

Special Report

# Code Inspections

December 2020



The Austin Code Department (ACD) has implemented several actions to improve inspection efficiency since fiscal year 2018. These actions include: increasing staff, realigning the department, and requiring all inspectors to complete an average of five inspections per day. ACD also developed several new processes and tools to assist inspectors with meeting the minimum productivity standard of five inspections per day and increasing efficiency. Some barriers may be keeping ACD from achieving peak efficiency, including barriers related to ACD's system of record, AMANDA, as well as barriers related to processes, training, communication, and leadership. Additionally, ACD's standard of five inspections per day was calculated to meet inspection demand in fiscal year 2018 and may not be the best measure of inspector efficiency.

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Cover: Artwork provided by the Austin Code Department

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## Objective

The objective of this special request was to answer the following questions:

- What are the different types of code violations investigated by ACD?
- How many full-time employees are assigned to investigate each type of code violation?
- How many inspections take place for each type of code violation?
- How does this data compare to peer cities?
- How did ACD determine a daily goal of five inspections per day?
- What processes does ACD use to work toward that goal?
- What barriers may be keeping ACD from achieving peak efficiency?
- During what hours does ACD address violations? Was money specifically allocated to ACD for extending hours?

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## Background

ACD aims to make Austin safer through education, collaboration, and enforcement of city codes. ACD field operations staff are responsible for inspecting, investigating, and enforcing city code violations. Common city code violations include tall weeds and grass, improper land use, illegal dumping, and construction without a permit.

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## What We Learned

The Austin Code Department (ACD) has implemented several actions to improve inspection efficiency since fiscal year 2018. These actions include: increasing staff, realigning the department, and requiring all inspectors to complete an average of five inspections per day. ACD also developed several new processes and tools to assist inspectors with meeting the minimum productivity standard of five inspections per day and increasing efficiency. Some barriers may be keeping ACD from achieving peak efficiency, including barriers related to ACD's system of record, AMANDA, as well as barriers related to processes, training, communication, and leadership. Additionally, ACD's standard of five inspections per day was calculated to meet inspection demand in fiscal year 2018 and may not be the best measure of inspector efficiency.

## What are the different types of code violations investigated by ACD?

Currently, ACD field operations staff are responsible for investigating and enforcing 342 types of code violations. As shown in Exhibit 1, most violations fall into three main categories: land use violations, property abatement violations, and structure condition violations. ACD is also responsible for enforcing one solid waste services violation related to residential trash carts.

**Exhibit 1**  
**ACD Investigates 342 Types of Code Violations**

Violation Category	Description	Number of Violations
Land Use Violations	Related to accessory dwellings, billboards, landscaping, mobile homes, etc.	175
Property Abatement Violations	Related to sanitary conditions and prohibitions on litter	3
Structure Condition Violations	Related to fire, mechanical, and electrical safety	163
Solid Waste Services Violation	Related to residential trash carts	1
<b>Total Number of Code Violations Investigated</b>		<b>342</b>

SOURCE: OCA analysis of types of code violations in ACD's system of record (AMANDA), October 2020

## How many full-time employees are assigned to investigate each type of code violation?

As shown in Exhibit 2, ACD field operations staff includes 69 full-time inspector positions, 10 investigator positions, and 11 supervisor positions. As of November 2020, nine of these positions were vacant, including seven inspector positions and two investigator positions. Inspectors are responsible for inspecting, investigating, and enforcing code violations. Investigators also perform inspections but do more in-depth investigations and assist inspection staff with complex code violations.

Field operations staff are not assigned to investigate specific types of violations. Instead, staff are assigned to six specialty groups which generally focus on different types of properties. Staff are responsible for investigating all types of code violations for the property types they manage within their assigned geographical area.

**Exhibit 2**  
**ACD's 90 Field Operations Staff Members are Assigned to Six Specialty Groups**

Specialty Group	Description	Inspectors	Investigators	Supervisors
Neighborhood	Five geographically assigned teams and an extended hours team that investigate residential properties	43	6	6
Commercial	Investigates commercial businesses, schools, restaurants, and City-owned properties	5	1	1
Licensing and Registration	Manages licenses and registration for hotels, motels, short-term rentals, etc.	11	1	2
Case Review and Escalation*	Manages escalated enforcement actions such as judicial proceedings	1	1	1
Repeat Offender Program	Investigates properties with multiple code violations	7	1	1
Code Connect*	Provides residents with guidance about code requirements	2	0	0
<b>Total Field Operations Staff</b>		<b>69</b>	<b>10</b>	<b>11</b>

\*According to ACD management, Case Review and Escalation and Code Connect teams do not generally perform field inspections and investigations.  
 SOURCE: OCA analysis of staff assigned to specialty groups, October 2020

### How many inspections take place for each type of code violation?

There is not a standard number of inspections completed for each type of code violation. Generally, there are a minimum of two inspections per case when a violation is found. Most cases start when a resident calls 311 to complain about a suspected code violation. An inspector then conducts an initial inspection to confirm whether a violation exists. If a violation is confirmed, an inspector conducts a follow-up inspection later to determine if the issue was addressed. Additional follow-up inspections may be required for some cases, but the number of additional inspections completed per case varies depending on factors such as the type of violation or the length of time it takes a property owner to reach compliance. Based on an analysis of data from ACD's system of record, known as AMANDA, ACD conducted an average of two inspections per case from fiscal years 2015 to 2020.

### How does this data compare to peer cities?

We attempted to compare ACD inspection and staffing data with code departments in other large Texas cities: Arlington, Dallas, El Paso, Fort Worth, Houston, and San Antonio. However, we were unable to complete a reliable peer city analysis because of notable differences in code departments across these cities and difficulty obtaining comparable data. The code departments we reviewed enforce similar types of violations to ACD, such as violations related to building standards, property standards, and permitting requirements. However, there are some significant differences. Dallas, which reported investigating about 900 types of violations, also investigates public health violations at bars and restaurants as well as public swimming pools. Houston, which reported investigating 97 types of violations, does not have zoning regulations that require enforcement. These organizational differences and the lack of reliable data on other cities made it difficult to draw meaningful conclusions about how ACD's inspection and staffing data compares to other cities.

## How did ACD determine a daily goal of five inspections per day?

In fiscal year 2018, ACD management announced a department realignment, referred to as A New Way Forward. ACD also added 17 additional positions to field operations. According to an internal memo, the purpose of the increased staffing and department realignment was to enhance ACD's capacity to deliver services, balance inspector workloads, and maintain a high performing workforce.

As part of A New Way Forward, ACD outlined new productivity expectations for enforcement activities. This included the expectation that all inspectors complete an average of five inspections per day. The standard was calculated based on the number of inspections each staff person needed to complete to meet inspection demand at that time. The standard is currently still in place, though management reported focusing less on the standard since the Coronavirus pandemic began in early 2020.

## What processes does ACD utilize to work toward that goal?

ACD has developed several new processes and tools to assist inspectors with meeting the minimum productivity standard and increasing efficiency. This includes processes for prioritizing cases, determining efficient driving routes between inspection sites, and monitoring inspector performance.

### Prioritizing Cases

In November 2017, ACD implemented a new case prioritization tool called the Code-Tiered Enforcement Response Matrix (C-TERM). C-TERM is intended to help inspectors prioritize high-risk violations and respond to resident complaints more efficiently and consistently. As shown in Exhibit 3, C-TERM requires a response to violations within a certain amount of time. For example, violations that pose an imminent danger to life and safety must be responded to within one hour.

**Exhibit 3**  
**C-TERM Sets Standard Priority Levels and Response Times for Violations**

Priority Level	Response Time	Examples of Type of Violations
1 - Imminent Danger/Life-Safety	1 hour	Natural disasters, emergency responses, etc.
2 - High-Risk Hazard/Time Sensitive	24 hours	Open or accessible dangerous buildings, potentially dangerous nuisances, etc.
3 - Land Use/Structural	3 working days	Site plan violations, work without permit, etc.
4 - Property Maintenance/Use	4 working days	Setback violations, fencing, parking, storage, infestations, etc.
5 - Other Abatement	5 working days	High weeds, trash, illegal dumping, etc.

SOURCE: OCA review of ACD's Code-Tiered Enforcement Response Matrix, October 2020

## Determining Efficient Driving Routes

ACD developed an application that allows inspectors to select locations from their daily list of tasks and generate the most efficient driving route between locations. Staff report this has improved productivity by decreasing the travel time between locations.

## Monitoring Performance

Following a 2016 audit of code inspection processes, ACD implemented new procedures for monitoring inspector performance. The procedures require managers to complete several reports on a regular basis, such as monthly reports on individual inspector performance. As part of A New Way Forward, ACD also developed several dashboards to illustrate inspector case load and case status. These dashboards are updated daily, and supervisors can use them to balance inspector workload and monitor performance. Supervisors provide a corrective action work plan to inspectors who do not meet the minimum productivity standards of an average of five inspections per day.

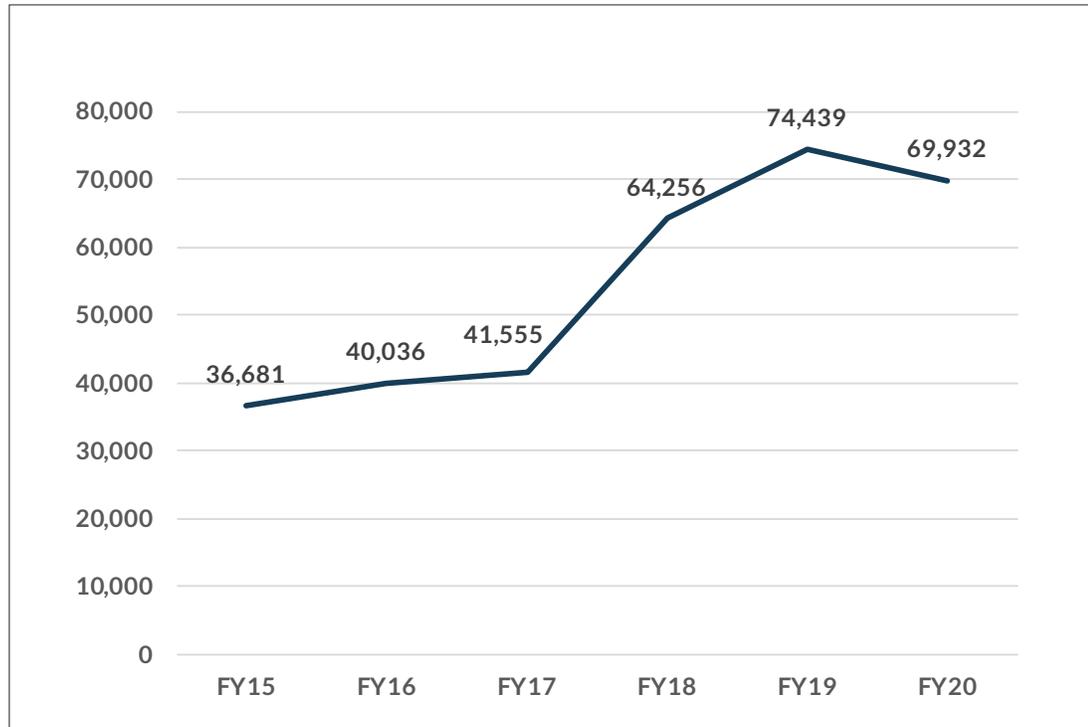
ACD also created a tool to calculate inspector productive time, called the productivity calculator. This calculator allows supervisors to monitor time spent away from the field, referred to as non-productive time. Non-productive time may include authorized absences, court appearances, training, and neighborhood meetings. According to ACD staff, supervisors are required to approve non-productive time to ensure it does not become a barrier to efficiency. ACD also uses the tool to calculate individual average productivity figures based only on hours inspectors are assigned to the field.

## What barriers may be keeping ACD from achieving peak efficiency?

Internal ACD documentation suggests that the department's inspection performance increased after the implementation of A New Way Forward and the new productivity standard. Documents provided by ACD show that, overall, ACD exceeded the productivity standard every month in fiscal year 2019. Some individual inspectors did not meet the average and others exceeded it.

As shown in Exhibit 4 and in more detail in the Appendix, based on a review of inspection data, there was an increase in the number of inspections completed after ACD implemented A New Way Forward and added new staff in fiscal year 2018. The average number of inspections completed per inspector also increased. However, ACD changed the way staff recorded inspections around the same time. Prior to fiscal year 2018, inspection data only included inspections performed in response to a complaint. Beginning in fiscal year 2018, ACD began including proactive inspections in addition to complaint-driven inspections. This change may have also contributed to an increase in reported inspections. Because these changes occurred around the same time, it is not possible to determine to what extent this increase resulted from an increase in productivity or from the changes in the way inspections were recorded.

**Exhibit 4**  
**Inspections Completed Increased Significantly in Fiscal Year 2018**



SOURCE: OCA analysis of inspection data in ACD's system of record (AMANDA), October 2020

While ACD has worked to improve efficiency since 2018, there may be additional improvements ACD can make to further increase efficiency. We surveyed ACD field operations staff in October 2020 to gather their input on potential barriers to efficiency. We distributed the survey to all current field operations staff including inspectors, investigators, supervisors, and division managers who oversee field operations teams. As shown in Exhibit 5, fifty-five of the 86 current field operations staff (64%) responded.

**Exhibit 5**  
**64% of ACD Field Operations Staff Responded to our Survey**



**76% of respondents were inspectors & investigators**

**24% of respondents were supervisors, division managers, & executive staff members**

SOURCE: Survey of ACD field operations staff conducted by OCA, October 2020

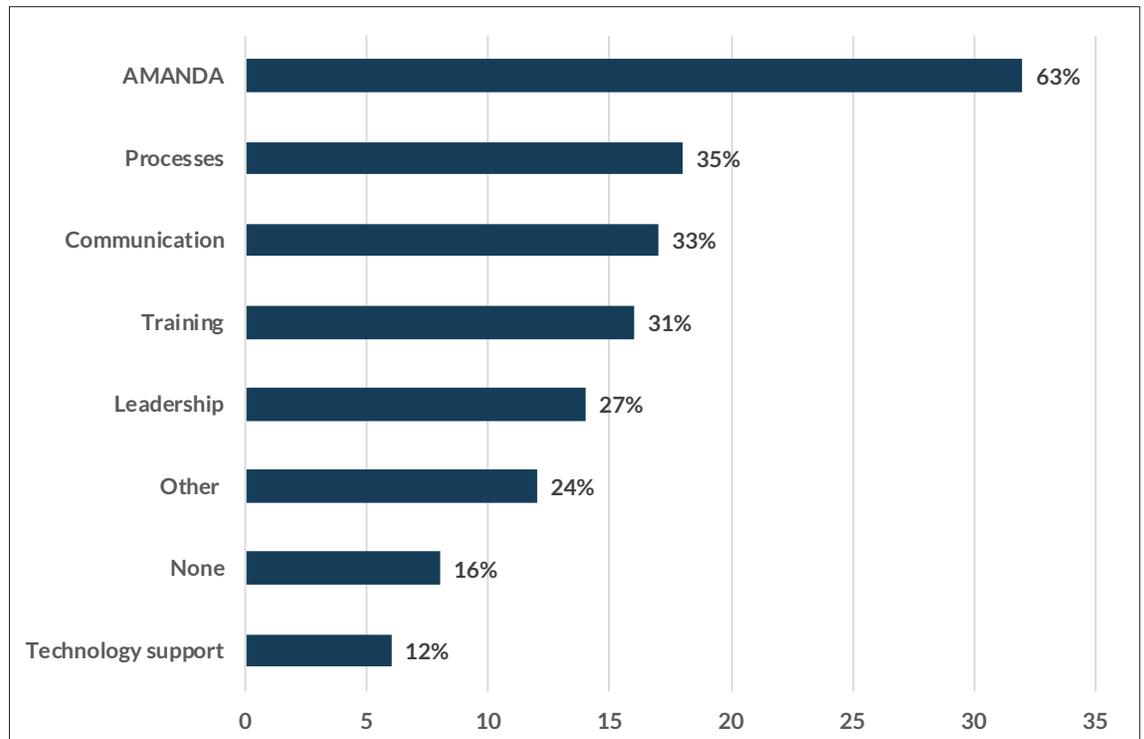
Based on results of the survey, the most significant barrier to efficiency may be AMANDA, which was selected by 32 of 51 respondents (63%) and was commonly selected by both managers and staff. In open-ended responses, respondents commonly indicated that using AMANDA is difficult or complicated and that it is not the best system for code enforcement processes. Additionally, respondents cited issues with internet connectivity in the field.

Respondents were also asked what one change they would make to help ACD become more efficient. The most common responses suggested improvements or changes to AMANDA. AMANDA was also identified as a potential barrier to efficiency in an internal ACD program evaluation done in 2020 and by managers in interviews.

As shown in Exhibit 6, other barriers to efficiency may include processes, communication, training, and leadership.

- About 35% of field operations staff who responded to our survey indicated processes were a barrier, generally stating that code enforcement processes are inconsistently implemented across cases.
- About 33% of staff who responded indicated communication was a barrier, though little additional detail was provided.
- About 31% of staff who responded indicated training was a barrier to efficiency, generally stating that there was not enough training or that existing training was not adequate.
- About 27% of staff who responded indicated leadership was a barrier, generally stating that leadership could be more connected to field operations and that there is inconsistent supervision.

**Exhibit 6**  
**Respondents Said Barriers may Include AMANDA, Processes, Communication, Training, and Leadership**

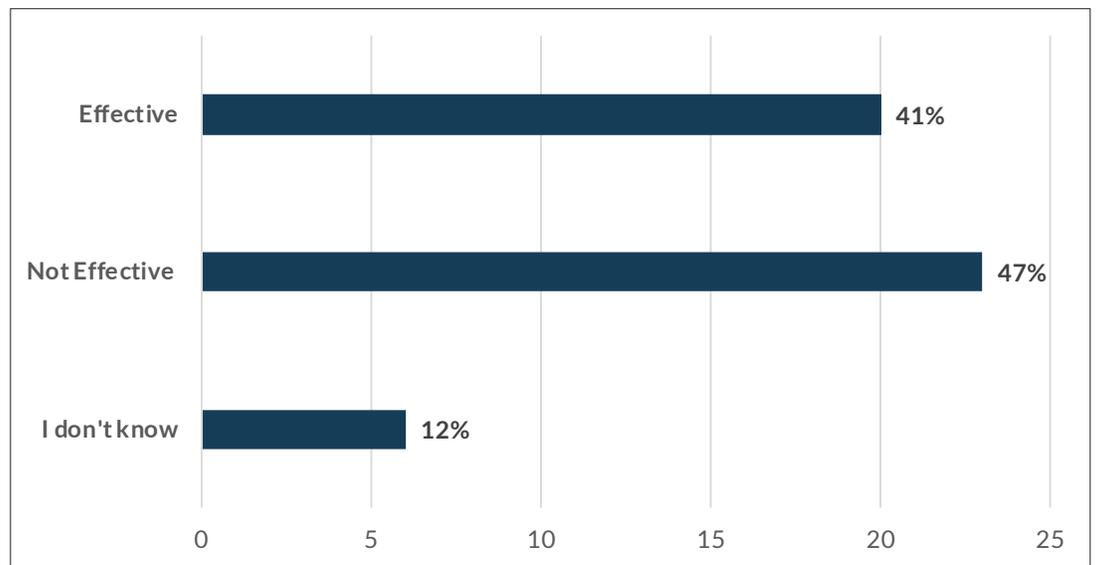


SOURCE: Survey of ACD field operations staff conducted by OCA, October 2020

Another possible barrier to ACD achieving peak efficiency is that ACD's minimum productivity standard may not be the best measure of inspector efficiency. Internal ACD documents suggest the minimum productivity standard was developed to meet demand rather than as a goal to reach peak efficiency. It is possible that inspectors may be able to do more than an average of five inspections per day. The standard may also be inappropriate since it applies to all inspectors equally. The number of inspections an inspector can complete per day depends on several factors including location, whether the inspection is proactive or complaint-driven, and the type of inspection. Additionally, demand fluctuates from year to year, but the metric has not been updated accordingly.

As shown in Exhibit 7, about 47% of field operations staff who responded to our survey said they thought the minimum productivity standard was not effective. Those who indicated the standard was effective generally said it was effective because it was reasonable to achieve or because a standard was needed, not necessarily because it was the right standard or because it helped increase efficiency.

**Exhibit 7**  
**47% of Respondents Said the Minimum Productivity Standard is Not Effective**



SOURCE: Survey of ACD field operations staff conducted by OCA, October 2020

While ACD management said the standard has not been reviewed since it was implemented, managers suggested that focusing on response time and compliance with C-TERM may be a better way to improve the number of inspections completed per day.

### During what hours does ACD address violations? Was money specifically allocated to ACD for extending hours?

The majority of ACD teams operate from 7:00 a.m. to 4:00 p.m. Monday through Friday. In fiscal year 2018, eight positions, including 5 new inspectors, were funded to implement extended ACD operating hours. ACD's Extended Hours team operates 9:00 a.m. to 8:00 p.m. Monday through Saturday.

# Appendix - Inspection and Staffing Trends Over Time

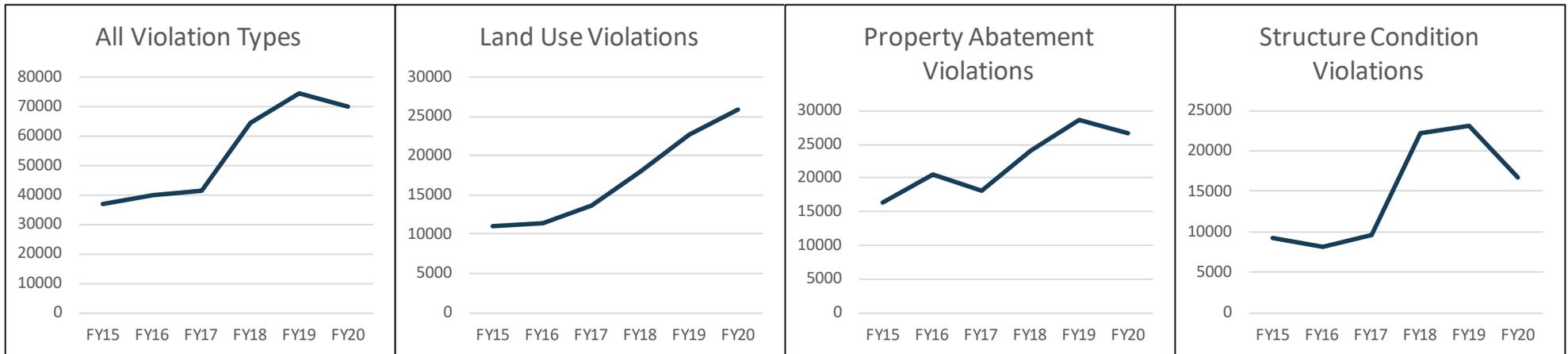
Based on inspections recorded in AMANDA, ACD's reported inspections have generally increased over the last several years, except for fiscal year 2020. The number of inspections completed for most violation types in fiscal year 2020 likely decreased because of operational changes due to the Coronavirus disease (COVID-19) pandemic. However, inspections for land use violations increased in fiscal year 2020 partially because cases related to COVID-19 are coded as land use violations. The significant increase in completed inspections in fiscal year 2018 appears to align with the increase in staff that occurred the same year.

## Inspections Completed by ACD Inspectors from Fiscal Year 2015 (FY15) through Fiscal Year 2020 (FY20)

	FY15	FY16	FY17	FY18	FY19	FY20	Total
Land Use Violations	10,922	11,431	13,611	17,921	22,581	25,950	102,416
Property Abatement Violations	16,403	20,480	18,151	23,917	28,525	26,632	134,108
Structure Condition Violations	9,307	8,102	9,548	22,280	23,162	16,784	89,183
Solid Waste Services Violations*	49	23	237	121	112	121	663
Violations Not Coded**			8	17	59	445	529
<b>Total</b>	<b>36,681</b>	<b>40,036</b>	<b>41,555</b>	<b>64,256</b>	<b>74,439</b>	<b>69,932</b>	<b>326,899</b>

\*Solid Waste Services Violations are not charted below because the numbers are too small.

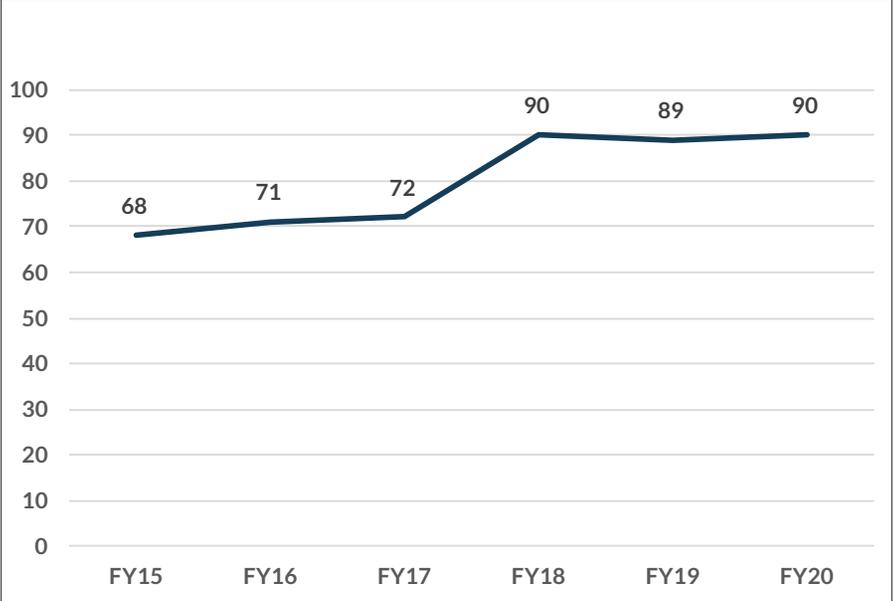
\*\*The violation type was not coded for some inspections. This issue increased in fiscal year 2020 likely due to an issue with the connection between 311 and AMANDA, which ACD staff reported has since been resolved.



SOURCE: OCA analysis of inspection data in ACD's system of record (AMANDA), October 2020

# Appendix (continued)

**Staff Assigned to Field Operations from FY15 through FY20**



SOURCE: OCA analysis of ACD staffing data provided by the Budget Office, November 2020

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## Why We Did This Report

This report responds to a request from Council Members Paige Ellis, Alison Alter, Jimmy Flannigan, and Leslie Pool regarding code inspections.

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## Scope

The project scope included Austin Code Department code violation and inspection activities from fiscal year 2015 to fiscal year 2020.

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## Methodology

To complete this special request, we performed the following steps:

- interviewed staff in the Austin Code Department;
- analyzed Austin Code Department data;
- reviewed policies, procedures, and other documentation related to inspection processes;
- reviewed relevant past audits and internal evaluation reports;
- surveyed a sample of peer cities regarding inspection processes and analyzed results; and
- surveyed field operations staff about inspection processes and analyzed results.

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## Project Type

Special request projects conducted by the Office of the City Auditor are considered non-audit projects under Government Auditing Standards and are conducted in accordance with the ethics and general standards (Chapters 1-3).

The Office of the City Auditor was created by the Austin City Charter as an independent office reporting to City Council to help establish accountability and improve City services. Special requests are designed to answer specific questions to assist Council in decision-making. We do not draw conclusions or make recommendations in these reports.

**Team**

Katie Houston, Audit Manager  
Maria Stroth, Auditor-in-Charge  
Francis Reilly

**City Auditor**

Corrie Stokes

**Deputy City Auditor**

Jason Hadavi

**Office of the City Auditor**

**phone:** (512) 974-2805

**email:** [AustinAuditor@austintexas.gov](mailto:AustinAuditor@austintexas.gov)

**website:** <http://www.austintexas.gov/auditor>



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