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FIRE
CONSTRUCTION INSPECTIONS

SEPTEMBER 15, 2015

MAYOR AND CITY COUNCIL

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The City of
OKLAHOMA CITY
Office of the City Auditor

Executive Summary

Audit Report 15-02

September 15, 2015

The Mayor and City Council:

The Office of the City Auditor has audited the timeliness of inspections for fire code compliance in new construction including buildings and fire suppression systems such as sprinklers, alarms and hood/ducts (fire construction inspections) conducted by the Fire Department – Fire Prevention Services Division (Fire Prevention) during calendar year 2014.

- Based on the results of our work, we believe that established procedures are not adequate to ensure the timely completion of fire construction inspections.

- We also believe that timelier and more efficient customer service could be achieved through consolidating fire construction inspections in the Development Services Department – Development Center Division (Development Center).

Our survey of peer cities indicates diversity in departments performing fire construction inspections. The best inspection response time performance was reported by those peer cities where fire construction inspections are performed by cross-trained civilians within the building department. These cities complete 90-100% of fire construction inspections within 1 day. Given existing staffing and workload levels, completing 95% of fire construction inspections within 5 days would place Fire Prevention performance in line with peer cities where uniformed inspectors perform both building and fire suppression system inspections within the fire department.

In addition to the benefits realized from cross-trained inspectors (e.g., scheduling and travel efficiencies; reduced number of on-site visits by inspectors; added capacity to handle vacancies, leave time and service demand fluctuations; etc.), using civilian employees is less costly. With the added productivity, efficiencies, and capacity from cross-training, we estimate 3 civilian inspectors in the Development Center could perform the work of the 5 uniformed construction inspectors in Fire Prevention, for a total annual savings of approximately $350,000.

- We recommend consolidating fire construction inspections in the Development Center and performing these inspections with cross-trained civilian inspectors. Should fire construction inspections be consolidated in the Development Center, consideration should be given to moving the fire plan review function into the Development Center as well. Recommendations 1 and 2.

Civilianizing and consolidating fire construction inspections in the Development Center would provide more timely and efficient customer service. However, if the function remains within Fire Prevention, implementing recommendations included in the audit report would provide the means to achieve a performance target more in line with peer cities. These recommendations include:

- Increase time available to perform inspections by attempting to negotiate changes to construction inspector work schedules mandated in union contract and scheduling inspections earlier and/or later in the day. If flex time (4 hours per inspector each week) is not eliminated through contract negotiations, completely track when flex hours are worked and the activities performed. Recommendation 3.

- Assign only construction-related inspections to construction inspectors when performance targets are not being met. Recommendation 4.

- Discontinue practice of encouraging contractors to submit inspection requests 5-10 days prior to being ready for an inspection (i.e., require contractors to submit inspection requests only when they are ready), in order to reduce office time needed for scheduling and rescheduling and the negative impact to productive work schedules. Recommendation 5.

- Establish expectations for the number of inspections to be completed daily, periodically monitor inspector performance against target productivity and use GPS technology in monitoring efforts. Recommendations 6 and 9.

- Develop inspection priority policy emphasizing oldest inspections are worked first and have daily inspection lists assigned by the Battalion Chief or experienced staff rather than inspectors selecting their daily workload. Recommendations 7 and 8.

- Revise LFR measure for percentage of inspections completed within targeted number of days from 75% to 95%, in order to provide assurance that performance is being evenly achieved and in line with peer city targets. Recommendation 11.

- Correct LFR reporting inaccuracies and enhance and protect accuracy of inspection data. Recommendations 10 and 12 through 15.

- Charge expedited inspection fees at the amount approved by City Council (i.e., Fire Prevention charges $150 rather than the authorized $250 fee), perform expedited inspections only using overtime and improve accuracy and completeness of monitoring overtime used for expedited inspections. Recommendations 16 and 17.

- Attempt to negotiate with union to eliminate firearm requirement for construction inspectors, removing the need for CLEET training (e.g., 3 months initial training and 27 hour per year thereafter), track time spent on training and limit non-required training when performance targets are not being met. Recommendations 19 and 20.

- Improve customer relations by implementing automated methods of submitting inspection requests, develop a report for monitoring waived re-inspection fees to reduce rejections and meet regularly with customers to share information. Recommendations 18, 21 and 22.

- Create routine automated management reports to completely depict workload status and aid performance monitoring and decision making. Recommendations 23 and 24.

The content and emphasis of items in this report have been discussed in detail with appropriate representatives from management. These discussions were held to assure a complete understanding of the recommendations and observations arising from our audit. Management's responses are attached to this report in their entirety. We would like to recognize the positive comments regarding the professional, customer oriented service provided by Fire Prevention we received from local contractors during the audit.

Jim Williamson
City Auditor

Lori Rice
Audit Manager

FIRE DEPARTMENT
FIRE PREVENTION SERVICES DIVISION
CONSTRUCTION INSPECTIONS

AUDIT OBJECTIVE, BACKGROUND, SCOPE AND METHODOLOGY

The objective of this audit was to evaluate the adequacy and effectiveness of controls in place to ensure the timely completion of construction inspections completed by the Fire Prevention Services Division from January through December 2014.

The Fire Prevention Services Division (Fire Prevention) is responsible for providing education, code enforcement and investigation services to the residents, business community and visitors of Oklahoma City so they can benefit from a reduced risk of loss from fire and other hazards. The code enforcement program provides inspections of construction activity to ensure safety and fire code compliance. Performing construction inspections in a timely manner is a customer service concern, as the development community strives to minimize construction delays and their associated costs. A key Leading for Results (LFR) measure is in place to monitor construction inspection timeliness (i.e., response times): complete 75% of construction inspections within three work days of request.

While Fire Prevention performs other inspections (e.g., special events, required annual fire code compliance, complaint-based, etc.), this review considered only fire construction inspections: fire code compliance for new construction, including buildings and fire suppression systems such as sprinklers, alarms and hood/ducts. Approximately 4,300 annual construction inspections are performed by 5 uniformed inspectors in Fire Prevention.

Procedures performed during this audit included assessing the accuracy of reported response times; evaluating productive time, productivity standards, inspection scheduling methodologies and staffing levels; examining the reliability and usefulness of current performance reporting; interviewing department managers regarding processes in place to ensure timely inspections; reviewing management's process for obtaining and assessing customer feedback; performing surveys of peer cities; and polling contractors/customers regarding Fire Prevention performance.

We conducted this audit in accordance with generally accepted government auditing standards (GAGAS). GAGAS requires that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our audit findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following recommendations provide suggestions for improving the timeliness of construction-related inspections and the relevant reporting of such. Each recommendation included in this report is immediately followed by a *management response*, and they are included in their entirety as Attachment E to this report.

RESULTS OF WORK PERFORMED

Established procedures are not adequate to ensure the timely completion of fire construction inspections. More timely and efficient customer service could be achieved through consolidating fire construction inspections in the Development Center.

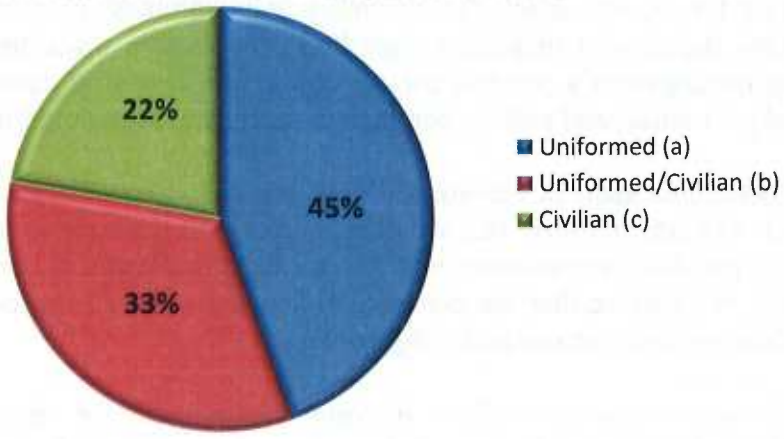
Survey of Peer Cities

To evaluate Fire Prevention's inspection response time performance against peer cities, a survey was conducted (see Attachment A). Survey participants were asked to supply data on response time performance and the factors impacting that performance for their most current, completed 12-month period. Data obtained included the location of the fire construction inspection function; total number of inspections completed; staffing breakdown (i.e., by inspection type; fire portion of building code and fire systems); other work performed by construction inspectors; rejection rates; actual and target response time performance; and required qualifications of a Fire Prevention construction inspector. Follow-up occurred as needed to gain clarification.

Survey results indicate diversity in the organization of the construction inspection function among the peer cities responding.

- Four of nine stated both building and system inspections are performed by uniformed inspectors within the fire department, as is organized in Fire Prevention.
- Three stated system inspections are performed by uniformed inspectors within the fire department, with building inspections performed by cross-trained, civilian inspectors[1] within the building department
- And, two stated both building and system inspections are performed by civilian inspectors, cross-trained by trade[2], within the building department, as shown in Exhibit 1.

Exhibit 1: Organization of Fire Construction Inspections, In Peer Cities



Source Peer City Survey

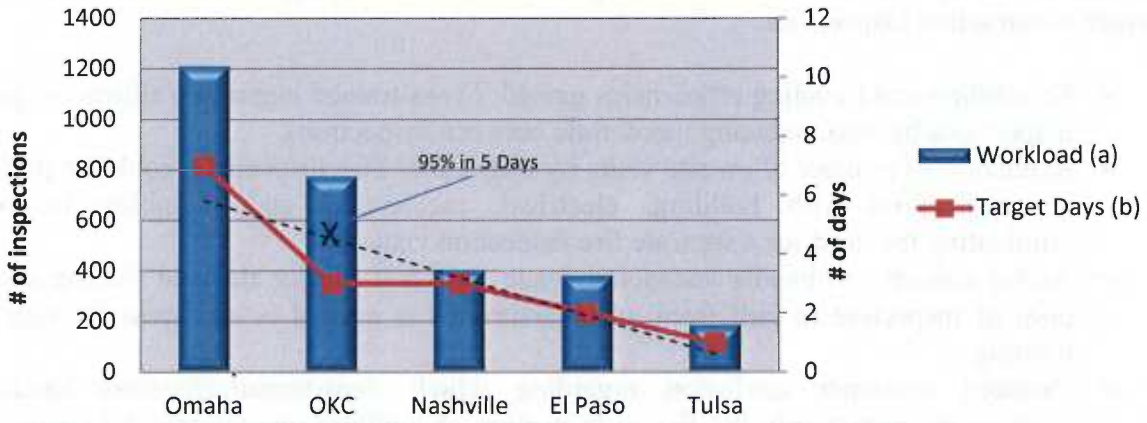
[1] Two cities confirmed cross-training, while the third did not respond to this inquiry.

[2] Examples include fire alarm inspections performed by electrical inspectors, fire sprinkler inspections performed by plumbing inspectors, fire hood inspections performed by mechanical inspectors and fire code portion of building inspections performed by building inspectors.

Workload, Staffing and Target Performance

Fire Prevention's target performance for construction inspection response times does not correspond with peer cities where uniformed inspectors perform both building and system inspections in the Fire department. As shown in Exhibit 2, of this group, Omaha performs the most inspections per inspector and targets inspection completion within 7 days of request. Tulsa performs the least inspections per inspector and targets inspection completion within 1 day of request. Fire Prevention changed their target days from 10 to 3 beginning July 1, 2014; 3 days is shown below. This change was made without any anticipated change in workload, staffing or operations.

Exhibit 2: Inspection Workload and Target Performance, Compared to Peer Cities



(a) Average number of inspections per inspector for latest 12-month period.
(b) Targeted inspection response time in number of days.

Source: Peer City Survey; Accela and LFR for OKC data

Targeted days trend steadily with productivity (i.e., number of inspections per inspector), except for Fire Prevention whose targeted days are more aggressive. However, the peer cities shown in Exhibit 2 target completing on average 96% of inspections within their specified days, while Fire Prevention targets a more lenient level of performance at 75% within the specified days. Targeting a level of performance of 95% within 5 days of inspection request would place the Fire Prevention performance target more in line with peer cities.

Of the peer cities shown in Exhibit 2, all reported substantially meeting their performance targets except for Nashville[3]. Fire Prevention performance during calendar 2014 was calculated at: 49% in 3 days, 63% in 5 days and 84% in 10 days.

The best inspection response time performance was reported by those peer cities where fire construction inspections are performed by cross-trained civilians within the building department: 90 - 100% within 1 day.

[3] Nashville targets completing 90% of inspections within 3 days; however, actual results were 90% within 5 days during their most recently completed fiscal year.

Consolidation of Construction Inspection Functions

In consideration of the notable response time performance of those cities where fire construction inspections are performed by cross-trained civilians within the building department, thought should be given to the potential benefits received should fire construction inspections be consolidated in the Development Center.

The Development Center is responsible for providing plan review, permit, **inspection** and licensing services to the development community and the public so they can develop and build code compliant commercial and residential structures in a timely manner. Inspections performed within this area include construction-related code inspections: building, electrical, mechanical and plumbing.

Several advantages exist for consolidating fire construction inspections with Development Center construction inspections.

- Scheduling and traveling efficiencies gained: Cross-trained inspectors allows for grouped inspections by area, reducing travel time between inspections.
- Reduction of number of on-site visits by inspectors: Fire inspections could be performed in conjunction with building, electrical, mechanical and plumbing inspections, eliminating the need for a separate fire inspection visit.
- Added capacity to handle vacancies, leave time and service demand fluctuations: The pool of inspectors to pull from when assistance is needed is increased through cross-training.
- Reduced customer confusion regarding which department/inspectors handle fire inspections, particularly the fire code portion of building inspections: All construction-related inspections would be performed by inspectors from the same department.
- Added productivity through more customer service focused work schedules: Development Center inspectors work five 8-hour shifts, Monday through Friday, with little to no office time. Fire Prevention inspectors work four 9-hour shifts with an additional 4-hour flex period. Each Fire Prevention inspector spends at least 8 hours per week in the office. (See the following Productive Time/Inspector Work Schedules section of this report for additional discussion)
- Added productivity through less time spent on training: Development Center inspectors obtain an estimated 12 hours of annual training, while Fire Prevention inspectors obtain an estimated 120 hours. (See the following Training section of this report for additional discussion)
- Added productivity through less time spent performing work outside of construction inspections: Development Center construction inspectors perform only construction-related inspections, while 5% of inspections performed by Fire Prevention construction inspectors are not construction-related. (See the following Productive Time/Inspector Work Schedules section of this report for additional discussion)

Additionally, using civilian employees is less costly. With the added productivity, efficiencies, and capacity mentioned above, we estimate 3 civilian inspectors in the Development Center could perform the work of the 5 uniformed construction inspectors in Fire Prevention, for a total annual savings of approximately $350,000[4], as shown in Exhibit 3:

Exhibit 3: Average Cost per Fire Prevention Construction Inspector, Compared to Development Center Construction Inspector

	FY 2015 Budget Average Per Position		
	Development Center Inspector (a)	Fire Prevention Inspector (b)	*Difference*
Salary w/FICA	$ 56,063	$ 87,806	*$ 31,743*
Retirement	3,385	12,198	8,813
Insurance	11,906	11,374	(532)
Other	853	1,438	585
Inspector Cost	$ 72,207	$ 112,816	***$ 40,609***
# of positions	3	5	
Total Cost	$ 216,621	$ 564,080	***$ 347,459***

Source: PeopleSoft Human Resources data

(a) Average of all Development Center inspectors I & II, including building, electrical, mechanical and plumbing

(b) Average of all construction inspectors in Fire Prevention

Finally, the Development Center recently updated their LFR measure, now targeting 90% of construction related inspections to be completed within 1 working day of inspection request. Actual LFR measure results for fiscal year 2015, as of the end of April, is 92% completed within 1 day of request.

Recommendation 1

Management should consider consolidating fire construction inspections in the Development Center, and performing these inspections with cross-trained civilian inspectors.

[4] This does not include any cost associated with a new position included in the FY 2016 Fire Prevention budget, which management indicated would be at least partially involved in managing construction inspection operations.

Fire Department Response 1

Disagree with recommendation. Chapter 20-41 of Oklahoma City Municipal ordinances requires administration and enforcement of adopted fire codes by the Fire Marshal. Section 20-41 (c) further requires specific qualifications for personnel assigned to carry out inspection and enforcement functions based on education, experience, technical competency and examination. Management feels that this is a vital Life Safety issue. The inspections conducted by Fire Prevention are life safety inspections that require expertise to ensure that compliance is being met. Transfer of the Fire Marshal's Office responsibilities would require negotiations through collective bargaining with the labor group. We strongly feel this function should remain within the Fire Marshal's jurisdiction.

City Manager Response 1

Disagree with Recommendation. The City Manager's Office agrees that there would be several advantages to moving the Fire Construction Inspection function to Development Services, where other construction-related inspections are housed. Efficiencies would be gained, and there would be opportunities for better communication and additional cross-training among various inspectors. However, management would be required to negotiate the removal of this function from the Fire Department with the labor union, and the potential efficiencies do not outweigh the difficulty of negotiating this change.

Fire Plan Review

While not included in the scope of this audit, consideration should be given to the most effective location of the fire plan review function (review of fire code portion of building plans and fire suppression systems plans) should the fire construction inspection function be re-located. Currently, fire plan review is also located in Fire Prevention, and is performed by 2 civilian employees. Management indicates it is important to keep fire plan review and fire construction inspections together, as they work closely to ensure compliance with fire code. Fire plan reviewers already spend a minimal amount of time in the Development Center reviewing building plans, and could cross-train with building plan reviewers, adding capacity to handle vacancies, leave time and service demand fluctuations.

Recommendation 2

Should fire construction inspections be consolidated in the Development Center, consideration should be given to moving the fire plan review function into the Development Center as well.

Fire Department Response 2

Disagree with recommendation. Plan review is a required function of the adopted code-Section 20-41(b). As stated above this is a function that Fire Prevention should be responsible for. This section further requires the Fire Marshal is responsible for issuance of permits, certificates, notices, approvals and other orders pertaining to fire control and fire hazards-all; of which are a component of the plan review process. A higher level of training is necessary to effectively and accurately conduct reviews. The codes and standards within the Fire industry are forever changing requiring ongoing training and would be best suited for Fire Prevention staff to conduct the review. Transfer of the Fire Marshal's Office responsibilities would require negotiations through collective bargaining with the labor group.

City Manager Response 2

Disagree with Recommendation. The City Manager's Office agrees that the Fire Plan Review and Fire Construction Inspection functions should be kept together. Moving the Fire Plan Review function to Development Services would have the same issues that moving the Fire Construction Inspection has, in terms of requiring negotiation with the labor union.

Fire Prevention Construction Inspections

Civilianizing and consolidating fire construction inspections in the Development Center would provide more timely and efficient customer service. However, if the function remains within Fire Prevention, implementing the recommendations in this section of the report would provide the means to achieve a performance target more in line with peer cities where uniformed inspectors perform both building and fire suppression system inspections within the fire department. These recommendations may apply to other inspection types performed by Fire Prevention, in which case management should implement the recommendations for those inspections as well.

Productive Time/Inspector Work Schedules

Fire Prevention has 12 inspector positions, 5 of which are construction inspectors who primarily perform construction-related inspections (see Attachment B for organizational chart). Work hours, as required per union contract, are four 9-hour days per week, from 7:00 am to 5:00 pm, with a 1-hour meal period. An additional 4-hour flex period is subject to be assigned and controlled by management, for a total of 40 weekly work hours. Construction inspectors are allowed to work the flex period at their discretion, and the tracking of when flex hours are worked and work performed during flex hours is inconsistent.

Department practice is for inspectors to be out of the office performing inspections by 8:00 am, and returning at approximately 4:00 pm. Six hours per day is spent performing inspections, with the remaining 2 hours for office time used to schedule inspections, return contractor phone calls and perform code research as needed. This results in 8 hours per week per inspector not being used to perform construction inspections, for a department total of 40 hours per week (i.e., 8 hrs. /wk. multiplied by 5 inspectors); 1 full inspector position. This does not include any office time that may be related to flex time[5].

Additionally, 5% of total inspections performed by construction inspectors are not construction-related: special events, required annual fire code compliance, complaint-based etc. Time spent performing other duties is less time spent performing construction inspections, negatively impacting productivity.

Recommendation 3

Construction inspector office time should be reduced, increasing time available to perform inspections.

Changes to the union contract should be negotiated to allow for a construction inspector work schedule of five 8-hour days per week, Monday through Friday, 8:00 am to 5:00 pm, eliminating flex time. This work schedule is more conducive to standard customer business hours and would eliminate administrative time necessary to schedule and track flex time. If changes to work schedules can't be negotiated, office time should be reduced by scheduling inspections earlier in the work day. If flex time is not eliminated, completely track when flex hours are worked and the activities performed.

Regardless of whether start times are changed, inspections should be scheduled for later in the work day.

Fire Department Response 3

Agree with recommendation. FY 15/16. This is a Labor/Management issue, and we are currently working with labor to try to accomplish a change in work schedules to 8-5, M-F and to eliminate flex hours. If we are unable to accomplish that with labor, we will track flex hours and schedule inspections earlier in the day. In either case we will schedule inspections later in the day.

Recommendation 4

Assign only construction inspections to construction inspectors when performance targets are not being met, increasing the amount of time spent on construction inspections.

[5] We were unable to reliably establish office time relating to flex hours due to weaknesses in flex hour monitoring procedures.

Fire Department Response 4

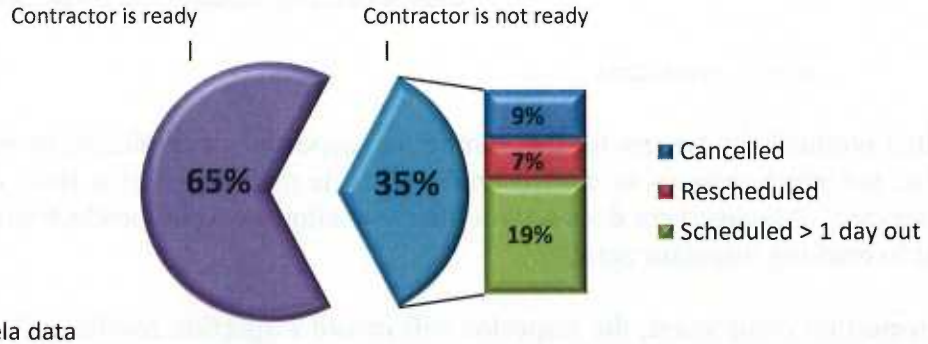
Agree with recommendation. By October 31, 2015, management will develop and implement SOP's to address this issue.

Scheduling/Priorities/Productivity

Contractors are advised through published guidance to submit their inspection requests 5 – 10 days prior to being ready for an inspection. Administrative staff receives inspection requests via phone or fax, and records the relevant information into Accela to create an inspection request record. While most inspection request records are placed into a holding queue until they are selected to be scheduled and performed, some are placed directly into a specific inspector's queue upon contractor request. Inspectors are responsible for creating their own assignment list of inspections to perform daily by selecting inspection requests from the holding queue, adding them to the list of inspections already placed in their queue by administrative staff.

As inspectors select the inspection request records to add to their assignment list, they call the respective general contractor to schedule the inspection. Generally, the inspection is scheduled for the following day, but as shown in Exhibit 4 below the contractor is not ready for the inspection in 35% of all requests received. This is indicated by the contractor cancelling the inspection, requesting the inspection be rescheduled following the initial scheduling, and/or scheduling the inspection for some point in the future beyond the following day.

Exhibit 4: Inspection Requests Received, Calendar Year 2014

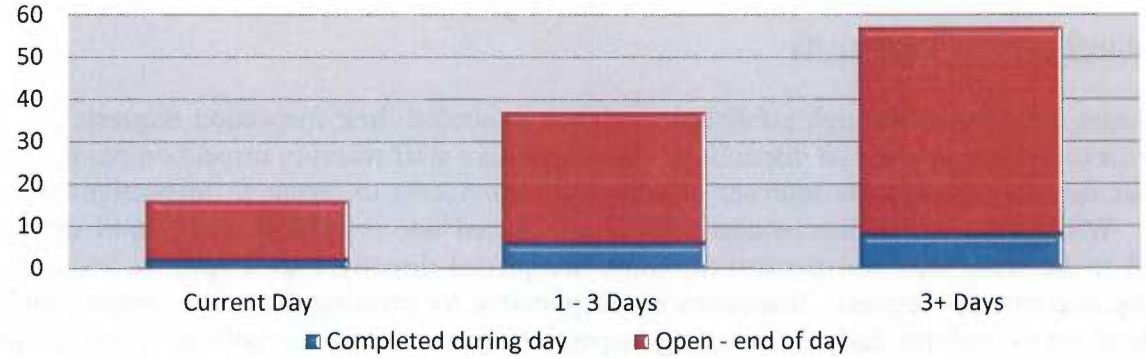


Source: Accela data

Accepting inspection requests from contractors who are not ready for their inspection results in more office time needed for scheduling and rescheduling, and it prevents the inspector from being able to maintain a full list of inspections to perform daily.

While department practice is for the inspector to prioritize inspections by selecting the oldest from the holding queue as they are building their assignment list, Exhibit 5 below indicates 50% of all inspections worked on a daily basis are current inspections.

Exhibit 5: Inspection Prioritization, Calendar Year 2014



Observation: On an average day in 2014, 16 inspections were completed and comprised as follows: 50% inspections aged 3 days or less, and 50% inspections aged greater than 3 days. Considering the significant backlog of inspections aged greater than 3 days at the start of any given day, this serves as indication of prioritization efforts inconsitent with working the oldest inspections first.

Calendar Year 2014 Average

	Age			
Inspections	Current Day	1 - 3 Days	3+ Days	Total
Open -start of day	16	37	57	110
Completed during day	2	6	8	16
Open - end of day	14	31	49	94

Source: Accela Data

Individual productivity targets for the number of inspections that should be performed daily do not exist, but are necessary to ensure productivity is maintained at a level needed to provide timely service. Management does not routinely monitor inspector productivity, nor is GPS used to assist in tracking inspector activity.

Upon inspection completion, the inspector will record inspection results in Accela. Accela will record the date, time and inspector completing the inspection. Construction inspectors may record inspection results for construction inspections completed by other Fire Prevention inspectors helping to address backlogs, leaving inaccurate information recorded on the inspection record. Also, there are two system options for recording inspection results in Accela; one of those options fails to record the time of inspection completion on the record. Inaccurate and incomplete information on inspection records create data integrity concerns, and limit management's ability to use that data for monitoring inspector productivity.

Recommendation 5

Practice should be changed to require contractors to only submit an inspection request when they are ready, in order to reduce office time needed for scheduling and rescheduling and the negative impact to productive work schedules. All published guidance should be revised to reflect this change. If a contractor is not ready for the inspection subsequent to the submitted inspection request, that request should be cancelled and the contractor directed to call when they are ready rather than the inspection being prospectively scheduled.

Fire Department Response 5

Agree with recommendation. By December 31, 2015, management will work with IT on website information to ensure accurate practice. We will develop and implement SOP's to adhere to receiving request for inspection only when the contractor is ready for inspection. If contractors are not ready for inspection the request will be cancelled.

Recommendation 6

A policy establishing individual inspector productivity targets should be developed and implemented. Management should periodically monitor inspector performance against target productivity through routine reporting (example provided at Attachment C), and counsel inspectors on productivity concerns as needed.

Fire Department Response 6

Agree with recommendation. By March 31, 2016, management will work with IT to develop a report similar to the Development Center inspection reports and develop and implement SOP's to establish productivity targets.

Recommendation 7

Guidance regarding inspection prioritization objectives should be included in the policy mentioned in Recommendation 6, emphasizing oldest inspections are worked first. All inspection requests should be consistently treated upon receipt, placing each one in the same holding queue to ensure the proper prioritization of all inspections.

Fire Department Response 7

Agree with recommendation. By October 31, 2015, management will develop and implement SOP's to ensure all inspections will be placed in a holding queue and assigned by a supervisor in the order of request. Keeping in mind that there are other factors that may take priority over previous requests.

Recommendation 8

The Battalion Chief or experienced staff, as opposed to individual inspectors, should create daily inspection assignment lists for each inspector, considering prioritization objectives, productivity targets, and travel time.

Fire Department Response 8

Agree with recommendation. A New Construction supervisor has been hired and by October 31, 2015 SOP's will be developed and implemented to address this issue.

Recommendation 9

GPS technology should be fitted to vehicles. This data should be used in conjunction with monitoring of inspector productivity.

Fire Department Response 9

Agree with recommendation. By June 30, 2016 management will look into the cost of the GPS technology and how this can be integrated.

Recommendation 10

To ensure the accuracy of data used to monitor inspector performance, the inspector completing the inspection should complete the Accela inspection record. Department management should work with Information Technology to correct the system error failing to consistently record the completion time on the inspection record.

Fire Department Response 10

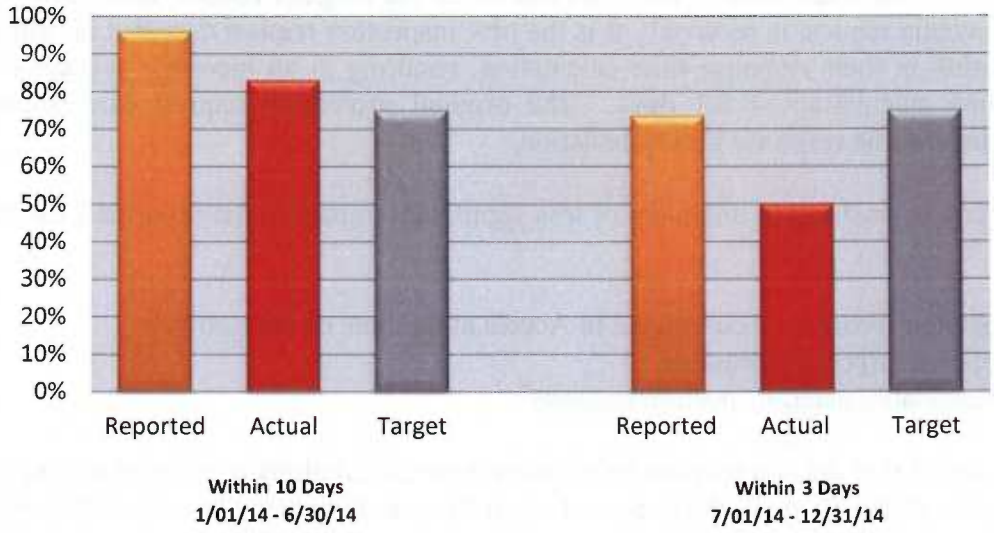
Agree with recommendation. By June 30, 2016, management will work with IT to see if we can correct the glitch in the system. Develop and implement SOP's to ensure the inspector completing the inspection is the one entering the Accela inspection record.

LFR Measure

"Percentage of initial new construction inspections completed within three working days of request" is a key LFR measure used in evaluating results of the Fire Prevention Inspection program, and was changed from ten working days as of July 1, 2014.

The targeted percentage of completion for both of these timeframes was 75% (Exhibit 6). A higher percentage of completion provides more confidence that a level of performance is being evenly achieved. As discussed in the Survey of Peer Cities section of this report, peer cities target an average completion percentage of 96%.

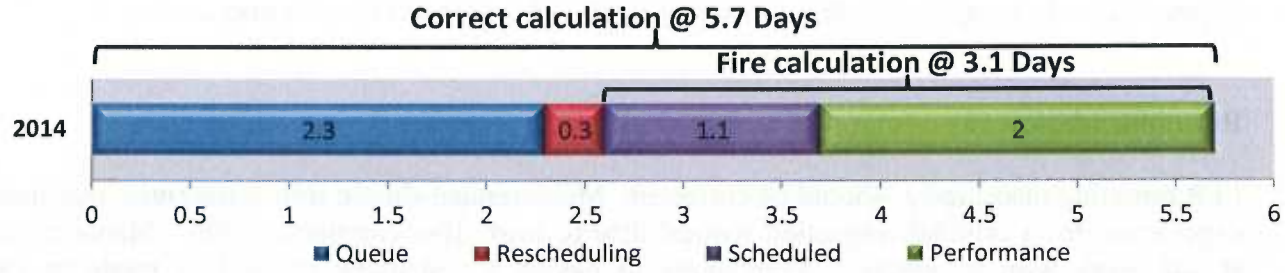
Exhibit 6: LFR Measure, Percentage of Inspections Completed Within Three Days



Source: LFR reported data used for 'Reported' and 'Target'. Accela data used for calculation of 'Actual'.

Reported LFR results for the audit period were found to be incorrect. The inaccuracy primarily resulted from use of an erroneous inspection request date as the start of the response time calculation. A combination of department practice in how inspections are assigned and scheduled within Accela, and current system limitations preventing retention of the original inspection request date, has resulted in this error. Further explanation of this error is shown in Exhibit 7.

Exhibit 7: Average Inspection Response Time, Calendar Year 2014



- Queue - Time between date of contractor inspection request and date of inspector's first call to schedule inspection.
- Rescheduling - Time between date of inspector's first call to schedule inspection and inspector's final call to schedule inspection.
- Scheduled - Time between date of inspector's final call to schedule inspection and the date the inspection is scheduled for.
- Performance - Time between date inspection is scheduled for and date inspection is completed.

Source: Accela Data used to calculate inspection response times

Average inspection response time for calendar year 2014 is 5.7 days, calculated by counting the number of work days between when the inspection request was received and when the inspection was completed. The Accela system process used by Fire Prevention to 'reschedule' (i.e., assign)

an inspection from the holding queue to an inspector, and to reschedule an inspection upon contractor request, creates a new record with a new inspection request date reflective of the day the assignment/reschedule occurs, and does not retain the original request date reflective of the day the inspection request is received. It is the new inspection request date that is being used by Fire Prevention in their response time calculation, resulting in an incorrect average inspection response time calculation of 3.1 days. The original inspection request date is the correct beginning date for the response time calculation.

Additional errors resulting in unknown or less significant impact to the reported LFR results are as follows:

- Inspection records not completed in Accela at the time of inspection[6]
- Duplicate inspection requests[7]
- Unreasonably dated inspection requests[8]

It was also found that dates important to response time calculations were open to revision by all Fire Prevention staff. Through the course of our testing nothing came to our attention that would suggest date revisions had occurred, but the existing opportunity may compromise the integrity of the data being used to report performance.

Recommendation 11

Revise LFR target completion percentage to 95% in order to provide assurance that performance is being evenly achieved and is in line with peer city targets.

Fire Department Response 11

Agree with recommendation. By June 30, 2016, management will adjust the target to 95% of inspections to be completed within 3 business days, to be more in line with peer cities.

Recommendation 12

LFR reporting inaccuracies should be corrected. Measurement should reflect the entire customer experience, from original inspection request date to inspection completion date. Management should work with Information Technology to devise a systematic method of retaining the original inspection request date on all inspection records[9].

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[6] Inspectors may not record the completion of the inspection on the Accela record on the day it occurred, resulting in an inaccurate inspection completion date. These occurrences, thus the impact on the LFR results, could not be identified and quantified.

[7] Duplicate inspection records may be entered erroneously when contractors call multiple times to schedule inspections. These occurrences had an insignificant impact on LFR results.

[8] Incorrect dates may be entered on the inspection record resulting in an unreasonable response time calculation. These occurrences had an insignificant impact on LFR results.

[9] The implementation of Recommendation 5 included in this report, and Fire Prevention's use of Accela's re-assign function instead of the re-schedule function, would negate the need to modify Accela programming to retain the original inspection request date.

Fire Department Response 12

Agree with recommendation. By June 30, 2016, management will work with IT to correct all of the issues that directly affect the accuracy of the LFR report. This has been a challenge in the past to accomplish with IT, due to their limited staffing and other work assignments.

Recommendation 13

The Accela inspection record should always be completed at the time of the inspection so that the inspection completion date will be accurate and properly reflected in performance reports.

Fire Department Response 13

Agree with recommendation. By October 31, 2015, management will develop and implement SOP's to ensure that the inspection data entry is being completed at the time of the inspections.

Recommendation 14

Management should create routine edit reports identifying potential duplicate records and unreasonably dated inspections, and monitor for these occurrences. Data used to calculate LFR results should be corrected for these instances.

Fire Department Response 14

Agree with recommendation. By June 30, 2016, management will work with IT to address any and all issues that will directly cause duplicate records and develop edit reports to identify errors.

Recommendation 15

Management should work with Information Technology to revise system security to prohibit the modification of critical dates entered into Accela.

Fire Department Response 15

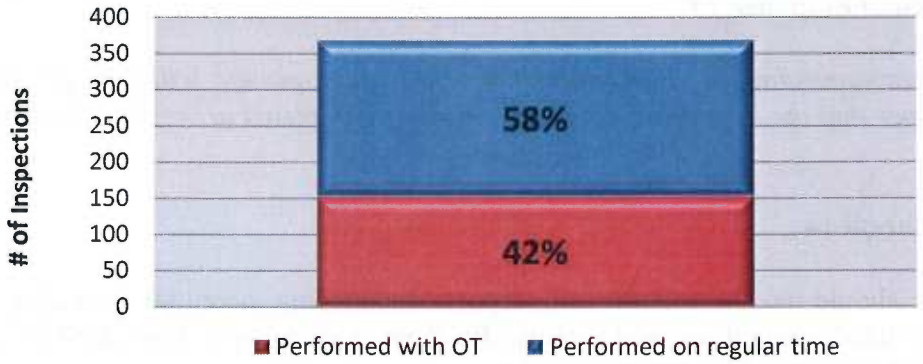
Agree with recommendation. By June 30, 2016, management will work with IT to revise system security for all New Construction Inspectors.

Expedited Inspections

Expedited inspections are offered as a service to the contracting public upon request, and for an additional fee. This program guarantees inspection completion within 3 days of request. City Council approved the addition of this $250 fee to the Schedule of Fees in February, 2014; Fire Prevention is charging $150 instead.

Undocumented policy is that expedited inspections are only to be performed by an inspector during overtime, so as to prevent the condition of a contractor paying extra to have an inspection moved to the 'front of the line.' Testing shows of the 368 expedited inspections performed in calendar 2014, only 42% were performed using overtime, as demonstrated in Exhibit 8.

Exhibit 8: Overtime Usage for Expedited Inspections, Calendar Year 2014



Source: Accela used to identify expedited inspections; Kronos used to identify OT hours

Fire Prevention attempts to track overtime usage for expedited inspections, but their records were incomplete.

Recommendation 16

Expedited inspection fees should be charged at the amount approved and listed in the Schedule of Fees.

Fire Department Response 16

Agree with recommendation. This has already been corrected in Accela.

Recommendation 17

Management should create a formal policy providing guidance for ensuring expedited inspections are performed only using overtime. Tracking mechanisms used to monitor the use of overtime for expedited inspections should be accurate and complete.

Fire Department Response 17

Agree with recommendation. By October 31, 2015, management will develop and implement SOP's ensuring expedited inspections are performed only using overtime and the tracking system is accurate and complete.

Rejections

Upon completion of an inspection, the inspector will assign a result based on their interpretation of code. Results reflect the construction's compliance with code and can range from passed to failed (i.e., "rejected"), with some minor variations in between. Rejected inspections generally result in a second trip to the location for a re-inspection, upon which a re-inspection fee is charged. 170 of 580, or 29%, of all rejected inspections during calendar year 2014 were either not charged a re-inspection fee, or the fee was subsequently voided. This practice serves as a dis-incentive for contractors to ensure they are ready for the inspection before they call in the request, which ultimately may result in increased volumes and decreased productivity.

Recommendation 18

A written policy should be created explaining when it is appropriate to waive re-inspection fees. A management report identifying waived fees should be developed and routinely monitored for these occurrences. Concerns and excessive occurrences should be addressed.

Fire Department Response 18

Agree with recommendation. By June 30, 2016, management will develop and implement SOP's regarding waving of inspection/re-inspection fees. We will work with IT on developing a management report.

Training

The union contract specifies construction inspectors as Certified Peace Officers with the need to carry a firearm, thus requiring Council on Law Enforcement Education and Training (CLEET) certification. To become CLEET certified, an individual must initially obtain 3 months of training, followed by an annual continuing education training requirement of 27 hours. Oklahoma City is the only peer city where construction inspectors are authorized to carry a firearm.

Each uniformed construction inspector obtains an estimated total of 120 hours of annual training, of which only 27 hours is a requirement. The remaining 93 hours are not required, and are not tracked and monitored for necessity and impact to department productivity and performance.

Recommendation 19

Negotiate with the union to eliminate firearm requirement for construction inspectors, removing the need for CLEET training and increasing time spent performing inspections.

Fire Department Response 19

Agree with recommendation. By FY 15/16, management will work with labor on eliminating the requirement for CLEET training for New Construction Inspectors.

Recommendation 20

Develop mechanism to track time spent on training, including subject matter of training and impact on productivity and performance. Limit non-required training accordingly during periods when response time performance targets are not being met.

Fire Department Response 20

Agree with recommendation. By October 31, 2015, management will develop a tracking system for time spent on training, and limiting training when targets are not being met.

Customer Relations

To evaluate contractor concerns regarding service provided by Fire Prevention, a survey was conducted. Contractors suggest concern over recurring instances of lost inspection requests; request was called in but never recorded, resulting in the need for a second request and continuing inspection response time delays. As mentioned in Scheduling section of this report, all inspection requests are retrieved by administrative staff via phone or fax and subsequently recorded in Accela, leaving room for human error.

Fire Prevention does not routinely obtain and assess customer concerns (e.g., lost inspection requests, confusion regarding departments responsible for inspections, reasons for rejections, inspection inconsistencies, etc.), and are less likely to be made aware of service issues that should be addressed.

Recommendation 21

Work with Information Technology to implement both the Interactive Voice Response (IVR) system and the on-line method of submitting inspection requests. These systematic inspection request submission options remove the need for manual input into Accela, eliminating the risk of human error in this process. The latter also allows for contractor on-line access to inspection status and results.

Fire Department Response 21

Agree with recommendation. By June 30, 2016 management will work with IT and see what all is involved with the Interactive Voice Response (IVR) system. Also researching avenues to submit request for inspections on line.

Recommendation 22

Management should develop a process to obtain customer feedback and assess the information to address customer service concerns; this could include routine meetings with contractors to exchange information pertinent to the services provided by Fire Prevention.

Fire Department Response 22

Agree with recommendation. By June 30, 2016, management will be attending the meetings that are currently held between Development Center and their general contractors. We will need to develop a network base with all other contractors who do not attend the regular scheduled meetings. We will also look into an on line survey for customer feedback.

Performance Reporting for Management

To inform City management of response time performance, department management and the City Manager are provided with a manually created weekly "Inspection Status" email depicting the number and oldest date of open inspections as of Friday of each week. While not found to be materially misstated, this report does not provide a complete picture of the age of all outstanding inspections. Incomplete reporting prevents management from being fully informed of performance, possibly impacting management decision making; while manually created performance reports presents the opportunity for reporting error.

Aside from the monthly LFR measure reporting and the weekly inspection status email, there are no routine operational reports upon which management is able to monitor response time performance and the factors affecting it. Management oversight, for the purpose of ensuring reasonable response times, may not be effective without routine, organized and trended information regarding workloads, resources/efforts and operating results. Possible examples of such reports are included in Attachment D. Observations regarding activities that may have been worthy of management investigation and/or action are indicated on the example reports.

Recommendation 23

The current weekly inspection status report should be automatically created from Accela and reflect a complete depiction of the count and age of all outstanding inspections.

Fire Department Response 23

Agree with recommendation. By June 30, 2016, management will work with IT on developing an outstanding inspections report.

Recommendation 24

Develop routine reports to aid Fire Prevention and department management in monitoring performance, alert management of changing trends and aid in decision making. Possible example reports are shown at Attachment D.

Fire Department Response 24

Agree with recommendation. By June 30, 2016, management will work with IT on developing reports similar to that which is being used by the Development Center Construction Inspections.

ATTACHMENT A

Peer Cities Surveyed

Surveyed Cities

Peer Cities (A)	**Construction Inspection Organization** (D)
1. Austin	Uniformed/Civilian
2. El Paso	Uniformed
3. Ft. Worth	Uniformed/Civilian
4. Kansas City	Civilian
5. Nashville	Uniformed
6. Omaha	Uniformed
7. St. Louis	Civilian
8. Tucson (B)	
9. Tulsa	Uniformed
10. Wichita	Uniformed/Civilian

Suburban Cities (C)	
11. Edmond	Uniformed
12. Norman	Uniformed

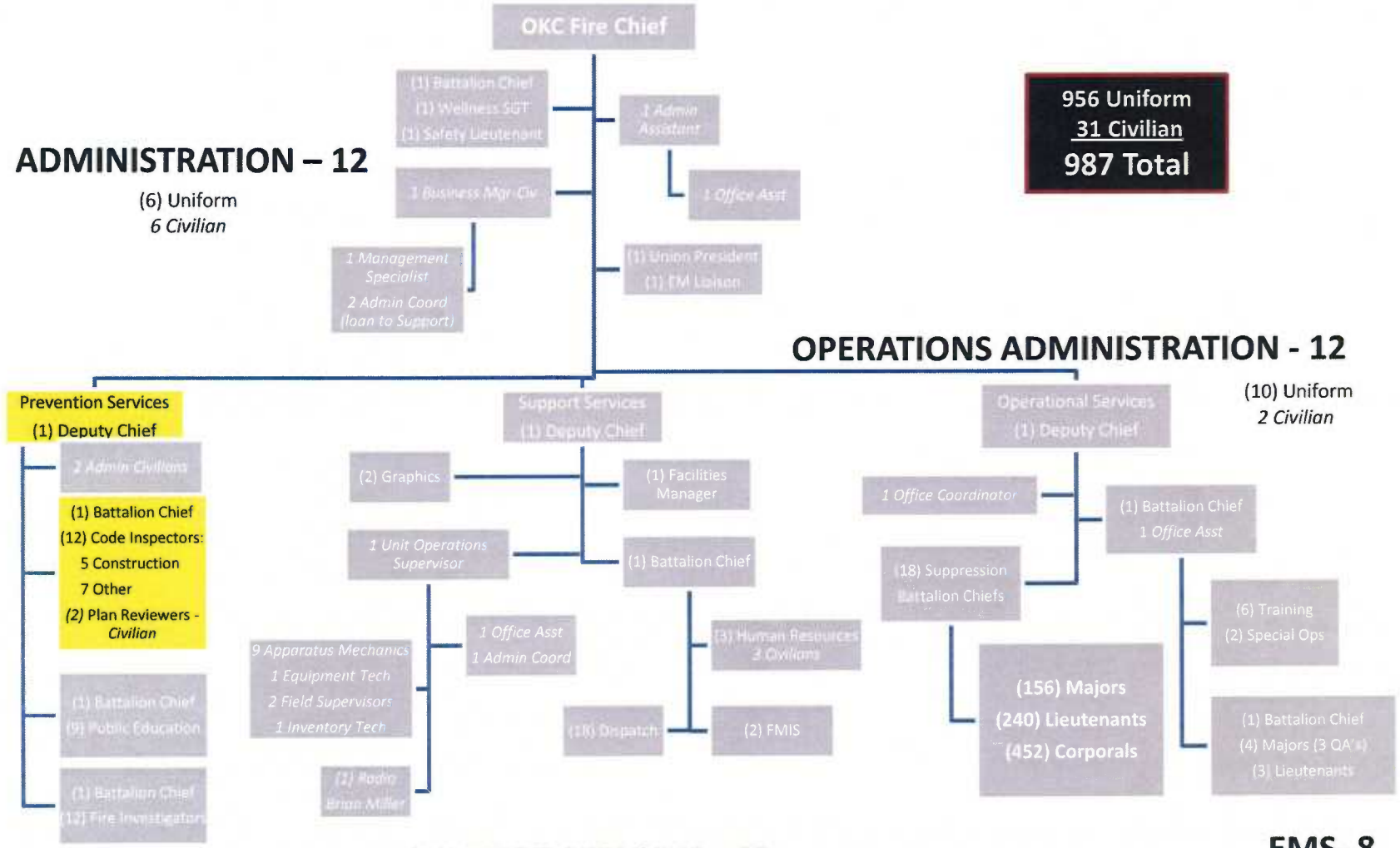
Survey Notes

A. Peer cities are those agreed upon by the city and its labor bargaining representatives.
B. Tucson was contacted but did not respond to the survey.
C. Suburban cities were contacted as a result of their proximity and significance in the metro area.
D. How fire construction inspections are organized within these cities:
   - Uniformed – Uniformed inspectors within the fire department perform inspections for both fire suppression systems and the fire portion of building code.
   - Uniformed/Civilian – Uniformed inspectors within the fire department perform inspections for fire suppression systems, and civilian inspectors within the building department perform inspections for the fire portion of building code.
   - Civilian – Civilian inspectors within the building department perform inspections for both fire suppression systems and the fire portion of building code.

ATTACHMENT B

Fire Organizational Chart

Oklahoma City Fire Department FY 2015 Organizational Chart



Source: Derived from organizational chart provided by Fire Department

ATTACHMENT C

Example Inspector Productivity Report

Example

Construction Inspection Productivity Report
Apr-15

NCO Inspections												
Inspector	Total Requested	Total Inspections	% of Total Work in Section	# Insp. within 3 Days	% Insp. within 3 Days	Hours Worked	Inspections per Day	Inspections per Hour	Total # of Rejections	% of Insp. Rejected	Miles Driven	Miles / Inspection
Inspector 1	80	81	19.61%	75	92.59%	147.00	4.41	0.55	15	18.52%	744.6	9.19
Inspector 2	42	38	9.20%	29	76.32%	145.00	2.10	0.26	3	7.89%	828	21.79
Inspector 3	95	89	21.55%	75	84.27%	148.25	4.80	0.60	10	11.24%	525	5.90
Inspector 4	125	130	31.48%	125	96.15%	148.75	6.99	0.87	12	9.23%	950	7.31
Inspector 5	83	75	18.16%	55	73.33%	138.00	4.35	0.54	5	6.67%	900	12.00
SECTION TOTALS	**425**	**413**		**359**	**86.92%**	**727.00**	**4.54**	**0.57**	**45**	**10.90%**	**3947.6**	**9.56**

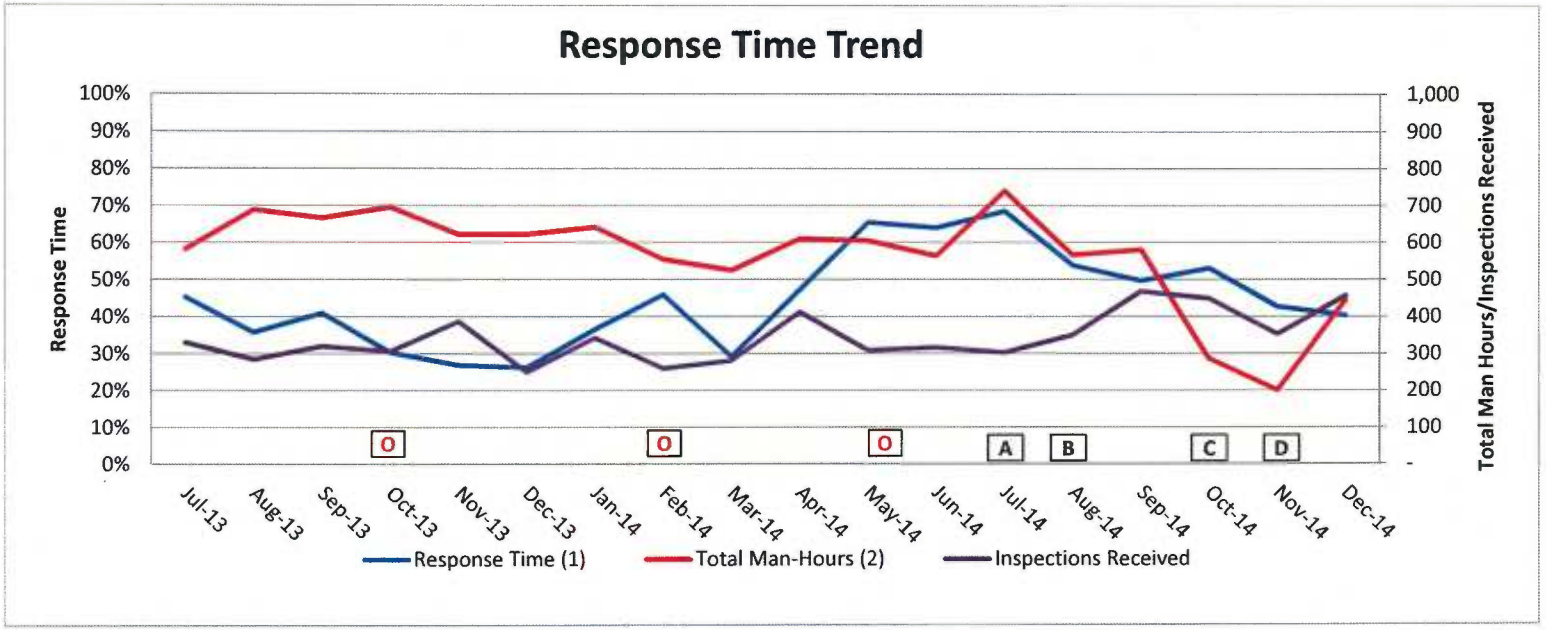
Note: Example report is not intended to be indicative of actual results.

ATTACHMENT D

Example Management Reports

Example Management Report

See note "O" for auditor's observation.



(1) Response Time reflects % of inspections completed within three days.

(2) Total Man-Hours reflects total regular and overtime hours spent performing inspections.

[A] Headcount was increased by 1 beginning July 1 in the 14-15 fiscal year.

[B] Three month CLEET training for new construction inspector began Aug 14.

[C] Two Construction Inspectors left on OJI

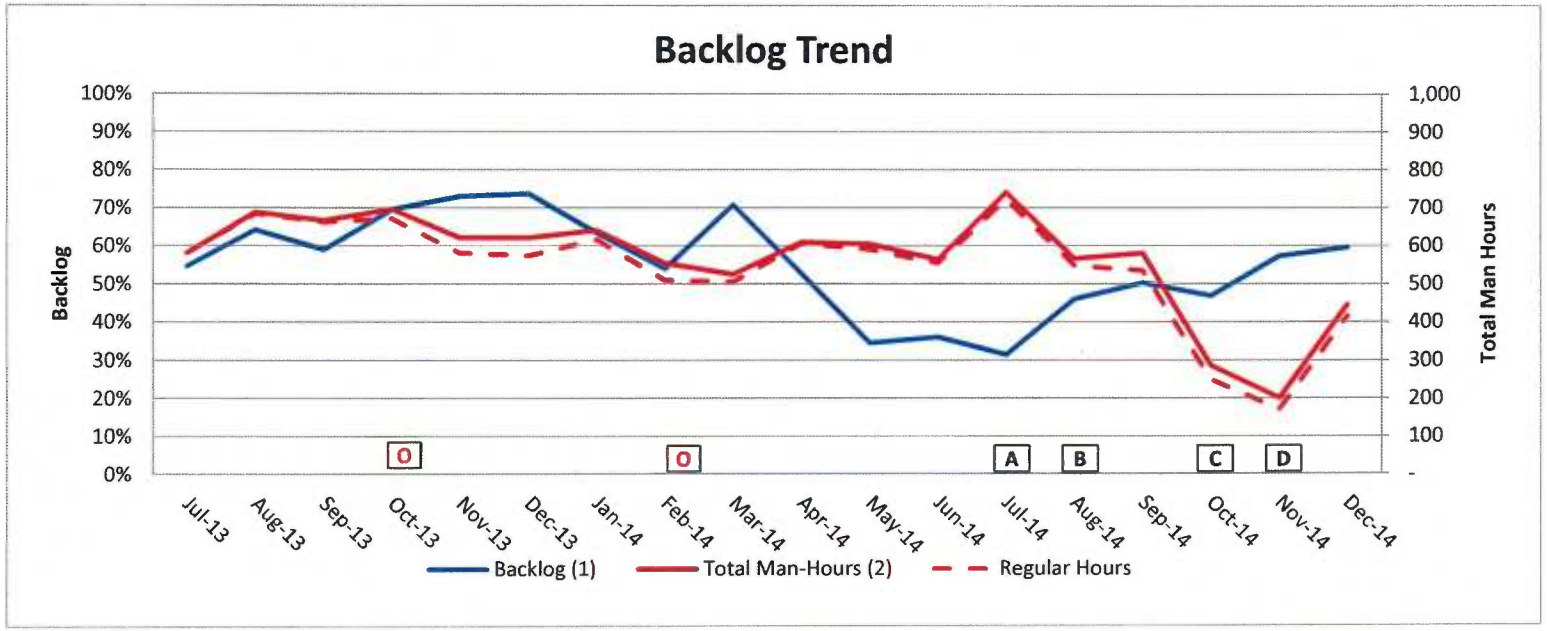
[D] One District Inspector brought in to assist, and inspector returns from CLEET training.

[O] Observation: Dramatic fluctuations in Response Time Performance would have been worthy of management investigation given lack of corresponding change in Total Man-Hours and/or Inspections Received.

Source: Accela and Kronos data

Example Management Report

See note "O" for auditor's observation.

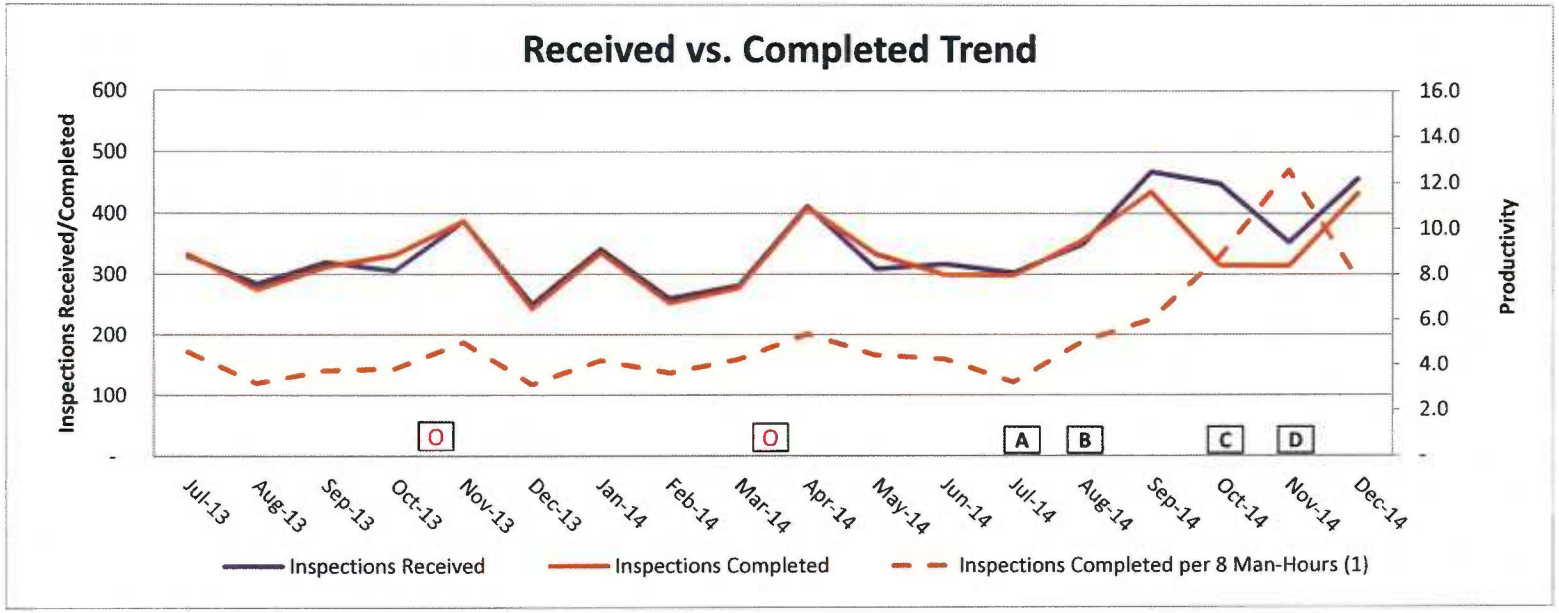


(1) Backlog reflects percentage of inspections not completed within three days.
(2) Total Man-Hours reflects total regular and overtime hours spent performing inspections.
[A] Headcount was increased by 1 beginning July 1 in the 14-15 fiscal year.
[B] Three month CLEET training for new construction inspector began Aug 14.
[C] Two Construction Inspectors left on OJI
[D] One District Inspector brought in to assist, and inspector returns from CLEET training.
[O] Observation: There may be question surrounding adequacy of the additional work effort being applied (i.e., increase in total man-hours, overtime) during periods of backlogs.

Source: Accela and Kronos data

Example Management Report

See note "O" for auditor's observation.



(1) Inspections Completed per 8 Man-Hours reflects the number of inspections completed for every eight hours of work (i.e., productivity).

[A] Headcount was increased by 1 beginning July 1 in the 14-15 fiscal year.

[B] Three month CLEET training for new construction inspector began Aug 14.

[C] Two Construction Inspectors left on OJI

[D] One District Inspector brought in to assist, and inspector returns from CLEET training.

[O] Observation: Inspector productivity appears worthy of management investigation given that the average number of Inspections Completed per 8 Man-Hours fluctuates with the number of new inspection requests. The inspection backlogs presented in the graph on page D-2 indicates sufficient workload to warrant a more constant level of productivity (i.e., Inspections Completed per 8 Man-Hours).

Source: Accela and Kronos data

ATTACHMENT E

Management Responses

MEMORANDUM

The City of
OKLAHOMA CITY
Fire Department

TO: Jim Williamson, City Auditor

THROUGH: James D. Couch, City Manager

FROM: G. Keith Bryant, Fire Chief

DATE: September 3, 2015 Revision

SUBJECT: Fire Department, Fire Prevention-Code Enforcement, Fire New Construction Inspections

Following are management's responses to the status of recommendations outlined in the recent Fire Prevention Code Enforcement, Fire Construction Inspections Audit.

1. Disagree with recommendation. Chapter 20-41 of Oklahoma City Municipal ordinances requires administration and enforcement of the adopted fire codes by the Fire Marshal. Section 20-41 (c) further requires specific qualifications for personnel assigned to carry out inspection and enforcement functions based on education, experience, technical competency and examination. Management feels that this is a vital Life Safety issue. The inspections conducted by Fire Prevention are life safety inspections that require expertise to ensure that compliance is being met. Transfer of the Fire Marshal's Office responsibilities would require negotiations through collective bargaining with the labor group. We strongly feel this function should remain within the Fire Marshal's jurisdiction.

2. Disagree with recommendation. Plan Review is a required function of the adopted fire code-Section 20-41 (b). As stated above this is a function that Fire Prevention should be responsible for. This section further requires the Fire Marshal is responsible for issuance of permits, certificates, notices, approvals and other orders pertaining to fire control and fire hazards-all; of which are component of the plan review process. A higher level of training is necessary to effectively and accurately conduct reviews. The codes and standards within the Fire industry are forever changing requiring ongoing training and would be best suited for Fire Prevention staff to conduct the plan review. Transfer of the Fire Marshal's Office responsibilities would require negotiations through collective bargaining with the labor group.

3. Agree with recommendation. FY 15/16. This is a Labor/Management issue, and we are currently working with labor to try to accomplish a change in work schedules to 8-5, M-F and to eliminate flex hours. If we are unable to accomplish that with labor, we will track flex hours and schedule inspections earlier in the day. In either case we will schedule inspections later in the day.

4. Agree with recommendation. By October 31, 2015 management will develop and implement SOP's to address this issue.

5. Agree with recommendation. By December 31, 2015 management will work with IT on website information to ensure accurate practice. We will develop and implement SOP's to adhere to receiving request for inspection only when the contractor is ready for inspection. If contractors are not ready for inspection the request will be cancelled.

6. Agree with recommendation. By March 31, 2016 management will work with IT to develop a report similar to the Development Center inspection reports and develop and implement SOP's to establish productivity targets.

7. Agree with recommendation. By October 31, 2015 management will develop and implement SOP's to ensure all inspections will be placed in a holding queue and assigned by a supervisor in the order of request. Keeping in mind that there are other factors that may take priority over previous requests.

8. Agree with recommendation. A New Construction supervisor has been hired and by October 31, 2015 SOP's will be developed and implemented to address this issue.

9. Agree with recommendation. By June 30, 2016 management will look into the cost of the GPS technology and how this can be integrated.

10. Agree with recommendation. By June 30, 2016 management will work with IT to see if we can correct the glitch in the system. Develop and implement SOP's to ensure the inspector completing the inspection is the one entering the Accela inspection record.

11. Agree with recommendation. By June 30, 2016 management will adjust the target to 95% of inspections to be completed within 3 business days, to be more in line with peer cities.

12. Agree with recommendation. By June 30, 2016 management will work with IT to correct all of the issues that directly affect the accuracy of the LFR report. This has been a challenge in the past to accomplish with IT, due to their limited staffing and other work assignments.

13. Agree with recommendation. By October 31, 2015 management will develop and implement SOP's to ensure that the inspection data entry is being completed at the time of the inspections.

14. Agree with recommendation. By June 30, 2016 management will work with IT to address any and all issues that will directly cause duplicate records and develop edit reports to identify errors.

15. Agree with recommendation. By June 30, 2016 management will work with IT to revise system security for all New Construction Inspectors.

16. Agree with recommendation. This has already been corrected in Accela.

17. Agree with recommendation. By October 31, 2015 management will develop and implement SOP's ensuring expedited inspections are performed only using overtime and the tracking system accurate and complete.

18. Agree with recommendation. By June 30, 2016 management will develop and implement SOP's regarding waving of inspection/re-inspection fees. We will work with IT on developing a management report.
19. Agree with recommendation. By FY 15/16 management will work with labor on eliminating the requirement for CLEET training for New Construction Inspectors.

20. Agree with recommendation. By October 31, 2015 management will develop a tracking system for time spent on training, and limiting training when targets are not being met.

21. Agree with recommendation. By June 30, 2016 management will work with IT and see what all is involved with the Interactive Voice Response (IVR) system. Also researching avenues to submit request for inspections on line.

22. Agree with recommendation. By June 30, 2016 management will be attending the meetings that are currently held between Development Center and their general contractors. We will need to develop a network base with all other contractors who do not attend the regular scheduled meetings. Also researching avenues to an on line survey for customer feedback.

23. Agree with recommendation. By June 30, 2016 management will work with IT on developing outstanding inspections report.

24. Agree with recommendation. By June 30, 2016 management will work with IT on developing reports similar to that which is being used by the Development Center Construction Inspections.

Thank you for all your time spent on reviewing the Fire Departments New Construction Inspection program.

pc: Kellie Sawyers-Deputy Chief/Fire Marshal
Harold Thompson-Assistant Fire Marshal

MEMORANDUM

The City of
OKLAHOMA CITY

TO: Jim Williamson, City Auditor

FROM: James D. Couch, City Manager

DATE: September 10, 2015

SUBJECT: Fire Construction Inspections Audit

Please find the attached management responses to the status of recommendations outlined in the recent Fire Construction Inspections audit that were submitted by the Fire Department. In addition to those responses, I wish to add some commentary regarding recommendations 1 and 2 from the City Manager's Office perspective.

1. Disagree with Recommendation. The City Manager's Office agrees that there would be several advantages to moving the Fire Construction Inspection function to Development Services, where other construction-related inspections are housed. Efficiencies would be gained, and there would be opportunities for better communication and additional cross-training among various inspectors. However, management would be required to negotiate the removal of this function from the Fire Department with the labor union, and the potential efficiencies do not outweigh the difficulty of negotiating this change.

2. Disagree with Recommendation. The City Manager's Office agrees that the Fire Plan Review and Fire Construction Inspection functions should be kept together. Moving the Fire Plan Review function to Development Services would have the same issues that moving the Fire Construction Inspection has, in terms of requiring negotiation with the labor union.

Thank you for conducting this thorough review of the Fire Construction Inspection function. It has provided some important recommendations that will be implemented and will improve operations.