Shared Public Services Initiative
Capital Area Fire

City of East Lansing
City of Lansing
Delhi Township
Delta Township
Lansing Township
Meridian Township

Final Report | June 6, 2012

plante moran

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I. Management Summary

Project Scope and Objectives

Through the Michigan Municipal League Foundation (MML), Plante & Moran, PLLC ("Plante Moran") was retained to assist the Michigan communities of:

- City of East Lansing
- City of Lansing
- Delhi Township
- Delta Township
- Lansing Township
- Meridian Township

(collectively "the Communities") with a Shared Public Services Initiative Project (the "Project") involving the exploration of various collaboration scenarios for the representative fire departments of each community.

The main objectives of the project included:

1. Assess the feasibility of creating an actionable plan for the fire departments, leading to either a
    - full-merger
    - partial-merger
    - mutually beneficial cooperative agreement
2. Facilities plan, using existing infrastructure and resources to the extent feasible
3. Organizational strategies and structure, including possible functional consolidation
4. Offer a phased approach, including identifying:
    - Immediate opportunities (e.g., smaller consolidations, common response protocol, automatic mutual aid, etc.)
    - Longer term plan for remaining objectives

For the sake of clarity in this report, collaboration refers to cooperative efforts among the Communities' fire departments to share services or undertake other collaborative efforts to improve services, reduce costs and/or expand services to the benefit of the Communities. Consolidation refers to a merger of two or more fire departments within the Communities.

Project Governance

The Executive Sponsors for the project include the Communities, Lansing Economic Area Partnership (LEAP) and the Lansing Regional Chamber of Commerce. Grant funding for the project is from the Michigan Municipal League Foundation.

The Steering Committee includes representatives from each of the six communities, including both union and non-union representatives from the fire departments and city/township management, as well as representatives from the business community. The Steering Committee's role is to provide overall

project guidance ensuring objectives are met through a sound project approach and methodology. Members of the Steering Committee were the primary decision makers and resources within each community, including fire representatives to address the specific operational issues and city or township supervisors/managers to address the managerial and financial issues (i.e., Community Sponsors).

The Community Sponsors include the fire representatives (i.e., fire chiefs) and city/township management from each community. The role of the Community Sponsors is to provide general input on consolidation benefits and barriers along with operational and financial data from the communities. Additional input was sought from union and business leadership regarding benefits and barriers of collaboration and consolidation.

The Stakeholders include any individual that is impacted by recommendations in the report.

It is important to note that there is no Governance Committee or legal agreement in place between the Communities at this juncture for any form of consortium or other form of governance or shared service.

Project Approach

1. Project Initiation

This project was launched on November 30, 2011 at a project kickoff meeting with the Steering Committee. Prior to the kickoff, the project Steering Committee was established.

2. Documentation Review

Following project initiation, Plante Moran provided a detailed information request list and reviewed documentation provided by all participating entities. The request list consisted of matrices to collect specific operational and financial data from each community.

3. Conduct Leadership Interviews

Plante Moran conducted leadership interviews involving fire chiefs and management from each of the Communities. The purpose of these interviews was to understand leadership perspectives regarding collaboration, understand the current organization/operations and validate information required to complete the quantitative analysis.

4. Conduct Site Visits

Plante Moran conducted independent site visits to each community. The focus of the site visits were to gain detailed operational, technical, and financial information regarding current fire operations and project expectations related to collaboration and consolidation of fire services.

In addition, separate site visits were conducted to examine and collect data regarding the condition of existing facilities for each community.

5. Visioning Session

Upon completion of the site visits, Plante Moran compiled information gathered from the individual meetings and held a Steering Committee meeting with the emphasis on establishing collaboration and/or consolidation scenarios, specifically those scenarios that focused on opportunities for cost savings, improved service levels, or both.

To get a key understanding of the most reasonable collaboration scenarios and to design a consolidated fire department, Plante Moran facilitated a Visioning Session to address the following key topics:

- Convey status of the analysis and request Steering Committee guidance on further data validation
- Present preliminary data, analysis and scenarios to seek Steering Committee feedback and direction

6. Conduct Additional Data Validation

After completion of the Visioning Session Plante Moran conducted several additional follow-up activities to collect data required to complete its operational and financial model. Steps involved in completing this activity included sending out additional information requests and conducting an additional full day session in East Lansing, MI with the Community Sponsors in order to further validate the data to ensure the most accurate and comparable data possible.

Following this meeting, additional worksheets were distributed with identified gaps in data. Data was collected and included in Plante Moran's operational and financial model for further analysis.

7. Create Operational and Hypothetical Financial Model

Plante Moran created an operational and financial model for proposed collaborative scenarios. The results are included in this report. During the Visioning Session, the Steering Committee expressed that a multi-phased approach for implementation was the most desirable and should consider:

- Increased regional collaboration
- Full consolidation of all departments

8. Draft Report and Presentation

Plante Moran created this management report for all participating communities to review, which outlines increased collaboration scenarios, operational benefits of increased collaboration and advantages of a consolidated operation. Because of multiplicity of service, labor, and fixture conditions and assumptions that would have to be resolved by the communities it is impossible to provide anything but a hypothetical model and range of savings based on current costs, which a consolidation might realize. With an understanding of such limitations, Plante Moran agreed to undertake such modeling for the purpose of providing the communities some understanding of the potential range of savings a consolidation might realize and the estimated total costs and/or secondary savings available to the communities. Plante Moran met with the Steering Committee to present its findings, scenarios for the Steering Committee to consider, a phased approach for collaboration/consolidation as well as the recommended next steps.

9. Finalize Report

Plante Moran accepted feedback from the Steering Committee and finalized the report.

Next Steps

During the next step, the Communities will discuss the operational case for collaboration and implementation scenarios for the multi-phased approach. The identified "ideal" timeframe for the implementation plan as expressed by the Steering Committee representatives ranged from three to ten years to achieve final consolidation. It is Plante Moran's experience that final consolidation will likely not occur for seven years based on research of other departmental consolidations.

In the near term, the Steering Committee will need to decide if Plante Moran will be retained for the second phase of this project which includes the development of an implementation plan. This planning is the necessary first step to proceed with the recommendation presented in this report.

Summary Findings and Results

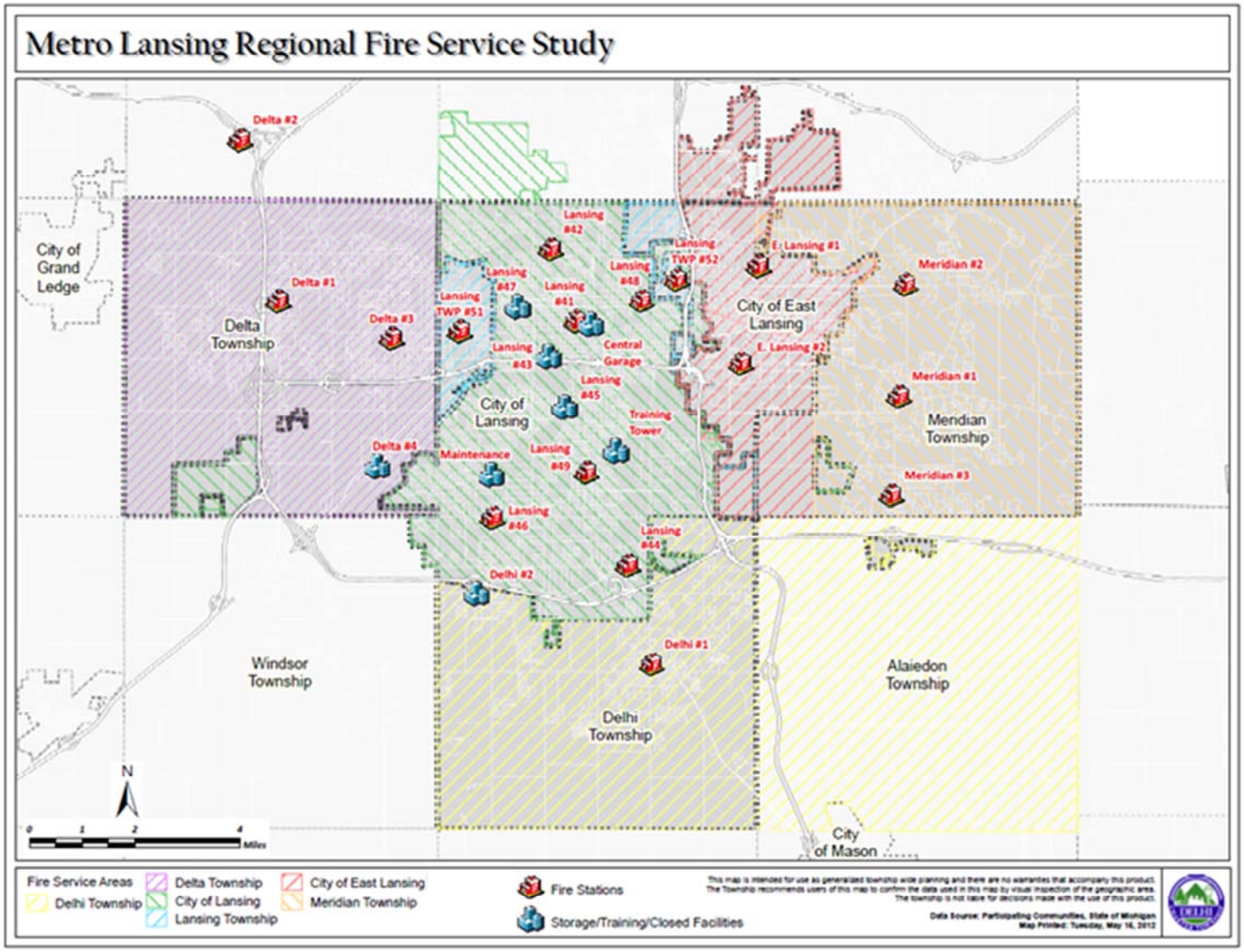
Overview

The Communities represented in this study are represented in the following table, which shows general demographic data about each community:

Item	City of East Lansing	City of Lansing	Delhi Township	Delta Township	Lansing Township	Meridian Township	Total
Population (1)	48,579	114,297	25,877	32,408	8,126	39,688	268,975
Geographic Area (sq. miles)	13	35	29	35	5	32	149
Population Density (population/sq. mile)	3,601	3,294	908	917	1,625	1,240	1,805

Each of the Communities currently operates its own independent fire department. The service area represented by the six Communities is 149 square miles consisting of urban, residential and rural locations. The State Capitol and many government buildings are located within the City of Lansing. Michigan State University's (MSU) campus is located in East Lansing. Several prominent businesses are located within the service area, each with major facilities. The Board of Water & Light has a large power facility located on the south side of Lansing and there are three large hospitals in the City of Lansing (McLaren, Sparrow, and St. Lawrence). Several major retail outlets include the Meridian Mall, the Lansing Mall, and Eastwood Towne Center.

Major freeways include US 127, I-69, and I-94. The area also has several train tracks running east and west. The following map provides an overview of the Communities along with locations of the various fire facilities.



[1]

[1] Note that Delta #2 is outside of the service area of this Shared Public Services Initiative project.

Significant Findings

The majority of our effort during this feasibility stage of the project was to accomplish the following:

- Collect data to support feasibility relative to various collaboration and consolidation scenarios.
- Confirm interest, benefits and potential barriers to consolidation among Steering Committee and Community Sponsor participants.
- Gain consensus on general collaboration and consolidation approaches.

During this time, we learned the following:

- Data was difficult to collect and normalize. During the discovery process, numerous follow-ups were required to collect adequate data. Even through this effort, some gaps remain in the data that Plante Moran needed to fill through a "normalization" process.
- The Communities prefer and complexities of the legal, labor and service and political factors require a phased approach toward possible full consolidation before the benefits of collaboration can be fully realized.
- The Communities prefer not to include community legacy costs (e.g., retirement obligations) in the analysis or the ultimate entity that may be formed as part of a consolidation.
- The Communities have had a history of collaboration and general interest around collaboration has existed since June 1997 with a joint HAZMAT initiative. Further collaborative efforts and studies have since ensued resulting in other shared services around procurement, training, etc. These efforts have resulted in a platform for more formal collaboration to take place, potentially leading to consolidation.
- A potential barrier to consolidation includes the variety of standards and services among the communities and disagreement on a standard operating model for a single entity. Another barrier often mentioned was one of culture and identity the employees had with their particular department.
- Generally, the facilities are in good condition. The majority of the facilities need renovations/maintenance of less than $1M, with three stations in excellent condition. Four of the facilities are either in need of renovations/maintenance of more than $1M or are no longer salvageable.
- Operationally, the six fire departments are more similar than different. Significant exceptions include:
    - The City of Lansing and Meridian Township operate using a 2 shift schedule while the other communities operating use a 3 shift schedule.
    - The Cities of Lansing and East Lansing do not use a 'jump truck' model; i.e., staff are assigned to a particular truck/ambulance and do not provide services unless their truck/ambulance is needed.
    - Mutual aid is in place but only Lansing Township and Delta Township share automatic mutual aid.
- Communities indicated interest in forming an authority as part of consolidation, and an authority is eventually necessary for the full cost and service benefits of collaboration to be realized.

- There is a strong interest in improving current service levels (e.g., response times, etc.) under collaboration/consolidation scenarios along with standardization.

Major Conclusions

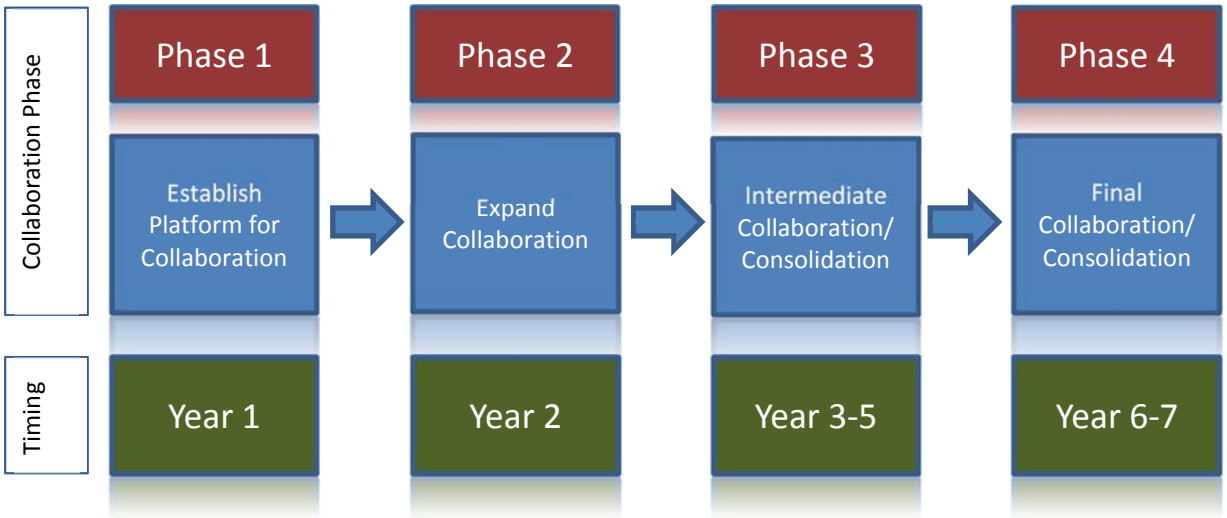
Based on our analysis of the Communities, the following represents several of the key project conclusions:

- Given the current state of the Michigan economy and the current operational challenges experienced by each of the fire departments independently, we believe that fire department collaboration is an attractive option for all communities participating in the study. Ultimately full consolidation should be considered. However, it is important to understand that full consolidation can take a number of different forms that could involve a variety in levels of local involvement in fire/EMS service.
- The Communities have the unique opportunity to work together to provide enhanced coverage to the entire geography, and stabilize the fire department's personnel and operations to provide improved service for all project participants. Shared services, such as automatic mutual aid, typically result in improved response times, improved services, and better utilization of resources based on experience with other communities that have implemented them.
- The Steering Committee supports a multi-phased approach to increase regional cooperation of the fire departments in the Greater Lansing Area in order to mitigate risks associated with a short-term, full consolidation scenario. The initial phases (1 and 2) are intended to work toward increased collaboration between departments to improve service levels and slightly decrease costs for each community. Later phases (3 and 4) are intended to weigh the merits of combining departments into a single, larger department in the future. This report outlines the general feasibility and cost structure of a combined department for the region.
- There is no consensus yet on the necessity or shape of full department consolidation at this time, nor is there an appropriate governance or financial structure in place to facilitate consolidation. The communities recognize the need to work together to develop service enhancements and/or cost reductions that can be achieved through enhanced collaborative efforts. There is general Steering Committee agreement to move forward with increased regional collaboration in the short term and, in fact, the communities have worked closely on other collaborative efforts regarding fire and EMS services. Developing and implementing effective instruments for building a common identity within the fire departments and for providing some local input and control will be necessary to ensure collaborative success and critical organizational stability.
- There appears to be economies of scale and service improvements associated with consolidating fire department operations among the six communities. The Communities collectively incur about $37M in annualized expenditures relative to fire and EMS services. This report includes various consolidation scenarios. Long term savings potential from consolidation should be annually in the seven figures in the aggregate depending on selected service, labor, and fixture models.

Collaboration/Consolidation Approach

Plante Moran recommends a phased approach toward a possible single entity serving the fire and EMS needs of the residents of all six communities. During the Visioning Session as well as interviews, we consistently heard an interest in a phased approach that eases into possible full consolidation. Because consensus around collaborative efforts and consolidation takes time and is difficult to implement, we recommend the phased approach as follows:

Shared Public Services Initiative
Collaboration/Consolidation Phased Approach



The timing indicated above is purely an estimate based on Plante Moran's experience and research relative to other fire department and other entity consolidation. Economic, cultural, political and other factors may dictate another timeframe. Ultimately, leadership and governance will dictate a timeframe that suits the citizens and other stakeholders. Clearly the timeline can be accelerated to achieve possible full consolidation, and resulting cost savings, sooner. Obviously, this may be the desire of some stakeholders in the region. If such an aggressive timeline is chosen, it will be up to leadership and governance to balance these cost savings with a myriad of risks related to labor, safety, service as well as a variety of other factors.

In addition, the Communities may wish to welcome other communities to participate in collaboration.

The following represents a more detailed presentation of the phased approach along with major components of each phase.

Shared Public Services Initiative
Collaboration/Consolidation Phased Approach

Phase 1	Phase 2	Phase 3	Phase 4
Establish Formal Platform for Collaboration	Expand Collaboration	Intermediate Collaboration/ Consolidation	Final Collaboration/ Consolidation

• Establish governance structure for expanding on collaboration
• Establish a legal relationship between communities
• Implement automatic mutual aid
• Formalize existing collaborative efforts
	• Establish standards
	  • Schedules
	  • Equipment
	  • Policies/procedures
	• Procurement cooperative
	• Shared facilities/property maintenance
	• Shared vehicle maintenance
	• Create an Authority (possibly)
		• Limited mergers
		  • Scenario 1
		  E. Lansing, Meridian Twp.
		  • Scenario 2
		  E. Lansing, Lansing, Lansing Twp.
		• Re-configure station locations (short versus long term)
		• Common management/ unified command center
		• Create an Authority (probably)*
			• Single Fire Authority
			• Potentially Maintain Independent "Brands"
			• Re-configure station locations

◆ Decision regarding next phase by Governance Team/Entity

*Possibly create contracts between the Authority and Communities for firefighter units

This approach guides the Communities toward possible full consolidation and includes the necessary decision points that the ultimate governance structure and model would be designed to deal with. The approach is designed to present a variety of choices during each phase. For exampleit may be desirable as early as Year 2 to create a new legal entity (the "Authority") in order to conduct common purchasing, maintenance etc.

This also helps differentiate Phases 2 and 3, because in Phase 3, we envision the Authority actually having employees. The Authority could employ the common management out of a unified command center. So, it may actually start owning things and employing people in Phase 3.

Interestingly, it may be desirable or necessary for some time for the Authority to contract out to the local units to supply manpower (i.e., actual firefighters). There are a myriad of possibilities here to balance the varied interests of key stakeholders (i.e., citizens, management, labor, etc.) Some hybrid may be necessary to accommodate these varied interests. Whichever, we envision the emergence of the Authority as being necessary at Phase 3.

Recommendation

Plante Moran recommends the Communities strongly consider moving forward with Phase 1 within 30 days of the date of this report. Prior to Phase 1 execution, an implementation plan should be developed to outline the detailed steps and costs associated with Phase 1.

The benefits of Phase 1 are:

- Provides a platform for increased collaboration as a step toward consolidation.
- Formalizes the relationship between the Communities.
- Provides a much needed governance structure which will serve as a basis for decision making relative to the multi-phase approach.
- Establishes automatic mutual aid which is a basic element where the Communities are collaborating on fire and EMS services.

II. Operational Analysis

Introduction

The premise for this Shared Public Services Initiative project is that economies of scale can exist within contiguous communities relative to fire and emergency medical services (EMS) and that, through collaboration, municipalities can deliver improved fire protection and EMS services at a reduced cost. Rural communities in Michigan were some of the first to engage in some form of collaboration with neighboring municipalities, such as joint purchasing and mutual aid, and quickly began to recognize the financial and service level benefits of fire department collaboration. While most fire departments engage in some form of mutual aid as a backup, as this is needed for large scale fires, it is evident that the majority of service runs for a fire department are medical in nature and require EMS services.

While neighboring fire departments are able to provide assistance across municipal borders when called for mutual aid, in most cases, fire department and medical service coverage areas are restricted to municipal boundaries. By eliminating municipal boundaries from coverage areas and working as a single service unit, fire departments may be able to provide enhanced services at similar or lower costs to all citizens in a region. In doing so, emergency responses can be directed from the closest, best equipped station, improving service levels to community residents and businesses. The operations of a joint fire department or separate departments functioning under a collaborative agreement can be structured in such a way to minimize response times, avoid duplication in equipment and certain administrative and operational services. Reduced response time and costs savings are the primary benefits of operating together, rather than as separate entities.

Service Area Overview

The communities engaged in this analysis, Delta Township, Delhi Township, City of East Lansing, City of Lansing, Lansing Township and Meridian Township (together the “Communities”), encompass roughly 149 square miles and are located in the greater Lansing Metropolitan Area. The approximate total population for the area is over 268,975 residents or on average slightly over 1,805 residents per square mile. Currently the six communities are covered by six individual fire departments; one for each community. All of the local fire departments provide Emergency Medical Services (EMS) to their communities. In addition, Delhi Township provides fire protection and services to Alaiedon Township while Delta Township provides fire protection and EMS services to Eagle and Watertown Townships, which are part of the Looking Glass Regional Fire Authority service area.

Current State of Operations

Overview of Operations

All of the fire departments with the exception of Delta Township utilize the same dispatch system through Ingham County. Delta Township utilizes Eaton County for central dispatching. These dispatching systems provide central dispatch for both fire and EMS services based on 911 and other calls received through dispatch. Although some mutual aid is being provided among the Communities, there is no formal agreement and mutual aid is not automatic (i.e., each request requires notification to and approval from the fire department being called on for mutual aid).

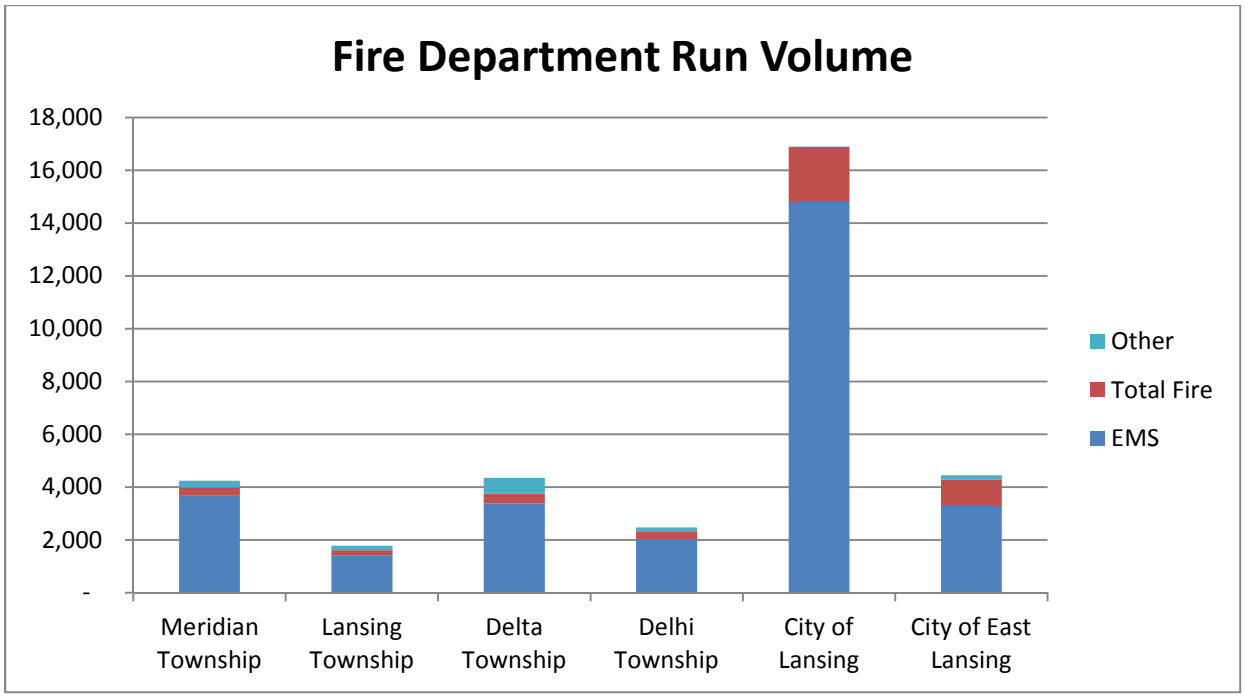
Some of the fire departments have several significant differences in their operations. Those noted during this project were:

- The two cities (Lansing and East Lansing) assign staff to equipment, such that staff do not respond to calls unless their equipment is needed. This can result in greater staffing levels.
- Four of the departments have three shifts of staff, although these shifts do not always follow the same schedules in regards to days on or off. The remaining two departments (Meridian Township and the City of Lansing) have two shifts. The departments agree that using three shifts is ideal for scheduling purposes.

These differences should be eliminated in order to achieve economies of scale and improved service levels.

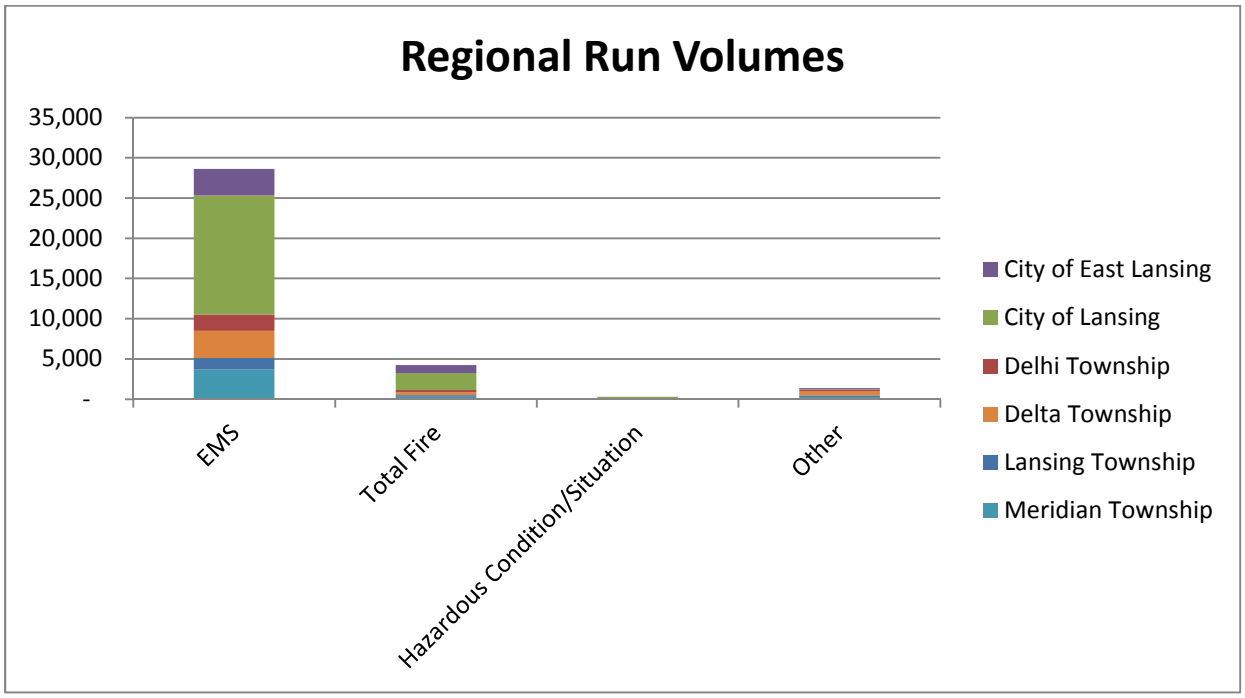
Operating Data

The following chart shows the number of runs, including both fire and EMS runs, for calendar year 2011, as provided by the Communities:



The City of Lansing has the highest run volume for both fire and EMS by a significant margin. The City of Lansing logged approximately 17,089 (or 49.5%) of the 34,528 total runs for the calendar year ended December 31, 2011. Note that these run volumes are used as a predictor of calendar year 2012 run volumes in Plante Moran's operational and financial analysis. The City of East Lansing, Delta Township and Meridian Township had nearly identical run volumes (4,455; 4,384 and 4,332, respectively). The City of Lansing had the highest number of fire runs (2,079) followed by the City of East Lansing (1,004). Combined, the two cities represented nearly 75% of the total fire runs.

The following chart shows the total regional run volumes by type with a breakdown by community:



Clearly, EMS run volumes outpace other run types by nearly 5:1.

The following table summarizes additional operating data regarding each fire department represented within the Communities:

Summary of Operating Data

Item	Meridian Township	Lansing Township	Delta Township	Delhi Township	City of Lansing	City of East Lansing	Total
Fire Dept. Staff	36	18	36	24	180	50	344
Staff per Thousand of Population	0.916	2.215	1.111	0.914	1.575	1.019	
Number of Stations	3	2	2	1	6	2	16
Number of Facilities	3	2	3	2	9	2	21
ISO Rating (1)	4	5	4/8	4	3	4	
Average Dept. Response Time - Fire (minutes)**	4 - 6 (3)	4	6.2	6.016	4 - 6	-*	
Average Dept. Response Time - EMS (minutes) (#) (2)	4 - 6	4	4.1	5.283	4 - 6	-*	

*East Lansing did not provide this data.

**Meridian Township, East Lansing and Lansing follow NFPA 1710[(2)], Lansing Township, Delta Township, Delhi Township follow NFPA 1720[(2)]

(1) ISO has been the premier source of information about property and liability risk. ISO's statistical, actuarial, and underwriting information is a vital resource to insurers, government

regulators, and other companies and organizations. We include ISO ratings (generally speaking, lower ISO ratings indicate enhanced fire service) as an outside measure of fire department service levels since ISO's standardized policy language is the foundation upon which many insurers build their coverage programs.

(2) Response times are as reported by the Communities. Acceptable response times are stated within the National Fire Protection Association's (NFPA) standards and influence ISO ratings. NFPA standard 1710 applies to fire protection and EMS services for stations only using full-time (also referred to as "career") firefighters. NFPA 1720 applies to departments that also use paid-on-call, part-time, and volunteer firefighters. Acceptable response times for arriving on scene range from 4 to 15 minutes depending on whether the station is "career" or not, and whether the incident is in an urban, suburban, or rural area. The Communities' response times are shown for informational purposes as a comparison to our recommended response time, which strives to retain the Communities' current service levels and ISO ratings.

(3) Meridian Township followed NFPA 1710 Standards in 2011, but began following NFPA 1720 Standards in 2012.

Staffing

Several of the Communities only have full-time ("career") firefighters (the cities of Lansing and East Lansing), while others (the townships) also have paid-on-call, part-time, and/or volunteer firefighters. Staffing levels are highly dependent on run volumes and the numbers of stations, which explains the higher staffing level for the City of Lansing and the lower staffing level for Lansing Township. Delhi Township has the highest proportion of part-time firefighters, and also the greatest proportion of administration relative to its firefighters. Lansing Township has the lowest proportion of administration relative to its firefighters.

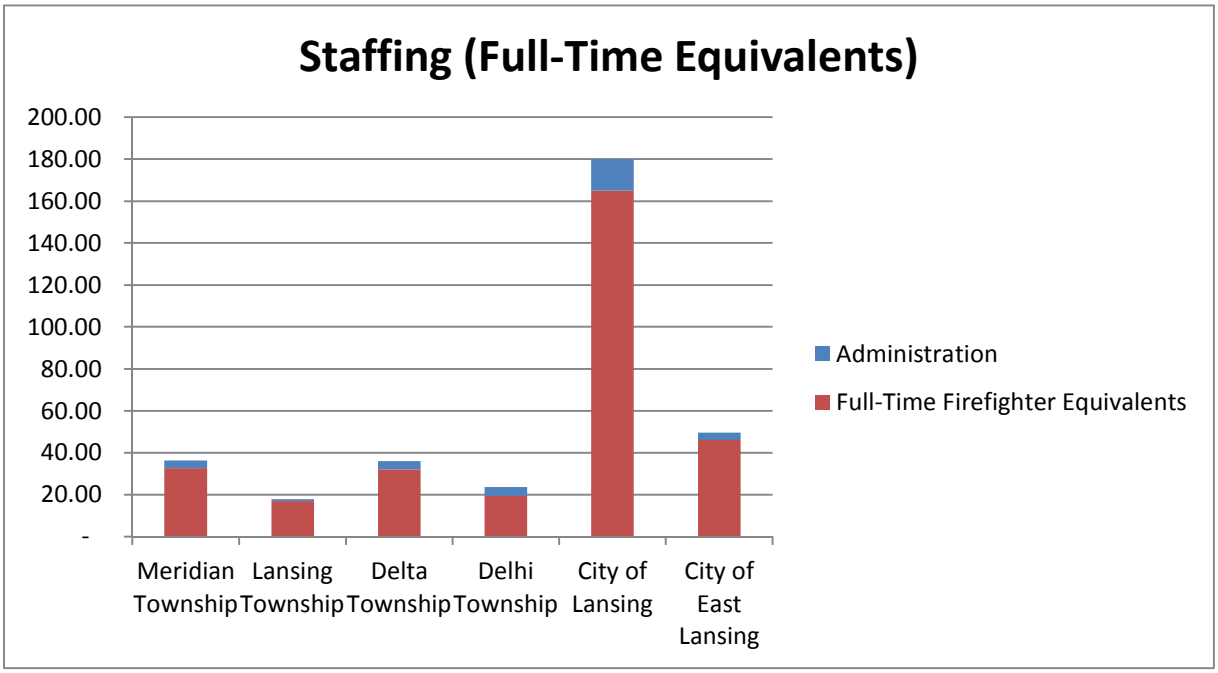
The following table summarizes the staffing models for each of the Communities:

Summary of Staffing Model

Item	Meridian Township	Lansing Township	Delta Township	Delhi Township	City of Lansing	City of East Lansing	Total
Administration	3.60	1.00	4.00	4.16	15.00	3.50	31.26
Full-Time Firefighters	31.00	14.00	30.00	13.50	165.00	46.00	299.00
Part-Time Firefighters (1)	1.75	3.00	2.00	6.50	0.00	0.00	13.25
Total staffing	36.35	18.00	36.00	23.66	180.00	49.50	343.51

Meridian Township and the City of Lansing utilize a two-shift schedule, while Lansing Township, Delta Township, Delhi Township, and the City of East Lansing utilize a three-shift schedule. These schedules are all based on 24-hour workdays, with patterns for the amount of consecutive days worked or not worked. Even with a similar number of shifts, the schedules for the Communities vary in the pattern of days that staff work, and also result in differences in the total number of hours worked per week for each community (ranging from 50.4 to 56 hours per week for full-time staff). The differences in these schedules have historically made it difficult to collaborate on training and prevent the Communities' staff from covering each other's shifts.

The following chart shows the total number of full-time equivalent staff by community:



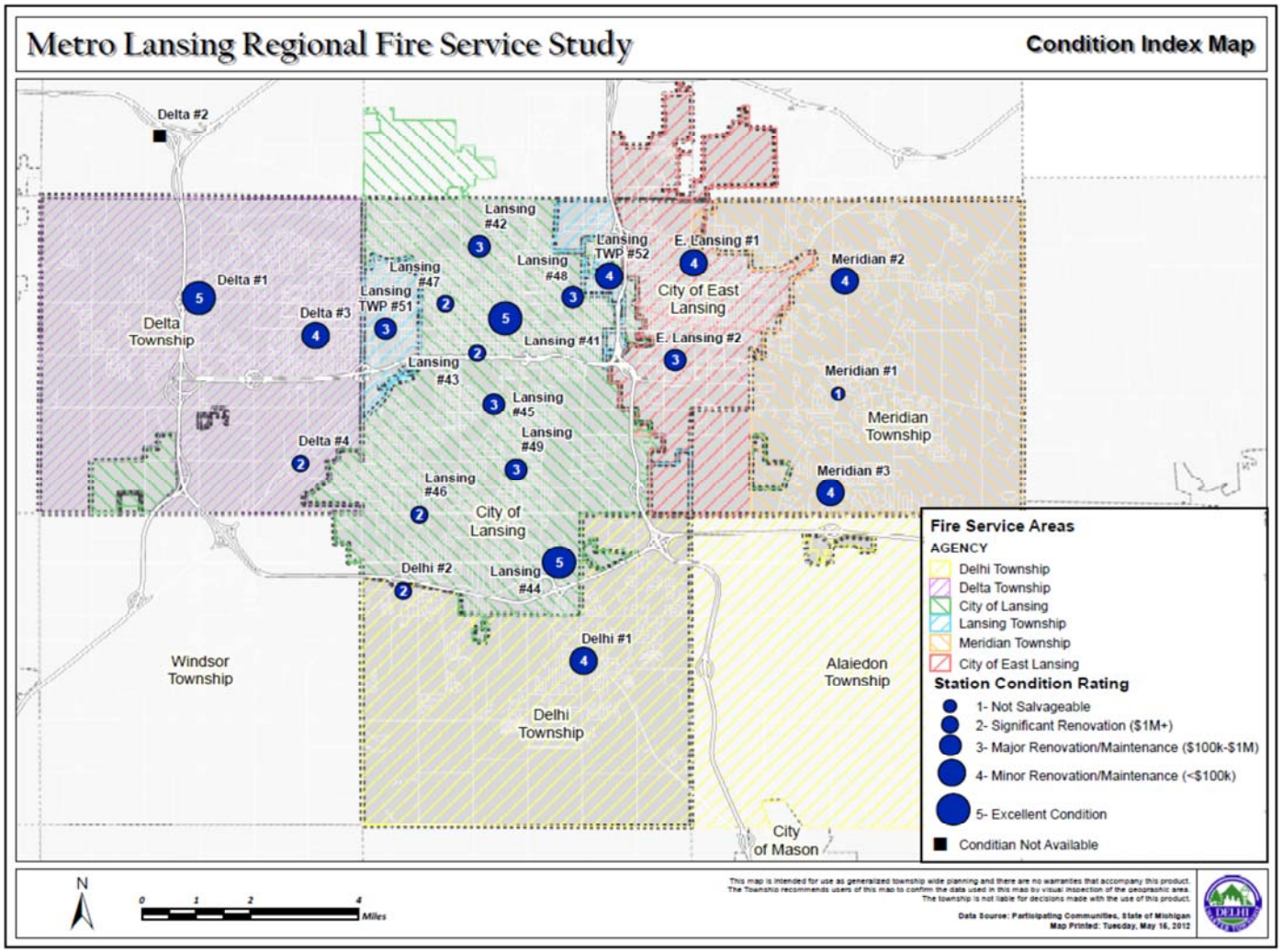
Full-time staff are each counted as 1 full-time equivalent. Part-time staff are each counted as 0.25 full-time equivalents, as is the practice for ISO standards and as verified by the Communities.

Facilities and Equipment

The map on the following page shows the locations and conditions of the Communities' facilities. The subsequent page lists the facilities and their conditions.

The conditions are categorized as to whether the facilities are in excellent condition, require various levels of renovation, or are not salvageable.

The Communities currently have a total of 21 open facilities. Of these 21, three are in excellent condition, seven need minor renovations (<$100K each), 5 need major renovations ($100K - $1M each), three are in need of significant renovations (>$1M each), one is not salvageable, one is the central garage, and one is the maintenance garage.



[2]

[2] Note that Delta #2 is outside of the service area of this Shared Public Services Initiative project.

Greater Lansing Area Communities
Facilities Condition Summary

Jurisdiction	Station	Address	Built	SF	Stories	Bays	Height	Bunks	Private	Condition Index*	Notes
Lansing	Central**	120 E. Shiawassee	N/A	60,952	2	4	12	17	Y	5	Remodeled 2008
	Two	2114 N. Grand River	1962	9,119	2	2	12	7	N	3	Mechanical issues
	Three	639 Hillsdale	1953	8,414	2	2	12	6	N	2	Currently closed
	Four	1435 Miller	2002	N/A	1	4	12	15	Y	5	Built for 15 people. Now only has 5
	Five	1821 Todd Street	1955	8,736	2	2	12	6	N	3	Currently closed
	Six	5135 Pleasant Grove	2001	9,119	1	3	14	11	Y	4	Needs Acoustical treatment in bays
	Seven	629 N. Jenison	1927	5,000	2	1	10	9	Y	2	Historical Building, Closed
	Eight	815 Marshall	1977	15,336	1	3	12	8	Y	3	Tech. Response Vehicle store here
	Nine	520 Glendale	1954	17,260	2	3	12	16	N	3	Mechanical work needed
	Training	3015 Alpha Access	1934	960*	2	2	12	0	N/A	2	Two buildings-not staffed FT
	Maintenance	3708 Pleasant Grove									
**office and training areas only*											
East Lansing	Central	1700 Abbott	1977	18,000	1	5	12	9	N	4	Old boilers, roof leaks
	Two	MSU, Shaw Lane	1956	7,900	2	4	12	8	N	3	Heat from steam tunnels
Lansing Twp.	Central	3301 W. Michigan	1949	1,200	1	3	12	4	N	3	Next to Twp. Office
	Two	2701 Hopkins	1973	900	1	3	12	4	N	4	Neighborhood station
Delhi Twp.	Central	2074 Aurelius	1998	8,500	1	4	14	4	N	4	Too small for current staffing
	Two	6139 Bishop	1964	3,500	1	6	10	0	N/A	2	Used for storage only
Meridian Twp.	Central	2150 Clinton	1958	6,868	1	2	12	5	N	1	New Central on ballot in November
	Two	2140 Haslett	1995	6,984	1.5	2	12	4	N	4	Drainage issue behind station
	Three	3711 Okemos Rd	1992	10,489	1	3	14	5	1	4	Concrete repair needed in back
Delta Twp.	Central	811 North Canal	2003	20,000	1	6	14	10	Y	5	Well utilized and maintained
	Three	215 Snow Road	1999	15,000	1	3	14	10	N	4	Across from Waverly HS
	Four	Old Lansing Rd	1970	3,000	1	2	12	0	N	2	Used for storage only

*Condition Index
1. Not salvageable
2. Needs significant renovation ($1M+)
3. Needs major renovation/maintenance ($100K-$1M)
4. Needs minor renovation/maintenance (<$100K)
5. Excellent condition

**Central is both a station and a central garage

Clearly, there exists a broad range of attributes that comprise the facilities, including: square footage, configuration, and conditions. Lansing operates the majority of the facilities (nearly 50% of the total number). It should be noted that facilities with a Condition Index of 5 may still require minor maintenance. Regardless, as the Communities progress toward Phases 3 and 4, they should collectively evaluate possibly closing and/or combining various facilities as they begin to collaborate more.

The following table displays the types and amounts of equipment for each of the departments which are housed in the facilities identified above:

Equipment	Meridian Township	Lansing Township	Delta Township	Delhi Township	City of Lansing	City of East Lansing	Total
Engine	3	3	2	1	6	1	16
Quint		1	1			3	5
Rescue - Heavy	0	2	0.5	1	1	0.5	5
Rescue - Light					3		3
Ambulance	4	3	5	3	5	3	23
Ladders	1	0	1	1	2		5
Tanker	0	0	1	1			2
Command Vehicle	1	2	3	2	1	2	11
Brush Trucks			1	1	2		4
Staff Cars	5			2	13	4	24
Generators	3	5	5	4	6	2	25
Cascade Systems		1			2		3
Gator/ATV			1		2		3
HazMat			1		1	0.5	3
Air Truck/Trailer	1	1	0.5		1	1	5
Boats	1		1	1	4	1	8
USAR					1		1
MFR Response		4					4

The Communities' equipment varies in age, levels of standardization/customization, and condition, but can nonetheless be shared jointly. Over time, the Communities can replace obsolete equipment with new equipment based on agreed-upon standards. Plante Moran's estimates for future equipment levels and the resulting reductions in the full-consolidation scenario are shown in the Appendix.

Operating Costs

The following table provides overview financial data for each community.

Item	City of East Lansing	City of Lansing	Delhi Township	Delta Township	Lansing Township	Meridian Township	Total
Taxable Value (1)	$937,697,440	$2,662,792,292	$737,412,758	$1,260,770,269	$292,482,849	$1,625,442,000	$7,516,597,608
Municipal Budget (2)	$46,653,156	$107,698,833	$9,779,349	$15,423,574	$3,900,000	$17,846,310	$201,301,222
Fire Dept. Cost (3)	$7,075,380	$27,673,397	$2,098,831	$4,244,021	$1,412,977	$4,350,120	$46,854,726

(1) Amounts provided by the Communities. Note, however, that these are not an exact indication of each community's total value. The Cities, for example, are home to many publicly owned buildings (such as the State Capitol and Michigan State University), which are do not have a taxable value. This data is for informational purposes only.
(2) Amounts provided by the Communities. Note that these may differ from each other for a variety of factors. This data is for informational purposes only.
(3) Amounts provided by the Communities, based on budgets for the 2012 fiscal year.

Legacy Costs

The following table displays the Communities' current budgeted amounts for legacy costs (pension and other post-employment benefits), for informational purposes only.

	Meridian Township	Lansing Township	Delta Township	Delhi Township	City of Lansing	City of East Lansing	Total
Annual pension contribution	$696,260	$73,125	$194,707	$-	$3,927,044	$1,077,069	$5,968,205
Annual Other Post-Employment Benefits (OPEB) contribution	$92,426	$65,595	$245,000	$71,000	$4,672,020	$525,173	$5,671,214
Total	**$788,686**	**$138,720**	**$439,707**	**$71,000**	**$8,599,064**	**$1,602,242**	**$11,639,419**

For purposes of this study, current legacy costs related to retiree benefits are not factored into any future state operational or financial analysis. The premise, as preferred by the Steering Committee, is that all current legacy costs will remain with their respective communities and will not be transferred as part of any merger activity. However, benefits costs are incorporated into future state modeling for proposed employees based on the current percentage of benefits to salaries costs as provided by the Communities.

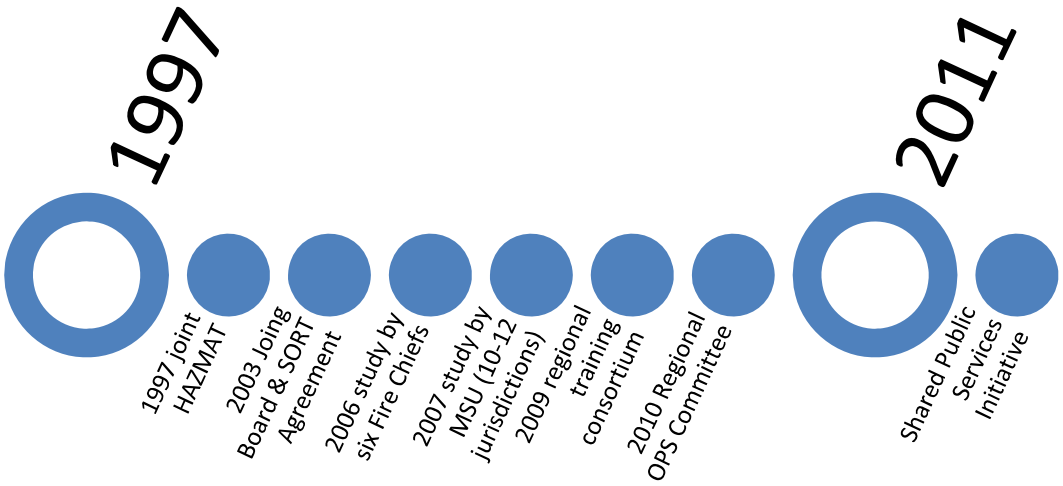
Further, the recent enactment of Public Act 152 (of 2011) limits the amount that public entities can pay for legacy costs, which would further reduce an authority's estimated future expenses. We would assume that the authority would pay 80% of the current costs for medical benefit plans (within the "80/20 Rule") and 10% of base salary for pension plan contributions [in order to qualify for Economic Vitality Incentive Program ("EVIP") payments, as established by Public Act 63 of 2011]. This also assumes that the cities would begin contributing to Social Security, as they are currently exempt.

History of Collaboration

The Communities have a history of collaboration in the area of fire services. Ingham County currently provides dispatch services to all fire departments with the exception of Delta Township, which currently receives its dispatch from Eaton County. Recently, the City of Lansing and the City of East Lansing began using one Chief for the two communities. The fire departments currently also work together in the areas of training (e.g. EMS and Metro Training Consortiums), mutual aid for structure fires, and specialized training/services such as Hazmat. The City of East Lansing and Meridian Township collaborate on purchasing and grants, and Delta Township and Lansing Township have automatic mutual aid with each other although it is limited in scope. Further, the City of Lansing and Delta Township have automatic mutual aid for the Capital Region International Airport and General Motor's facilities.

The following represents a historical perspective on collaboration between fire departments within the region.

Greater Lansing Area Communities
Collaborative Efforts
1997 - 2011



Previous Studies and Results

As noted in previous studies, several reasons have driven collaborative efforts among various members of the Communities including:

- Logistics and proximity
- Existing relationships
- Joint teams (RRT, HAZMAT, Special OPS, EMS)
- Unfilled positions (Training/Joint Teams)
- Common budget challenges

In 2006, the area Fire Chiefs completed a study to addressed six topical areas:

- Operations
- Personnel
- Budget and Promotional Issues
- Prevention
- Training
- Maintenance and Apparatus

In 2006-2007 an MSU study was commissioned to conduct more detailed analysis and the scope was expanded to include 10-12 jurisdictions. This study advised against full consolidation. Instead, it suggested a focus on training (LCC) and joint purchasing (MSU). In 2009 a training group became operational through LCC.

In May 2010 at a Regional OPS Committee meeting the Chiefs discussed Meridian and East Lansing Fire Department training proposal. The parties agreed timing was right to meet with Lansing Township and Delta Township Fire Departments. In addition, union leadership was invited. Subsequent meetings and phone conferences (IFD/SMCO) resulted in information gathering.

All efforts have led to greater collaboration* including:

- Joint Med Unit Purchasing
- Equipment Purchasing
- Coordinated Training Calendars
- Shared Training Resources
- Coordinated Training Budgets/Sites

*Modest budget impact overall. Training progress has been affected by retirements as of July 2010.

III. Operational Case for Collaboration/Consolidation

A key driver of this study is the current state of the economy in Michigan and current challenges experienced within the fire departments participating in the study. However, it is critical to note that collaboration and/or consolidation offer potential opportunities for improved service that should also motivate this process, especially since technological opportunities on the horizon will require economies of scale similar to those that have motivated and driven regional, consolidated dispatch. Each community participating in the study is at a different stage of evolution with regard to current fire department service levels, operating philosophy, availability of paid on call resources, migration to full-time or shift staffing, level of fire department investment, etc. These differences in operating philosophy and fire department financial resources (e.g. budgets) causes a challenge in balancing the cost versus service level trade-offs inherent in providing fire service.

The overall economic picture for the State of Michigan is in question. Property values have fallen significantly since their peak in 2006-2007 resulting in severe revenue reductions throughout local governments such as those represented by the Communities. The financial pressures hammering cities like Detroit and Flint, including falling property values and cutbacks in state revenue sharing, are undercutting municipalities throughout Michigan; large and small, urban and rural, homogeneous and diverse.

It is inevitable that the demands for fire and EMS service throughout the Communities will continue to increase in the region and financial pressures will continue for the foreseeable future. Therefore, it is in the best interest of the Communities to determine how regional collaboration can help better utilize scarce resources and maintain, or even improve, service levels. Regional collaboration should include interim steps leading up to a strong consideration for full consolidation of all six fire departments.

The fundamental question to be answered by this project is whether the Communities are better off by joining forces and providing combined services across the region or by maintaining separate fire departments subject to the continuing challenges of diminishing municipal and personnel resources. The majority of Steering Committee members believe that increased regional collaboration can have a net positive effect for the area. However, there is no consensus on what level of collaboration to pursue (i.e., working together more while maintaining separate departments versus full consolidation of all six fire departments). The Community Sponsors generally believe that the fire service is better off through increased collaboration between departments as a means to preserve and enhance the current level of service offered each community. This is evident in the current collaborative efforts the fire chiefs and other fire department representatives are spearheading. With the pursuit of a single department, differences arise in the pursuit of the basic service levels for each community and related costs to provide a particular level of service (e.g., usage of part-time personnel).

Overall, a phased approach makes the most sense. There should be a decision point at the end of each phase to determine if there is merit to the next phase. The following are the recommended phases.

- Phase 1: Establish Formal Platform for Collaboration
- Phase 2: Expand Collaboration
- Phase 3: Intermediate Collaboration/Consolidation
- Phase 4: Final Collaboration/Consolidation

Each phase is described in detail in the following section. The scenarios created for the financial feasibility assume full consolidation in Phase 4.

Phased Approach

Phase 1: Establish Platform for Collaboration *(Year 1)*

The intent of this phase is to provide a platform for regional collaboration among all six communities. This phase will build upon and formalize much of the regional collaboration that has already taken place. There are many low cost options for the communities to pursue enhanced collaboration, which may benefit the region as a whole, including but not limited to the following:

- Automatic Mutual Aid. The concept of this type of agreement is to provide centralized dispatchers the discretion to send the necessary, appropriate, available, closest fire/EMS resources without the need to obtain fire/EMS administrative approvals if borders are crossed. With immediate dispatch of particular types of incidents, other fire departments will arrive on-scene more quickly and assist with fire suppression operations to minimize overall fire loss. We suggest crafting an automatic mutual aid agreement between the six Communities as a first step to increased collaboration.
- Legal Agreement. We recommend the Communities develop and execute an agreement to solidify expectations and demonstrate a commitment toward consolidation. The agreement should minimally include:
  - Participation definition.
  - Committee representation and purview.
  - Budgetary process for collaborative effort.
  - Initial collaborative service provisions (automatic mutual aid and perhaps other services).
  - Procedure for modifying agreement to establish Authority.
  - Termination/withdrawal rights/process.

  A draft agreement is an important first step and should be rolled out with the implementation plan. Such an agreement would form the basis upon which future agreements could be built.
- Collaboration Committee. Create a Collaboration Committee ("Committee") to administer the agreement between the Communities. The Committee will consist of 12 members as follows:
  - Manager/supervisor from each participating community.
  - The Committee will select two members from the community (preferably one from the cities and one from the townships) to serve two year terms.
  - The Committee will select two fire chiefs (preferably one from the cities and one from the townships) to serve two year terms.
  - The Committee will select two firefighter representatives (preferably one from the cities and one from the townships) to serve two year terms.

  Responsibilities of the Collaboration Committee will be the following:
  - Set standards for schedules, equipment, policies/procedures.
  - Establish a procurement cooperative.
  - Recommend additional services to be shared.

- Establish fees for shared services.
- Make recommendations regarding modifications to Collaborative Agreement to enable Authority.
- Handle budgeting
- Conduct long range planning

The Collaboration Committee will institutionalize Phases 1 and 2 of the cooperative effort and transition into an authority board once the Interlocal Agreement is modified in Phase 2 or Phase 3 to create a separate legal entity.

- The implementation plan developed for this project phase should depict the activities that the departments can work together on to achieve additional standardization, economies of scale, etc. in fire department operations to improve service levels to the region. The final implementation item in Phase 1 is a go/no-go decision regarding expansion of the collaboration.
- The projected economic benefit of establishing a platform for collaboration is nominal; however, it is a necessary first step toward greater savings. Most importantly, a platform for regional collaboration sets the stage for future collaboration and consolidation.
- Standardized meeting schedule between Chiefs to share best practices.

Phase 1 addresses many things the fire departments can do to work better together in the near term. The items identified for enhanced collaboration do not require significant economic resources and likely can be accomplished through additional collaborative efforts between departments, such as regular administration meetings and agreement on standardized policies, procedures, equipment and purchasing requirements. What this phase of the implementation process does require is the time and dedication of existing fire department resources to accomplish each task. This implementation phase is considered a good continuous improvement approach for the region.

Achieving consensus is vital to the success of Phase 1 and continuation to Phase 2. Phase 1 consists of evaluating and implementing the above items, considered either individually or collectively, that could increase the level of cooperation within the region, while each community maintains its individual fire department. These are viable improvements in service with minimal increases in costs to the communities. We did not model these individual options in detail because we felt they needed to be considered collectively to determine the overall benefit to region. Overall, the Steering Committee expressed a strong interest in a phased approach and this first step builds a strong foundation for later phases because it is a means to ease into to concept of consolidation, and promote increased cooperation in the region as a first step. The group felt strongly that based upon completion of this project phase, the Communities would be better prepared to make an educated decision regarding the merits, benefits and risks of regional consolidation. The final implementation item in Phase 1 is a determination by each community whether they would like to proceed to Phase 2.

Phase 2: Expand Collaboration *(Year 2)*

Plante Moran recommends the Communities consider expansion of the collaboration initiated in Phase 1. This expansion would include increased standardization between departments; currently each department operates under their own policies and procedures, schedules, equipment specifications, maintenance and training programs. The quality of these programs vary from department to department, so there is an interest in combining forces to develop improved and standardized procedures and specifications based upon the “best of breed” concept from each department to increase overall quality and consistency of fire department operations in the region. Items targeted for standardization include:

- Standardized policies and procedures.
- Standardized schedules. All Communities adopt a three shift schedule.
- Standardized equipment specifications.
- Standardized training programs and coordinated training.
- Standardized fire prevention, inspections and public education programs.
- Shared resources for administration, inspections, etc.
  - policies and procedures,
  - schedules,
  - equipment specifications,
  - vehicle/equipment maintenance,
  - training programs and
  - possibly human resource practices and procedures.
- Joint purchasing arrangements. Once increased standardization in equipment, operations and training are achieved, the six individual fire departments will be ready to embark upon combined purchasing to achieve some volume discounts in purchasing. Today, with the exception of joint purchasing between the City of East Lansing and Meridian Township, each department operates independently and they have collaborated little on the purchasing front because of differences in operating preferences and specifications. With increased standardization we expect that approximately 5-10% can be saved on equipment, operating, and training purchases for the Communities. We suggest investigating the Michigan Inter-Governmental Trade Network (www.mitn.info) as one procurement option, which is a collaborative bid service available to all municipalities in the State.
- Scenario Review. At this juncture, the Communities should consider and conclude on consolidation scenarios for Phase 3. Some of these considerations should include:
  - Merger scenarios (several are presented in the next section relative to Phase 3).
  - Establishing a Regional Fire/EMS Authority ("Authority")
    - The Communities should strongly consider this option during Phase 2 and possibly even setup the Authority during this phase.
    - One option is separation of the provision of fire services from the provision of EMS services. Separating the provision of fire services from EMS services would likely incur a higher cost structure than is currently in place within the Communities, due to the inability to use the same resources for both functions. This is likely not a viable option.
    - Another option is to contract with a private ambulance company that could provide high-quality, fast response advanced life support (ALS) service to all communities within the region; this option would depend highly on receiving satisfactory response times from a private ambulance company.
    - The Communities should formalize a governance structure and model as part of this activity. The key components of an appropriate governance structure should include an Authority Board. Further information is provided in Section IV.
- The Communities should determine how to achieve a maximum community-wide Insurance Services Office (ISO) rating of 4, which could save the citizens a significant amount of money in insurance premium dollars. The model used for this study aims for this outcome.

- Consolidated Dispatch. In order to achieve full consolidation, combined fire dispatch would be required. With the exception of Delta Township, the Communities operate on the same dispatch system, which is provided by Ingham County. Delta Township's dispatch system is provided by Eaton County, in which it is located. However, a patch has been established for Delta Township to be informed of calls within Ingham County. As the collaborative process develops, consideration should be given to the benefits of making Ingham Central Dispatch the secondary public safety answering point (PSAP) for all fire/EMS calls in Delta Township.
- Standardized and possible shared fire prevention, inspections and public education programs. Each department handles fire prevention, inspections and public education programs differently. The frequency of inspections varies between the communities. Best fire practices indicate that regular and routine fire inspections are the best way to prevent fire loss in a community. There is an interest by the communities to join forces to establish consistent and improved fire prevention programs and standards based upon the "best of breed" concept from each department to increase overall quality and consistency of fire prevention operations in the region. As a result, the communities may wish to consider sharing Fire Marshal or Fire Inspector resources to accomplish these tasks on a routine basis.
- Service levels currently vary among the communities, as indicated by their various ISO ratings. A significant contributor to service levels is response times. Acceptable response times are stated within the National Fire Protection Association's (NFPA) standards. Acceptable response times for arriving on scene range from four to 15 minutes depending on whether the station is using only full-time firefighters or not, and whether the incident is in an urban, suburban, or rural area. Our recommended response time, which strives to retain the Communities' current service levels and ISO ratings, is based on a response time of five minutes, assuming that vehicles will travel at 30 miles per hour on average.
- The projected economic benefit of expanding collaboration is nominal; however, it is a necessary first step toward greater savings. Most importantly, expanding collaboration sets the stage for future collaboration and consolidation.

Phase 3: Intermediate Collaboration/Consolidation (*Years 3-5)*

This phase represents the first step involving actual merging of two or more fire departments among the Communities. This phase represents the bridge between increased collaboration and full consolidation. A decision for full consolidation would not be reached until the results of intermediate collaboration and consolidation are known.

Consolidation Scenarios

Given there are six communities involved in this study, there are numerous combinations to consider for intermediate consolidation. Plante Moran considered many of these scenarios in its analysis and concluded that the following represented the best scenarios for the Communities to consider. The scenario numbers do not indicate any preference toward which scenario the Communities may wish to choose.

Scenario 1: City of East Lansing and Meridian Township

- Reasons for choosing this scenario:
    - Geographic vicinity
    - Amount of cooperation currently:
        - Involvement in Metro Emergency Response Team
        - Meridian and East Lansing work together to staff Michigan State University events
    - May represent a less onerous "pilot" versus an intermediate merger involving City of Lansing and other communities

- Potential gains
  - Harmonize schedules and staffing model to reduce overtime expenses
  - Closure of facility that is in need of replacement
  - Estimated savings of $1.02M to $1.48M in the long-term

Note: The short- and long-term annual savings for the City of East Lansing and Meridian Township is greater than the short- and long-term annual savings projected for these two communities if all of the Communities combined. This is because the consolidation of the City of East Lansing and Meridian Township would result in an insignificant change in staffing levels, but an increase in staffing (approximately 21 FTEs) would result for these two communities in the event of a consolidation of all the Communities. Under the scenario of consolidating only the City of East Lansing and Meridian Township, where the results of calculations for staffing levels showed greater amounts than what the two departments already had, the current amount of staffing was used.

Scenario 2: City of Lansing, Lansing Township, and City of East Lansing

- Reasons for choosing this scenario:
  - Current sharing of Chief, who is currently working on harmonizing policies and procedures
  - Geographic vicinity; including Lansing Township's noncontiguous areas around the City of Lansing
  - Would represent a major step toward possible full consolidation; more risk but more potential reward
- Potential gains
  - Harmonize schedules and staffing model to reduce overtime expenses, with eventual decreases in staffing through attrition
  - Closure of facilities that do not add to the Greater Lansing Area's coverage
  - Estimated savings of $9.82M to $10.79M in the long-term (see the Note following "Phase 4: Full consolidation of all departments")

Other Collaboration Scenarios

- Joint Administration and/or increased administration communication and collaboration of best practices. The concept of joint administration across the region was identified and evaluated as part of this project. There may be some interest among the Communities to further explore this scenario. In pursuing increased collaboration across the region, we recommend increasing the fire department frequency and nature of communications across the region. This can minimally be established through a standing meeting structure and potentially on a maximum basis through a contract for joint fire administration. The communities should explore these concepts further to identify the benefits across the region for such action.
  - The premise of this scenario is sharing administrative resources across all departments to reduce the overall administrative cost structure.
  - A compelling reason to move in such direction would be to achieve the greater benefits of consolidation.
  - The benefits of such scenario, includes the following:
    - Increased standardization across the region
    - Ability to implement changes within the fire service on a region-wide basis
    - Full-time administrative coverage for the Communities
    - Potential to achieve fire department cost reductions through further standardization of

equipment and operations

Phase 4: Final Collaboration/Consolidation *(Years 6-7)*

Phase 4 consists of a plan to move forward with final collaboration/consolidation between all fire departments in the region. Much of our detailed analysis was framed around this concept based upon the direction of the Steering Committee and Community Sponsors during our series of meetings. Members of the Steering Committee and Community Sponsors also felt strongly that full consolidation should be a consideration. Thus, Plante Moran created a scenario for full consolidation as part of the financial feasibility.

Assumptions

The following list represents the assumptions regarding full consolidation, which were used to develop the financial feasibility:

- Combining departments and providing 24 x 7 coverage at all designated fire stations. The full consolidation would need to at least maintain current service levels through station manpower, service response times, and medical response capabilities.
- Distributes equipment among stations; no additional equipment needs to be purchased.
- The 911 Consolidated Dispatch Center would provide all dispatch services.
- Consolidates administrative overhead cost for items such as Human Resources, IT, Payroll, etc.
- Fire Marshal to complete fire inspections on all buildings in the region.
- Enhances fire protection coverage by multiple stations immediately responding to fire calls within a larger jurisdiction to help prevent fire loss.
- The related economic benefit of consolidating fire and EMS operations across the Communities is the reduction of costs for these services, which can be passed to the taxpayers through either reduced property taxes or an increase in other services provided by the Communities (such as economic planning and development).
- Other scenarios may also be available to the Communities. It is possible for the Communities to change some of the assumptions used in our analysis on either a regional or community-specific basis to model different operating environments that still achieve some service level benefits (for example, 24x7 staffing in some versus all stations). Having the Authority contract with certain administrative (e.g., accounting, human resources, etc.) and possibly fire labor may also be considered.

Facility Plan

The 21 open facilities include one training, one maintenance and two storage facilities. The Communities could utilize current stations and central garage for training, maintenance, and storage, and thus should consider closing these four facilities. In addition, in order to minimize facilities costs while maintaining coverage for the area, we also recommend the Communities consider closing the one station that is not salvageable and the three stations that are in need of renovations in excess of $1M by the end of Phase 3. By the end of Phase 4, we recommend the Communities consider closing only one additional station that is currently in need of minor renovation (<$100K), for a total of nine potential facilities closed. The Communities will need to consider the amount of equipment on hand and the placement of that equipment before concluding on closing stations.

For any maintenance and renovations on those facilities that are expected to remain open, we recommend that the Communities consider expected future changes in run volumes due to the closure of nearby facilities, shifts of coverage areas to nearby facilities, and any potential impacts from the use of automatic mutual aid.

Note that the same facility plans would apply for the two merger scenarios described in Phase 3 for those communities represented as follows:

Phase 3 –Scenario 1: City of East Lansing and Meridian Township merger
Phase 3 –Scenario 2: City of East Lansing, City of Lansing and Meridian Township merger

A facility plan was also considered for Phase 4 under a full consolidation scenario.

Plante Moran prepared a hypothetical model for a facilities plan for each scenario. The hypothetical model assumes certain options relative to facility closures. Plante Moran does not recommend any specific closures at this time, rather, the closing of some facilities should be considered in any future scenarios evaluated by the Communities. There are a host of legal, political, and other factors that could affect the feasibility of any specific facility plan and related closures.

Benefits of a Phased Approach

Some additional benefits that may be experienced through this increased collaboration arrangement are the following:

- Ability to respond to fire calls outside of current municipal boundary limits further decreases response times and ensures that the closest fire station responds to each emergency call.
- Decreased fire loss for the Communities through the following:
    - Decreased response times,
    - Increased ability to provide the required manpower on-scene to fight structure fires
    - Regular fire inspections and re-inspections.
- Increased opportunities to meet best practice and community requirements for paid on call/volunteer fire departments. As the departments work better together and strive to meet firefighting industry best practices and community expectations, they should decrease their internal liability and enhance their operations in the following areas:
    - Health and safety of the public and firefighters
    - Incident management
    - Training
    - Communications
    - Pre-incident planning
- Provides for immediate ALS services in each community with decreased response times and increased medical support.
- Increased department size makes the department a more attractive employer in this area and helps to maintain appropriate number of qualified fire and emergency medical personnel.
    - Increased advancement opportunities for staff will decrease turnover to large full-time departments.
    - Departments will no longer compete against one another for the same resources in a limited pool of available resources.
- Increased knowledge and depth of administrative resources to apply best practices to the department.
- Decreased ISO ratings for some communities may decrease local citizen fire insurance premiums (residential and commercial).
- Increased ability to meet best practice and community fire operations guidelines for addressing internal strategic issues involving:
    - Organization
    - Operations
    - Deployment
- Larger department will achieve economies of scale in equipment and operating expenditures and can expect to receive a reduction of approximately 5-10% on current expenditures by working as one unit rather than six separate departments.

- A phased approach is the only approach that blends full consideration to the four core values that should be considered when any consolidation or transfer of function is considered:
    - Realization of cost savings, containment and/or stability
    - Provision of service improvement or maintenance
    - Promotion of organizational stability and
    - Minimization of the losses in control
- Fire department consolidation provides the communities with a long-term cost containment and service preservation or enhancement strategy to ensure provision of high or even higher quality fire service during these difficult economic times.

IV. Governance

Authority Board

The Collaboration Committee institutionalized in Phase 1 of the cooperative effort will transition into an Authority Board once the Interlocal Agreement is modified in Phase 2 or Phase 3 to create a separate legal entity.

Legal Options

The three most common legal options for providing regional fire service are as follows:

- Public Act 7 of 1967 (Urban Cooperation Act) [MCL 124.501 et seq]
- Public Act 57 of 1988 (Emergency Services Act) [MCL 124.601 et seq]
- Public Act of 35 of 1951 (Intergovernmental Contracts Act) [MCL 124.1 et seq]

Urban Cooperation Act

The Urban Cooperation Act allows for each public agency that has the power to exercise specific power separately, to also exercise that power together. This joint exercise of power must be executed through a contract between the units of government. Other features of this governance option include:

- Parties may agree to revenue sharing, given the following:
  - Specific property description on which taxes will be shared
  - Duration of the contract agreement
  - Formula for calculating revenue sharing
  - Method/schedule of distribution of revenues
- This option must be approved by the majority of the legislative body of each governmental unit
- Must hold at least one public hearing prior to approving
- Agreement is subject to referendum by the voters
  - Petition signed by 8% of electors voting in last general election
  - Within 45 days of meeting at which agreement was approved
- Participating governmental units may create a separate entity to administer the agreement
  - Each party appoints a “member” removable by the appointing party
  - Creating an “Authority”, “Board”, “Commission”, etc. is defined by the contract
- The administrative body has the following powers/constraints:
  - May not levy taxes
  - May issue bonds under very limited circumstances
  - May not obligate participating governments (indebt) unless expressly authorized by them
  - Upon dissolution, property and debts of entity become property and debts of participating governments
- Employee rights under the Urban Cooperation Act include:

- Employees who are qualified and necessary shall be transferred and appointed to the new political subdivision as employees subject to wages and benefits that are comparable or better.
- Employees shall be given seniority credits and sick leave, vacation, insurance, and pension credits in accordance with the records or labor agreements from the acquired system.
- Members and beneficiaries of any pension, retirement or benefit system established by the acquired system shall continue to have comparable rights, privileges, benefits, obligations and status with respect to such established system.
- The political subdivision that receives the transferred employees assume the obligations of any transfer system acquired by it with regard to wages, salaries, hours, working conditions, sick leave, health and welfare, and pension or retirement provisions for employees.
- Some agreements that involve state funding need to be approved by the Governor.

Emergency Services Act

The Emergency Services Act allows for counties, cities, villages and townships to form a joint emergency services authority, which includes providing joint fire service. This Authority is a body corporate with the power to enter contracts and levy taxes subject to voter approval. Other features of this governance option include:

- Parties must adopt Articles of Incorporation, including:
  - Name and purpose of incorporating municipalities
  - Power, duties and limits of authority
  - Method for selecting governing body, officers and employees
- Each municipality must adopt articles of incorporation by a majority vote of each legislative body
- Authority's jurisdiction is the total jurisdiction of adopting municipalities
- Registered electors in a jurisdiction (5% or more) may petition to cause a vote to occur on the question of joining such an authority
- New municipalities may join an existing authority by adopting articles of incorporation
- Municipality may withdraw from authority by Board resolution
  - Still liable for share of debt while part of authority
  - Residents will still be subject to authority tax if it exists
- Authority tax levy cannot exceed 20 mills for a certain period (number of years)
- Must file a copy of Authority Board resolution to hold election with clerk of each participating municipality not less than 60 days prior to election
- Cannot have more than one tax election per year
- If a special election, cost must be paid by the authority
- Individual municipalities may levy their own tax and appropriate, grant, or contribute the proceeds of the tax to the authority for the purposes of this act. The tax must be within charter, statutory, and constitutional limitations.
- Employee rights under the Emergency Services Act include:

- Authority is bound by existing labor agreements from incorporating municipalities for the remainder of the term of the labor agreement.
- Employees transferred shall be given comparable positions, maintain seniority and all benefit rights.
- The members and beneficiaries of any pension or retirement system or other benefits established by a municipal emergency service which is transferred to an authority shall have the same rights, privileges, benefits, obligations, and status with respect to the comparable systems established by the authority.
- Employees may be laid off, but must be placed on laid off status and rehired if similar job becomes available within 3 years.
- Authority shall determine the number of positions necessary and is not required to maintain unnecessary positions.

Intergovernmental Agreement Act

- Municipalities may contract with each other to perform jointly or for one another a service each could perform individually.
- No provision to create a separate entity, except for insurance pools.

Advantages and Disadvantages

	Urban Cooperation Act	Emergency Services Act	Intergovernmental Contracts Act
Advantages	■ Easier to dissolve, if required (could also be a disadvantage) ■ May create separate legal or administrative entity to execute the agreement ■ Can have dedicated millage but only through the separate votes of each participating municipality	■ Able to remove the fire service from the "books" of the municipality, creating additional millage capacity if needed in the future ■ Can levy taxes with one vote of the people in the entire jurisdiction ■ Able to define governance representation and process through the Articles of Incorporation, in accordance with the expectations of the participating communities	■ Easiest to establish—just need two parties to sign a contract. ■ Good method for establishing a trial period for joint service provision to "ease into" the concept of an Authority
Disadvantages	■ Does not have the ability to levy taxes independently ■ Funding tied to individual Township or Village budgets ■ Fire service still competes for funding with other municipal services ■ May require at least one member on board per participating community	■ More difficult to dissolve, if required (could also be an advantage) ■ Levy of one millage across entire jurisdiction (with voter approval) may result in additional millage requirements for one or more participating communities	■ No separate entity status. ■ Can't employ personnel or purchase property. ■ Totally dependent on budgets of participating public entities ■ No separate identity

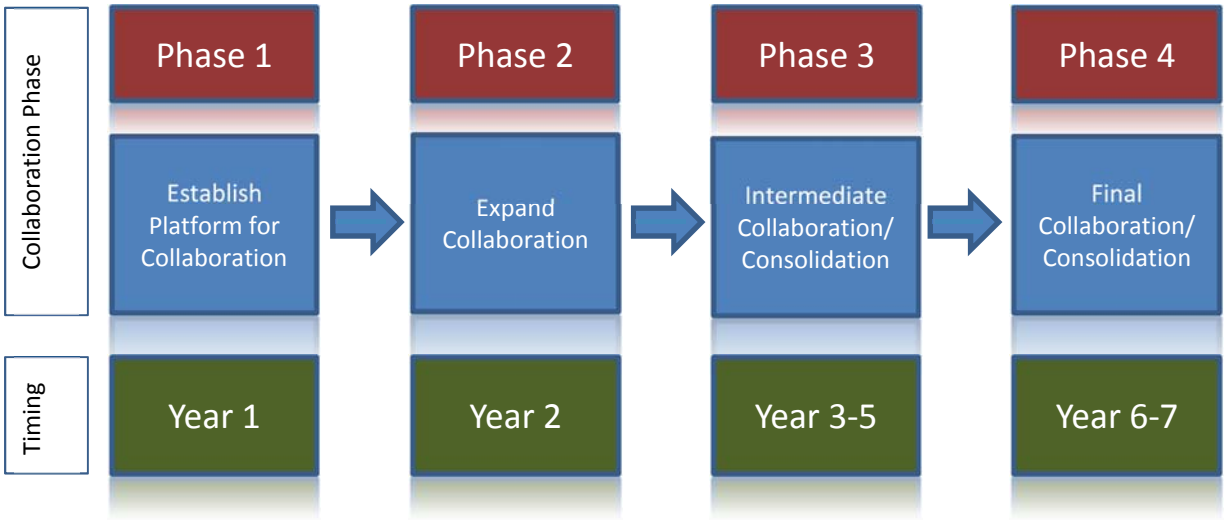
V. Financial Feasibility

To the basic financial question of whether consolidation presents the opportunity for substantial financial savings to the local units Plante Moran answers, "yes." Based on our analysis of current operations and a reasonable resolution of labor, staffing, facilities, equipment, and governance assumptions, Plante Moran estimates an annual aggregate savings range of between $4 million and $8 million dollars while maintaining industry service standards.

The basis of Plante Moran's financial feasibility range is one model for full consolidation based on current costs and industry standard. As noted previously this model is not a recommendation and is dependent on a host of assumptions that would require future analysis and decision making.

The model serves one purpose: to test whether consolidation can realize potential significant savings so that the communities can decide whether to proceed to Phase 2 which Plane Moran recommends. Before any consolidation in Phase 3 or Phase 4 is under taken, Plante Moran recommends the creation of a cost analysis similar to that created in the hypothetical model. Such an undertaking is only feasible when the collaborative governance board has settled on the appropriate labor, staffing facilities, and equipment assumptions.

Plante Moran prepared a financial analysis that is separated into the aforementioned phases in order to clearly set the expectations for the Communities.



The projected annual savings in each of the scenarios below primarily relate to savings in labor, facilities, and equipment costs through reductions of each of these. As part of their ongoing operations, the Communities will also need to make additional investments in those facilities that will remain open. These costs are described above in the "Operational Analysis." These costs are necessary regardless of whether the Communities choose to consolidate their operations, and were therefore left out of the financial analyses provided below, as not to incorrectly skew the total projected annual savings.

Financial Feasibility Methodology

Reasonable assumptions were used to calculate financial feasibility. These assumptions are stated in the Appendices. Plante Moran's methodology for conducting financial feasibility, which has been utilized on numerous similar engagements, included the following steps:

- Data collection, validation and normalization. This step included both operational and financial data. It is vitally important to providing reasonable financial feasibility analysis.
- Identification of reasonable standards. Reasonable standards were established for equipment, depreciation, service levels, schedules, staffing, etc. which formed the basis for the assumptions used in our model.
- Establishment of reasonable facilities plan. Based on consolidated coverage areas, locations of existing facilities and the condition of those facilities, a facilities plan was established for each scenario.
- Establishment of reasonable staffing levels. Based on anticipated run volumes for each facility in the facilities plan, we referred to guidance from IFSTA Manuals to determine firefighter staffing levels by facility. Administrative staffing levels were established based on experience.
- Establishment of equipment levels. Based on anticipated run volumes for each facility in the facilities plan, we determined equipment levels based on experience.
- Using the levels established in the previous steps and reasonable assumptions regarding labor and other costs, we ran financial analyses to determine projected annual savings under each scenario for Phases 3 and 4.

Phases 1 and 2: Establish Platform for Collaboration and Expand Collaboration

Phases 1 and 2 are recommended to take place within the first two years of implementation. As described above, they are intended to establish a platform for collaboration and expanding collaboration, respectively. These phases seek to establish an implementation plan, standardize policies and procedures, and share some resources for activities such as maintenance and training. As such, the annual savings realized from these activities would not be significant in comparison to the total projected annual savings from partial or full consolidation. Any savings within the first two years of operations would result from savings realized through such activities as joint equipment purchases or trainings, and would be expected to realize a nominal savings of 5-10% of the current costs for those activities. On the other hand, it is expected that the Communities may need to spend up to $300K in planning, legal, accounting and administrative costs during the first two years of implementation in order to draft governance agreements and establish and implement plans and programs for consolidation. In addition, the Communities' Chiefs and other personnel would need to spend time fulfilling the steps of the implementation plan, which is an expenditure of resources but not necessarily funding. As such, internal resource costs are not factored into costs of consolidation.

Phase 3: Intermediate Collaboration/Consolidation

As described in the "Operational Analysis" above, the Communities may decide to begin implementing joint operations through the collaboration/consolidation of several departments at a time. The following two scenarios were considered, given the reasons mentioned previously.

- Scenario 1: City of East Lansing and Meridian Township
- Scenario 2: City of Lansing, Lansing Township and City of East Lansing

Calculated annual expenditures are based on staffing and equipment amounts, labor costs by position, annual capital costs based on current market rates and estimated useful lives, and budgeted costs for other items. The calculations and assumptions for the amounts presented below are shown in the Appendices.

Assumptions made for the ratio of part-time to full-time firefighters and medics have a significant impact on the projected annual savings. As a result, each scenario is shown with two possible ratios of part-time to full-time firefighters, indicating a range of projected annual savings. The ratios of part-time to full-time staffing and related amounts for the hypothetical short-term, full-consolidation are as follows:

Staffing for Hypothetical Short-Term, Full Consolidation Scenario	Current Ratio	Lower Ratio (Part-Time : Full-Time)	Higher Ratio (Part-Time : Full-Time)
Full-Time Firefighter / Medic (FTEs)	163.00	142.90	100.40
Part-Time Firefighter / Medic (FTEs) (1)	13.25	30.00	72.50
Total	**176.25**	**172.90**	**172.90**
Ratio (Part-Time : Full-Time)	1 : 12.30	1 : 4.76	1 : 1.38
(1) Each Full-Time Equivalent represents four individual Firefighters / Medics.			
Total number of Part-Time Staff	53.00	120.00	290.00

Note that the amounts of staff are based on the number of stations for the hypothetical short-term, full-consolidation scenario. Quantities for the long-term are based on the proportion of stations in the long-term. The ratios of part-time to full-time staff are the same in the short-term and long-term. As a result, the part-time to full-time staffing and related amounts for the long-term, full consolidation is as follows:

Staffing for Long-Term, Full Consolidation Scenario	Current Ratio	Lower Ratio (Part-Time : Full-Time)	Higher Ratio (Part-Time : Full-Time)
Full-Time Firefighter / Medic (FTEs)	163.00	131.00	92.10
Part-Time Firefighter / Medic (FTEs) (1)	13.25	27.50	66.50
Total	**176.25**	**158.50**	**158.60**
Ratio (Part-Time : Full-Time)	1 : 12.30	1 : 4.76	1 : 1.38
(1) Each Full-Time Equivalent represents four individual Firefighters / Medics.			
Total number of Part-Time Staff	53.00	110.00	266.00

These ratios are based on those experienced in comparable communities within Michigan.

Scenario 1: City of East Lansing and Meridian Township

Scenario 1A. Lower Part-Time to Full-Time Firefighter / Medic Ratio

Summary of Calculated Annual Expenditures (in millions)	Meridian Township	City of East Lansing	Total	Short-Term (3-5 Yrs.)	Projected Annual Savings (Yrs. 3-5)	Long-Term (6-7 Yrs.)	Projected Annual Savings (Yrs. 6-7)
Labor	$2.873	$4.822	**$7.694**	$7.038	**$0.656**	$6.923	**$0.771**
Capital	$0.969	$0.761	**$1.730**	$1.480	**$0.250**	$1.480	**$0.250**
Other	$0.121	$0.117	**$0.237**	$0.237	**$-**	$0.237	**$-**
Calculated Annual Expenditures*	$3.962	$5.700	**$9.662**	$8.756	**$0.906**	$8.640	**$1.021**

*Rounded to nearest .001

As shown in the table above, the projected annual savings in the short-term (3-5 years) is $0.91M, which is equal to 9% of the current total calculated annual expenditures. 72% of these projected annual savings are related to changes in staffing. These changes are realized through increasing the use of part-time firefighters (accounting for 43% of the savings) and by eliminating positions (accounting for 52% of the savings). In the aggregate, the departments' staffing would only be reduced by 2.85 positions. 66% of the savings realized from staffing reductions is from the elimination of administrative positions. These savings would be offset by part-time firefighters, resulting in lower costs to the communities along with a minimal decrease in the number of firefighter full-time equivalents.

If Meridian Township and the City of East Lansing were the only two to consolidate, the projected annual savings for the long-term (6-7 years) is $1.02M, which is equal to 11% of the current total calculated annual expenditures. The explanations provided for the short-term remain the same, with the reduction of one additional position.

Scenario 1B. Higher Part-Time to Full-Time Firefighter / Medic Ratio

Summary of Calculated Annual Expenditures (in millions)	Meridian Township	City of East Lansing	Total	Short-Term (3-5 Yrs.)	Projected Annual Savings (Yrs. 3-5)	Long-Term (6-7 Yrs.)	Projected Annual Savings (Yrs. 6-7)
Labor	$2.873	$4.822	**$7.694**	$6.576	**$1.118**	$6.461	**$1.234**
Capital	$0.969	$0.761	**$1.730**	$1.480	**$0.250**	$1.480	**$0.250**
Other	$0.121	$0.117	**$0.237**	$0.237	**$-**	$0.237	**$-**
Calculated Annual Expenditures*	$3.962	$5.700	**$9.662**	$8.294	**$1.368**	$8.178	**$1.484**

*Rounded to nearest .001

As shown in the table above, the projected annual savings in the short-term (3-5 years) is $1.37M, which is equal to 14% of the current total calculated annual expenditures. 81% of these projected annual savings are related to changes in staffing. These changes are realized through increasing the use of part-time firefighters (accounting for 67% of the savings) and by eliminating positions (accounting for 30% of the savings). In the aggregate, the departments' staffing would only be reduced by 1.85 positions. 66% of the savings realized from staffing reductions is from the elimination of administrative positions. These savings would be offset by part-time firefighters, resulting in lower costs to the communities along with a greater number of firefighter full-time equivalents.

If Meridian Township and the City of East Lansing were the only two to consolidate, the projected annual savings for the long-term (6-7 years) is $1.48M, which is equal to 15% of the current total calculated annual expenditures. The explanations provided for the short-term remain the same, with the reduction of one additional position.

In total, long-term projected annual savings range from $1.02M - $1.48M.

It is important to note that the short- and long-term annual savings for the City of East Lansing and Meridian Township is greater than the short- and long-term annual savings projected for these two communities if all of the Communities combined. This is because the consolidation of the City of East Lansing and Meridian Township would result in an insignificant change in staffing levels, but an increase in staffing would result for these two communities in the event of a consolidation of all the Communities. Under the scenario of consolidating only the City of East Lansing and Meridian Township, where the results of calculations for staffing levels showed greater amounts than what the two departments already had, the current amount of staffing was used. However, if consolidating with all of the communities, these communities would absorb staff from other departments in order to balance the annual run volume per full-time equivalent.

Scenario 2: City of Lansing, Lansing Township, and City of East Lansing

Scenario 2A. Lower Part-Time to Full-Time Firefighter / Medic Ratio

Summary of Calculated Annual Expenditures (in millions)	Lansing Township	City of Lansing	City of East Lansing	Total	Short-Term (3-5 Yrs.)	Projected Annual Savings (Yrs. 3-5)	Long-Term (6-7 Yrs.)	Projected Annual Savings (Yrs. 6-7)
Labor	$0.967	$15.767	$4.822	**$21.555**	$16.235	**$5.321**	$13.651	**$7.905**
Capital	$0.719	$2.917	$0.761	**$4.397**	$3.128	**$1.269**	$2.883	**$1.514**
Other	$0.107	$0.699	$0.117	**$0.923**	$0.923	**$0.000**	$0.923	**$0.000**
Calculated Annual Expenditures*	$1.794	$19.382	$5.700	**$26.876**	$20.286	**$6.590**	$17.457	**$9.419**

*Rounded to nearest .001

As shown in the table above, the projected annual savings in the short-term (3-5 years) is $6.590M, which is equal to 25% of the current total calculated annual expenditures. 80% of these projected annual savings are related to changes in staffing. These changes are realized through increasing the use of part-time firefighters (accounting for 13% of the savings), using the average of the communities' current salaries and benefits for firefighters/medics going forward (accounting for 25% of the savings), and by eliminating positions (accounting for 62% of the savings). In the aggregate, the departments' staffing would be reduced by 42 positions. The primary cause for the reduction in firefighters is related to the current practice of assigning staff to equipment rather than enabling staff to use multiple types of equipment. We recommend that staff be able to use multiple types of equipment (referred to as "jumping rigs"), which would reduce staffing needs. This could primarily be accomplished through having "EMS-engines," or engines which would respond to EMS calls if all ambulances were out. The short-term includes the closure of five facilities.

If these three communities were the only three to consolidate, the projected annual savings for the long-term (6-7 years) is $9.419M, which is equal to 35% of the current total calculated annual expenditures.

The additional savings relates to the closure of one additional station, which results in an additional reduction of 26 positions.

Scenario 2B. Higher Part-Time to Full-Time Firefighter / Medic Ratio

Summary of Calculated Annual Expenditures (in millions)	Lansing Township	City of Lansing	City of East Lansing	Total	Short-Term (3-5 Yrs.)	Projected Annual Savings (Yrs. 3-5)	Long-Term (6-7 Yrs.)	Projected Annual Savings (Yrs. 6-7)
Labor	$0.967	$15.767	$4.822	**$21.555**	$15.082	**$6.473**	$12.682	**$8.873**
Capital	$0.719	$2.917	$0.761	**$4.397**	$3.128	**$1.269**	$2.883	**$1.514**
Other	$0.107	$0.699	$0.117	**$0.923**	$0.923	**$0.000**	$0.923	**$0.000**
Calculated Annual Expenditures*	$1.794	$19.382	$5.700	**$26.876**	$19.134	**$7.742**	$16.489	**$10.387**

*Rounded to nearest .001

As shown in the table above, the projected annual savings in the short-term (3-5 years) is $7.742M, which is equal to 29% of the current total calculated annual expenditures. 79% of these projected annual savings are related to changes in staffing. These changes are realized through increasing the use of part-time firefighters (accounting for 29% of the savings) and by eliminating positions (accounting for 51% of the savings). In the aggregate, the departments' staffing would be reduced by 42 positions. The primary cause for the reduction in firefighters is related to the current practice of assigning staff to equipment rather than enabling staff to use multiple types of equipment. We recommend that staff be able to use multiple types of equipment (referred to as "jumping rigs"), which would reduce staffing needs. This could primarily be accomplished through having "EMS-engines," or engines which would respond to EMS calls if all ambulances were out. The short-term includes the closure of five facilities.

If these three communities were the only three to consolidate, the projected annual savings for the long-term (6-7 years) is $10.387M, which is equal to 39% of the current total calculated annual expenditures. The additional savings relates to the closure of one additional station, which results in an additional reduction of 26 positions.

In total, long-term projected annual savings range from $9.42M - $10.39M.

Phase 4: Full consolidation of all departments

The following scenario illustrates the projected annual savings in the short- and long-term if all the communities collaborated/consolidated together. The major difference between this scenario and Scenario 2 above is that staffing reductions from the City of Lansing would, in essence, be absorbed by the other Communities. The total projected annual savings for all the Communities is less than that of Scenario 2 above, given the fewer staffing reductions that balance the annual runs per full-time equivalent across the Communities.

Scenario 3A. Lower Part-Time to Full-Time Firefighter / Medic Ratio

Summary of Calculated Annual Expenditures (in millions)	Total	Short-Term (3-5 Yrs.)	Projected Annual Savings (Yrs. 3-5)**	Long-Term (6-7 Yrs.)	Projected Annual Savings (Yrs. 6-7)
Labor	**$28.396**	$26.396	**$2.000**	$24.194	**$4.203**
Capital	**$7.106**	$5.046	**$2.060**	$754	**$2.352**
Other* **	**$1.268**	$1.268	**$0.000**	$1.268	**$0.000**
Calculated Annual Expenditures*	**$36.770**	$32.710	**$4.060**	$30.215	**$6.555**

*Rounded to nearest .001. Note that the totals presented here (totaling to $36.8M for all of the communities) differ from the amounts provided by the Communities ($46.8M for all of the communities). The differences are related to:

a) Depreciation costs as calculated by Plante Moran versus depreciation costs as provided by the Communities. This was done in an effort to "normalize" depreciation costs across the Communities.

b) Benefits for retired staff are not include in the financial analysis as previously mentioned.

c) Costs for overhead and other miscellaneous items that are not included in the financial analysis (e.g., Supplies, Hydrant Fees, Contract Services, etc.)

**The short-term scenario is hypothetical. It is not in line with the recommended four-phase approach. It is presented here for illustrative purposes only relative to a more aggressive consolidation scenario.

***Based on a meeting with the Community Sponsors, participants agreed that the "Other" category only includes: Facility Maintenance, Equipment Maintenance, Fuel and Utilities.

As shown in the table above, the projected annual savings in the short-term (3-5 years) is $4.06M, which is equal to 11% of the current total calculated annual expenditures. 51% of these projected annual savings are related to reductions in facilities and equipment, including the closure of 8 facilities resulting in annual savings of $1.78M related to depreciation expenses. 49% of the projected annual savings are related to changes in labor. These changes are realized through using the average of the communities' current salaries and benefits for firefighters/medics going forward (accounting for 48% of the savings), increasing the use of part-time firefighters (accounting for 31% of the savings) and by a net elimination of positions (accounting for 21% of the savings). The net elimination of positions results from $1.89M in savings from eliminating 17.26 administrative positions, which is offset by $1.48M in costs by adding 16.85 full-time firefighter equivalents. In the aggregate, the departments' staffing in the short-term would only be reduced by almost half a position. Overall, this scenario results in lower costs to the communities along with a greater number of firefighter full-time equivalents.

The projected annual savings for the long-term (6-7 years) is $6.555M, which is equal to 18% of the current total calculated annual expenditures. The additional savings relates to the closure of one additional station, which further results in an additional reduction of 29 positions.

Scenario 3B. Higher Part-Time to Full-Time Firefighter / Medic Ratio

Summary of Calculated Annual Expenditures (in millions)	Total	Short-Term (3-5 Yrs.)	Projected Annual Savings (Yrs. 3-5)**	Long-Term (6-7 Yrs.)	Projected Annual Savings (Yrs. 6-7)
Labor	**$28.396**	$24.838	**$3.559**	$22.770	**$5.626**
Capital	**$7.106**	$5.046	**$2.060**	$4.754	**$2.352**
Other	**$1.268**	$1.268	**$0.000**	$1.268	**$0.000**
Calculated Annual Expenditures*	**$36.770**	$31.152	**$5.618**	$28.792	**$7.978**

*Rounded to nearest .001

**The short-term scenario is hypothetical. It is not in line with the recommended four-phase approach. It is presented here for illustrative purposes only relative to a more aggressive consolidation scenario.

As shown in the table above, the projected annual savings in the short-term (3-5 years) is $5.618M, which is equal to 15% of the current total calculated annual expenditures. 80% of these projected annual savings are related to changes in staffing. These changes are realized through using the average of the communities' current salaries and benefits for firefighters/medics going forward (accounting for 27% of the savings), increasing the use of part-time firefighters (accounting for 61% of the savings), and by a net elimination of positions (accounting for 12% of the savings). The net elimination of positions results from $1.89M in savings from eliminating 17.26 administrative positions, which is offset by $1.48M in costs by adding 16.85 full-time firefighter equivalents. In the aggregate, the departments' staffing in the short-term would only be reduced by almost half a position. Overall, this scenario results in lower costs to the communities along with a greater number of firefighter full-time equivalents. The short-term also includes the closure of 8 facilities, resulting in annual savings of $1.78M related to depreciation expenses.

The projected annual savings for the long-term (6-7 years) is $7.978M, which is equal to 22% of the current total calculated annual expenditures. The additional savings relates to the closure of one additional station, which further results in an additional reduction of 29 positions.

In total, long-term projected annual savings range from $6.56M - $7.98M.

Partial vs. Full Consolidation Commentary

It is important to note that the short- and long-term annual savings for the City of Lansing, Lansing Township, and the City of East Lansing is greater than the short- and long-term annual savings projected for all of the Communities combined. This is because the consolidation of the three communities would result in a greater decrease in staffing levels than the consolidation of all the Communities. In the scenario with all Communities, the additional communities (Delhi, Meridian, and Delta Townships) would each add staff, in theory taking on positions that would otherwise be eliminated. This corresponds to the finding from this study that Delhi, Meridian, and Delta Townships' staff have more annual runs per full-time equivalent (FTE) than the City of Lansing, Lansing Township, and the City of East Lansing. Currently the annual runs per FTE range from 97 to 136 across the Communities. The staffing changes from a consolidation of all the Communities would move the annual runs per FTE closer to the average of 111 runs per FTE.

Financing Discussion

There are numerous options for the communities to consider in determining an equitable cost sharing formula for an inter-local agreement. Based upon our history in performing many of these projects, we know that it will be difficult to significantly revise the current department cost structure in the near term. In addition, each party must achieve some financial benefit (e.g. savings) to make the consolidation process worthwhile to pursue and in the long run, each community must feel that they are paying an equitable share of the department expenses. For illustrative purposes, we have produced an example for consideration by the Communities in sharing the costs and/or savings of this endeavor. However, the Communities can arrive at any formula that they believe is equitable for moving forward with consolidation and providing joint benefit to the Communities. Following is a discussion of some potential cost sharing options.

Dr. Lynn Harvey of the Michigan State University (MSU) State and Local Government Extension program developed a cost weighted formula for the sharing of costs in intergovernmental agreements. This cost weighted formula has been primarily used by fire departments in the past. The formula includes the following factors:

- Potential demand for protection – Population
- Value of the property to be protected – State Equalized Value (SEV)
- Actual use of the service – Fire Runs or Police Incidents

An example is provided in Appendix C.

VI. Appendices

A. General Financial Assumptions

- Financial figures based on planned 2012 budget for all communities.

Staffing

- Salaries and benefits costs were calculated by multiplying recommended staffing levels by respective maximum salaries and benefits among the communities for all except for the following positions: Lieutenants/Captains, Firefighters/Medics, and Part-Time/Paid On-Call Firefighters. Calculated salaries and benefits for these positions was based on averages for the communities, given the higher number of staff and greater ability to pay based on a range of skills/experience for staff in these positions.
- Within this industry, it is reasonable for overtime costs to be 10% of salaries and benefits costs. The Communities' percentage of overtime costs were each less than 10% of salaries and benefits costs. As a result, no decreases in overtime costs were projected. Overall, overtime expenses are expected to decline by filling staffing needs with part-time staff.

Equipment

- Fixed assets are depreciated on an annual basis vs. cash basis for equipment and other purchases. This assumes the ability to pay cash for the equipment through a capital outlay revolving fund. This does not incorporate financing costs.
- Figures will not match the current budget exactly due to the annualized fixed asset depreciation schedule. The annualized fixed asset depreciation schedule is as follows:

Annual Depreciation Calculations	Estimated Cost (1)	Estimated Useful Life (yrs.)	Estimated Annual Depreciation (2)	Comments
Fleet				
Engine	$450,000	20	$22,500	$400K - $500K per vehicle.
Quint	$750,000	20	$37,500	
Rescue - Heavy	$400,000	20	$20,000	$300K - $500K per vehicle.
Rescue - Light	$250,000	20	$12,500	$200K - $400K per vehicle.
Ambulance	$200,000	7	$28,571	
Ladders	$1,250,000	20	$62,500	$1M - $1.5M per ladder
Tanker	$375,000	20	$18,750	$75K - $100K less than an engine.
Command Vehicle	$40,000	10	$4,000	
Brush Trucks	$45,000	20	$2,250	
Staff Cars	$17,000	6	$2,833	
Gator/ATV	$10,000	10	$1,000	
HazMat	$450,000	20	$22,500	
Air Truck/Trailer	$100,000	20	$5,000	
Boats	$15,000	10	$1,500	
USAR	$400,000	20	$20,000	
MFR Response	$45,000	10	$4,500	
Equipment				
Cascade Systems	$45,000	20	$2,250	

Annual Depreciation Calculations	Estimated Cost (1)	Estimated Useful Life (yrs.)	Estimated Annual Depreciation (2)	Comments
Generators	$3,000	20	$150	
Facilities				
Buildings (3)	$8,900,000	40	$222,500	

(1) Based on discussion with vendor in April 2012.
(2) Note that salvage values were not subtracted from estimated purchase price for calculating estimated annual depreciation. Salvage values are considered to have an immaterial impact on annual costs.
(3) Estimated by Plante Moran, based on a station with 3 bays.

Other

- Estimates were used for IT capital costs, facility maintenance, equipment maintenance (parts and labor), fuel, and utility expenditures for those communities that did not provide this information. The estimates were calculated for each community, as follows, based on the percentages of those communities that provided the information:

IT capital costs	1% of labor costs
Facility maintenance	2% of facilities capital costs
Equipment maintenance	20% of fleet, equipment, and IT capital costs
Fuel	15% of fleet capital costs
Utilities	1% of facilities capital costs

- These amounts represent approximately 5% of the total calculated costs, and are therefore not significant to the financial analysis. It is assumed that these costs will decrease given shared efforts that result in reductions of facilities, fleet, and equipment. However, this decrease is not shown as part of this analysis.

B. General Operational Assumptions

Staffing

- Administrative staffing levels for consolidated operations include the following quantities for each position, :
    - One of each: Chief, Fire Marshal, Deputy Chief*, and Training Chief
    - Two Assistant Chiefs**
    - 3 Training Officers for seven or more stations in the short-term, reduced in the long-term based on the number of stations.
    - 2 Admin. Secretaries / Accountants for four stations. 5 Admin. Secretaries / Accountants for seven or more stations in the short-term, reduced in the long-term based on the number of stations.

* Note that the communities in Phase 3 do not currently have a Deputy Chief. A Deputy Chief was not added for these scenarios.

** Note that Meridian Township and the City of East Lansing do not currently have any Assistant Chiefs. This position was not added for Scenario 1.

- Staffing was determined based on guidance from IFSTA Manuals, assuming "4-person engine companies," or that 4 firefighters are assigned to an engine. This is a conservative estimate, given that several stations allow "3-person engine companies". An additional 20% was added to account for leave time, based on national averages.
- Guidance from IFSTA Manuals led to staffing of 4.5 Driver Engineers per station and 14.40 Firefighters / Medics per station. This includes the additional 20% to account for leave time.
- For consolidation of three or more communities, each shift has two Battalion Chiefs. For consolidation of two communities, each shift has one Battalion Chief. Additional Battalion Chiefs were retained in the short-term to help with harmonizing differences in shifts.
- Each station would have one Lieutenant and one Captain per shift. These amounts were increased by 20% to account for leave time.
- For Phase 4: Full Consolidation, every two stations were assumed to have 1 Fire Inspector plus 20% additional FTEs to account for leave time. This resulted in a total addition of 3.20 Fire Inspectors in the short-term and 2.60 Fire Inspectors in the long-term. For Phase 3, the current number of Fire Inspectors for the communities was retained, given the smaller coverage area and assumption that the amount of inspections would be similar over time.

Equipment

- Each station would have either one engine or quint. When available, stations would have quints instead of engines, because of their greater functionality. In addition, the consolidated communities would have 2 engines on reserve.
- Each standard township area (a 6 x 6 square mile area) would have one heavy or light rescue and one ladder. In addition, the consolidated communities would have one rescue and one ladder on reserve. In the event that the communities currently operate with less than these amounts, no additional items were added.

- There are no reductions to the amount of ambulances on-hand.
- Each Chief, Fire Marshal, and Inspector would have a command vehicle.
- The stations could immediately begin sharing one Air Truck/Trailer for the entire area.
- Calculated annual savings from other items are not significant. It was assumed that stations retained all other items on-hand for this analysis, recognizing that they will likely reduce the amounts on-hand as they streamline operations.

Based on these assumptions, the full consolidation of the departments would result in the following equipment levels and reductions in the short- and long-term:

Equipment (including active and reserve items)	Total	Recommended for Short-Term	Difference	Recommended for Long-Term	Difference
Engine	16	9	7	6	10
Quint	5	5	-	5	-
Rescue - Heavy	5	2	3	2	3
Rescue - Light	3	3	-	3	-
Ambulance	23	23	-	23	-
Ladders	5	5	-	5	-
Tanker	2	-	2	-	2
Command Vehicle	11	9	2	9	2
Air Truck/Trailer	5	1	4	1	4

The number of bays in the facilities that would remain open are sufficient for housing the recommended amounts of equipment.

C. Example Cost Weighted Formula

The following two tables display the distribution of fire data for those three factors. This is simply an example for the Communities to consider. The values have no correlation to those of the Communities.

Fire Department Formula Distribution

Fire Dept.	Population	%	SEV	%	Fire Runs	%
Community A	19,588	32%	$2,925,760,680	38%	1,696	33%
Community B	41,707	68%	$4,696,964,620	62%	3,408	67%
TOTAL	61,295	100%	$7,622,725,300	100%	5,104	100%

The typical formula weighting recommended by MSU allocates population at 30%, SEV at 30%, and usage at 40%. Applying these weightings for the Fire Departments, we have the following cost or savings sharing distribution.

Fire Department Weighted Formula Breakdown

Fire Dept.	Population	SEV	Fire Runs	Total Distribution
WEIGHT	30%	30%	40%	
Community A	0.0959	0.1151	0.1329	34%
Community B	0.2041	0.1849	0.2671	66%
TOTAL	0.3000	0.3000	0.4000	100%

As exhibited in the tables above, applying the standard values to the MSU cost sharing formula calculates different weighting of costs between communities. In the consolidated Fire Department, Community A is expected to provide 34% of the costs while Community B adds the remaining 66%. For comparison purposes the table below lists each community's costs estimated from their adjusted 2007/2008 budget.

Estimated Current Cost Distribution

Community	Fire Department Costs	Percent Distribution
Community A	$4,656,280	33%
Community B	$9,500,937	67%
TOTAL	$14,157,217	100%

In creating a formula for sharing the costs of an agreement between two communities, the options are either to fund the consolidated department according to the status quo (e.g., current cost distribution), or to create a new funding formula based on multiple factors. The goal of using a new funding model is to create a more equitable sharing of costs/savings between communities based on multiple factors such as population, SEV, and usage. However, creating more equitable cost sharing implies that costs are not already divided equitably. As such, between the two communities there is always going to be a "winner" and a "loser" when compared to current cost distributions. The following tables display the differences between the current cost distribution and the breakdown recommended through the MSU formula.

Community A Current Costs vs. MSU Formula

Department	Current Costs	MSU Formula	Difference
Fire	33%	34%	+ 1%

Community B Current Costs vs. MSU Formula

Department	Current Costs	MSU Formula	Difference
Fire	67%	66%	- 1%

Thank You

For more information, contact:

Adam Rujan
248-223-3328
adam.rujan@plantemoran.com

Dennis Bagley
248-223-3348
dennis.bagley@plantemoran.com