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NORTHEAST JOINT FIRE DISTRICT PLANNING STUDY - 2006 TO 2026 STAFFING, EQUIPMENT AND FACILITIES NEEDS FOR THE NEXT TWENTY YEARS

Prepared for:
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NORTHEAST JOINT FIRE DISTRICT

PLANNING STUDY - 2006 TO 2026

STAFFING, EQUIPMENT AND FACILITIES NEEDS FOR THE NEXT TWENTY YEARS

November, 2005

SUMMARY

The North East Joint Fire District (NEJFD) engaged CGR (Center for Governmental Research Inc.) to evaluate the needs of the district for the next twenty years (2006 through 2026) and identify how the district should plan for resource needs to ensure the district has the required staff, equipment and facilities to provide fire response services within the district.

To estimate demand for services in the future, CGR identified what changes could reasonably be projected in the population, housing and commercial/industrial character of the area served by the NEJFD. CGR also mapped call-for-service data for all calls served within the NEJFD from January, 2004 through May, 2005, to show where calls are originated from within the district based upon current development within the district. CGR also prepared a map that shows a 1.5 mile polygon around each of the two existing stations in the district, and the coverage provided by the two Union Hill Fire Department stations that provide coverage to the eastern side of the district, under contract with the district. The 1.5 mile polygons show the distance from each station, based upon traveling on the current actual road network. 1.5 miles is the standard measure used by the Insurances Services Office Inc. (I.S.O.) to determine fire insurance ratings.

These maps indicate that there is a large area between the village of Webster and Lake Ontario that is either currently developed, or is likely to be developed with residential housing, that is not within 1.5 miles of a fire station serving the district. In order to be

proactive in meeting current and future demand for service within the district, the district should locate a new station somewhere in the center of the area not currently covered by the existing station 1.5 mile polygons. CGR used geographic information system (GIS) computer software to calculate the centroid (central point) of the area. The computer identified centroid is actually in the middle of a housing development. However, the district could identify any site within approximately one-half mile of the centroid and still serve the area. One prime location that the district could consider would be the intersection of Schlegel Road and Phillips Road, which is within a half-mile of the theoretical center, and is the closest point located on major east-west and north-south roads.

The last I.S.O. review for the Town of Webster was conducted in 1996. Based on that review and the information collected for this study, CGR believes the NEJFD should take a pro-active role to build a new station at or close to the proposed site. Building a new station there will accomplish three objectives.

- ❖ It will help preserve the current I.S.O. rating for the district for fire insurance purposes,
- ❖ It will also locate fire department emergency medical service (EMS) rescue equipment in the middle of an area with a high demand for those services based upon actual calls for service,
- ❖ It will locate a station closer than the existing stations to areas where a number of volunteers currently live, and are likely to live, which may increase the response speed of the department.

CGR believes that the current level and configuration of fire apparatus located in the NEJFD and provided by the Union Hill Fire Department for the area under contract to NEJFD is sufficient to meet current and projected future requests for service within the district.

Once the new Station #3 is built, it can house an engine (pumper) and one of the district's light rescue vehicles, which will provide faster response for these "first-in" companies to the north-central part of the town. Two pumpers, the ladder, two rescue vehicles and other vehicles can remain at Station #1, which is still central geographically to the district, and also is centrally located to the

highest number of calls for service. A pumper and brush truck would also continue to be located at Station #2, which serves the southeast section of the district.

CGR reviewed preliminary plans prepared a few years ago for the district for both renovations needed at Station #1 and concept plans for the new Station #3. We also discussed various space and programming needs with the Chief and two commissioners. Based upon that information, as requested in the RFP, we developed some rough estimates for the amount and type of space needed to meet these requirements. CGR also built in sufficient extra equipment bays and bunk room space to absorb any reasonable need for additional equipment or firefighting staff for the next twenty years at least. We then applied standard estimating numbers to project square foot estimates, and used cost per square foot estimates based upon the fact that construction costs in the last year have ballooned, and are likely to continue to do so due to demands for construction materials and the high cost of oil.

Given these parameters, CGR estimates that a new Station #3 will cost in the range of \$2.3 million, plus land acquisition costs, and that renovations to Station #1 will cost in the range of \$1.9 to \$2.1 million depending on the mix of new construction versus re-use of the existing space. CGR did not develop any cost estimates for additional improvements for Station #2, as that station was recently built, but we did identify some improvements that the district should consider making. These cost estimates could change, however, as the district refines its needs and its programming requirements and identifies ways to reduce costs below the standard architectural and equipment estimates that CGR used for initial planning purposes.

CGR also evaluated whether the district is likely to have to move to a mix of either full or part-time career staff in order to supplement volunteer fire fighters. Although the national trend is that volunteerism in firefighting has declined, based upon a recent survey conducted by the Monroe County Fire Bureau, the number of volunteers in comparable local volunteer departments in Monroe County has increased over the last twenty years. The numbers for the Webster Fire Department (the precursor to the NEJFD) indicate that the number of volunteers in Webster has

remained constant over the same time period, despite a 7% per year average growth in call volume since 1990. Thus, it is reasonable to assume that this trend will continue, i.e. that the NEJFD, going forward, will continue to be able to attract and retain sufficient numbers of volunteers to meet the needs of the department.

It is also important to understand that the district does have some flexibility in managing the demand for and use of volunteers through its own department policies regarding what types of incidences it will respond to, and in what manner. As shown in this report, the total number of fire related calls since 1990 has remained almost exactly the same. However, rescue calls have increased 61% since 1990, and other calls have increased 208%. Since these are the types of calls that are putting additional demands on the district, the district will have to evaluate options for responding to and managing these calls if the district finds it is unable to provide timely service with the number of volunteers available.

The district needs to monitor whether it has enough volunteers to meet the service demands of the district. CGR identified five trends that the department should monitor, to determine the impact on staffing. Clearly, it is most cost effective to run the department with volunteers. The district has to some extent had its size limited by a historical cap on the number of volunteers allowed in the department. Current limits have served the department well in the past, but may need to be raised in the future if volunteer response drops off.

The district could also follow the path taken by a number of districts in the county, consistent with the national trend for moving to paid staff. The district could choose to hire part-time staff or full-time career staff. Based upon the current averages being paid in Monroe County, the cost of a 20 hour per week part-time career firefighter would be approximately \$16,800 per year, and the starting cost of a full-time career fire fighter would be \$43,800.

CGR compared these costs to the cost to the district of instituting a Length of Service Award Program (LOSAP). In a LOSAP, the district can contribute up to \$30/month into a retirement program

for volunteers with at least five years of service. If the NEJFD finds itself in a position where it needs to provide incentives to attract volunteers in order to avoid hiring career staff, the district could consider again seeking voter approval for a LOSAP. The district would need to obtain a cost estimate for funding a LOSAP from a company that specializes in the field, as the cost is based upon actuarial estimates based upon the length of service, turnover and age of the volunteers in the department. However, CGR estimates that fully funding a LOSAP would cost about as much as hiring one full-time career firefighter. Thus, if the district can continue as an all-volunteer department using a LOSAP, this would be a very cost effective way to keep district personnel costs as low as possible.

This report has two sections in addition to this Executive Summary. Section One contains copies of slides of the Power Point presentation that summarizes CGR's findings and conclusions. Section Two provides backup documentation that was used to develop our findings and recommendations. CGR also prepared and delivered to the Commissioners a number of large maps for the district that include information such as the location of calls for service, the location of current volunteers, and response areas for existing stations and the proposed new station.

In conclusion, CGR believes that building a new station and renovating its main station now, will position the district to effectively meet demands for its services for the next twenty years.

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SECTION I – POWER POINT PRESENTATION

Study Purpose

To make a twenty year projection for the NEJFD for planning for:

- ❖ **Staffing**
- ❖ **Equipment**
- ❖ **Facilities**

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Projecting Demand – The Components (1)

Demand projections based on:

- ❖ **Development Restrictions – Zoning, etc.**
- ❖ **Population changes**
- ❖ **Housing changes**
- ❖ **Commercial development changes**
- ❖ **Types of call changes**

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Projecting Demand – The Components (2)

❖ Development Restrictions

- Residential development restricted by low-density zoning in most of remaining Webster and Penfield areas
- Commercial/Industrial development restricted to Ridge Rd. and Basket Rd. corridors
- Much land protected by parks or open space restrictions

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Projecting Demand – The Components (3)

❖ Population Projection for NEJFD

- 1990 – 18,474
- 2000 – 22,223 Percent increase: 20.3%
- 2010 – 24,000 Percent increase: 8.0%
- 2020 – 25,000 Percent increase: 4.2%
- 2030 – 26,000 Percent increase: 4.0%

OVERALL Change 2000 to 2030: +16%

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Projecting Demand – The Components (4)

❖ Housing Units Projection for NEJFD

- 1990 – 6,980
- 2000 – 8,715 Percent increase: 24.9%
- 2010 – 9,200 Percent increase: 5.6%
- 2020 – 9,600 Percent increase: 4.3%
- 2030 – 9,900 Percent increase: 3.1%

OVERALL Change 2000 to 2030: +13%

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Projected Demand – The Components (5)

❖ Commercial development

- Three possible areas of growth
 - Xerox complex – Xerox has own fire brigade, assume that continues through 2030
 - Commercial development on Ridge Road – no major plans beyond what is on drawing board – assume changes through 2030 only extend existing development
 - Basket Road corridor – no significant development on the horizon

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Projected Demand – The Components (6)

❖ Types of Calls for Service (1)

- Fire Calls: 1990 = 80
2004 = 81
Growth = 1%
- Rescue Calls: 1990 = 315
2004 = 508
Growth = 61%

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Projected Demand – The Components (7)

❖ Types of Calls for Service (2)

- Other Calls: 1990 = 174
2004 = 536
Growth = 208%
- Total Calls: 1990 = 569
2004 = 1125
Growth = 98%
- Average annual growth rate = 7%/year

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Projected Demand - Calls for Service 2010-2030 (1)

- ❖ Assume growth in calls for service continues at same ratio to population growth as occurred in 1990-2004
 - Calls for service grew 7%/year from 1990 to 2004
 - Population grew 2%/year from 1990 to 2004
 - Calls for service grew 3.5 times faster than population

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Projected Demand - Calls for Service 2010-2030 (2)

❖ Total Calls for Service Projections

<u>YEAR</u>	<u>CFS/Year</u>	<u>CFS/Avg./Day</u>
▪ 1990 actual:	569	1.6
▪ 2004 actual:	1,125	3.1
▪ 2010 proj.:	1,315	3.6
▪ 2020 proj.:	1,515	4.1
▪ 2030 proj.:	1,725	4.7

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Projected Demand – Conclusions

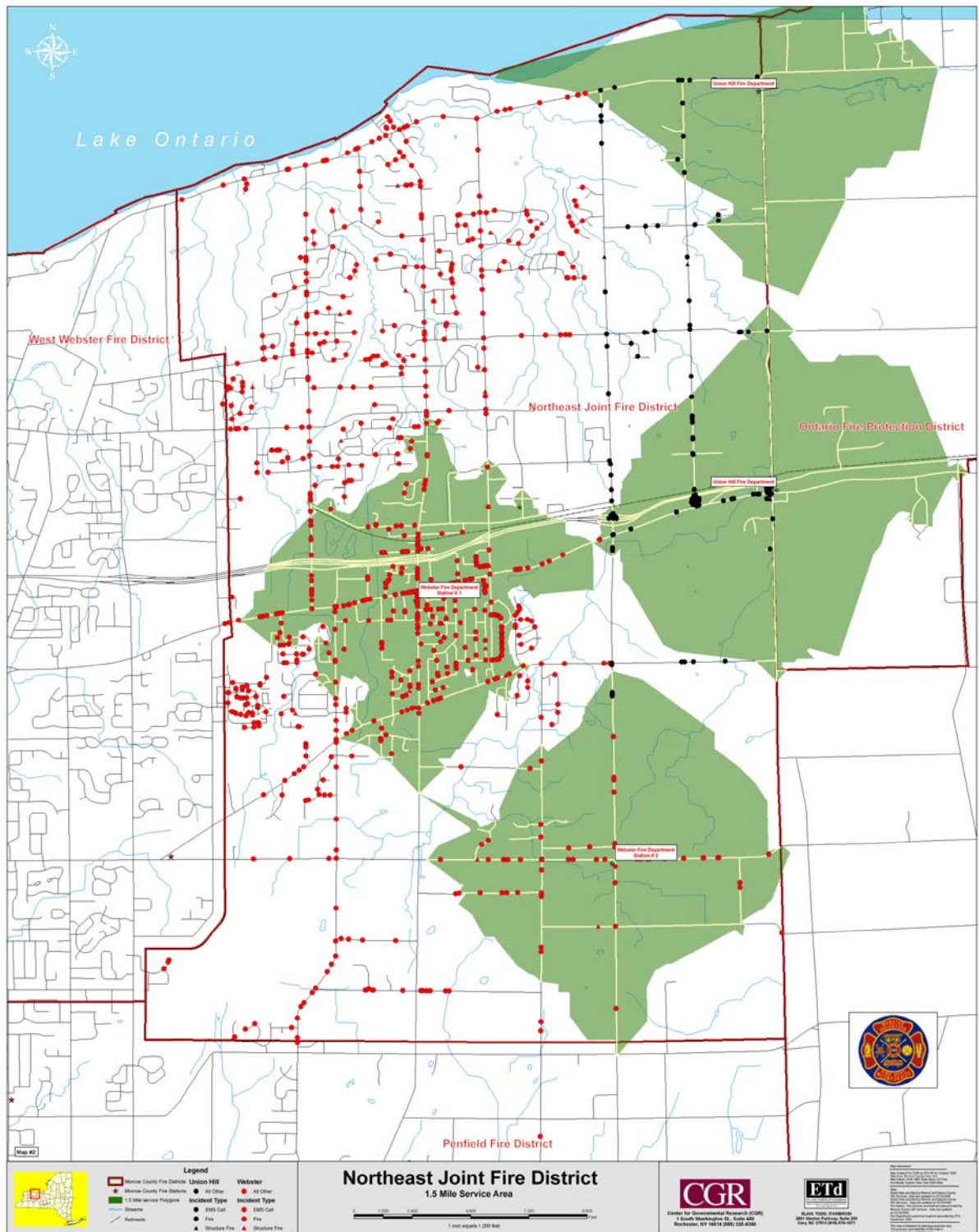
- ❖ **Much slower population and housing growth for next 20 years than last 15**
- ❖ **Housing development will occur mostly north/northeast of the village**
- ❖ **Commercial/industrial growth will be limited**
- ❖ **Demand for fire suppression will remain flat, demand for rescue and other calls will increase faster than population and housing growth**

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Station Coverage in the NEJFD

- ❖ **Per Fire Insurance (I.S.O.) standards, 80% of “built upon” area should be within 1.5 miles of an engine company**
- ❖ **Most of NEJFD area is covered by current 4 stations EXCEPT north/central region – MAP 1**

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New Station # 3 Location (1)

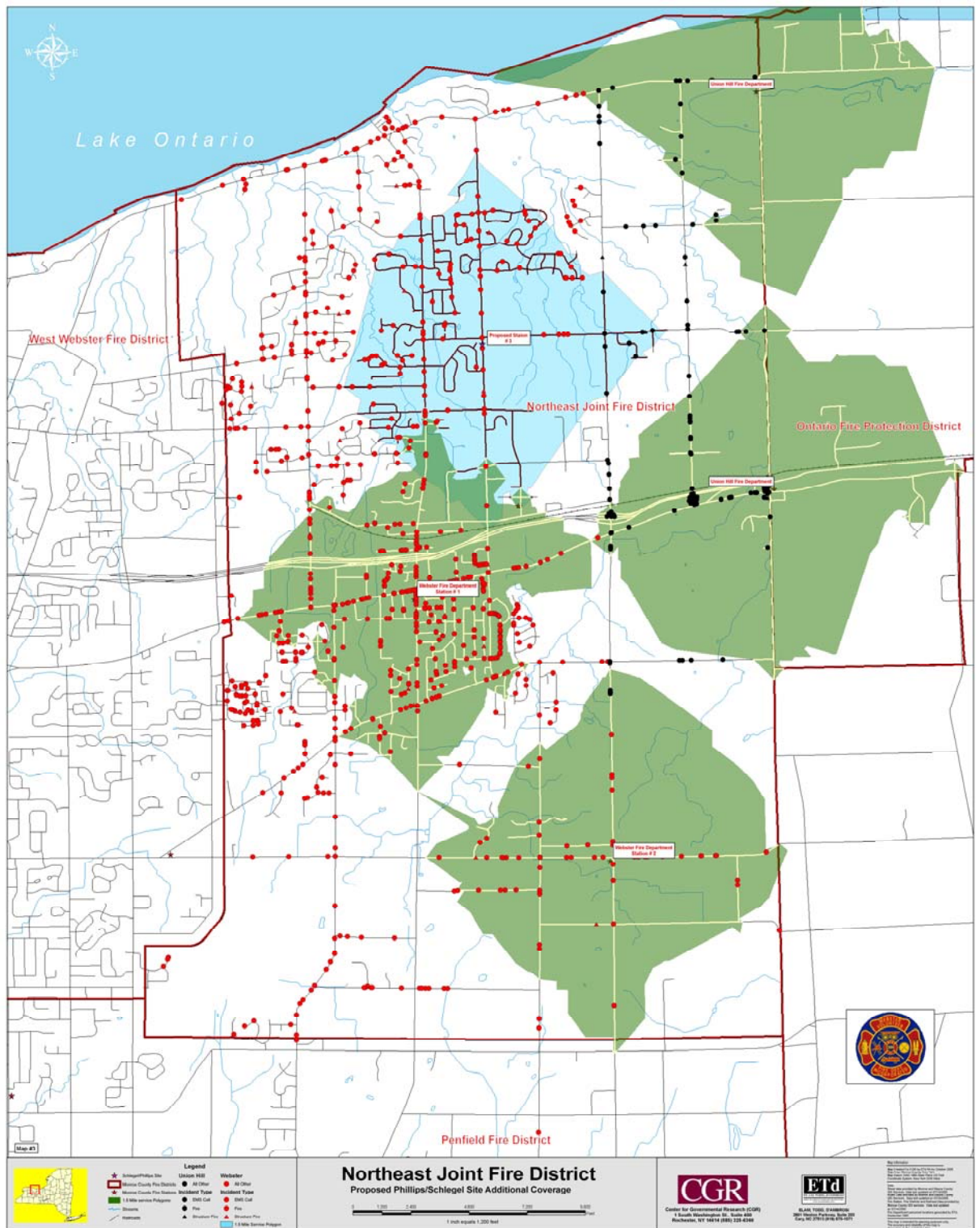
- ❖ **Optimal location for one new station would be in center of the north/central area: Akers Mill Rise and Willowgate Drive**
- ❖ **But – that is middle of high density residential**

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New Station # 3 Location (2)

- ❖ **Good location – intersection of Schlegel Road and Phillips Road**
- ❖ **Within ½ mile of optimal location**
- ❖ **Major east-west and north-south access**
- ❖ **1.5 mile area gives good coverage for area currently outside of coverage areas for existing stations – MAP 2**

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Size of New Station #3

- ❖ Plan to accommodate 1 engine and 1 light rescue truck immediately
- ❖ Size to potentially house another engine or aerial for flexibility
- ❖ Include bunk rooms, training room, lounge/kitchen, rest rooms/showers, radio room, one office, storage space. Total approx. 8,200 S.F.

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Land Area Needed for New Station #3

- ❖ Based on the likely footprint for the new building, plus parking, driveway and landscaping – minimum needed is 1.5 acres.
 - Allowing for buffer space, additional parking, future training grounds, etc. – additional space needed is 3.2 acres.
 - Optional additional needed – 3.3 acres

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New Station # 3 Time Schedule

- ❖ **Depends on Phasing with Station 1 renovation. New station is justified based on demand for service now**
- ❖ **If new station were built first, this could house 4 pieces of equipment during Station 1 renovation**

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Apparatus Requirements (1)

- ❖ **Current Apparatus in NEJFD Stations 1 and 2:**
 - **4 engines**
 - **1 ladder truck**
 - **3 light rescue**
 - **1 heavy rescue**
 - **2 miscellaneous**

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Apparatus Requirements (2)

- ❖ **Current Apparatus in Union Hill Stations 1 and 2:**
 - 3 engines
 - 1 brush truck
 - 1 rescue truck

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Apparatus Requirements (3)

- ❖ **Future requirements**
 - Current number of engines meets current and future I.S.O. pump capacity based on projected growth
 - One ladder should meet I.S.O. minimum requirements based on projected growth

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Apparatus Requirements (4)

❖ Conclusions:

- No net additional equipment needed for the next 20 years unless actual growth exceeds projected growth
- Move 1 engine and 1 light rescue to new Station #3 initially for fast response to the north central area
- If an additional pumper is required in the future, it could be housed at Station #1 or Station #3

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Fire Staffing Requirements (1)

- ❖ Total Number of Volunteers in Webster F.D. has remained stable over 20 years
 - 1984 – 75 members
 - 2004 – 75 members
- ❖ Number of certified firefighters in the department was 58 as of September 2005

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Fire Staffing Requirements (2)

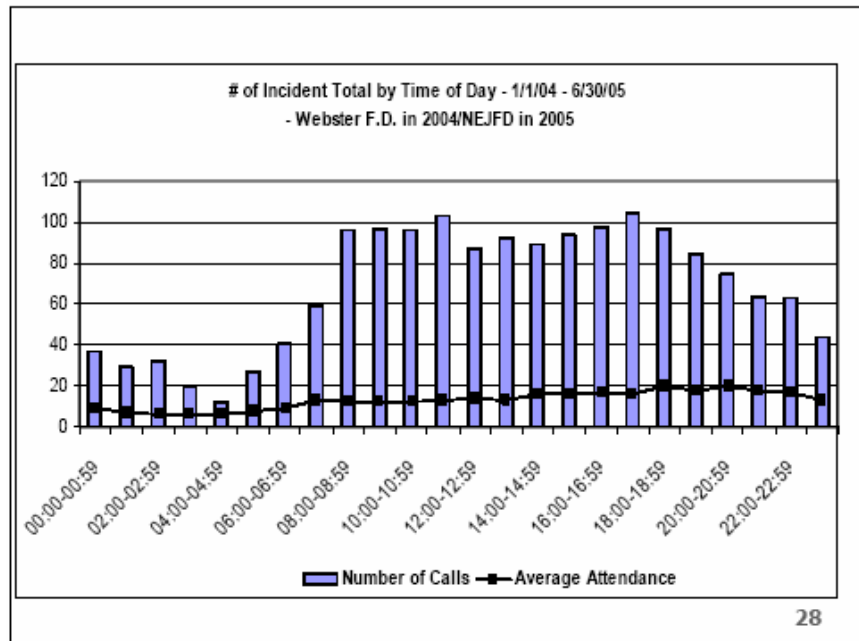
- ❖ **In 7 comparison all volunteer departments in Monroe County, total volunteers grew slightly in last twenty years**
 - **Number reported in 1984 – 650 volunteers**
 - **Number reported in 2004 – 712 volunteers**

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Fire Staffing Requirements (3)

- ❖ **During middle of day, when some departments need paid drivers, NEJFD still has excellent coverage based on attendance – next GRAPH**

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Fire Staffing Requirements (4)

- ❖ To fully staff all fire apparatus at 4 per engine or ladder and 2 per rescue, NEJFD needs 26 volunteers. Currently has 58 certified firefighters.
- ❖ Conclusion – historical trends suggest NEJFD should be able to meet its FIRE staffing needs with volunteers for the foreseeable future

Fire Staffing Requirements (5)

- ❖ However, FIRE calls are expected to stay around 80 per year, out of 1,125 calls in 2004. But TOTAL calls are expected to grow.
- ❖ As TOTAL number of calls continues to increase, at some point the district may see an unacceptable fall-off of response by volunteers

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Administrative/Maintenance Staffing Requirements (1)

- ❖ NEJFD currently:
 - Has one part-time secretary for administrative work, no paid administrator
 - Pays the District Treasurer and Commission Secretary annual stipends
 - Outsources for janitorial, plowing, lawn mowing, HVAC and generator maintenance
 - Uses the village or outside contractors for vehicle maintenance

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Administrative/Maintenance Staffing Requirements (2)

❖ In the 7 comparison volunteer districts:

- One has a full-time paid admin., one a .5 paid administrator, and one has a village employee assigned to administrative duties
- Six have either full or part-time to full-time secretaries
- Most use part-time paid staff for janitorial work
- Most contract out for vehicle maintenance 32

Administrative/Maintenance Staffing Requirements (3)

❖ Considerations for NEJFD

- If NEJFD hires an administrator, that position could assume a range of responsibilities to reduce other costs and run the business
- Building maintenance costs \$22,000/yr. The district could consider alternatives to outsourcing and stay within that budget
- Assume continued outsourcing of vehicle maintenance supplemented by either the village or a part-time mechanic as needed 33

Station Space Options (1)

❖ New Station #3 Considerations

- Should have bay capacity for up to 2 engines and a rescue vehicle
- Have separate bunk accommodations for 8
- Have a dedicated training room
- Include standard items like lounge area, kitchen, radio room, etc.

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Station Space Options (2)

❖ New Station #3 (continued)

- Estimated total space requirement = approx. 8,200 sq. ft.
- ❖ **Total 2006 cost estimate - \$2.3 million plus land acquisition costs**

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Station Space Options (3)

- ❖ **Renovating Station #1 – Option 1**
 - Maintains Station #1 as primary site for equipment and staffing based on call-for-service patterns, future demand and location of volunteers
 - Assume existing south end can be renovated – but keeps all existing bays
 - Assumes primary training room remains at Station #1

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Station Space Options (4)

- ❖ **Renovating Station #1 (continued)**
 - Assumes bunk accommodations for 12
 - Assumes other upgrades noted in RFL report
 - Total renovated space – approx. 1,900 S.F.
 - Total new construction space – approx. 2,500 S.F.
- ❖ **Total 2006 cost estimate - \$ 2.1 million**

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Station Space Options (5)

- ❖ **Renovating Station #1 – Option 2**
 - Renovated one existing full-length double bay saves approx. 1,300 sq. ft. of new construction
 - Renovation construction est. @ \$125/sq. ft. versus new construction @ \$185/sq.ft.
 - Using one double bay would save about \$95,000 versus building new

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Station Space Options (6)

- ❖ **Renovating Station #1 – Option 2 (continued)**
 - Using two double bays would eliminate need for new construction at Station #1
 - Station 3 has two new double bays proposed so there would be no net loss of bays among the buildings
 - Renovating Station # 1 without new construction – estimated 2006 cost = \$1.9 million

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Station Space Options (7)

- ❖ **Station #2 are adequate but some improvements are suggested:**
 - Put in a ready to respond room
 - Put in bunk accommodations for 4

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Future Staffing (1)

- ❖ ***Question*** – will NEJFD need to re-think staffing at some point going forward?
- ❖ ***Answer*** – current trends suggest NEJFD is at a critical junction regarding having sufficient volunteers to meet projected demand for service

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Future Staffing (2)

ISSUES/VARIABLES to Consider

- In NEJFD – number of volunteer firefighters has held steady for 20 years while number of calls has tripled
- In comparable volunteer departments in Monroe County – volunteers have increased. But, some other departments have gone to a career/volunteer mix
- Several of the comparable volunteer departments have paid administrative staff to provide support to volunteers

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Future Staffing (3)

- NEJFD recently started sending mutual aid to the area in NEJFD covered by Union Hill for fire and automatic alarm calls
- Current number of calls/day average 3.1 in 2004. Projected to go up to:
 - 3.6 calls/day in 2010
 - 4.1 calls/day in 2020
 - 4.7 calls/day in 2030

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Future Staffing (4)

- ❖ **Question – will NEJFD have to start with career drivers in the daytime?**
- ❖ **Answer – current response suggests they are not needed at this time**
 - Actual response patterns indicate 11 a.m. and 3 p.m. the average attendance ranges from 13 to 15 volunteers
 - Paid drivers might reduce response time, but would require change in department dispatch procedures

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Future Staffing (5)

- ❖ **Question – if NEJFD needed to hire career staff – when?**
- ❖ **Answer – the decision point is based on NEJFD policy on what is acceptable full complement of firefighters**
 - Counting all 4 engines, the ladder and three rescues, 78 firefighters would give NEJFD maximum I.S.O. credit for full staffing. Current total staffing = 70, Current certified firefighters = 58

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Future Staffing (6)

- ❖ **When would career staff be needed (continued)**
 - NEJFD is getting between 12 – 19 firefighters responding to all calls except between midnight and 6 a.m. During those hours response is covered by pre-defined groups

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Future Staffing (7)

- ❖ **When would career staff be needed (continued)**
 - Comparison volunteer departments have ratios of volunteers to front-line equipment ranging from 11 to 20 – i.e. each piece of front line equipment (engines, ladders, rescue vehicles) has from 11 to 20 volunteers
 - The ratio in 2004 for Webster was 11

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Future Staffing (8)

- Based on a 20% sample of responses to actual fire calls in 2004, the average number of firefighters on the scene was 15.5 (low of 11, high of 25), and the average total number signed in was 23.5 (low of 15, high of 44).
- In every case, there were at least 4 firefighters per piece of apparatus on scene

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Future Staffing (9)

- ❖ Conclusion – Fire calls are adequately covered
- ❖ However, there are concerns about insufficient coverage on initial response to alarms for “other” calls (536 in 2004)
- ❖ That problem needs to be monitored and addressed by the district if adequate coverage is not maintained

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Future Staffing (10)

❖ Cost of career staff

- Range of full-time career starting salaries in Monroe County (excluding the City) is \$29,200 to \$43,200 plus fringes ranging from 15% to 26%
- Assuming the average of \$36,200 plus 21% fringe, one full-time career firefighter would cost NEJFD \$43,800 the first year. Costs of career staff escalate rapidly from there

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Future Staffing (11)

❖ Range of part-time staff in Monroe County is \$10 to \$16/hr.

- Assuming a part-time career person would receive \$15/hr and work 20 hrs/wk for 52 weeks, total cost to NEJFD would be \$15,600 plus 7.65% FICA = \$16,800 per year

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Future Staffing (12)

❖ Cost-Benefit of Volunteer Incentives

- 4 comparison volunteer districts have LOSAP's. All 4 have increased volunteers between 1984 and 2004
- CGR estimates that a LOSAP would cost NEJFD in the range of \$50,000 - \$60,000 per year. This is about the cost of one full-time career firefighter after a couple of years on the job

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Future Staffing (13)

❖ Cost-Benefit of Volunteer Incentives (continued)

- Thus, paying for a LOSAP for 75 volunteers would be cost beneficial if it saved having to hire one full-time career person, or three to four part-time career persons
- However, LOSAP's are typically not recruitment tools – they help with retention

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Future Staffing (14)

❖ Property Tax Incentive

- Currently no comparable department in Monroe County has a property tax incentive program
- Oneida County recently authorized a property tax incentive to reduce county property taxes. Estimated to save each firefighter between \$20-\$30 per year on property taxes.
- Conclusion – marginal benefit for volunteers

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Future Staffing (15)

❖ Additional considerations:

- The number of volunteers in NEJFD has stayed constant despite annual growth in calls of 7%/year since 1990. Clearly, volunteers have been willing to do more per year
- Recent experience is that there is an annual turnover of 4-5 volunteers per year
- Since the NEJFD is not limited by Village requirements, the district could choose to support an increase in the number of volunteers in the department

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Factors to Monitor (1)

- ❖ **Five factors might change that require the NEJFD to consider adding career staff. NEJFD should monitor these factors because changes in any of these trends would be an early warning sign. The factors are:**
 - **The total number of calls for service increases faster than the projected rate**

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Factors to Monitor (2)

- **Overall staffing levels drop because new volunteers do not replenish volunteers leaving**
- **Average attendance to calls declines because the existing volunteers cannot handle increased number of calls**
- **The number of volunteers who are certified drops below some acceptable level to the department**
- **The number of drivers falls below a level that permits the district to respond quickly**

Conclusions (1)

- ❖ Demand for the NEJFD to fight fires is likely to grow only slowly if at all for the next 20 years
- ❖ Demand for other NEJFD services, especially rescue/EMS responses and other calls is likely to continue to grow although at a lower rate than from 1990-2004 as growth in the NEJFD slows

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Conclusions (2)

- ❖ NEJFD should consider building a new Station #3 to provide coverage meeting I.S.O. standards to the north-central area of the district
- ❖ The cost to build the new Station #3 using standard estimates is projected to be around \$2.3 million plus the cost of land

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Conclusions (3)

- ❖ **Station #1 should be renovated, at an estimated cost of between \$1.9 million and \$2.1 million**
- ❖ **The number and type of NEJFD fire apparatus, including that provided by Union Hill, is sufficient to provide coverage for the district for the foreseeable future, and continue with current I.S.O. ratings**

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Conclusions (4)

- ❖ **The data available to CGR suggests that NEJFD could staff its fire and rescue response needs with volunteers but the district will need to be very proactive in attracting and retaining volunteers to meet increasing demand**

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Conclusions (5)

- ❖ **Examples of pro-active steps the district could take include:**
 - Hire administrative staff to reduce administrative burdens on volunteers
 - Review department policies that drive response requirements
 - Develop programs to attract and retain volunteers, including a LOSAP
 - Provide facilities and equipment that encourage active volunteer participation

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Conclusions (6)

- ❖ **The district should monitor the five factors identified to determine if changes are happening that will require hiring either part or full-time career firefighters in the future**

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SECTION II – BACKUP DOCUMENTATION

Methodology

CGR conducted this project for the NEJFD by interviewing many people with knowledge and information that was incorporated into this report. Planning and land use information was obtained from interviews with the following: Penfield – George Weidemer, Pat Morris, Doug Fox and Julie Tolar; Town of Webster – Cathie Thomas, Anthony Cacciani, Gary Kleist, Don Hauza, Kris Tallon and Bob Boutillier; Village of Webster – Dave Galliazo and Billy Southwell. Information about the fire department operations in the NEJFD was obtained from interviews or discussions with the following: Union Hill – Greg Reid and Cris Bowen; Webster Fire Department – Henry Willard, Steve Wright, George Harris, Steve Andrews, John Freckleton and Gary Partridge; Xerox Fire Brigade – Doug Romach. CGR also spoke with staff or had first hand information about each of the comparison districts referenced below, and used information from the Monroe County Fire Bureau and the New York State Office of Fire Prevention and Control to develop both current and historic cross department comparisons.

Population and Housing Projections

CGR developed the population, housing and demographic projections for NEJFD based upon projections developed by the Genesee/Finger Lakes Regional Planning Council (GFLRPC). CGR took historical census information for census tracts and blocks in Penfield and Webster, and, as closely as possible, used the blocks and tracts from the two towns located within the NEJFD boundaries. Projections for NEJFD were based on prorating GFLRPC projections for each town to the areas within the NEJFD boundaries.

TABLE 1 below shows CGR's population projections for NEJFD through 2030. TABLE 2 below shows CGR's housing unit projections. Projections for commercial and industrial development cannot be made in the same way from census data. Therefore, statements in this report about the future are based on CGR's discussion about commercial and industrial development

plans and potential with planning and town leaders from both towns.

TABLE 1
Population Projections for NEJFD through 2030

	Monroe County	Penfield Town	Webster Town	NEJFD* Mid Point	NEJFD Low Estimate	NEJFD High Estimate
1990	713,968	30,219	31,639	18,474		
2000	735,343	34,645	37,926	22,223		
2004	735,177	35,691	40,421	23,300		
2010	749,878	37,030	41,617	24,000	23,700	24,400
2020	758,290	38,044	43,658	25,000	24,400	25,600
2030	766,274	39,316	45,605	26,000	25,200	26,700
Change '90 to '00	3.0%	14.6%	19.9%	20.3%		
Change '00 to '10	2.0%	6.9%	9.7%	8.0%	6.9%	9.7%
Change '10 to '20	1.1%	2.7%	4.9%	4.2%	3.0%	4.9%
Change '20 to '30	1.1%	3.3%	4.5%	4.0%	3.3%	4.3%

Sources: 1990 Census; 2000 Census; 2004 Census estimates; Genesee/Finger Lakes Regional Planning Council projections for 2010, 2020, 2030.

*Estimates for NEJFD are by CGR. Estimated population for 1990 and 2000 based on Census Tracts and Block Groups in NEJFD district. Blended growth rate from Towns of Penfield and Webster is applied to generate NEJFD population projections for 2004-2030.

TABLE 2
Housing Unit Projections for NEJFD through 2030

Estimated Change in Housing Units in NEJFD, 2000 to 2030	
Year	Number of Housing Units
1990	6,980
2000	8,715
2010*	9,200
2020*	9,600
2030*	9,900
Change '90 to '00	24.9%
Change '00 to '10	5.6%
Change '10 to '20	4.3%
Change '20 to '30	3.1%

Sources: 1990 Census, 2000 Census. Estimates for NEJFD 1990 and 2000 population based on Census Tracts and Block Groups in NEJFD district.

*Projections generated by CGR, based on information from Town of Webster and Town of Penfield planning staff.

Calls For Service

Call for service projections are based upon actual call for service information for the Webster Fire Department as reported to the New York State Office of Fire Prevention and Control, as shown in TABLE 3. Union Hill statistics could not be split to indicate changes only for that area covered by the NEJFD. According to Monroe County 911 data, total calls for service within NEJFD that is covered by Union Hill, total calls for service in 2004 were 261. Although the data bases are somewhat different, it is reasonable to assume that calls for service within the entire NEJFD area totaled approximately 1490. For purposes of this report, since it is assumed that NEJFD would continue to contract with Union Hill for the foreseeable future, the key equipment, station and staffing issues would revolve around the area previously covered by the Webster Fire Department. Thus, trends shown in this report are based on trends available for the Webster Fire Department.

TABLE 3
Changes in Types of Calls for Service for the
Webster Fire Department – 1990 to 2004

Type of Call	1990	2001	2002	2003	2004	% Increase 1990 - 2004
Fire Calls	80	47	114	75	81	1.3%
Rescue Calls	315	183	444	498	508	61.3%
Other Calls	174	205	417	639	536	208.0%
TOTAL Calls	569	435	975	1212	1125	97.7%

Source: N.Y. State Office of Fire Prevention and Control Annual Reports

Projections for future demand for calls for service assume that the Xerox fire brigade continues in existence through 2030. If the Xerox fire brigade substantially changes or eliminates its operations, this could significantly change call for service demands on the NEJFD. Xerox fire brigade activity is confidential, thus CGR could not estimate the impact on NEJFD of such changes. However, changed demand on NEJFD would affect one or more of the five factors that CGR recommends NEJFD monitor closely to indicate whether or not changes in staffing are required.

Comparison Departments

CGR identified seven volunteer and two combination career-volunteer departments in Monroe County that are relatively comparable to NEJFD, to use for comparison purposes. No

department exactly matched NEJFD, however, when considering a number of variables in total, these comparison departments were most comparable to NEJFD out of all departments within the county. TABLE 4 shows the variables identified by CGR and shows how NEJFD compares to the nine departments. CGR obtained the information shown in TABLE 4 from a variety of sources as shown in the footnotes, or directly from the departments through conversations with department personnel. For ease of display, TABLE 4 is broken into three sections.

While the departments at the top of TABLE 4 are identified as volunteer departments, to distinguish them from departments that have career as well as volunteer firefighters, it is important to note that several of the volunteer departments have paid staff, either administrative or custodial or both. In some departments, these paid staff become volunteer firefighters as needed to assist with rapid deployment of equipment.

TABLE 4
Comparison Departments in Monroe County

	Population Served ¹		# of Total Incidents reported*		# of Fire Calls***
	1984	2004	1984	2004	2004
<i>Volunteer Departments</i>					
NEJFD	n/a	23,000	n/a	1,134	81
West Webster	15,000	25,000	1,056	2,100	109
Chili	23,000	27,000	438	1,086	49
Spencerport	12,000	20,000	205	878	NR
Pittsford	24,000	27,000	345	875	NR
Penfield	16,000	23,000	399	855	52
Fairport	30,000	45,000	300	757	40
Hilton	8,400	11,800	303	634	16
<i>Career/Volunteer Departments</i>					
Gates-Chili	36,000	52,000	1,260	2,465	80
Lake Shore	10,000	12,000	500	1,186	29

TABLE 4 (continued)
Comparison Departments in Monroe County

	# of Career Firefighters*		# of Volunteer Firefighters*		On-time Response in 6 mins, '86-'02**	LOSAP	Property Tax Credit
	1984	2004	1984	2004			
<i>Volunteer Departments</i>							
NEJFD	0	0	75	76	76.9%		
West Webster	0	0	95	106	67.2%	Y	N
Chili	0	0	129	142	69.7%	Y	N
Spencerport	0	0	90	105	60.4%	N	N
Pittsford	0	0	81	89	56.1%	Y	N
Penfield	0	0	68	75	67.2%	Y	N
Fairport	0	0	115	115	80.6%	N	N
Hilton	0	0	72	80	81.2%	N	N
<i>Career/Volunteer Departments</i>							
Gates-Chili	6	20	136	96	81.7%	Y	N
Lake Shore	0	5	60	45	89.2%	N	N

TABLE 4 (continued)
Comparison Departments in Monroe County

	Comparable Land Area	Pumpers ²	Ladders/ Quints ²	Rescue Vehicles ²	All Other Vehicles ²	Paid Admin. Staff
<i>Volunteer Departments</i>						
NEJFD		4	1	2	4	Y
West Webster		5	1	1	8	Y
Chili	Yes	5	2	1	7	Y
Spencerport	Yes	3	1	1	7	N
Pittsford	Yes	5	2	1	4	Y
Penfield		3	2	2	2	Stipend
Fairport		4	1	1	3	Stipend & Vill.
Hilton	Yes	2	1	1	4	Y
<i>Career/Volunteer Departments</i>						
Gates-Chili		4	3	3	2	Y
Lake Shore		3		2	3	Stipend

*Monroe County Fire Advisory Board survey

**Boston Globe analysis of National Fire Incident Reporting System (NFIRS) data (<http://www.boston.com/news/specials/fires/>)

***2004 Incident data as reported to NYS Department of State Office of Fire Prevention and Control. NR = not on the database

1. CGR estimate from Monroe County Fire Advisory Board Survey

2. Monroe County Fire Bureau Mergency Response Plan data

All other information from CGR telephone survey or CGR estimates

Volunteers and Staffing

CGR developed its observations about current staffing through discussions with members of the NEJFD, and by data collected by NEJFD. The primary source of information about attendance was run sign-in sheets. Average attendance figures were based on summary reports provided by NEJFD.

A major concern raised in interviews during the project was whether or not there were sufficient volunteers to meet the needs of the department. Average attendance figures indicate that the number of volunteers who sign-in should be sufficient. However, to address specific questions about differences between who signs in and who actually goes to the scene, CGR reviewed a 20% sample of sign-in sheets for actual fire calls in 2004, to determine how many volunteers were at the scene compared to how many volunteers signed in. TABLE 5 shows that for the 17 incidents where the information was listed on the sign-in sheets, the number of firefighters on the scene averaged 15.5. The lowest total on the scene was 11. I.S.O. gives maximum credit for having four firefighters on a scene per piece of equipment. TABLE 5 shows that in no case were there less than four firefighters per piece of equipment for each sample incident.

TABLE 5
Equipment and Firefighter Response to a Sample of Fire Calls in 2004 from Stations 1 and 2

DATE	# of Pieces of Equipment	# FF on Scene	Total FF Signed In
18-Apr	3	13	23
5-May	3	17	27
7-May	2	15	33
6-Jun	2	11	16
16-Jun	2	12	14
10-Jul	3	15	16
14-Jul	2	16	21
3-Aug	2	13	19
23-Aug	2	15	44
4-Sep	5	20	27
29-Sep	3	16	22
2-Oct	2	14	22
11-Oct	3	25	33
13-Nov	3	12	15
22-Nov	3	13	23
3-Dec	4	19	23
7-Dec	3	17	22
SUM	47	263	400
AVG	2.8	15.5	23.5

Source: CGR review of sign-in sheets for these dates

TABLE 5 indicates that overall response to fire calls continues to be good within the department. However, the department doesn't have data readily available that shows how quickly volunteers arrive at the stations, when equipment is dispatched and how the equipment is staffed when it leaves the station. Concerns about how many volunteers show up for automatic alarms, how often equipment is dispatched with less than a full complement, etc., could not be measured with data available to CGR. These concerns are real, but the NEJFD needs to develop a consistent means of measuring the types of response issues that are an ongoing concern, in order to clearly understand when, where, at what time of day, etc. staffing issues occur that indicate the need for the department to take steps to address staffing concerns.

Station Size and Space Estimates

CGR engaged the services of Lewis Childs, Architects, to review prior conceptual plans developed in 2001-2002 for the Webster Fire District, to develop building options for the NEJFD to meet building needs for the next twenty years, and to develop general cost estimates for budget purposes. Based upon review of the prior work and discussions with NEJFD personnel about the desired functionality for NEJFD operations, CGR developed estimates for the amount of land needed for a new station (referred to as Station 3), the size of Station 3, and renovation requirements for Station 1 (the main station in the district).

It is important to understand that the cost estimates are based upon the facility program options identified by NEJFD personnel during interviews with CGR and Mr. Childs. The estimates in the following tables are for gross planning purposes only. It is possible that as NEJFD refines its needs and options, the cost estimates noted in these tables could be changed substantially while still meeting the base needs of the department. For example, based upon the facility program requirements identified for Station 3, the suggested building calculated out to be 8,245 sq. feet. This is about twice the size of Station 2, but is based on various assumptions such as the desire to have 4 engine bays, a second meeting/training room for the district (the primary meeting/training room would remain at Station 1), bunk room space for 8 staff (enough to provide for two 4-person crews), and related officer, living and kitchen facilities. Should the NEJFD decide on a different configuration of training/meeting room

needs, both Station 1 and Station 3 building costs would be changed.

TABLE 6 indicates CGR's estimate of the amount of land NEJFD may wish to acquire for a new Station 3. TABLE 7 indicates the various elements to be included in Station 3 that require space (space program elements). TABLE 8 indicates the various elements to be included in the renovated Station 1 that could occur in refurbished/renovated existing space, or that would require new space. Additional improvements to Station 1 are shown based upon conversations with NEJFD personnel.

NEJFD requested that CGR review whether or not re-using existing bays in Station 1 would save overall costs of the project. CGR used the information shown in TABLE 8, and concluded that if two double bays in Station 1 were used as other space (i.e. renovated) then no new additional building would be required at the existing site. Thus, NEJFD could save the difference between new cost (\$185/sq. ft.) versus renovating space cost (\$125/sq. ft.) times the estimated 2,500 sq. feet of new construction identified, plus mark-ups, contingencies, etc. CGR estimates the savings to be (2,500 sq. ft. times \$60/sq.ft. savings plus 33% total for contingencies, etc. = \$200,000 rounded).

TABLE 6
Estimates Amount of Land Needed for New Station 3

Land Needed for Station 3			
ITEM			Sq. Ft.
Building Footprint			7,000
Front Yard			8,000
Parking 25			9,500
Rear drives			3,000
Landscaping			1,000
Circulation			5,000
Sides and buffers			6,200
			39,700
Grossing factor 1.3			51,600
1 acre = 43,560 sq. ft.			1.2 Acres Needed
+ Contingency			.3 Acres
MINIMUM LAND NEEDED			1.5 Acres
Rec. & Festival Yard 63,000 s.f.			1.5 Acres
Additional Parking 9,500 s.f.			0.2 Acres
Future Training Grounds			1.5 Acres
Future Expansion 1.5 A x 1.5	2.3 Acres		2.3 Acres
Drive through to Schlegel			1.0 Acres
TOTAL POTENTIAL DESIRED			8.0 Acres

TABLE 7
Estimated Program Elements and Cost for New Station 3

New Station 3 Estimates - Page 1 of 2			
<u>Space Program</u>			
ITEM			Sq. Ft.
Truck Bays			3,200
Radio Room			216
Lounge			360
Storage			50
Training			430
Capt. Office			120
Toilets/Showers			200
Bunk Rooms (8)			960
Equip. spaces			100
Net Program Spaces			5,636
Grossing Factor @ 1.25			x 1.25
Total New 1 st Floor - Gross Footprint			7,045
New Construction @ \$185/sq. ft.		\$ 1,303,325	
Add 1,200 sq. ft. Loft @ \$125/sq.ft.		\$ 150,000	
TOTAL New Construction - 8,245sq. ft.		\$ 1,453,325	
Selected features			
Used Compressor from HQ	\$7,000		
Furniture 8 Bunk Rooms	\$9,500		
Furnish office (2 sta.)	\$5,000		
Furnish Lounge	\$13,000		
Phone/Data/Link (owned not leased)	\$4,000		
Kitchen	\$10,000		
Oil-Water Separator	\$20,000		
Emergency generator and Tank	\$20,000		
Washing Area Finishes and Drain	\$8,000		
Exterior Lighting	\$7,000		
Radio sta./trans./CPU/mini-tower	\$42,000		
Parking area	\$37,000		
Landscaping	\$25,000		
Security Hardware	\$6,000		
Truck Bay Static Line	\$3,000		
3 Tail Pipe Exhaust	\$25,000		
Gear Racks	\$3,500		
PA System	\$2,000		
Total Features	\$247,000		
Subtotal before contingency	\$1,700,325		
Construction Contingency @ 6%	\$102,020		
TOTAL Basic Hard Costs		\$1,802,345	

New Station 3 Estimates - Page 2 of 2			
Soft Costs			
A/E design basic services @ 11%			
Geotech @ 1%			
Testing services @ 1%			
Construction Management @ 5%			
(over and above basic services)			
Total Soft Costs @ 18%	\$	324,422	
<i>Subtotal before contingencies</i>	\$	2,126,767	
Administrative Contingency @ 5%			
(bidding/owner changes) (1.05)	\$	106,338	
1 Year Time Contingency @ 4%	\$	85,071	
Total Cost Projection Station 3		\$ 2,318,175	

TABLE 8
Estimated Program Elements and Costs for Renovated
Station 1

Station 1 Renovations - Keeping All Bays - Page 1 of 2			
New Program Spaces To be Included			
ITEM			Sq. Ft.
Conference Training Room			500
Bunk Rooms (12)			960
Kitchen			180
Toilet Rooms (assumes no separate room for visitors)			
M			80
W			96
Locker area			30
Showers			
M			72
W			80
Central computer			40
Offices			
3 Chiefs and Secty.			575
Capt + Line			170
desk/chair			
2 visitors			
Files			
bookshelves			
3 work sta.			
			288
Confr. Room			
Office			
2 file cab			
desk/chair			
2 work sta.			
Fit Room			50
New Functional Program Spaces			3,121
Grossing Factor @ 1.4			1,248
TOTAL New Space Estimate			4,369
Existing Space to be re-used			
1 st floor			774
2 nd floor			1,100
Net area that can be re-constructed			1,874
Net area that must be new construction			2,495
SUMMARY			
Existing space to be renovated - 1,874 sq.ft. @ \$125/sq.ft.		\$234,250	
New Construction - 2,500 sq. ft. @ \$185/sq.ft.		\$461,649	
Add Lift		\$30,000	
BASE Construction Cost		\$725,899	

Station 1 Renovations - Keeping All Bays - Page 2 of 2			
Additional Costs for Upgrades, Other Features			
Mechanical Systems	\$70,000		
Bay Roof / General Roof	\$179,000		
Sprinklers	\$110,000		
PA	\$6,000		
Site upgrades	\$30,000		
Kitchen	\$18,000		
Radio room upgrades	\$9,000		
Transmitter(s)	\$50,000		
Security System / Card Access	\$10,000		
Furnish 12 Bunk Rooms	\$14,000		
Phone / Data system (owned, not leased)	\$16,000		
Emergency Generator / Tank	\$60,000		
Asbestos (prev. estimate)	\$5,000		
Oil-Water Separator	\$30,000		
OH Door Operators	\$12,000		
Wash System	\$12,000		
9 Tail Pipe Exhausts	\$70,000		
Epoxy Bay Floor	\$30,000		
Office Furniture	\$20,000		
Conference-Training-Commissioner Furniture	\$20,000		
Window Upgrade	\$9,000		
Gear Racks	\$10,000		
4 Overhead Fill Lines	\$15,000		
9 Static Lines	\$5,000		
Compressor w/ additional drops	\$22,000		
TOTAL of New Features	\$832,000		
New Construction plus Features		\$1,557,899	
Construction Contingency @ 6%		\$93,474	
TOTAL New Construction/Renovation		\$1,651,373	
Soft Costs			
A/E design basic services @ 11% of total	\$181,651		
Geotech @ 1% of base construction	\$7,259		
Testing services @ 1% of total	\$16,514		
Construction management @ 5%	\$82,569		
(over and above basic services)			
Total Soft Costs @ 18%	\$287,992		
Subtotal before contingencies	\$1,939,365		
Administrative Contingency @ 5%			
(bidding/owner changes) (1.05)	\$96,968		
1 Year Time Contingency @ 4%	\$77,575		
Total Cost Projection Station 1 Renovation Project		\$2,113,908	