Overview

- Purpose
- Background Information
- Current State
- Problem Statement
- Solutions
- Summary & Next Steps
WHEREAS, protecting human life and property is a primary responsibility of town government; and

WHEREAS, emergency response times in northwest Greenwich far exceed 4 minutes, the nationally recommended time that increases the chance of rescuing trapped occupants and reducing property damage; and

WHEREAS, in addition to residents, the area has schools, nursing homes, businesses, churches, public and private golf courses, and more traffic on King Street and the Merritt Parkway, but still has inadequate protection against fires and other emergencies;

Adopted: September 17, 2018
Vote: 126-55-3
NOW THEREFORE, it is the Sense of the Meeting of the RTM that the First Selectman’s Office and the Board of Estimate and Taxation should address the inadequate protection existing in the northwest area of Greenwich during the forthcoming budgetary process for the 2019-2020 budget, which budgetary process includes public hearings, and

(i) determine whether and where a new firehouse in northwest Greenwich is needed,

(ii) establish what the likely total capital costs for land acquisition and construction are if a firehouse is needed, and

(iii) provide simultaneously with any such capital budgetary proposal an assessment of overall fire department staffing and the likely annual ongoing operating costs of any new firehouse in light of such overall staffing.

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North West Fire Response Area
Background Information
### GFD – Primary Services Provided

<table>
<thead>
<tr>
<th>Division</th>
<th>Budget Code</th>
<th>Paid Staff</th>
<th>Primary Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>201</td>
<td>4</td>
<td>Strategic planning, business operations, inter-department relations, community partnerships</td>
</tr>
<tr>
<td>Training</td>
<td>202</td>
<td>2</td>
<td>Training all career &amp; volunteer, personal protective equipment, records &amp; OSHA compliance, quality control</td>
</tr>
<tr>
<td>Fire Marshal</td>
<td>204</td>
<td>5</td>
<td>Public fire prevention education, code enforcement, fire investigation, building/demo plan review, permit inspection</td>
</tr>
<tr>
<td>Firefighting Force</td>
<td>205</td>
<td>95</td>
<td>Protect life, property, and environment, fire rescue/suppression/prevention, technical rescue services for accidents, cold water, trench collapse, confined space, elevator entrapment, CO responses, hazardous materials emergencies, all hazards response, service calls</td>
</tr>
<tr>
<td>Volunteers</td>
<td>208</td>
<td>1</td>
<td>Volunteer recruitment and retention, benefits management, management volunteer program requirements</td>
</tr>
</tbody>
</table>
GFD – Stations

- 1 – Central (HQ) (Combo)
- 2 – Cos Cob (Combo)
- 3 – Byram (Combo)
- 4 – Glenville (Combo)
- 5 – Sound Beach (Combo)
- 6 – Round Hill (Volunteer)
- 7 – Banksville (Volunteer)
- 8 – North Street (Career)
• Dispatch located at Public Safety Complex
  • Police, Fire, and GEMS calls for service
  • Computer Aided Dispatch (CAD)
    • Suite of software packages used to initiate public safety calls for service, dispatch, and maintain the status of responding resources in the field
    • Pre-determined logic helps best dispatch appropriate resource levels and response type based on call type and information provided by caller
National Fire Standards

• National Fire Protection Association (NFPA)– National Industry Standard
  • Started 1896 by insurance industry; widely known as a codes/standards organization
  • More than 250 technical committees, comprised of approximately 9,000 volunteers, review public inputs and vote on the revisions in a process that is accredited by the American National Standards Institute.

• Insurance Services Organization (ISO) - Public Protection Classification
  • ISO analyzes the relevant data and assigns a Public Protection Classification — a grading from 1 to 10. Class 1 generally represents superior property fire protection, and Class 10 indicates that the area’s fire suppression program does not meet ISO’s minimum criteria.
  • Most U.S. insurers of properties use ISO’s PPC in calculating premiums. In general, the price of insurance in a community with a good PPC is lower than in a community with a poor PPC, assuming all other factors are equal.
  • ISO bases criteria on NFPA standards, as well as other organizations.
Related National Fire Standards

• National Fire Protection Association (NFPA)— National Industry Standard 1710 – Response Standards for Career Departments
  • 80 second turnout time for fire and special responses*
  • 240 second (4 min) travel time for fire and special responses*
  • 8 min for initial assignment on scene*
  • 90% of the time

• Insurance Services Organization (ISO) - Public Protection Classification
  • Fire Suppression Rating Schedule (FSRS)
  • Item 561 – Deployment Analysis (10 Points). Road mile analysis and systematic performance evaluation, comparing CAD data to general criteria of NFPA 1710.

*1710-7: 4.1.2.1, 4.1.2.3
Current State
Population

Legend
Population Count
- 0 - 54
- 55 - 175
- 176 - 396
- 397 - 877
Emergency Response Information

<table>
<thead>
<tr>
<th>Department</th>
<th>Number of Calls (FYE14 to FYE18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire (Emergency Responses Only)</td>
<td>16,616</td>
</tr>
<tr>
<td>Fire (All Responses)</td>
<td>20,274</td>
</tr>
<tr>
<td>Fire (NW Greenwich)</td>
<td>1,095</td>
</tr>
<tr>
<td>GEMS (Emergency Responses Only)</td>
<td>16,973</td>
</tr>
<tr>
<td>GEMS (All Responses)</td>
<td>31,452</td>
</tr>
<tr>
<td>GEMS (NW Greenwich – Medic 4)</td>
<td>6,320</td>
</tr>
</tbody>
</table>

Note: Emergency Response is Code 20, lights & sirens
Fire Department Calls

• Five years of data, July 2013 to June 2018

• Emergency responses only (Code 20 – Lights & Sirens)

• Pin map is by parcel address, does NOT show frequency of response to an address
Fire Department Calls

- Five years of data, July 2013 to June 2018
- Emergency responses only (Code 20 – Lights & Sirens)
- Heat map shows frequency of response by location
GEMS Calls

• Five years of data (in town), July 2013 to June 2018

• Emergency responses only (Lights & Sirens)

• Pin map is by parcel address, does NOT show frequency of response to an address
GEMS Calls

- Five years of data (in town), July 2013 to June 2018
- Emergency responses only (Lights & Sirens)
- Heat map shows frequency of response by location
Response Time

- **Total Response Time** = processing time + turnout time + travel time
  - Processing time is the time it takes from when dispatch receives a call, processes information, and notifies the appropriate resources.
  - Turnout time is the time it takes from being notified about a call, getting geared up, and ready to leave the station.
  - Travel time is the time it takes to travel from the station (or location response initiated) to arrive on scene.

*Total response time is the amount of time the victim (911 caller) experiences after summoning emergency services.*
Emergency Response – Travel Time

SPEED, DISTANCE AND TIME

Distance = Speed x Time

Time = Distance / Speed

Speed = Distance / Time

MathsOne Academy
Current Map of Response Time

Legend
- Blue Circle: Fire Stations

- Green: 0 - 4:00 Minutes
- Yellow: 4:01 - 8:00 Minutes
- Orange: 8:01 - 12:00 + Minutes

SPEED, DISTANCE AND TIME

Distance = Speed x Time
Time = Distance / Speed
Speed = Distance / Time
Mutual Aid vs Automatic Aid

• Support neighboring communities
  • Mutual Aid: Agreement among emergency responders to lend assistance to neighboring jurisdiction if necessary, when called upon (if available). Mutual Aid Agreement (MAA) to outline understanding and pledge commitment.
  • Automatic Aid: Municipalities have signed agreement; department listed on original dispatch run card for calls in specified area. Often has cost associated.

<table>
<thead>
<tr>
<th>Department</th>
<th>Current Relationship</th>
<th>Response Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banksville Volunteer FD</td>
<td>Automatic Aid Agreement, about $147k/year</td>
<td>Approx. 300/year</td>
</tr>
<tr>
<td>Armonk Volunteer FD</td>
<td>Mutual Aid Agreement</td>
<td>Approx. 1/year</td>
</tr>
<tr>
<td>Village of Rye Brook</td>
<td>Ad Hoc mutual aid</td>
<td>Less than 1/year</td>
</tr>
<tr>
<td>Port Chester Volunteer FD</td>
<td>Ad Hoc mutual aid</td>
<td>0</td>
</tr>
<tr>
<td>City of Stamford</td>
<td>Ad Hoc mutual aid</td>
<td>Approx. 1/year</td>
</tr>
</tbody>
</table>
Problem Statement

What are we trying to solve?
The Problem

WHEREAS, protecting human life and property is a primary responsibility of town government; and

WHEREAS, emergency response times in northwest Greenwich far exceed 4 minutes, the nationally recommended time that increases the chance of rescuing trapped occupants and reducing property damage; and

WHEREAS, in addition to residents, the area has schools, nursing homes, businesses, churches, public and private golf courses, and more traffic on King Street and the Merritt Parkway, but still has inadequate protection against fires and other emergencies;

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Vote: 126-55-3
The Problem – GEMS

- Currently have a facility (GEMS “Station” 4)
- Facility is in disrepair and requires investment
- Facility is not adequate for operational needs – lacking climate controlled environment to properly store ambulance
The Problem – Travel Time

SPEED, DISTANCE AND TIME

Distance = Speed x Time

Time = \(
\frac{Distance}{Speed}
\)

Speed = \(
\frac{Distance}{Time}
\)
The Problem – Travel Time

<table>
<thead>
<tr>
<th></th>
<th>Greenwich</th>
<th>NW Greenwich</th>
</tr>
</thead>
<tbody>
<tr>
<td>% sq. mi in 0-4m</td>
<td>44%</td>
<td>1%</td>
</tr>
<tr>
<td>% sq. mi in 4-8m</td>
<td>44%</td>
<td>51%</td>
</tr>
<tr>
<td>% sq. mi in 8-12+</td>
<td>12%</td>
<td>48%</td>
</tr>
</tbody>
</table>

**Legend**
- **Fire Stations**
- 0 - 4:00 Minutes
- 4:01 - 8:00 Minutes
- 8:01 - 12:00 + Minutes
Emergency Occurs

Caller dials 9-1-1

Dispatch Collects information

Dispatch Notify Emergency Services & Prepare for Response

Emergency Services Responds to Emergency Scene

Emergency Services Provides Help On Scene

**The Problem – Travel Time**

<table>
<thead>
<tr>
<th>PROCESSING TIME</th>
<th>TURNOUT TIME</th>
<th>TRAVEL TIME</th>
</tr>
</thead>
</table>
| Standard: 1 minute*  
Greenwich Avg: Not Available  
NW Greenwich Avg: Not Available | Standard: 1 minute 20 seconds*  
Greenwich Avg: 1 min 53 sec  
NW Greenwich Avg: 2 min 5 sec | Standard: 4 minutes*  
Greenwich Avg: 4 min 4 sec  
NW Greenwich Avg: 6 min 57 sec |

*90 percent of the time
The Problem

• Stations strategically placed to cover “hot spots” in Town
• Clear deficiency in NW Greenwich
The Problem

- NW Greenwich travel is okay when traveling north and south, but very challenging and limited east and west

- Dependent on Glenville

- Multi-station response still meets standard. Per 1710, full initial assignment within 8 minutes, 90% of the time.
Other Issues

• Target Hazards:
  • Schools
  • Rehab Center
  • Assisted Living Facility
  • Airport
  • Multiple Religious Institutions

• Operational Challenges:
  • Narrow and hilly connecting roads, especially difficult to navigate during inclement weather
  • Surrounding departments are Volunteer (higher turnout time)
  • Primary response is dependent upon one station (Glenville-4)
  • Target Hazards with greater exposure and frequent response
## Other Issues

<table>
<thead>
<tr>
<th>Department</th>
<th>Response Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banksville Volunteer FD</td>
<td>Limited – no expansion</td>
</tr>
<tr>
<td>Armonk Volunteer FD</td>
<td>Limited – no expansion</td>
</tr>
<tr>
<td>Village of Rye Brook</td>
<td>Very Limited – no expansion</td>
</tr>
</tbody>
</table>

- **Banksville FD**
  - Volunteer FD
  - Limited – no expansion

- **Armonk FD**
  - Volunteer FD
  - Limited – no expansion

- **Village of Rye Brook**
  - Volunteer FD
  - Very Limited – no expansion
Summary of the Problem

- A condition of inadequate fire protection exists in North West Greenwich
- Only area of Town with high call volume and no station nearby
- Largest portion of Town in 8m to 12m+ response time
- High-volume King Street Corridor is still exposed to lengthy travel time
Solutions
Analysis Process

• Core Team – Met Weekly After SOMR Passage
  • First Selectman
  • Town Administrator
  • Fire Chief
  • Assistant Fire Chief
  • Executive Director of GEMS
  • Senior Management Analyst

• Subsidiary Workgroups:
  • Joint Budget Committee/BET
  • District 10 RTM Members
  • Key Stakeholders
Analysis Process

• Assessed current fire and GEMS data
  • Call volume & location
  • Response time: processing, turnout, travel
  • Travel time from each station
• Analyzed demographic and geographic data
• Contacted surrounding communities
• Reviewed budget and financial/operational impacts
• Onsite visits and area assessments
Solutions Explored

1. Do nothing
2. Put Career at Round Hill
3. Automatic Aid from Rye Brook or Armonk
4. Change Zoning or Building Regulations
5. Fire Department Staff on Overtime at Station 4
6. Recommended: Construct Joint Fire/GEMS facility in NW Greenwich
Do Nothing

- Does not honor the SOMR
- Costs continue to rise as solution is delayed (proposal construction costs are 9% more expensive than proposed in 2016)
- Risk exposure remains due to clear fire response inadequacy
- Requires Town to build *separate* facility for GEMS
Career Staff at RHVFD

- Explored option with leadership

- Primary problem is *travel time (distance)*

- Leaves area with highest call volume exposed

- Requires Town to build a *separate* facility for GEMS
Automatic Aid Agreement

• Not possible – surrounding departments confirmed NO ability to increase response

• GFD contacted surrounding depts. to consider request:
  • Armonk FD: Chief confirmed no capability to provide automatic aid to North West Greenwich
  • Rye Brook: Village Manager confirmed no capability to provide automatic aid to North West Greenwich at this time
Zoning or Building Code Changes

• Change Zoning Regulations
  • Not possible – structural regulations apply to setbacks, building heights, etc.
  • Does not address current situation

• Change Building Code:
  • Connecticut State Building Code
  • Would require State to make a state-wide code change
  • Does not address current situation
Hire Career Staff on Overtime at Station 4

- Hire 4 firefighters on overtime (1 per shift) at Station 4 (creates arriving interior-ready engine)

- Problem is travel time (distance)

- Add about $462,000 per year (FY20) to operating budget without increasing fire protection
Recommended Solution: Joint Facility

- Construct A Joint Fire/GEMS Station in North West Greenwich
  - 2 Bay Fire Station
  - 3 Firefighters/Shift
  - Adjoining 2 Bay Ambulance Station
  - Reposition current GEMS station from “Station” 4

- Notes & Assumptions
  - Joint Facility of GEMS/Fire is best financial and operational decision
  - Maintain GEMS & GFD as 2 separate service lines
  - Volunteers at Round Hill Volunteer Fire Department will continue to provide service and will remain active with renovation benefits
  - RHVFD is financially and operationally solvent
Identifying Potential Locations

- Building, Construction & Maintenance Division put property requirements together
- Used GIS to identify all possible properties in NW Greenwich that satisfied minimum requirements
- Mailed letters to all property owners to solicit interest (24)
- Assessed interested properties
- In addition: contacted Brunswick School, Audubon Society, and Fairview Country Club
- Narrowed down potential list to 4-5 property options
Proposed Stations - Response Time

- Upper King Street
- Proposed joint Fire/GEMS station
Proposed Stations - Response Time

- Lower King Street
- Proposed joint Fire/GEMS station
Proposed Stations - Response Time

- Riversville Road
- Proposed joint Fire/GEMS station
## Budget – Operating & Capital Overview

<table>
<thead>
<tr>
<th></th>
<th>FY19-20</th>
<th>FY20-21</th>
<th>FY21-22</th>
<th>FY22-23</th>
<th>FY23-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hire 4 Floaters (Temp)</td>
<td>-</td>
<td>610,118</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hire 4 Floaters (Temp)</td>
<td></td>
<td></td>
<td>634,193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Station 9</td>
<td></td>
<td></td>
<td>660,134</td>
<td></td>
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<tr>
<td><strong>Operating Subtotal</strong></td>
<td>$</td>
<td>-</td>
<td>$ 610,118</td>
<td>$ 634,193</td>
<td>$ 660,134</td>
</tr>
<tr>
<td>Land acquisition¹</td>
<td>TBD</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Property due diligence</td>
<td>100,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Station A&amp;E</td>
<td></td>
<td></td>
<td></td>
<td>500,000</td>
<td></td>
</tr>
<tr>
<td>Station construction²</td>
<td></td>
<td></td>
<td></td>
<td>5,425,200</td>
<td></td>
</tr>
<tr>
<td>Station FF&amp;E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>200,000</td>
</tr>
<tr>
<td>Sale of TOG Property</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TBD</td>
</tr>
<tr>
<td><strong>Capital Subtotal</strong></td>
<td>$ 100,000</td>
<td>$ 500,000</td>
<td>$ 5,425,200</td>
<td>$ 200,000</td>
<td>$ -</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td>$ 100,000</td>
<td>$ 1,110,118</td>
<td>$ 6,059,393</td>
<td>$ 860,134</td>
<td>$ -</td>
</tr>
</tbody>
</table>

1) Pending negotiations; subject to additional costs based on conditions applied to agreement.
2) Joint Fire/GEMS facility would be 9,042 square feet; construction estimated at $600 per square foot.
## Budget – GFD Operating Detail

<table>
<thead>
<tr>
<th>Year</th>
<th>Station</th>
<th>Current # of Career Staff</th>
<th>Proposed # of Staff</th>
<th>Change in Staff</th>
<th>Unit Cost</th>
<th>OT Cost</th>
<th>Net Budget Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YEAR 1</strong>&lt;br&gt; (FY20)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>$0</td>
</tr>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>YEAR 2</strong>&lt;br&gt; (FY21)</td>
<td>Floaters</td>
<td>12</td>
<td>16</td>
<td>Add 4 FF's (1 per shift)</td>
<td>$122,024</td>
<td>$30,506</td>
<td>$152,529</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$610,118</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>YEAR 3</strong>&lt;br&gt; (FY22)</td>
<td>Floaters</td>
<td>12</td>
<td>16</td>
<td>Add 4 FF's (1 per shift)</td>
<td>$126,839</td>
<td>$31,710</td>
<td>$158,548</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>$634,193</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>YEAR 4</strong>&lt;br&gt; (FY23)</td>
<td>9 (Northwest)</td>
<td>0</td>
<td>12</td>
<td>Relocate 8 FF's from Station 4 &amp; 8</td>
<td>$132,027</td>
<td>$33,007</td>
<td>$165,034</td>
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</tbody>
</table>

1) Unit Cost includes: base salary (estimated 2% general wage increase); benefits (estimated 10% increase); stipends; and uniform allowance. Unit Cost also includes: Fire Academy tuition; turnout gear; and uniforms.
Summary

- Recommended solution: Build a joint Fire/GEMS station in North West Greenwich
  - Will require 12 additional firefighters to staff 24/7
  - Start phased in hiring and strategic deployment in FY21
- Explored many solutions – do not honor SOMR or solve travel time problem
Next Steps – NW Station

• BET & RTM must approve FY20 Budget to finalize property search and acquisition
• Town conducts necessary soil and water tests on final properties of interest
• Town acquires property
• Begin A&E for new facility (FY21)
North West Greenwich Fire Response

Final Report
February 4, 2019