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March 18, 2017

MEMO TO: BOARD OF SUPERVISORS

FROM: TIMOTHY J. TIEPERMAN, TOWNSHIP MANAGER
MARK TOOMEY, CHIEF OF POLICE
BRYAN BORTNICHAK, ASSISTANT TOWNSHIP MANAGER
JOSHUA OVERHOLT, DIR., FIRE AND EMERGENCY SERVICES

RE: EMS WHITE PAPER REPORT AND RECOMMENDATIONS

Background Information

Three (3) Emergency Medical Service (EMS) organizations currently serve the Township of Upper Providence (UPT): (1) Trappe Fire and Ambulance; (2) Friendship Ambulance; and (3) Lower Providence Ambulance. All three are located outside UPT's geographic boundaries but nevertheless serve as first due responders to different Township sectors. These same agencies also have first due responsibilities in other neighboring communities, which sometimes necessitate a back-up – or second due – ambulance to respond to a medical emergency within UPT.

The Township has endured the above status quo service for several years. However, renewed interest in this important public safety function has illuminated some important trends which we believe can no longer be ignored. One major trend is the Township's explosive growth over the past decade and the lack of commensurate EMS growth to accommodate this population surge.

Response Times and Increasing EMS Call Volume

In 2015 EMS agencies responded to 1450 EMS calls inside Upper Providence Township, representing a 17% increase in call volume between 2013 and 2015. The average EMS response time for UPT-based calls was 9.3 minutes in 2015 and 9.2 minutes for the first half of 2016.

For secondary response calls, there is evidence showing response times exceed the 9.3 minute average, which is directly related to the fact that the first due ambulance was not available to take the call.

When reviewing the EMS response times mentioned above, national best practices set expectations at having a medical responder such as a police officer, firefighter or EMT on scene within 4 minutes, 90% of the time.

For critical calls requiring a paramedic, the expectation is to have a unit on scene in 8 minutes or less 90% of the time.

Our current response times, when compared to national best practices, paint a rather chilling picture for our community's EMS needs.

Rising Incidents of Scratch Calls

The inability of a first due ambulance to take a call is referred to as a *scratch*. County data seems to show all three agencies are experiencing an increase in call scratches. We believe there are three reasons for this increase:

1. The number of calls located inside the Township has increased.
2. The number of calls located in the neighboring communities that are also served by the same EMS units has increased.
3. There has been no increase in resources (additional ambulances) available to keep up with the increase in call volume.

When we reviewed EMS responses information for 2015 and 2016, we can see an increase in call scratches for each of our four (4) EMS providers that serve UPT.^{1 2 3} It's important to note that even while two (2) of the EMS providers saw small decreases in call volume, their call scratches increased. This is an indication that the number of simultaneous emergencies occurring in UPT and/or in the associated other districts that our EMS providers serve, have increased.

Further analysis of the EMS responses illustrate an increased need for service in the portion of UPT where the township municipal complex is located. This particular increase can be attributed to the continued development of the township and a reasonable expectation for further growth can be expected as the Township continues to grow in this sector.

Moreover, while still relatively young, the Township's population will age in future years causing further increases in the demand for EMS services.

¹ See Chart 1 which maps overall call volumes by agency – See Page 12

² See Chart 2 which illustrates scratches by agency – See Page 13

³ See Montgomery County 2015-2016 EMS Call Data – See Page 14

2014 Emergency Services Assessment Report & Recommendations

In 2014 the Board of Supervisors commissioned a comprehensive assessment of Upper Providence's emergency services function. While the study focused primarily on fire department operations, it included some noteworthy references and recommendations to improve EMS services.

The report stated that EMS services in the Township's northern and western quadrants were quite good, while coverage quality in the southern and eastern quadrants were dependent on the time of day. The report did not take into account call volumes but rather focused on UPT's geographic layout and the location of each responding agency's base operations.

The study asserted that the Township can make *radical improvements* and make a *major impact* to the EMS service if it were to locate an EMS unit at a more central location – either co-located with Engine 93 at the Township Building or at a nearby alternative location.

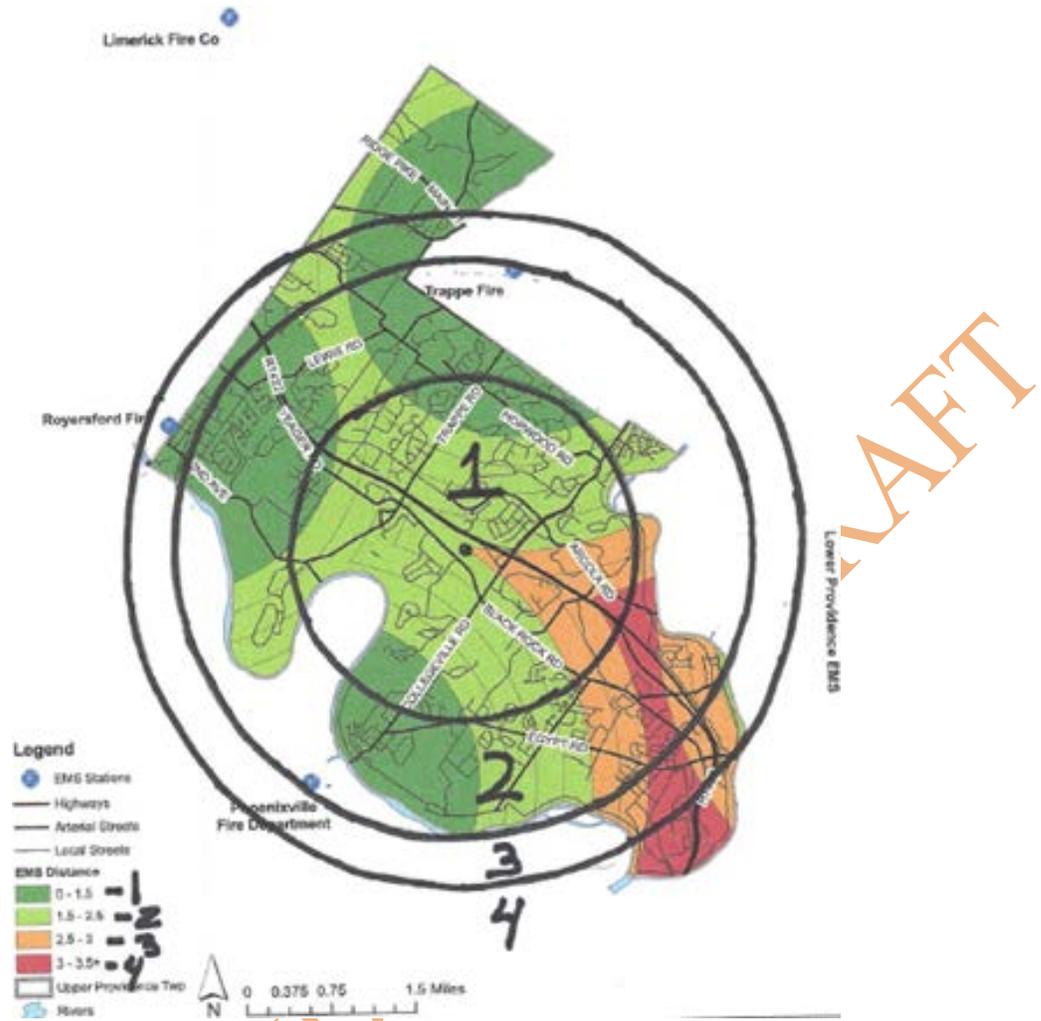
Doing so would enhance daytime, nighttime, and surge coverage within the township in addition to the following advantages:

1. It would provide substantial coverage improvement for the Township's southern and eastern sections, under either nighttime coverage or a surge scenario when the Lower Providence unit is unavailable.
2. It would place the entire Township within 2.5 miles of an EMS home base, especially within the central-east portion service by Trappe Ambulance.
3. It would also promote better backup coverage through the Township.

While not addressing either EMS response times, scratch data or second due response assignments, the report did provide some good geographic mapping, showing the benefits of a centrally located facility.

One such map on the next page shows the impacts of a centralized unit on a 3.5-mile radius map.

CENTRALIZED MAP



Note that Radius 1 is the epicenter for where most of the Township’s growth has occurred and where EMS calls have increased the most.

Presentation from David Brown – Deputy Director EMS, Montgomery County

At the September 2016 Special Board Meeting on EMS operations, Montgomery County’s Deputy EMS Director, David Brown, shared with us some empirical data which seems to suggest that response times in UPT are higher than four (4) other comparable communities. One particular community – Upper Merion Township – has a larger and denser population, yet has shorter response times than UPT.

In his letter dated November 29, 2016, Brown states that Upper Providence is sufficiently busy to support a full-time EMS station and noted that several other area municipalities have done similar studies and concluded that a geographically-based EMS unit led to the quickest response times to critical patients and made the call volumes more manageable.

At the meeting's conclusion, the Board agreed unanimously to prepare a questionnaire for distribution to Trappe, Friendship and Lower Providence Ambulances to gauge their collective opinions. All three companies responded in a timely manner, after which we coordinated separate and confidential meetings. The questionnaire was comprehensive but its core purpose was to elicit each agency's independent feedback on the major challenges impacting their operations and whether they believed the Townships was best served by one contracted ambulance to serve the entire Township or to maintain the current multi-agency system.

MEETING SUMMARIES

Friendship Ambulance

Friendship officials cited declining reimbursement rates, rising training/certification requirements and rising non-urgent 911 service calls as major factors straining the traditional EMS economic model. Given recent changes to Medicare and Medicaid reimbursements and the proliferation of new high-deductible insurance plans, more patients are using 911 for non-urgent calls. All these factors are making it increasingly difficult for the company to break even.

Given these above constraints, Friendship officials believe an exclusive agency model would best serve Upper Providence. They advocated placing an ambulance at its main headquarters at 269 Green Street in Royersford, basing one ambulance at the Oaks substation, and instituting a *floater* ambulance to be located on a mobile basis in the Township's central sector. The float ambulance would position itself as required to meet current Township needs and to reduce the need for second-due calls.

Friendship officials opined that if the Township elected to retain the current multi-agency model, then it would recommend no changes to the current boundaries separating coverage areas. They did not elaborate, however, on how to address the night-time coverage issues in the southeastern quadrant of Oaks.

They concluded by stating if the Township were to adopt a single contract model and not choose Friendship, the agency would have difficulty remaining financially solvent.

Trappe Ambulance

Trappe EMS officials cited lower billing reimbursements, rising personnel costs and increasing workforce turnover to other better paying positions as major factors impacting its business model.

Unlike Friendship, Trappe officials are not advocating for a change to an exclusive agency model. They recommend keeping the current multi-agency model, albeit with some tweaks. One immediate change they recommended was redrawing the existing response boxes and rearranging the EMS beat lists to ensure that the next closest ambulance is dispatched.

They also recommended a baseline response benchmark of ≤ 2 minutes from dispatch and ≤ 8 minutes for arrival. They also stated there should be better coordination between all EMS units utilizing a system status management system.

In our follow-up discussion Trappe also suggested basing a floater ambulance at the Black Rock municipal campus. Since they are the exclusive agency provider in Phoenixville and Limerick, they believe it would be possible to assign a dedicated floater to UPT without impacting its core base operations.

Trappe officials concluded that if they were to lose their UPT Response area, they would be forced to close their main Trappe Borough facility within 6 months, thus depriving Perkiomen Township, Trappe Borough and Collegetown Borough of a first due ambulance.

Lower Providence Ambulance

Lower Providence officials cited a similar theme of challenges evoked by Friendship and Trappe: Declining reimbursements, abuse of the EMS system and staffing problems.

They agree with Trappe ambulance that the current multiple agency system better serves all residents as opposed to an exclusive system. They agree that certain components of an exclusive agency model, as espoused in the 2014 Fire Planning Associates Study, could be adopted to improve the current multi-agency system. One such component would be basing 2 floater ambulances within the Township, most likely the Oaks substation and the Black Rock municipal campus.

Both ambulances could be floater ambulances, allowing the spare unit to provide primary response coverage during a surge scenario.

When asked how they would endure economically if the Township were to adopt an exclusive agency model, LP officials responded that they would experience a reduction in 250 calls per year if a dedicated ambulance covers 100% of their UPT dispatches, resulting in a \pm \$75,000 loss of revenue.

STAFF DELIBERATIONS

After these meetings, we met separately to digest all the data disseminated throughout this fact finding process, not only the confidential feedback from these meetings but also the voluminous amounts of information received from Supervisor Vagnozzi, Dave Brown (Montgomery County EMS Deputy Director), 2014 Fire Planning Associates Study, 2007 Emergency Services Education and Consulting Group Report (VFIS), not to mention our informal discussions with other area EMS professionals.

Each of us brought to the table a unique perspective, whether it be financial, management or technical experience to help us formulate a working blueprint on how to improve EMS services in Upper Providence. We excerpted the best suggestions from all these resources. Here are our findings:

FINDINGS OF FACT

- All the analytical data that we reviewed, while contradictory in spots, confirms a consistent correlation between regional population increase and a rise in scratched calls.
- The Affordable Care Act (ACA) and Washington's radical retooling of Medicare reimbursement formulas have adversely impacted what once was a reliable cash flow for all EMS providers.
- The proliferation of ACA-inspired high deductible plans has fueled a rise in non-urgent 911 calls by individuals unable to pay the full costs for ambulance transports.
- Excessive staff turnover to higher-paid, less stressful medical jobs is only likely to exacerbate as these financial constraints persist. We find these trends particularly troubling because it directly impacts quality of care, for which there are currently no performance standards.

- We have reviewed the County's current *beat lists* to ensure that the next closest EMS unit is being used. What we discovered does corroborate Trappe's assertions that several areas in UPT do not have accurate, closest *next due* EMS units. This is unacceptable and should be rectified immediately.
- Unlike the formalized relationships that UPT has with Black Rock (BRVFC) and its contracted fire service providers, we have no such relationship with our local EMS providers. Staff believes this hands-off approach cannot continue, now that some of these adverse statistics have come to light.
- Based on the current state of each EMS Company's economic condition, gravitating to an exclusive agency model would inflict unnecessary financial damage on either Trappe or Friendship, thus impacting their ability to provide first dues responses to the Greater Spring Ford Region.
- Staff concurs that a full-service Advanced Life Support (ALS) Ambulance – based at the Black Rock Campus – will restore optimal first due response services, whether it be Trappe, Friendship or Lower Providence. The challenge will be realigning the service boundaries in tandem with the updated beat lists.
- The latter would need to be done with some surgical accuracy given the extreme fragility of each company's financial situation. Any systematic change would require close monitoring since a natural consequence of either expanding or shrinking response districts may have unforeseen consequences on area EMS organizations.

STAFF RECOMMENDATIONS AND TIMELINES

Based on all the information presented, we unanimously recommend that the Township move in the direction of deploying an additional ambulance centrally based inside UPT’s municipal boundaries. This change will avail additional medical resources that – when coupled with the adjusted beat lists – will improve response times and promote greater coordination of EMS responses through the Township.

To implement these recommendations, we have prepared the following recommended action steps and corresponding milestones:

1. Implement updated EMS beat lists to provide better second due coverage.

TIME FRAME: IMMEDIATE

2. Prepare service contracts modeled after the fire service contracts with Trappe, Royersford and Collegeville Fire Companies. At a minimum these contracts should address:
 - a. Acceptable response time thresholds
 - b. Enforcement provisions (e.g., GPS tracking of vehicles)
 - c. Other TBD standards

TIME FRAME: IMMEDIATE – TWO MONTHS

3. Amend Chapter 85 to give clear and unambiguous authority to the Director of Fire and Emergency Services – with the advice and consent of the Township Manager – to enforce all fire and EMS service agreements without political interference.

TIME FRAME: IMMEDIATE – TWO MONTHS DEPENDING UPON OPPOSITION

4. Identification and fit-out of a temporary, centralized facility to house a Township-owned (or leased) ALS response ambulance.

TIME FRAME: TWO – FOUR MONTHS

5. Realign all first-due response districts to reflect the supplemental EMS provider in preparation for startup.

TIME FRAME: FOUR – SIX MONTHS BUT CAN BE COMPLETED SIMULTANEOUSLY WITH OTHER TASKS

6. Authorize the formation of a permanent Emergency Services Committee to provide the Township Manager and Director with support in the management of this newly reorganized fire/EMS hierarchy. This transitional committee would evolve into a standing committee once the BOS transitions to a 5-member governing body in 2018.

TIME FRAME: TWO – FOUR MONTHS BUT CAN BE COMPLETED SIMULTANEOUSLY WITH OTHER TASKS

7. Develop and implement a definitive plan for a permanent emergency services facility to be located at the Black Rock Municipal Campus. This facility should be scoped out as part of a larger, combination fire and ambulance facility.

TIME FRAME: HAVE A PERMANENT EMERGENCY SERVICES FACILITY IN PLACE BY 2019

8. Prepare a *limited* Request for Proposal (RFP) to be shared with Trappe, Friendship and Lower Providence Ambulances. The RFP will have defined service specifications, including the same minimum requirements enumerated in #2 above, including the procurement and staffing of the ALS ambulance.

TIME FRAME: TWO – FOUR MONTHS BUT CAN BE COMPLETED SIMULTANEOUSLY WITH OTHER TASKS BUT SHOULD BE IN PLACE PRIOR TO COMPLETION OF PERMANENT FACILITY

9. Interview and select the new centralized provider.

TIME FRAME: TWO – FOUR MONTHS BUT CAN BE COMPLETED SIMULTANEOUSLY WITH OTHER TASKS BUT SHOULD BE IN PLACE PRIOR TO COMPLETION OF PERMANENT FACILITY

10. The 5-Year CIP should be amended to reflect the correct projected costs

TIME FRAME: FOLLOW 2017-18 BUDGET TIMELINE (NOV-DEC 2017)

CONCLUDING REMARKS

We hope the Supervisors review this report favorably, as reflects our collective, objective and unanimous analysis of the facts as we see them.

We also cannot end this report by not acknowledging the logical nexus between fire and emergency medical services. We should take full advantage of the obvious synergies between EMS and fire when planning for a permanent, combination facility in 2019.

Lastly, we should adopt strategies that promote the cross training of EMS and fire personnel to help us not only achieve reduced response times in medical emergencies but also help us affirmatively address the 24/7 shortage of available firefighters.

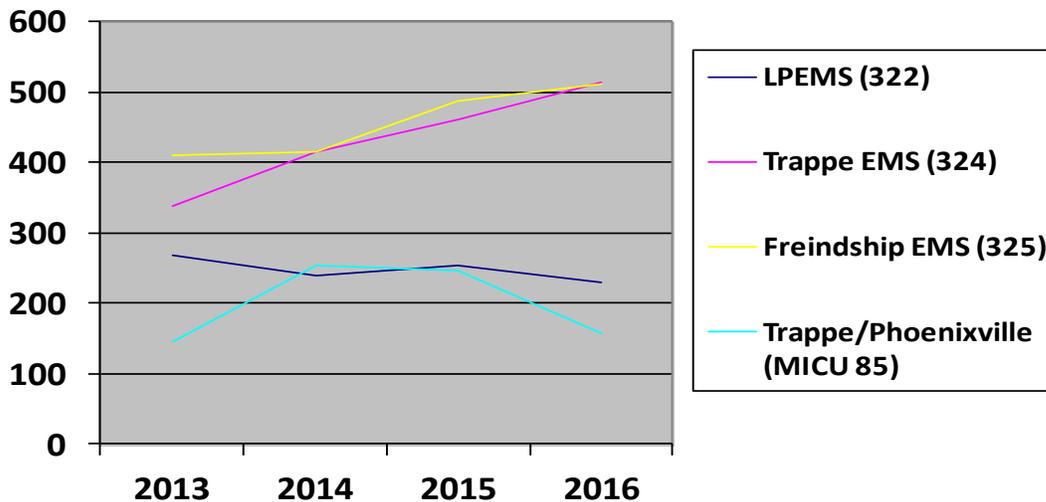
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CONFIDENTIAL - DRAFT

WHITE PAPER FOOTNOTES

CONFIDENTIAL - DRAFT

Chart 1 below illustrates overall call volumes by agency

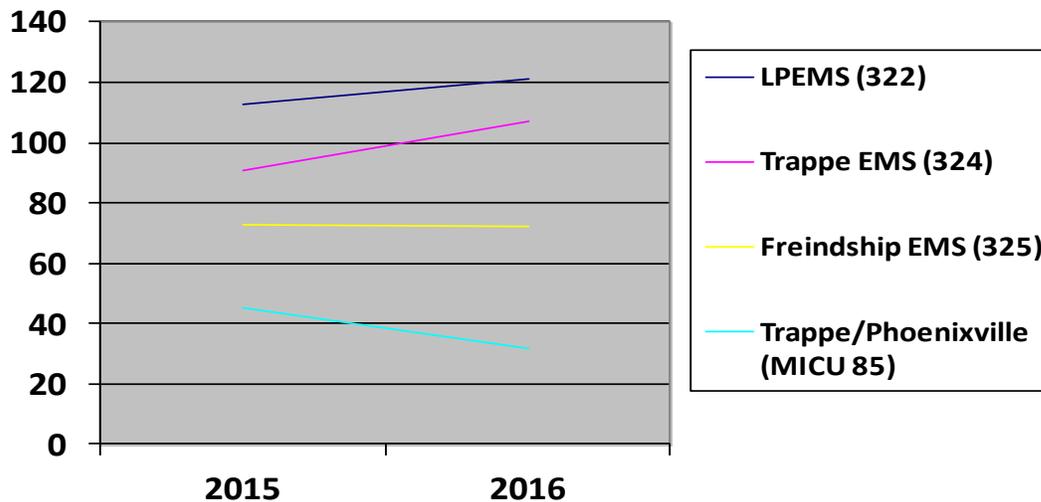


The above chart illustrates a 17% increase in the overall call volume between 2013 and 2015. To that point, the call volumes for Trappe EMS and Friendship EMS have increased steadily over the years while LPEMS has remained the same and the Trappe/Phoenixville unit call volume has slightly decreased.

Assumptions

The increased call volume for Trappe EMS and Friendship EMS can be attributed to the steady growth of the Township’s core and; that both of these agencies are largely responsible for a significant portion of the Township’s Route 422 jurisdiction. The increased calls on Route 422 are also indicative of higher traffic volumes throughout the area.

Chart 2 below illustrates scratches by agency



The above chart illustrates that even while the call volumes for Trappe EMS and Friendship EMS have increased over the years;

-Friendship EMS has had no significant increase in scratches.

Assumption

It would appear that Friendship EMS has been able to account for the increase in call volume in some fashion.

-Trappe EMS however has had an increase in scratches to accompany their increased call volume.

Assumption

This may be indicative of the agencies expansive district(s) with no increase in the number of available EMS units to handle the increasing call volumes. That said, both the agency and the Township would benefit from a supplemental EMS unit to be established.

The same chart illustrates an increase in scratches for the LPEMS unit. While the call volume has remained somewhat consistent for this unit, it would appear that this unit is handling more calls for service in other communities making it less available when needed in UPT.

