

**City of Charleston
Post Incident Assessment and Review Team**

Phase 1 Report

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Project Overview

The City of Charleston Post Incident Assessment and Enhancement Review Team was established to conduct an independent comprehensive review of the Charleston Fire Department and the overall state of fire protection services in the City of Charleston, following the tragic Sofa Super Store fire that claimed the lives of nine Charleston firefighters.

The project is being conducted in three phases, beginning with an organizational analysis of the Charleston Fire Department. This review was conducted before undertaking the detailed analysis of the Sofa Super Store incident, so that the City and the Fire Department may begin the process of implementing the first set of recommendations, while the incident analysis is being conducted.

The detailed analysis of the Sofa Super Store incident is the second phase of the project. The incident analysis should take three to four months to complete and is expected to produce additional recommendations.

The third phase will be conducted after the incident analysis has been completed. The Review Team will work with the City of Charleston and the Charleston Fire Department to develop a strategic plan for the following 5 to 10 year period, which will take into account all of the recommendations from the first two phases.

This report presents the recommendations that were produced during the first phase of the project. Mayor Joseph P. Riley, Jr. has stated that the City of Charleston is fully committed to bringing the Charleston Fire Department up to the highest possible standard. That vision is incorporated in the recommendations that have been developed by the Review Team.

Introduction

This report presents the findings of the first phase of the Post Incident Assessment and Enhancement Review. The initial review was intended to identify issues that should be addressed without delay and provide recommendations that can be implemented, or at least initiated, while the detailed incident analysis is being conducted. The organizational review was conducted in a short time period and was specifically directed toward identifying areas of concern; the Review Team did not focus on areas where there were no indications of problems or concerns. The result is a series of recommendations that tend to emphasize the areas that should be improved. A more comprehensive analysis, which would have taken much longer to conduct and document, would also focus on strengths and areas where changes are not recommended.

In developing its recommendations, the Review Team looked beyond minimum standards and legally mandated programs and policies. The recommendations are focused on the best practices of the fire service, making references to model programs and national consensus standards, as well as exemplary policies and procedures that have been successfully implemented in other fire departments. The specific needs and circumstances of the City of Charleston were also taken into consideration. The recommendations emphasize firefighter health and safety along with delivering high quality public safety services to the community.

The initial list of recommendations that was delivered to Mayor Riley on August 17, 2007, identified several high priority issues. Most of those recommendations were directly related to fire department operations and firefighter safety and were considered appropriate for implementation without delay. In the short time since that interim report was delivered, action has been taken to implement or to begin the implementation process for most of the initial recommendations. Full implementation of the initial recommendations will require several months to allow for training, purchasing new equipment, and developing detailed policies and procedures.

The preliminary review phase has now been completed and a more extensive list of recommendations has been compiled by the Review Team. All of the additional recommendations support, either directly or indirectly, the overall mission of protecting lives and property in the City of Charleston. The critical issues of public safety and firefighter safety are the highest priorities; however the full set of recommendations addresses a wider range of subjects.

The recommendations presented in this report extend well beyond the concept of "immediate implementation" items. Some of the issues are too complex for "quick fix" solutions and will require further analysis to determine the best course of action. Some of the recommendations involve large expenditures and/or extensive training, which can best be accomplished through a phased implementation process. The Review Team also recognized that the Charleston Fire Department, like any organization, has a limited capacity to absorb and adapt to change within a short time period.

The Review Team has assigned a priority rating to each recommendation, based on its relative urgency as well as the practical feasibility of rapid implementation.

The recommended priority levels are:

- A – should be implemented without delay or as soon as possible
- B – should be implemented after the “A” recommendations (generally within 6 months to 2 years)
- C – should be incorporated into the strategic planning process

The purpose of identifying long term issues in a report that is directed toward “changes and improvements that should be implemented without delay” is to provide an appropriate context for several recommended actions. While the ultimate goals and objectives will not be determined until the strategic planning process is conducted, it is important to begin the process of moving the Fire Department forward. The Review Team has attempted to identify short term actions and realistic objectives that will be consistent with the longer term strategies.

The strategic planning process will take the time needed to establish long term goals, objectives and implementation plans. Some of the resulting projects will involve phased implementation and coordinated efforts over an extended period.

Emergency Incident Operations

The primary emphasis of the interim report, dated August 17, 2007, was directed toward operational changes to address immediate safety concerns. The initial recommendations were intended to have a significant impact on emergency incident operations and they remain as the highest priority recommendations in this report.

The first steps have been taken to implement most of the initial recommendations. Several of those recommendations involve extensive training that will require at least six months to fully implement. The initial recommendations also require the purchase of new equipment and changes to apparatus that will take time to accomplish.

The strategic planning process should address further changes and refinements in emergency operations, including: fire suppression, technical rescue, hazardous materials response, and emergency medical training levels.

Firefighter Health and Safety

The recommendations presented in this report place a strong emphasis on firefighter health and safety. The Review Team paid special attention to the 16 Firefighter Life Safety Initiatives, produced by the National Fallen Firefighters Foundation, and the efforts of several other organizations that are committed to the goal of preventing firefighter fatalities and improving firefighter health and safety.

The leading health and safety experts have identified the need to develop a safety-based organizational culture within fire departments and throughout the fire service. Firefighter safety must become a primary consideration for all fire department activities, on a par with public safety. Safe behaviors should be encouraged through positive reinforcement and recognition, while behaviors that needlessly place firefighters in danger should not be tolerated.

The development of a safety-based culture is a multi-faceted and long-term commitment. The safety culture must be founded on a combination of values, beliefs and behaviors that eventually become organizational expectations. The implementation of a comprehensive occupational safety and health program is an essential foundation for accomplishing this goal.

The recommended scope and basic requirements of a fire department occupational safety and health program are defined in NFPA 1500, *Standard for a Fire Department Occupational Safety and Health Program*. This document is a consensus standard, first adopted in 1987, that is intended to provide a model framework for a comprehensive system of policies, programs and procedures that should be adopted by fire departments. References to numerous other standards and recommended practices are incorporated within NFPA 1500.

The scope of NFPA Standard 1500 includes:

- Fire Department Administration
- Training, Education, and Professional Development
- Fire Apparatus and Equipment
- Driver/Operator Requirements
- Protective Clothing and Protective Equipment
- Emergency Operations
- Facility Safety
- Medical and Physical Requirements
- Member Assistance and Wellness Programs

Very few, if any, fire departments fully comply with every provision of NFPA 1500. The adoption of an implementation plan is an integral component of the standard and most fire departments are continually refining their programs. The standard itself is a work in progress, as sections are revised and additional components are added in every revision cycle.

The Charleston Fire Department should use NFPA 1500 and the documents referenced within it as the foundation of a multi-year plan to address health and safety concerns. The recommendations that were included in the August 17th report addressed the most urgent firefighter safety concerns that were identified by the Review Team. The longer

term recommendation is to develop and implement a comprehensive health and safety program based on NFPA 1500. A health and safety program based on NFPA 1500 would also meet or exceed all of the applicable South Carolina OSHA requirements for fire departments.

Implementation of a Health and Safety Program will be a major effort requiring commitment throughout the Charleston Fire Department. The overall project involves multiple components, such as the development of a written Respiratory Protection Program, an enhanced Physical Fitness Program and a more structured Driver Training Program. The full implementation of incident command, personnel accountability, rapid intervention and other operational procedures are also directly related to the Health and Safety Program.

One of the primary responsibilities of the Fire Department Safety Officer is to ensure that continual progress is made toward full implementation of NFPA 1500. Any and all measures that are implemented in the short term should be consistent with the long term goal, even if they are only incremental steps and interim approaches.

Staffing of Engine and Ladder Companies

The preliminary recommendations, delivered on August 17, 2007, included maintaining a minimum staffing level of at least 3 crew members on-duty on all engine and ladder companies. The current Charleston Fire Department policy is to assign 4 members to each company on each shift; however there are no "extra" members to fill-in for absences. Prior to the implementation of this recommendation, engines operated with at least 3 crew members, while ladder companies occasionally operated with only 2 crew members. Ladder companies were sometimes placed out of service due to staffing shortages.

The 3 crew member minimum recommendation is only an interim step toward a policy of operating every engine and ladder company with at least 4 crew members on-duty, which would comply with NFPA Standard 1710. The interim policy has been implemented through the use of overtime and/or compensatory time as needed to maintain all companies in service with at least 3 crew members. The City of Charleston should consider the costs and benefits of a change in the overtime pay rate to provide a greater incentive for members to work additional hours when they are needed.

The full staffing objective will require additions to the Fire Department roster, estimated at a 15% increase above current levels (The exact numbers will have to be calculated, based on leave experience and expectations.) The policy requiring a minimum of 4 on-duty crew members for each company should be fully implemented by the end of 2009.

Training

The Review Team placed a high priority on providing additional training and education for Charleston Fire Department members. The recommended training initiatives will probably require several years to fully implement. The process should begin with the assignment of additional staff to the Training Division, which should consist of a Battalion Chief, three Captains and one clerical position.

The immediate priorities related to training should be directed toward fully implementing incident command and operational safety procedures (personnel accountability, rapid intervention, firefighter rescue, air management, crew resource management, etc.) throughout the Charleston Fire Department. These programs will remain as the highest priorities until all of the initial recommendations have been fully implemented. Training efforts should also focus on establishing basic performance expectations for engine and ladder companies.

Opportunities for company officer and command officer training should also be prioritized, particularly National Fire Academy classes and programs hosted by other fire departments. The Charleston Fire Department should also take advantage of opportunities to visit other fire departments and observe their established systems, such as the recent visits to Montgomery County, Maryland to observe their command officer training program.

The current plan to acquire property and new training facilities should be deferred until a longer term vision of training facility requirements can be developed. The possibility of establishing a regional training consortium with neighboring fire departments should be seriously considered as a strategic option. In the interim, opportunities to participate in joint training programs with those departments should be pursued, particularly in areas relating to incident command and operational safety.

Any individuals who are hired as recruit firefighters should be integrated into an NFPA Standard 1001-compliant Firefighter II training/certification program as soon as possible. Ensuring that all new members meet the recommended standard of training is a high priority. The training/certification program should be implemented as quickly as possible, in order to fill new and/or vacant positions without excessive delays.

Fire Department Organization and Structure

The interim assignment of two management positions, an Assistant to the Fire Chief and a Fire Department Safety Officer, was recommended by the Review Team to provide immediate staff support to begin implementing the first set of recommendations. These positions were created very quickly and the assigned individuals have already begun to implement the highest priority recommendations.

The strategic planning process should consider additional measures to support the delegation of management and supervisory responsibilities, as well as the addition of support staff to perform essential functions. These measures should have a positive impact on the organization by allowing command-level officers to perform management and supervisory functions, while clerical and support personnel perform routine and time-consuming functions such as recordkeeping and delivering supplies to fire stations. The

effectiveness of the two interim positions should be evaluated within the strategic planning process.

One of the short term recommendations encourages the Fire Chief to begin delegating more responsibilities to individual command officers, while establishing committees to address specific issues:

- An Apparatus and Equipment Committee to focus on fire apparatus and the equipment carried on the apparatus.
- A Uniform and Protective Clothing Committee to develop recommendations on station uniforms and protective clothing ensembles.
- A Health and Safety Committee to develop an overall Health and Safety Program for the Charleston Fire Department.

Delegating these responsibilities immediately will allow for progress to be made in each of these areas and will also set the stage for implementation of the strategic planning recommendations.

Fire Apparatus and Equipment

The highest priority for the Apparatus and Equipment Committee is the acquisition of large diameter supply hose (LDH). In addition to the large diameter hose, fittings and adaptors will need to be acquired, hose beds will need to be reconfigured and LDH intake valves and discharge outlets will need to be installed on each engine. The committee should determine the specific type of LDH that will be purchased, develop a detailed inventory of all of the items that will need to be purchased, and identify the modifications required for each vehicle. The modifications should be coordinated with the development of standard operating procedures and training programs for the new hose configurations.

The Apparatus and Equipment Committee should also seriously consider upgrading the existing 1-1/2 inch attack lines to 1-3/4 inch hose and acquiring appropriate nozzles to take advantage of the increased flow potential. This change could be accomplished at the same time as the LDH transition or as a separate project.

The Apparatus and Equipment Committee should place a priority on reviewing the specifications for the two new engines that are currently on order, working with the manufacturers to ensure they are configured for the new hose sizes and incorporate other changes that the committee believes are appropriate. These two vehicles will be the prototypes for future apparatus that will be designed for the Fire Department's new operating environment. The changes, once they are perfected, should be incorporated into the base specifications for new apparatus.

Uniforms and Protective Clothing

The Uniform and Protective Clothing Committee should develop the specifications for new station uniforms and new protective clothing ensembles.

The uniforms worn by on-duty firefighters should be made of materials that will not increase the severity of a firefighter's injuries if the firefighter is burned. The City of Charleston is preparing to purchase new uniforms for its firefighters, which will meet NFPA Standard 1975, as soon as the committee recommendation is received.

Charleston firefighters take pride in their appearance and the uniform contributes to this feeling of pride. A Uniform Committee has recently been established by the Fire Chief. The new uniforms will be acquired after the Uniform Committee selects the specific style and materials for the uniforms and as quickly as the purchasing process permits a vendor to be selected. All firefighters should be wearing the new uniforms by the end of the first quarter of 2008.

The committee should also develop specifications for new protective clothing ensembles that will to meet the specific needs and preferences of the Charleston Fire Department, in addition to basic NFPA standards. Any new protective clothing that is purchased should meet the new specifications. The Fire Department Safety Officer should determine the quantities of each item that need to be ordered.

Self-Contained Breathing Apparatus

The Health and Safety Committee should conduct a detailed review of self-contained breathing apparatus options as the first step of a program to upgrade and/or replace all existing units. The Department currently uses several different models of self-contained breathing apparatus, with each unit meeting the NFPA and NIOSH standards that were in effect when it was purchased or upgraded. The committee should work toward a goal of providing every firefighter with one standard model SCBA that meets all current standards. In the interim, all existing SCBA units should be inspected and tested, and a policy of maintaining all cylinders "full" should be instituted.

The Health and safety Committee should also develop specifications for the purchase of a standard model thermal imaging camera for each engine and ladder company, along with the replacement of the existing hand lights with more suitable units.

Community Fire Risk Reduction

The Review Team believes that the City of Charleston should place an increased emphasis on reducing the level of fire risk across the community through enhanced fire prevention, code enforcement, community partnerships, increased use of technology and public fire safety education.

The Sofa Super Store was an example of a high risk property that exceeded the fire suppression capabilities of any fire department. Fire prevention and code enforcement measures are intended to reduce the risks of life and property loss by limiting the overall level of fire risk within a community.

The primary responsibilities for both building code and fire code enforcement in Charleston are assigned to the Inspection Division of the Public Service Department. The Fire Department has no direct role in code enforcement or occupancy inspections. The Fire Department does conduct familiarization visits and collect information for pre-fire plans of selected occupancies.

The Inspection Division includes two fire inspector positions. Their efforts, however, are directed toward inspecting new construction projects, changes of owner or occupancy, and investigating fire hazard complaints; they do not conduct any periodic fire code enforcement inspections of existing occupancies. State and local laws do not require fire inspections for existing occupancies.

Additional fire inspector positions should be added to support an expanded fire code enforcement program, including regular inspections of public buildings, businesses and multiple occupancy residential buildings. The short term recommendation is to add one supervisor and two additional fire inspectors to create a fire code enforcement section within the Inspection Division. The fire inspections staff should be further expanded in subsequent years.

In partnership with the Inspection Division, the Fire Department should have a greater role in fire prevention and code enforcement efforts. The short term recommendation is to assign a Fire Department member with expertise in code enforcement as a liaison to the Inspection Division. The primary responsibilities of this position should include reviewing plans and evaluating risks to firefighters in existing occupancies. The Fire Inspections Supervisor should have a matrix reporting relationship to the Fire Chief, as well as the Chief Building and Fire Code Official.

The strategic planning process should consider re-establishing a Fire Prevention Division within the Fire Department, as well as the number of additional fire inspectors needed to expand the occupancy inspection program.

Code Changes

A more proactive effort to reduce fire risk would involve code changes to limit the level of risk in new construction and either retroactive requirements or economic incentives to reduce risk in existing properties. These measures would require approval from the South Carolina Building Code Council and/or the South Carolina Legislature.

The City of Charleston should take an active role in efforts to strengthen the South Carolina State Building and Fire Codes as a means of reducing fire risks. This would include supporting legislation at the state level that will help to reduce fire risk. The various proposals that are being developed should be studied to determine which options are most desirable from the City's perspective. The City should establish coalitions with other jurisdictions and organizations to support legislative proposals.

Several measures have been proposed to require the installation of automatic sprinkler systems in certain types of occupancies and/or reduce the size limitations for buildings that are not required to have sprinklers. The City should support and encourage efforts to require the installation of automatic sprinkler systems. The Charleston Water System has already taken action to eliminate connection fees and reduce stand-by water rates for private fire protection systems. These measures remove a significant disincentive to the installation of sprinkler systems.

Communications

The initial recommendations included discontinuing the use of radio 10-codes in favor of clear text and NIMS-ICS terminology, and assigning tactical radio channels for incidents. These recommendations have already been implemented, along with recommended changes in the standard response assignments to structure fires. The initial recommendations also included maintaining a minimum of two operators on duty at all times in the Fire Communications Center, which will require hiring and training additional personnel.

Several additional changes in dispatch assignments and communications procedures should be developed and implemented in the short term, including standard multiple alarm assignments and procedures for placing reserve apparatus in service. These adjustments can be implemented as they are developed as an ongoing enhancement process.

The Review Team noted that there is significant potential for more extensive and structured use of mutual aid and automatic aid with the surrounding fire departments. The short term objective should be to develop communications interoperability with all surrounding jurisdictions to ensure that multi-agency operations can be effectively coordinated. The strategic planning process should address a higher level of regional coordination and cooperation, including standardized equipment and operating procedures. The options to be considered should include a regional plan to ensure that the closest available units respond to emergency incidents, without regard to jurisdictional boundary lines.

The option of consolidating fire communications systems within a regional emergency dispatch center should also be seriously considered. The development of this type of

system would be a long range project; the City of Charleston should continue to participate in preliminary discussions and planning for this possibility.

In the future, mobile data terminals should be installed in all emergency response vehicles to provide advanced mapping, electronic pre-plans, automatic response/on-scene mechanisms, as well as Automatic Vehicle Location (AVL) systems.

Accreditation

The Charleston Fire Department should work toward achieving accreditation under the program administered by the Center for Public Safety Excellence (CPSE). Accreditation would establish that the organization has met the prevailing standards of the fire service in a wide range of areas. This goal should take at least two to three years to accomplish, assuming that the anticipated progress is made toward implementing all of the recommendations included in this report

RECOMMENDATIONS

The recommendations listed in this section are intended to guide the efforts of the City of Charleston to significantly enhance the Charleston Fire Department and the level of public safety within the community. The Post Incident Assessment and Enhancement Review Team was asked to look beyond compliance with mandatory requirements and voluntary consensus standards and to recommend actions that are consistent with the best practices of the most progressive cities and fire departments in the United States. The ultimate goal is to make the Charleston Fire Department a model for other fire departments. The following recommendations were developed with that vision in mind.

TRAINING RECOMMENDATIONS

TRAINING STAFF

Priority A

- Modify Training Division staffing to consist of one Battalion Chief and three Captains.
 - One Captain should be assigned for coordination of recruit training including recruitment and retention; one should be assigned for coordination of field level training for fire companies; and the third Captain should be assigned to special operations/technical rescue / EMS training
 - Assigned staff members should be certified as NFPA Standard 1041-compliant fire instructors.
- Add an Administrative Assistant (40 hour secretarial position) to the Training Division. The administrative assistant will assist with records management, scheduling, program/policy writing, department-related correspondence, etc.

TRAINING CURRICULUM

Priority A

- Develop a multi-year training plan for the Charleston Fire Department. Prioritize training segments, plan implementation, identify internal and external instructors for each segment, implement the plan, evaluate its effectiveness, and change the plan as needed.
 - Review the training records of all current fire department employees to assess department-wide training needs.
 - Establish a training documentation and records management system.
 - Provide all training through the South Carolina Fire Academy (SCFA) or equivalent accredited organizations and certified professional trainers.
 - The training schedule should include hands-on training, in-station training programs, computer-based opportunities, quick drills for roll call sessions, outside training opportunities, technical rescue certification/recertification training, etc.
 - The training plan should be periodically reviewed and revised. The degree of precision and level of detail incorporated in the training plan should be higher for the near term and more generalized for the longer term. The future details should be added as progress is achieved.

- The training curriculum and plan should include, but not be limited to, the following areas.
 - Fireground Operations
 - Firefighter Safety and Survival
 - Crew Resource Management
 - Accountability
 - Air Management
 - Rapid Intervention
 - Firefighter Rescue
 - National Incident Management System (NIMS)
 - Incident Management Procedures
 - Command and Control of Incidents
 - Strategy and Tactics
 - Thermal Imaging Camera Operations
 - Building Construction for the Fire Service
 - Truck Company Operations
 - Instructor Development
 - Driver/Operator Certification (Engine / Ladder)
 - Company Officer Development
 - Chief Officer Development
 - Fire Department Safety Officer
 - Firefighter Near-Miss Reporting Program
 - Emergency Medical Technician
 - Training on New Equipment and Procedures

TRAINING POLICIES AND GUIDELINES

Priority A

- Develop safety policies and guidelines that detail the requirements for safely conducting practical (hands-on) training, including live fire training (NFPA Standard 1403), extreme temperature training, and requirements for work-rest cycles and rehabilitation during training.
- Develop a policy and philosophy for instructors and students that promotes a culture of training, for both recruit and incumbent firefighters. The culture should emphasize the importance of positive reinforcement and a continual emphasis on safety throughout all aspects of training.
- Establish structured procedure to conduct post-incident reviews in accordance with the recommendations of NFPA Standard 1500.
 - Develop a formal policy to conduct post-incident reviews and to identify and implement the lessons learned from them.
 - Establish a process to provide all members with access to the lessons learned from post-incident analyses (i.e., master data base of lessons learned, electronic bulletin of lessons learned, etc.).

Priority B

- Develop a Performance Standards Evaluation (PSE) program to evaluate company level effectiveness. Each company should be evaluated annually using nationally accepted performance standards such as NFPA Standard 1410.
 - This evaluation process should focus on “company” level performance rather than “individual” performance levels.
 - All evaluations should be conducted in a supportive manner with an established remedial training program for identified deficiencies.

TRAINING DELIVERY

Priority A

- Establish four designated training groups including companies from different areas of the city within each group.
 - The companies assigned to each training group would be scheduled to participate in on-duty training activities together while the remaining companies provide coverage of their response districts. No two bordering companies would be assigned to one group unless suitable coverage is provided by relocating other companies.
 - Agreements may need to be established with surrounding departments to provide coverage in adjacent areas while companies are assigned to training.
- Identify up to three locations that are suitable for multi-company classroom training until a permanent site/training facility is developed.
 - Consideration should be given to location, availability, and equipment needs to support the required training (tables, chairs, AV equipment, internet connectivity, etc.).

MULTI-AGENCY TRAINING CONSORTIUM

Priority A

- Participate in the regional training officer consortium.
 - The purpose of this consortium is to help develop relationships among training officers and support joint training initiatives throughout the Charleston region.
 - Joint training also supports effective mutual aid and large-scale training exercises.

RECRUIT TRAINING

Priority A

- Immediately establish a contract with the South Carolina Fire Academy (SCFA) or an equivalent accredited institution to provide Firefighter II certification training for all members hired within the 2007 calendar year. Members who currently hold Firefighter II certification would not be required to repeat the recommended training.
 - Deliver the training in Charleston with all practical skills being conducted at the Charleston Fire Academy and/or an appropriate facility within the region. The training program should be based on NFPA 1001 requirements applicable to obtain South Carolina IFSAC Firefighter I/II certification including hazardous materials awareness and operations levels.
- Upgrade the current recruit training program to a 14-week curriculum based on NFPA 1001 requirements to achieve Firefighter I and II IFSAC compliant certification program, including hazardous materials awareness and operations levels.
 - All training should be provided by certified fire instructors. If necessary, outside staff could be contracted until a sufficient number of in-house instructors are properly trained and certified.
 - Following implementation of this program, the requirement for applicants to have prerequisite training may be discontinued. All applicants would be required to pass a validated written examination, the Candidate Physical Abilities Test (CPAT), and an oral interview.
- Develop a “temporary” fast-track recruit training program for applicants who currently hold IFSAC Firefighter I & II certifications and hazardous materials awareness/operations level certifications. The certifications must be accepted and validated via the SCFA or an equivalent accredited institution.

Priority B

- Develop a core group of Charleston Fire Department members (representative of all ranks) to become certified instructors capable of providing Firefighter I & II certification level training for future trainees. This training could alternatively be obtained through the SCFA or an equivalent accredited institution and hosted in Charleston.
- Develop a plan to incorporate Emergency Medical Technician (EMT) certification into the recruit training program.

TRAINING RESOURCES

Priority B

- Update fire station libraries and the instructional media library of the Training Division to encompass current fire service policies and practices.
 - Each station should be provided with an inventory of training textbooks and materials, including copies of the items referenced in the reading lists for promotional examinations.

Priority C

- Upgrade the instructional equipment/media of the Training Division to include new computers (including computers for training at satellite facilities), multiple LCD projectors, internet connectivity at all training sites located throughout the city, updated instructional materials, and audio visual media applicable to current practices (i.e., IFSTA library, driver operator training curriculum, NFPA codes and standards subscription service, etc.).
- Begin working on a plan/system to provide web-based training to all stations from a central facility (i.e., video conferencing, electronic blackboard usage, etc.).
- Purchase a flashover simulator to support fire behavior and flashover recognition training. This training would not only support existing field personnel, but also provide critical fire behavior and flashover recognition training for newly hired fire recruits.
 - The cost of this simulator could be offset through grant funding and/or outside usage fees for surrounding departments.
- Secure a multi-acre training site to develop a training facility capable of supporting multi-company training evolutions.
 - Consider the possibility of developing a regional training facility or a partnership with one or more other fire departments to share training facilities. The plan should compliment other training facilities that are available locally.

- Site selection should take into consideration emissions requirements, building height restrictions, water storage and retention requirements, infrastructure requirements for multiple hydrants, paved areas for parking and driver training.
- The facility should include a multi-unit classroom facility with appropriate AV equipment, restroom and shower facilities, video conferencing capabilities, a multi-media production room, and related office space.
- The facility should include a multi-station burn facility suitable for class A and B live fire training.
- Planning should be based on the long-term needs (at least 20 years) of the Charleston Fire Department.
- This facility should be designed by qualified professionals to incorporate a wide range of training scenarios including: residential, commercial, industrial, and high-rise configurations.
 - The facility should include one or more training structures, which should simulate typical design and construction features in Charleston.
 - The plan should include props to train firefighters in vertical ventilation, forcible entry, technical rescue, SCBA confidence training, utility isolation simulators, firefighter safety & survival training, and marine-based scenario training throughout.
- Work with local utility companies to develop realistic training props and scenarios based in situations that are likely to be encountered in Charleston.

ADMINISTRATIVE RECOMMENDATIONS

APPARATUS STAFFING

Priority A

- Operate all engine and ladder companies with a minimum of four crew members on-duty at all times. This level of staffing complies with NFPA Standard 1710, the national standard on staffing and deployment for career fire departments.
 - The Fire Department will have to increase overall staffing by approximately 15 percent to fully implement this recommendation.
 - An interim minimum staffing level of three crew members on-duty at all times should be maintained until the additional firefighters are hired and trained.
 - Continue to use overtime and compensatory time to maintain the interim minimum staffing levels until an adequate number of new hires are available to fill all positions.
 - The initial recommendation should be addressed immediately and full implementation should be achieved by the end of 2009.

Priority B

- Obtain and make use of computer software to monitor personnel assignments for payroll purposes. The data should also be used for staff planning, budget forecasting and to develop historical data for other purposes.

OVERTIME AND COMPENSATORY TIME

Priority A

- Review the City's pay plan, particularly the hourly rates for overtime and compensatory time. A change in the method of calculating overtime pay would mirror best practices and provide a greater incentive for members to work additional shifts when needed.
 - Obtain a legal opinion from the City Attorney's Office, in cooperation with a retained labor attorney, to determine if the existing overtime pay policy can be amended.

OFF-DUTY RESPONSE

Priority B

- Firefighters who respond off-duty to emergency incidents and perform normal job functions should be tracked by the incident commander and properly compensated.
 - Firefighters cannot volunteer to perform similar duties for the department without the time being counted as work hours and included as overtime for pay purposes.
 - Full firefighter staffing (four firefighters on all engines and ladders at all times) as proposed in these recommendations will decrease the need for off-duty response to incidents. This practice should be discontinued at that time.
 - A computer generated form (ledger) should be developed to account for off-duty members working at emergency incidents.

ADMINISTRATIVE CULTURE AND LEADERSHIP

Priority A

- Fire Department management should promote an empowering and inclusive leadership and management style throughout the organization.
 - Provide opportunities for members to take part in the decision making process and contribute to the success of the organization. This also helps to develop a more effective, well-rounded and knowledgeable workforce.
 - The inclusive/empowering style also creates a greater sense of ownership in the organization, which leads to improved morale and more productive employees.
- Standing and ad hoc advisory committees should be established to solicit input and encourage employee participation in decision making about job-related activities, equipment, policies, and procedures.
 - Differences of opinion should be embraced and encouraged to provide realistic and thought-provoking discussion of important job-related activities. Active participation often exposes problem areas and leads to corrective measures that contribute to the success of the organization.
- The Fire Chief should open a bilateral dialogue, to an extent that is consistent with state law and public policy considerations, with the local organizations that represent the interests of firefighters.

ADMINISTRATIVE SUPPORT STAFF

Priority B

- Establish a Human Relations Coordinator position to serve the fire department.
 - This position could reside within the Fire Department as an extension of the Department of Human Resources and Organizational Development to administer and oversee a variety of personnel issues currently being handled by fire officers.
 - Tasks for this new position should include entry-level hiring and in-house promotional processes, recruitment, EEO compliance, disciplinary processes, grievance procedures, and pay and benefits. It is recommended that this be a civilian position filled by an individual with a degree in human resources or industrial psychology, as well as related specific experience with public safety agencies.
 - Because of the multiple tasks associated with this new position, it is recommended that support be provided in the form of an administrative assistant or clerical worker to help with filing, appointment setting, records management, etc.
- Establish a Fire Department Fiscal Manager position to serve the fire department.
 - Although the Finance Department provides a person in their office to oversee the Fire Department budget, it is recommended that the fire department have a full-time, in-house Fire Department Fiscal Manager working daily within the department to oversee financial matters, budget preparation, payroll, and to provide the Fire Chief with responsive and proactive financial guidance and assistance.

EMPLOYEE DISCIPLINE

Priority C

- Explore more flexible disciplinary options, particularly in regard to suspensions without pay.
 - The current policy stipulates “suspended without pay for a period of no less than a biweekly pay period” (two weeks). This practice appears to be derived from the 1998 pay settlement as the only method where salaried employees’ pay could be docked for disciplinary reasons.
- Consider establishing a diverse and inclusive Disciplinary Review Board (DRB) to review reported violations of rules, regulations, policies, or procedures. The DRB would forward recommendations for behavior correction to the Fire Chief for final action.
 - The DRB would be a consulting body. Their recommendations would not be binding to the Fire Chief, as that office still maintains final authority over all disciplinary matters.

CAREER DEVELOPMENT AND SUCCESSION PLANNING

Priority B

- Develop a structured Career Development Program that includes required training, experience, and educational requirements for each rank within the organization.
 - The plan should coincide with posted minimum job requirements and eligibility requirements for each rank within the department.

Priority C

- Develop a succession plan that outlines specific criteria, professional development, training, and certifications required for success in each promotional position. This plan should allow individual firefighters to have knowledge of future requirements and ensure that fire engineers and officers are competent and well-prepared.

PROMOTIONAL TESTING

Priority C

- Establish a formalized promotional testing process, including a written examination and assessment center, for promotion to all ranks up to and including the position of Battalion Chief.
 - Promotional tests should be developed by an accredited outside organization, based on a promotional reading list that is applicable to the position being tested.
 - Develop a promotional training program to support candidate preparation and testing. Conduct a series of workshops to assist candidates with testing and skill development, such as oral tactical sessions, mock interviews, etc.
 - Established promotional criteria should be written and published for all candidates (prior to testing) including: eligibility requirements, testing methods, candidate ranking process, method of notification, and (where possible) dates of eligibility/promotion.
- Establish a formal process for promotion to Assistant Fire Chief, including a resume review and an interview board composed of members from within the fire service, city management, and qualified community representatives.

PERFORMANCE EVALUATIONS

Priority C

- In addition to an annual evaluation for all City employees, new firefighters and newly promoted members should be evaluated monthly for a period of not less than one year from the date of employment or promotion. The monthly evaluations should be job specific and performed by immediate supervisors.
 - A monthly probationary check-off book should be developed for each rank with regards to knowledge, skills, and ability (KSAs) specific for the position.
 - Evaluation criteria should be thoroughly reviewed with member prior to and after rating period to ensure understanding of expectations and job tasks.
- Rating supervisors should keep a running real-time journal on members they are rating. These journals should be used for specific notations when a member performs a “critical task” associated with their new position.

FIREFIGHTER SELECTION

Priority A

- Develop and utilize a multi-phase, validated firefighter recruitment and selection process for entry-level firefighters.
 - Contract with a professional testing organization to develop a validated written entrance exam. Administer the exam as the first step in a firefighter selection process.
 - Incorporate the nationally recognized Candidate Physical Abilities Test (CPAT) program into the selection and hiring process for all new hires. Purchase the equipment and related training/certification materials.
 - A diverse Applicant Interview Board (AIB) made up of various fire department ranks and demographics should be established and incorporated. Proper training of AIB should be accomplished for accuracy in rating candidates.
 - All existing applicants should be contacted and informed of the new testing requirements. They should be notified of their eligibility for testing.
 - All applicants should be provided with a pre-employment packet that outlines the entry-level firefighter recruitment and testing process. The package should also provide general information relating to pay and benefits, work schedules, job descriptions and work duties.
 - The development and monitoring of this recommendation should be supervised by the City's Department of Human Resources and Organizational Development and the City Attorney's Office.

Priority B

- Develop three separate manuals for fire department standard operating procedures: rules and regulations, operational procedures, and administrative procedures.

RECRUITMENT PROGRAM

Priority C

- Develop a concerted recruitment effort to encourage minority and female participation in the entry-level firefighter candidate process, leading to a more diverse and community based fire service.
 - Examine factors that contribute to the lack of female firefighters and the low number of minority firefighter applicants in relation to the demographics of the local population.

- The Fire Department should work closely with the Human Resources and Legal Departments to develop a strategic plan to bolster its diversity to better reflect the community. This should be accomplished while maintaining equal employment opportunities for all applicants. Support and guidance should be obtained from city elected and appointed officials as well as civic, community, and education leaders. The African-American community and other minority groups within the greater Charleston area should be solicited for guidance in developing an effective outreach effort.
- All recruitment procedures should be written in policy form and reevaluated annually for adverse impact and potential modifications.

COMMUNITY INVOLVEMENT

Priority C

- Host a series of town hall meetings, within each council district, to provide an opportunity for citizens to share their perceptions and expectations about the services provided by the Charleston Fire Department.
 - From these meetings, the various ideas, suggestions and recommendations should be used to help shape specific goals and objectives particularly as part of the upcoming Strategic Plan.
 - The Charleston Fire Department should publish an annual report to the Mayor, City Council, and citizens of Charleston. The report should outline accomplishments of the previous year and define goals and objectives for the next year. It would also provide statistical information that could be used to evaluate the effectiveness of the public safety services that are being delivered.

FIRE SERVICE ACCREDITATION

Priority C

- Develop a plan for obtaining accreditation through the Center for Public Safety Excellence (CPSE).
 - The CPSE accreditation process provides a well-defined, internationally recognized system of standards and benchmarks for fire departments and to measure the delivery of fire and emergency services

DISPATCH AND COMMUNICATIONS

Priority A

- Continue to participate in discussions regarding regional public safety communications.
- Develop standard levels of fire department response, based on the severity of an incident, including multiple alarm level dispatches.

REGIONAL COOPERATION

Priority A

- Begin discussions with fire departments in the area surrounding Charleston (Saint Andrews, Johns Island, James Island, North Charleston, Mount Pleasant, and others) regarding enhancements to the current system of mutual aid.

Priority B

- Explore the practicality of automatic mutual aid response with surrounding fire departments. With automatic mutual aid, the closest fire department unit (or units) should respond to an incident, regardless of the jurisdiction where the emergency occurs. Automatic mutual aid provides the customer with the fastest response time to an emergency.
 - Automatic mutual aid works best with consolidated or closely coordinated dispatch, training, standard operating procedures, and a high level of management communications between the participating agencies.

HEALTH AND SAFETY PROGRAM

Priority A

- Establish a Health and Safety Committee to begin development of a comprehensive Occupational Safety and Health Program, based on NFPA Standard 1500.
 - The Health and Safety Committee is responsible for guiding the implementation of policies. The Fire Department Safety Officer is responsible for implementing and administering the policies and related programs.
 - The Health and Safety Committee should regularly review and monitor all of the Fire Department's policies/procedures, rules/regulations and fire ground operations to ensure compliance with fire service safety standards.
 - Emergency scene operations should be critiqued and evaluated in relation to safety as well as effectiveness.

Priority B

- Adopt an operational risk management policy, consistent with the requirements of NFPA Standard 1500.
 - Provide training for all Charleston Fire Department members on the operational risk management policy.

Priority C

- Develop a plan to fully implement the comprehensive Occupational Safety and Health Program.

SCBA – RESPIRATORY PROTECTION PROGRAM

Priority A

- **IMMEDIATELY** implement a change to the policy on SCBA cylinder pressure that increases the minimum storage pressure in a 2216 psi cylinder to 2000 psi or greater. If the pressure is below the specified level, the cylinder must be refilled.
- Purchase RIT Kits (including supplemental air supply) for each battalion unit and ladder company.
- Direct the Health and Safety Committee to develop recommendations, by the end of 2007, for changes and improvements in the type of SCBA to be used by Charleston firefighters. Factors to be considered include:
 - SCBA that comply with the new NFPA standard (NFPA Standard 1981, 2007 edition). This edition of NFPA 1981 provides units with improved voice communication, PASS audibility, durability, flame and heat resistance, and integrated PASS.
 - Acquisition of high pressure 4500 psi/45 minute cylinders for all SCBA units.
 - Communications improvements (voice amplifiers, radio interconnection).
 - Individually issued facepieces for all Fire Department members.
 - Determine whether existing SCBA units can be upgraded or all units will have to be replaced.
 - Evaluate the need to replace existing compressors and fill stations.

Priority B

- Implement the recommended SCBA changes/upgrades by the end of 2008.
- Ensure appropriate records are kept regarding SCBA maintenance.

Priority C

- Direct the Fire Department Safety Officer to develop a comprehensive, written Respiratory Protection Program for the Charleston Fire Department.
- Purchase a mobile breathing air compressor and lighting vehicle to refill SCBA cylinders at incident scenes.

PERSONAL PROTECTIVE CLOTHING

Priority A

- Direct the Uniform and Protective Clothing Committee to develop specifications for new protective clothing ensembles by the end of 2007. The specifications should be based on current NFPA standards and incorporate advances in technology and functionality. Factors to be considered include:
 - Fire fighting gloves and protective hoods that are well-suited for Charleston firefighters – with or without gauntlet, long drape hoods, multiple layer hoods, etc.
 - For protective coats and trousers – the use of extended wristlets and additional padding in compression areas such as knees, elbows, and shoulders.
 - The development and implementation of a company identification system to display the company assignment of each firefighter in a standard manner on the firefighter's helmet.
 - The utilization of materials for the outer shell, thermal barrier, and vapor barrier that provide the highest practical levels of protection.
 - The addition of the firefighter's last name to a removable panel at the bottom of the back of the firefighter's protective coat for identification purposes on the incident scene.
 - The replacement of all worn or damaged personal protective clothing items that do not meet applicable NFPA standards and all protective clothing items that are over seven years old. Advances in materials and technology cannot be taken advantage of unless older obsolete gear is replaced.
 - The provision of leather fire fighting boots in place of rubber boots.
- Provide regular PPE inspections by the Safety Officer.

Priority B

- Implement the personal protective clothing changes recommended by the Uniform and Protective Clothing Committee for all purchases of personal protective equipment.
- Maintain an inventory of spare personal protective clothing to facilitate rapid replacement of damaged items and allow sizing flexibility.

- Provide a means for firefighters to launder PPE as needed. PPE laundering may be done through a service provider or with appropriate laundering equipment supplied at the fire department.
- Ensure appropriate records are kept regarding PPE inspections, maintenance, and cleaning (per NFPA Standard 1851).

FIREFIGHTER UNIFORMS

Priority A

- Direct the Uniform and Protective Clothing Committee to make recommendations on the type and style of uniforms to be purchased by the end of November 2007. Uniforms should comply with current NFPA 1975 requirements.
- Implement the new firefighter uniforms (purchase and delivery) by March 31, 2008.

RESOURCE AND LOGISTICS RECOMMENDATIONS

FIRE APPARATUS

Priority A

- Purchase large diameter supply hose (LDH) for all front line and reserve engines. The Apparatus and Equipment Committee should make specific recommendations on hose size (4-inch or 5-inch), materials (plastic or woven jacket), couplings (Storz or threaded), required fittings and adapters, and how much LDH will be carried by each engine company.
 - Provide adaptors and fittings needed to utilize LDH, including gated intake relief valves, intake adapters, discharge adapters, spanner wrenches, and equipment that will allow LDH connectivity with other fire departments in the region.
 - Provide hose lines and allied equipment needed to supply water to ladder companies through LDH.
 - Install hose bed dividers to accommodate LDH supply lines and attack lines on existing apparatus.
 - In the event that the Charleston Fire Department chooses to utilize a forward hose lay for supply lines, purchase hydrant valves (Humat or similar) for all front line and reserve engine companies.
- The Apparatus and Equipment Committee should also develop a plan for attack lines, including a recommendation the number and lengths of pre-connected lines, whether the 1-1/2 inch attack lines should be upgraded to 1-3/4 inch hose, and the types of nozzles to be used (fixed gallonage or automatic).
- Install jump lines (using 100 or 150 feet of 1-1/2 inch hose) on each existing engine company apparatus. Determine the ability to add the jump lines to front bumpers or other locations on the existing apparatus to facilitate easy deployment and repacking.
- Add larger unit identifiers on fire apparatus to allow the IC to determine the unit identification of staged apparatus or apparatus on the scene of an emergency. Work with regional fire departments to develop a standard numbering system for all fire department vehicles.
- Increase the visibility of Charleston fire apparatus to drivers approaching from the rear of the apparatus by adding retroreflective materials and directional arrow striping.

- Direct the Apparatus and Equipment Committee to review the specifications for apparatus currently on order and recommend changes to improve their effectiveness. Two pumpers are currently on order and changes should be made prior to their production. Suggested changes to the apparatus on order (and to future apparatus) include, but are not limited to, the following:
 - Configure hose beds, intakes, and discharges for LDH.
 - Provide additional pre-connected attack lines.
 - Provide a front-mounted suction intake with pre-connected soft suction line
 - Provide a 150-foot 1-1/2 inch jump line or trash line in a well on the front bumper to be used for vehicle and rubbish fires.
 - Install only one booster line or remove both booster lines.
 - Install a fixed, pre-plumbed monitor on the top of the apparatus, in addition to the existing portable monitors.
 - Install 12 volt high intensity emergency scene lighting.
 - Install air conditioning in the cabs.
 - Provide communications headsets for all crew members.
 - Install amber emergency lighting for the traffic-blocking mode.

Priority B

- Direct the Apparatus and Equipment Committee to evaluate the acquisition of foam (Class A and/or B) equipment for new and existing apparatus.

Priority C

- Direct the Apparatus and Equipment Committee to address the need for additional changes to the configuration, outfitting, and equipment carried on existing fire apparatus.
 - Consider the purchase and installation of communications headsets in all existing front line apparatus to provide hearing protection and allow all firefighters to hear tactical radio traffic while responding to an incident.
 - Evaluate the cost and practicality of making enhancements to existing apparatus in line with the recommended enhancements to new apparatus such as front suction intakes, air conditioning, etc.

- Provide continuing education for fire apparatus maintenance personnel, membership in related professional organizations, and assistance in attaining certification as Emergency Vehicle Technicians (EVT).
- Ensure appropriate records are kept regarding apparatus maintenance.

TOOLS AND EQUIPMENT

Priority A

- Provide Thermal Imaging Cameras for all engine and ladder companies. For standardization in training, utilize the same make and model TIC for all apparatus. Provide training for all firefighters, company officers, and command officers in their use.
- Provide additional/upgraded extrication equipment for the ladder companies and additional combination tools for engine companies in areas with long response times for ladder company service.
- Provide positive pressure ventilation fans for ladder companies.
- Purchase and supply lapel microphones and radio straps for each portable radio. These microphones facilitate communication and some models include channel selectors and mayday buttons.
- Provide individually issued flashlights for firefighters that are better suited for the fire fighting environment than those currently issued.
- Purchase command vests (Incident Commander, Incident Safety Officer, (4) Division Officer, Staging Supervisor, etc.) for each battalion.
- Purchase ANSI approved highway safety vests for each riding position on all engines, ladders, and command vehicles.

Priority B

- Direct the Apparatus and Equipment Committee to evaluate the equipment carried by ladder companies and make recommendations on upgrades, replacements, or additional equipment to improve ladder company capabilities.

Priority C

- Direct the Apparatus and Equipment Committee to develop recommendations on technical rescue and extrication equipment and propose an implementation plan. Consider the need for rescue-pumpers and/or a heavy rescue vehicle.

LOGISTICS STAFFING

Priority B

- Establish a position for a staff assignment to Logistics and Supply to maintain inventories, keep records, and relieve the Battalion Chiefs of supply and equipment delivery responsibilities.

FIRE DEPARTMENT FACILITIES

Priority C

- Provide source capture diesel exhaust extraction systems in all fire stations for all apparatus.
- Install fire sprinkler and alarm systems in all new fire stations.
- Over time, retrofit installation of fire sprinklers in all existing fire stations.
- Provide storage areas for PPE in all fire stations that allow air drying, separation from personal items, uniforms, and bedding, and are out of the path of sunlight.
- Conduct a comprehensive multi-disciplinary evaluation of the location, condition, and functionality of all existing fire stations.

COMMUNITY FIRE RISK REDUCTION RECOMMENDATIONS

FIRE AND BUILDING CODE ENFORCEMENT

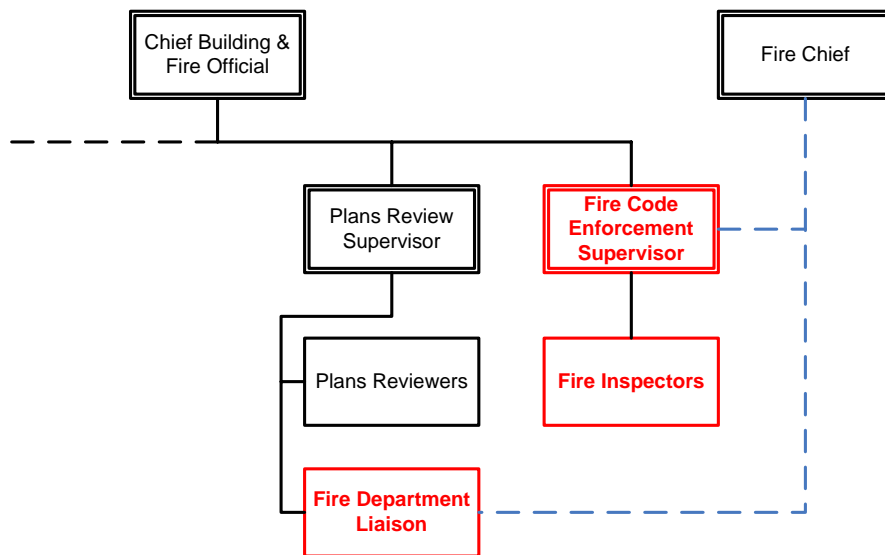
Priority A

- The City of Charleston should:
 - Take an active role in efforts to strengthen the South Carolina State Building and Fire Codes as a means of reducing fire risks.
 - Support and encourage efforts to require the installation of automatic sprinkler systems in all new residential and commercial construction.
 - Support and encourage efforts to require the installation of automatic sprinkler systems in existing occupancies with excessive fire risk.
 - Support tax incentives encouraging the installation of fire sprinklers in existing occupancies.
 - Urge the South Carolina Legislature to allow communities to adopt local amendments to the building and fire codes that are more stringent than the state base (minimum) code.
- The Inspection Division should:
 - Begin cross-training all current city fire inspectors and building inspectors.
 - Ensure that the City of Charleston code enforcement policies are in compliance with the State Building and Fire Codes.
 - Revise policies, procedures, and job descriptions, as well as develop a personnel evaluation system for current fire inspections staff.

Priority B

- Develop and implement an interim plan to upgrade the Fire Code Enforcement program.
 - Create a new position for a fire code enforcement supervisor in the Inspection Division and hire a qualified individual to fill this position. This position should report directly to the Chief Building and Fire Official, with a matrix reporting relationship to the Fire Chief.
 - Assign a firefighter with knowledge of plans review techniques (or a qualified individual with equivalent knowledge of fire department operations) as a full-time liaison to the Inspection Division. This individual should review plans for fire code compliance, with an emphasis on firefighter safety and fire department operational concerns. Pre-fire plan information obtained through plans review should be transferred to the Fire Department.

- Create and fill at least 2 additional fire inspector positions. All fire inspectors should be certified to the NFPA Standard 1031 Inspector II level (at a minimum) and be well versed in the South Carolina State Fire Code (IFC). Continuing education, as well as membership and active participation in professional associations, should be encouraged. Attendance at such institutions as the South Carolina Fire Academy, an equivalent accredited institution, or the National Fire Academy should be encouraged.
- Establish a regular inspection schedule for public assembly, educational and high risk residential occupancies.
- The Charleston Fire Department should revise procedures for pre-fire planning to ensure that plans for target hazards are complete and up-to-date and that the information is immediately available to the incident commander, if a fire occurs at a pre-planned location.
- The Charleston Fire Department should develop a working partnership with the Chamber of Commerce to promote fire protection and safety within the business community.
 - Participate in the Chamber's continuing current emergency management project entitled "Recovering from Disasters".
 - Fire Department members should attend and speak at regular Chamber meetings about various fire prevention issues, including the reasons for fire inspections and benefits of fire safety.



Proposed Organization Chart

Priority C

- Develop a strategic plan for Fire Prevention and Public Fire Safety Education.
 - Determine the most effective structure for a partnership between the Inspection Division and the Fire Department. Consider re-establishment of a Fire Prevention and Public Education Section within the Charleston Fire Department.
 - Develop a public fire safety education program, incorporating civilian assistance and national initiatives such as Fire Corps.
 - Develop a regular fire code enforcement inspection schedule for existing occupancies, based on occupancy and risk characteristics.
 - Create and fill additional fire inspector positions to meet the inspection frequency objectives. All fire inspectors should fully understand the principles of firefighter safety and the benefits of pre-fire planning; they should immediately communicate any urgent observations related to firefighter safety to the Fire Department.
 - Provide basic Fire Code training for all firefighters and officers. Any obvious code violations observed during pre-fire planning visits should be reported to the Fire Code Enforcement Supervisor.
 - Make greater use of the City's existing GIS capability to support fire code enforcement and pre-fire planning, including mobile data terminals to transmit pre-fire plan information directly to responding units.
- Regular occupancy inspections should focus on identifying hazards and ensuring that all fire protection systems (sprinkler systems, fire extinguishers, smoke detectors and alarm systems) have been properly checked and maintained. Required exits must also be inspected to ensure they can be used in an emergency.
- Proposed inspection frequency objectives:
 - All public assembly occupancies, schools, hotels, multiple dwellings (three families or more) and other high risk occupancies should be inspected annually
 - All mercantile and business occupancies should be inspected at least once every three years
 - All vacant and abandoned buildings should be closely monitored
 - All other occupancies should be inspected on a regular schedule
 - Single family residences should be inspected upon request