

# Lathrop Manteca Fire Protection District



2018 General Master Plan Information  
and Fire Department Standards

# LATHROP-MANTECA FIRE DISTRICT MASTER PLAN - 2018

## General Plan Information and Fire Department Standards

### Fire Company Location and Maximum Time Response Standards, Equipment Standards and Staffing Standards

#### FIRE COMPANY LOCATIONS:

The Grading Schedule for Municipal and Rural District Fire Protection (1974), is used in most United States Cities and Districts to establish insurance rates. As a rule, Cities and Districts will attempt to meet as many standards in this schedule as possible, so as not to incur a higher rating than necessary.

The only criteria provided by the schedule for the number of engines and ladders to be located in any part of a city or district is the maximum travel distances for each type of company. For engines, these guidelines are based on fire flow (gallons of water per minute) required for different types of company uses, based on the knowledge of the number of gallons per minute each engine company can deliver, and implicitly, on judgments of response times needed to ensure timely delivery of the water required. For ladder companies, the guidelines are based strictly on judgment of fire risks.

In zones with high fire flow requirements, the schedule requires every point of the protected area to be no further than 1<sup>1/2</sup> miles from an engine company and no further than 2<sup>1/2</sup> miles from a ladder company.

The Fire Protection Master Plan will cover both the incorporated areas of the city and the rest of the unincorporated area of the Fire District. This standard will identify stations, equipment and staffing levels needed to provide fire protection services. The location of stations, equipment and delegation of staffing levels are identified as to proposed responses, density, zoning uses and population. An example of this standard would be:

Industrial/Commercial Zoning	1500 - 3500 gpm
Residential	1000 - 1500 gpm

We have found that the current uses in the District fall within these ranges and are being abided by.

# LATHROP-MANTECA FIRE DISTRICT

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### PRESENT SERVICE DELIVERY STANDARD:

The Lathrop-Manteca Fire District presently delivers fire and rescue services from four fire stations with plans to build a fifth station in the next 18 months and a sixth within a 3-year period. These stations are primarily planned for residential, commercial, and industrial protection. The population of the District is spread over approximately a 100 square miles, with the bulk of population (approximately 70%) within the boundaries of the City of Lathrop. Currently we serve 90% of our population within the 5-minute service for emergency response standard, due to staffed stations and preplanning. Currently, first due responses to our commercial and industrial responsibilities are within 1 to 7 minutes for both Urban and Rural locations. There is one mobile home park and housing development located outside those time frames. Additional new stations and specialized equipment obtained as development occurs, will keep the service requirements in prospective, and will maintain affordable and hopefully attractive insurance rates for commercial, industrial and residential properties. We feel that through proper planning, adequate fire protection and service levels can be maintained. It is critical in our planning that the impact on our community and the Fire District be mitigated at this time, in order to maintain and improve the service levels that are currently being delivered.

The Fire Department Staff has devoted much time to look at the twenty-year plan with regard to location of fire stations, equipment placement, and for staffing levels needs. We are continually evaluating the service levels and are in the process of building one Fire Station in the River Islands Development which will be completed by December of 2018 and have plans for two additional Fire Stations within the next 5 years. One will be placed on Klo Rd. and the Second on McKinley Ave. South of Yosemite Ave.

Currently, our responses to commercial/industrial areas are in excess of a one-mile travel distance and in a few cases in excess of a three-mile distance. Attached are current and future station locations in Appendix "A"

The 100-foot Aerial Truck identified in the General Plan of 1989 was purchased in 1990 and was sold in 1997. The Aerial Truck sold was replaced with an Aerial Truck equipped with a 65-foot elevated master stream and currently being utilized as a reserve Aerial Truck. A new 100-foot Aerial Truck was purchased in 2016 and is being utilized for all responses, including all commercial and industrial areas through-out the Fire District and including the River Islands areas.

In addition, Lathrop-Manteca Fire District has also staffed specialized apparatus to respond to specialized incidents such as, Hazardous Materials spills/releases, Heavy Equipment Entrapment and Dive Rescues. This equipment was purchased in 2015 and was staffed full-time in January of 2018.

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### IMMEDIATE SERVICE INCREASES NEEDED:

Currently, in the building stage, is a future station, which will staff a Type I Pumper Engine along with a 100-foot Aerial Truck and a Type III Engine in the River Islands area. This Station will also include an Administration Building to satisfy the future growth of our Administrative Staff.

Currently, in the planning stage, are two future stations, in the South Lathrop Specific Plan (South of Yosemite Ave), and the North Lathrop Specific Plan area (North of Lathrop Rd). Both Stations will house and staff a Type I Pumper Engine.

We are also projecting at least two more new fire stations in the River Islands area of the District. These stations will be needed to serve current and future growth of residential, commercial, and industrial structures. We are expecting the second location to be needed within the next three to five years, with the exact timing dependent on growth and development. This location will provide the standard required service level to the area west of the San Joaquin River and Interstate 5. This station will serve future growth and development of the west area of the City of Lathrop's boundaries, which are also the District's responsibility. The Fire Facility Fee currently in place, will address the engine and station requirement needs. It is imperative that we maintain personnel at the current level of 1.2 personnel per thousands of populations. This allows us to continue to meet our minimum level of service requirements.

The remainder of the stations, equipment, and personnel requirements identified in the Master Plan will occur and can be modified as the Master Plan is updated. Realistically, new development impacts will dictate these requirements.

**LATHROP-MANTECA FIRE DISTRICT  
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**PROJECT CATEGORY:** *Dispatch and Record Management*

**SERVICE STANDARD FOR CATEGORY:**

All streets and addresses are to be maintained in a computerized dispatch center [Stockton Fire Department].

Goal standard of computer dispatch main frame has been accomplished; January 1992. The dispatch center computer aided dispatching system (CAD) will be completely updated by; 2019

SERVICE STANDARDS

**PROJECT CATEGORY:** *Fire Training Center*

**SERVICE STANDARD FOR CATEGORY:**

Training Center (Classrooms).

Classroom will be provided for full time and reserve personnel at 50 square feet per person on duty with appropriate audio-visual equipment and all the related props needed for proper training. Our goal is to have a training building with the associated equipment needed to provide both probationary and in-service training for department personnel available. The Rescue Systems One Training Tower and Pumper drafting pit is completed. The classrooms will be completed by July of 2019.

**TIMING STANDARD FOR CATEGORY:**

As new development occurs, it is identified in the Ordinance Fee structure to be accommodated.

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<b>PROJECT CATEGORY:</b> Fire Prevention Bureau: Staffing
<b>SERVICE STANDARD FOR CATEGORY:</b>
<p>One Fire Prevention Person will be provided for every 10,000 populations, or major development of large scale commercial/industrial development that may not necessarily provide permanent population.</p> <p>For each Fire Prevention Person assigned permanently, a vehicle and related support equipment will be needed. Facility space should be provided for each Fire Prevention Person at 170 square feet per employee.</p>
<b>TIMING STANDARD FOR CATEGORY:</b>
<p>When the population exceeds 30,000, additional Fire Prevention Personnel, with appropriate equipment, should be added to the Bureau.</p>
<b>FUNDING [PERSONNEL]:</b>
<p>General Fund, standardized charges for related services i.e.; permits, plan checking, inspections and other Fire Prevention activities will accommodate salaries and benefits. Mello-Roos or similar funding mechanisms could be looked at as a possible future funding avenue for those specialized services.</p>

<b>PROJECT CATEGORY:</b> Fire Stations
<b>SERVICE STANDARD FOR CATEGORY:</b>
Residential - [Up to 1500 gpm Requirement]
<p style="text-align: center;">Every building up to 1500 gpm will be served by a first due Engine Company within four to five minutes, and a complete first alarm assignment within seven to nine minutes [Urban residential schedule]. Rural residential, first due Engine within four to nine minutes, a complete first alarm assignment within seven to fourteen minutes, and Water Tender within five to eight minutes.</p>

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Commercial/Industrial - [1500-3500 gpm Requirement]
Every building up to 3500 gpm will be served by a first due Engine Company within four to five minutes, and a full alarm assignment including Aerial Ladder within nine minutes [Urban Commercial/Industrial]. Commercial/Industrial areas located outside City Limits will be served by first due Engine within four to seven minutes, and a full alarm assignment including Aerial Ladder within nine minutes to fourteen minutes.
<b>TIMING STANDARD FOR CATEGORY:</b>
Residential:
When more than 50 (new) dwelling units, ie; subdivision, are in excess of four to five minute response [urban], a fire station with appropriate apparatus will be located.
Commercial/Industrial:
When more than two buildings that exceed 3000 gpm are in excess of a four to seven minute response, a fire station with appropriate apparatus will be located.
<b>MONITORING AGENCY:</b> Fire Department
<b>CRITERIA TO MONITOR:</b>
<ul style="list-style-type: none"> <li>Loss of Mutual Aid</li> <li>Reduction in Reserve Firefighters</li> <li>Age of equipment</li> <li>Replacement Schedules of equipment</li> <li>High Rise Construction</li> <li>Large Commercial/Industrial Develop</li> <li>Toxic or Hazardous material presence</li> </ul>
<b>UPDATE:</b> Annually in July
<b>RESPONSIBLE AGENCY:</b> Fire Department
<b>REQUIRED ACTION:</b> See action description at end of this section
<b>ASSUMPTIONS/SOURCE:</b>
Response Time:
Response time measured in gallons-per-minute (gpm) or the amount manpower/equipment able to respond in minutes with the ability to fight a gpm vs. BTU (British Thermal Unit) level of fire.

# LATHROP-MANTECA FIRE DISTRICT MASTER PLAN - 2018

The Lathrop-Manteca Fire District has the following standards set for the following types of Land use.		
<b>*COMMERCIAL</b> - 1500-3000 gpm with an average response time of 5 minutes [Urban]		
<b>*INDUSTRIAL</b> - 1500-3500 gpm with an average response time of 5 minutes [Urban]		
<b>*RESIDENTIAL</b> - 1000 gpm with an average response time of 5 minute [Urban]		
The Firefighting Team that would be able to fight a 3500 gpm, 1500 gpm, and a 1000 gpm fire are as follows:		
*3500 gpm fire	*1500 gpm fire	*1000 gpm fire
28 personnel	15 personnel	12 personnel
5 pumpers	3 pumpers	3 pumpers
1 rescue	1 rescue	1 aerial truck
2 aerial trucks	1 aerial truck	1 chief officer
2 chief officers	1 chief officer	
The Fire District has the capability of fighting a 3500 gpm fire within the Fire District. <i>*All are current response models that are currently being utilized by the Lathrop-Manteca Fire District. This is accomplished by automatic and mutual aid agreements.</i>		

The Fire District Standard recognizes that as new stations are located with new development impacts, the personnel, equipment, and duration of water flows are reduced. This will bring us faster response times, and with the fire sprinkler requirement, we have quicker control of fires with the fire being held in the incipient stage until the fire can be extinguished by the attack crew.

The acquisition of additional equipment, station construction, the hiring of personnel to staff the station, and the training of new probationary firefighters would take, from planning to completion, an estimated 18 to 24 months, with the equipment and station construction taking the longest period.

### **MEDICAL AID and RESCUE RESPONSES:**

Medical aid response is measured in minutes, from the time of the call for assistance to the arrival at the scene of the incident. The Fire District Standard is four to five minutes in Urban areas, and five to nine minutes in Rural areas. The Fire Department provides first responder aid (basic life support). All paid personnel are certified as Advanced EMT-D's (Emergency Medical Technicians certified to use automated external heart defibrillation and the ability to administer Epinephrine and Narcan.)



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The Fire Department is designated as the responsible agency to respond first to an injury related incident, along with an ambulance and local law enforcement agencies. The Fire Department is equipped to stabilize a victim of any type of accident until an advanced life support ambulance (ground or air) arrives. We are also the agency responsible to set up a landing zone, support and assist all air-ambulances.

### **FIREFIGHTING PERSONNEL**

Personnel is measured in firefighter per gpm Flow needed to suppress fire. The Standard used by the District is one Firefighter per 125 gpm for the particular land use gpm (Commercial 1500-3000 gpm, Industrial 1500-3500 gpm, and Residential 1000-1500 gpm) as shown in response time-assumption. The firefighter standard is set for service to each individual planned area. (After two heavy stream lines are deployed, calculations are accommodated for ladders, pipe, monitors, etc.)

### **FIRE FIGHTING EQUIPMENT**

Firefighting equipment is measured by engine pump per gpm Flow capacities. The standard is one fire engine per 375 gpm flow (3 Firefighters)  $3 \text{ f/f} \times 125 \text{ gpm} = 375 \text{ gpm}$ .

### **ISO RATING**

The Insurance Rating Service is the organization that rates fire departments on their competency to provide the many functions of a fire department, such as fire suppression, fire prevention, communications, and response times. The ISO rating is measured on a scale of 1 - 10. This rating number is then used by insurance companies when they set premium ratings for homeowners, businesses, and industries. It is beneficial to the owner of a single family dwelling if the fire department can maintain a rating under 5 and beneficial to commercial and industry when the department can obtain a rating under 3. The lower the number, the more attractive an area can be to commercial and industrial interest.

The District was recently evaluated in our urban response area. Our ISO Grade was reduced from a 6 to a 3. This improvement was due to a number of things, including: our record keeping and training program; our Fire Prevention Bureau, which includes a fire permit and annual inspection program; our Fire Facility Fee being in place to fund new equipment and stations; our contracting with the City of Stockton for fire dispatching services; And, the City of Lathrop Public Works Department's ability to provide improvements to the water storage and delivery system capabilities.

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Currently, some major industries are providing their own water systems, and provide excellent fire flows. Some of the new commercial/industrial development have a secondary source coming from the City Municipal system. With the addition of a 1.2 million gallon storage tank and fire pump located in the industrial park; a 1.2 million gallon storage tank and booster pump located in the Stonebridge subdivision; the completion of the looped water system of Harlan and Roth Roads; as well as the construction of Well 21; an additional 1 million gallon storage tank on the west side of I-5; and the completion of the SSJID Surface Water Project; we are continuing to see improvements to our excellent water delivery system for our community.

### **FIRE DEPARTMENT SERVICES**

#### Residential Response Time

#### Fire Suppression

Standard	5 minutes
Goal @ build-out	4 minutes
Currently	4 to 5 minutes

#### Medical Aid and Rescue Services

Standard	4 minutes
Goal @ build-out	5 minutes
Currently	5 min Urban 6 min Rural

#### Commercial/Industrial

#### Fire Suppression/Medical Aid and Rescue Services

Standard	5 minutes
Goal @ build-out	5 minutes
Currently	5 to 6 minutes

### **NEW STATION PROJECTED TIME FRAMES**

River Islands (south)	6 to 8 months (2018)
McKinley and Yosemite Ave	18 to 24 months (2020)
Klo Rd	36 to 48 months (2021)
River Islands (north)	48 to 120 months (2024)

The actual timing of the construction of these stations will be triggered by new development growth impacts and will be funded by the Fire Facility Fee Ordinance and other funding sources.

**Fire Fighting Personnel**

Firefighter per 125 gpm or Engine 375 gpm

Engine companies of three personnel can deliver first response attacks of 375 gpm in hand line operations or up to 1000 to 1500 gpm in fixed master stream appliances. New technology in nozzle and hose efficiency, allows operations of 1<sup>3/4</sup> inch live lines to produce 375 gpm, which takes two firefighters to handle the hose line and an additional person at the pump panel during attack modes. The standard of a minimum three personnel to staff an engine company is based on these calculations.

Truck company applications involve Aerial operations, such as ventilation and exposure protection. In cases of large fires, direct attacks are needed to suppress these fires. This makes the common standard for staffing a truck company at between four and six persons. Our standard is more realistic based at three, relying on the use of off-duty and reserve personnel to make up the additional staffing needed. We feel with the truck responding with the engine company, we provide a minimum acceptable standard, one that can be justified as affordable to our community.

**Firefighting Personnel**

**Target Personnel Standard**

<b>Line Firefighters</b>	(*Per Shift)		
<u>Location</u>	<u>Station</u>	<u>Current Staffing Level</u>	<u>Staffing At Build Out</u>
800 J Street, Lathrop	31	4	4
22701 S. Union Rd, Manteca	32	2	2
9121 E. Lathrop Rd., Manteca	33	2	2
460 River Islands Parkway Lathrop	34	6	7
Somerston Drive, Lathrop	35	0	7
Yosemite Ave and McKinley Ave	36	0	3
Klo Rd, Lathrop	37	0	3
River Islands North	38	0	3
Total Daily Staffing		14	31
Total Department Personnel		42	93

# LATHROP-MANTECA FIRE DISTRICT

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### **Staff Positions**

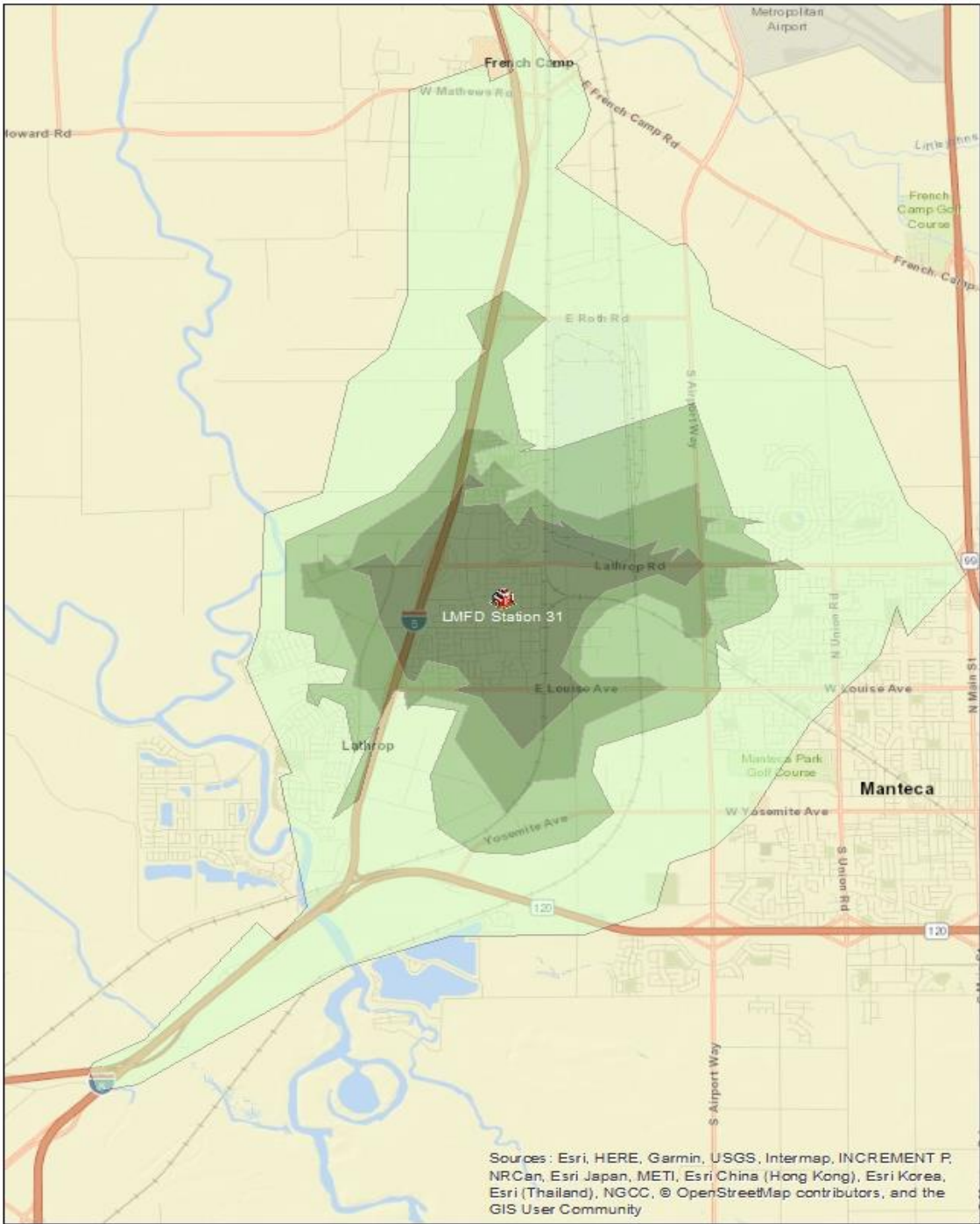
- 1 Fire Chief (existing)
- 1 Deputy Chief (vacant)
- 2 Division Chiefs (vacant)
- 3 Battalion Chiefs (existing)
- 1 Office Manager (existing)
- 1 Full-time Office Assistant (existing)
- 1 Full-time Permits Clerk (existing)
- 1 Full-time Office Clerk (existing)

### **Prevention Bureau**

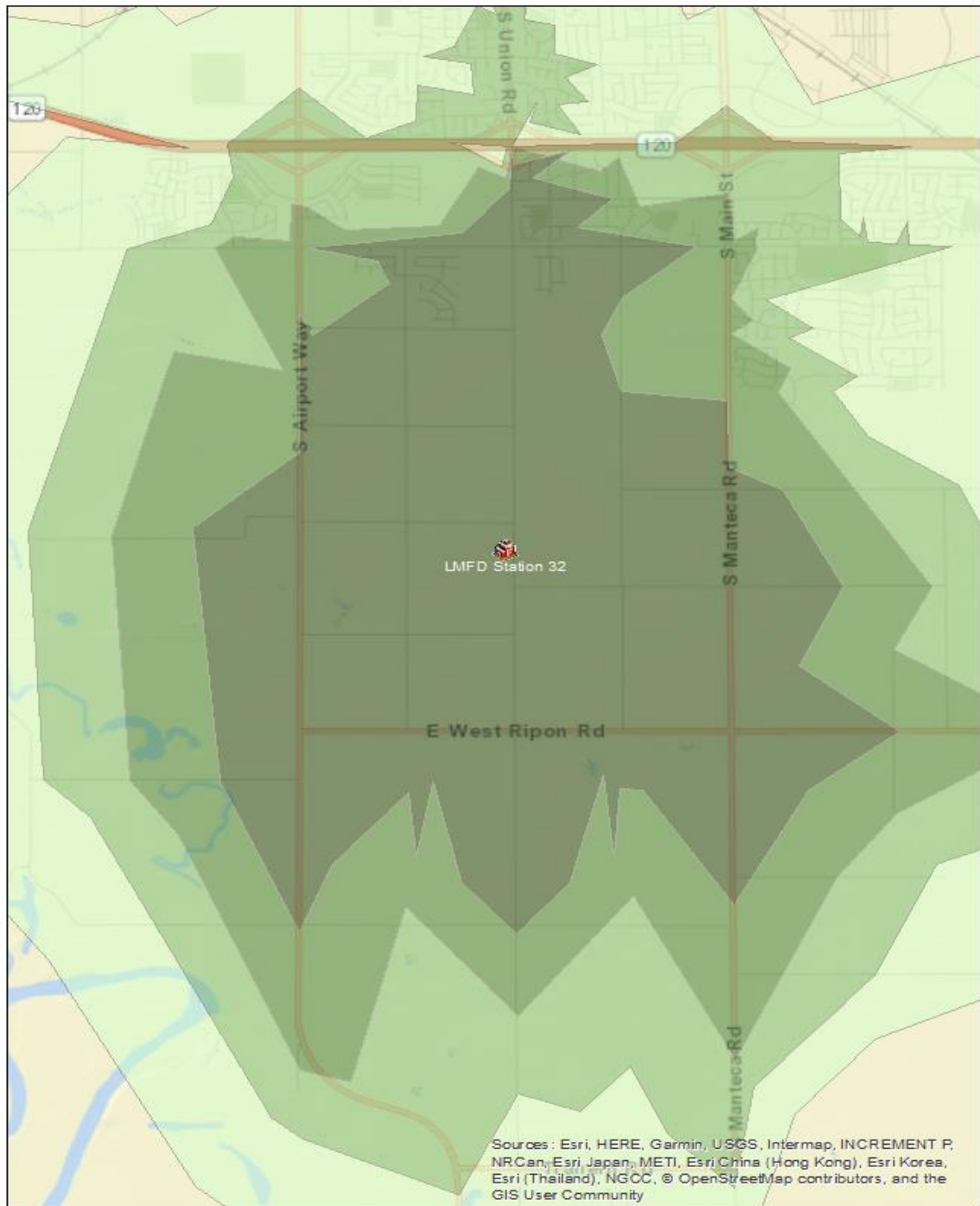
- 1 Deputy Fire Marshal (existing)
- 2 Part-time Fire Inspectors (existing)

# Appendix “A”

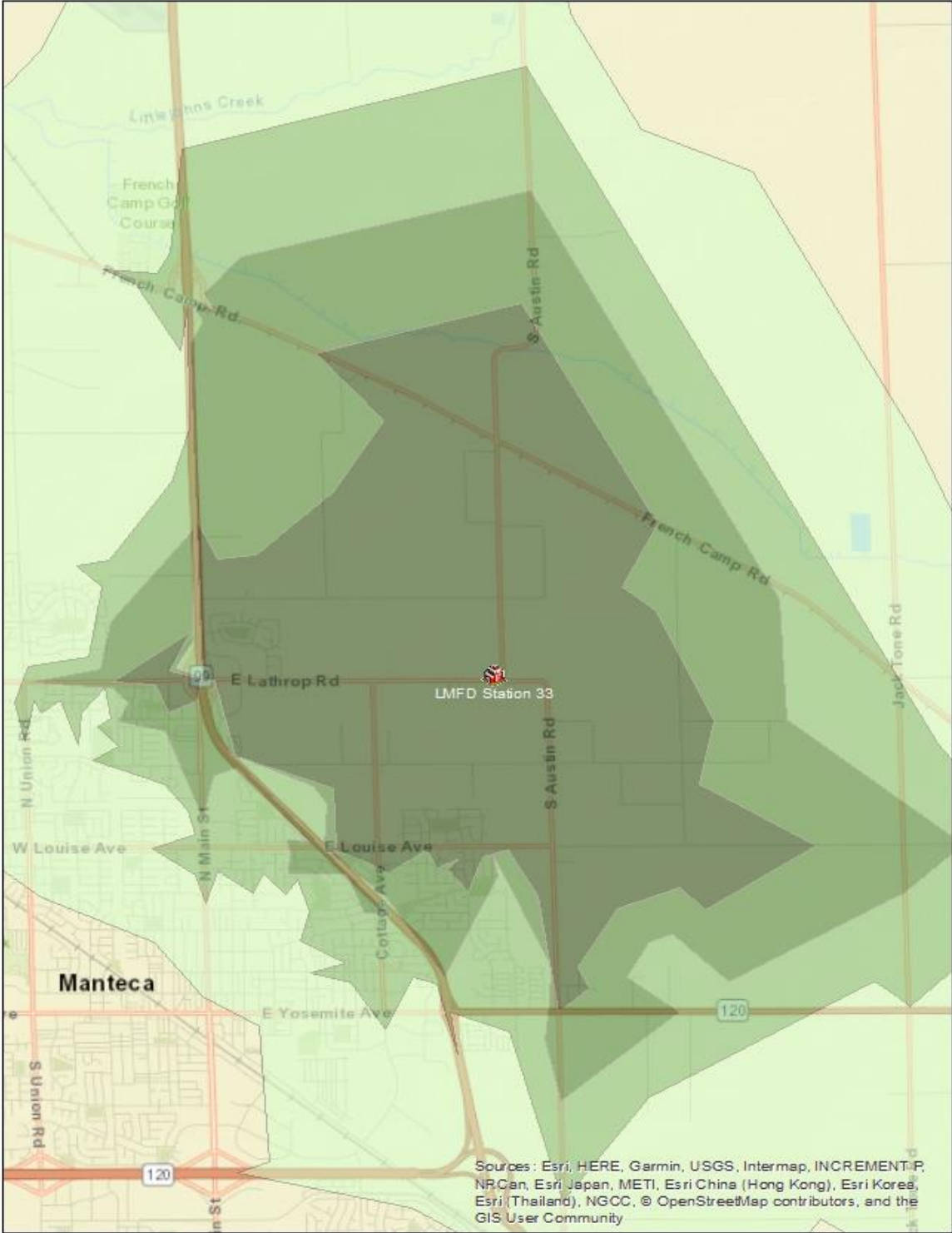
# Fire Station 31



## Fire Station 32

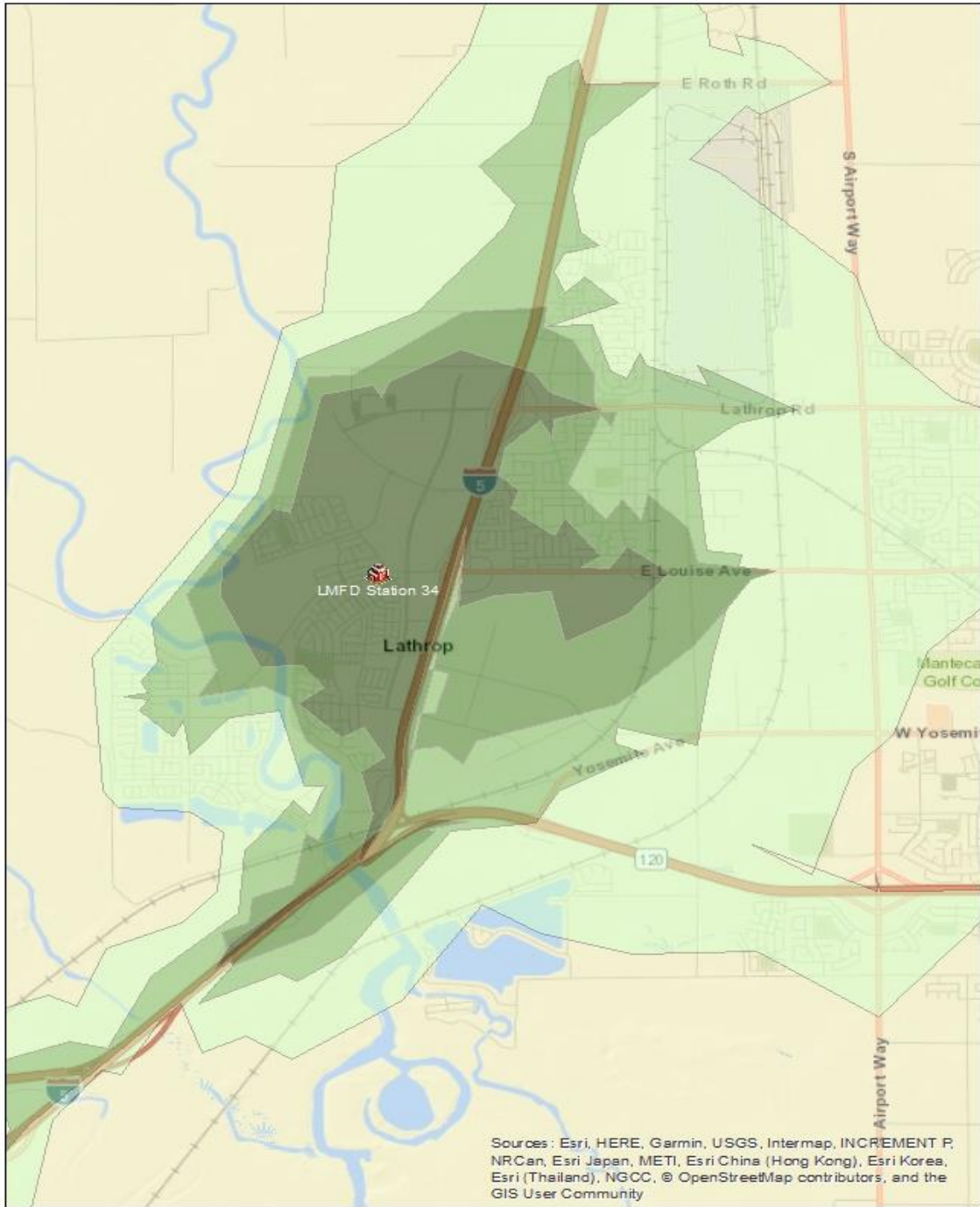


# Fire Station 33

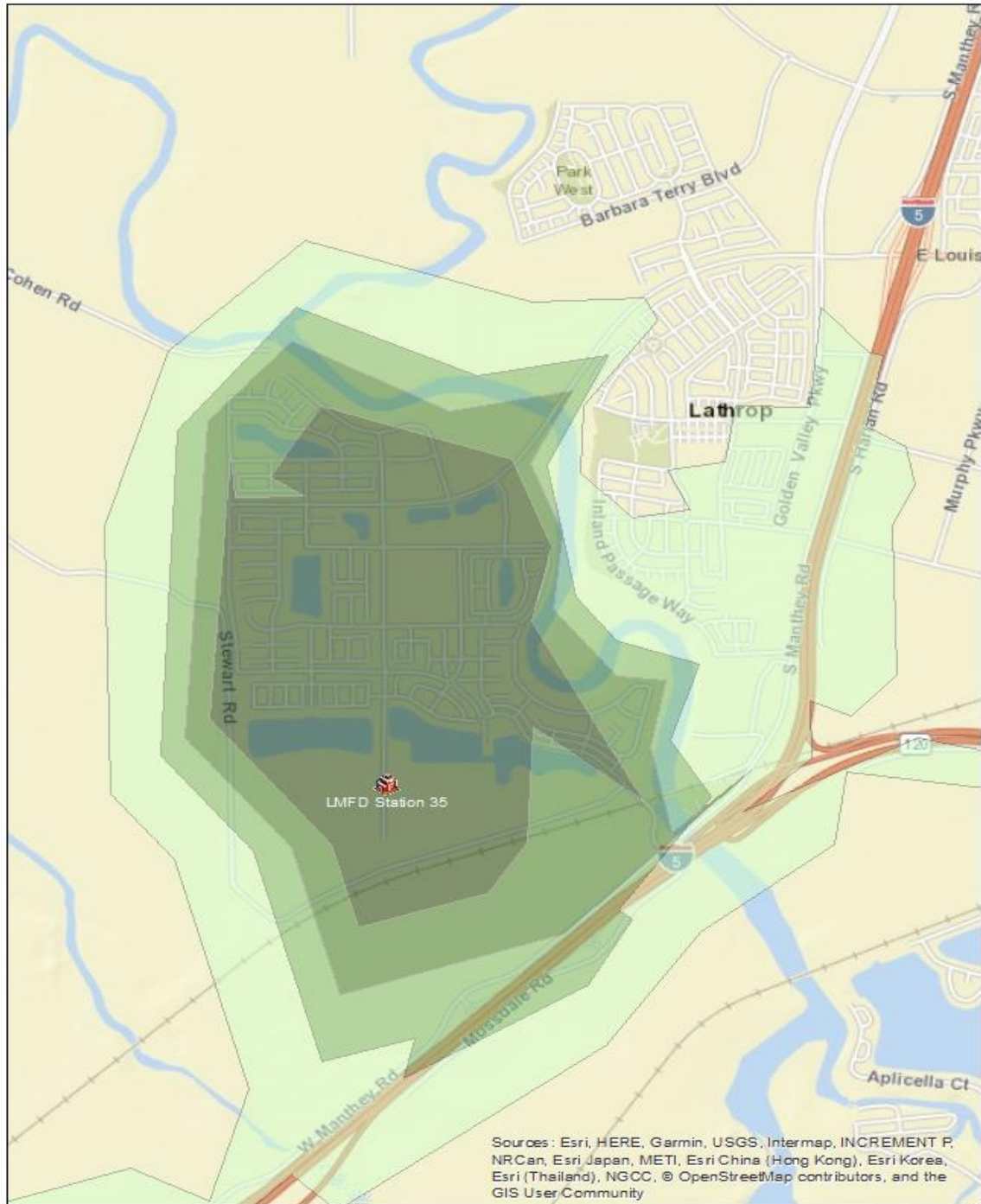




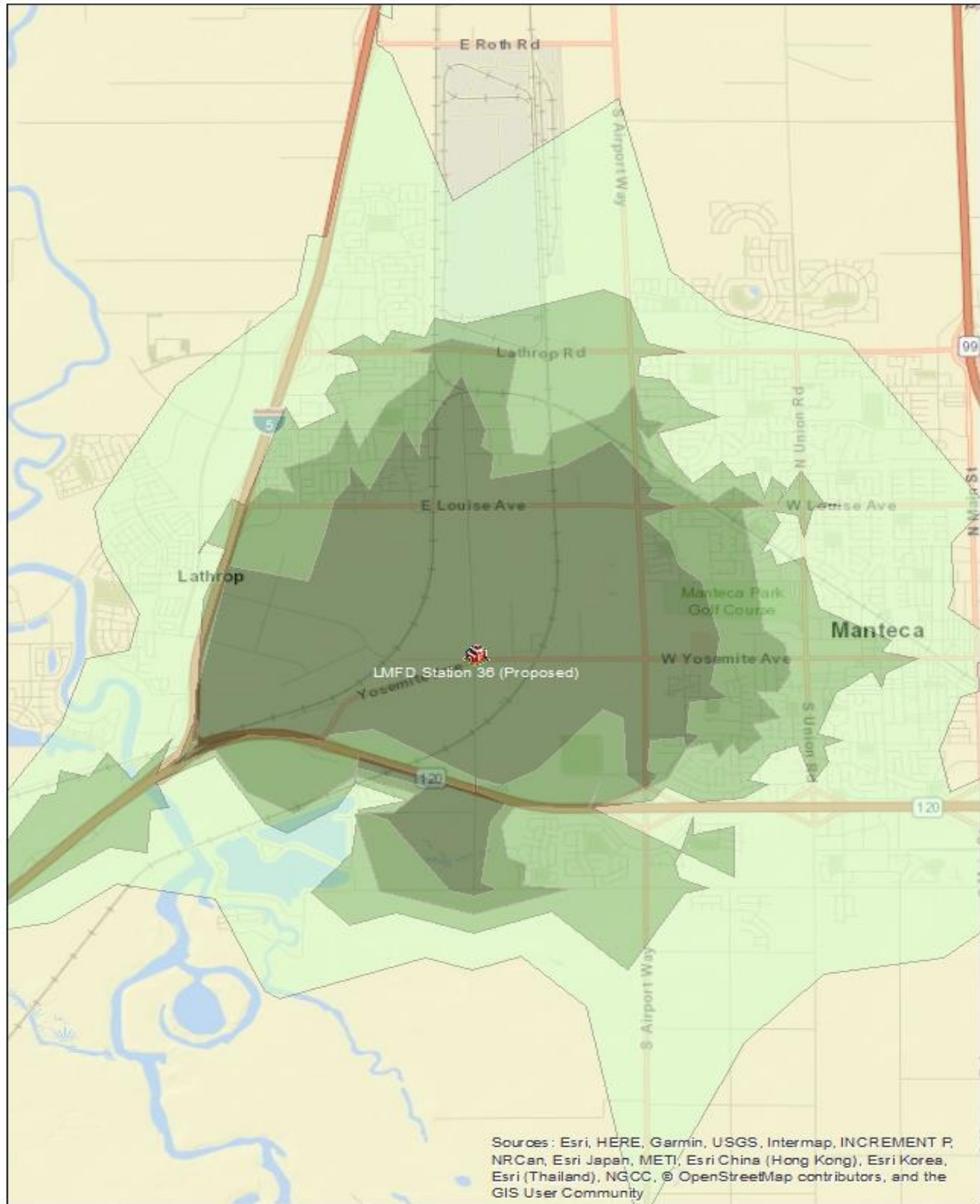
# Fire Station 34



## Fire Station 35

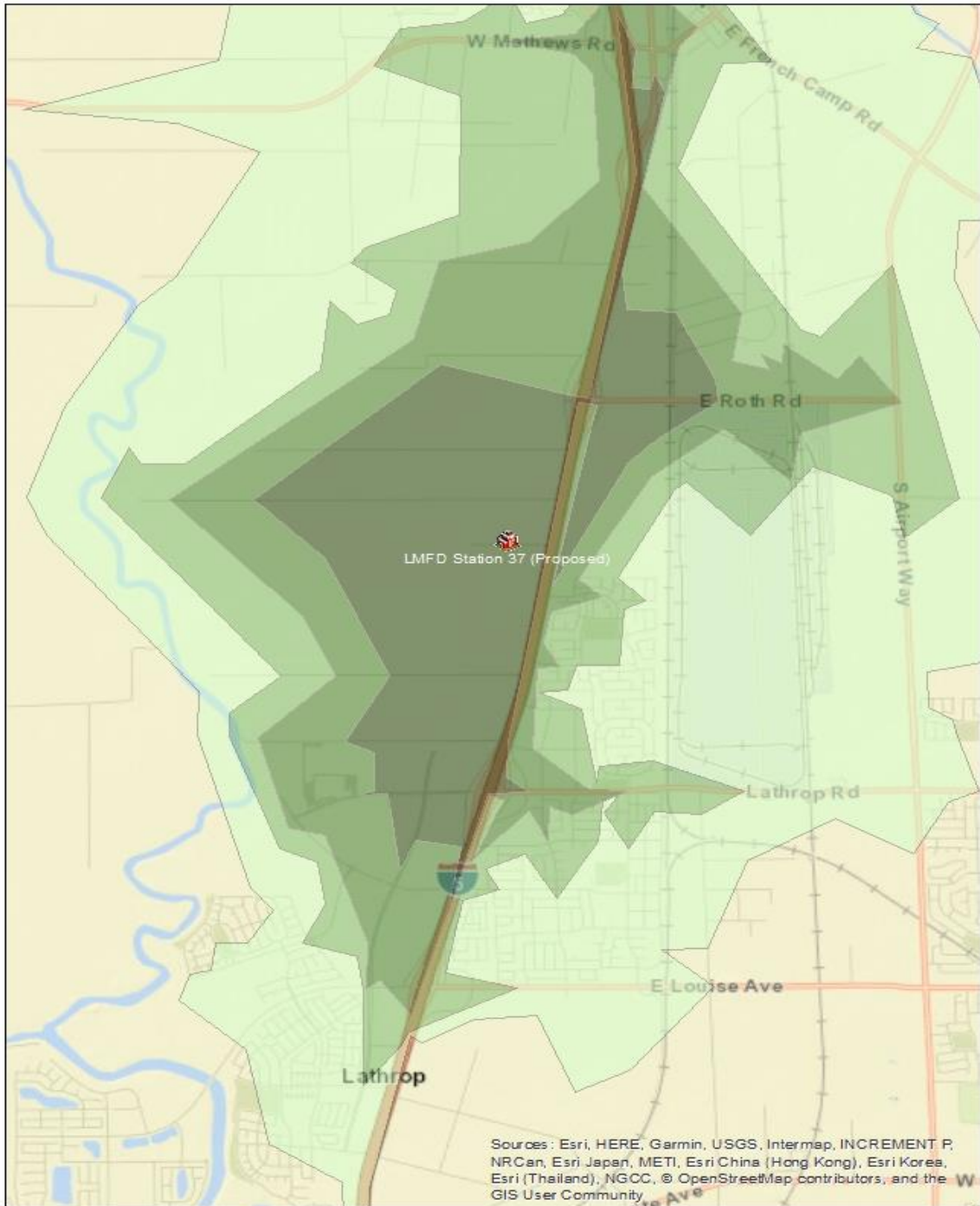


## Fire Station 36 (Proposed)

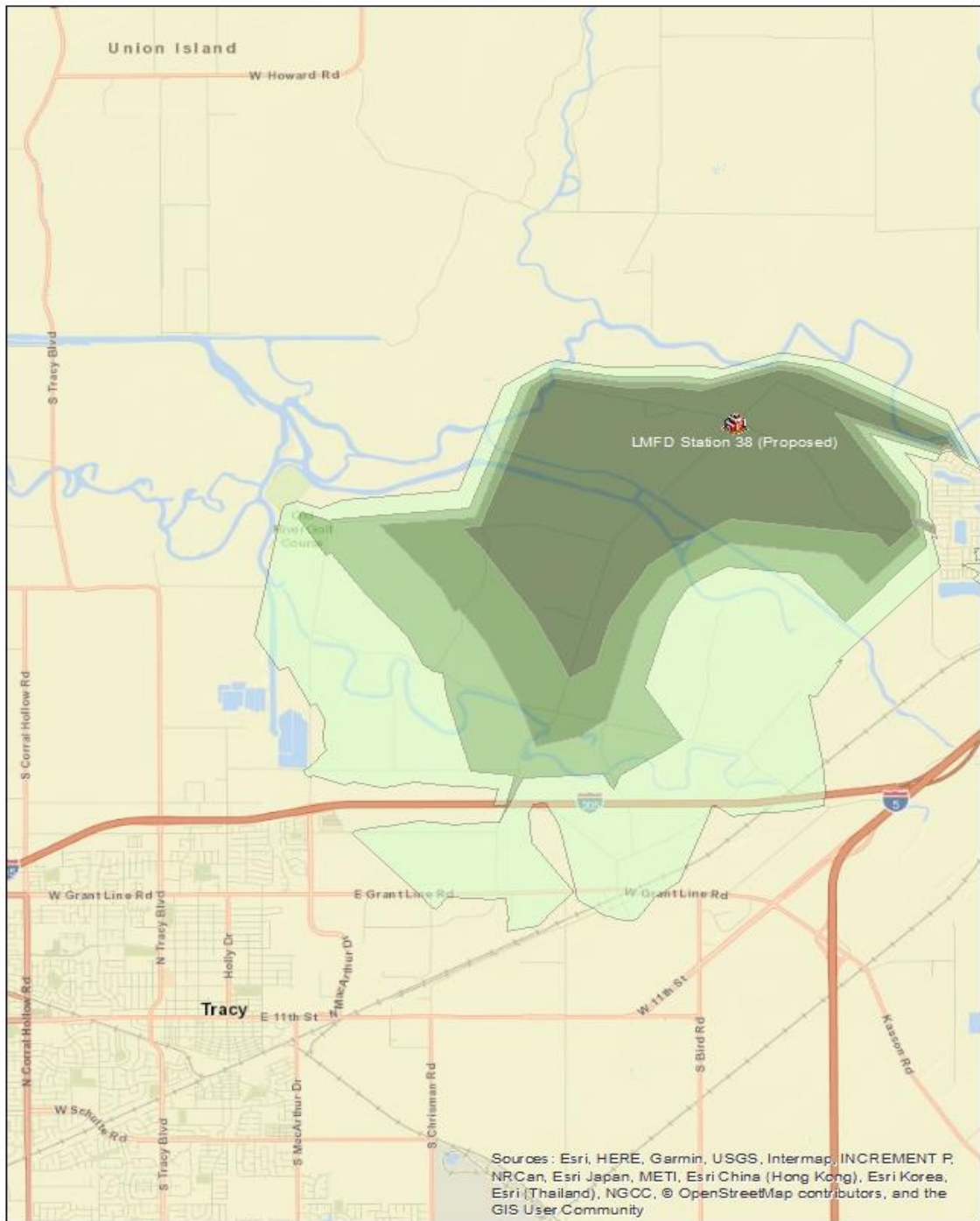




## Fire Station 37 (Proposed)



## Fire Station 38 (Proposed)



# Overall - Lathrop

