37%	49%	45%	56%
1700-2300	32%	35%	26%	35.1%	26.5%
2300-0700	22%	28%	25%	29.9%	17.5%

Response time is often used as a key performance measure of a fire department. The data in the table is presented in "fractals" verses averages to be more specific as to performance. The 10-minute travel time is a benchmark performance measure in the national NFPA 1720 Standard for the Organization and Deployment of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments. This standard is based pm having 10 personnel on scene with a travel time of 10 minutes or less 80% of the time. While travel times appear to be meeting the standard, the other part of the measurement of the time necessary to gather the effective response force of 10 people is not within the data currently collected. While this specific data was not available, the available data did have a total response force or number of personnel that did respond to the incident. This data is displayed in the Table 9 below.

Table 9 Time Enroute to Time of Arrival at Scene

Response time	2016	2017	2018	2019	2020
<5 minutes	66.9%	53.6%	65.6%	44.9%	26.4%
<10	95.8%	97.1%	88.2%	87.6%	75.5%
>10	4.2%	2.9%	11.8%	12.4%	24.5%

There appears to be a trend that the response time is increasing. This trend needs to be monitored and addressed in the future.

A more analytic view of the travel time portion of response time was conducted using Geographic Information Software (GIS) to model travel distances and travel time. The Insurance Service Office (ISO), uses a travel time distance of 1.5 miles to receive maximum credit for "distribution of Engine companies" in areas served by a municipal water system. It is important to note that while this distance coverage would receive a 100% score, a percentage of coverage score would still receive some credit for areas over this distance. This is shown in Appendix C, Map 1 for the current fire station location. As can be seen by the map, the vast majority of property within the City limits and the developed areas in townships are covered using this travel distance. It should also be noted that the GIS system only follows existing roads and not "area coverages", so additional road development could show additional coverage of some areas. Map 2 shows the response time estimates for a five, ten- and fifteen-minute travel times. This is calculated using an industry standard response time formula that was developed by the Rand Corporation and is proven to be quite accurate. The times reflected in the model also reflect the findings of the historic response travel time data.

The historic and mapping data also shows that the current location of the fire station is serving the needs of the response area very well. It is centrally located to provide a high level of response to the highest risk area of the protection district and maximize ISO credit by covering the majority of the area with municipal water system within one- and one-half miles of the station.

Another key performance indicator reviewed is the number of personnel that turn out per incident. The data shows that the department has an excellent number of personnel per call average that exceeds the benchmark standards for a mostly volunteer department. This report breaks down these data into structure fire incidents and all other incidents. The primary reason for doing this is that structure fires present the greatest demand for personnel on scene. Another reason is that because averages were used, the data would have been skewed for structure fires if data also included limited responses for non-structural events. The data for turnout of personnel per incident are listed in the Table 10 below.

Table 10 Average Personnel on Calls

Year	All calls	Structure Fires
2016	18	28
2017	21	29
2018	21	22
2019	17	37
2020	17	33

The last ISO rating confirms this high-performance level, showing an average turnout of 30.6 personnel on the first alarm for fires. This is an excellent turnout of personnel for this time by any department much less an on-call volunteer department. This turnout of personnel would be envied by not just other on call/volunteer departments but full time/career departments as well. However, the ISO review of the Platteville Department only awarded 6.38 out of 15 points. The reason for this rating is that ISO credits on-call personnel differently than personnel staffed in the station, essentially counting them at one third of the credit awarded to 24-hour station personnel. This reduction in points is done, according to ISO, to reflect the time of personnel responding to the station and to assemble as a team due to varying arrival times at the station.

Mutual Aid, or service provided to another community as well as requested and received by PFD was also reviewed, see Table 11 below. The data shows that is truly balanced and mutual and that PFD neither provides for or receives a significant volume of calls in either category. A large number of mutual aid given calls would show other communities were relying of service from PFD or the invers would show that PFD was struggling to meet their demands and relying on other departments for assistance.

Table 11 Mutual Aid Provided and Received

Year	Mutual Aid Provided	Mutual Aid Received
2016	4	3
2017	4	4
2018	6	2
2019	1	2
2020	4	6

Safety and Professional Services 330 requires the creation of standard operating policies and guidelines to govern safety within the fire department. This is a rather new requirement in the past few years. Platteville Fire Department is currently working on creating Standard Operating Policies and Guidelines at the time of this study. Appendix A has the areas that are needed to have Standard Operating Policies and Guidelines created for.

One of the outcomes of this study was to determine the performance of the department in meeting the current and future demand as it is currently organized and determine if a change in organization is now or will be required.

On a very positive note, the department is meeting current demand for service benchmarking data as established by national standards and practices. Some additional data and data sets need to be developed to make this picture even clearer for future continuous evaluation, but overall the data and anecdotal views are very positive. There are some improvements that can and need to be made, primarily policy and Standard Operating Guidelines development, which will drive improvements in training standards and operations.

There are four organizational options to consider:

1) The first option is essentially the current department with selected improvements. The organization, as an on call/volunteer department with a paid Fire Chief and inspector, currently is adequate and should be for the next five to ten years. During this time period, the fire department should be reorganized as a municipal department and PFD INC should transition into a non-profit support association for the department. The pride of volunteerism is still strong, but in time, compensation may need to be also considered for members' time for response and training, both of which have and will continue to increase. The need for this will show in the key performance measure of recruitment and retention of personnel. The other factors we recommend for moving toward a municipal based department are outlined in the detailed review of governance and organization.

   Rather than a set timeline, what should drive the next organization change for the department is to monitor Key Performance Indicators KPI's) for the department and ensure that the proper data is collected to do so.
   The KPI's that should be monitored and used in this decision making should be at minimum:

1) Time of dispatch to time first unit enroute
   a. Benchmark 5 minutes or less 90% of the time
2) Continue to monitor time enroute to time on location
   a. 10 minutes or less 80% of the time
3) Time to gather an effective response force on scene (structure fires only)
   a. Minimum 10 personnel on scene in 10-minute time 80% of the time in the City
   b. Minimum 6 personnel on scene in 14 minutes 80% of the time in rural area of district
4) Retention of personnel
   a. 50% retention of members that remain in response area

The next step organizational step for the department to meet demand increases would be a combination department. This could be accomplished in several different options.

2) The second combination option would be to provide day time staffing for one engine company Monday through Friday 7:00 am to 5:00 pm. All other times would be covered by on-call personnel. This configuration would accomplish two things. It would cover the times of highest demand and relieve pressure on-call members from frequently having to leave their regular employment. A single engine company can deal with the majority of incidents other than structure fires. In most communities protected by full time departments, calls such as building alarms, carbon monoxide calls, vehicle accidents on city streets, and EMS assistance are handled by a single engine company. It should be noted that the Incident Commander can upgrade the response to more units based on additional dispatch information or other circumstances. Calls involving fire and vehicle accidents on highways would still require a full response of personnel.

   The fire inspection program could be handled by the engine company crew and the current inspector position being merged into the crew staffing. Three additional full-time staff would be required to ensure an effective and adequate fire company crew. The current cost for fire firefighters in Wisconsin is in the $45,000.00-$60,000.00 range with an additional 30-40% cost for benefits. The total cost per firefighter would be in the $63,000.00 to $84,000 per year. This would add an additional annual personnel cost to the department of $126,000.00 to $168,000 per year. The Fire Chief should not be considered for staffing of a fire company as State of Wisconsin 2% dues requires a response of at least four personnel, one of which cannot be the Fire Chief. The fire station also would need a locker room and a day/room lounge for breaks and an area for personnel while standing by but not actively engaged in routine work assignments.

3) The third option, similar to option two, is to provide daytime coverage with full time personnel and provide the balance of coverage of days and weekends with paid on-premise part-time staff. Paid on premise staff can be drawn from the on-call membership or be simply part-time employees. They are paid hourly for their time in the station but are limited in weekly hours to less than benefit eligible status. Paid on-call staffing for firefighters is generally in the $12.00 to $15.00 per hour range. Four paid on-premise personnel for remainder of time coverage, which is 118 hours per

week, would be $294,000 to $368,000 per year. An option to supplementing or phasing in this concept would be to use fire interns. In this option, students attending UW Platteville would be given dorm space in the station in return for providing night time and weekend coverage. While this option would not provide year around coverage, it certainly could reduce cost to the city and provide a cost savings and beneficial experience for the students.

This option absolutely would require a new fire station with day room/lounge, dorm space, and locker facilities. A configuration would need to allow separate and private access rooms similar to those in campus dormitories.

4) The fourth option, and the costliest, would be to provide 24-hour staffing of one engine company supplemented by on-call personnel. This would require hiring at least twelve personnel to cover rotating 24-hour shifts. The additional total cost for the department would be in the range of $756,000 to $1,008,000 in today's dollars. Most likely, on-call personnel also would be compensated if this option were selected. As an option to limit the additional full-time staff at 12, on- call staff could be utilized as paid-on-premise staff to fill in for paid leave of full-time personnel. If the use of paid on-call staff were not employed in this manner, at least one more additional full-time staff would be needed to cover paid leave along with the use of overtime back-fill for short notice situations such as emergency sick or injury leave.

5) Utilize Appendix A to drive which areas of the organization that need Standard Operating Policies and Guidelines created for.

Level of Service: Training

Fire Department training in Wisconsin is a requirement to meet Department of Safety and Professional Services Chapter SPS 330.07 *Fire Department Safety and Health Standards*. There are also some federal mandates that require fire departments to provide annual training on nine topic areas. The National Fire Protection Association (NFPA) also has consensus standards that provide direction for training. NFPA standards are not law, however, they are considered best practices or "standard of care".

Training is one of the most important components to a fire department for safety and security. Platteville has a very complex emergency incident response responsibility. Their incidents range from the house fires, barn fires, industrial fires, high rise fires, vehicle accidents and technical rescue to include high angle rescue and Haz-mat. Training has also been noted to be the best recruitment and retention tool there is for an organization. A robust training program will allow members to climb the ladder of all levels of Maslow's hierarchy of needs. As members become trained in fire ground operations this meets the needs of the Physiological and Safety needs. As they progress in the organization, they start to meet the Love and Belonging and Esteem by being recognized as a member of the department and becoming a part of the team. This is performed through social involvement with other members and being able to perform trained skills at a high level brings them to the esteem level. When they have the opportunity to respond to an incident and perform at a high level the skills that have been provided to them with training, they have met the self-actualization level. A robust, validated and verified training program can assist members to reach the highest of Maslow's ladder of success.

The Platteville Fire Department has a very robust training program. They have done a very good job in meeting the requirements of SPS 330.08 Minimum training and education standards for new members and members advancing in the organization. Platteville Fire Department has gone a level higher and requires, not only minimum training and education but to the level of certification. The department has a training committee that yearly sets the training schedule for the coming year. Topics are identified by creating a theme for the year. Multiple department members are certified fire instructors and work for the Southwest Technical College. Training is performed on at least two nights a month. This exceeds the two percent dues requirement of three hours per month. There are other training opportunities to the membership outside the two nights a month, but these are held for special teams like extrication and high angle rescue. Other department members that are not involved with special teams can also attend smaller training sessions for basic skills.

The membership we interviewed felt very satisfied with the training provided by the department. They felt the training was very organized and prepared them for different incidents they may encounter. The department requires training to be provided at each level (entry level fire fighter, apparatus driver, and company officer) which complied with SPS 330.08. The department creates training lesson plans and has good records of attendance and topics covered. The department has been doing multiple evolution training or scenario-based training. This training in the opinion of PAA, prepares an organization the best for an emergency scene.

Recommendations: Level of Service Training

1) This study has provided recommendations for operating guidelines in reference to emergency incident operations. Currently the department has a seat assignment process that identifies which fire fighter in the apparatus does what job. This is a great start to organization but need to be formalized in an operational guideline. Once these guidelines have been created, training should be performed off of these guidelines. Operations should drive fire department training. SPS 330.07 (2) Assure that the training and education provided under this section are based upon the fire department's written standard operation guidelines.
2) A training committee is already in existence and has been doing a great job and identifying training needs and topics to train on. As they move forward the committee should look at these items as they create there training programs. A lot of these areas mentioned below are being implemented currently, these are just a guidance for future training program creation.
    a. SPS 330.07 (1) Establish and maintain a member training and education program that identifies specific goals and objectives for the prevention and elimination of occupational accidents, injuries, illnesses, exposures to communicable disease, and fatalities.
    b. SPS 330.07 (4) Provide training and education commensurate with the duties and functions the member is expected to perform.
    c. SPS 330.07 (6) Provide training and education to fire fighters about special hazards to which they may be exposed during a fire and other emergencies and advise of any changes that occur in relation to the special hazards. The procedures to address special hazards shall be maintained in written form. Training and education under this subsection shall be provided at least biannually.

d. SPS 330.07 (7) Assure that the training and education are conducted frequently enough to ensure that each fire fighter is able to perform the assigned duties and functions satisfactorily and in a safe manner so as not to endanger other fire department members or employees.
e. 330.07 (8) Assure that fire fighters whose duties include interior structural firefighting receive training and education consistent with established fire ground operating procedures. Training and education under this subsection shall be provided at least monthly.
f. SPS 330.07 (10) Assure that a training and education program for any fire fighter engaged in fire ground operations includes procedures to perform a safe exit from a dangerous area in the event of equipment failure or sudden change in fire conditions.
g. SPS 330.07 (11) Assure that fire fighters receive training and education on the incident management system in accordance with s. SPS 330.14 (1) (c).
h. Federal training mandates for fire department also include on a annual basis to cover; Respiratory protection, Blood Borne Pathogens, Haz-Com (1910.1200), Lock-out/Tag-out, Haz-Mat (1910.120), Confined Space, NIMS, CPR and Ergometric.

3) NFPA 1410 *Minimum Company Standards* is a good guidance in assisting with creation of the already in place scenario based training.

4) NFPA 1401 *Recommended Practice for Fire Service Training Reports and Records* should also be to formulate their training record program.

5) If Live Fire in an acquired structure is going to be performed, assure that training and education involving live firefighting exercises meet the standards specified in NFPA 1403. This is found in SPS 330.07 (9). The most difficult part of NPFA 1403 to follow is the need for certified instructors, however, Platteville Fire Department has multiple certified fire instructors.

6) Strengthen the on boarding and training process of new fire fighters.

Level of Service: Prevention

The Deputy Chief of Fire Prevention supervises fire prevention activities and for the greater part, carries out most of these duties. As required by State Administrative rule Safety and Professional Services 314 (SPS 314), all public buildings, places of employment and apartments of three family dwellings and more are inspected twice per year. There are some exceptions in the code for certain buildings, reducing the number of required inspections to once per calendar year in non-overlapping 15-month periods. When code violations are found on these routine inspections, they are followed up with re-inspections to assure that corrective action has been taken. There are approximately 588 properties identified for inspection in the department's coverage area of which approximately 450 of them are in the category requiring two inspections per year. These routine inspections account for roughly 1038 inspections with plus or minus 200 re-inspections.

In addition to the routine inspections, the fire inspector is involved with new construction of buildings and renovations, which in turn require plan and development reviews. While the

inspector reports that more fire department involvement is occurring in inspections, there is not a formalized process or procedure for development review by the fire department. While the fire department's formal legal charge is enforcement of the fire code (which is a maintenance code rather than a building code), active participation in new construction and renovation reviews would do well to prevent fire related building code issues that might be discovered after the fact in the routine inspection process.

As mentioned in the section on revenues, the City charges for fire prevention inspections. The charges include a fee of $70.00 for routine inspections that take less than one hour to conduct and if over one hour and additional $35.00 per hour. Re-inspection fees to follow up on corrected violations are not charged, but there is a progressive system if additional re-inspection is required, starting at $150.00 (2nd), $200.00 (3rd) and finally $325.00 (4th and any further re-inspections). This type of system serves as a good incentive for fewer code violation corrections. These fees along with the 2% dues money received for the city and surrounding townships are estimated to generate $119,150 in 2020, which is 38% of the estimated total budget for the fire department.

Public education programs on fire prevention also are conducted, including the usual activities of school visits, station tours, and appearances at public events.
Fire extinguisher training also is provided on request to business and industry.

The inspector is involved in the delivery of these programs. He reports that is getting more difficult to recruit volunteers to assist with these activities.

The ISO also provides credit and evaluation of Fire Prevention activities, broken down into Code Enforcement/Inspection, Public Fire Safety Education, and Fire Investigation. The department received maximum credit, 2.2 out of 2.2 points for Code Enforcement/Inspection, which is excellent. Public Fire Safety Education received 1.5.1 out of 2.1 possible points. The shortcomings cited were lack of specific training for personnel in this area (certification) and evaluation of the programming provided. Fire Investigation is included in the category of prevention since the primary purpose of investigation is to identify the origin and cause of fires in order to develop preventative actions and codes. The department received 4.5 out of 5.5 possible points, with the loss of points due to not having a certified fire investigator.

The State of Wisconsin has a provision in the Administrative Rule SPS 314 (Safety and Professional Services) that reduces the number of all required annual inspections from two per year in non-overlapping six-month periods to one per year in non-overlapping 15-month periods by developing a local ordinance. SPS 314.01(13) (7), entitled "Local ordinances for reducing the frequency of inspections" spells out that "Where authorized by a local ordinance, a city, village or town may reduce the inspections required under subd. 3. to at least once per calendar year, provided the interval between those inspections does not exceed 15 months." There are several advantages for a municipality to do exercise this option. The first advantage is that it avoids the State 2% dues audit requirement of two inspections in non-overlapping six-month periods, which can be burdensome and difficult to meet. This option also allows the City to maintain a two inspection per year cycle if it chooses to, yet allows some flexibility if is not met that would have put 2% dues in jeopardy. As

inspection volume grows or there is a change in how inspections are conducted, the City will have flexibility as well in choosing which buildings need to be inspected twice per year, therefore managing cost and workload.

Recommendations: Level of Service Prevention

1) Adopt a local ordinance per the provisions in SPS 314.01(13) 7, allowing for the reduction of inspection in all inspectable buildings to once per calendar year in non-overlapping 15-month periods.

2) Formally include the fire department in the development review and final occupancy inspection process.

3) Seek additional training for personnel conducting Public Fire Education Programs.

4) Seek training and certification for personnel assigned to fire investigation.

Level of Service: Emergency Medical Services (EMS)

Currently Emergency Medical Services (EMS) are being provided to the City of Platteville and the surrounding area by Southwest Health. In recent years, EMS was provided by the City of Platteville, until Southwest Health took the service over. This service was not part of the PFD. PFD does respond when requested by Southwest Health to EMS calls. This number has been less than ten calls for service per year, over the past five years. These types of calls generally are for lift assists and cardiac arrests.

PFD does respond to vehicle accidents for extrication. These range in the upper thirties for numbers over the past five years. Whether PFD was in the EMS response or not, they would still respond to vehicle accidents and rescue calls because of their equipment and trained personnel.

PFD to provide EMS could be in two types of services. The first and easiest to implement would be a first response service. This service is provided by members of the departments that would have Emergency Medical Responder Training and carry limited equipment in their personnel vehicle. They would respond directly to the scene and provide patient care until the ambulance arrived and assisted the ambulance as needed until transport to the hospital. This would be an easy transition, however, there would be a cost associated with it and no added revenue stream to the department. Members (20) would have to take training to provide this service. The course is approximately 80 hours in length and cost approximately 500 dollars. Equipment would need to be purchased for each responder which would be approximately $2,500 dollars each. This would also have an impact on response numbers. Responding to EMS related calls would add approximately 600 more calls for service. This would have a negative impact on the volunteers to the point that there would need to be considerations of having paid on premise personnel at peak times and possibly transitioning to full paid staff.

Proving transport service with an ambulance is another level of EMS service that could be provided. Currently Southwest Health is at the Critical Care Paramedic Level (Highest Level of EMS) to the Platteville area. They have two staffed ambulances and a third when call

volume increases. The ambulances are staffed with personnel 24/7. With this staffing model, they have good response times. If a first responder service would be started, essentially the ambulance would arrive prior to the first responders on most calls.

To provide this level of service, there would need an extensive training program to bring personnel to the first level which is Emergency Medical Services – Basic. This course is about 180 hours of training. There is revenue that can be recuperated for transporting people to the hospital. There would also be a capital outlay for purchase of at least one ambulance equipped and it would be recommended to purchase two for startup. This cost would be close to a million dollars for two ambulances. The new fire station would need to have dedicated space for storage of ambulance(s), disposable and non-disposable medical equipment.

This would only be a small portion of the actual start up needed for an ambulance service at the EMT-Basic level. By only providing the EMT-Basic level, the Platteville area would see a decrease in the level of care provided currently.

To obtain the training and provider level, there would be a year plus of training for each member. There will also be discussions on how they would fit in with Southwest Health. Part of Southwest Health's EMS responsibilities is not only to respond to 911 calls, they also transport patients to other area hospital for care that cannot be provided in Platteville. There would not be enough revenue from all the EMS work to support two separate ambulance services. There would need to be one service to take over all the EMS responsibility or each service would need to obtain a subsidy for operation from the hospital and the communities. The service would also have to meet the requirements for DHS 110.50 EMS Provider Staffing Levels.

Recommendations: Level of Service EMS

1) At this time of the report, it would not be recommended to increase to any level of EMS response whether it would be First Response or transport.
2) Monitor community needs to assure level of service is being provided and possibly augment the EMS system with first response if call volume increases or there are peak times for demand that cannot be met. The first response would only put medical trained personnel on scene until the arrival of an ambulance, not provide transport.

VIII. EQUIPMENT/VEHICLES

The apparatus fleet of the department is adequate and reasonably right sized for a community of this size and complexity. The vehicles are well maintained and equipped with the necessary hose and equipment for the needs and risks of the community. Apparatus and equipment are checked at the required intervals to be compliant with state regulations. The age of the fleet is within recommended standards with the exception of one engine. A replacement schedule has been established. The standard and industry practice for fire apparatus is a 20-year service life depending on call volume, use and maintenance. Although the 1995 engine is in fair condition. it is nearing the end of its service life and value. Any major service issues would not likely be worth the current value of the vehicle. Table 10 below outlines the detail on the fleet of apparatus.

Table 10 Fleet of Apparatus

City/Rural	Year	Apparatus Type	Purchase Date	Estimated Replacement Date
City	2007	Engine	2007	2037
City	1995	Engine	1995	2025
City	2017	Engine	2017	2047
Rural	2019	Engine	2019	2049
City	2001	Aerial	2001	2031
City/Rural	2009	Rescue	2009	2039
City/Rural	2018	Quick Response	2018	2043
Rural	2011	Tender	2011	2039
Rural	1997	Tender	1997	2029
Rural	2008	6-Wheel ATV	2008	2023

Table 12 are from the most recent fire Deportment profile survey conducted by the National Fire Protection Association (NFPA) are presented for comparison purposes. We selected data from two population ranges as Platteville is near the lower threshold of its comparative data range.

Table 12 National Profile of Equipment

Pumpers per Department

Population	1	2	3 to 4	5 or More
10,000-24,999	9%	34%	47%	10%
5,000-9,999	15%	44%	36%	4%

Aerials per Department

Population	0	1	2	4-Mar	5 or More
10,000-24,999	49%	47%	4%	0%	0%
5,000-9,999	73%	26%	1%	0%	0%

Other Vehicles per Department

Population	0	1	2	4-Mar	5 or More
10,000-24,999	24%	23%	20%	21%	12%
5,000-9,999	17%	23%	25%	26%	10%

Based on the comparative data and response area needs, the fleet of the department falls within the range of comparable protection areas. In regard to “other vehicles” the department is on the upper range of apparatus. Being that the rural area without a water system is part of the protection area, the department has a need for a minimum of two water tender apparatus and an ATV vehicle for fighting brush fires or assisting with recues in off road areas. The rapid response vehicle is not a typical apparatus in most fleets. The department is above average on the number of pumpers in its fleet for a community of its size and profile.

ISO rating for apparatus is near maximum point value, indicating an adequate and appropriate fleet for the fire risk protected. The pump capacity of the fleet also received maximum credit. Platteville requires the maximum rated flow of 3,500 gallons per minute based on maximum for flows needed for the buildings protected. The department did not receive credit for a reserve ladder or service truck. It does not have a reserve ladder truck no do we believe there is a need for one. But the department does have a service truck, which is counts as the Rescue Company. Table 12 below outlines the department point value of ISO in comparison of what credit is possible.

Table 13 ISO Rating for Platteville Apparatus

Rating Schedule Item	Earned Credit	Credit Possible
Engine Companies	5.96	6
Reserve Pumpers	0.5	0.5
Pump Capacity	3	3
Ladder Companies	3.85	4
Reserve Ladder or Service Truck	0	0.5

Recommendation: Equipment and Vehicles

1) Reduce the apparatus fleet by one engine company to right size the fleet for the protection area and to avoid costly repairs and maintenance on the 1995 engine.

2) Ensure on the next ISO evaluation that the Rescue Company is properly credited as a service company.

IX. FACILITIES

A complete analysis of the current facility was done in tandem between PAA and Five Bugles Design. Please refer to Part B, Section 3 for more information.

Recommendations: Facilities

A new fire station should be constructed to meet the operations, storage and safety needs of the department. The Station should be located within the downtown area of Platteville as close to the existing location as possible to maintain response times to current levels.

In addition to accommodating the anticipated organizational changes just listed, the fire station has obvious issues affecting the safety and operations of the department. The more specific space and design needs is outlined above.

Our research and modeling of response times from the current location show this station is an effective site for service delivery. Benchmark criteria for ISO and NFPA standards for response time and distances for the City can be met from this location. In addition, this location is very centralized for the majority of on- call members of the department, contributing to good turnout times to the stations. See Maps in Appendix C

However, the current land space available along with storm water issues pose limits for this location. The City has acquired a dwelling and land behind the current station on Ellen Street, although there is no vacant land within this block. Because this location is very good for the listed reasons, it should be further evaluated to determine if with further land acquisition a station that would accommodate the needs of the department could be located within this block.

The response modeling shows that to maintain the current response time and ISO travel distances, the fire station needs to be located in the center of the city in or near the edges of the downtown area. Though interviews and discussions and reviewing this area, there are no significant vacant parcels of land available. However, two underutilized properties were brought to our attention: (1) the Armory building and property and (2) the current location of the Senior Services building, which is located in the site of a former elementary school. The Armory building once was home to the Army National Guard Detachment 1, 229th Engineer Company. This unit has since relocated to Richland Center due to lack of space at this site. Currently, the Armory building is used as a recruiting office and a gym/auditorium space for City recreation activities. The site also includes a large parking lot area, significantly adding to the foot print of this property. This building has been a point of discussion with the City in the past regarding possible acquisition. This site was mapped as a potential new location. The response time model and ISO travel distance maps are located in Appendix C.

The location of the former O.E. Gray Community Learning Center, owned by Platteville Public Schools and currently occupied by the Senior Center, also was discussed as a possible location. This location has significant open land space in the former playground and athletic field areas for the school. Potential sharing of facilities at this location will be explored as well in the second section of this report. This site was mapped as a potential new location and the response time model and ISO travel distance maps are located in Appendix C.

X. FUTURE REGIONALIZATION OF THE FIRE SERVICE

The volunteer/ paid on call fire service in Wisconsin and throughout the nation is showing signs of struggling, as a quick internet search would quickly confirm. While this study did not extensively examine the viability and performance of the surrounding departments, there is evidence revealed from our discussions and mutual aid history that indicate that this area is not immune from these issues.

The authors believe that to meet the future needs of providing service, coupled with declining numbers in the ranks and longevity of volunteer/on call firefighters, fire department will need to resort to a more regional model for delivering fire response. This has already taken affect in the state with the organized response effort called the Mutual Aid Box Alarm System or MABAS. This system, rather than utilizing a "call as needed" type of mutual aid from neighboring departments, has pre-determined groups of resources or Box Alarm list, for designated geographic areas. This system mimics the response and dispatch procedures of large cities, but is applied over jurisdictional lines to obtain the proper resources. Admittedly, most volunteer/on call departments rely on this to system to provide sufficient resources to respond to a structure fire, particularly during the day time hours and weekends. Some departments that regularly rely on additional assistance will take this one step further by developing automatic aid agreements so that sufficient resources are dispatched on the initial call. With these two practices, in some respects one of the more important aspects of fire service, the area around Platteville already is somewhat regionalized, but the regionalization is not fully developed.

In addition to mustering an effective response force for calls, there are the various prevention, administrative, and training needs of the department that must be performed. The Platteville fire department added a fire inspector some time ago and recently converted the fire chief position to full time, in recognition of its needs. Regardless of the size and call volume, most of these needs and legal requirements are the same for all fire departments. It is around these support functions where we see the next steps in regionalization to occur. This is known in the fire service as functional consolidation. Administrative functions, such as planning, maintenance and preparedness, policy, and SOG development are provided by full time staff on a regional basis. Individual "fire departments" keep their community identity, have local fire officers for supervision and direction, but fall under the administrative and leadership umbrella of the full-time staff of the regional department. This model already exists in some areas of the State such areas surrounding Washington DC including farther out into the more rural areas. What once were stand-alone fire departments are fire companies or stations as part of a regional or county fire department.

Training is one of the consolidated areas and, in our opinion, probably one of the first and most important things that should be regionalized. If fire departments rely on mutual aid as a regular practice, which they are doing, then it is imperative that they operate under the same Standard Operating Guidelines and train to those standards as a matter of safety.

Fire prevention and inspection activities would be one of the easier areas to functionally consolidate. This often is one of the first areas where departments struggle to get its members to complete the work. Inspection activities mostly need to be done during normal business hours, which usually conflict the work schedules of volunteer /on call members. Some departments already sub-contract this work to private for contract providers, this is not a recommended practice in our opinion.

How then do we see the role of the City of Platteville Fire Department in future regionalization activities. Platteville is the largest City in the area. It already has paid staff, the largest on call membership and apparatus fleet. It is poised to be the central agency or hub of a regional effort.

How this is effort specifically is done as a regional or county-wide organization is difficult to predict. It will no doubt be met with some resistance with concerns about loss of control and community identity. As with our recommendations for Platteville, key performance indicators on an area-wide basis should begin to be collected and monitored to make this decision more objective than subjective.

At this moment, the most important thing Platteville should consider is how functional regionalization would affect the construction of a new fire station. The new station should have adequate office space for administrative, training and prevention functions of a regional nature, with potential room to expand to accommodate additional full-time staff. Training facilities need to be designed to accommodate large groups and small groups simultaneously in a classroom setting. There also should be consideration for indoor practical training as part of the fire apparatus floor as well as an outdoor training space.

XI. STAKEHOLDERS AND DEPARTMENT MEMBERS Information and opinions of members and Stakeholders

As part of the study process, community stakeholders and members were interviewed and the following information summarizes, the information obtained in this process not necessarily specifically cited in previous sections of the report. The following City Leaders were Interviewed:

Common Council Members Barbara Daus (Council President), Eileen Nickels (President Pro-Tem), Ken Kilian, Robin Cline, and Kathy Kopp

Police and Fire Commission Members Vikki Peterson, Jane Peoples, Deborah Rice, Frank King and Kathy Kopp

City Manager Adam Ruechel

The same following questions were asked of each city leader as part of the PAA/Five Bugles initial information gathering for the Platteville Fire Study project. Here are the questions and a summary of the responses:

What do you believe are the issues that prompted this study to take place?

To a person, those interviewed indicated that what prompted this study is the realization that the current Fire Station is inadequate to meet not only current department needs but also future needs. The current facility was constructed in 1964 and fire operating standards, equipment and vehicles have changed significantly since then in the Platteville community.

A community study group was formed in 2013 to look at the Fire Station but there has been little progress made since then in determining how either the existing facility can best be expanded or a new facility should be sited and designed. It was mentioned several times that community members Deborah Rice (a current Police and Fire Commissioner and retired UW-

Platteville Criminal Justice Professor) and her husband Bill Kloster (UW-Platteville Foundation President) have been the driving forces to address the "Fire Station" issue.

Selected Direct Quotes in Response to this Question are as follows: "We have a "state of the art" library, police station, and event center and we need one for the fire department" "As a long-time city resident, I have a lot of respect for the Platteville Fire Department and the department has been somewhat neglected and I'm an advocate for more resources, including updated facilities, for them to perform their jobs more effectively" "We have to modify equipment in order to fit into existing fire station and that's not right…I like the current location but can it be efficiently expanded?" "Current facility is outdated and is not ADA compliant" "Very concerned about volunteer safety in existing fire station and we are dependent on them to provide this essential service…I can't imagine anything worse for them than what we have now" "Fire facility is just inadequate to meet current as well as projected future needs…real key change is that the department itself is not so focused on staying at the existing location which opens up our options…we need you (consultants) to provide a game plan that will provide us with where the department needs to go for the next 15,20,25 years"

Do you believe that the current Platteville Fire facilities are sufficient to provide the services you are responsible for?

As previously stated in response to Question 1, all community leaders interviewed were unequivocal in their belief that the current fire station is inadequate to meet both current and projected community and departmental needs. In their estimation, after many years of community discussion about either updating or replacing the current facility, there seems to be strong feeling that the timing is right to address the long-standing problems with the facility.

Several City Council members were concerned about the many current "site challenges" to expanding at the current site including likely relocation of large sanitary sewer and water systems that greatly complicate the site.

Selected Direct Quotes in Response to this Question: "Our Fire Department is well-liked in the community and is the 'face' of the community-they are our neighbors and we need to provide them a better place to do their jobs and to better store the equipment and vehicles they use" "The roof is leaking and there isn't enough parking for the volunteers when they respond to calls and for training exercises"

"General public is not that aware of the pressing space problems we have at the fire station so there will need to be public education on what a modern and efficient fire facility will bring to the community" "Current fire station is certainly not adequate but I like the location that it's in…could it be expanded as part of a downtown redevelopment project? Mixed multi-use project?"

Do you know of any issues or problems regarding the Fire Department that concern you?

In response to this question, the community leaders invariably said that the Platteville Fire Department is highly respected in the community and they didn't voice any concerns about current fire operations and personnel. The Police and Fire Commission members rarely have

met to review any issues pertaining to the Fire Department and their focus is primarily on the Police Department. One person mentioned that she was concerned about future recruitment and retention of volunteers that the Fire Department is dependent on but that currently is not an issue for the department.

Does the Platteville Fire Department have a response time goal and how do you measure the success of the Department (other performance indicators)?

It was interesting that not a single community leader could articulate what the Fire Department's response time goal was or what they regard as key department performance indicators. They responded to this question by generally stating that they never receive any complaints about response times to fire incidents and that complaints were their number one indicator of department performance.

Notwithstanding the lack of clear response time goals, however, the community leaders interviewed indicated that they were very aware of the need to develop such goals in the context of any potential new fire facility siting and that they looked forward to the spatial analysis that will be provided as part of the Fire Study. They agreed that spatial analysis is critical to provided future optimal response times.

Are you aware of any current recruitment and /or retention issues for the Platteville Fire Department?

Interviewees were generally unaware of any significant recruitment and/or retention problems with Fire Department volunteers, although several remarked that they were concerned that this will be an issue for them going forward as training and certification requirements for firefighters increase. Several also stated that there should be a future emphasis on recruiting UW-Platteville or Southwest Technical School students as well as UW-Platteville faculty and staff to become Platteville firefighters (currently there are approximately 4-5 UW-Platteville students and 6-7 UW-Platteville staff who are on the Fire Department). This could be a real plus in attracting new members of the Department and to promote the Firefighter profession in general.

One interviewee said that the Department has a capacity of 60 members and that the current roster is 51, so there is room for additional personnel. That same individual expressed a concern that Platteville might need to provide fire services to the Belmont and Livingston areas in the future because of an increasing shortage of fire volunteers in those communities.

Are there any unique barriers in the community that affect Department performance?

The Platteville community leaders interviewed indicated that the City has many old historic structures and the downtown has some narrow one-way streets that could affect Fire Department performance.

The University, of course, has a large concentration of buildings and other facilities, including several densely populated dormitories that need to be protected. There seems to be a very good working relationship between the City and the Fire Department.

What key stakeholders do you believe should be engaged in this study to ensure its ultimate success?

The issue of who should be involved in the study prompted a good deal of discussion among the interviewees. In general, all thought that a meeting of all identified stakeholders at some time during the fire study process would be very important to its overall success in getting implemented. As one individual stated, "this needs to be an inclusive rather than exclusive process because we have not had a community consensus on what to do with the Fire Department in the past".

The key stakeholders that were identified included the following: UW-Platteville leadership including the chancellor and provost; seven surrounding communities that currently receive services from the Platteville Fire Department; Southwest Wisconsin Technical College leadership; Platteville Chamber of Commerce; Platteville School District; Platteville Main Street Program and Hospital. These stakeholders would be in addition to the Platteville firefighters and administrative leaders as well as the City Council, City Manager and City Management Team.

What are other things that you want the consultants to know about Platteville and its Fire Department that we might not have covered in previous questions?

There were a number of items that city leaders wanted our consultant team to be aware of or that they wanted to have addressed in the Fire Study (these are presented in no priority order:

- A general community input session was desired by several City Council members in order to capture what community members might want in a new or expanded fire facility.
- There is an interest in exploring potential "mixed-use" fire facilities that could combine a traditional fire station with housing, retail, or other institutional uses. For example, it was suggested that the Southwest Wisconsin Technical College might desire a Platteville location for some of its training and education courses.
- Parking for an expanded or new Platteville fire facility was a concern. A Council member mentioned that the need for a 100-car parking lot (for adequate volunteer parking and training events?) has been rumored around the community and that would be difficult to achieve in the current location.
- The current Platteville Fire Station is located in a special Downtown Main Street Design District. Fire study consultants will need to review those special design standards to determine how they might affect an expanded Fire facility at its current location or at a potential new site within the same Design District.
- The City's Historic Preservation efforts were highlighted in the Downtown area. It was noted that any expansion of the existing fire station will need to be carefully done to blend in with the existing neighborhood and downtown. It was mentioned that a past Fire task force recommended that the future station site should be at the corner of Main and Water Street. We note, however, there have been considerable flooding and stormwater issues at that corner that need to be considered as well as other underground utility impacts.

- City leaders want the consultants to be "visionary" in projecting what fire service on a regional basis might be in the next 10 to 30 year time horizon. Specifically, what services could Platteville could expect to possibly provide to nearby communities such as Belmont, Cuba City, Dickeyville, Lancaster and Potosi?
- Overall, there was a consensus that the timing was right to move forward with Fire Department facility and organizational plans…this has been building for the last 7-10 years.

Fire Department Members interviewed were: two fire fighters with 1-3 years of service, two fire fighters with 5 years of service, two senior fire fighters, two lieutenants, two captains, fire chief, three assistant chiefs, secretary/treasurer, and directors.

What do you think the Dept. does well?

This question was met quickly and positively by all persons interviewed. Performance on response and training receiving the most mention. The dedication of members, how well they work with each other was also a common theme. I believe the answers to this question show that overall, the department has a positive culture and pride, which is very important to success.

What areas if any, do you think the Dept. could improve?

The answers to this question were a bit more diverse and somewhat dependent on years of service. The Fire Station was unanimously the first comment with everyone interviewed. Training arose in this question overall some saying more is needed, some with the caveat of ensuring there is understanding of the amount of time that volunteers have available. This will be covered more under the training question. Retention of personnel was raised as an area that needs attention, again this will be covered in more depth under that question.

What are the challenges for the department in the next five to ten years?

Maintaining the number of personnel on the department was the most common answer with this question lack of experience for a large number of members and followed by the impending retirement and loss of senior members. (This is a very common situation and concern in most fire departments today) Coverage during daytime hours/weekdays is not as good other times of day, not anticipated to improve. Time commitment for volunteers was also a common concern in this question, the need for change and more training is understood, but members expressed concern for change to take place at a slower pace and recognition of time commitment of volunteers. This time commitment concern not just with training, but also with other non-emergency duties including maintenance. In regard to maintenance for example, members cited it was getting more difficult to fit in response as incidents go up, adding vehicle and maintenance after calls puts added stress on this situation.

Do you think the organizational structure of the department is effective?

Generally, this question also received very quick and positive answers. Members feel the leadership and supervisory positions are adequate and there is good unity and chain of command.

Do you think the Department should remain as a Chapter 181 non-stock corporation? Would changing this have a negative impact on the department?

The answers to this were also varied by tenure. The members with 5 years or less were not really even aware that this was the official governance model of the department and therefore did not have a major concern. Of the more senior members there was some variance, but a common concern over losing authority and control with the department. This led to lengthy discussions and the explanation that the department was operating more as a municipal department form a financial standpoint than an independent corporation. This question also led to the discovery that a committee had been developed to create new by-laws to more accurately reflect the current operation and more closely resemble a non-profit benevolent association of fore department members. This document was acquired, but there remains some question of it has been legally enacted and if so, further moves the department from the legal form and practice of a Chapter 181 department.

Do you think the staffing and staffing model of the department is adequate to meet the community's needs?

This was answered as a unanimous yes, but with concerns for the future.

Do you think that the current station is adequate for the Department's needs?

This was met with a resounding no from all members. The most pressing issue, the crowding of apparatus and access to Personal protective equipment a vehicle during turnout time with people having to move out each other's way and having to move vehicles out to access others on some incidents. Not having an indoor and outdoor hands on training space was also commonly cited. Lack of decon, cleaning areas is also a concern along no adequate shower or personal locker facilities for members. It was mentioned the current Station does not have entrance that is welcoming to the public when they visit.

Do you think that the departments apparatus and equipment is adequate to meet the community's needs?

This was met very positively and with little concern other than ensuring replacement of apparatus is kept up to the current practice. There was also the concern of the effect of the current station and having to customize apparatus to fit in the station. Members over all feel this is a strong suit of the department.

Is the Departments training program adequate?

All members believe the training program is also a strong suit of the department. Newer members however expressed that they would like to see a more outlined and directed program for new members. They stated at times it is more of a wait and learn on the job from more senior members. Balancing demands and time commitments and being aware of that is a concern with training.

Is there adequate communication and direction provided by the department leadership?

This was generally met with favorable comments. There were some comments that indicated a lack of consistency at times and appearance of disagreement. This issue we believe is not an issue of leadership personnel but I indicative of our finding that there is significant work to be done on development of written policy and standard operating guidelines.

Does the Department Policies and SOG's provide you the direction needed for you to comfortably and safely do your job?

Surprisingly this was met with a fairly positive initial response which shows that there is a high level of consistency and communication by the supervisors and leadership of the department in general and "understood" unwritten policy and guideline, which is very important. This just needs to be also converted to written documentation and further development.

How do you think the Department is doing with recruitment and retention?

The consensus was the department is doing fairly well on recruitment. Members interviewed constantly stated that they were recruited by another member. This is an excellent and probably the most effective recruitment practice as well as showing a very positive department culture! The department also actively recruits members from the student population at UW-Platteville very successfully. The issue of retention, was of greater concern. There was no internal issue with the department cited as having an effect on retention other than time commitment. Competing interest in members time, employment and members moving on to other communities (not just UW students) being impacts outside of the department affecting this. This too is a common issue in the volunteer for service in the state and country. There were not many suggestions on dealing with these challenges. We did use this to explore the question of would compensating volunteer staff help in retaining members, this was met with it may help but was not looked at as that impacting from those interviewed.

Do you think the current promotional process is meeting the leadership needs of the Department?

This was met with generally positive views, but the majority of persons interviewed had achieved a rank in the department. Newer members, were not real informed as to the process or how it takes place, nor could they say how a member indicates their interest in

being promoted. While an evaluation system is used by the Chief and Chief officers for promotion, it is not documented in policy form.

XII. SUMMARY OF RECOMMENDATIONS

Governance and Oversight

Altering the relationship between those individuals who have selflessly served their community is always sensitive issue, even when it works to the advantage of both volunteers and their municipality. Change is too often viewed as criticism. It can, however, be a win-win proposition for both the volunteers and community which it serves. As it stands now, there are too many grey areas in the relationship between the City and the Corporation. PAA recommends that the City either:

1) Clearly create a municipal fire department that includes current firefighters as employees and places hiring, discipline and discharge decisions under the authority of the Police & Fire Commission and operations under the authority of the Chief and Common Council. Human resources and administrative support can be provided by professional City staff. Position descriptions and hiring/promotional standards can be adopted. An ordinance creating a Fire & Police Commission can be enacted, establishing the Commission as the Code establishes other committees and commissions in the City. The current Corporation could continue to function as a benevolent and fund-raising association.

2) Clearly separate the City from the Corporation. This could take a number of different forms; however, the clearest separation would be for the City to remove references to a City Fire Department from its ordinances and simply contract with the Corporation for fire protection. The Corporation would need to be prepared to take over the administrative functions currently provided by the City. Officers and firefighters would be elected and removed from the Corporation by its membership as provided in the Articles of Incorporation. The contract should spell out who owns what assets and how they will be acquired in the future.

Budget and Finance

1) When updating the contracts for service with townships, the City should move away from the fee for service and billing of services in arrears model. This is a somewhat unpredictable and difficult methodology for municipal budgeting. It should develop a formula for assigning cost to the contracted townships based on assessed value of property improvements, calls for service, and population protected.
2) Funding for Conference and Travel should be increased to provide more opportunities for outside training opportunities for department members.
3) Establish written budgetary rules with decision making and to include documentation.

Organizational Structure

1) Develop position descriptions for all positions within the department.
2) If the department is going to continue as a Chapter 181 organization, update the articles of incorporation to reflect the current organizational practices and position titles used.
3) Continue the successful recruitment efforts that are in place and continue to monitor for effectiveness.

4) Put an exit interview program in place and monitor issues affecting retention of personnel and put mitigating efforts in place to retain personnel.

Level of Service

1) Monitor response time as there has been a slight increase.
2) Monitor amount of personnel responding to incidents. If there are times of the day that are consistently falling below recommended numbers, this would indicate a need for paid-on-premise personnel.

Level of Service Training

1) This study has provided recommendations for operating guidelines in reference to emergency incident operations. Currently the department has a seat assignment process that identifies which fire fighter in the apparatus does what job. This is a great start to organization but need to be formalized in an operational guideline. Once these guidelines have been created, training should be performed off of these guidelines. Operations should drive fire department training. SPS 330.07 (2) Assure that the training and education provided under this section are based upon the fire department's written standard operation guidelines.
2) A training committee is already in existence and has been doing a great job and identifying training needs and topics to train on. As they move forward the committee should look at these items as they create there training programs. A lot of these areas mentioned below are being implemented currently, these are just a guidance for future training program creation.
   a. SPS 330.07 (1) Establish and maintain a member training and education program that identifies specific goals and objectives for the prevention and elimination of occupational accidents, injuries, illnesses, exposures to communicable disease, and fatalities.
   b. SPS 330.07 (4) Provide training and education commensurate with the duties and functions the member is expected to perform.
   c. SPS 330.07 (6) Provide training and education to fire fighters about special hazards to which they may be exposed during a fire and other emergencies and advise of any changes that occur in relation to the special hazards. The procedures to address special hazards shall be maintained in written form. Training and education under this subsection shall be provided at least biannually.
   d. SPS 330.07 (7) Assure that the training and education are conducted frequently enough to ensure that each fire fighter is able to perform the assigned duties and functions satisfactorily and in a safe manner so as not to endanger other fire department members or employees.
   e. 330.07 (8) Assure that fire fighters whose duties include interior structural firefighting receive training and education consistent with established fire ground operating procedures. Training and education under this subsection shall be provided at least monthly.
   f. SPS 330.07 (10) Assure that a training and education program for any fire fighter engaged in fire ground operations includes procedures to perform a safe exit from a dangerous area in the event of equipment failure or sudden change in fire conditions.
   g. SPS 330.07 (11) Assure that fire fighters receive training and education on the incident management system in accordance with s. SPS 330.14 (1) (c).
   h. Federal training mandates for fire department also include on a annual basis to cover; Respiratory protection, Blood Borne Pathogens, Haz-Com (1910.1200),

Lock-out/Tag-out, Haz-Mat (1910.120), Confined Space, NIMS, CPR and Ergometrics.

3) NFPA 1410 *Minimum Company Standards* is a good guidance in assisting with creation of the already in place scenario based training.
4) NFPA 1401 *Recommended Practice for Fire Service Training Reports and Records* should also be to formulate their training record program.
5) If Live Fire in an acquired structure is going to be performed, assure that training and education involving live firefighting exercises meet the standards specified in NFPA 1403. This is found in SPS 330.07 (9). The most difficult part of NPFA 1403 to follow is the need for certified instructors, however, Platteville Fire Department has multiple certified fire instructors.

Level of Service Prevention

1) Adopt a local ordinance per the provisions in SPS 314.01(13) 7, allowing for the reduction of inspection in all inspectable buildings to once per calendar year in non-overlapping 15-month periods.
2) Formally include the fire department in the development review and final occupancy inspection process.
3) Seek additional training for personnel conducting Public Fire Education Programs.
4) Seek training and certification for personnel assigned to fire investigation.

Level of Service EMS

1) At this time of the report, it would not be recommended to increase to any level of EMS response whether it would be First Response or transport.
2) Monitor community needs to assure level of service is being provided and possibly augment the EMS system with first response if call volume increases or there are peak times for demand that cannot be met. The first response would only put medical trained personnel on scene until the arrival of an ambulance, not provide transport.

Equipment and Vehicles

1) Reduce the apparatus fleet by one engine company to right size the fleet for the protection area and to avoid costly repairs and maintenance on the 1995 engine.
2) Ensure on the next ISO evaluation that the Rescue Company is properly credited as a service company.

Appendix A

WISCONSIN SPS 330 AUDIT CHECKLIST

SPS 330.03 Fire Department Safety Position

Policy: Yes

a) Assignment: Captain Position, two others underneath
b) Qualifications: No
c) Authority: Yes
d) Functions: Research any items issue, perform annual report for State

Recommendations: Add safety to Captain job description

SPS 330.05 Occupational Safety and Health Committee

Policy:

a) Established Occupational Safety and Health Committee: Yes
b) Meet at Least biannually: Quarterly
c) Written record of its meetings available to all firefighters in the department: Assure record of meeting

Recommendations: Add some more people of different levels to the committee and assure written records are kept of the meetings.

SPS 330.07 Training and Education

1) Policy: No policy, have check list for competency

a) Subject matter: Division Chief in Charge of Training
b) Based on SOG's: Training off the current guidelines.
c) Attendance: Attendance records
d) Records: Records of competencies

SPS 330.08 Employment Standards

Policy: Policy on each position

a) Fire Fighter
b) Pump Operator
c) Aerial Operator
d) Officer

Recommendations: To have qualifications and expectations of each position. List competencies from NFPA 1582.

SPS 330.09 Vehicles

Policies: Working on it

a) Vehicle maintenance, inspection and repair _____
b) Pump testing
c) Aerial testing
    1. Records and checklist
d) Vehicle Operations
    1. Valid Driver's license
    2. Seat belts
    3. Safe and Prudent Operations Defined
    4. Hose loading

Recommendations: Create a policy for items 1-4 and accordance of NFPA 1911 for inspections practices and frequency.

SPS 330.10 Portable Equipment

Policies: Working on policy and Target Solutions

a) Maintenance, inspection and repair
b) Maintain inventory records for equipment carried on each fire apparatus
c) Maintain inventory records of equipment designed for training
d) Inspect and service test all ladders
e) Inspect and service test all fire hose
f) Inspect and test all fire extinguishers

Recommendations: Create a policy to identify inspection practices and frequency to align with practice.

SPS 330.11 Protective Clothing and Equipment

Policies: No policies

a) Issued Equipment
b) Required use
c) Training in the care, use, inspection, maintenance and limitations
d) Maintenance and Repair

Recommendations: Create a policy for items 1-4 above in accordance to NFPA??

SPS 330.12 Self-contained breathing apparatus and PASS device

Policies: No policy

1. Issued equipment
2. Required use

a) Confined Space

3. Respiratory protection program
4. Training in care, use, inspection, maintenance and limitations
5. Inspection maintenance and repair
6. Air quality testing
7. Cylinder testing
8. Annual fit testing
9. Annual flow testing
10. A firefighter may not wear a beard or facial hair that comes in contact with a facepiece seal if the fire fighter's duties require him/her to use a self-contained breathing apparatus. If a fire fighter wears eyeglass, the fire fighter shall use frames that do not pass through the seal area of the facepiece.

Recommendations: Policies should be reviewed to assure they meet the requirements of 1-10.

SPS 330.13 Life safety ropes, harnesses and hardware; eye, face, and hearing protection Policies: Create a policy

1. Use of life safety ropes, harnesses and hardware
2. Use of class 1 life safety harnesses for fire fighter attachment to aerial devices
3. Use of class 2 and class 3 life safety harnesses for fall arrest and rappelling operations
4. Eye, face and hearing protection

Recommendations: Create a policy for 1-4 above

330.14 Emergency Operations

1) Incident Management SOG's

a) Incident specific SOG's that identify fire fighter roles and responsibilities relating to the safe of operations

1. Structure fire, dwellings, apartments, commercial and industrial
2. Vehicle fires
3. Vehicle accidents
4. CO incidents
5. Gas Leaks
6. Fuel Spills
7. Haz-Mat
8. Tech Rescue, confined space, water/ice, and trench 9. Downed wires
10. EMS

Recommendations: Create guidelines for 1-10

1) Incident safety requirements

a) Minimum personnel needed for operations (2 in two out)
b) Operations with potential contact with motor vehicle traffic
c) Back-Up Crew
d) Back up line(s)
e) Rapid Intervention Team/Crew
f) Ambulance stand by

Recommendations: Create guidelines for the Incident Safety Requirements.

SPS 330.145 Facility Safety

Policy: Create policy

SPS 330.15 Physical and medical capabilities

Policy: Policy

a) Entry level physical
b) Responsibility to report change in health

SPS 330.16 Member assistance change in health

a) Policy statement for fire fighter's assistance referral program that identifies and assists fire fighters with alcohol or substance abuse, stress, and personnel problems adversely affecting their job performance.

Existing Conditions

Architectural Existing Conditions

General Observations

The Platteville Fire Station was constructed in 1963 with additions and alterations in 1985, 1994, and 2015. Platteville boasts dynamic grade changes throughout the downtown area, yet this station is located on a relatively flat parcel of land at the corner of E. Main Street and Ellen Street. The remainder of the somewhat trapezoid-shaped city block has significant grade changes. The station was initially designed to support a volunteer staff.

The facility is currently comprised of an apparatus bay, with bay doors on the north and eastern sides of the facility, with limited associated apparatus support spaces; a large training room, a day room, two offices, a small conference room, storage, and a kitchen.

Figure 1

Site

Located at the intersection of E. Main Street and Ellen Street, the site is landlocked and limited in size and accessibility (figure 2). The existing station is located along the northern and eastern most edges of the property with limited sized front apparatus apron exiting onto E. Main Street, and onto Ellen Street, driving over public sidewalks. A one-way parking lot wraps around the facility with limited parking available to the department.

Figure 2

Due to space constraints in the apparatus bay, the department is required to house several vehicles in the already limited parking area. When volunteer members of the department arrive on-site for calls or for other events, many of the 50+ volunteers are required to park on nearby streets. During non-emergency events, off-site parking is not as much of a concern. However, during an emergency incident, having volunteers responding to the facility from multiple directions and distances is dangerous and negatively affects response times.

In addition to the fire station, the small site also accommodates a small residential-grade detached garage. This garage serves as storage for the department.

Figure 3

The site is comprised of concrete for the apparatus aprons and asphalt for the remaining parking areas. With the grade change from the apparatus bay floor to the adjacent Ellen Street, the eastern apparatus apron slopes down away from the facility for about 8' to a trench drain, and then slopes back up to the sidewalk level, and down again to the roadway (figure 3). These grade changes are hard on both the apparatus and the concrete, with visible deterioration at the high points.

Figure 4

The north concrete apron appears to primarily be in moderate condition with deterioration along saw cuts and minor scuffing from apparatus bottoming out.

The remaining area of the parking lot is asphalt and is in poor condition, needing replacement.

Exterior Envelope

The exterior envelope of the Platteville Fire Station is a mixture of materials, depending on when it was constructed. The original facility was primarily built of CMU block walls with a brick veneer on the exterior (figure 5). Above the main door, plate glass was covered with redwood louvers and accent stone was installed next to the front entry and above the apparatus bay doors on Main Street.

Figure 5

Serving as an awning over the front apparatus bay doors, the hollow core pre-cast floor system from the second level extends outside.

In 1985, the second story was extended over the existing rear apparatus bay area, with CMU block walls wrapped in steel siding. At the same time, a new sloped metal roof was constructed to not only cover this new addition, but to also cover the existing roof which was originally constructed as a 4-ply built-up roof with rigid insulation below. Rain is directed off the roof through gutters on the north and south sides of the facility, with downspouts on the western side. Two downspouts are placed side-by-side to accommodate the load and are directed into underwater storm sewer connections.

Figure 6

Also, in the 1985 addition, a metal staircase was installed to serve as a secondary exist out of the second floor of the facility.

Overall, the exterior of the facility is in average condition, being in need of general maintenance due to the age of the structure (figure 6). These items include:

- Several brick needs replacing
- Grout needs tuckpointing in certain locations
- Sealants of the precast planks needs replacing
- Exterior service doors show a significant amount of rusting and should be replaced
- Steel lentils for overhead doors are rusting and should be investigated for structural integrity
- Many of the overhead doors have damage to the bottom panels, which should be replaced
- Metal panels are prone to leaking. Due to the age of their construction, all seals and gaskets should be replaced.
- There is some settlement cracking that appears to be superficial, but further investigation should be considered.
- The exterior stairwell has large amounts of rust, which should be investigated for structural integrity.

Interior Conditions:

Building Code and ADA Guidelines

When evaluating facilities, we need to consider code/ADA, function, and physical condition.

In general, this facility is not ADA compliant. Noncompliant issues include, but are not limited to:

- It does not have an elevator
- No compliant parking stalls
- Approach to the front entryway is not compliant
- Toilets are not proper height, do not have grab bars, do not have necessary clearance in stalls, or circulation
- Bathroom sinks do not meet height, clearance and knee protection requirements
- Many doors do not have required push-pull clearances
- Kitchen serving counter, worksurfaces, and sink heights and clearances

Additionally, building and energy codes have changed significantly since this facility was constructed. If this same facility were constructed as-is today, it would not meet standard building codes. Some examples are:

- Non-complaint hand rails and landings on primary stair case
- Fixture count on lower level
- Exterior envelope construction, in terms of energy
- There are no vestibules from exterior of facility into interior to help with climate control and energy usage.
- Door hardware

Due to the age of the facility, if renovated asbestos testing should be performed. Areas that could contain asbestos or mastic fibers include, but are not limited to:

- Asbestos tile flooring
- Insulation around piping and ductwork
- Acoustic “popcorn” applied to ceilings
- Glue behind mirrors
- Grout in tile

The facility does not meet current code requirements and ADA guidelines. The remainder of this section will focus on function and condition.

Interior Conditions:

First Floor: Apparatus Bays and Support

The apparatus bay features four sectional overhead doors on the front (north) side of the facility and two sectional overhead door on the eastern facade. The four apparatus doors on the front of the facility were originally all 12'-0" W x 10'-0" H. However, in 1994 the fourth apparatus bay underwent a renovation which lowered/sloped the apparatus bay floor gaining 8" in order to accommodate the height of the ladder truck. With just 2'-0" between overhead doors, this height transition is ramped, however, this ramp is neither code or ADA compliant and is considered a hazard, especially in an emergency response situation.

Figure 7

The eastern façade originally had two apparatus bay doors (10'Wx10'H) allowing access to Ellen Street and in 1985, a third (11-0'Wx10'-8"H) apparatus bay door was added. In 2015, two of these doors were removed and replaced with one large 22'- 0"Wx10' - 6"H door (figure 8). With the apparatus bay doors opening to the east and north, and a row of columns dividing the apparatus bay, the first floor of the station is primarily comprised of two apparatus bays, with back-in-only capabilities.

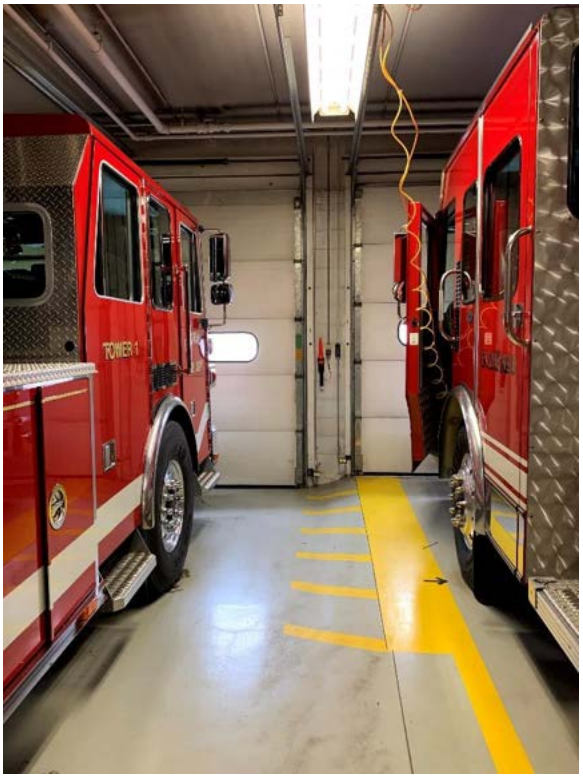


Figure 8

In 1960, the minimum for vertical clearance for vehicles on interstate roadways was changed from 14'-0" (which was instated in 1956) to be 16'-0". This station being designed and constructed as that new federal rule was being updated, was designed for the smaller vehicles of the day, making the 10'-0" high doors acceptable. However, since the 1960's, the heights of fire and EMS apparatus has grown, with many apparatuses now more than 11'-6" high.

With the floor-to-floor height of 13'-0" between first and second floors and ceiling height in the apparatus bay on 12'-0" with beams dipping below that height, the facility cannot be renovated to accommodate an overhead door of more than 10'-6" high. Due to the height restrictions, the Platteville Fire Department is now required to have their apparatus made with custom designs to accommodate these limited overhead doors. Additionally, there is not enough room above each apparatus to provide staff the ability to clean and maintain items on the top of the apparatus or to lift the cab to allow for maintenance. Both of these opportunities are standard features in station design today.

In addition to the floor-to-ceiling height deficiency, the overall size of the apparatus bay is inadequate. Currently nine apparatus are positioned like a jigsaw puzzle in the facility (figure 9). The space restrictions are to the point that arrows were placed on the floors to indicate the necessary tire locations so that the apparatus won't hit another apparatus, and to allow the overhead doors to close without hitting the front apparatus. With many vehicles sitting two-deep in the apparatus bay, the staff often have to shuffle apparatus around prior to respond to emergencies. All of this creates hazardous conditions and extends response times.

Figure 9

Dividing the apparatus bay is one single trench drain, to which all the floors slope. Best practice would have a trench drain running down the center of each apparatus bay allowing the moisture dripping off the apparatus to flow beneath the apparatus. In addition to reducing the slip hazard of people walking on wet surfaces, it also allows the apparatus to be on a more level surface. In the case of this sloping floor, all the apparatus that exit onto Ellen street are constantly leaning toward the drain, causing long-term stress on the vehicles chassis and tires.

The apparatus bay is not equipped with a vehicle exhaust system. Vehicle exhaust systems can either be systems that are flexible ducting that attaches onto the tail pipes when vehicles enter into the bay, venting the contaminates directly outside, or systems that are mounted onto each apparatus, cleaning the air before entering the bay. These systems go above and beyond the building code required for air exchange ventilation systems and comply with NFPA standards.

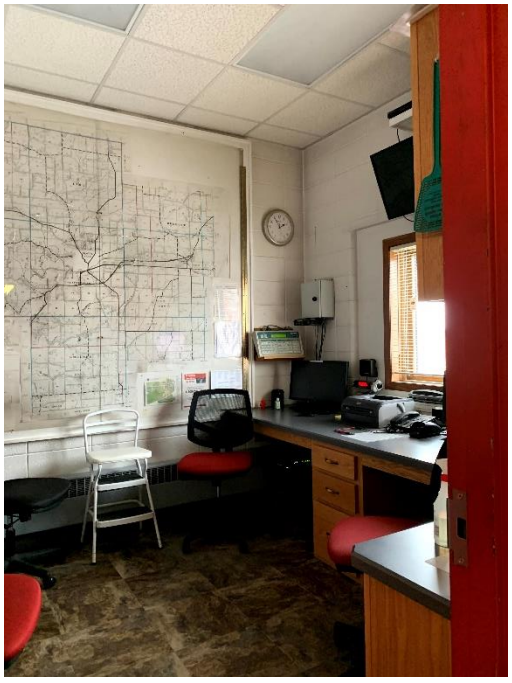


Figure 10

Along the south/back wall of the apparatus bays are three small rooms. Located next to a service door opening to the west parking area, is a small watch office and radio room. Traditionally this room is where volunteers will report when arriving at the station to learn about the incident, wait for deployment orders and review maps prior to departing (figure 10).

Directly to the east is the station's boiler room, followed by a room that was originally designed as the stations' locker room (rm. 103, see appendix B for exiting plan), with a toilet room (rm. 104), and shower (rm. 105). Since the

1960's, personal protective equipment (PPE) and the personal decontamination (decon) recommendations have changed dramatically, resulting in an increased space requirement. The locker room is no longer large enough to store the departments PPE, and serves now as storage. The toilet room is used by all genders and the shower now stores the PPE extractor, making todays best practices for personal decon impossible. Directly outside this space, the department has a PPE dryer. Best practice after returning to the station allows a firefighter to clean their PPE, shower, and put their clothing into a residential washer within the "shower within an hour" recommendation.

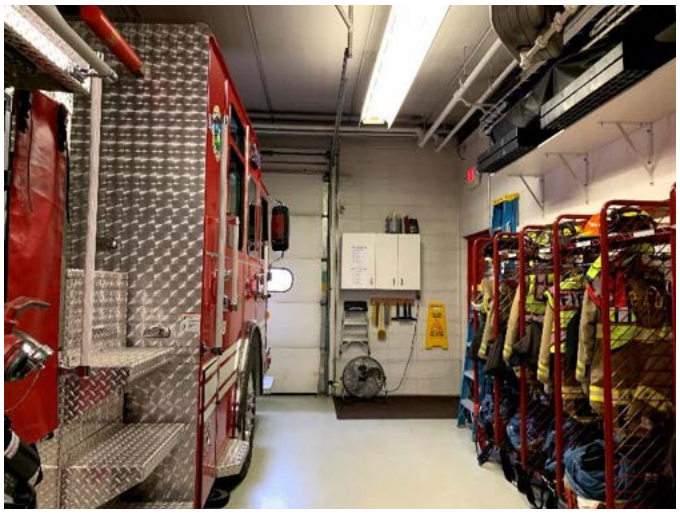


Figure 11

With the PPE displaced from the locker room, the PPE lockers line the perimeter of the apparatus bay (figure 11). Their location causes them to be exposed to harmful UV light which deteriorates PPE at an accelerated pace; they're exposed and stored in a room with harmful carcinogens caused by the diesel trucks; and can lead to extended response times since individuals have to move through a very crowed apparatus bay to get to their PPE. Best practice would allow a department to clean their PPE, keep it clean (off the apparatus bay floor), and have limited exposure to UV light. Finally, this room should be sized so people can "dress out" while arriving at staggered intervals. In a volunteer department, having this space near the primary volunteer entry and near the PPE storage will help minimize response times.

The bay closest to the Watch Room generally houses the apparatus that is most often utilized, allowing the fastest response times. For safety reasons, the Watch Room is also typically located at the front of the apparatus bay to have direct line of sight while apparatus are leaving the station. The location of the Watch Room in the Platteville Fire Station is at the back of the station. Though this is as centrally located as is possible due to the split nature of the apparatus bay, the amount of apparatus housed in this restricted facility forces staff to weave through and around apparatus to arrive at their apparatus assignment. This not only increases response time but is also increases risk of injury or death.

A work room (rm. 108) was built adjacent to the stairs at some point after initial construction. It is undersized for the departments needs.

The self-contained breathing apparatus (SCBA) clean/fill station is located on the bay floor, with contaminated air (figure 12). Since this station is used to clean and fill the SCBA equipment, its exposure to the carcinogens is not best practice and increases the safety risk to firefighters.

Figure 12

Current best practice for fire stations divide the facility into what are referred to as hot and cold zones of contamination, with a transition/warm zone in between. These

zones are compartmentalized and have mechanical systems with positive and negative pressured systems (air being forced from positively pressured spaces into negatively pressurized spaces) to keep the carcinogens and contaminates contained to specific open areas. Hot zones are thos e with a high level of contamination potential, including the apparatus bay, workshop, and any potential mezzanines. These spaces are negatively pressurized and are designed to have higher levels of fresh air intake into their mechanical systems. The transition/warm zone and all cold zones are positively pressurized. Transition zones include gear laundry, gear turnout, decon hallway(s), decon toilet/showers, SCBA cleaning, and clean/residential laundry. The cold zones are all the living and administration areas. The mechanical systems, in addition to the overall design and layout of this facility does not allow for the hot, cold and transition/warm zones (figure 13).

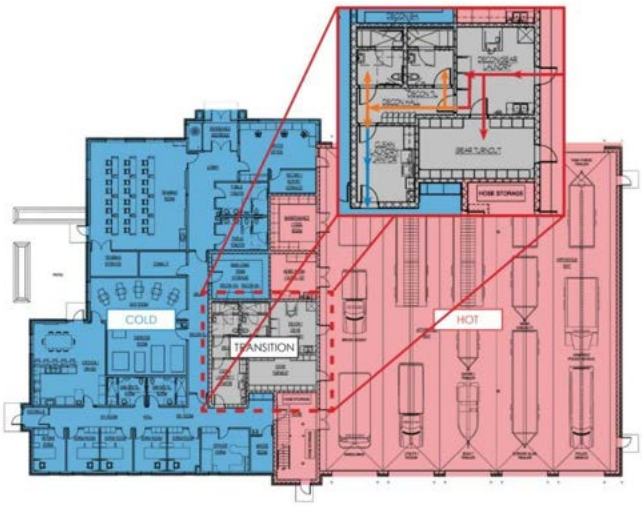


Figure 13

Finally, the facility's main entry is located just off the apparatus bay floor on the corner of Main and Ellen. To enter the station, visitors must ring the doorbell and wait outside to be permitted in. Since the occupiable spaces are upstairs, visitors must wait in the elements. Today, best practice is to allow visitors into a vestibule where a call box is located, so they are able to wait inside the facility. This vestibule can also serve as a safe-zone in urban areas where someone can retreat if threatened.

The lobby is a simple room with access to the apparatus bays, a small historical apparatus, and the stairs to the second floor. Visitors have commented that this is an unwelcoming entryway. (figure 14)

Figure 14

Interior Conditions

Second Floor: Training and Administration

The second floor of the facility provides the occupiable spaces for the department. They include the training room, a day/activity room, two small offices, a conference room, kitchen, toilet rooms, and storage areas. (figure 15)

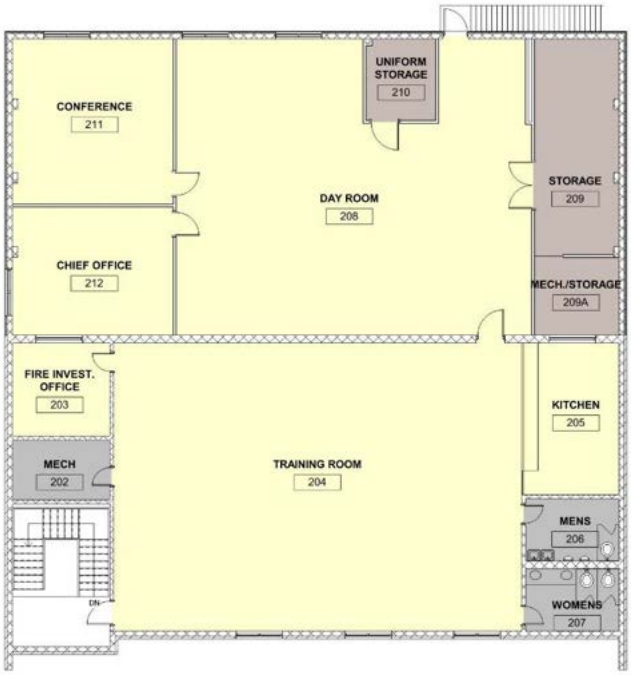


Figure 15

Located at the top of the primary staircase is the departments' training room (rm. 204) (figure 16). This room is of adequate size and has good access to technology. However, being located directly off the primary entry, people accessing any other area of the second floor must pass through this room to reach their destination, including the toilet rooms. These items, as well as the ADA concerns render this training room unavailable to members of the community. Utilization of the training room by the community offers opportunities that are fiscally and personally beneficial for the department and the tax payers.

Figure 16

A small mechanical room (rm. 202) is located just off the Training Room, housing the stations air conditioning unit. The door to this room is often left open to increase air circulation in the room since it does not appear to be adequately vented. The small room also holds a large refrigerator and serves as pantry storage. Ideally, these functions would take place in two separate rooms. The primary source of heat for this floor comes from hot water radiant heat piping, which runs below the floor on the ceiling of the apparatus bay. Though this equipment allows the apparatus bay to be heated, it often causes the second floor to be overheated, forcing occupants to open windows even in cold months.

Adjacent to the mechanical room, the Fire Investigators (rm. 203) office is located just off the training room. This room has new carpet tile flooring and a fresh coat of paint. However, the room is undersized for this position, which requires review of full sets of building plans.

Two multi-user toilet rooms (rm. 206 and 207) and the kitchen (rm. 205) are on the other side of the training room. The toilet rooms have vents that vent directly from the interior to the exterior. However, these vents stopped working years ago. Since that time, the toilet rooms are not vented, which is another code violation.

The kitchen was recently updated and houses a large three-compartment sink and an eight-burner commercial stove. The kitchen is open to the training room and there is no way to separate each space. Many department members feel that a larger kitchen with a food prep area and buffet window to the training room would make the space more functional and efficient.

The back half of the second floor includes the day/activity room (rm.208) (figure 17)

Figure 17

Figure 18

, storage (rm. 209), the chiefs office (rm.212), and the conference room (rm. 211). Typically, a day/activity room is often utilized as a gathering location in between training opportunities and before or after incidents. While viewed occasionally as non-essential by some, a day/recreational room for volunteer departments is critical for the opportunity to overcome the constant challenge of recruiting and retaining volunteers. In addition, this room (similar to a fitness room) provides an incentive for volunteers to be at the station to respond immediately to emergencies directly from the station. Thereby, reducing response times similarly to the way career departments respond without the community having to pay for additional career staff wages and benefits. The current day/recreational room is of adequate size but does not have the separation of space or furniture/equipment typically seen in a conventional day/recreational room.

Cracks in the polished concrete floor were detected. They appear to be superficial, but further investigation should be considered if the station were to undergo a major renovation.

The exercise room, being co-located in the open day room, is limited in size and equipment. A more robust exercise room would allow volunteers to be on-site more often and potentially provide the opportunity for use by City employees.

The chief's office is located in this section of the station (figure 19). Though it is right-sized, it is not near the other full-time staff member (the fire investigator), is far away from the front entry, and is adjacent to a potentially loud day room. Directly next to the fire chief's office is a conference room with seating for eight, with walls lined with storage.

Figure 19

Lastly, two storage rooms are located in this section of the station; one for dress uniforms, and one for all other storage. These rooms are neatly organized but severely undersized for the departments current needs. In the larger storage room (rm. 209) a section of the room has been somewhat walled off with

furniture to create a second room. The smaller of the two (rm. 209A) holds the exhaust fan for the cooking range hood, a mop side, janitorial supplies, and the departments freezers.

Space Needs Analysis

FBD was hired to review the Platteville in terms of facility conditions, facility function and space needs of the department. The space needs of the department will allow us to determine what size facility would be necessary if a new station were constructed.

Care was taken during the programming session to determine the appropriate amount of square footage, while addressing all the needs and concerns of the various entities. FBD then prepared the following program statements, of which greater detail can be found in the appendix of this report.

Platteville Fire Station– Space Needs Analysis

Space	Recommended 20-Year Need
Apparatus Bays	13,022 SF
Apparatus Support	4,958 SF
Training	4,428 SF
Administration / Office	2,943 SF
Living Quarters & Support	2,389 SF
Infrastructure	4,161 SF
Total New Construction	**31,900 SF**

These numbers indicate the maximum amount of square footage FBD feels the department needs based on the programming and discussion with the department. Following the conceptual plan phase, design would move into schematic plans, which would be refined after meetings with end users. The schematic design plans more closely align with the final square footage, which more often than not, decrease during that process.

Conceptual Design

Apparatus Needs:

Prior to considering the existing location as a potential location for a new facility, it is important to understand the size requirements of a contemporary station. Figure 1 is a potential layout of an apparatus bay featuring the departments current apparatus with proper clearances around each vehicle. With the number of apparatus currently housed, PFD would be required to have a minimum of six apparatus bays. Even with these six bays, they will still be required to have several bays with two or three apparatus in each. In order to plan for the future, our concepts were created with eight apparatus bays.

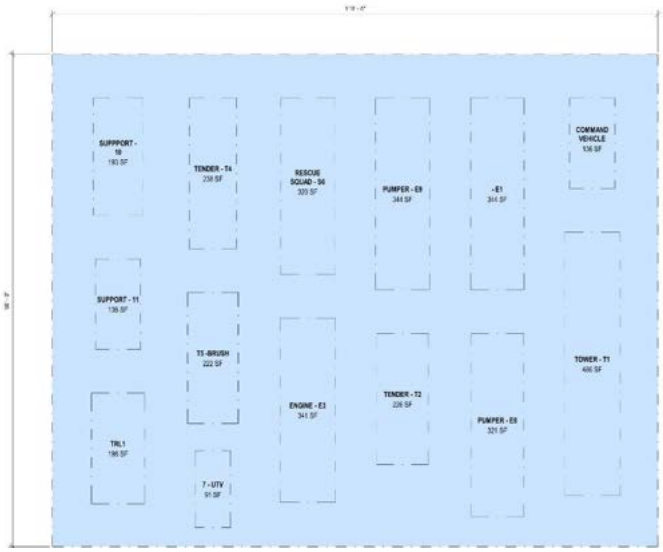


Figure 1

Contemporary bays typically have 14' wide doors and 3' to 4' between each door to allow for proper controls and notification systems. This space allows for ample room between apparatus for staff to open doors, perform general maintenance, and move through the space without any issues. The last bay has at least 5' from the bay door to the exterior wall, which allows space for the exterior wall to be used for storage needs; still allowing the ability to access the apparatus.

Ideally, directly in front of and behind the apparatus bays, concrete aprons are provided that extend 70' to 80' from the facility. This allows departments to park their apparatus on the aprons without impeding pedestrian traffic and allows for turn radius requirements for many of the apparatus, when drive-through bays are not available.

Current Location:

The current location for the PFD Station in downtown Platteville is limited in size. In order to accommodate a right-sized station for the department, the new apparatus would consume nearly the entire lot. The front apron would only be able to be 45' in length, and the station would not have drive-through capabilities. Figure 2 shows the eight apparatus bays in blue with concrete areas in gray. In addition to the apparatus bays, the ground level would need to have space for a Watch Room, Gear Locker Room (PPE), SCBA clean/fill station, a workshop, personal decon zone, stairs to the upper levels, and an elevator. These areas are not shown on this plan at this time. However, if these spaces are added, they would consume the entire site, requiring additional

Figure 2

property to accommodate drive-through bays, on-site parking, and stormwater management. All other occupiable space would be provided on additional stories, creating a three- or four-story facility.

Additionally, if a new station were to be constructed here, the existing structure would have to be razed prior to construction of the new facility, forcing temporary relocation. This renovation would take between ten months and a year to complete.

Due to all of these challenges, further development of this concept was not pursued.

Lewis Street:

In an effort to provide the best response times, two entrances were created for this concept; one for volunteers responding to a call, and one open to the public. Located on the north side, firefighters would respond and park in a dedicated parking lot. They would then enter the facility through a vestibule leading directly into the Watch Room. Once at the station firefighters have immediate access to the Gear Lockers (PPE) where they will don their PPE, and head to their assigned apparatus. The response apron would be approximately 75' long, existing onto Lewis Street.

Figure 3

When returning from a call, firefighters would proceed down the hallway off the apparatus bay to begin personal decon in the Gear Laundry Room, transition through the Decon Hall to Showers, and finally through the Residential Laundry and back to the entryway (decon area shown in red). From this location, firefighters can either exit the facility to return to their vehicles, or head upstairs to the staff support areas.

Located off the apparatus bays, are additional support services including a work room and the SCBA clean and fill station.

On the south side of the station, a return apparatus apron would be provided as well as the main public parking and entry. After entering through a vestibule, visitors would enter a "community area" space with a large and welcoming lobby.

Figure 4

Off the lobby will be access to the administration zone, the training room (with associated kitchen and storage), two toilet rooms, the training/hose tower and the apparatus bay. Visitor entry to these spaces would be controlled with a keycard access system.

The administration area (shown in yellow) features offices for the Fire Chief, the Fire Investigator, and an administrative assistant, and spaces for captains. There is also storage, a large and a small conference room, and a workroom.

The living quarters (shown in green) are located on the second level of the facility providing a clear distinction between the two. (figure 5) A day room is sized to accommodate recreational and living room furniture. Additional spaces on the second floor include, a kitchen; dining room; three individual, all-gender toilet-shower rooms; eight

Figure 5

private dorm rooms; an exercise room; and a mechanical mezzanine. The location of the kitchen, dining, exercise room, and dorms have all been configured to share a straight hallway, leading to the volunteer stairs and fire pole which both enter into the Watch Room. This layout minimizes turns and maximizes direct access to response vehicles.

The stair near the visitor's entry would be a multi-use space. This stair will allow the department to hang dry their hose after an incident; serve as a training tool with rappelling stations, a functionable standpipe, confined space training; and will provide the code required second access to the second floor. The location of this training/hose tower is just off the main entry and the return apron. Being on the return apron will provide a convenient training area if a call were to come in during a training session. Additionally, the public will be able to observe the department training as they access the facility.

A basement would be considered as an alternate bid to accommodate additional program areas (figure 6). These spaces would include additional classroom space for the local technical college, storage for their additional uniforms and PPE, scenario training spaces, and toilet rooms. This space could also be designed as a storm shelter for the department and local community members.

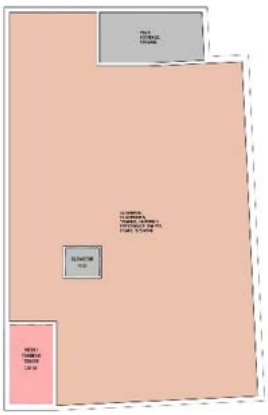


Figure 6

The mechanical system throughout is configured with positive ventilation pressure in all cold and transition zones of the facility, with the apparatus bays having negative pressure. Coupling this with the vehicle exhaust capture system and additional exhaust/fresh air exchange system utilized in the bay, contaminated air from the bays is prevented from entering and being recirculated throughout the remainder of the facility.

In order to construct this facility, the existing structure on the property would have to razed and consideration will be given to the overall layout to accommodate the grade transitions. This site however, provides area for additional future bays to the west; has room to accommodate potential training props; has ample parking area for visitors and volunteers; and creates safe pedestrian and vehicular circulation throughout the site.

Water Street:

Similar to the concept for Lewis Street, two entrances were created for this concept; one for volunteers responding to a call, and one open to the public. Located on the southeast side, firefighters would respond and park in a dedicated parking lot located just across the return apparatus apron. They would then enter the facility through a vestibule leading directly into the Watch Room. After receiving their orders, firefighters have immediate access to the Gear Lockers (PPE) where they will don their PPE, and head to their assigned apparatus. The response apron would be approximately 45' long, exiting onto Water Street, near the Lewis Street intersection. This site would only allow the department to have six apparatus bays.

Figure 7

When returning from a call, firefighters would proceed down the hallway off the apparatus bay to begin personal decon in the Gear Laundry Room, transition through the Decon Hall to Showers, and finally through the Residential Laundry and back to the entryway (decon area shown in red). From this location, firefighters can either exit the facility to return to their vehicles, or head upstairs to the staff support areas.

Located off the apparatus bay are additional support services including a work room and the SCBA clean and fill station.

On the south side of the station is the return apparatus apron.

Due to the configuration of this site, visitors would likely park on the nearby streets, entering into the main entrance on the southwest side of the facility. After entering through a vestibule, visitors would enter a "community area" space with a large and welcoming lobby.

Off the lobby will be access to the administration area, stairs, an elevator and the apparatus bay. Visitor entry to these spaces would be controlled with a keycard access system.

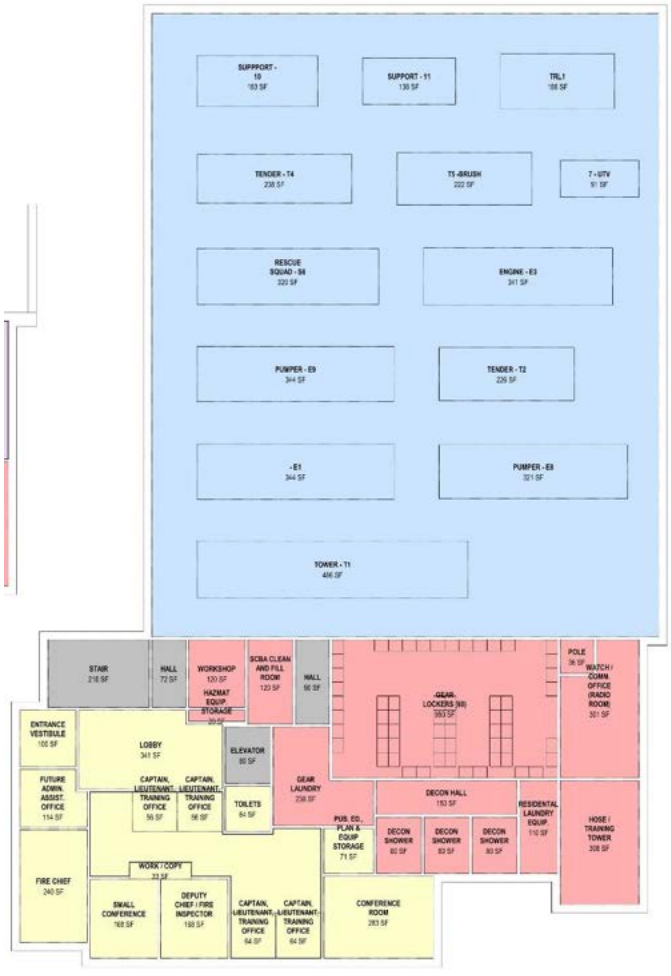


Figure 8

The administration area (shown in yellow) features offices for the Fire Chief, the Fire Investegator, an administrative assistant, and space for captains. There is also storage, a large and a small conference room, and a workroom.

The second level would be a continuation of the community area (shown in purple) with access to the training room, with associated kitchen and storage, exercise room, and two toilet rooms (figure 9). A mezzanine space will open up to the apparatus bay to provide additional storage. The remaining space on this floor could be used for storage, or future program use.

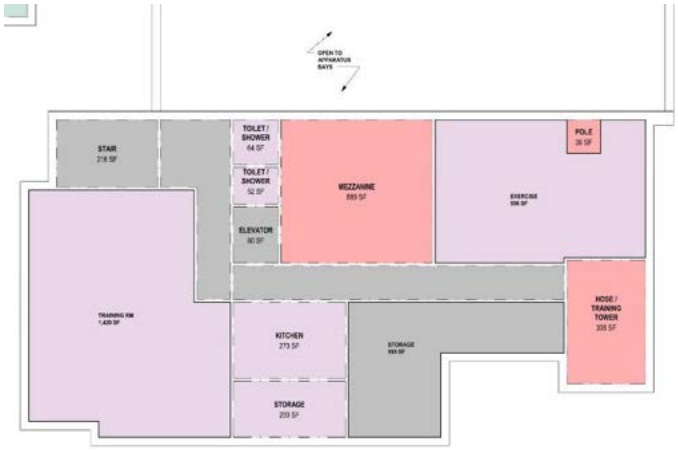


Figure 9

The living quarters (shown in green) are located on the third level of the facility providing a clear distinction between the community, administration, and living areas (figure 10). A day room is sized to accommodate recreational and living room furniture. Additional spaces on the second floor include, a kitchen; dining room; three individual, all-gender toilet-shower rooms; eight private dorm rooms; an exercise room; and a mechanical space. The location of the kitchen, dining, exercise room, and dorms have all been configured to share a hallway, leading to the volunteer stairs accessing the Watch Room or the primary stairs accessing the apparatus bays. This layout minimizes turns and maximizes direct access to response vehicles.

Figure 10

The stair near the volunteer's entry would be a multi-use space. This stair will allow the department to hang dry their hose after an incident; serve as a training tool with rappelling stations, a functionable standpipe, confined space training; and will provide the code required second access to the second floor. The location of this tower is not ideal but does provide adequate access and utilization. Its location does allow the public to observe the training as they walk or drive by the station.

The mechanical system throughout is configured with positive ventilation pressure in all cold and transition zones of the facility, with the apparatus bays having negative pressure. Coupling this with the vehicle exhaust capture system and additional exhaust/fresh air exchange system utilized in the bay, contaminated air from the bays is prevented from entering and being recirculated throughout the remainder of the facility.

In order to construct this facility, the existing structure on the property would have to be razed and consideration will need to be given to the overall layout to accommodate the grade transitions further to the east. With the current site as is, future expansion is not possible and the response apron would only be 45' long. Additionally, though the site is large, it's complex shape will make for challenging and limited parking opportunities. Any parking on the site will force pedestrians to walk across the return apron.

If the city were able to purchase additional adjoining sites, the overall concept for this plan would be reconsidered and be more desirable. Ideally, aligning the response apron with the Water and Lewis street intersection and installing new traffic signals would allow for a safe and expeditious response to emergencies. Additional space could also allow for on-site parking for visitors and safer on-site parking for volunteers.

Probable Costs

Probable cost for each concept is developed by calculating square foot cost. Low and high ranges are established due to the various building materials that the new structure could be. The range is established using costs from Engineering New Record (a national construction cost source) and Five Bugles Designs historical cost data base. It should be assumed that the final construction cost will fall between the low and high range. Once a concept is selected and building material expectations are defined, a final budget will be provided before moving forward. It should be noted that with the various options; base plan, alternate plans, unknown site conditions, material costs, inflation, potential demolition costs, etc., estimates will fluctuate.

Lewis Street Concept

	Low	High	Alternate
New Construction	$6,996,375	$8,551,125	$1,951,250
Other Costs (FF&E, Technology, Contingencies, Soft Costs)	$1,768,384	$2,197,691	$331,713
Total	**$8,764,759**	**$10,748,816**	**$2,282,963**
Total w Alternate	**$11,047,721**	**$13,031,779**	

Water Street Concept*

	Low	High
New Construction	$6,455,250	$7,889,750
Other Costs (FF&E, Technology, Contingencies, Soft Costs)	$1,476,393	$2,035,258
Total	**$8,031,643**	**$9,825,008**

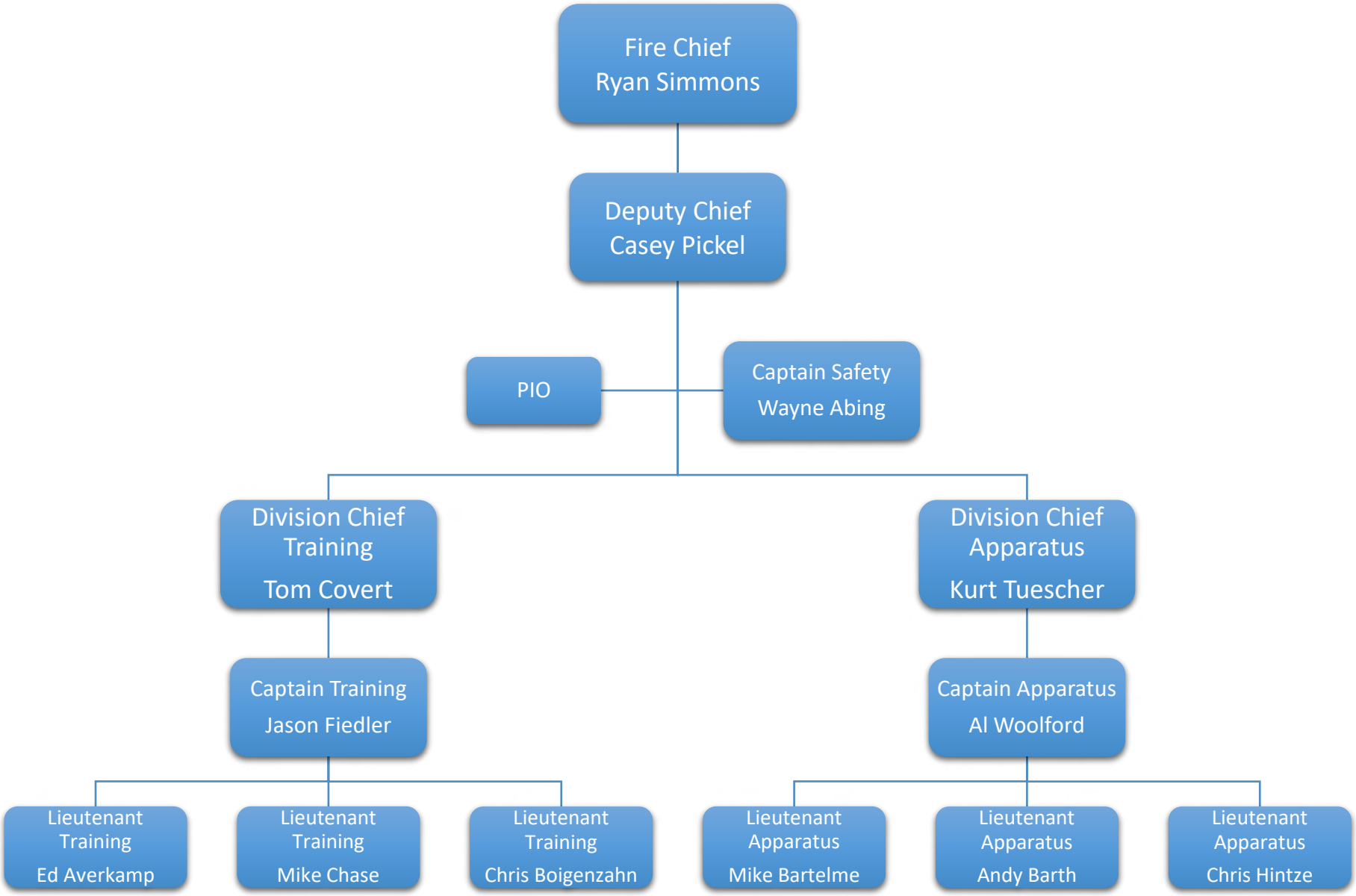
*Site will only allow for six apparatus bays.

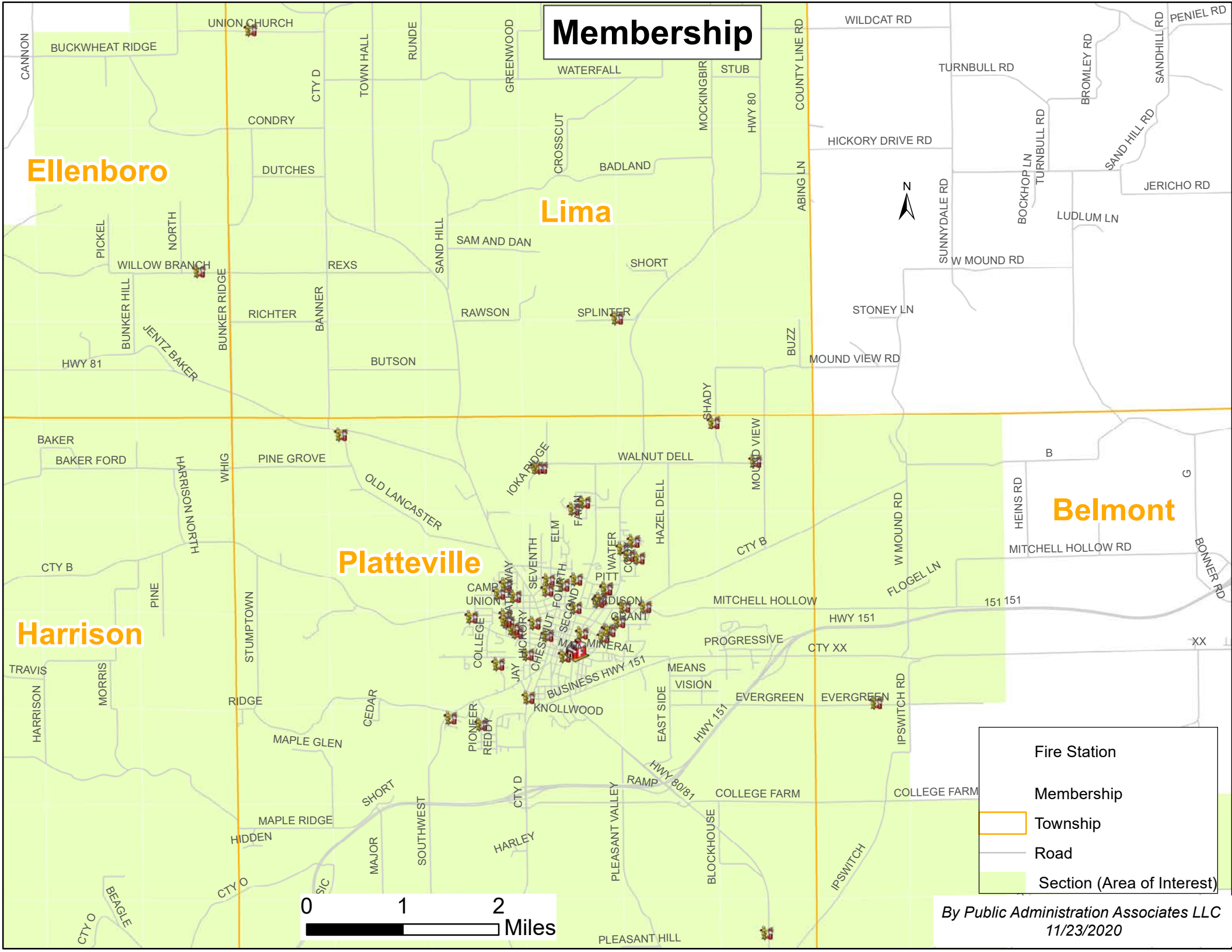
Notes:

1. Due to the plans being on a conceptual level at this point, with many open-ended questions, it is important to note that the estimate includes 10% of contingency. When it is decided to move forward, estimates will be refined at the schematic level and a final budget will be set.
2. Estimates of probable cost are based on 2020 construction costs. Inflationary costs should be added for each year the project is delayed beyond that.
3. Many departments see an average square footage reduction of 20% between conceptual and final design.

Response Maps

Platteville Fire Department Command Structure




Membership
Ellenboro
Lima
Platteville
Harrison
Belmont
UNION CHURCH
BUCKWHEAT RIDGE
CANNON
CTY D
TOWN HALL
RUNDE
GREENWOOD
WATERFALL
STUB
MOCKINGBIRD
HWY 80
COUNTY LINE RD
WILDCAT RD
TURNBULL RD
BROMLEY RD
SANDHILL RD
PENIEL RD
CONDRY
CROSSCUT
BADLAND
HICKORY DRIVE RD
SAND HILL RD
TURNBULL RD
BOCKHOP LN
JERICHO RD
LUDLUM LN
ABING LN
SUNNYDALE RD
W MOUND RD
STONEY LN
MOUND VIEW RD
DUTCHES
PICKEL
NORTH
WILLOW BRANCH
REXS
SAND HILL
SAM AND DAN
SHORT
BUNKER HILL
BUNKER RIDGE
BANNER
RICHTER
RAWSON
SPLINTER
JENTZ BAKER
HWY 81
BUTSON
BUZZ
SHADY
BAKER
BAKER FORD
HARRISON NORTH
WHIG
PINE GROVE
OLD LANCASTER
IOKA RIDGE
WALNUT DELL
MOUND VIEW
HAZEL DELL
FARM
ELM
SEVENTH
FOURTH
SECOND
PITT
WATER
CAMP
UNION
HICKORY
CHESTNUT
MADISON
GRANT
MINERAL
COLLEGE
JAY
CTY B
W MOUND RD
HEINS RD
B
G
MITCHELL HOLLOW RD
BONNER RD
FLOGEL LN
MITCHELL HOLLOW
HWY 151
151
PROGRESSIVE
CTY XX
XX
PINE
STUMPTOWN
TRAVIS
MORRIS
HARRISON
RIDGE
CEDAR
BUSINESS HWY 151
MEANS
VISION
EAST SIDE
EVERGREEN
IPSWITCH RD
KNOLLWOOD
PIONEER
REDDY
MAPLE GLEN
HWY 151
SHORT
CTY D
RAMP
HWY 80/81
COLLEGE FARM
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HIDDEN
MAJOR
SOUTHWEST
HARLEY
PLEASANT VALLEY
BLOCKHOUSE
IPSWITCH
CTY O
BEAGLE
PLEASANT HILL
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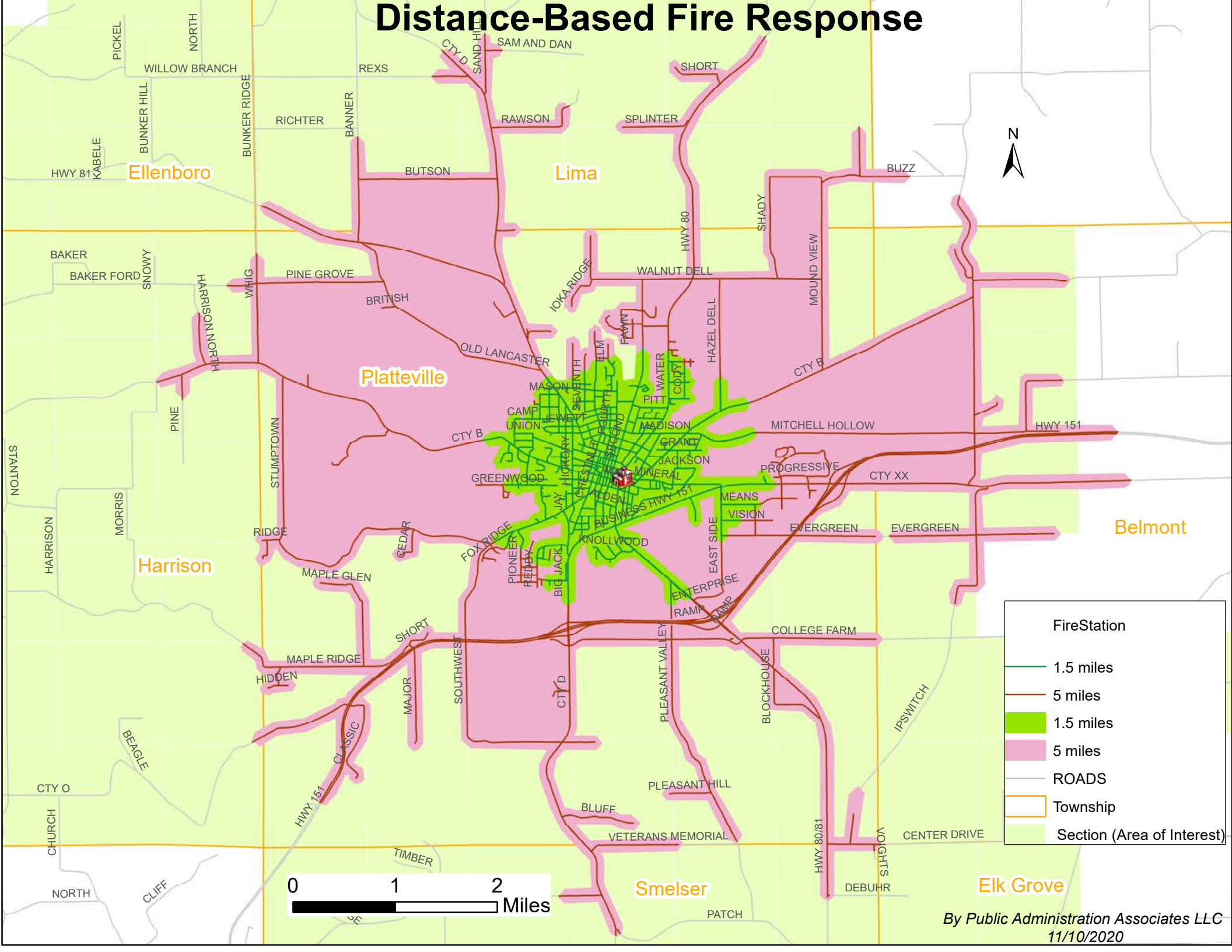
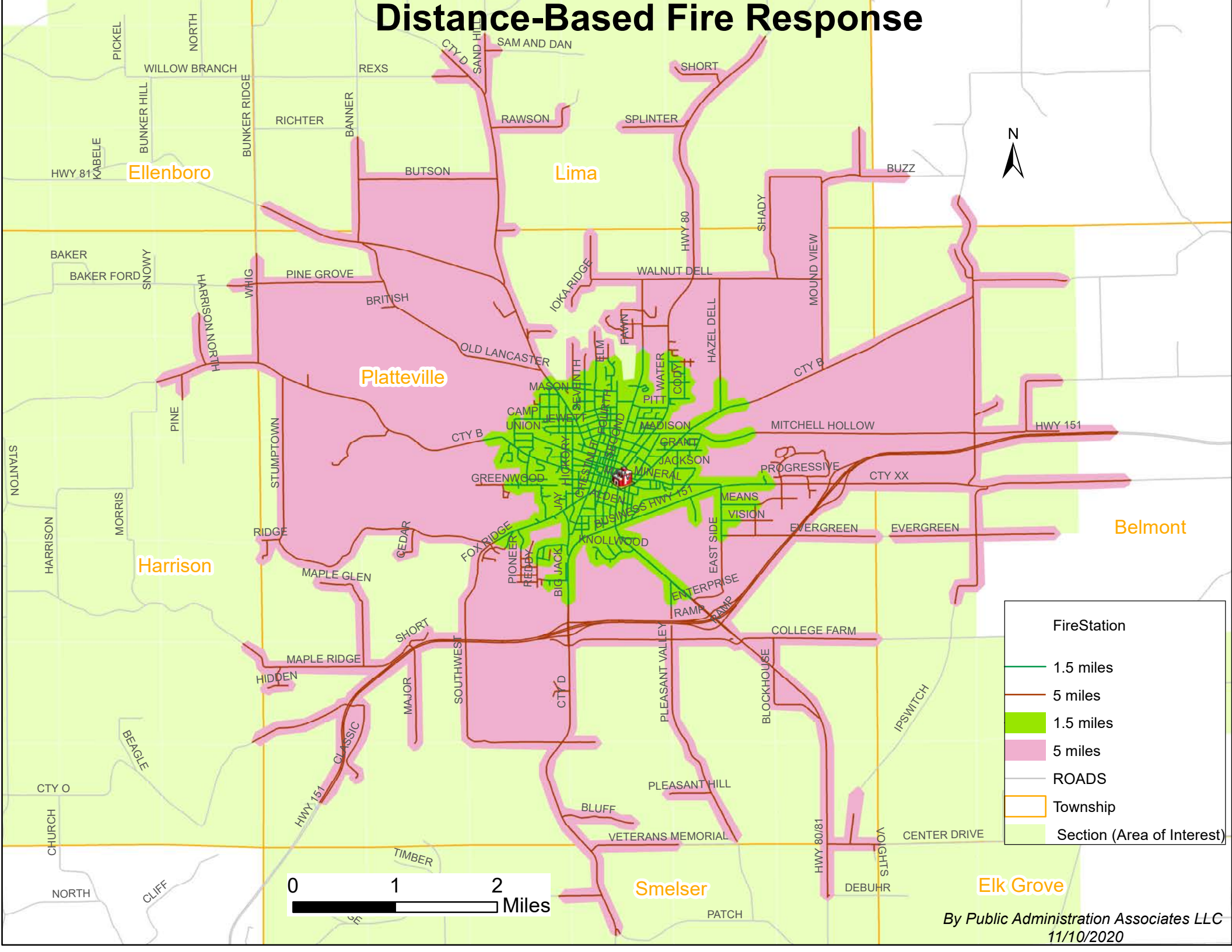
Miles
Fire Station
Membership
Township
Road
Section (Area of Interest)
By Public Administration Associates LLC
11/23/2020

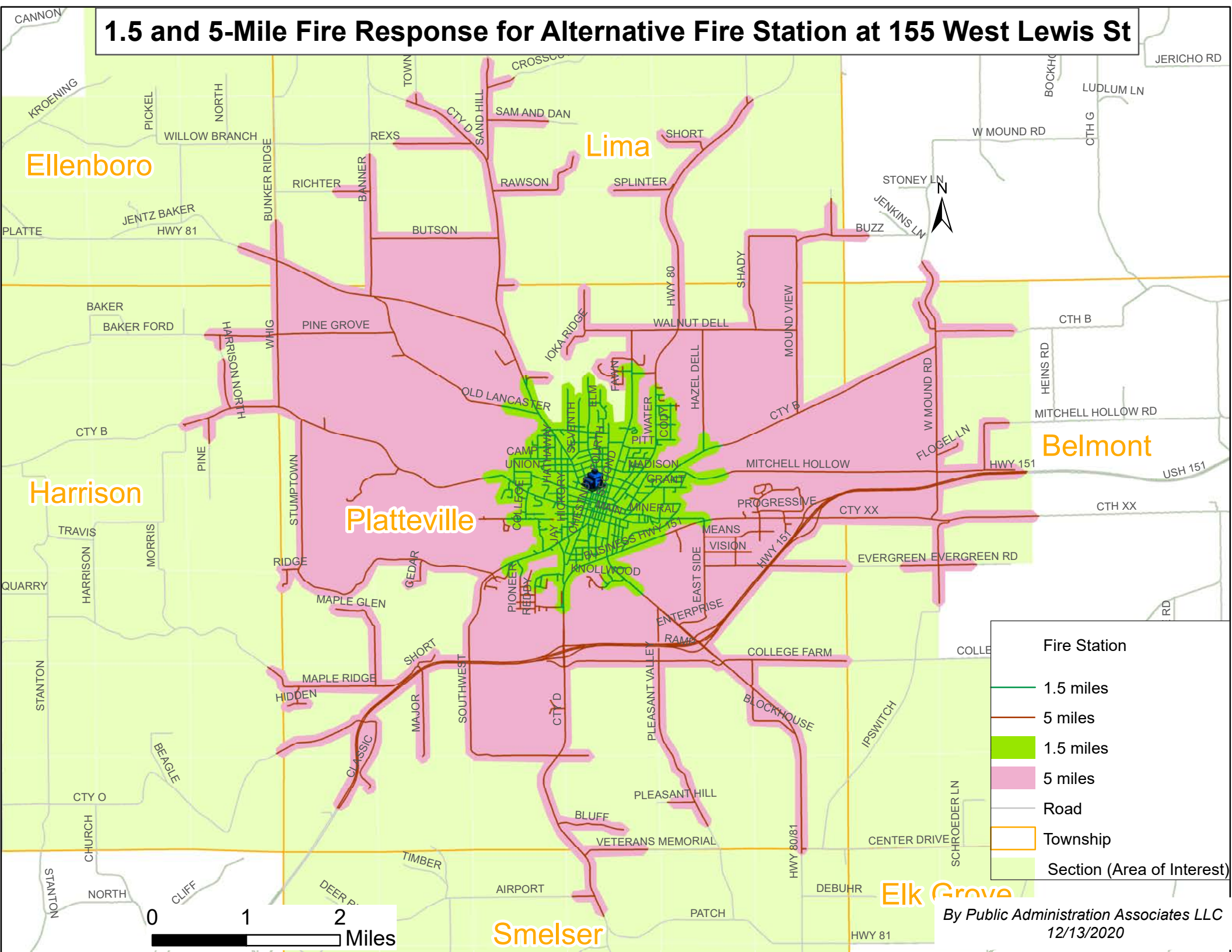
Distance-Based Fire Response



Distance-Based Fire Response



1.5 and 5-Mile Fire Response for Alternative Fire Station at 155 West Lewis St



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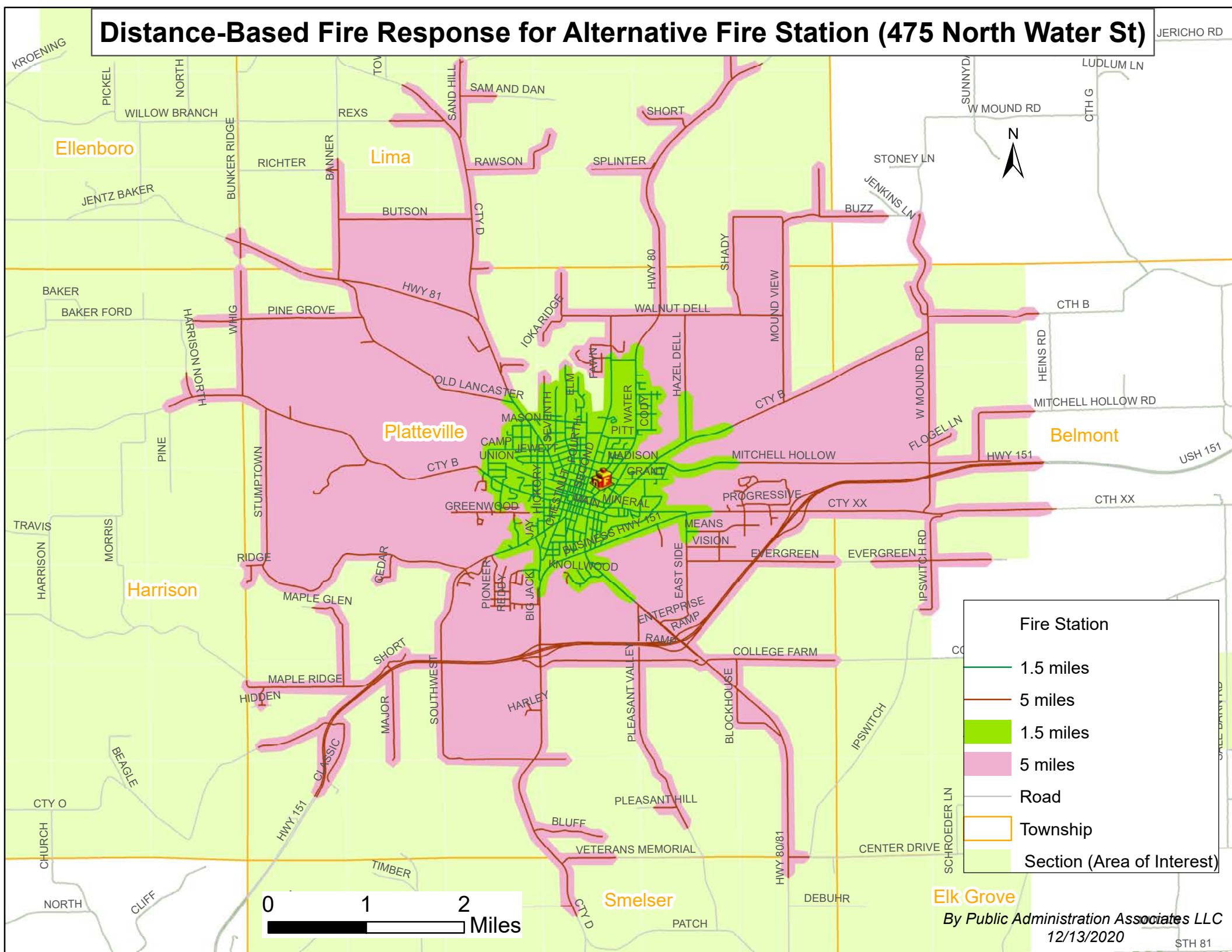
Distance-Based Fire Response for Alternative Fire Station (475 North Water St)



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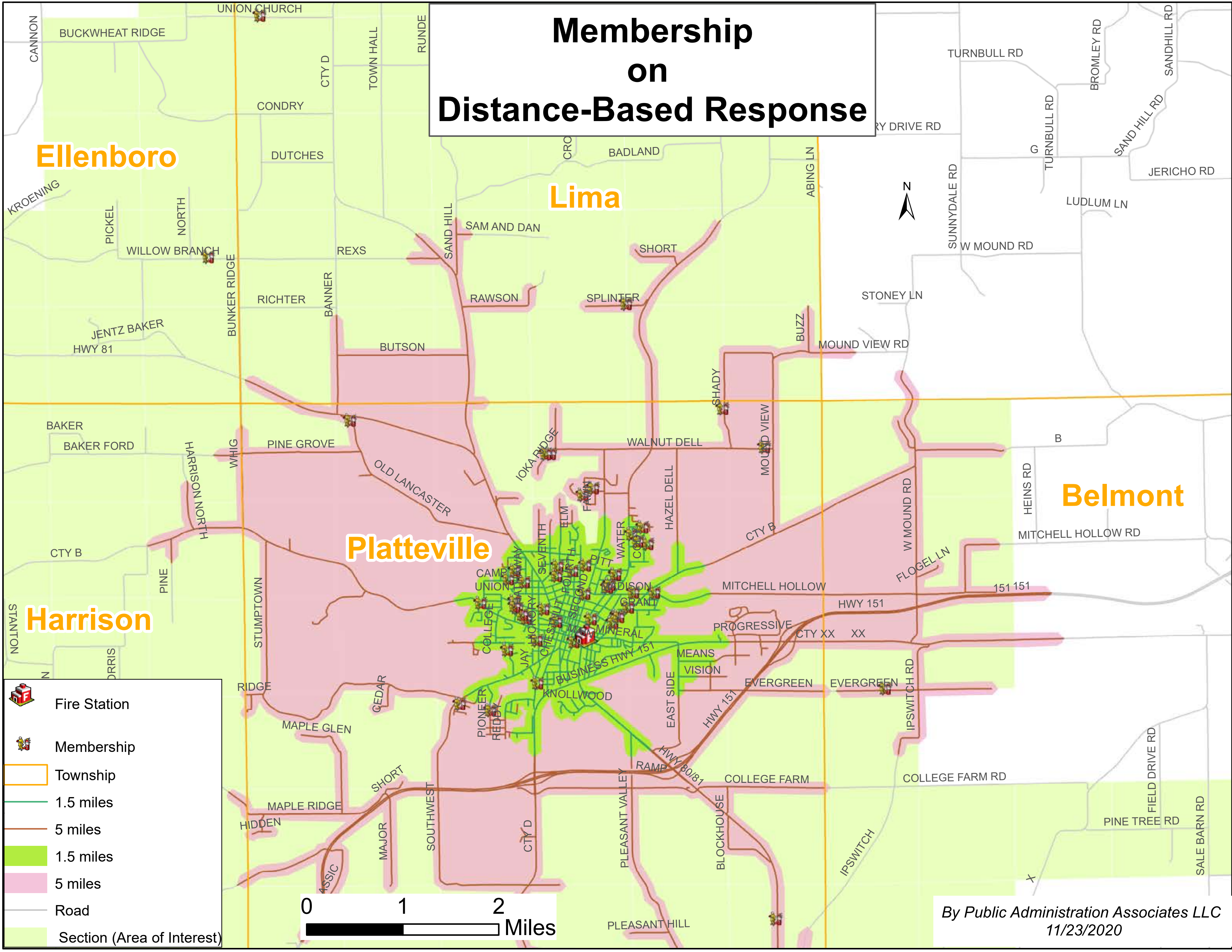
Membership on Distance-Based Response
Ellenboro
Lima
Platteville
Harrison
Belmont
N
Fire Station
Membership
Township
1.5 miles
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Road
Section (Area of Interest)
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By Public Administration Associates LLC
11/23/2020
UNION CHURCH
BUCKWHEAT RIDGE
CANNON
CTY D
TOWN HALL
RUNDE
CONDRY
DUTCHES
BADLAND
TURNBULL RD
BROMLEY RD
SANDHILL RD
SAND HILL RD
JERICHO RD
LUDLUM LN
SUNNYDALE RD
W MOUND RD
KROENING
PICKEL
NORTH
WILLOW BRANCH
REXS
SAND HILL
SAM AND DAN
SHORT
ABING LN
RICHTER
BANNER
BUNKER RIDGE
RAWSON
SPLINTER
STONEY LN
JENTZ BAKER
HWY 81
BUTSON
BUZZ
MOUND VIEW RD
SHADY
MOUND VIEW
BAKER
BAKER FORD
HARRISON NORTH
WHIG
PINE GROVE
IOKA RIDGE
WALNUT DELL
OLD LANCASTER
HAZEL DELL
HEINS RD
W MOUND RD
MITCHELL HOLLOW RD
CTY B
PINE
STUMPTOWN
CTY B
FLOGEL LN
MITCHELL HOLLOW
HWY 151
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STANTON
PROGRESSIVE
CTY XX
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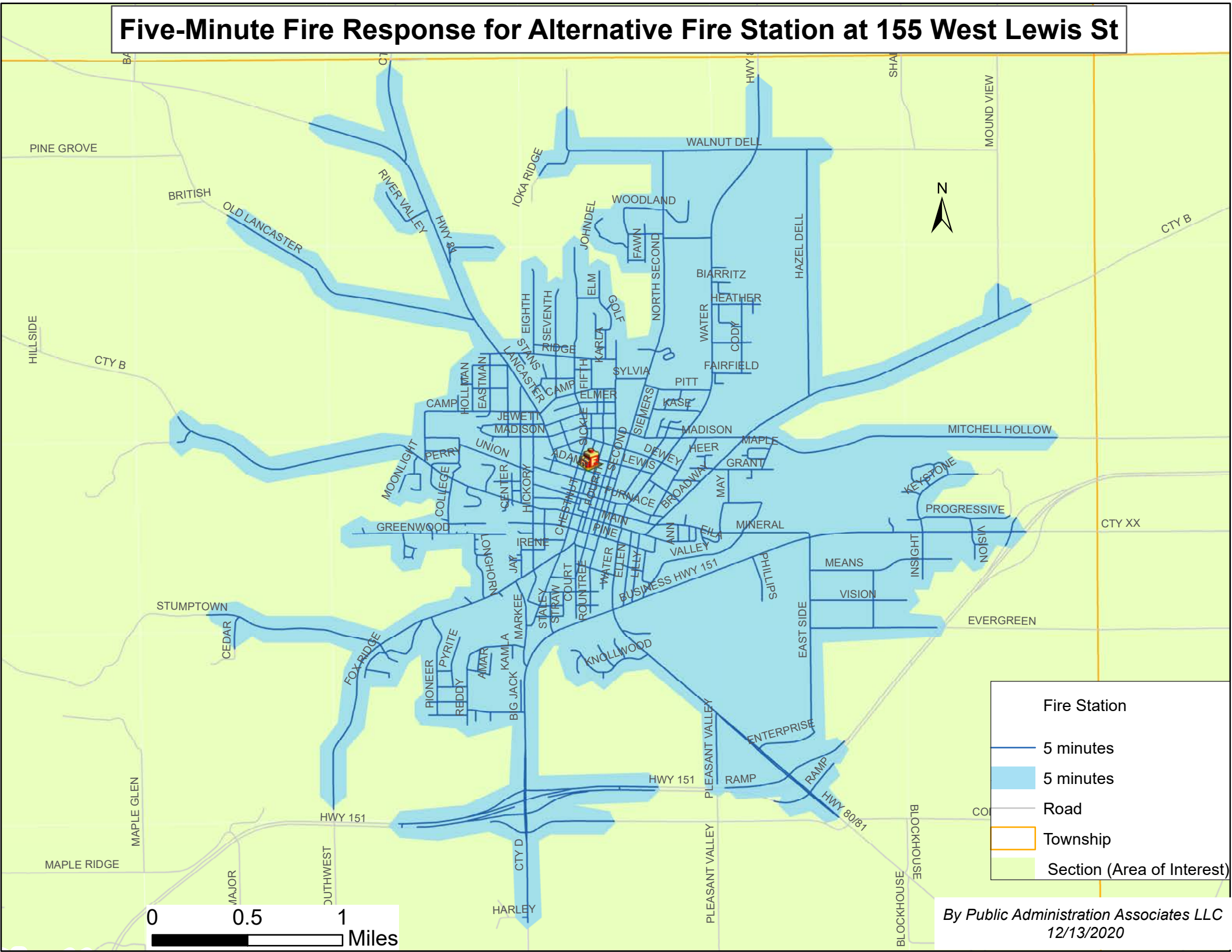
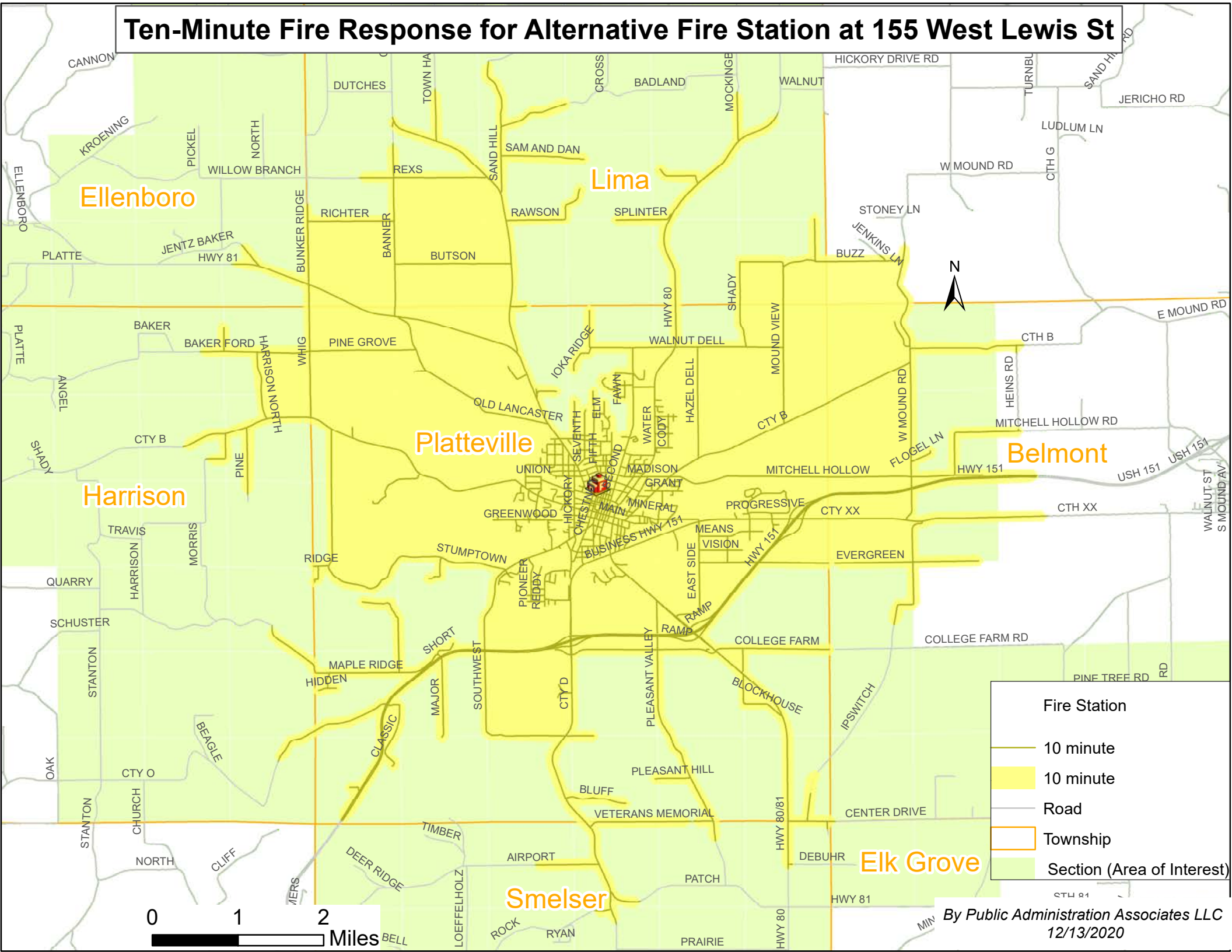
MEANS
VISION
BUSINESS HWY 151
KNOLLWOOD
EVERGREEN
EVERGREEN
IPSWITCH RD
EAST SIDE
HWY 151
RIDGE
CEDAR
MAPLE GLEN
PIONEER
SHORT
MAPLE RIDGE
HIDDEN
MAJOR
SOUTHWEST
CTY D
PLEASANT VALLEY
RAMP
HWY 80/81
COLLEGE FARM
COLLEGE FARM RD
BLOCKHOUSE
IPSWITCH
FIELD DRIVE RD
PINE TREE RD
SALE BARN RD
PLEASANT HILL

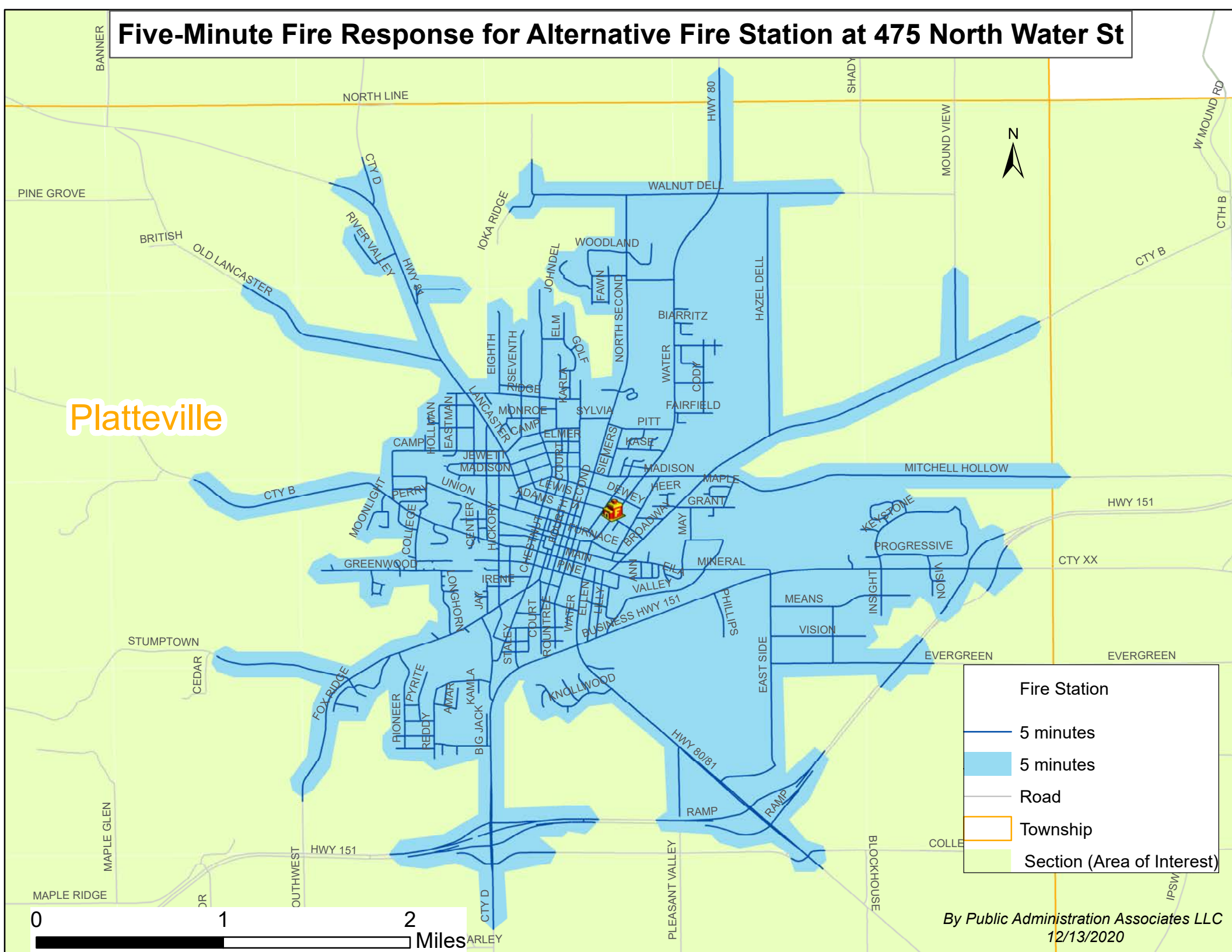
Five-Minute Fire Response for Alternative Fire Station at 155 West Lewis St



By Public Administration Associates LLC
12/13/2020

Ten-Minute Fire Response for Alternative Fire Station at 155 West Lewis St




Five-Minute Fire Response for Alternative Fire Station at 475 North Water St
Platteville
NORTH LINE
PINE GROVE
BRITISH
OLD LANCASTER
CTY D
RIVER VALLEY
HWY 80
IOKA RIDGE
WALNUT DELL
WOODLAND
JOHNDEL
FAWN
HWY 80
SHADY
MOUND VIEW
W MOUND RD
CTH B
CTY B
HAZEL DELL
BIARRITZ
NORTH SECOND
WATER
CODY
FAIRFIELD
EIGHTH
SEVENTH
RIDGE
ELM
GOLF
KARLA
LANCASTER
MONROE
SYLVIA
PITT
CAMP
ELMER
KASE
HOLLMAN
EASTMAN
JEWETT
MADISON
COURT
SIEMERS
MADISON
MITCHELL HOLLOW
UNION
LEWIS
ADAMS
SECOND
DEWEY
HEER
MAPLE
GRANT
MOONLIGHT
PERRY
COLLEGE
CENTER
HICKORY
FURNACE
BROADWAY
MAY
KEYSTONE
HWY 151
PROGRESSIVE
GREENWOOD
MAIN
PINE
ANN
ELM
VALLEY
MINERAL
CTY XX
IRENE
LONGHORN
JAY
CHESTNUT
COURT
ROUNTREE
WATER
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LILY
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INSIGHT
VISION
VISION
STUMPTOWN
CEDAR
FOX RIDGE
PYRITE
PIONEER
REDDY
AMAR
KAMLA
BIG JACK
STACEY
KNOLLWOOD
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MAPLE RIDGE
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BLOCKHOUSE
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IPSW
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Fire Station
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Section (Area of Interest)
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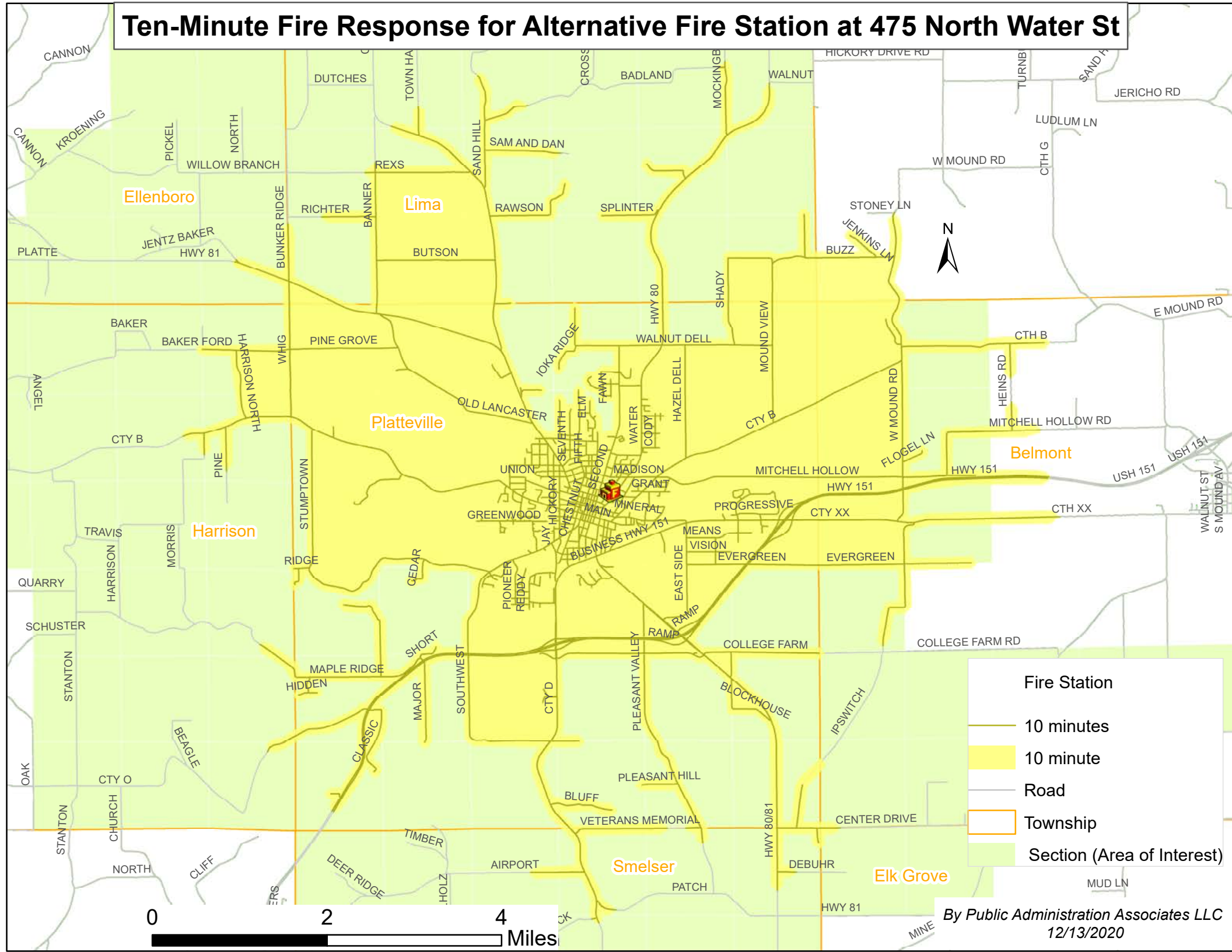
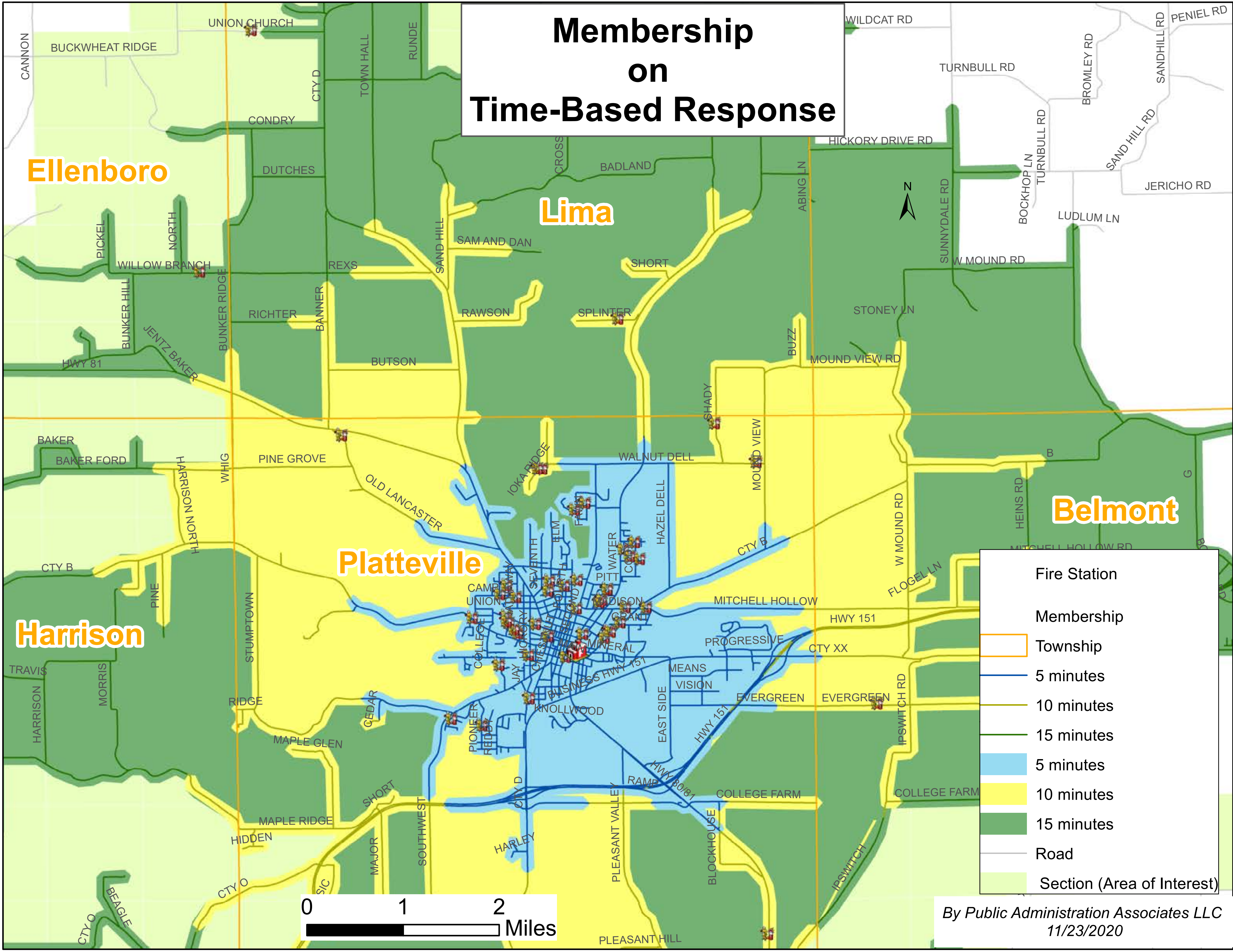
Miles
By Public Administration Associates LLC
12/13/2020

Ten-Minute Fire Response for Alternative Fire Station at 475 North Water St



By Public Administration Associates LLC
12/13/2020


Membership
on
Time-Based Response
Ellenboro
Lima
Platteville
Belmont
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UNION CHURCH
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BROMLEY RD
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EVERGREEN
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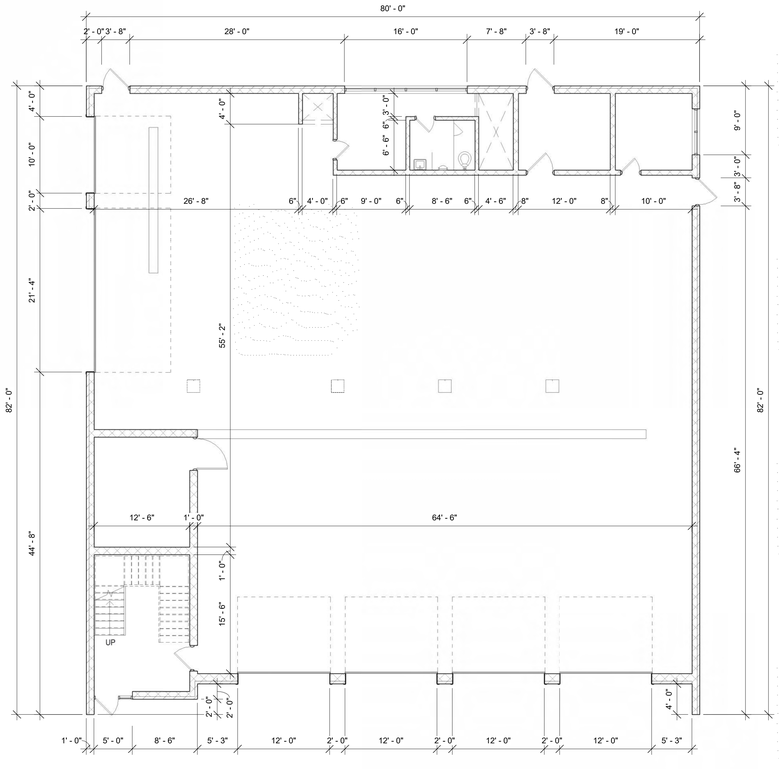
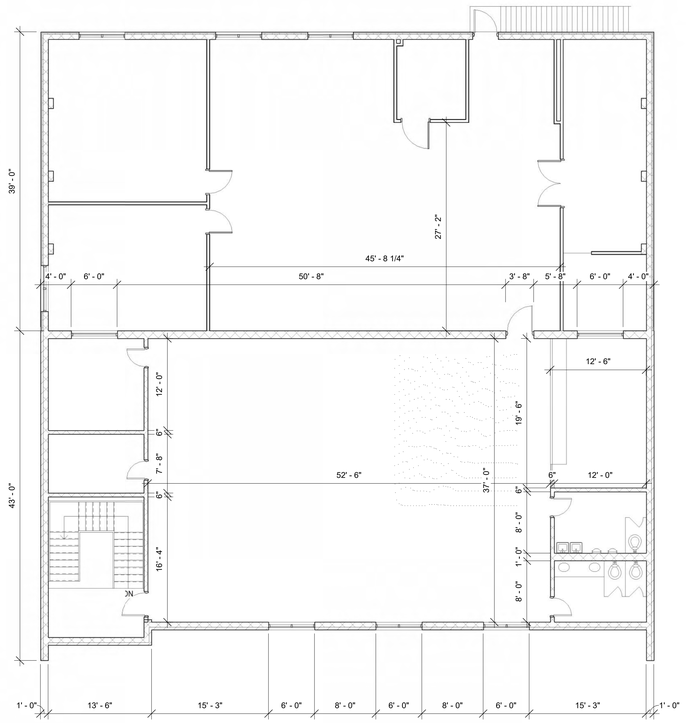
IPSWITCH RD
KNOLLWOOD
EAST SIDE
HWY 151
PIONEER
REIDY
MAPLE GLEN
SHORT
RAMP
HWY 80/81
COLLEGE FARM
COLLEGE FARM
CTY D
MAPLE RIDGE
HIDDEN
SOUTHWEST
MAJOR
HARLEY
PLEASANT VALLEY
BLOCKHOUSE
IPSWITCH
CTY O
BEAGLE
CTY O
PLEASANT HILL
0 1 2
Miles
Fire Station
Membership
Township
5 minutes
10 minutes
15 minutes
5 minutes
10 minutes
15 minutes
Road
Section (Area of Interest)
By Public Administration Associates LLC
11/23/2020

Existing Building Plans



1 FIRST FLOOR
SCALE: 1/8" = 1'-0"



2 SECOND FLOOR
SCALE: 1/8" = 1'-0"

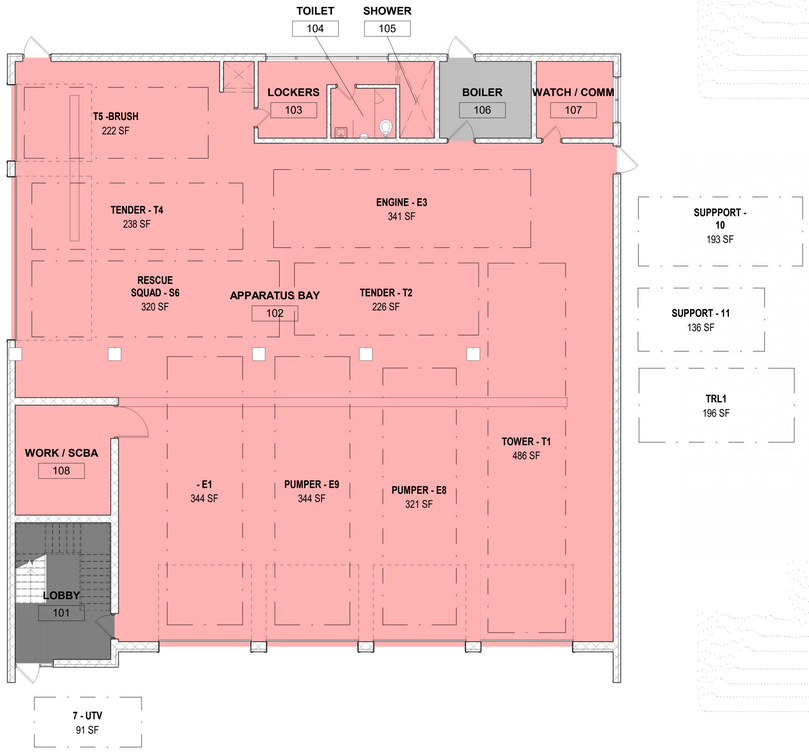
PLATTEVILLE FIRE STATION

STUDY - 02-17-2021

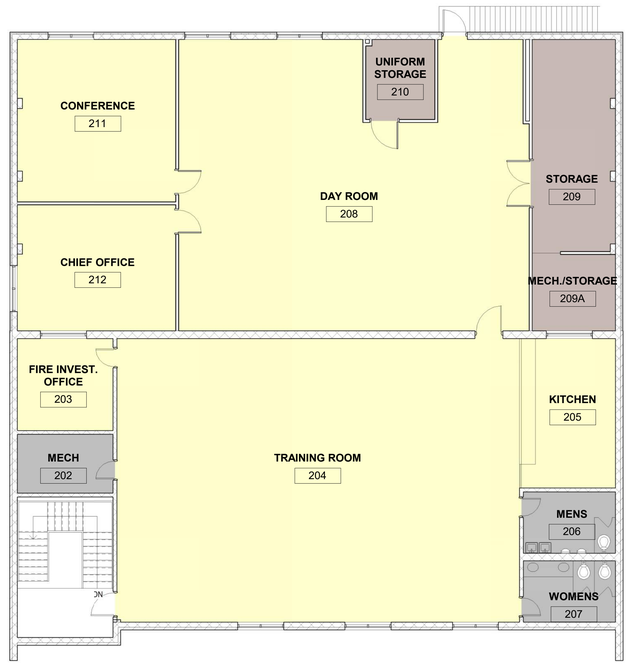
Platteville, WI

PROJECT NUMBER: 908901

wendel Home of the Award Winning Five Bugles Design™



1 FIRST FLOOR
SCALE: 1/8" = 1'-0"



2 SECOND FLOOR
SCALE: 1/8" = 1'-0"

PLATTEVILLE FIRE STATION

STUDY - 02-17-2021

Platteville, WI

PROJECT NUMBER: 908901

wendel Home of the Award Winning Five Bugles Design™

Space Needs Analysis

Space Needs Analysis

Project: Fire Department

Location: **Date:** **14-Dec-17**

Apparatus Bays

Spaces	Existing	Length	x	Width	=	Ft²	Quantity	Total Ft²	Proposed Bay	Notes
Engines /Pumpers										
Engine(s)		45	x	18	=	810	4	3240		
Rescue Pumper - Mini-Pumper		45	x	18	=	810	1	810		Mini-pumper: truck 5
Quint		90	x	18	=	1620	0	0		
Aerial Apparatus										
Ladder/Snorkel		90	x	18	=	1620	0	0		
Aerial Platform		90	x	18	=	1620	1	1620		Tower 1
Telesquirt		90	x	18	=	1620	0	0		
Heavy Rescue Units										
Rescue Squad		45	x	18	=	810	1	810		Squad 6
Tender		45	x	18	=	810	2	1620		
Light Trucks/SUV's/Pickups										
Medium or Light Rescue		45	x	18	=	810	0	0		
Command Vehicle		25	x	18	=	450	1	450		SUV - C1
Utility/Pickup		25	x	18	=	450	1	450		Truck 10
Arson Unit		45	x	18	=	810	0	0		
Inspections Vehicle(s)		25	x	18	=	450	1	450		SUV - Truck 11
Wildland Unit		45	x	18	=	810	0	0		
RIT Unit		20	x	20	=	400	0	0		
Trailers										
Haz Mat		22	x	18	=	396	0	0		Might have one in future? Currnelty County Owned
UTV Trailer		22	x	18	=	396	1	396		
UTV		22	x	18	=	396	1	396		
Mass Casualty Unit		22	x	18	=	396	0	0		Stored at hospital
Boat		22	x	18	=	396	0	0		
Snowmobile/ATV		22	x	18	=	396	0	0		
Technical Rescue		22	x	18	=	396	0	0		Future? County Owned
Portable Pump		22	x	18	=	396	0	0		
Firefighter Rehab Unit		22	x	18	=	396	0	0		
SCBA Clean and Fill		22	x	18	=	396	0	0		
Portable lights		22	x	18	=	396	0	0		
Other Equipment/Space										
Parade Vehicle/Trailer		25	x	18	=	450	3	1350		Have 2 antique 1912 engine & 1912 ladder & hose cart. Display or garage - needs to be stored
Vehicle Maintenance Bay		45	x	18	=	810	0	0		
Wash Bay		45	x	18	=	810	0	0		Need the ability for washing but do not need a dedicated wash bay. DO want underbody washing abilities
Building Maintenance Equip		20	x	20	=	400	0	0		Do some in-house maintenance, want to be able to tip the trucks to do some .
EMS										EMS is provided by local hospital. Long-term commitment. Might do first responders on staff in future
Ambulance		45	x	18	=	810	0	0		
First Responder - EMR		45	x	18	=	810	1	810		FUTURE
EMS Command Vehicle		45	x	18	=	810	0	0		
Mass Casualty Trailer		22	x	18	=	396	0	0		
Staff Support Unit		25	x	18	=	450	0	0		
Other Space Need		0	x	0	=	0	0	0		
TOTAL	**0**						**18**	**12,402**		**Subtotal (Ft²)**
								620		Efficiency Ratio of 5%
								13,022		**Apparatus Floor Total (Ft²)**

= Existing Equipment

= Future Equipment

See also Training for other Apparatus and Large Equipment

Apparatus Bay Sizing Table (Ft²)

Number of Bays		3	4	5	6	7	8
		Length					
		60	80	100	120	140	160
Depth	60	3600	4800	6000	7200	8400	9600
	80	4800	6400	8000	9600	11200	12800
	90	5400	7200	9000	10800	12600	14400
	100	6000	8000	10000	12000	14000	16000

Space Needs Analysis

Project: Fire Department

Location: **Date:** **14-Dec-17**

Apparatus Support

Spaces	Existing	Length	x	Width	=	Ft²	Quantity	Total Ft²	Notes
Hose/Training Tower		30	x	20	=	600	1	600	Ladders, Could have burn prop accessbile, but does not need to be.
Hose/Gear Dryer		8	x	10	=	80	0	0	Hang their hoses.
Protective Gear Lockers		5	x	2	=	10	60	600	One set of PPE. 60 people is fully staffed. Start with 30" lockers to begin with> have structural and wildland gear in lockers
Decon Spaces									
Equipment Decon		5	x	6	=	30	1	30	Cleaning backboards, etc.
Gear Dryer		5	x	6	=	30	1	30	Would want one cabinet type dryer
Gear Laundry		10	x	10	=	100	1	100	Commercial extractor and dryer
Decon Shower		8	x	10	=	80	3	240	full time staff memebers. On-call will still be i
Residential Laundry Equip.		8	x	10	=	80	1	80	See also Living Quarters
SCBA Equipment									
Compressor Room		8	x	8	=	64	1	64	
SCBA Clean and Fill Room		8	x	15	=	120	1	120	Compressor and SCBA fill are one unit. Have 5 training SCBA units they'd like to store there.
Workshop		10	x	12	=	120	1	120	Hand tools. Currently a catch all right now. Would want it a bit bigger than what they have now. Center work bench/work table for larger items
Storage		4	x	4	=	16	1	16	
Hazardous Material Storage		4	x	4	=	16	0	0	
Hazmat Equipment Storage		10	x	10	=	100	1	100	
General Storage		10	x	10	=	100	1	100	
Dirty Toilet		10	x	10	=	100	0	0	
Mezzanine		80	x	20	=	1600	1	1600	Have a compressor for their apparatus, too
Watch/Comm Office - Radio Room		18	x	14	=	252	1	252	
POC Staging Area		8	x	12	=	96	0	0	
Medical Related Spaces									
EMS Report Writing		8	x	12	=	96	0	0	
EMS Storage		8	x	10	=	80	1	80	
Regulated Storage		6	x	6	=	36	0	0	
Bio Hazard Control		6	x	6	=	36	0	0	
Janitors Closet		8	x	4	=	32	0	0	In decon area
TOTAL	**0**							4,132	**Subtotal (Ft²)**
								826	Efficiency Ratio of 20%
								4,958	**Apparatus Support Total (Ft²)**

Space Needs Analysis

Project: Fire Department

Location: **Date:** **14-Dec-17**

Training

Spaces	Existing	Length	x	Width	=	Ft²	Quantity	Total Ft²	Notes
Training Room/Community Room		35	x	50	=	1750	1	1750	A dividable space would be good. Consider a basement to allow physical training and then have a formal training room that can be divided. Like the size of their current training romo
Training Storage		12	x	12	=	144	0	0	
Table and Chair Storage		10	x	12	=	120	1	120	
General Storage		10	x	12	=	120	1	120	
General Storage - Training in Basement?		10	x	12	=	120	1	120	If we have a physical training room, having a space for matts and props will useful
Kitchen/Kitchenette		16	X	12	=	192	1	192	Commercial - sim to what they have now . Only needs to be accessible from one side - would want roller windows. Could have warming countertop outside of that space for community room
Physical Fitness									
Exercise Room		30	x	35	=	1050	1	1050	Would want agility space in addition to equipment space. Might be open to city emplooyees in future
Wellness space		8	x	10	=	80	0	0	Steam or other decontamination space
Locker Room(s)		3	x	10	=	30	1	30	Cubbie space or small lockers
Shower/Toilets		8	x	10	=	80	2	160	One can be toilet and one toilet shower
Large Training Props		20	x	24	=	480	0	0	
								Sub Total	**4427.5**
									Includes efficiency ratio
								Proposed Bay	
Tempered Storage									If they have internal space, they will use it, if not they will have small storage needs: grill for fundraisers, snow blowers
Building Maintenance Equipment		20	x	20	=	400	0	0	
Training Props		10	x	20	=	200	0	0	
General Storage		10	x	20	=	200	0	0	
Mobile Live Burn Trlr (MLFTU)		60	x	16	=	960	0	0	
Mobile Training Tower (MTT)		60	x	16	=	960	0	0	
Ventilation Trlr (Vent)		40	x	16	=	640	0	0	
Driving Simulator (Driving)		40	x	16	=	640	0	0	
Tractor Trailer (semi)		30	x	16	=	480	0	0	
Survive Alive Trailer		40	x	16	=	640	0	0	
Portable lighting		24	x	16	=	384	0	0	
Boat and Trailer		35	x	16	=	560	0	0	
Snowmobile/ATV/Trailer		16	x	16	=	256	0	0	
Other									
								Sub Total	**0**
									Includes efficiency ratio
TOTAL	**0**								

3,542		**Subtotal (Ft²)**
886		Efficiency Ratio of 25%
4,428		**Training Total (Ft²)**

Space Needs Analysis

Project: Fire Department

Location: **Date:** **14-Dec-17**

Administration/Office Spaces

Spaces	Existing	Length	x	Width	=	Ft²	Quantity	Total Ft²	Notes
Fire Chief		20	x	12	=	240	1	240	
Deputy Chief		16	x	12	=	192	1	192	Casey - Deputy / Fire Inspector
Small Conf off Inspectors Office		12	x	14	=	168	1	168	n inspectors office? Plan review, meeting with c
Fire Marshal/Investigator		16	x	12	=	192	0	0	Officer in charge does this
Evidence Storage		6	x	8	=	48	0	0	
Plan/Equip Storage		8	x	8	=	64	1	64	Do small amount of plan review.
Deputy/Battalion Chiefs		30	x	10	=	300	0	0	
Sleeping Room		10	x	13	=	130	0	0	
Toilet/Shower		8	x	10	=	80	0	0	
Captain/Lieutenant/Training Office		8	x	8	=	64	4	256	ared office. 8 people, but can share 4 work spac
Pub Ed Office		14	x	12	=	168	0	0	Fire Inspector will do this
Pub Ed Storage		6	x	8	=	48	1	48	
Inspections Unit									
Inspectors Office		14	x	12	=	168	0	0	
Plan Review		18	x	12	=	216	0	0	
Conference Room		18	x	14	=	252	0	0	
Resource Library		2	x	10	=	20	0	0	
Record Storage		14	x	12	=	168	0	0	
Future Office		16	x	10	=	160	1	160	Could be off a training room - hoteling office
Administrative Assist. Office		16	x	12	=	192	1	192	Future
Fax/Work/Copy		8	x	10	=	80	1	80	
Record Storage		8	x	10	=	80	0	0	
Misc. Office Supplies		4	x	6	=	24	0	0	
Conference Room		20	x	20	=	400	1	400	14-16 people
Staff Toilets		8	x	8	=	64	0	0	
Study/Work Area		8	x	10	=	80	0	0	Could utilize the small conference room
Resource Library		2	x	10	=	20	0	0	Shelf in the admin area
New Gear and Uniform Storage		8	x	16	=	128	0	0	
General Storage		8	x	10	=	80	0	0	
Communications/ IT		10	x	10	=	100	0	0	
Public/Support Spaces									
Entrance Vestibule		10	x	10	=	100	1	100	
Lobby - Museum		10	x	15	=	150	1	150	LOT of memorabilia
Walk-in Med Check/Ed Space		6	x	8	=	48	0	0	
Public Toilets		10	x	14	=	140	2	280	
Elevator		10	x	20	=	200	0	0	
Stairs		24	x	10	=	240	0	0	
Janitors Closet		6	x	4	=	24	1	24	
TOTAL	**0**							2,354	**Subtotal (Ft²)**
								589	Efficiency Ratio of 25%

2,943	**Administration/Office Spaces Total (Ft²)**

NOTES:

Fire Chief's office is sized for an executive desk/credenza with separate table with seating for up to 6.

Battalion Chief Suite consists of the following: Open office space with 3 work stations, single-bed sleeping room, toilet room with shower.

Space Needs Analysis

Project: Fire Department

Location: **Date:** **14-Dec-17**

Staff Support

Spaces	Existing	Length	x	Width	=	Ft²	Quantity	Total Ft²	Notes
Day Room / Rec Room		20	x	20	=	400	1	400	Pool table, ping pong, recliners, TVs
Kitchen		20	x	20	=	400	0	0	Will use the kitchen from the training room.
Pantry		3	x	3	=	9	3	27	
Dining		20	x	15	=	300	1	300	8-10 people
Dorm Room		10	x	13	=	130	8	1040	
Restrooms/Showers		8	x	8	=	64	1	64	
Linen Closet		6	x	8	=	48	0	0	
Supply Closet		4	x	5	=	20	0	0	
Residential Laundry / Linen / Supply / Janitor		8	x	10	=	80	1	80	
Janitor's Closet		6	x	6	=	36	0	0	
TOTAL	0								

1,911	Subtotal (Ft²)
478	Efficiency Ratio of 25%
2,389	Living Quarters Spaces Total (Ft²)

Space Needs Analysis

Project: Fire Department

Location: **14-Dec-17**

Site

Spaces	Existing	Quantity	Notes
Parking			
Fire Staff Parking		50	
EMS Staff Parking		0	
Public Parking		30	
Other Parking		0	
Total Parking		**80**	
Fire Apparatus Apron		1	
EMS Apparatus Apron		0	
Outdoor Training		1	
Outdoor Patio		1	
Enclosed Dumpster		1	
External Generator		1	
Storm Water Treatment		1	
Heliport Pad		0	
Extrication pavement		1	
Detatched storage building		0	desired for lawn maintenance. Could have a truck with plow in the future?
Other		0	
Other		0	
Other		0	

Space Needs Analysis

Project: Fire Department

Location: **Date:** **14-Dec-17**

Totals			Existing Areas
Apparatus Bays	13,022		0
Apparatus Support	4,958		0
Training	4,428		0
Administration/Office	2,943		0
Staff Support	2,389		0
Tempered Spaces	0		0
	27,739	Station Footprint (Ft^2) Sub Total	0
	4,161	Infrastructure (M & E) Space Factor 15%	
	31,900	TOTAL PROGRAM SPACE REQUIRMENT	

NOTES:

Conceptual Plans

1 00 - SITE PLAN - W. LEWIS STREET
SCALE: 1" = 20'-0"

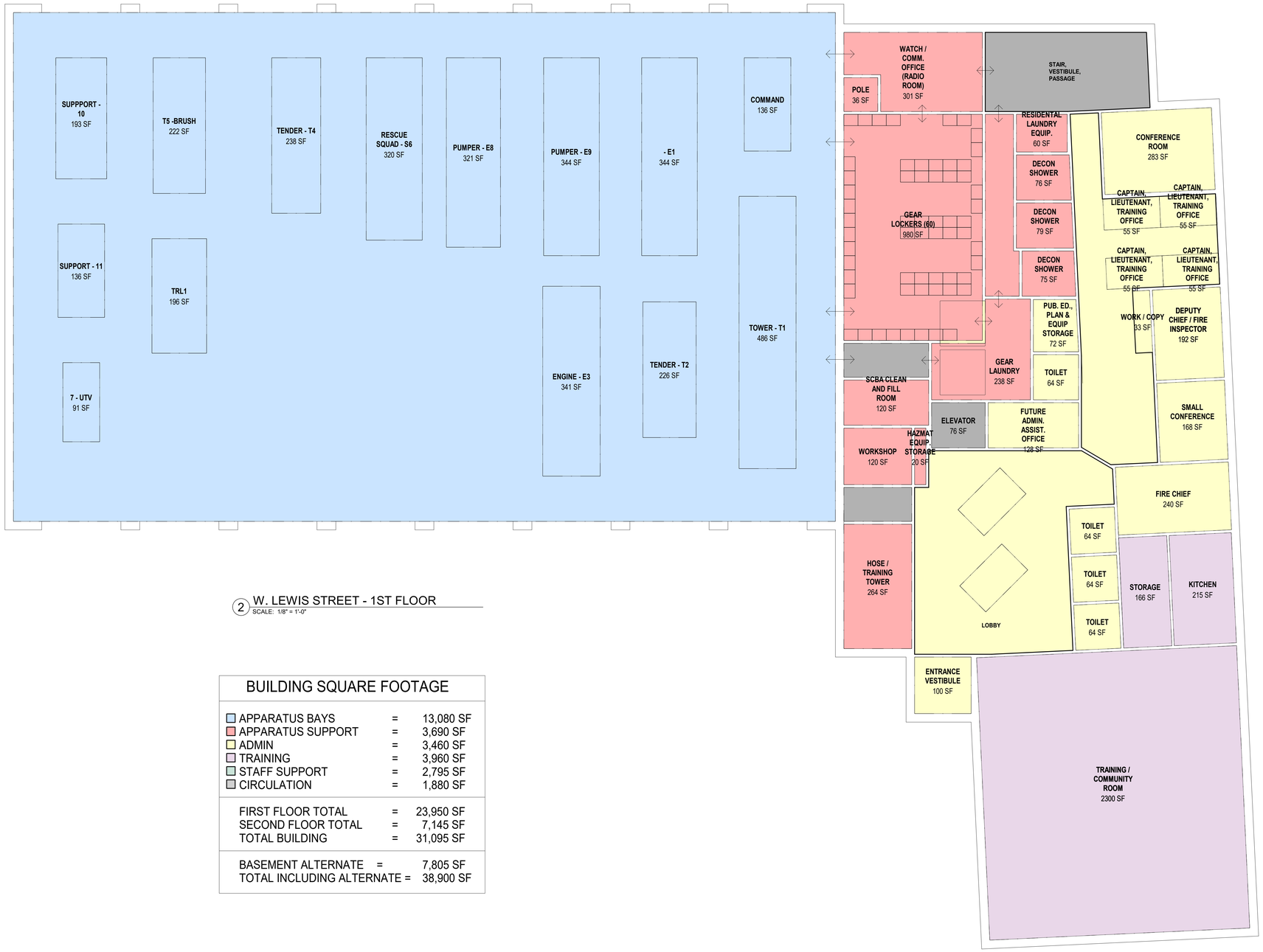
PLATTEVILLE FIRE STATION

STUDY - 02-19-2021

Platteville, WI

PROJECT NUMBER: 908901

wendel Home of the Award Winning Five Bugles Design™



2 W. LEWIS STREET - 1ST FLOOR
SCALE: 1/8" = 1'-0"

BUILDING SQUARE FOOTAGE

APPARATUS BAYS	=	13,080 SF
APPARATUS SUPPORT	=	3,690 SF
ADMIN	=	3,460 SF
TRAINING	=	3,960 SF
STAFF SUPPORT	=	2,795 SF
CIRCULATION	=	1,880 SF
FIRST FLOOR TOTAL	=	23,950 SF
SECOND FLOOR TOTAL	=	7,145 SF
TOTAL BUILDING	=	31,095 SF
BASEMENT ALTERNATE	=	7,805 SF
TOTAL INCLUDING ALTERNATE	=	38,900 SF

PLATTEVILLE FIRE STATION

STUDY - 02-19-2021

Platteville, WI

PROJECT NUMBER: 908901

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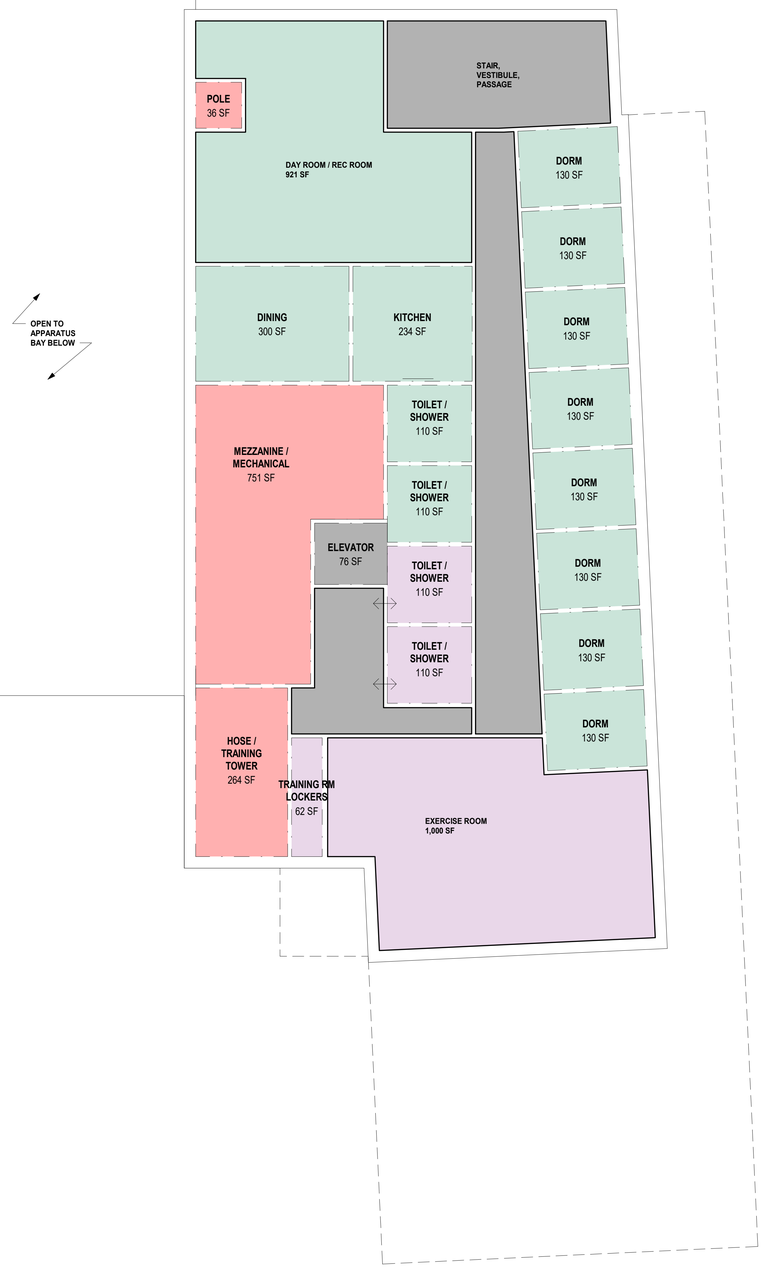
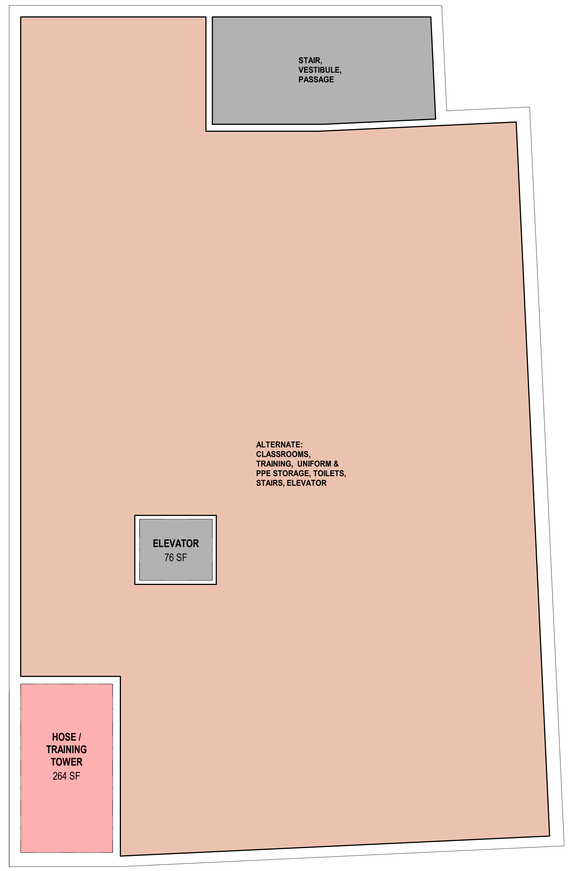


1 W. LEWIS STREET - 2ND FLOOR
SCALE: 1/8" = 1'-0"



2 W LEWIS STREET - BASEMENT
SCALE: 1/8" = 1'-0"

PLATTEVILLE FIRE STATION

STUDY - 02-19-2021

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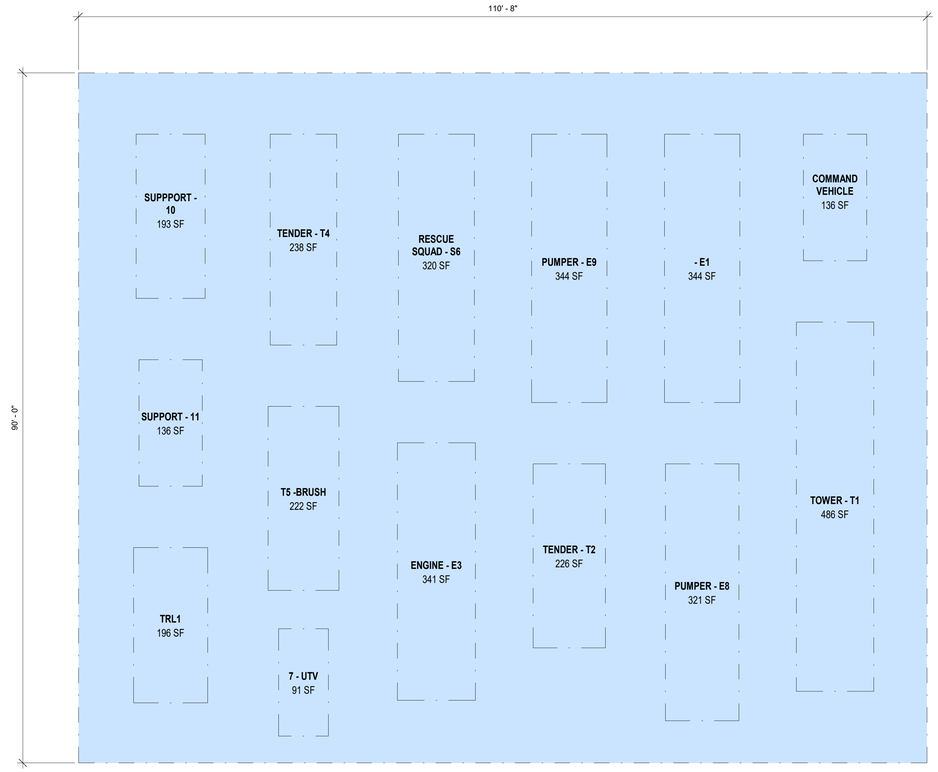

2 00 - APPARATUS BAY LAYOUT - 6 BAYS
SCALE: 1/8" = 1'-0"

1 00 - EXISTING LOCATION - SITE
SCALE: 1" = 30'-0"

3 00 - APPARATUS BAY LAYOUT - 8 BAYS
SCALE: 1/8" = 1'-0"

PLATTEVILLE FIRE STATION

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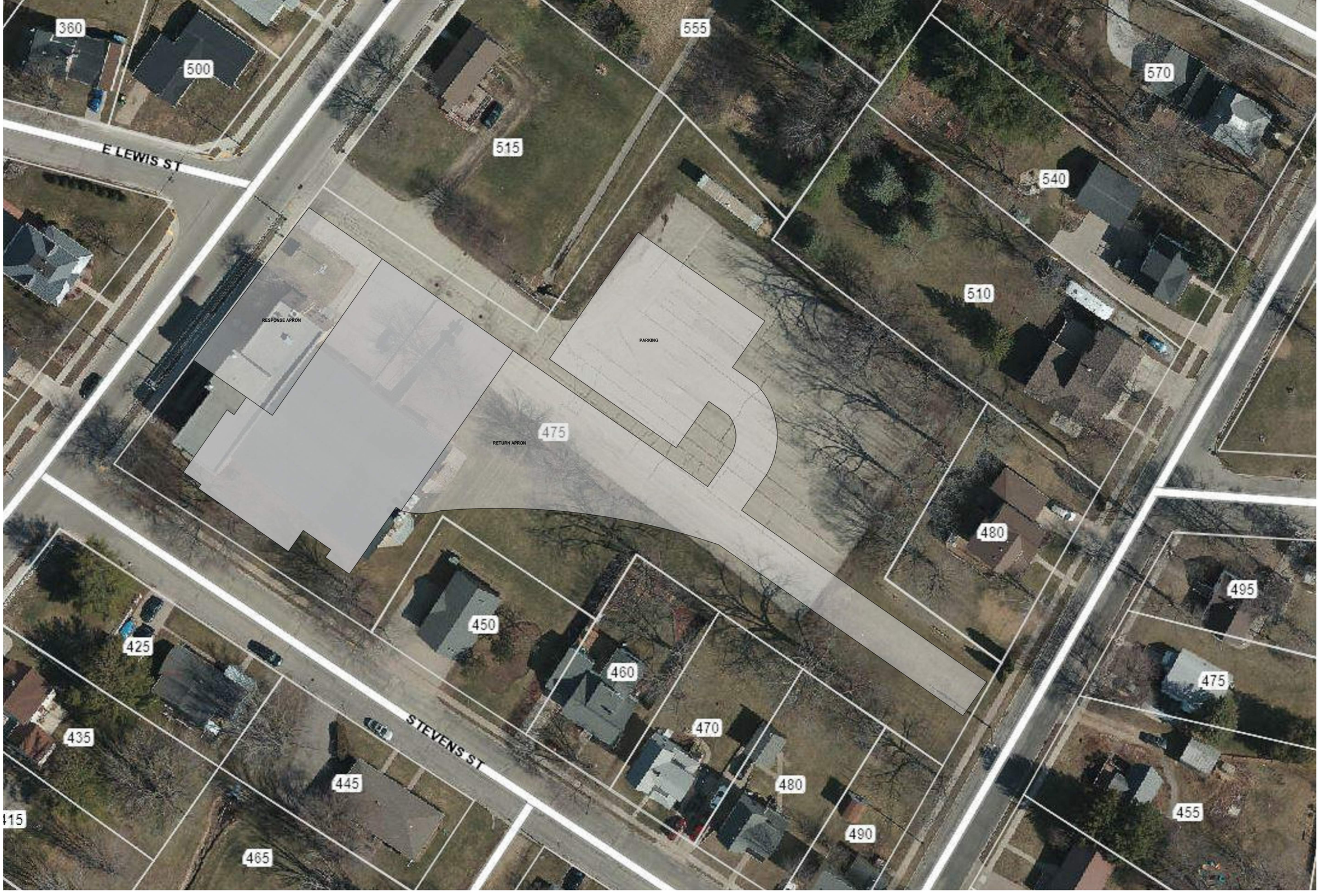

1 00 - SITE PLAN - WATER STREET
SCALE: 1" = 20'-0"

PLATTEVILLE FIRE STATION

STUDY - 02-19-2021

Platteville, WI

PROJECT NUMBER: 908901

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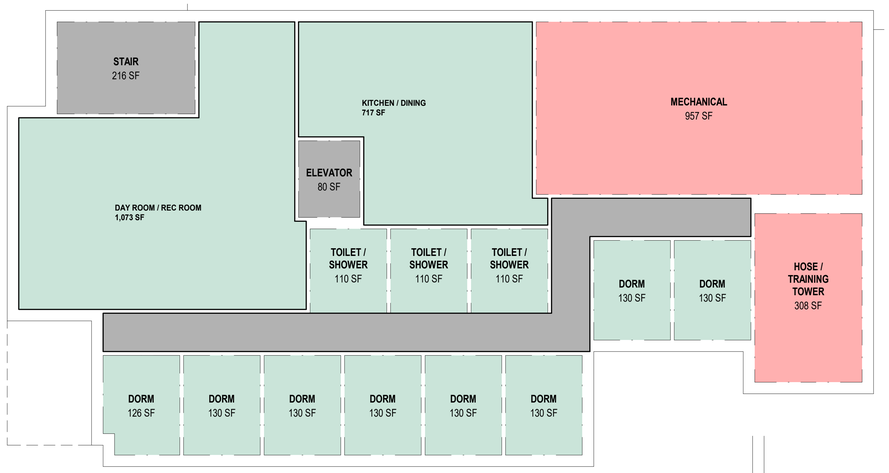
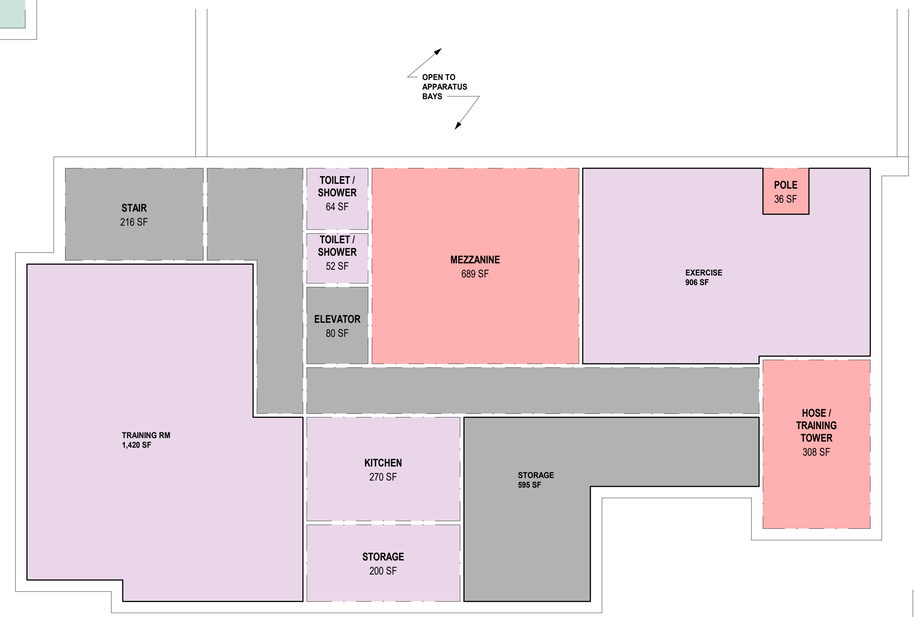


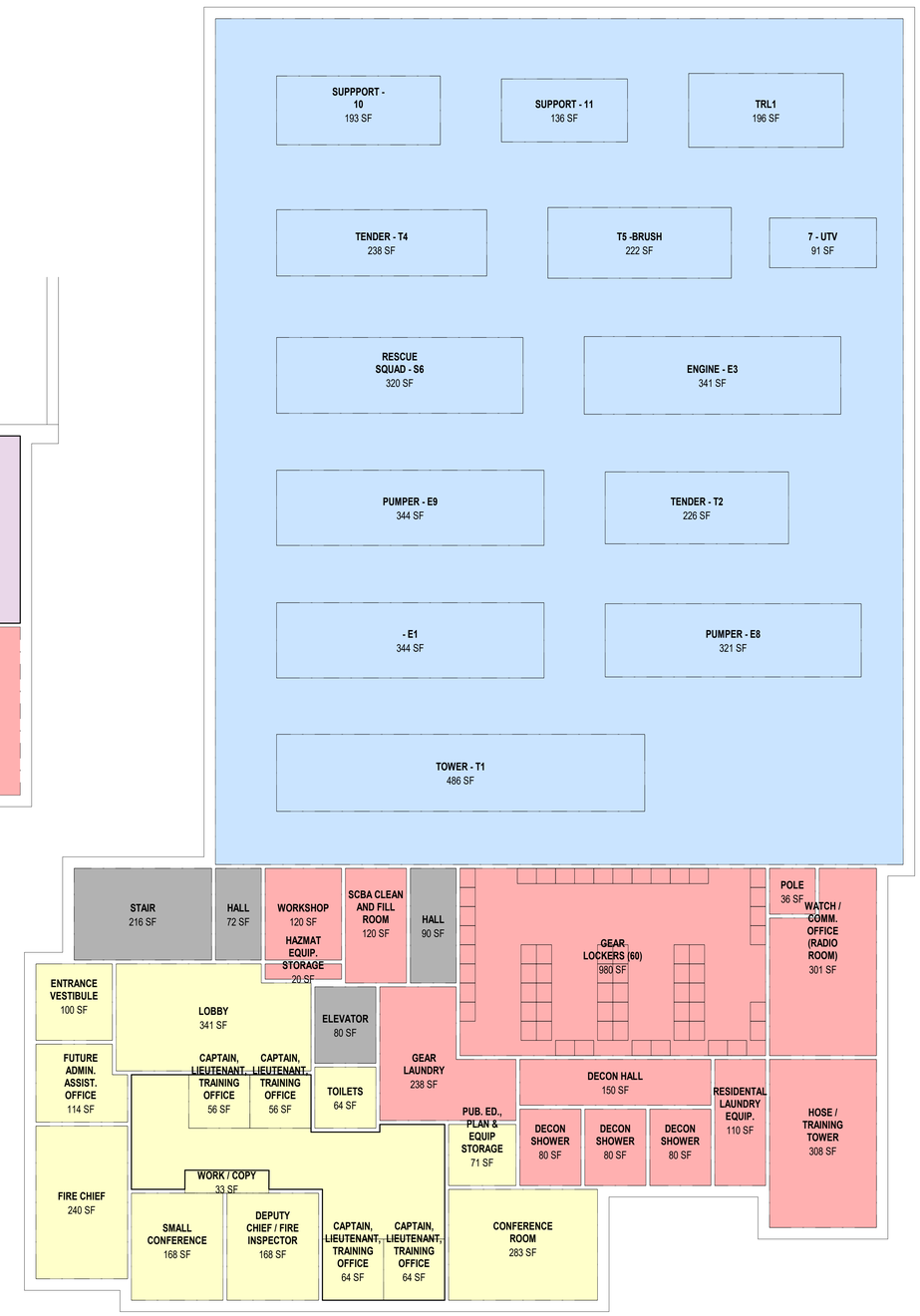
3 03 - FLOOR PLAN - N WATER STREET - 3RD
SCALE: 1/8" = 1'-0"



2 02 - FLOOR PLAN - N WATER STREET - 2ND FLOOR
SCALE: 1/8" = 1'-0"

BUILDING SQUARE FOOTAGE

APPARATUS BAYS	=	9,960 SF
APPARATUS SUPPORT	=	5,025 SF
ADMIN	=	2,370 SF
TRAINING	=	2,940 SF
STAFF SUPPORT	=	3,230 SF
CIRCULATION	=	2,810 SF
FIRST FLOOR TOTAL	=	16,520 SF
SECOND FLOOR TOTAL	=	6,170 SF
THIRD FLOOR TOTAL	=	6,000 SF
TOTAL BUILDING	=	28,690 SF



1 01 - FLOOR PLAN - N WATER STREET - 1ST FLOOR
SCALE: 1/8" = 1'-0"

PLATTEVILLE FIRE STATION

STUDY - 02-19-2021

Platteville, WI

PROJECT NUMBER: 908901

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Probable Cost Analysis

ESTIMATE OF PROBABLE COSTS

Project: Paltteville Fire Department

Location: Platteville, WI **Date: 23-Feb-21**

Potential Costs for Cthe Lewis Street Concept

				LOW END COSTS		HIGH END COSTS		Alternate	Remarks
I. Site Acquisition									
Preferred Site				$100,000		$250,000		$0	
Sub Total				**$100,000**		**$250,000**		**$0**	
II. Building Construction Costs	Size (sf)		Cost/SF						
New Construction	31,095		$225.00	$6,996,375	$275	$8,551,125		$0	
Basement Alternate	7,805						$250	$1,951,250	
Sub Total				**$6,996,375**		**$8,551,125**		**$1,951,250**	
III. Furniture Fixtures and Equipment									
FF&E (estimated)				$300,000		$300,000		$0	Furniture, Fixtures, Equipment, etc.
Specific Equipment by Owner				$0		$0		$0	
Others				$0		$0		$0	
Sub Total				**$300,000**		**$300,000**		**$0**	
IV. Communications and Technology									
Communications				$25,000		$40,000		$0	
Audio Visual Equipment	Allowance			$15,000		$15,000		$0	
Sub Total				**$40,000**		**$55,000**		**$0**	
V. Contingencies, Inflation and Other Costs									
Design/Inflation Contingency	5% total construction cost			$349,819		$427,556		$97,563	Design Changes, Inflation, Etc.
Construction Contingency	5% of total construction costs			$349,819		$427,556		$97,563	Unforeseen Conditions, Owner Changes, E&O
Sub Total				**$699,638**		**$855,113**		**$195,125**	
VI. Professional Fees and Legal									
Architectural/Engineering	7.0% of Construction Costs			$489,746		$598,579		$136,588	
Geotechnical Studies				$7,000		$7,000		$0	
Site Survey				$7,000		$7,000		$0	
Unsuitable Soils Contingency				$100,000		$100,000		$0	
Power to Site				$0		$0		$0	
Fiber to Site				$0		$0		$0	
LEED/Sustainability				$0		$0		$0	
Hazardous Materials /Asbestos				$0		$0		$0	
Testing and Inspections				$25,000		$25,000		$0	
Sub-Total				**$628,746**		**$737,579**		**$136,588**	
TOTAL BASE BID				**$8,764,759**		**$10,748,816**			
TOTAL ALTERNATE								**$2,282,963**	
TOTAL w ALTERNATE				**$11,047,721**		**$13,031,779**			

ESTIMATE OF PROBABLE COSTS

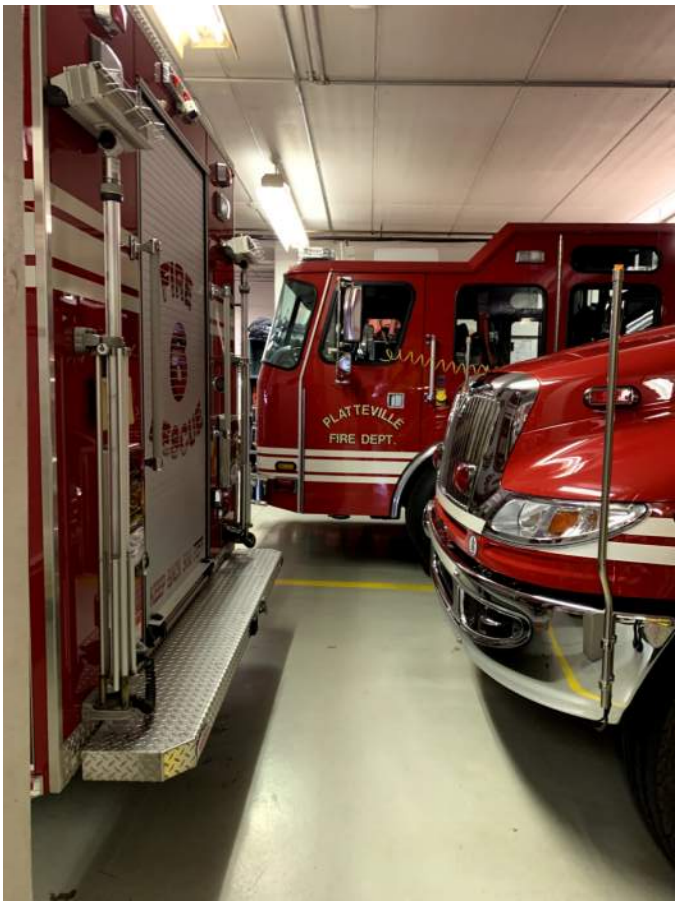
Project: Paltteville Fire Department

Location: Platteville, WI **Date:** **23-Feb-21**

Potential Costs for the Water Street Concept

			LOW END COSTS		HIGH END COSTS	Remarks
I. Site Acquisition						
Preferred Site			$0		$100,000	
Sub Total			**$0**		**$100,000**	
II. Building Construction Costs	Size (sf)	Cost/SF				
New Construction	28,690	$225.00	$6,455,250	$275	$7,889,750	
Sub Total			**$6,455,250**		**$7,889,750**	
III. Furniture Fixtures and Equipment						
FF&E (estimated)			$300,000		$300,000	Furniture, Fixtures, Equipment, etc.
Specific Equipment by Owner			$0		$0	
Others			$0		$0	
Sub Total			**$300,000**		**$300,000**	
IV. Communications and Technology						
Communications			$25,000		$40,000	
Audio Visual Equipment	Allowance		$15,000		$15,000	
Sub Total			**$40,000**		**$55,000**	
V. Contingencies, Inflation and Other Costs						
Design/Inflation Contingency	5% total construction cost		$322,763		$394,488	Design Changes, Inflation, Etc.
Construction Contingency	5% of total construction costs		$322,763		$394,488	Unforeseen Conditions, Owner Changes, E&O
Sub Total			**$645,525**		**$788,975**	
VI. Professional Fees and Legal						
Architectural/Engineering	7.0% of Construction Costs		$451,868		$552,283	
Geotechnical Studies			$7,000		$7,000	
Site Survey			$7,000		$7,000	
Unsuitable Soils Contingency			$100,000		$100,000	
Power to Site			$0		$0	
Fiber to Site			$0		$0	
LEED/Sustainability			$0		$0	
Hazardous Materials /Asbestos			$0		$0	
Testing and Inspections			$25,000		$25,000	
Sub-Total			**$590,868**		**$691,283**	
TOTAL BASE BID			**$8,031,643**		**$9,825,008**	

Photo Database of Existing Conditions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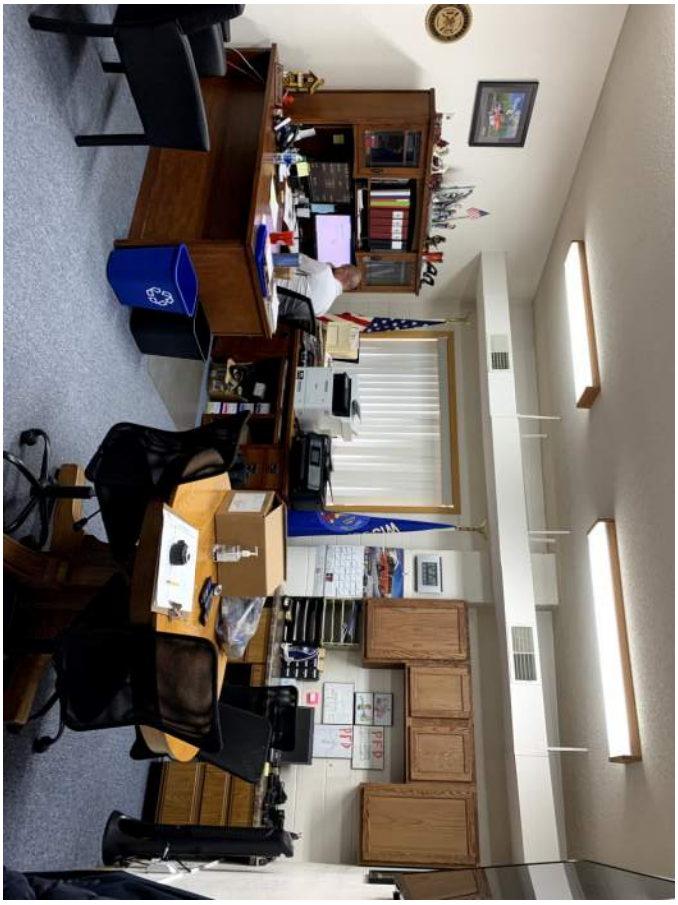

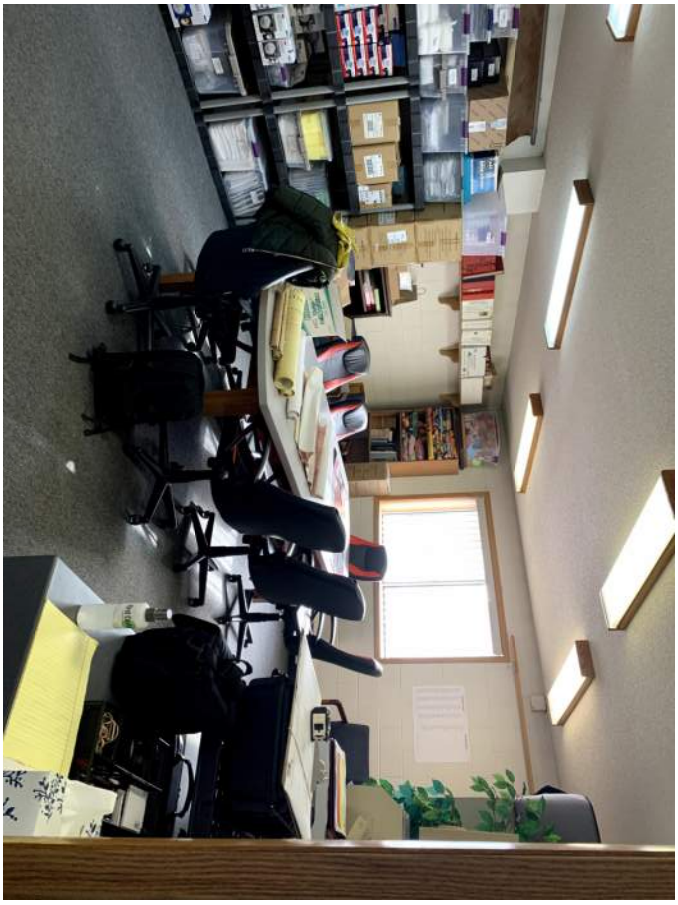


TOWER-1


KEEP
THE
WREATH
GREEN


PLATTEVILLE
PLATTEVILLE VOLUNTEER FIRE DEPT


BAUER
COMPRESSORS

FIRE
PLATTSVILLE
VOLUNTEER
DEPT.

PLATTSVILLE


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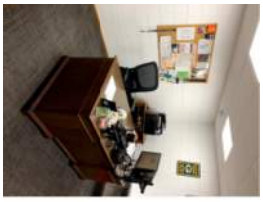
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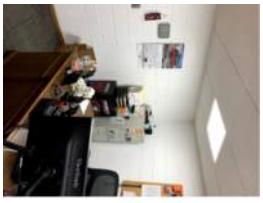
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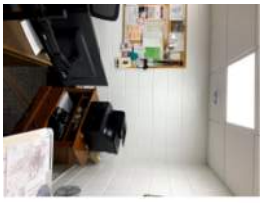
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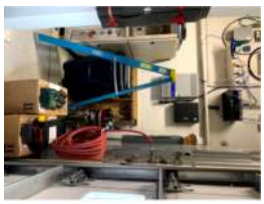
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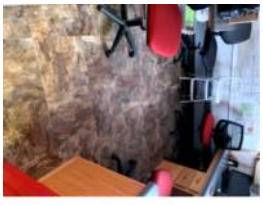
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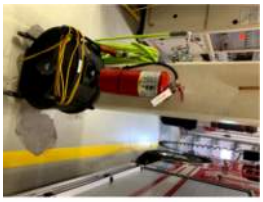
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