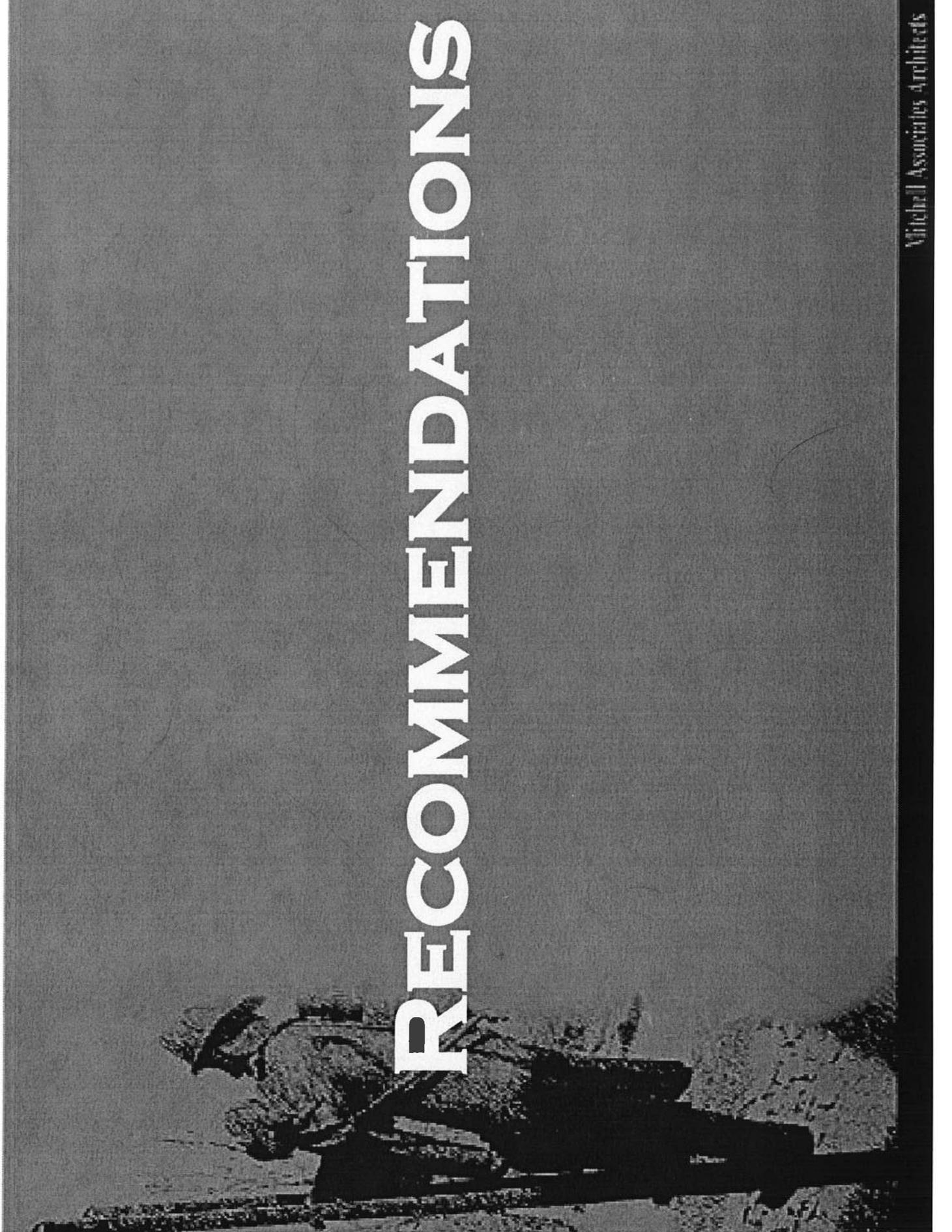


Appendix J:

Excerpts from Fire Station Renovation Study



RECOMMENDATIONS

RECOMMENDATIONS STATION 1

- Abandon
- Move H&L To Station 3 & 5

RECOMMENDATIONS STATION 2

- Abandon
- Move Fire Patrol To Station 6

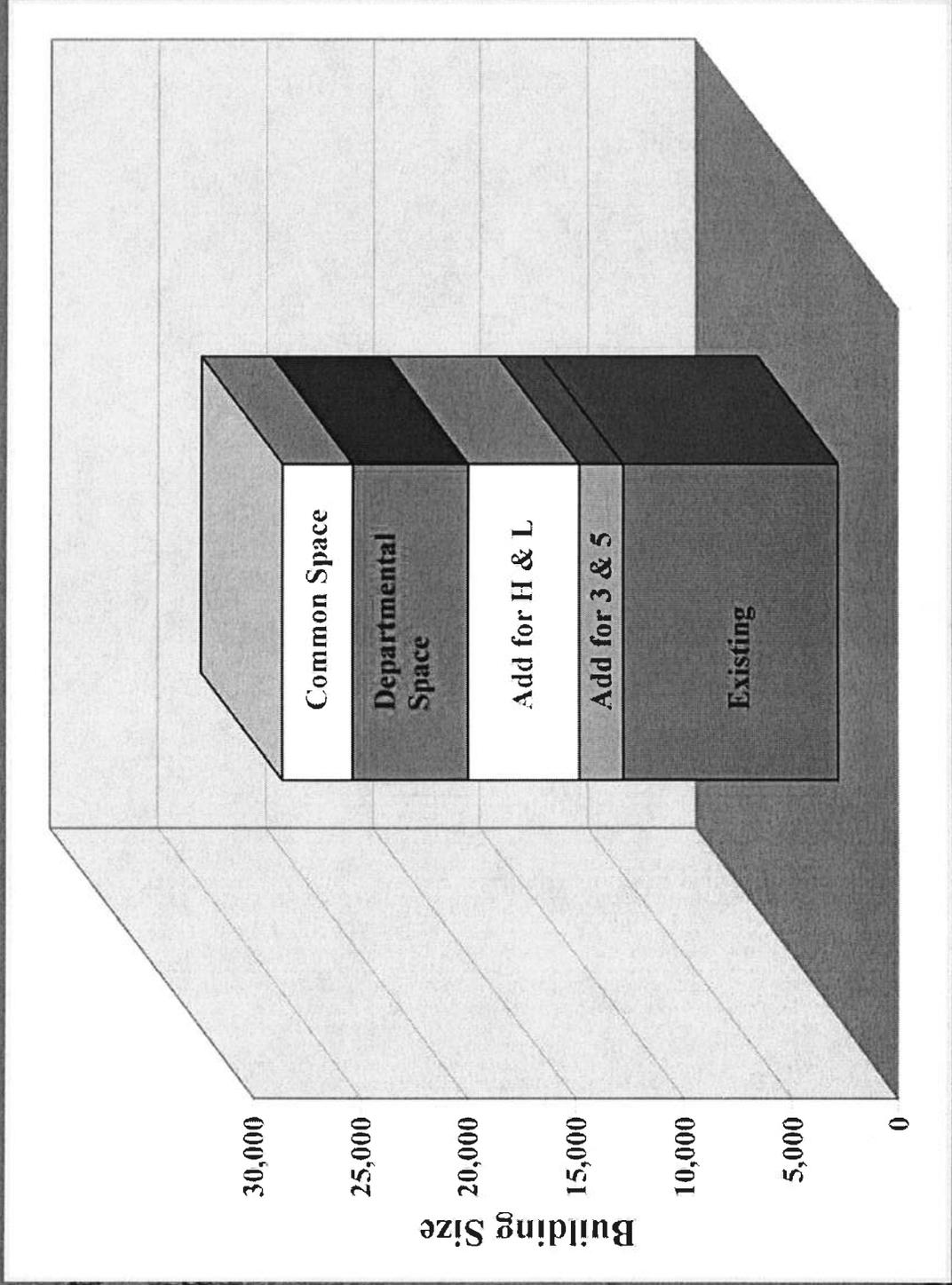
RECOMMENDATIONS

#3, #5, H&L, AND DEPARTMENT

- Renovate 9,980 sq ft to Bring up to Standards
- Build a 3 Story Addition
- Add 5,136 sq ft for H&L
- Add 3,282 sq ft for Common Space
- Add 5,438 sq ft for Department Offices & Spare Truck
- Total Size = 25,871 sq ft

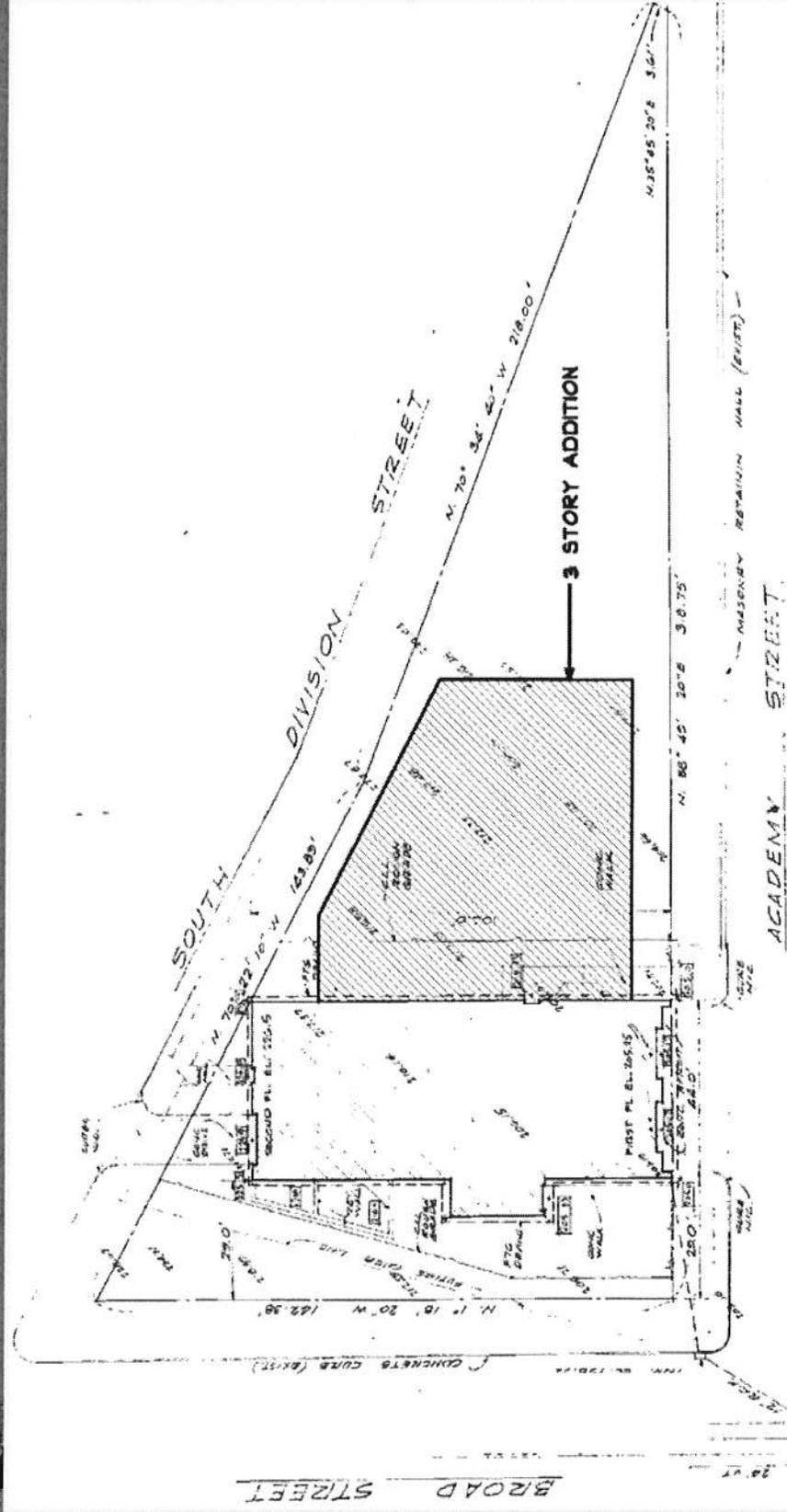
RECOMMENDATIONS

#3, #5, H&L, AND DEPARTMENT



RECOMMENDATIONS

#3, #5, H&L, AND DEPARTMENT



STATIONS 3 & 5 WITH H&L AND DEPARTMENT

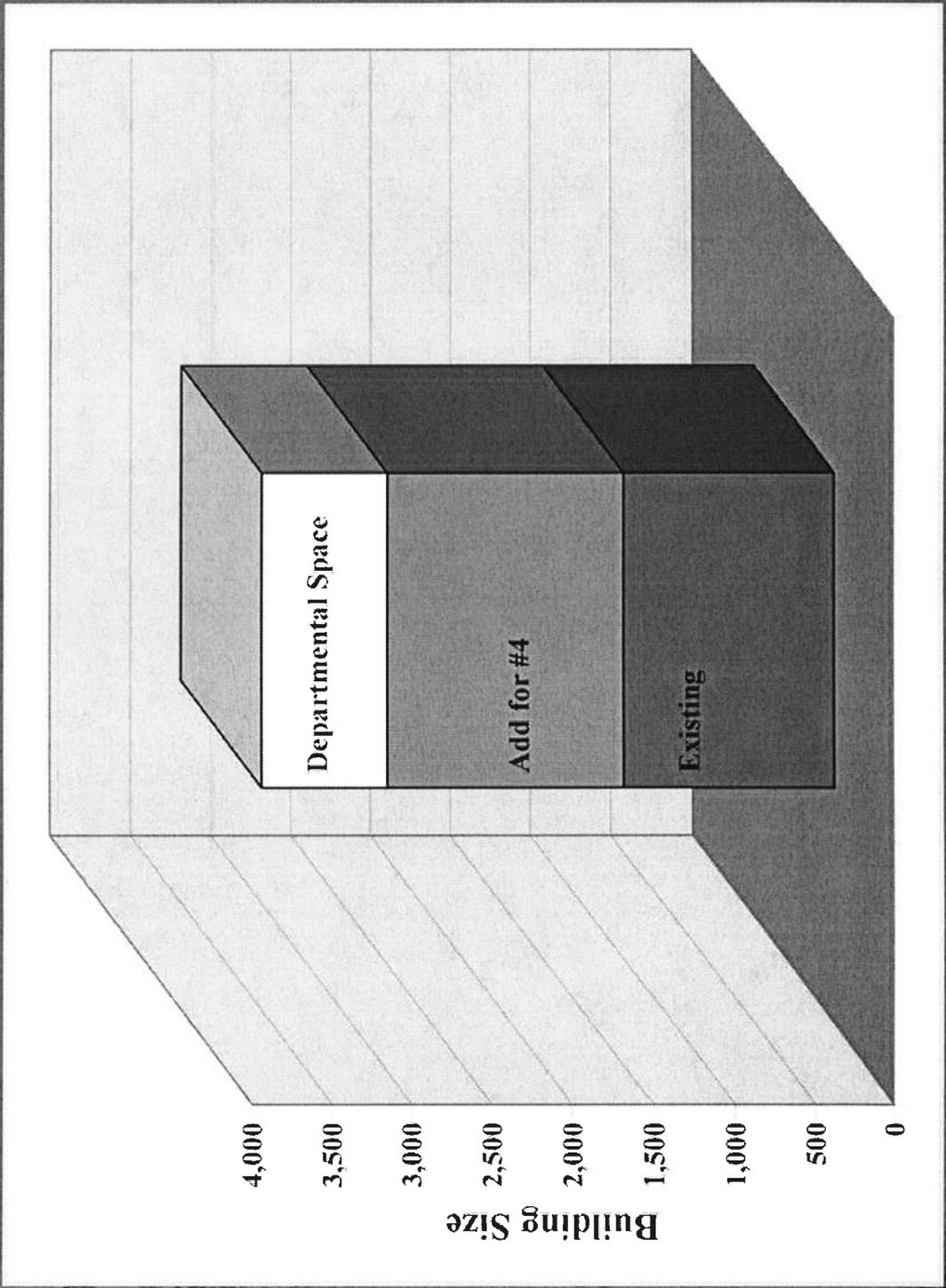
RECOMMENDATIONS

#4 & DEPARTMENT

- **Renovate 1,300 sq ft to Bring up to Standards**
- **Add 1,800 sq ft for Columbian Hose**
- **Negotiate Agreement With Columbian Hose for use of Hall**
- **Provide HC Bathroom and Entry for Meeting Room**

RECOMMENDATION

#4 & DEPARTMENT



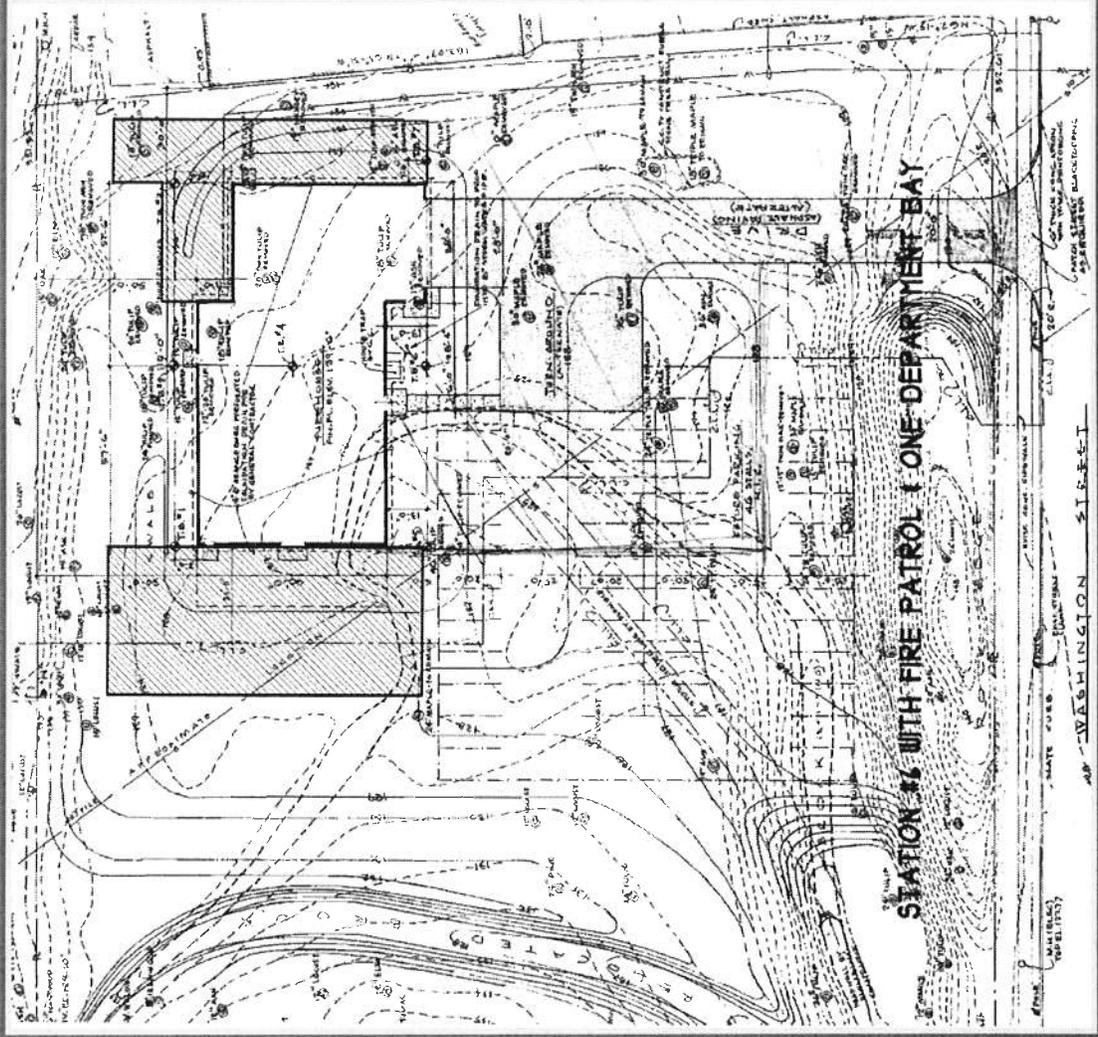
RECOMMENDATIONS

#6, FIRE PATROL & DEPARTMENT

- Renovate 7,835 sq ft to Bring up to Standards
- Add 4,791 sq ft for Centennial Hose
- Add 3,463 sq ft for Fire Patrol
- Add 1,100 sq ft for Department Spare Truck Bay
- Total Size = 17,189 sq ft

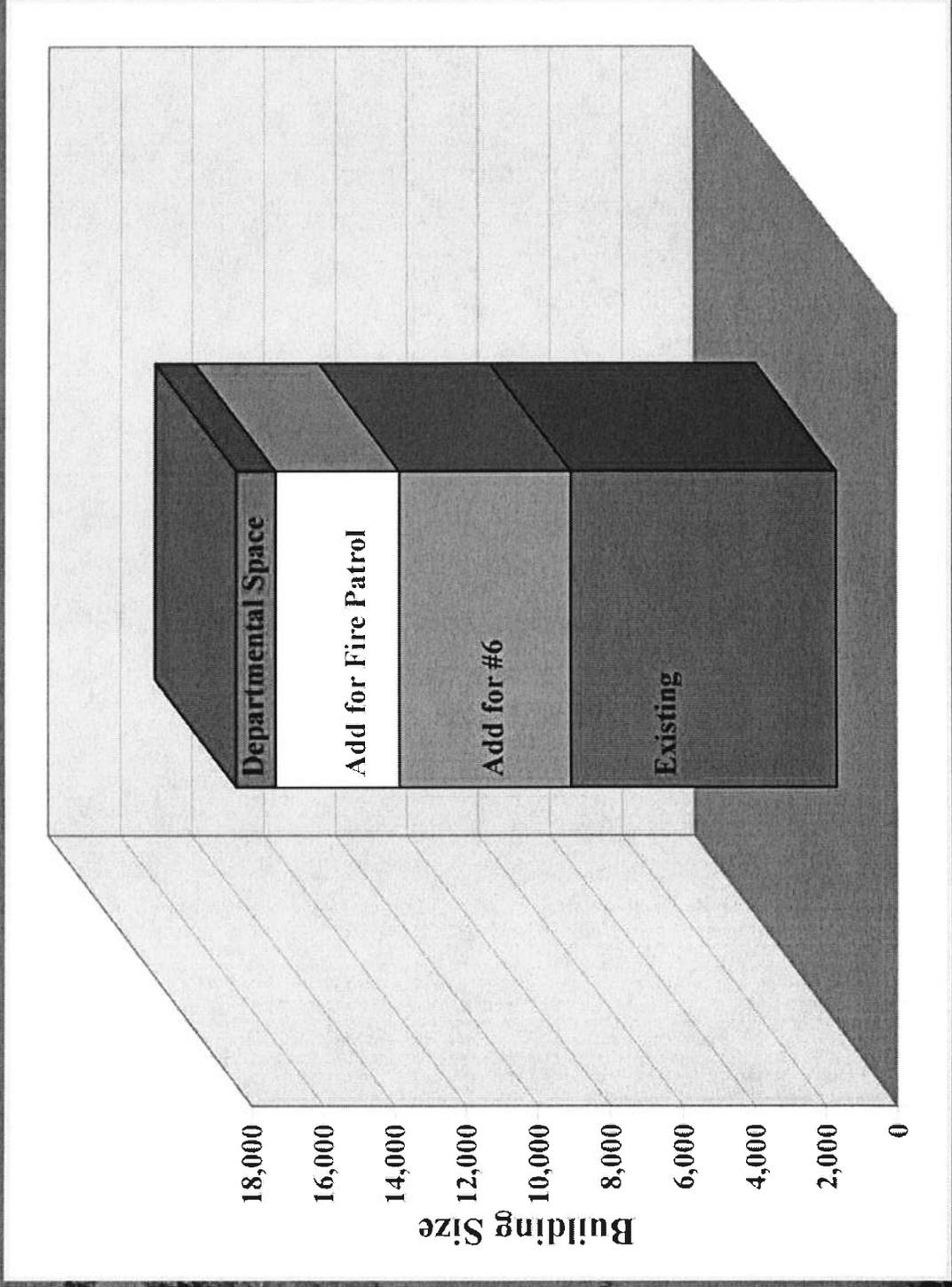
RECOMMENDATIONS

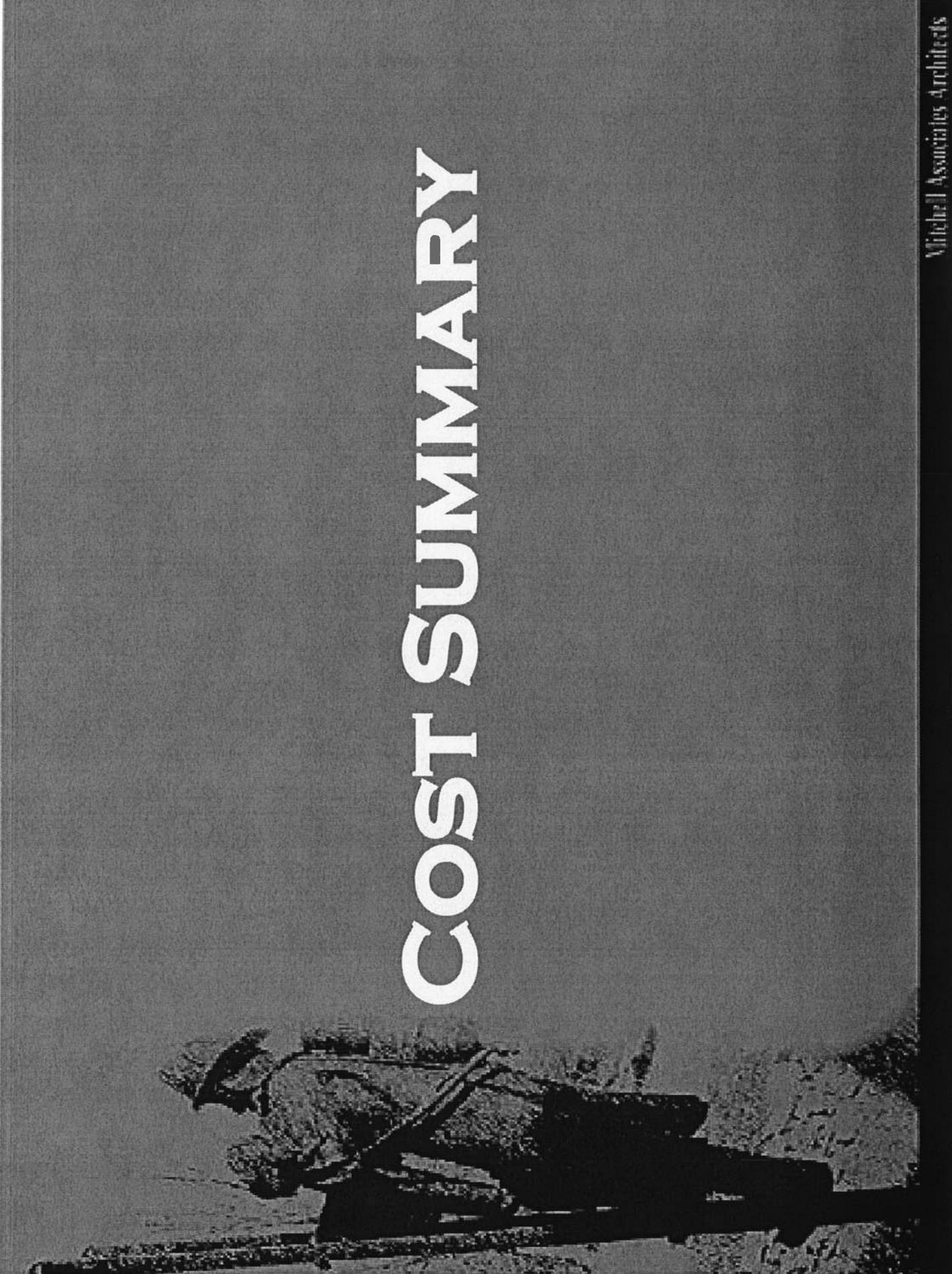
#6, FIRE PATROL & DEPARTMENT



RECOMMENDATIONS

#6, FIRE PATROL & DEPARTMENT





COST SUMMARY

COST SUMMARY

Renovation/Addition Areas and Costs								
	New Construction		Renovation		Total Area	Avg. \$/sq ft		
	Area	\$/sq ft	Area	\$/sq ft			Cost	
Station 3-5, w/ H&L & Department	15,891	\$ 350	\$ 5,561,773	9,980	\$ 150	\$ 1,497,000	25,871	\$ 273
Station 4, w/ Dept. Wide Mtg. Rm.	2,265	\$ 220	\$ 498,223	1,300	\$ 75	\$ 97,500	3,565	\$ 167
Station 6, w/ Fire Patrol & Spare Bay	8,816	\$ 300	\$ 2,644,797	7,385	\$ 75	\$ 553,875	16,201	\$ 197

COST SUMMARY

Renovation/Addition Scheme	
Total Building Area	45,636
Total Construction Cost	\$ 10,853,168
Soft Cost %	20%
Soft Cost	\$ 2,170,634
Hard & Soft Cost	\$ 13,023,802
Project Contingency	10%
Hard, Soft & Contingency	\$ 14,326,182
Land Acquisition	None
Total Project Cost	\$ 14,326,182

COST SUMMARY

New Headquarters Scheme	
Proposed Fire Headquarters Area	36,583
Cost/sq ft	\$ 290
Headquarters Construction Cost	\$ 10,609,070
Soft Costs	\$ 1,710,000
Soft Cost %	16%
Hard & Soft Cost	\$ 12,319,070
Project Contingency	5%
Hard, Soft & Contingency	\$ 12,935,024
Land Aquisition	\$ 2,750,000
Total Project Cost	\$ 15,685,024

Report on the Building and Site Study for the New Fire Headquarters City of Peekskill



**MANITOU
INCORPORATED**



**Mitchell
Associates
Architects**

10/27/2008

Report on the Building and Site Study for the New Fire Headquarters City of Peekskill

Submitted by Mitchell Associates Architects and Manitou, Inc.

In February, 2008 The City of Peekskill (City) retained Mitchell Associates Architects (MA) to undertake a study of the building and site needs of a new fire headquarters for the city. At that time, it was anticipated that the probable headquarters location would be adjacent the current station on Crompond Road. As the project progressed it was determined that it was necessary to examine a number of alternative sites, both from the point of view of the physical characteristics of the sites, and from the point of view of how their location would affect the Fire Department's operations. In April, 2008 the project scope was expanded to add the services of Dr. Charles Jennings of Manitou, Incorporated, to conduct a review of current Peekskill Fire Department station locations and evaluate the potential impact upon response times for the potential sites being evaluated.

In general, this study breaks down into the following tasks:

- **TASK 1 – PROGRAMMING**
 - Program
 - Diagrammatic Floor Plans
 - Diagrammatic Prototype Site Plan

- **TASK 2 – MANITOU ASSESSMENT**
 - Background: The City and Fire Department
 - Problem Overview
 - Response Time Analysis
 - Headquarters Site Recommendations
 - Suggestions for Further Study

- **TASK 3 – EVALUATE SELECTED SITES**
 - Input the site data for five parcels into CAD to allow conceptual site plans to be drawn
 - Provide a conceptual site plan for each of the candidate sites
 - Commentary on the firematic services impact of the parcel choice
 - Commentary on physical limitations to development of the candidate sites
 - Reduce candidate site to two

- **TASK 4 – DEVELOP ADVANCED SCHEMES FOR 2 FINAL PARCEL CHOICES**
 - Site development plans for the two candidate sites
 - Preliminary floor plans for the two candidate sites
 - One rendering of possible appearance
 - One preliminary estimate of probable cost
 - Partial Taking Diagram - Crossroads

TASK 1 – PROGRAMMING

- Program
- Diagrammatic Floor Plans
- Diagrammatic Prototype Site Plan

A series of meetings were held with Fire Department personnel to develop a facility assessment (program) which included descriptions of each space within the proposed headquarters, a diagram of each room, a diagrammatic prototype site plan, and a spreadsheet to determine the size of the building. The building design committee (Committee) met three times with the architect, and numerous times in subcommittee groups. The Committee members included:

- Chief John Pappas
- Assistant Chief Len Varella
- Assistant Chief Bob Fiorio
- Deputy Chief Jim Howard
- Capt Sue Sheridan
- Career Firefighter Kevin Bristol
- Career Firefighter Jim Ferris
- Firefighter Bruce Pappas
- Firefighter John Rose
- Firefighter Scot Rose
- Firefighter Dom Dipierro
- Firefighter Vin Dipierro
- Firefighter Gary Fetzer
- Sal Carano
- John Kelly
- Assistant Mayor, Don Bennett

A draft program was published on March 20, 2008 (appendix "A") that identified a headquarters building that would house the following entities:

- Fire Department Administration
- Columbian Engine
- Columbian Hose
- Washington Engine
- Cortland Hook and Ladder
- Centennial Hose
- Fire Patrol
- Career Firefighters

In addition, space in the apparatus bay was configured to allow for the possible future inclusion of Centennial Hose.

The program defines all of the required spaces for a modern, code compliant facility that meets current needs, with a modest attempt to allow for anticipated future needs. Diagrams of individual rooms were included in the program (appendix "B"). These room diagrams demonstrate that the stated functions for the rooms are met, and define the individual room sizes. The room sizes are summed up in a spreadsheet (appendix "A") that incorporates projected areas for corridors and walls to define the total building size that resulted in the following areas:

Program Topic	Area	Percent
Apparatus Bay	7,048	20%
Firematic Support	3,360	9%
Administration	1,738	5%
Firefighters	3,823	11%
Bunking	1,693	5%
Public Spaces	8,387	23%
Miscellaneous Spaces	984	3%
Vertical Circulation	1,342	4%
Corridors and Walls	7,663	21%

Since it was impossible to determine at the time whether the selected site would allow a two story building or require a three story building, an analysis was made of the additional construction area that would be required for a third story. The result was that a third story would add approximately 860 square feet to the building size.

With this information a diagrammatic prototype site plan was developed to assist with a "first blush" evaluation of potential sites (Appendix "C"). The site plan defined that a site of approximately 2 acres would be required.

The results of Task 1 were presented to the City Council in July, 2008.

TASK 2 – MANITOU ASSESSMENT

- o Background: The City and Fire Department
- o Problem Overview
- o Response Time Analysis
- o Headquarters Site Recommendations

At the time this project began, it was anticipated that the probable headquarters location would be adjacent the current station on Crompond Road. That site has significant shortcomings due to its size and topography, and early in the project discussions began regarding identifying alternative sites that would be more easily built on. The areas of interest became the four parcels that adjoin the intersection of Broad and Park, the current station location at 701 Washington Street, and the original target site on Crompond Road.

In April, 2008 the project scope was expanded to add the services of Dr. Charles Jennings of Manitou Incorporated to conduct a review of current Peekskill Fire Department station locations to evaluate the potential impact upon response times for all potential sites being evaluated. This analysis included the production of maps, review of historic workload, and a documentation of the Department's current and future operating modes.

The program defines all of the required spaces for a modern, code compliant facility that meets current needs, with a modest attempt to allow for anticipated future needs. Diagrams of individual rooms were included in the program (appendix "B"). These room diagrams demonstrate that the stated functions for the rooms are met, and define the individual room sizes. The room sizes are summed up in a spreadsheet (appendix "A") that incorporates projected areas for corridors and walls to define the total building size that resulted in the following areas:

Program Topic	Area	Percent
Apparatus Bay	7,048	20%
Firematic Support	3,360	9%
Administration	1,738	5%
Firefighters	3,823	11%
Bunking	1,693	5%
Public Spaces	8,387	23%
Miscellaneous Spaces	984	3%
Vertical Circulation	1,342	4%
Corridors and Walls	7,663	21%
Total Area	36,038	100%

Since it was impossible to determine at the time whether the selected site would allow a two story building or require a three story building, an analysis was made of the additional construction area that would be required for a third story. The result was that a third story would add approximately 860 square feet to the building size.

With this information a diagrammatic prototype site plan was developed to assist with a "first blush" evaluation of potential sites (Appendix "C"). The site plan defined that a site of approximately 2 acres would be required.

The results of Task 1 were presented to the City Council in July, 2008.

TASK 2 – MANITOU ASSESSMENT

- o Background: The City and Fire Department
- o Problem Overview
- o Response Time Analysis
- o Headquarters Site Recommendations

At the time this project began, it was anticipated that the probable headquarters location would be adjacent the current station on Crompond Road. That site has significant shortcomings due to its size and topography, and early in the project discussions began regarding identifying alternative sites that would be more easily built on. The areas of interest became the four parcels that adjoin the intersection of Broad and Park, the current station location at 701 Washington Street, and the original target site on Crompond Road.

In April, 2008 the project scope was expanded to add the services of Dr. Charles Jennings of Manitou Incorporated to conduct a review of current Peekskill Fire Department station locations to evaluate the potential impact upon response times for all potential sites being evaluated. This analysis included the production of maps, review of historic workload, and a documentation of the Department's current and future operating modes.



Potential changes to deployment and operations were evaluated with Department leadership and City officials, including addition of staff, increased staffing per apparatus, and use of stand-by crews. Other changes considered were the potential for volunteer personnel to respond to the station, rather than to the scene of emergencies, to determine what influence this potential change would have the programming for a new facility, and its affect on the suitability of sites and orientation of the facility.

Each site was listed for its impact on response times, indicating both improvements and increases in response times. Any significant changes in response time were indicated for each site, as appropriate. The orientation of apparatus ingress and egress was considered for each site, in order to minimize disruption to pedestrian and traffic flow, and assure timely response.

The potential to consolidate apparatus from existing facilities as well as reserve apparatus was also considered.

The Manitou report determined that the four parcels adjacent the intersection of Park and Broad are well positioned for proper response. It is appropriate to maintain a response capability at 701 Washington Avenue, but that site is not appropriately located for a main headquarters.

The Manitou report was presented to the City Council in early August, and is included as Appendix "D".

TASK 3 – EVALUATE SELECTED SITES

- Input the site data for five parcels into CAD to allow conceptual site plans to be drawn
- Provide a conceptual site plan for each of the candidate sites
- Commentary on the firematic services impact of the parcel choice
- Commentary on physical limitations to development of the candidate sites
- Reduce the number of candidate sites to two

Using satellite imagery as well as topographic and physical mapping, baseline maps were developed for the four parcels adjacent Park and Broad (Appendix "E"). Using the diagrammatic concept site plan developed in Task 1, preliminary concept site plans were drawn for each of the four sites (Appendix "E"), and presented at a City in Early August. At the Council meeting, the sites were discussed in great detail, and the following conclusions were drawn:

- **Site 1** - The vacant parcel to the South West of the intersection, bounded by Park, Broad and Brown cannot reasonably be adapted for the fire headquarters due to the approximately 18 foot rise in grade going from Park to Brown Street.
- **Site 2** - The potential parcel to the South East of the intersection, bounded by Park, Broad and Brown has a number of problems that were particularly troubling to the Fire Chief and his staff.
 - There is approximately a ten foot rise in grade along Broad Street in front of what would be the front of the station. This would result in a multi-level "first" floor, including having the apparatus bay on several levels.
 - Apparatus exiting on Broad in icy weather could encounter vehicles coming downhill from the South on Broad that would be unable to stop.
 - There is an approximate ten foot drop in elevation from Brown to Park. This would result in a portion of the "first" floor being partially underground at the Brown Street end.

- There would be a steep driveway for responder vehicles that may already be coming downgrade along Brown, coming from the East. This could be problematic during icy conditions.
 - The site probably does not allow for outdoor training or recreation.
- **Site 3** - The parcel to the North East of the intersection, bounded by Park, Broad and Main has a mix of benefits and drawbacks:
- The parcel is large enough to allow outdoor training and recreation
 - The site is not deep enough to allow drive through bays facing onto Broad. As a result, the apparatus bay needs to be divided into two spaces. One for the smaller trucks that would back in from Broad, and one for the two largest trucks that would enter from Park and drive through, exiting on Main.
 - There is a ten foot rise in elevation from park to Main. This will result in a steep exit driveway for the largest apparatus as it approaches Main making for difficult exiting under icy conditions (Appendix "F").
 - At the point of exit onto Main, traffic from East is going downhill, and has a limited site line. This is hazardous and would require installation of a traffic signal to control traffic when fire apparatus exited the station.
 - The ten foot rise would result in a portion of the first floor of the building to be partially underground at Main.
- **Site 4** - The parcel to the North West of the intersection, bounded by Park, Broad and Main is currently the Crossroads shopping Center. From a physical point of view, it is an ideal site:
- This is the only site that is essentially flat.
 - The site allows all fire apparatus to exit onto Broad Street with excellent lines of site.
 - It is easy for the largest returning vehicles to have drive-through access.
 - The site allows the building to be laid out so that the public entrance and public spaces front on Main Street, positively reinforcing the City's urban fabric.
 - The site allows adequate on-site parking.
 - The site allows outdoor training and recreation
- **Site 5** - Subsequent to the August presentations we prepared an evaluation of the parcel adjacent the current station on Crompond Road (Appendix "F"). As the diagrams indicate, it would be extremely difficult to use this parcel. The apparatus bay would need to intrude into South Division Street 35 feet, necessitating the permanent closure of the street, and leaving the houses that currently front on South Division with no frontage. Additionally, the site rises approximately 20 feet from the frontage line to the proposed rear of the building. This would require extremely expensive construction with extensive sheeting and retaining walls if the soils are soft, or blasting if there is rock.

The Council members discussed sites number one through four at length, receiving input from the Fire Department, Building and Planning Departments and the City's Corporation Counsel. The Council agreed that parcels one and two were not tenable. For the reasons outlined above, and it was agreed that further evaluation should occur for sites three and four, the sites fronting on Main, on either side of Broad as Task 4.

• **TASK 4 – DEVELOP ADVANCED SCHEMES FOR 2 FINAL PARCEL CHOICES**

- Site development plans for the two candidate sites
- Preliminary floor plans for the two candidate sites
- Partial Taking Diagram - Crossroads
- One rendering of possible appearance
- One preliminary estimate of probable cost

Site plans were developed for sites three and four (Appendix "F"). The plan for site 3 was driven by the attempt to meet three goals:

- Work with the narrow site strung along Broad.
- Allow a drive through bay while respecting the needs of the adjacent church.
- Work with the ten foot grade change between Park and Main.

A site grading section was developed to determine the degree of difficulty that the ladder truck would face exiting onto Main. Combined with the limited site line looking east along main, and the descending grade for cars coming from the east, exiting for the ladder truck is problematic.

The plan for site 4 was approached to demonstrate a scheme for the redevelopment of the entire block. For this purpose, the scheme shows the Eastern half of the site occupied by the fire station, and the Western half occupied by "Incubator" buildings. The incubator buildings would have commercial and/or retail space on the first floor with two or more floors of residences above. In the event that the City chooses to not develop the entire block, Appendix J has a plan that indicates which of the current business would need to be taken.

A first floor plan was developed for site 3. First and second floor plans were developed for site 4, and were developed in close coordination with the program, satisfying all of its requirements. The program forecast that the total building would require 36,038 square feet of space. The building as designed is 33,752 square feet, a reduction of 6% that was achieved through an efficient layout.

Although not a part of the original project scope, elevations and a rendering were developed for the design for site 4 (Appendix "I"). It is our belief that the design satisfies all of the requirements of the building program, while achieving the intention of reinforcing and helping revitalize downtown, with a building that will be a landmark in the city at least until the end of the century.

A detailed, preliminary estimate of probable construction cost was developed by our estimating consultant, NASCO Construction Services (Appendix "J"). NASCO has been in business for over 30 years and provides in the range of 200 estimates per year. They are located in Armonk, and are very familiar with local construction costs. The anticipated "bricks & mortar" cost will be \$11,200,000, if built in 2009. This cost is \$331 per square foot. Soft costs for this project are budgeted at \$1,800,000. In addition, a construction contingency budget has been set at \$700,000, bringing the total project cost to \$13,700,000, plus land acquisition.