



# Investigation of Workflow Processes and Best Practices in Kentucky's CDL Program

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Kentucky Transportation Center  
College of Engineering, University of Kentucky, Lexington, Kentucky

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Kentucky Transportation Cabinet  
Commonwealth of Kentucky

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**Research Report**  
KTC-21-16/RSF-55-1F

**Investigation of Workflow Processes and Best Practices in Kentucky's CDL Program**

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## List of Acronyms

AAA: American Automobile Association  
AAMVA: American Association of Motor Vehicle Administrators  
ACD: AAMVA Code Dictionary  
AOC: Administrative Office of the Courts  
ATA: American Trucking Association  
BAC: Blood Alcohol Content  
BAL: Blood Alcohol Level  
BMV: Bureau of Motor Vehicles  
CATS: County Attorney Traffic School  
CDL: Commercial Driver's Licenses  
CDLIS: Commercial Driver License Information System  
CDLPI: Commercial Driver's License Program Improvement  
CHFS: Cabinet for Health and Family Services  
CLP: Commercial Learner's Permit  
CMV: Commercial Motor Vehicle  
CMVSA: The Commercial Motor Vehicle Safety Act  
COT: Commonwealth Office of Technology  
CSC: Complied with Child Support Arrears  
D51: Failure to Pay Child Support  
DCS: The Division of Customer Service  
DDL: Division of Driver Licensing  
DMC: Division of Motor Carriers  
DMV: Department of Motor Vehicles  
DMVL: The Division of Motor Vehicle Licensing  
DUI: Driving Under Influence  
DVR: Division of Vehicle Regulation  
EPIC: Electronic Potential Integrated Circuit  
FFTL: Federally Funded Temporary Labor  
FHWA: Federal Highway Administration  
FMCSA: Federal Motor Carrier Safety Administration  
FTA: Failure to Appear  
FTC: Failure to Comply  
GLP: Graduated License Program  
IID: Ignition Interlock Device  
KAR: Kentucky Administrative Regulations  
KDLIS: Kentucky Driver Licensing System  
KTC: Kentucky Transportation Center  
KYTC: Kentucky Transportation Cabinet  
MCSAP: Motor Carrier Safety Assistance Program  
MPR: Master Pointer Record  
NDR: National Driver Register  
NHTSA: National Highway Traffic Safety Administration  
NLETS: National Law Enforcement Telecommunications Network  
NRCME: National Registry of Certified Medical Examiners  
OOIDA: Owner Operated Independent Driver Association  
OOS: Out-of-Service  
PDPS: Problem Driver Pointer System  
PSA: Proof of Citation Satisfied Letters  
SDLA: State Driver License Agency  
SEE: Search, Evaluate, Execute

SIPDE: Search/Scan, Identify, Predict, Decide, Execute  
SPIDER: Scan, Predict, Identify, Decide, Execute, Reflect  
STS: State Traffic School  
UNI: Unified Network Interface  
USDOT: United States Department of Transportation  
VASAP: Virginia Alcohol Safety Action Program

## Executive Summary

Kentucky's Division of Driver Licensing maintains the driver history records for all licensed drivers in Kentucky. It serves as the state driver licensing agency (SDLA) and is the locus for meeting the federal CDL requirements under 49 CFR 384. Kentucky's state driver licensing agency (SDLA) relies on FMCSA's Commercial Driver's License Program Implementation (CDLPI) grant funding to subsidize salaries for Federally Funded Temporary Labor (FFTL). FFTLs verify and process documents and field phone calls from customers, including drivers, SDLAs, state agencies, federal agencies, and law enforcement. Due to the state's limited revenue sources, Kentucky's SDLA cannot fund temporary or full-time staff members to meet the labor demands, and SDLA administrators say FFTLs are essential to ensuring the state meets the CDL reporting timeframes. However, FMCSA indicated a reluctance to continue funding FFTLs. Without the funding for FFTLs, Kentucky's SDLA anticipates difficulty meeting FMCSA compliance standards or passing an FMCSA CDL program audit without the use of FFTLs. The research team undertook a study to identify strategies for optimizing workflow and adjusting to the loss of FFTLs. This study examines the approaches states are currently using to administer state and federal CDL requirements, and analyzes how those approaches may help state CDL programs remain compliant despite fewer resources. Of particular interest are efforts to improve efficiency, such as technological innovations to automate workflow, decreased bureaucratic inefficiencies, and policy changes. Also, the study evaluates Kentucky's current workflow to identify opportunities for improvement. The research will not only help Kentucky adjust to staffing limitations; it also provides other SDLAs with tools to implement innovative practices in their state's CDL program.

DDL Employees identified that manual processes have a significant impact on DDL workflow. They affect the labor needed to maintain CDL records and continually update the Commercial Driver License Information System (CDLIS). The second concern is the aging mainframe system, Kentucky Driver's License Information System (KDLIS), which uses the COBOL programming language. Very few computer programmers have skills in COBOL, making it difficult to find qualified individuals to make programming changes to improve workflow. While it is clear that a modern system should replace KDLIS, this is cost-prohibitive for Kentucky, given limited fiscal resources. However, Kentucky has successfully invested in web-based automation for some CDL-related process. The myCDL web portal helped the agency adapt to declining staffing numbers and improved workflow efficiency. However, there are remaining manual workflow processes that may hold potential for automation.

Researchers also conducted a literature review regarding CDL regulations and state governments. FMCSA conducted a study of their CDL program and state CDL programs, concluding that states struggle with three main challenges: aging technology, limited funding for IT improvements, and limited staffing. The FMCSA recommends that states re-prioritize their CDL programs by stressing the importance of highway safety programs. They also advocate increased training for CDL issuance, law enforcement, and the judicial branch. The literature review also found that many states are investing in automation and e-government to meet these challenges.

Researchers also distributed surveys to identify best practices used by other SDLAs. A survey of IT administrators in 50 states and the District of Columbia revealed that most SDLAs are operating on driver licensing databases that are 15 years old and most of the states did not have plans to upgrade those databases. Instead, states rely on programming patches to address limitations within their mainframe systems. However, several states are automating portions of CDL-related data. CDL Histories are the most likely to be wholly automated, while medical certifications and self-certifications were the most likely to be somewhat automated. Medical waivers are the least likely to be automated. CDL-related automation can only continue as long as states can access adequate funding.

A second survey contained questions related to the workflow processes in the state SDLAs. Kentucky DDL staff indicated email could improve workflow efficiency. Based on survey data, many states are increasing email communication, although only 13 percent of respondents utilize email in their workflow processes. Based on survey questions inquiring about the number of employees required to complete CDL related tasks, Kentucky's staffing levels are close to the staffing levels of other SDLAs. Also, the automation level of a CDL-related process appears to be inverse to the number of employees required to complete a process. Most notably, half of the states have been found to be out of compliance with FMCSA regulations, including failure to report convictions in a timely manner or

having state laws not consistent with federal CDL laws. Despite the many agency challenges, Kentucky has never been found out of compliance.

The research team shadowed DDL employees as they completed various manual processes such as reviewing documents and inputting the data into KDLIS, and correcting errors in documents that resulted in a record entry being rejected by the database. The research team found three reasons for a process to require manual completion: 1) limited funding preventing programming updates in KDLIS; 2) requiring human judgement to correct errors and ensure the corrections charges are accurately applied to a driver history record; 3) opportunities for automation or improvements in efficiency simply have not been identified. The research team analyzed each process and identified potential strategies for automation.

Kentucky's SDLA continues to meet 10-day processing windows despite the loss of CDLPI funds for FFLs. Staff members attribute this to the introduction of the myCDL portal. The research team concluded that Kentucky should continue to identify similar avenues for automation. In addition, Kentucky's myCDL portal should be studied as a best practice for other states that are facing resource limitations in their CDL program.

## Chapter 1 Introduction

The State Driver License Agency (SDLA) in Kentucky is comprised of two separate but related entities. The first entity is the circuit court clerk system that maintains branch offices in each county to issue drivers' licenses as established under KRS 186.014. The second is the Kentucky Transportation Cabinet (KYTC), which administers regulations involving motor vehicle licensing and driver licensing as established under KRS 186.400. The Division of Vehicle Regulation (DVR) is a central organizational unit within KYTC identified in KRS 174.020. The Kentucky Administrative Regulations (KAR) that govern the activities of DVR are found in Title 601. DVR consists of four divisions: The Division of Customer Service (DCS), Division of Driver Licensing (DDL), Division of Motor Carriers (DMC), and the Division of Motor Vehicle Licensing (DMVL). DVR is headed by a commissioner who is appointed by Kentucky's governor. Kentucky's DDL is responsible for maintaining the driver history records for all licensed drivers in Kentucky. It serves as the locus for meeting the federal CDL requirements under 49 CFR 384.

This chapter examines DDL and the everyday duties agents must perform to remain compliant with 49 CFR 384. It outlines the background of the division and discusses the many challenges of maintaining Kentucky driver history records. Included is a discussion of manual processes and how they impact the workflow of DDL. While not all the manual processes are specifically related to commercial driver's licenses (CDL), they affect CDL holders and affect the labor needed to maintain CDL records. Finally, this section provides details about the myCDL portal, which enabled the agency to adapt to declining staffing numbers and improve workflow efficiency.

### 1.1 Administrative Functions of DDL

DDL is responsible for changing and updating the driver history records for Kentucky drivers. A director heads the division, and the division is divided by branches, then sections. This research pertains to the following sections: Court Records, CDL, and Records Verification in the Court Records/CDL Branch as well as Driver Education in the Education, Records, and Fees Branch. All sections discussed in this research are responsible for administering tasks related to CFR 384.

The CDL Section handles the bulk of work relating to CDLs. All communication concerning CDL driving records and state and federal compliance matters are routed through the section. The section agents communicate with other SDLAs, the Federal Motor Carrier Safety Administration (FMCSA), and the American Association of Motor Vehicle Administrators (AAMVA). The CDL section also interacts with the circuit court clerks during the permit and licensing process. The employees field phone calls and emails regarding CDLs from drivers, trucking companies, the Kentucky Trucking Association as well as other entities concerning the application process and processing time. Agents review and post medical certifications, self-certifications, and CDL/Commercial Learner's Permit (CLP) applications to the driver history record required under 49 CFR 383.71. 49 CFR 383.73 requires SDLAs to have two employees to verify these documents. The CDL section also performs the 10-year history survey (required under 49 CFR 384.206), updating the driver history record, if necessary. This section also approves or denies Kentucky intrastate medical waivers, CDL applications for military personnel, hazardous material extensions, and temporary commercial driver licenses for farm restricted services. All changes to state-of-record information for CDL transfers are reviewed for accuracy and posted to driver history records in this section. Additionally, agents track and resolve the Unified Network Interface (UNI) errors.

The Court Records Section obtains information from court systems (inside and outside of Kentucky) regarding changes needed to drivers' licenses and modified driver history records. This section handles all communications regarding court adjudications, suspensions, and reinstatements. Failure to pay penalties, appear in court, or failure to comply with court orders involving driving violations are posted to driver history records as well. Agents in the section post out-of-state convictions, court summons notices, appeals, expungements, and clearances to driver history records. The agents also investigate and correct clerk errors on electronic transmissions of court actions. Details for each of these processes are available in the Manual Workflow Processes section of Chapter 3.

The Records Verification Section sends correspondence to drivers notifying them of driver's license actions, including suspensions, eligibility requirements, reinstatements, and driver's license point accumulations. The agents in this

section also modify suspension time and determine eligibility for license reinstatement, including CDL drivers. The section evaluates suspensions received on all class drivers (operator’s, motorcycle, CDL) for accuracy in suspension time and correctness of driving records according to state and federal regulations.

The Driver Education Section handles the ignition interlock device (IID) program, State Traffic School (STS) program, and Substance Abuse Treatment. The section approves and administers the STS and Graduated License Program (GLP) curricula for young drivers. Agents approve and process in-state and out-of-state substance abuse treatment completion documents, as well as approve applications for IIDs and apply them to the driver history record. Section employees also maintain correspondence with drivers who are participating in these programs.

### 1.2 Compensation for DDL Staff Members

Researchers asked section supervisors to provide salaries and the number of employees in their sections. Table 1 shows the estimated monthly salaries for staff members in Court Records, Records Verification, CDL, and Driver Education. Administrative Specialists earn just over \$1800 monthly, and employees in the Administrative Specialist II position earn just over \$2000. Employees in the Administrative Specialist I and II positions provide professional-level support in the review, evaluation, development, and implementation of the agency's activities and other duties as required. The Administrative Specialist III position earns close to \$2500, and their job description has more responsibility than the Specialist I and II positions. These staff members provide professional support to the division head and office to develop, implement, and maintain various complex programs, projects, or activities. An administrative specialist III may supervise subordinate employees and perform other duties as required. A Program Coordinator earns \$2600. The program coordinator handles all inter and intra-unit administrative functions of a specific program on a statewide basis. The Section Supervisor earns \$3400 per month, and they provide direct supervision over all employees within a section. Most of the activities discussed in this research pertain to administrative specialists supervised by the Section Supervisor.

**Table 1.1 Monthly Salaries for Section Employees**

Title	Salary
Administrative Specialist I	\$1,823
Administrative Specialist II	\$2,006
Administrative Specialist III	\$2,427
Program Coordinator	\$2,600
Section Supervisor	\$3,400

Researchers also asked supervisors to provide the number of employees in their sections, displayed in Table 2. Court Records and the CDL sections both have eight employees each. Also, the Records Verification Section has six employees, while the Driver Education Section has 10 employees.

**Table 1.2 Employee Numbers for Sections**

Section Name	Number of Employees
Court Records	8
Records Verification	6
CDL Section	8
Driver Education	10

### 1.3 Current Challenges in DDL

In May 2017, KTC researchers interviewed DDL employees to understand the various challenges in their day-to-day activities. Employees expressed concern over staffing shortages in the CDL Section. Kentucky utilized Federally Funded Temporary Labor (FFTL) to supply staff to process CDL/CLP applications, medical certificates, and self-certifications. This labor was funded through the Commercial Driver’s License Program Improvement (CDLPI) grant.

However, in 2016, FMCSA said personnel funding was no longer a priority for the CDLPI grant. The CDL Section expended Kentucky's FFTL CDLPI grant funding in May 2017.

Staff members anticipate the loss of FFTL funding and labor will impede their ability to meet the 10-day CDLIS update requirement for the medical certificate, CDL/CLP application, and self-certification. DDL also has a staffing shortage of full-time workers in the CDL Section. While managers and supervisors are replacing staff, it is a lengthy process and includes a four-month training period.

There are also technological challenges. The aging Kentucky Driver Licensing System (KDLIS) is a mainframe platform that contains the driver history records database. KDLIS was designed in 1991 and uses COBOL programming language. COBOL is a very secure platform; however, KDLIS has many programming issues. Employees at Kentucky's Commonwealth Office of Technology (COT) create workarounds to adapt, but this is inefficient and takes time away from other activities. Currently, there are only two people within the organization that have COBOL programming skills. Additionally, there are bandwidth limitations to the number of people who can make programming modifications to the mainframe at the same time, which delays updates. DDL could hire additional programmers, but COBOL is no longer taught in university-level computer science programs. As a result, there are few people on the employment market with COBOL programming skills. Employees say the only way to rectify this problem is to replace KDLIS, which is an expensive proposition that could only be accomplished if a funding source is identified.

Another challenge pertains to the medical card certification process. As of May 21, 2015, the United States Department of Transportation (USDOT) requires medical examiners to be registered on the National Registry of Certified Medical Examiners (NRCME). To get their card renewed, drivers must find a certified medical examiner who submits the examination results to a repository with the FMCSA. However, FMCSA has not developed an interface between the federal repository for medical certifications and the SDLAs' computer systems. As a result, certified medical examiners send their examination data to the FMCSA, but the data is not available to the SDLA databases. The cards must also be sent to the state of record, creating confusion. Drivers and examiners assume the data is also being forwarded to the state when they submit it to FMCSA. If the states do not receive the medical certification, the drivers receive letters stating their CDL privileges have been suspended because they do not have a valid medical card on file. This is a particularly problematic scenario. First, staff members are required to make manual updates to CDLIS because the drivers are then disqualified. Second, CDL Section staff must field calls from drivers to explain the problem. Many times these drivers are angry, which can be stressful to staff members. Third, due to the confusion, drivers could be operating for a year or more on invalid medical cards. In that case, the driver has to take the written and vision tests again. This particular workflow problem cannot be rectified until the medical examination repository can interface with the SDLA databases.

During interviews, staff members also discussed the strain of managing the workload from manual processes. They would like some manual processes to be automated, allowing them to focus on other tasks. They also say that automation for these processes should receive more priority than it currently has. This report reviews those processes and recommends possible areas of automation.

Finally, interviews with DDL staff members also uncovered communication issues between Kentucky and out-of-state SDLAs. Since the 49 CFR 384 compliance mechanism for SDLAs is decentralized, each state has its own statutes and processes governing their driver history record-keeping. As a result, there are no standards of communication among the SDLAs. CDL Section agents say this creates a communication breakdown that makes it challenging to keep driver history records up-to-date. In some cases, states will simply not provide information about drivers when their agents contact them. These states generally refer to privacy laws saying that the driver must contact them instead. CDL branch employees suggest that states exchange contact information to improve communication among the SDLAs.

#### **1.4 Conclusions**

These issues make it challenging to keep driver history records up-to-date and potentially jeopardize compliance with 49 CFR 384. Some of the issues are easier to address than others. It would be complicated to fix the SDLA communication issue without unified action among SDLAs. In addition, the federal repository for the medical

certificates is still underway, so Kentucky's SDLA must adapt to those circumstances until that project is complete. It is also clear that KDLIS needs to be replaced, but this requires a level of investment that is currently not available in Kentucky.

However, improving efficiency is an option that should be explored. This research focuses on the issue of manual processes that demand a significant amount of labor daily. In some cases, these processes are manual for valid reasons, but the processes are simply inefficient in other cases. Improvements in efficiency could save time and allow agents to focus on other tasks that could help ensure that the state maintains compliance with federal requirements.



## Chapter 2 Literature Review and Legal Issues with CDL Workflow

### 2.1 Background for Commercial Motor Vehicle Safety Act

The Commercial Motor Vehicle Safety Act of 1986 (CMVSA) was a comprehensive effort to improve highway safety by removing unsafe commercial vehicle drivers from the highways and establishing federal authority over licensing commercial vehicle drivers. CMVSA mandated consistent enforcement for commercial vehicle regulations across all 50 states and minimum standards that drivers must meet to operate commercial vehicles. CMVSA required states to implement licensing programs, which included CLPs, CDLs, and knowledge and skills tests for CDL applicants. CMVSA was a watershed moment for the motor carrier industry. Previously, states rarely shared conviction data or driving histories on commercial vehicle drivers, and drivers could possess licenses from multiple states.

49 CFR 383 describes requirements for Commercial Motor Vehicles (CMV) drivers and motor carrier responsibilities. Drivers must:

- Provide a full name, address, signature, date of birth, sex, height, a photograph, a license number, license class, endorsements, restrictions, and the state of issuance for the CDL.
- Report, in writing, certain convictions to their state and to their employer within 30 days of the conviction.
- Provide 10 years of employment history and 10 years of driving history to their employer prior to employment.
- Operate a commercial vehicle with a valid CDL/CLP.
- Inform their employer if they lose their license within one day of receiving a revocation notice.
- Provide self-certification indicating whether they intend to operate interstate or intrastate and whether they are exempted or non-exempted.
- Submit a medical certification to the SDLA if they are operating a vehicle of 10,000+ lbs.

Drivers must also be disqualified for certain convictions, such as committing felonies while driving a CMV, driving under the influence of drugs and alcohol, fraudulent use of CDLs, committing serious traffic violations, violating railroad-highway grade crossing laws, and violating out-of-service orders.

While the CDL is a federally mandated credential, state driver's licensing agencies, usually referred to as SDLAs, bear the responsibility for implementing the requirements, processing CDL documents, and complying with federal standards. 49 CFR 384 addresses state requirements, which include:

- Implementing a testing scheme with a knowledge test and a skills test to be taken prior to a CDL issuance.
- Enforce a blood alcohol level (BAL) of .04 or higher for CDL holders in commercial motor vehicles, and revoke, suspend, or cancel the CDL if a driver violates this provision.
- Require that a driver possesses a CLP or CDL before operating a commercial vehicle.
- Check CDLIS and the CDL holder's 10-year driver history record before renewing, upgrading, or transferring a license.
- Disqualify, change status, and start the enforcement process if any required record searches uncover adverse information.
- Check the self-certification for all drivers and obtain a medical certification if the individual self-certifies as a non-exempt interstate driver.
- Have a digital image or photograph that SDLAs can verify.
- Notify the CDLIS operator if a CDL is issued, identification information changes, or issuing state changes.
- Refuse to issue a CDL until the individual surrenders all active driver's licenses from other states(s).

#### 2.1.1 State Record Keeping and Compliance after CMVSA 1986

Every jurisdiction must check specific databases in a limited number of days before issuing a new CLP or CDL, a renewed CDL, an upgraded CDL, or a transferred CDL. SDLAs must check the Commercial Driver License Information System (CDLIS), a database accessed through AAMVA.net, which houses driving records for each CDL holder using a master pointer record (MPR). An MPR contains a driver's convictions, disqualifications, violations, CDL applications,

self-certifications, and medical certifications. The SDLA then obtains the driver’s 10-year history from the State of Record. Under the Motor Carrier Safety Improvement Act of 1999, states are also required to check the National Driver Register (NDR) using the Problem Driver Pointer System (PDPS). This query alerts SDLAs to “problem drivers” convicted of reckless driving, DUI, and vehicular manslaughter charges.

In addition to checking a driver's records, SDLAs must verify CDL documents before a license is issued, renewed, duplicated, upgraded, or transferred. Two people must verify the proof of domicile, test scores, and CDL applications. Only one person is required to check the accuracy of the self-certification and the medical certification.

A particularly onerous part of compliance is meeting the reporting timeframes for changes to CLPs and CDLs. Table 3 below provides the timeframe in which the checks must be performed and when records must be updated. If a license is being issued to a driver who does not currently have a CDL in that state, the licensing agency must check the driver record no earlier than 24 hours prior to issuance. In the case of a renewed, duplicated, or upgraded license, the SDLA must check records no earlier than 10 before issuance. For reinstatement, the licensing agency must check driver records no earlier than 24 hours before issuance.

If a state disqualifies a license with another State of Record, the state disqualifying the license must inform the State of Record within 10 days of disqualification. If a CDL driver receives a violation for an offense other than parking, weight, or vehicle defect, the state must inform the state of record within 10 days of the conviction. If a state requests a driving record from another state, that state must comply with that request within 30 days.

In terms of medical certification, if a driver is non-certified, the state must update CDLIS within 10 days of expiration. If the FMCSA sends a state update about issuance or renewal of a variance, CDLIS must be updated within 10 days. If a driver receives medical certification or variances for a medical condition, CDLIS must be updated within 10 days.

**Table 2.1** CDL Record Check and CDLIS Update Time Requirements

	CDL Transaction	Timeframe
Issuing, renewing, duplicating, and upgrading	New Issuance	Check driver records 24 hours before issuing the license.
	Renewal	Check driver records 10 days before issuing the license.
	Duplicate	Check driver records 10 days before issuing the license.
	Upgrade to a new class or a new endorsement	Check driver records 10 days before issuing the license.
Driving Record and Disqualifications	Disqualification	Notify state of record within 10 days.
	Traffic violation of out-of-state CDL/CLP holder other than parking, weight, or vehicle defect	Notify state of record of violation within 10 days of the conviction.
	Receive request from another state for a Driving Record	Fulfill request within 30 days.
Medical Certification	Driver non-certified	Update CDLIS within 10 days of expiration
	FMCSA sends state update about issuance or renewal of a medical variance	Update CDLIS within 10 days.
	Receive medical certification or variances	Update CDLIS within 10 days.

SDLAs also face many other challenges. In addition to meeting federal regulatory guidelines, they must meet the demands of their customers and do so within the context of resource constraints and political pressure. Consequently, while the workload for SDLA agents has increased over the last 30 years, the resources provided have not kept pace with the workload. These resource constraints make it more challenging to meet the state CDL requirements specified in CFR 383.

### **2.1.2 Resource Constraints for Motor Vehicle Agencies and SDLAs**

Since CMVSA was implemented, CMV traffic has doubled (Harmon, 2011). However, statistics show that federal CDL regulations improved highway safety over time. In 1975, one study found that a CMV was involved in 4.53 fatal crashes per 100 million miles traveled by CMVs. Twenty-three years later, that number decreased to 1.79 fatal crashes per 100 million miles (Harmon et al., 2012). In 2011, there were 3,852 crashes with large trucks and busses, which resulted in 4,018 fatalities (McBeth, 2014). While it is clear the CDL regulations have improved highway safety, SDLAs still struggle to meet the demands of CDL compliance in the face of growing resource constraints.

Motor vehicle agencies face many of the same resource constraints as other government agencies. These agencies are responsible for meeting the needs of multiple stakeholders while also being mindful of political limitations. According to a 2008 FMCSA task force study, “Political and financial constraints may be the most significant inhibiting factors to successfully addressing the existing vulnerabilities for the CDL program” (FMCSA & AAMVA, 2008, p. 5). SDLAs may not have employees with adequate skill sets or a lack of employees committed to the agency’s mission. SDLAs depend upon tax revenue and fees for their operations, so there are also budget constraints over which they have little control. Also, many agencies are hemmed by limited technological resources such as aging infrastructure and computer systems. These limitations make adaptation difficult within these organizations and take away from other motor vehicle agencies’ program aspects.

In an era of growing state budget deficits, states frequently target motor vehicle agency budgets, forcing agencies to increase fees or cut back on service hours. A literature review on resource constraints and motor vehicle agencies shows these agencies deal with increasing demands despite declining budgets, forcing agencies to do more with less while also meeting their diverse customer base needs. As a result, states increase fees, close motor vehicle agency branches, or even privatize branches, as was the case with New Jersey in 1995.

California’s budget issues and their effect on state motor vehicle agencies is an illuminating example of this issue. Starting in 2009, California’s Department of Motor Vehicles (DMV) faced severe resource constraints due to state budget cuts. California’s \$24 billion deficit made it necessary to take drastic measures to make up for lost revenue. In 2010, the number of ID cards and licenses distributed at California DMVs increased by almost half a million from the number distributed in 2008 with no increase in personnel to meet the demands (James, 2010). The state forced employees to take unpaid furloughs. Then the state decreased the number of operating hours by 15 percent (James, 2010) by closing offices on the first and third Friday of every month (Woo, 2009). The result was a marked decline in customer satisfaction that stemmed from waits as long as four hours — six times higher than in previous years (Stevens, 2010). To combat this development, the agency implemented an online driver’s license renewal service option. However, online license renewal did not account for drivers without access to the internet or residents ineligible for the service because they let their license expire, moved to a new address, and so forth.

The services required and the resource constraints of the SDLAs only grow. One such example is REAL ID. The REAL ID law controversy stems from the expense, lack of resources, and increased personnel demands required for implementation. REAL ID promises to be costly for state licensing agencies. In 2008, experts estimated that it would cost \$11 billion to implement despite only \$90 million in federal appropriations to states (Sundeen, 2008). Without further appropriations, states will be forced to locate the resources to create systems that interface with other databases that verify identity. Other agencies often run these databases, and such upgrades require extensive coordination efforts (Sundeen, 2008). It also takes time away from other programs, such as state CDL programs, as resources must be redirected to meet federal requirements.

Indiana’s Bureau of Motor Vehicles (BMV) faced decreased funding, demoralized staff, corruption, and an aging IT system (Austrom and Baldwin, 2014). Indiana turned their motor vehicle agency into an award-winning program by

adopting a new software system while also staying within the governor's preset budgetary limits. According to Austrom and Baldwin (2014), Indiana increased service automation, including online driver license renewal, online vehicle registration, electronic proof of insurance, and online driver test scheduling. Also, Indiana added self-service kiosks in BMV branches. Indiana also narrowed their primary mission to areas of titles, registration, and licensing (Austrom and Baldwin, 2014). In some cases, this meant transferring specific responsibilities to other agencies. While the literature about Indiana mainly focuses on improvements in customer service ratings, it stands to reason that these improvements benefit other aspects of BMV activities such as the CDL program.

States require a reliable source of funding to implement these types of program improvements. In 2008, the FMCSA, in cooperation with the American Association of Motor AAMVA, convened a task force to conduct a review of FMCSA's CDL program. The task force included representatives from government organizations, judicial conferences, industry representatives, safety advocates, and union representatives. The findings were compiled into a report for Congress that addressed impediments and challenges to the CDL program (FMCSA and AAMVA, 2008). Finding and investing funds to accomplish these goals was a common theme throughout the Task Force recommendations. In particular, the task force recommended that Congress and FMCSA provide more funding sources to help SDLAs improve their CDL programs in light of the resource constraints that affect all SDLAs as they work to enhance the implementation of CMVSA. As the next section shows, CDL compliance appears to be one of the casualties of SDLA resource constraints.

## **2.2 SDLA Responsibilities and CDL Fraud**

Despite budget and resource constraints, SDLAs must continue to ensure that their state is in compliance with all CMVSA regulations. Preventing CDL fraud is an ongoing challenge for SDLAs, and the FMCSA has linked CDL fraud to a lack of proper staffing and funding, and certain workflow practices.

Since the introduction of CMVSA, the FMCSA and FBI have conducted investigations that uncovered issues with corruption within SDLAs and the issuance of fraudulent CDLs. One of those was Operation Safe Driver, which investigated allegations of CDL fraud in Illinois and, later, Florida. Operation Safe Driver uncovered instances where motor vehicle agency administrators were taking bribes to give passing scores to CDL applicants on the federally mandated knowledge and skills tests. This type of fraudulent activity threatens highway safety, the primary goal of CMVSA.

Operation Safe Road began in 1998 when a state worker in a CDL road testing facility in Chicago reported a pattern of fraudulent CDL issuances that spanned over four years. He alleged that licensing corruption involved employees and supervisors taking bribes to help drivers pass the skills test and obtain CDLs (Simpson, 2000; Simpson and Pallasch, 1999). Further investigation found that 312 drivers bribed workers at multiple testing facilities. Once these drivers obtained the CDLs, many of them transferred the license into other states. According to a Chicago Sun Times investigation (1999), these fraudulent CDLs were connected to 59 crashes, and 20 people were injured. In addition, 134 of the drivers received 329 moving violation convictions (Simpson, 2000; Simpson and Pallasch, 1999). Operation Safe Road investigators identified those drivers, forcing them to undergo the testing and licensing process again (FMCSA, 2000). There was an additional investigation into a licensing scam where drivers were obtaining licenses in Florida and then transferring them to Illinois.

According to a final report that followed the investigation of Illinois and Florida (FMCSA, 2000), a lack of program oversight enabled the fraud, particularly concerning the testing and licensing processes. Agents also had an overwhelming workload that complicated the CDL program oversight, which many SDLAs face. In addition, the FMCSA task force reported a lack of adequate training and procedure manuals within these agencies. In the same investigation, federal agents found that customer service and decreasing wait time in the motor vehicle agency branches took priority over the careful evaluation of CDL applications and documents (FMCSA, 2000).

The report provided recommendations to prevent this type of fraud from occurring in other state licensing agencies. The recommendations covered oversight for the testing process, front- and back-office workflow practices, and adjudication issues in the courts. Throughout the report, the investigators recommend that SDLAs provide enough staff support, invest in up-to-date technologies, and funding to prevent fraudulent activities.

The review panel suggested that SDLAs increase funding to ensure that enough individuals are available for monitoring CDL activities (FMCSA, 2000). The investigation review panel further recommended that SDLAs increase their use of automated reporting features and performance measures to monitor fraud and assess employee productivity (FMCSA, 2000). The FMCSA also suggested that states provide up-to-date procedural manuals and formal training, instead of providing only on-the-job training. Finally, the FMCSA said state CDL program administrators need to stress their agency's important role in ensuring highway safety (FMCSA, 2000). They are an integral part of ensuring that only qualified commercial vehicle drivers are on the highway.

### **2.3 E-Government and CDL Programs**

One way CDL programs are improving their workflow and staffing challenges is through automation and investments in technology upgrades. Kentucky automated the CDL certification, application, and ability to check the CDL application status through the CDL portal. Employees say this automation – known as myCDL – has saved considerable time in their daily workflow. Based on the successful implementation of those automated tasks, employees feel confident that additional automation can improve efficiency.

Deepening the use of e-government tools is a potential way to improve Kentucky's CDL workflow and help maintain compliance with the requirements of 41 CFR 383 and 384. The following discusses the development of e-government technologies, the benefit of these technologies, and potential problems with implementing the technologies in state agencies. Bakkus defines e-government as “the application of electronic means in the interaction between government and citizens and government and businesses as well as in internal government operations, to simplify and improve democratic government and business aspects of governance.”

#### **2.3.1 The Benefits of E-government**

The general trend among government agencies has been the development, deployment, modernization, and expansion of electronic databases and e-government tools for administration purposes. Public agencies have multiple missions, making it difficult to reach optimal efficiency even with efforts to improve infrastructure within their operations (Karwan and Markland, 2006). Deficits force agencies to do more with less while also meeting their customers' needs (Karwan and Markland, 2006). The literature on e-government often cites the many benefits of adopting e-government services. These benefit both the customer as well as the government agency. E-government helps citizens submit applications, obtain licenses, pay bills, file taxes, and provide documentation for various purposes (Bussell, 2011; Hodos, 2014; Pocora et al., 2011).

Proponents of e-government say these tools improve workflow efficiency and decrease costs to government agencies (Ariton-Gelan, 2015; Catana & Catana, 2009; Paroški, Konjović, Surla, & Popović, 2015). E-government improves tax collection because agencies can process returns in shorter amounts of time and improve compliance (Edmiston, 2003; Hodoš, 2014; Jannat, 2010). However, the most commonly cited benefit of e-government is time savings. Edmiston (2003) identified time savings as a significant benefit for e-government, particularly for vehicle and driver license-related processes (Edmiston, 2003).

#### **2.3.2 Cautionary Notes on E-government**

The literature on e-government includes caveats for building sustainable e-government systems. Scholars caution states to consider ways in which e-government efforts can be derailed. Many states are taking older systems and trying to meld them with new systems and infrastructure (Karwan and Markland, 2006). As Karwan and Markland (2006) argue, this may not result in measurable savings or improvements in efficiency. In addition, these types of changes may need additional personnel or an upgrade in infrastructure (Karwan and Markland, 2006).

The literature on e-government has further lessons for state IT system upgrades. Systems need to be dynamic and designed for upgrades (Ariton-Gelan, 2015; Jannat, 2010). Dynamic, sustainable systems require adequate funding over the long term (Catana & Catana, 2009) and well-trained staff members knowledgeable in creating and maintaining the system (Jannat, 2010; Paroški et al., 2015). Protecting the system against security risks is another consideration, especially since governments have access to a significant amount of personally identifiable information (Ariton-Gelan, 2015; Kreps & Richardson, 2007).

There are also financial lessons in the literature. E-government presents financial challenges that delay many of the often-touted benefits as well. It can be expensive to develop, deploy, and maintain (Jannat, 2010), preventing many governing agencies from transitioning to e-government applications (Edmiston, 2003). The monetary savings may not appear in the initial stages. The time savings may not be immediately apparent, as states may have to offer both online and paper options for conducting business during the transition period. In addition, decision-maker priorities can impede the speed of implementation, which may delay or even halt the adoption of electronic services (Bussell, 2011).

States can avoid such pitfalls through careful project management. Careful project management prevents a project from going over budget, getting behind schedule, and failing to meet the stakeholders' needs (Fisher & Bradford, 2006; Paroški, Konjović, Surla, & Popović, 2015; Kreps and Richardson, 2007;). It is vital to build risk management assessment into driver license and vehicle registration system upgrades. Not doing so has caused states to scrap costly projects, such as a \$44 million project in California that never came to fruition in the early 90's. In this case the state had an aging mainframe system that they attempted to update. In the end, the motor vehicle agency had a system that did not function. The system database had hardware but no operating system application for the database to function. While the California example is dated, it still holds valuable lessons for other states looking to upgrade their mainframe system, as is the case with Kentucky. States must have a reliable funding source, managers with experience leading projects for large public agencies, and the resources necessary to conduct a thorough analysis of possible solutions ("Throwing the dice: California learns the hard way," 1997).

The e-government literature shows that automation can save time, money and add efficiency to government agencies. However, the literature also discusses obstacles to successful implementation. First, automation is an expensive undertaking. The financial savings may not be apparent in the first phase of implementation. Savings generally accrue over time. Second, the state needs to reprioritize funding to ensure there is enough money to create a robust, dynamic system that can be updated easily as necessary.

E-government has the potential to improve Kentucky's CDL workflow processes. Kentucky has already embarked on some automation of their CDL program. The myCDL portal allows drivers to submit their CDL application, medical certification, and self-certification. The portal decreased the amount of time needed to process these documents, increasing efficiency. Automation in this context has been successful, however, more efforts toward improved workflow must be performed. This study will examine manual processes and provide recommendations on process automation so that Kentucky can further improve its workflow to decrease processing time and increase efficiency.

## **2.4 CDL Adjudication**

The judicial system plays an essential role in maintaining CDL compliance and keeping unsafe CMV drivers from getting behind the wheel. 41 CFR 383.51 contains specific penalties and disqualifications for CDL violations. These penalties leave very little sentencing discretion to the judge, which poses problems for judges, prosecutors, and SDLAs.

Commercial motor vehicle operators' penalties for violations vary from 60-day suspensions to lifetime disqualifications, such as drug- and alcohol-related offenses, serious traffic violations, and violation of out-of-service orders. Table 4 contains the violations and mandatory penalties for CDL holders.

**Table 2.2 Penalties for CDL Violations**

Disqualifying Violation	Length of Disqualification
<p><i>Major Offenses in CMV and Non-CMV</i></p> <ul style="list-style-type: none"> <li>• Operating a vehicle under the influence of alcohol as defined by the state in which the violation is committed</li> <li>• Operating a vehicle under the influence of drugs</li> <li>• Not submitting to a form of alcohol testing</li> <li>• Leaving the scene of an accident</li> <li>• Committing a felony in a non-CMV</li> </ul>	<p>Lifetime disqualification</p>
<p><i>Serious Traffic Violations</i></p> <ul style="list-style-type: none"> <li>• Speeding 15 miles or more over posted limits*</li> <li>• Reckless driving*</li> <li>• Improper lane changes*</li> <li>• Tailgating*</li> <li>• Traffic violation connected to fatal traffic crash*</li> <li>• Texting while driving in violation of state or local laws while operating CMV</li> <li>• Using a mobile phone while operating a CMV</li> <li>• Operating CMV without a CDL/CLP or without the license their possession</li> <li>• Operating a CMV without the proper endorsements or class as required for the vehicle being operated by the CDL/CLP holder</li> </ul> <p>*Pertains to CMV and non-CMV</p>	<p>Two violations involving CMV in separate incidents in a three-year period: 60-day disqualification</p> <p>Three violations involving CMV in a three-year period: 120-day disqualification</p> <p>Two violations in a non-CMV that result in revocation or suspension of driver license: 60-day disqualification</p> <p>Three violations in a non-CMV that result in revocation or suspension of driver license: 120-day disqualification</p>
<p><i>Violations involving Rail Crossing *</i></p> <p>*Pertains to CMV and non-CMV</p>	<p>First conviction : 60 days and more</p> <p>Two violations in separate incidents in a three year period: 120 days or more</p> <p>Three violations: 1 year or more</p>
<p><i>Violating Out-of-Service Orders</i></p> <p>Operating a CMV while under an out-of-service order</p>	<p>First conviction : 180 days to 1 year</p> <p>Two violations in separate incidents in three year period: 2 to 5 years</p> <p>Three violations: 3 to 5 years</p>
<p><i>Violating Out-of-Service Orders</i></p> <p>Operating a CMV while transporting hazardous materials or vehicle designed to carry 16 or more passengers, and under a vehicle or driver out-of-service order</p>	<p>First conviction : 180 to 2 years</p> <p>Two violations in separate incidents in three year period: 3 to 5 years</p> <p>Three violations: 3 to 5 years</p>

Two issues of growing concern regarding the requirements of 41 CFR 383.51 and the judicial system are the problems of masking and failure to report convictions to SDLAs in a timely manner. In the previously mentioned report following Operation Safe Road, the task force members were concerned about masking and diversion. They were specifically concerned about the use of alternative adjudication practices. The task force members found that states lacked data on how many court actions used these practices instead of convictions. During this time, the task force also found that states were not reporting out-of-state convictions in very high numbers. These adjudication inconsistencies threaten state CDL compliance certification and a potential loss of critical funds from FHWA and MCSAP. In a more abstract sense, improper adjudication practices harm public safety by failing to keep dangerous CMV drivers off the road. The following discusses masking and reporting requirements and ways to avoid adjudication errors in CDL-related cases.

### 2.4.1 Masking

49 CFR 384.226 prohibits judges from masking convictions. Masking consists of adjudication actions to keep moving convictions off of a driver's CDLIS record. Examples of masking can be any of the following:

- Allowing drivers to pay the court fees and then dismissing the charge
- Assigning the driver to diversion classes such as state traffic school
- Reducing a violation to avoid impact on the driver's record
- Allowing defendants to plead no contest, such that the case is removed from the docket for a period of time, and then later dismissed
- Vacating the conviction and sentence

The definition of conviction is the most critical factor in determining whether a sentence could be labeled masking. A conviction, according to the federal definition used by FMCSA, is

“an unvacated adjudication of guilt, or a determination that a person has violated or failed to comply with the law in a court of original jurisdiction or by an authorized administrative tribunal, an unvacated forfeiture of bail or collateral deposited to secure the person's appearance in court, a plea of guilty or nolo contendere accepted by the court, the payment of a fine or court cost, or violation of a condition of release without bail, regardless of whether or not the penalty is rebated, suspended, or probated.”

The FMCSA considers a sentence to be masking if the action occurs after a judge convicts a defendant. However, prosecutors can legally amend charges or dismiss them before getting to the hearing phase ("Masking and Other State Court Challenges", 2012). The following are not masking under the FMCSAs definition (Madison & Garcia, 2010):

- A prosecutor reduces a charge or changes the charge before the case goes to court
- The prosecutor files a motion to dismiss, and the court grants the motion

The only other way to avoid reporting violations to a driver's CDLIS record is if the case is dismissed due to a lack of evidence or the driver is found not guilty.

### 2.4.2 Why Masking Occurs

There are several reasons why judges may mask a conviction. Judges may face pressure to engage in masking or diversion strategies to help drivers avoid losing their livelihood. Judges and prosecutors may feel that FMCSA conviction requirements unfairly punish CDL drivers for moving violations and they may feel sympathy with the defendant ("Masking and Other State Court Challenges", 2012). In areas where trucking is a large part of the local economy, judges are less reluctant to follow through with federal CDL sentencing requirements. Some judges resent the loss of judicial discretion under the mandated sentencing rules.

Experts counter such arguments by reminding judges of the purpose of CMV regulations: they protect the public from accidents with CMVs, which cause more damage and have higher fatality rates than non-CMV crashes (Fritschner, 2013; Witte, 2011; Wright, 2006). Ten percent of CMV crashes involve fatalities, and the victims are usually the occupants of the passenger car (McBeth, 2014).

Prosecutorial discretion should also be used with caution. As the National District Attorneys Association stated, a prosecutor “cannot predict with 100 percent accuracy which offender may go on to commit a more serious offense” (Harmon, p. 29). In addition, experts cite three seemingly minor violations statistically linked to a future crash within the next year: failure to or improperly signal, improper passing, and speeding more than 15 miles over the limit. Drivers who fail to signal or engage in improper passing are close to 90 percent more likely to be involved in a crash within 12 months than drivers without such violations (Shea, 2012).



### **2.4.3 Reporting Convictions and Timing Requirements**

Despite the severe consequences of non-compliance with CDL requirements, judges and attorneys receive very little training on CMV regulations. A judge may not encounter very many CDL cases in their courtroom and lack adequate experience in adjudicating these types of cases (AAMVA and FMCSA, 2008). AAMVA and the FMCSA (2008) specifically noted that prosecutors and judges do not often have a significant caseload involving CMV drivers and may not have the requisite training on adjudicating CDL cases. As a result of this, legal experts and the FMCSA note that judges jeopardize state compliance because they are unaware of FMCSA's disqualifications and penalties for convictions involving CMVs (Shea, 2014; Witte, 2011). As a result, judges sentence defendants to diversion programs or mask convictions, which is a practice perfectly acceptable for standard license holders but illegal for CDL holders. Many judges and prosecuting attorneys are also unaware that CMV drivers can be penalized with a lifetime disqualification if they commit a felony in a non-CMV (Witte, 2011).

Other factors can lead to improper adjudication. The judge or the prosecutor may not know that a case involves a CDL holder (Shea, 2014; Witte, 2011). This scenario generally happens when law enforcement does not indicate the driver is a CDL holder on the citation. An FMCSA task force found problems with law enforcement practices and technologies that cause problems with appropriate adjudication in the courtroom (AAMVA and FMCSA, 2008). Law enforcement does not always put the correct state code corresponding with the Federal CDL regulation or note the license class. Law enforcement may not indicate that a CMV was carrying hazardous materials at the time of the citation. The problem is not merely one of human error. Much of the problem stems from issues with the National Law Enforcement Telecommunications Network (NLETS) and CDLIS. These two databases do not always provide up-to-date or accurate information, and SDLAs do not always report information promptly to these data mechanisms (AAMVA and FMCSA, 2008).

Another challenge is meeting reporting requirements. Judges can fail to report convictions to the SDLA within the 10-day reporting requirement (Witte, 2011). Rural areas face a different set of challenges ("Masking and Other State Court Challenges, 2012). There may not be a centralized form of communication among the state localities, or there may not be adequate communication with those areas. Not only do these errors risk losing compliance, but they also harm highway safety. Consistently reporting violations helps remove problem drivers from the highways.

### **2.4.4 Avoiding Adjudication Errors**

There are strategies judges and prosecutors can implement to avoid adjudication errors in CDL cases. First, judges and prosecutors need to be very familiar with their state's CDL laws and the reporting timelines, which can be accomplished through training (Witte, 2011). In a 2008 report, an FMCSA task force suggested that the agency put more funds towards training judges on diversion, masking, hardship licenses, and the importance of appropriately adjudicating cases involving CDL holders. With this need in mind, the task force further recommended that FMCSA embark on a judicial outreach program to help judges and prosecutors meet the 10-day reporting requirements through education and training (FMCSA, 2008). The Task Force also proposed that FMCSA develop a funding source for states to develop case management information systems (FMCSA 2008). To address the issues pertaining to rural judges, the states of Washington and Missouri conduct outreach training with judges in rural areas to impress the importance of meeting the reporting requirements and the serious consequences of non-compliance ("Masking and Other State Court Challenges," 2012). Judges' associations usually conduct these training sessions.

Second, judges should confirm whether or not a driver possesses a CDL endorsement when deciding traffic cases. Judges do not have access to CDLIS, so they cannot check whether the defendant is a CDL holder. Prosecutors and judges should specifically ask to see licenses before the trial to determine if the driver is a CDL holder. Courts also need to encourage law enforcement to note CDL licenses on the citations ("Masking and Other State Court Challenges," 2012). However, FMCSA task force findings suggest that FMCSA needs to provide more training to law enforcement on writing citations for stops involving CMVs. The training would stress the importance of obtaining CDL data when they are writing citations. The task force also recommended that FMCSA fund more technology to assist officers in roadside stops. Funds could be used to develop an interface between CDLIS and NLETS to access up-to-date CDL data and help states fund electronic citation software that includes a section indicating whether a CMV was involved in the citation (FMCSA, 2008).

Third, the SDLA can be an additional stopgap for adjudication errors. Sometimes judges, unfamiliar with the different conviction requirements for CDL holders, sentence CDL holders to diversion classes or mask the conviction. If the SDLA confirms the CDL status, they can report the violation. In some cases, this can result in a suspended license despite the judge's sentencing decision. Judges should also include notes about any cases they hear regarding CMV cases in their disposition paperwork and inform the SDLA if a conviction involves a CDL holder ("Masking and Other State Court Challenges," 2012).

The literature on masking says the practice threatens a state's CDL compliance status, causing a state to lose Federal Highway Administration (FHWA) funds and Motor Carrier Safety Assistance Program (MCSAP) funds, they fail to protect highway safety. Judges and prosecutors need to be more proactive in ensuring that CDL holders' cases are adjudicated following FMCSA requirements. Accurate record-keeping, checking CDL statuses, and training for judges and prosecutors on the requirements in 41 CFR 383.51 and 384.226 are vital strategies to tackle the challenges of maintaining compliance with CDL laws.

## **2.5 Conclusion**

SDLAs must balance CDL compliance with the resource and political restraints inherent to their agencies. Of particular concern is meeting the reporting timeframe requirements and the prevention of CDL issuance fraud. The SDLA must also ensure that courts are reporting CMV-related cases in the timeframe required by the FMCSA and that they avoid sentencing practices that go against the mandatory sentencing described in 41 CFR 384. The consequence of not meeting these demands is losing compliance, resulting in the loss of significant state revenue. The FMCSA has reviewed its CDL program as a whole in addition to specific state CDL programs. According to the review findings, states continue to struggle with aging technology and a lack of funding for IT improvements and staffing, making compliance with 49 CFR 384 more difficult. FMCSA recommends that states reprioritize their CDL programs by stressing the importance of those programs to highway safety. FMCSA also advocates increased training for licensing agencies, law enforcement, and the judicial branch.

Many SDLAs are automating many of their systems to help with low staff numbers and to improve efficiency. Kentucky has partially automated CDL processes, and by all accounts, it has increased efficiency and requires less staff time. However, they still contend with numerous manual workflow processes that may or may not be appropriate for automation. This study seeks to identify processes that can be automated. When Kentucky does expand its use of automation, the literature discussed here provides many caveats for this process. While automation can undoubtedly help Kentucky, administrators need to have realistic expectations. The benefits may not be apparent in the early stages of the project. In addition, Kentucky must ensure that skilled project managers create a dynamic system that can evolve and must secure enough funding to finish the project.

## Chapter 3 States' Survey on CDL Workflow Issues

### 3.1 SDLA IT Administrators Survey

The research team sent surveys to SDLA IT administrators in 50 states and the District of Columbia, asking states to answer questions about CDL workflow information technology issues in their states. There were six topic-related questions and two demographic questions. Researchers developed the survey using Qualtrics survey software and emailed the survey's link to CDL administrators and IT coordinators. The survey did not require states to respond to a question before moving to the next question. However, the survey introduction encouraged respondents to participate, as their responses would help Kentucky's state CDL program and national efforts to support state compliance. Nine states and the District of Columbia took the IT survey. As Figure 1 below shows, those states included Kentucky, Utah, North Dakota, South Dakota, Missouri, Mississippi, Oklahoma, Alabama, and North Carolina.

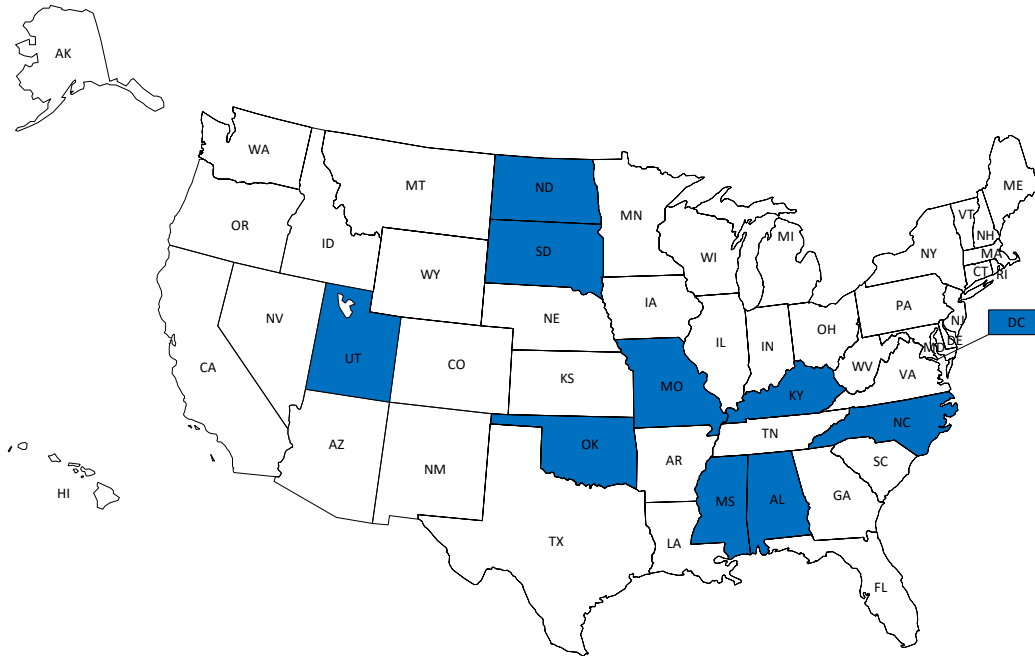
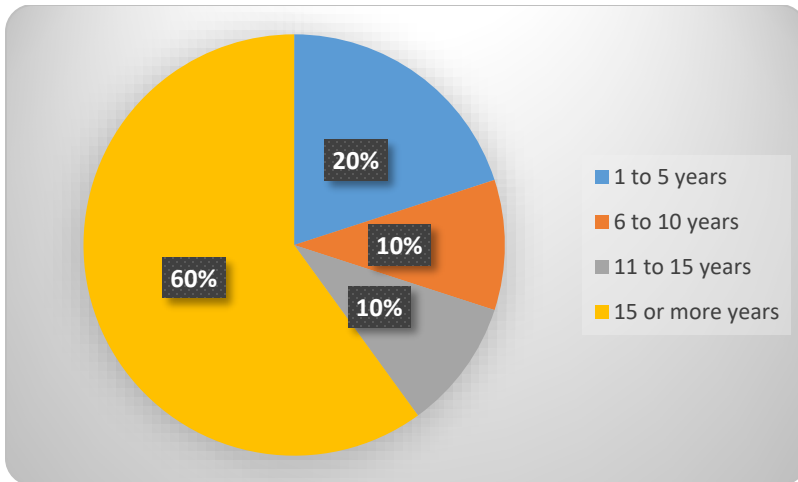


Figure 3.1 States Responding to the CDL IT Workflow Survey

#### 3.1.1 Age of Computer Systems

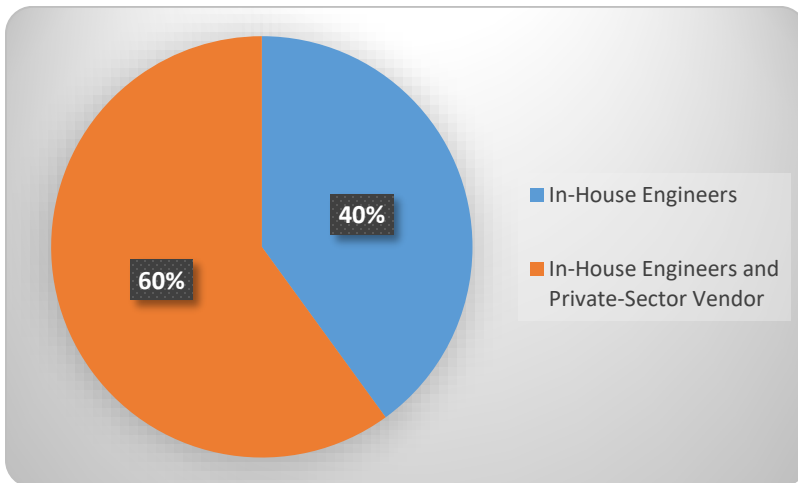
The survey inquired about the age of each state's driver licensing computer database, and the responses indicate that most systems are quite old. As Figure 2 shows, 60 percent of respondents operate their licensing programs on systems that are 15 years or older. Twenty percent have systems that are 1 to 5 years old, 10 percent of the states have systems that are 6 to 10 years old, and 11 percent have systems that are 11 to 15 years old.



**Figure 3.2** Age of State Driver Licensing Computer Databases

### 3.1.2 Database Development

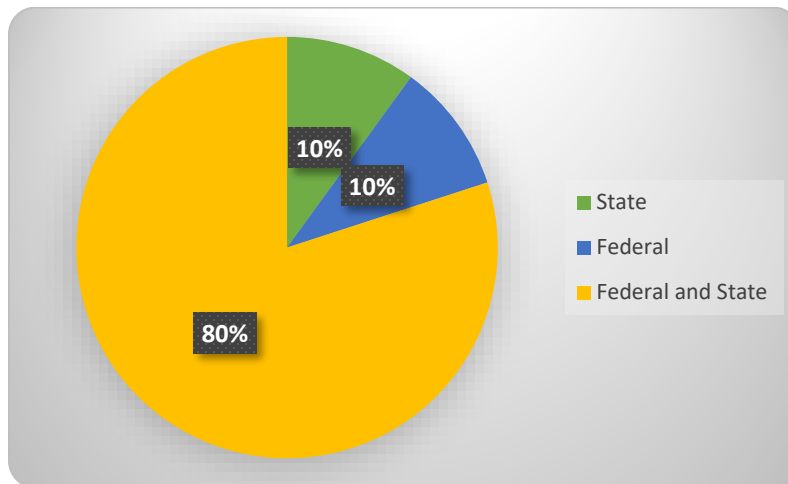
Question 2 requested information on the development of the state driver licensing computer database. Specifically, the survey asked states to indicate which entity developed the system. As seen in Figure 3, most states (60 percent) developed their systems through partnerships between in-house software engineers and a private-sector vendor. Forty percent of the respondents developed their databases using only the services of in-house engineers, including Kentucky, South Dakota, Utah, and North Carolina. As indicated by the responses, many states have not prioritized these vital pieces of electronic infrastructure.



**Figure 3.3** Developers of State Driver License Databases

### 3.1.3 Future Upgrades

Some of the agencies plan to upgrade to their licensing system. The survey explored the funding options for each state. States could choose from five potential funding sources: state resources, federal resources, federal and state resources, fees, or other. Utah, Missouri, DC, North Carolina, and Mississippi plan to upgrade their systems. As seen in Figure 4 below, 80 percent of those agencies (Utah, DC, North Carolina, and Mississippi) plan to use both state and federal funds to pay for the upgrades. Missouri will use state funds to fund upgrades (10%). Kentucky will use only federal funds to fund upgrades (10%). None of the upgrading states anticipate funding upgrades through fees or other sources. The reluctance of states to use a fee-based structure to finance system upgrades suggests some direct federal and state appropriations are necessary to ensure more states upgrade decades-old databases. The size of state transportation workforces has declined annually every year since 2009 (Governing, 2018). In addition, these agencies must adapt to REAL ID, centralized license distribution, and workflow automation.



**Figure 3.4** Funding for Driver License System Upgrades

The survey asked states to provide detail about agency plans to upgrade their driver licensing database. Mississippi said they are presently upgrading their driver licensing system from a mainframe system to a web-based system. Kentucky’s main upgrade consists of offering REAL ID and implementing an eight-year CDL license renewal period. Missouri will also be transitioning driver licensing functions from a mainframe to a web services platform, but the transition timeline is yet to be determined. Utah will implement state-to-state processes and automate more AAMVA transactions. Oklahoma is also planning to modernize their system but is still working on a plan for that upgrade. The scope of Oklahoma’s entire project will be finalized when the contract is signed and accepted. Implementation of new driver’s license databases can be a protracted and complicated process, which is why estimating costs and timelines can be difficult for SDLAs.

### 3.1.4 Automation and CDL Workflow Processes

Question 5 requested that respondents examine six CDL-related workflow processes and indicate the level of automation for 10-year Driver History of CDL Renewals, First-time CDL Application, CDL Transfers, Medical Certification, Self-Certification, and CDL Medical Waivers. For each of those categories, respondents were asked to indicate whether the process was completely automated, somewhat automated, slightly automated, or not automated at all. Figure 5 summarizes the survey answers to this question. Overall, states have automated or partially automated many of these processes.

#### *10 Year History*

The 10 Year history, which is the 10-Year driving record that a driver must submit for a CDL/CLP application or transfer a license to another state, was the most likely process to be completely automated. Forty-five percent of responding states said their 10 Year Histories are entirely automated, while 33 percent said their states had somewhat automated this process. Twenty-two percent of the states have slightly automated their 10 Year History process.

#### *First Time CDL Application*

An application must be submitted before any driver can obtain a CDL/CLP. Most of the states responding to the survey had automated at least some of their First Time CDL Application process. Thirty-four percent wholly automated this process, while 33 percent somewhat automated the application. A smaller percentage has automated the process slightly (11 percent) or not at all (22 percent).

#### *CDL Transfers*

Like the First-Time CDL/CLP application, 50 percent of responding states have completely automated their CDL Transfer process. The CDL Transfer process is when a CDL holder transfers their license to another state. Thirty-three

percent of respondents have somewhat automated the process, and 17 percent have not automated any part of the process.

**Medical Certification**

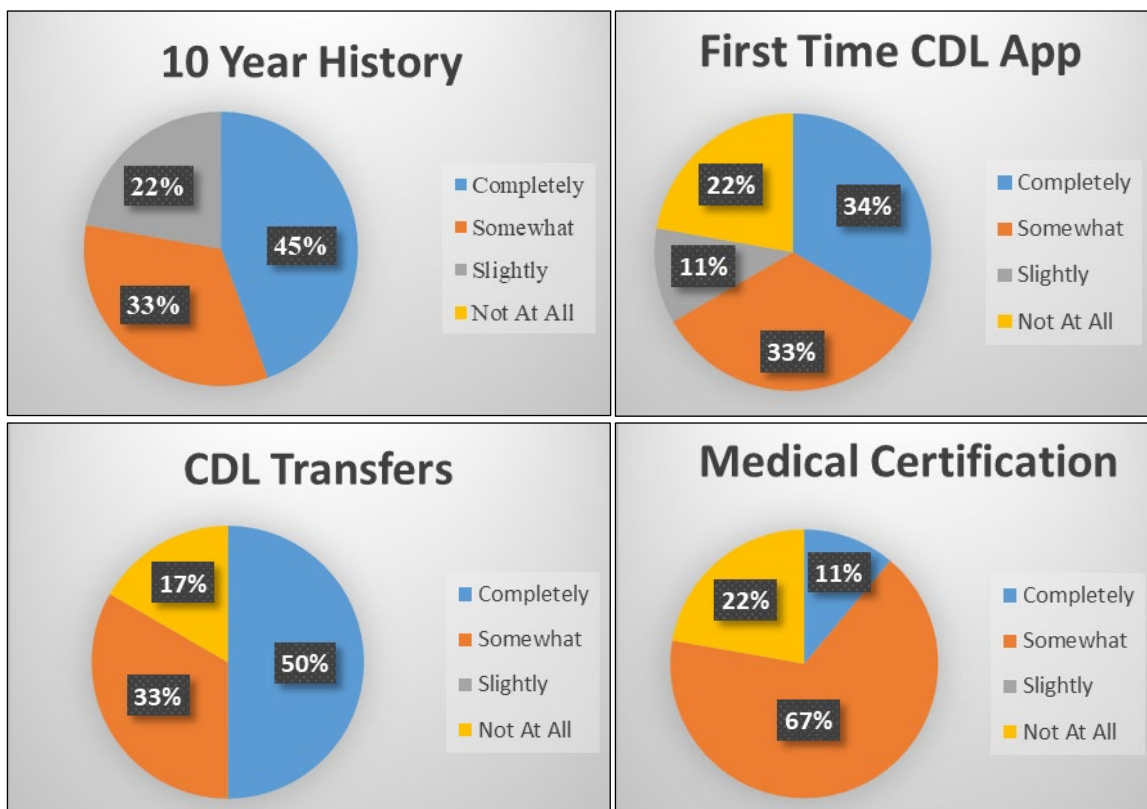
Commercial drivers of vehicles weighing 10,000 pounds or more must provide and maintain a valid medical certificate to the base state where they are licensed. A relatively small number of states have completely automated the Medical Certification process. Only 11 percent of states have completely automated Medical Certification, but 67 percent have automated the process somewhat. Twenty-two percent of states continue to process the certificates manually.

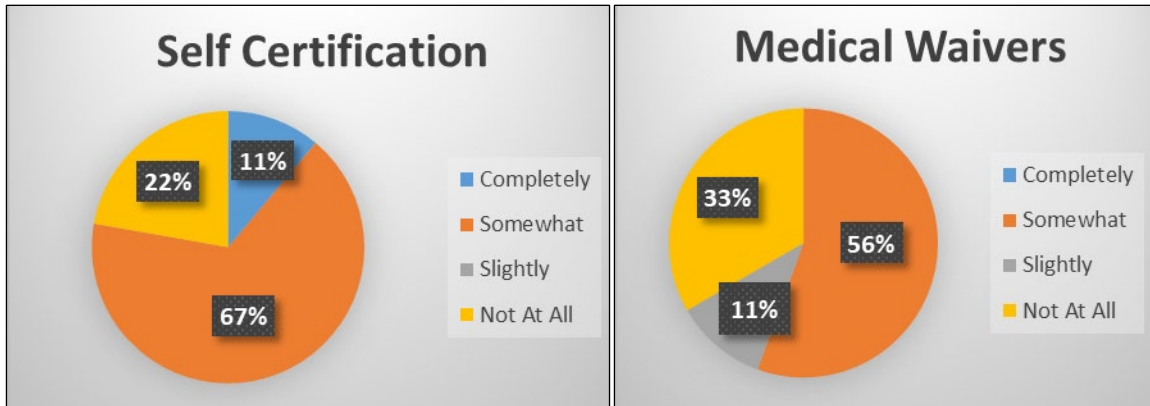
**Self-Certification**

FMCSA requires all CDL holders to self-certify what types of driving they perform or expect to perform. The levels of automation for the Self Certification are the same as the Medical Certification. Sixty-seven percent of responding states have automated the Self-Certification process, while only 11 percent have entirely automated it. Of the responding states, 22 percent have not automated self-certification at all.

**Medical Waivers**

If a driver does not meet the minimum federal medical standards, they may qualify for an intrastate medical waiver or a federal interstate medical exemption. Medical Waivers have the lowest amount of automation of all CDL processes. No states have completely automated the process. Fifty-six percent of states have somewhat automated these processes, while 11 percent have only slightly automated the process. Thirty-three percent of states have not automated the process at all.

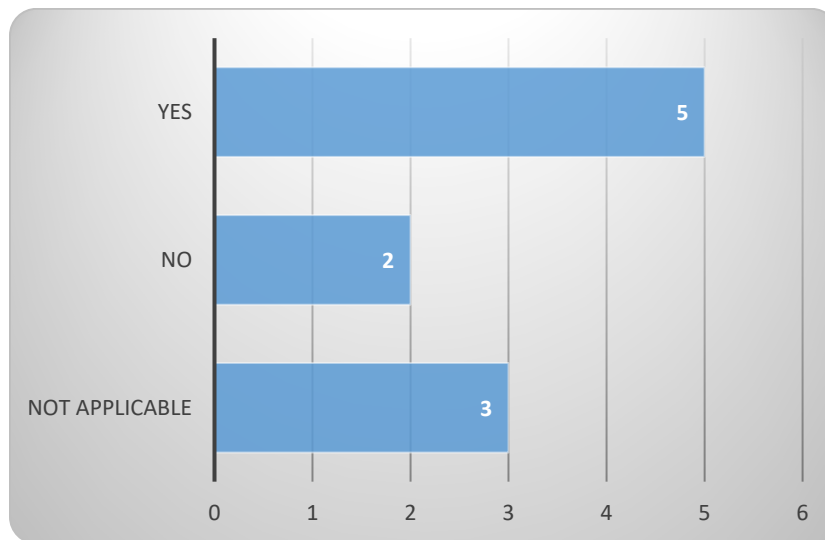




**Figure 3.5** Levels of Automation for CDL Workflow Processes

### 3.1.5 Ignition Interlock Devices

Many states added ignition interlock devices to their daily workflow. Question 6 asked respondents if their driver's license database underwent upgrades to accommodate the addition of IID administration to their daily workflow. As seen in Figure 6 below, 5 states upgraded their driver license database for IID, while two states did not have to upgrade their databases. The three remaining states said this question did not apply to their state presumably because their driver license agency was not responsible for administering the IID program.



**Figure 3.6** Database Upgrades and IID

### 3.1.6 Conclusions

Based on the survey analysis, the researchers put forth the following conclusions. First, most state driver licensing databases are at least 15 years old, and most of the systems were developed by a joint effort between in-house engineers and third-party vendors. Five of the respondents plan to upgrade their systems soon and plan to use a combination of state and federal funds to finance the project. One state will fund the project solely through state funds. Another state will fund any upgrades using federal resources. Two of those states plan to transition from a mainframe to a web-based platform.

The survey requested that participants rate the level of automation for eight workflow processes. Based on the survey responses, CDL Histories are the most likely to be completely automated, while medical certifications and

self-certifications were the most likely to be somewhat automated. Medical waivers are the least likely to be automated.

Finally, the survey explored driver license databases and IID programs. The survey question asked respondents to indicate if their states upgraded their databases to accommodate that process. Not all of the respondents provided an answer because their agency did not administer the program. However, the majority of the remaining states did upgrade those systems to accommodate IID processes.

The survey results show that, in general, states are not funding upgrades to their driver licensing databases. This survey finding is in line with a national trend of states decreasing expenditures on information system infrastructure, including databases and data warehouses. Many US states are using an economic growth strategy that decreases tax revenue while increasing corporate subsidies (McNichol, 2017). As a result, the quality of state infrastructure is on the decline.

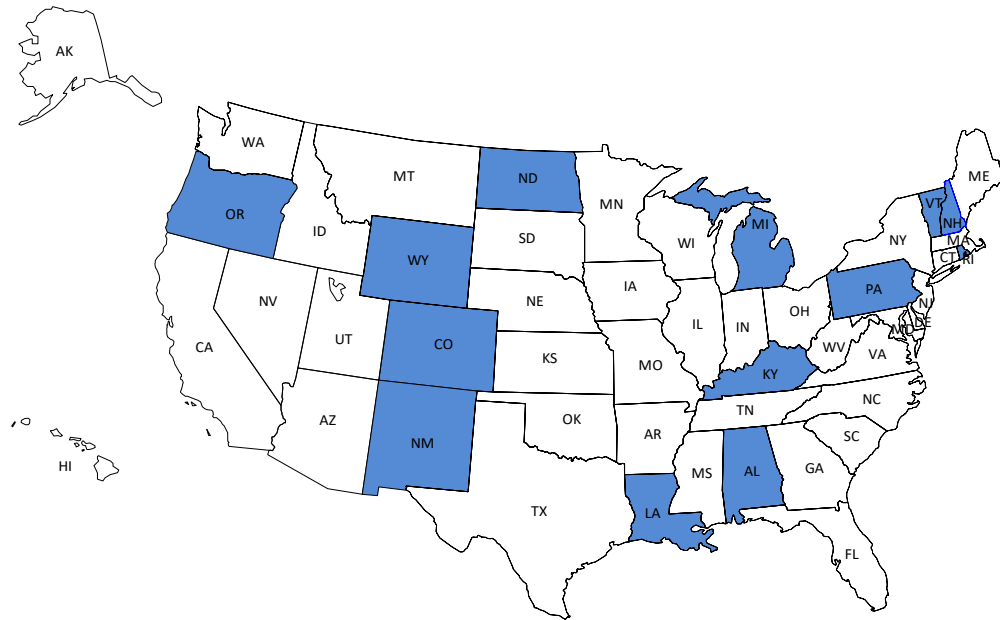
Aging IT systems can be problematic for driver's licensing agencies. States must rely on manual records processing, decreasing productivity, and potentially delaying CDL-related reporting. Also, SDLAs like Kentucky rely on patches to address programming limitations within their mainframe systems rather than upgrading those systems to meet the changing needs of modern driver licensing requirements. As CDL recordkeeping requirements change and states add additional federally-mandated programs such as REAL ID or even state-required changes such as IIDs, IT resources are further stretched. Several states have automated multiple processes related to CDL recordkeeping; however, it will be difficult for states to continue this progress without adequate funding sources. Since the CDL's principal purpose is to improve safety on the nation's highways by ensuring that only safe, qualified drivers are operating CMVs, this lack of investment in IT can decrease safety on the nation's highways.

### **3.2 SDLA Survey**

Kentucky Transportation Center (KTC) distributed a 20-question survey to State Driver Licensing Agencies (SDLAs) in all 50 states and the District of Columbia. KTC consulted with Kentucky's CDL program supervisors and developed the questions based on those interviews. The survey contained 13 multiple-choice questions and 3 open-ended questions. The survey questions pertained to the workflow processes in the state SDLAs. The questions covered policies, training materials, and ignition interlock devices. The survey did not require a respondent to answer any question before moving to the next question. However, the instructions did explain that the respondent's answers would help Kentucky's SDLA and national efforts to support state CDL compliance.

Thirteen states provided at least partial responses to the survey. As seen in Figure 7, those states include Alabama, Colorado, Indiana, Kentucky, Louisiana, Michigan, New Mexico, North Dakota, Oregon, Pennsylvania, Rhode Island, Vermont, and Wyoming. In some cases, states started a survey but did not answer any of the questions. Often, state administrators would click through all of the questions without answering them to get an idea of the survey questions. Unfortunately, due to technical issues with Qualtrics, respondents who did this preliminary question scan were locked out of the survey when they returned later to complete it. In cases where the survey administrator was made aware of the issue, the survey was unlocked to let participants submit their answers.

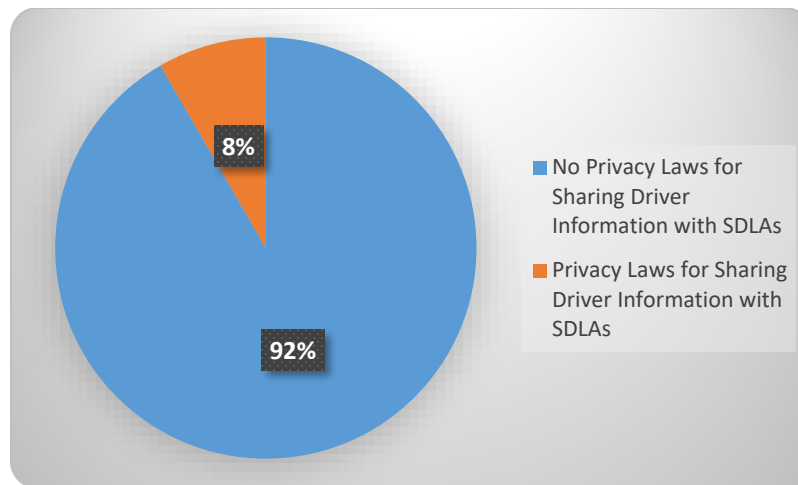




**Figure 3.7** States That Responded to Kentucky’s Survey

### 3.2.1 SDLAs and Privacy Laws

Privacy laws preclude some states from providing CDL license information to other states. In those states, the SDLA only fulfills data requests if the licensee submits them, making it difficult for SDLA in other states to obtain information about CDL holders. Question 1 asked states if they have privacy statutes preventing them from sharing this type of data. As seen in Figure 8, 11 respondents (92 percent) said their states do not have statutes regarding this type of data, while one state (8 percent) has this type of privacy law preventing them from providing data to another SDLA. Only the respondent from Colorado provided additional information about their privacy laws. According to Colorado, the SDLA agency can verify driver information if another state contacts them.

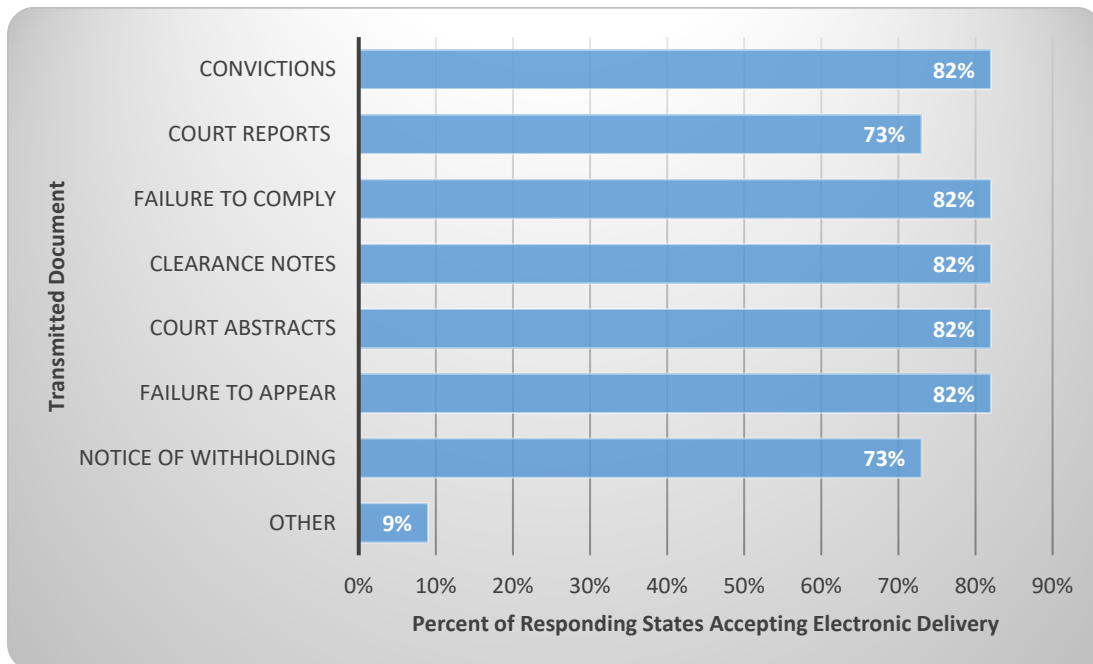


**Figure 3.8** State Privacy Laws for Sharing Driver Information

### 3.2.2 Electronic Communication

Kentucky’s CDL program supervisors expressed interest in increasing the use of encrypted email to send CDL-related documentation to other states. However, to implement this change, Kentucky must determine which states accept documentation in this format. The survey asked respondents if they accepted the following documents by encrypted email: notice of withholding, failure to appear, court abstracts, clearance notes, failure to comply, court reports, and convictions. Twelve participants answered this question. As seen in Figure 9, over 80 percent of the surveyed states

accept convictions, failure to comply, clearance notes, court abstracts, and failure to appear by email. Over 70 percent of states accept court reports and notices of withholding by email. Administrators in Rhode Island responded as “other,” noting they only accept these documents through postal mail. Alabama’s respondent reported that states could not transmit court reports or notice of withholding to their state by email.



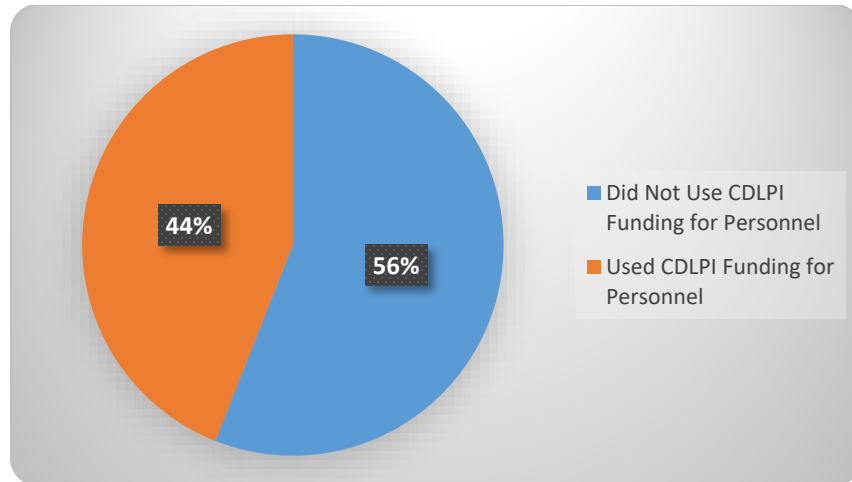
**Figure 3.9** Acceptance Rates for Electronically Transmitted CDL-Related Documents

### 3.2.3 CDL Pointers and Identification Cards

The survey asked about the following scenario: if a driver comes to your state to get an ID and has a CDL pointer, does your state change the state of record to reflect the state of residence on the identification card? Changing the state of record to reflect the state of residence helps prevent a driver from obtaining a license from two states. Except for two states, all the responding states would change the pointer to reflect the state of residence listed on the ID.

### 3.2.4 CDL Program Implementation and Federally Funded Temporary Labor

Before 2017, Kentucky used CDLPI grant money to pay for FFTLs to help with CDL-related tasks, such as document verification. Kentucky depleted their FFTL funding in April 2017, and the branch manager is concerned a staffing shortage could hinder Kentucky’s ability to meet the reporting requirements specified in 49 CFR 384. Kentucky’s CDL program supervisors want to know how other states adjusted their staffing levels if they used CDLPI funding for this purpose. The survey asked respondents two questions related to FFTLS. The first inquired if their state employed FFTLs and used CDLPI to pay for salaries. As seen in Figure 10 below, most respondents (63 percent) did not use CDLPI funding for personnel. Only Kentucky, Alabama, New Mexico, and Colorado applied CDLPI funds to staffing.



**Figure 3.10** CDLPI Funds and FFTL Funding

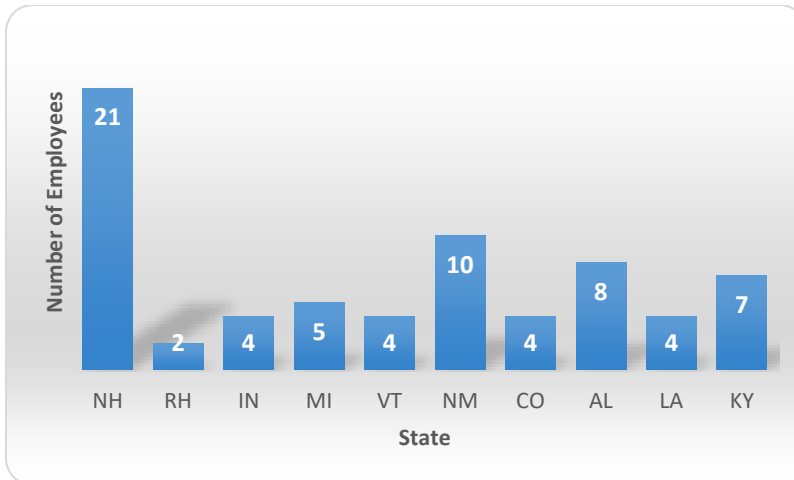
The second question was a follow-up to the first. If a state SDLA applied for CDLPI funds to support FFTL staff members, the respondent was asked about the kinds of adjustments made after depleting their funds. The respondent was asked to select all that applied from the following list: hired more staff, reorganized workflow and staff, automated processes formerly handled by FFTLS, or none. None of the states automated processes that were previously handled by the FFTLS. According to the respondent from New Mexico, when the state lost funding, they hired more staff and reorganized workflow and staffing. Alabama and Colorado did not provide any information about how they adapted to the loss of the FFTLS. The remaining states were not using FFTLS when the FMCSA restricted personnel funding through the CDLPI grant.

### 3.2.5 CDL Tasks and Staff

One interesting survey finding is that states require different levels of staffing to complete CDL-related tasks. The survey asked respondents to indicate how many employees they must have to complete the following tasks: maintain driver history records; process court records and court actions that impact driver license status; send out form letters related to court actions affecting driver license status; and process CDL applications, medical cards, and self-certifications.

#### *Maintain Driver History Records*

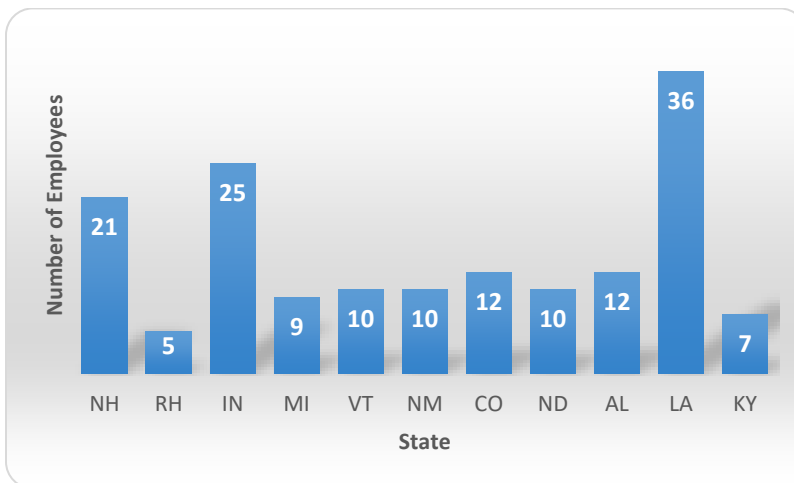
Ten states responded to the question about the number of employees required to process these documents. The average number of employees needed to maintain driver history records is 14 employees. Figure 11 below shows that Rhode Island requires two employees to maintain these records, which is the lowest number out of the total respondents. New Hampshire requires the highest number of employees: 21. The next highest number of employees was 10 in New Mexico and eight in Alabama. Kentucky uses seven. Michigan uses five employees, while Indiana, Vermont, Colorado, and Louisiana use four employees each.



**Figure 3.11** Staffing Levels for Maintaining Driver History Records

*Process Court Records and Court Actions that Impact Driver License Status*

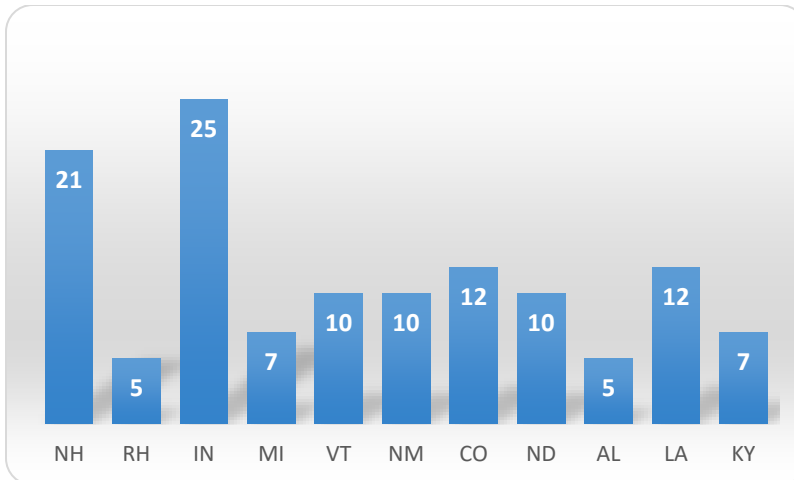
Ten states responded to a question about the number of employees used to process court records and court actions that impact driver license status. The average number of employees used for this task is 14. As seen in Figure 12 below, Louisiana uses 36 employees, which is the highest number. The next highest number is Indiana, with 25 and New Hampshire with 21 employees. Colorado, along with Alabama, uses 12 employees. Vermont, New Mexico, and North Dakota all use 10 employees each. Michigan employs nine staff members to process these documents. Kentucky uses seven employees, while Rhode Island uses five employees, which is the lowest number of employees among the respondents.



**Figure 3.12** Staffing Levels for Processing Court Records and Court Actions

*Send Out Form Letters Related to Court to Court Actions Affecting Driver License Status*

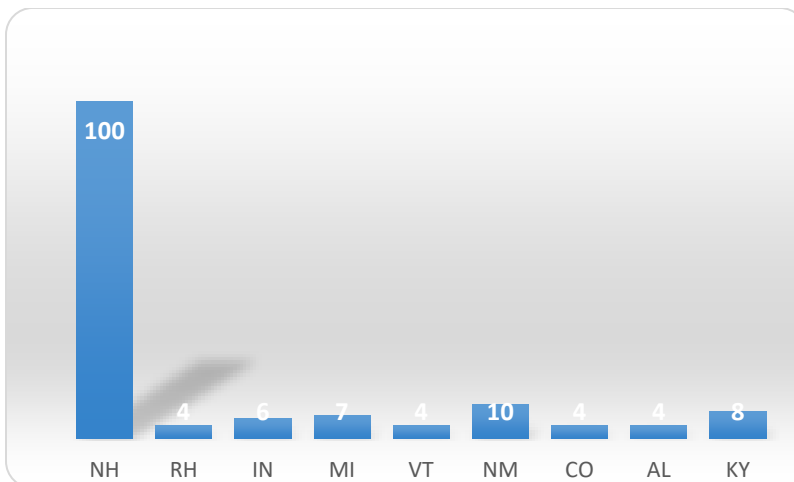
Eleven states responded to the question asking them to indicate the number of employees necessary to send out form letters related to court actions affecting driver license status. As seen in Figure 13, on average, states employ 11 people to send out form letters. The highest number of staff members were in Indiana with 25 staff members, while the lowest number was in Rhode Island and Alabama, which uses 5 staff members each. New Hampshire uses the second-highest number of staff members with 21. Those states were followed by Colorado and Louisiana, who use 12 staff members to send out form letters. Vermont, New Mexico, and North Dakota all use 10 staff members each. Michigan and Kentucky use seven staff members, the second-lowest number of staff members.



**Figure 3.13** Staffing Levels for Sending Out Form Letters

*Process CDL Applications, Self-Certifications, and Medical Cards*

The final part of the question asked states to indicate the staffing levels required to process CDL applications, self-certifications, and medical cards. Nine states responded to this question. On average, states require 16 staff members to process these documents. The highest number was 100 staff members in New Hampshire. As Figure 14 below shows, this is a dramatically higher staffing level than other states. Researchers contacted New Hampshire to determine why their staffing level was so high for this process but they did not respond. New Mexico uses 10 staff members to process CDL related documents. Kentucky uses eight employees for this task. Michigan employs seven staff members for this process while Indiana has six. The remaining states- Rhode Island, Vermont, and Colorado use four staff members each.



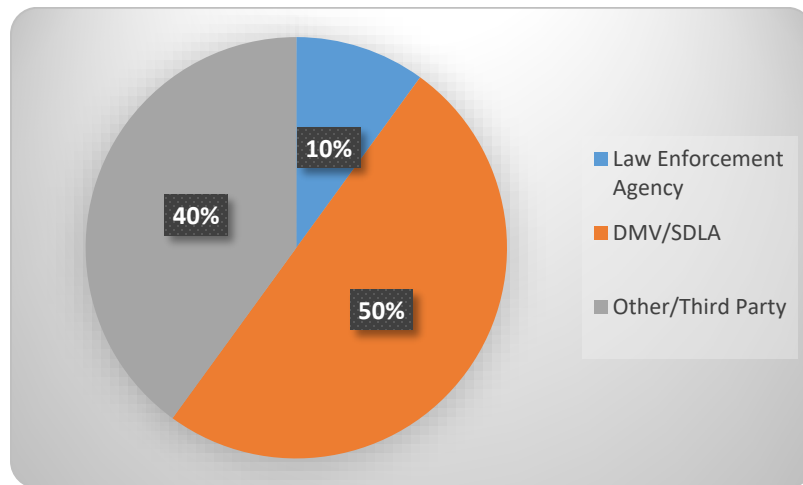
**Figure 3.14** Staffing Levels for CDL-Related Documents

Notwithstanding the relatively high number of staff members utilized by New Hampshire in the CDL-related document processing, processing court records and court actions that impact driver license status is the most labor-intensive based on respondents' answers. States indicated the second-highest staffing level is needed for sending out form letters related to court actions affecting driver license status. Maintaining driving records was the least labor-intensive of all the processes.

**3.2.6 CDL Skills and Knowledge Testing**

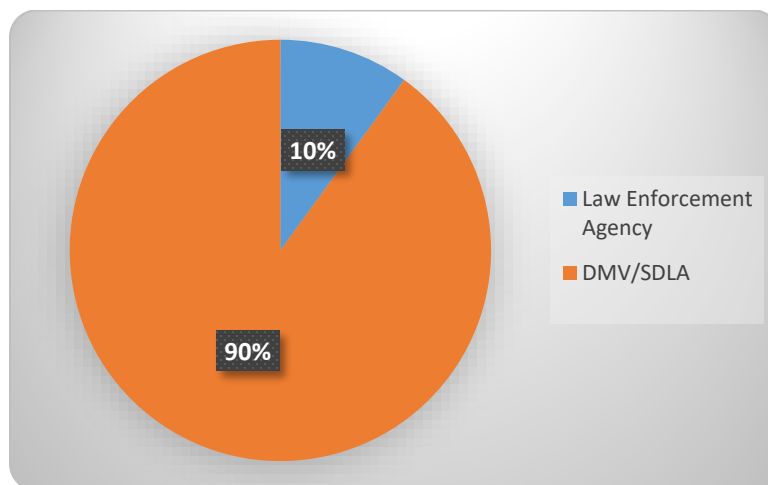
Under Federal CDL laws, law enforcement agencies, the SDLA, or third-party providers can conduct the knowledge and skills tests. The survey included two questions to determine the breakdown of states using those three options.

Question 8 requested that states indicate which agency conducts their CDL skills test. Ten states responded to the question. As shown in Figure 15, two states, Alabama and Kentucky, administer the skills test through a law enforcement agency. Fifty percent of the states, including New Hampshire, Indiana, Wyoming, Michigan, and Vermont, administer the tests through the DMV or SDLA, while 40 percent utilize third-party test administrators.



**Figure 3.15** Agency Responsible for CDL Skills Testing

Question 9 asked who administers CDL knowledge tests. Ten states provided an answer to this question. As seen in Figure 16, Alabama and Kentucky administer the test through law enforcement. The remaining 90 percent of states provide the test through the motor vehicle agency or the SDLA.



**Figure 3.16** CDL Knowledge Testing

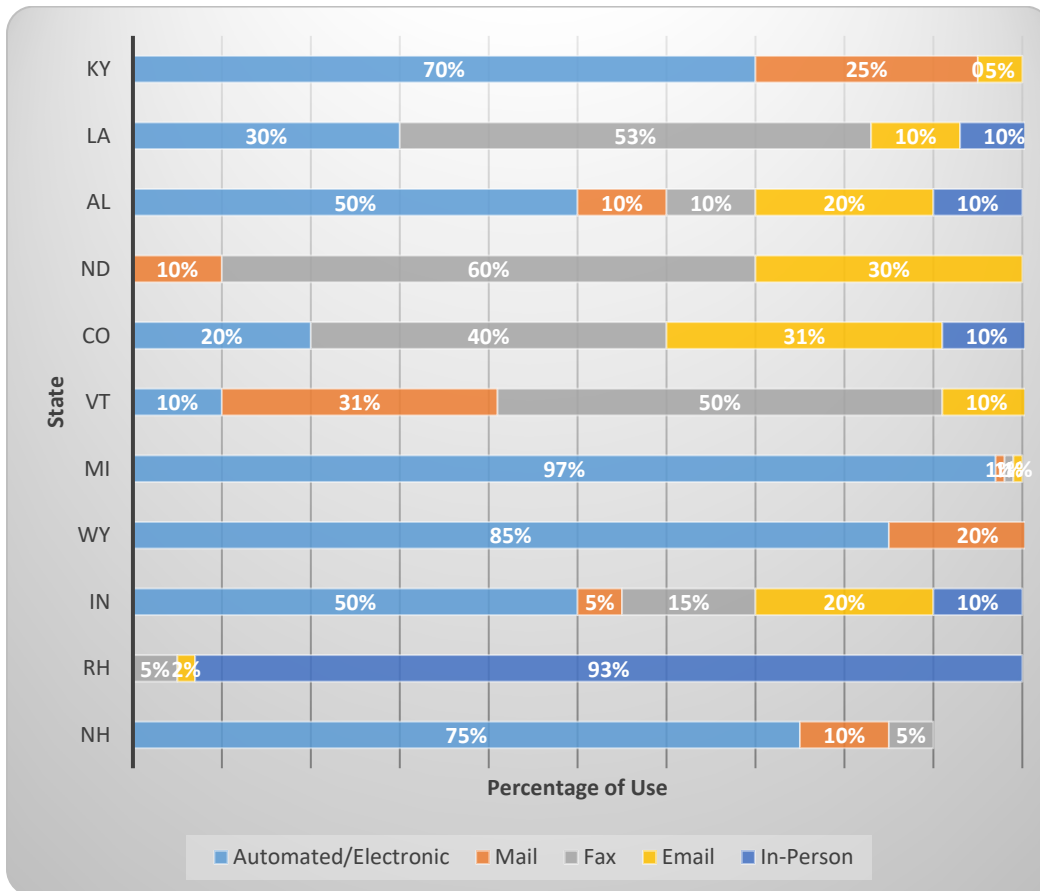
### 3.2.7 Records Processing

Researchers identified five primary processing tools for CDL-related documents: automated or electronic, mail, in-person visit, fax, and email. Question 10 investigated the percentage of records processed utilizing each of these tools. The survey asked respondents to use a sliding scale from 1 to 100 percent to indicate the percentage of processed documents using each tool. The survey responses revealed varied approaches in processing methods for CDL-related documents. However, most of the respondents rely heavily on automated processes. Figure 17 below compares each state's responses to the percentage of records processed by each. The colored bars represent the percentage of records processed by the tool. The following bar colors represent the five processes:

- Light Blue- Automated or electronic

- Orange- Mail
- Grey-Fax
- Yellow-Email
- Dark Blue- In-person transactions

Please note that not all states responded for every tool and some states' responses did not total 100 percent.



**Figure 3.17** Tools Used for Records Processing

### 3.2.7 Automated/Electronic

Most of the responding states use automated or electronic tools to process driver license-related documents. Over 70 percent of the records in Michigan (97%), Wyoming (85%), New Hampshire (75%), and Kentucky (70%) process records through automated activities. Indiana and Alabama use automated tools 50 percent of the time. The remaining states use these tools less frequently. Louisiana and Colorado process records using automated tools 30 percent and 20 percent of the time, respectively, while Vermont only uses these tools 10 percent of the time.

#### Mail

Mail was the next most commonly used tool for driver license-related documents. Three states, North Dakota (60%), Louisiana (53%), and Vermont (50%), use mail at least 50 percent of the time, while Colorado processes records by mail 40 percent of the time. The remaining states use mail to a much lower degree. Kentucky processes 25% of records by mail. Indiana processes 15 percent of records by mail, and Alabama processes records by mail 10 percent of the time. The remaining states, New Hampshire, Rhode Island, and Wyoming, only use mail five percent of the time.

### *Fax*

Fax machines were the the third most common tool for processing driver license records. New Hampshire was notable because this state does not use fax machines to process any records. Colorado (31%) and North Dakota (30%) used this tool most frequently. Alabama and Indiana, each 20 percent of their agencies' records using fax machines. The remaining states, Rhode Island, Wyoming, Michigan, Vermont, and Louisiana, only process 10 percent or less of records utilizing fax machines. Kentucky has eliminated faxes from the workflow processes.

### *Email*

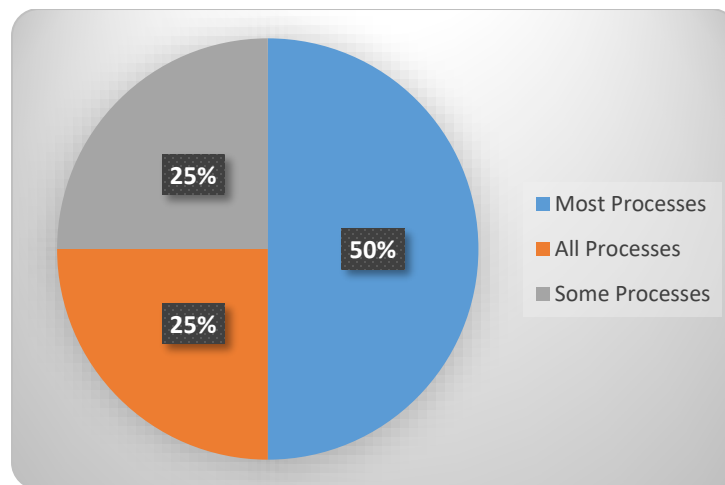
The states that responded to the survey do not use email as frequently as other tools for processing driver license records. Vermont (31%) and Wyoming (20%) use email to process more records than the other states. However, the remaining states only use email to process 10 percent or fewer records. North Dakota, Alabama, and New Hampshire process 10 percent of agency records through email, and Indiana only uses this method to process 5 percent of their records. Five percent of Kentucky's workflow includes email, although agents would like to utilize this tool more frequently. One percent of records are processed through email in Michigan.

### *In-Person*

Out of the five records processing methods, in-person visits were the least likely to be used. Rhode Island is a notable exception, as 93 percent of their records are processed in-person. Wyoming processes 20 percent of the driver's license records in person. Only 10 percent of records in Indiana, Colorado, Alabama, and Louisiana are process in-person. Kentucky processes no records through in-person visits.

### **3.2.8 Process Manuals**

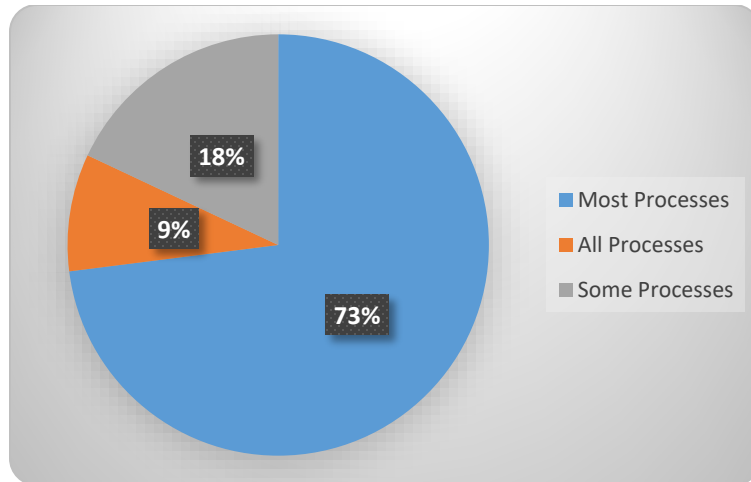
An FMCSA task force study recommended that states maintain process manuals for their CDL programs. Questions 11 and 12 asked states to indicate if they have step-by-step training manuals for their court records processes and CDL Workflow processes. All the states retain at least some step-by-step training manuals for court records processes. As shown in Figure 18, 25 percent have step-by-step manuals for all the court record processes, and 50 percent have manuals for most of their court record processes. Twenty-five percent of the agencies maintain manuals for at least some processes.



**Figure 3.18** SDLAs Maintaining Court Records Process Manuals

All of the respondents maintain step-by-step manuals for at least some of the CDL workflow processes as well. As seen in Figure 19, only 11 percent provide step-by-step manuals for all CDL workflow processes to staff members. Eighteen percent of the states provide step-by-step manuals for some of their CDL workflow processes. Seventy-three percent of the respondents maintain step-by-step manuals for most CDL workflow processes.





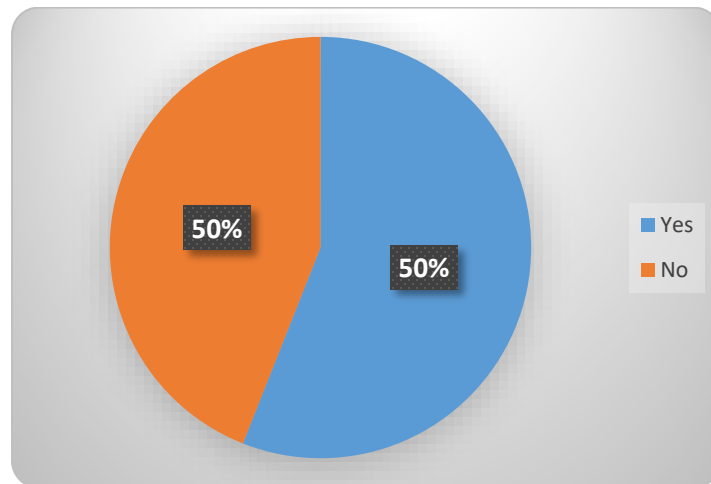
**Figure 3.19** SDLAs Maintaining CDL Workflow Process Manuals

FMCSA recommends that DMV agencies maintain process manuals for their programs. The value of such documents is that manuals provide agencies with the ability to catalog institutional knowledge. As a result, agencies can streamline cross-training for staff members. It also assists agencies when they hire new employees to replace staff members that are terminated, resign, or retire. Based on the answers to this survey question, many agencies are making at least some effort at heeding this recommendation.

### **3.2.9 Compliance with 49 FMCSR 383 or 384**

SDLAs failing to meet the requirements of 49 FMCSR 384 can be found out of compliance by FMCSA, which can have severe consequences for those agencies. The consequences of being out of compliance are specified in 41 CFR 383. First, the state can lose 5 percent of their FHWA and MCSAP funding in the initial year of non-compliance and 10 percent in the second year. In the second year, those funds cannot be recovered even if a state is recertified. Also, CDL regulations are intended to increase commercial vehicle safety. Finally, CDL laws prevent a state from conducting CLP or CDL transactions such as issuance, renewals, transfers, and upgrades. So, a loss of compliance can have high costs in terms of state fiscal resources. trucking industry activities by limiting the number of qualified drivers, and possibly decreasing highway safety by increasing the possibility of crashes and injuries. Therefore, it is of vital importance that a state maintain compliance with these regulations.

Question 13 asked states if the FMCSA has ever found their state CDL program out of compliance with 49 FMCSR 383. In Figure 20, half of the survey respondents answered in the affirmative to being found out of compliance, while the remaining half said their state has not been found out of compliance.



**Figure 3.20** Compliance with 49 FMCSR 383

Four states provided input on reasons for being out-of-compliance. Indiana responded that their commercial license permit (CLP) has to be updated to include the written description of restrictions and endorsements. Wyoming remarked their state was deemed out of compliance because the state does not order pretrial suspensions for driving under the influence charges. Colorado does not report convictions and withdrawals on time, which led to their state being found out of compliance. This particular stumbling block involves getting all the municipal courts to submit CDL driver convictions to the state in a timely manner. Alabama has three main issues that pertain to state laws not being consistent with federal requirements for commercial driver’s licenses:

- 9CFR384.209c Notification of Traffic Violations - Alabama state law read that the court had 10 days to send convictions to the state. In the same statute it read that the state had 10 days to send the conviction to the State of Rec. FMCSA interpreted this to mean that we allow 20 days to get the conviction to the SOR.
- 384.223 Railroad Highway Grade Crossing Violation - Alabama did not have state laws covering railroad grade crossings.
- 49CFR384.226 Prohibition on Masking Convictions - Alabama did not have expressed authority to prevent masking.

### 3.2.10 Ignition Interlock Devices

Kentucky’s IID program is administered by the Division of Driver’s License (DDL) and the court system. The court determines the length of the sentence and monitors compliance while DDL reviews the applications for participation and certifies completion of the program. Question 15 explored how other states administer their IID programs. States were asked to indicate whether their program was administered by the judicial branch, the motor vehicle agency, or if the judicial and executive agencies shared the responsibility (also known as a hybrid system). Eleven states answered this question. As seen in Table 5, Indiana is the only state that administers its program through the judicial branch, while 55 percent of the respondents administered their program through the motor vehicle agency. The 55 percent of states include New Hampshire, Wyoming, Vermont, New Mexico, Colorado, and Louisiana. Four states (36 percent) – Alabama, Michigan, Kentucky, and Rhode Island – share the responsibility between the two branches.

**Table 3.1** Ignition Interlock Device Administration

Branch	Percent of Respondents
Judicial branch	9%
Motor vehicle agency	55%
Shared responsibility	36%

Question 16 further inquired about IID programs. The question read: Under what circumstances would your state transfer a license with a CDL endorsement if there was an IID order on the driver's base license? In general, states do not let CDL holders have IID restrictions in their states and therefore would not transfer the license. Five states – Rhode Island, Indiana, Vermont, New Mexico, and Colorado would not transfer the CDL license under these circumstances. Indiana does not permit CDLs to transfer conditional licenses. If a CDL driver's base state is New Mexico, the driver is required to retake their CDL tests when the IID installation period expires. Similarly, Colorado does not transfer a CDL with a restricted base license. Colorado CDL holders lose their CDL endorsement and must obtain a commercial learner's permit once the device is removed from the vehicle.

Three states would transfer a CDL with a restricted base license. Wyoming said the state would transfer if there were a CDLIS pointer, and the license was being issued in the state. Alabama would transfer the license into the state as long as the CDL holder met the full disqualification requirement. However, they would place a narrative restriction on the license and indicate the state that required the IID. In Louisiana, drivers must have ignition interlock as a condition to reinstate or to obtain a hardship license. Since Louisiana prohibits CDL holders from obtaining a hardship license, they would have to downgrade their license type. If CDL licensees need it for a condition of reinstatement and reinstate their license, they can then transfer to another state. However, the driver would still have to keep the IID on their vehicle once they transfer. If the device is removed, the driver is required to reinstall the device or face suspension. Kentucky would only transfer a valid Class D license and would pull the CDLIS pointer and place in non-status.

### 3.3 Conclusions

Based on survey data, researchers put forth the following conclusions. In regards to privacy laws, it appears that the majority of states do not have privacy restrictions when communicating with other SDLAs about driver records. In addition, almost all of the respondents accept CDL-related documents by email. So, Kentucky should be able to increase their use of email communications with other SDLAs, which could increase DDL efficiency.

Unlike Kentucky, most survey respondents did not use CDLPI funds to employ FFTLs. For the states that did use FFTLs, they adapted to the loss of funds by hiring more staff and reorganizing workflow. None of these states automated the processes formerly performed by FFTLs. Kentucky automated some of the tasks formerly completed by FFTLs which has helped the program adjust to the labor demands following the loss of funding. However, the fact that Kentucky had to rely on the CDLPI grant funds to pay for staffing could indicate that the Commonwealth of Kentucky should consider investing more funds into Kentucky's CDL program.

The survey investigated the number of employees required to complete CDL related tasks. Processing CDL applications, self-certifications, and medical cards required the highest number of staff members — 17 on average. Maintaining driver history records requires 7 workers on average. Kentucky's staffing levels are close to the staffing levels of other SDLAs. There appears to be a relationship between the amount of automation and the number of employees needed to do certain things. For example, the IT survey showed that driver history records were more automated than most other tasks, and the DHRs seem to require fewer employees to process than CDL stuff. So the amount of automation appears to be inverse to the number of employees.

States can legally administer CDL knowledge and skills tests through the SDLA/DMV, a third-party provider, or law enforcement. Kentucky is one of two states that administer the CDL tests through law enforcement. The remaining states administer their skills testing through either the DMV/SDLA or third-party providers. In terms of the knowledge test, drivers generally complete the exam through their DMV/SDLA. Given the tremendous amount of

work currently required of Kentucky's CDL program, leaving this responsibility with law enforcement is a wise policy for the state.

States process many records in their daily work and use multiple methods to manage that responsibility. Most states automate many of those processes and address mail and in-person visits quite frequently. Despite the fact that most of the states said they would accept documentation by email, only 13 percent of states utilize email in their workflow processes. In addition, states generally maintain step-by-step manuals for most of their CDL workflow processes.

By a slim majority, FMCSA found most of the respondents out of compliance at one point or another. In general, states were found out of compliance because their state agencies did not report convictions in a timely manner, or state laws were not consistent with federal laws regarding CDLs. Unlike other survey respondents, it is notable that despite the staffing challenges and the tremendous amount of responsibilities that DDL staff members must contend with, Kentucky has never been out of compliance.

The survey also explored licensing issues among the SDLAs. States are putting forth the effort to prevent drivers from having two licenses and ensure that CDL holders with DUIs are being identified and properly addressed during the state of record change process. The bulk of states change the CDLIS pointer to reflect the state of residence if a driver obtains an identification card in their state after transferring from another state. Changing the CDLIS pointer for ID cards helps foster the FMCSA goal of one state one license. Second, the survey also inquired about state IID requirements. Motor vehicle agencies administer IID programs in the vast majority of cases, while a smaller percentage share the responsibility between the motor vehicle agency and the judicial branch. Only one state manages the program solely through the judicial branch. Finally, states were asked to indicate if they would transfer a CDL license with an IID restriction. Five states would not transfer that license, while three would transfer the license as long as the driver met specific requirements.

## Chapter 4 Kentucky DDL Workflow Processes

### 4.1 Manual Workflow Processes

Driver history records are updated each day through electronic and manual processes. Electronic processes generally consist of in-state court actions such as court summonses, failure to appear in court, failure to comply with court orders, driving under the influence (DUI), and court case appeals. The documentation is loaded electronically to KDLIS from the Administrative Office of the Courts (AOC), the Judicial Branch's operational arm in Kentucky, and statuses are updated automatically. CDLIS records are updated automatically, with some exceptions. In a manual process, the agent reviews documents, inputs data, changes the driver history record status and scans necessary documentation into microfiche. Manual processes may also include correcting the court's errors or correcting the errors that resulted in a record entry being rejected from KDLIS.

There are many reasons why a process might be manual. First, there are limited funds for automating processes, and the antiquated programming platform for KDLIS makes it very difficult to make programming updates. Second, there are needs for human judgment and discernment to ensure errors are corrected and the correct charges are added to a driver history record. Third, in some cases, potential areas for automation or improvements in efficiency simply have not been identified.

To judge the impact of manual processes on workflow in DDL, KTC researchers shadowed DDL agents while they completed manual processes. Researchers observed the agents as they reviewed the documents, keyed the data into the driver history record, changed the statuses, and prepared the documentation to send to the driver. Also, the researchers timed the agents to get an idea of how long, on average, it takes them to process the records. The goal was to measure how much time manual processes take to complete and the number of labor hours needed to complete them. Then, researchers created summaries to describe the data gathered during observation, which are included in this section. Researchers did not shadow the more self-explanatory tasks such as reading emails, opening mail, and retrieving faxes. Due to time limits, researchers did not observe every manual process. The summaries are intended to give the reader an idea of how manual processes are conducted and give ideas on possible ways to automate those processes.

Section 4.2 presents information about a document that the Court Records Section created to track the number of hours needed to complete 16 manual tasks (see Table 18). If a manual task is included in Table 18, its summary will not include a processing time table. If a manual task is not included in Table 18, the summary will include a processing time table.

While some of these processes do not specifically isolate CDLs from general operator's licenses, all of them impact CDL holders. KDLIS prompts agents to indicate if the record entry involves a Commercial Motor Vehicle (CMV). Additionally, if some of these processes were automated, those employees could be transitioned into CDL-related activities to help the state maintain its compliance with CDL requirements. With that in mind, this document makes suggestions on possible ways to automate particular processes.

To help the reader understand the large number of processes discussed in the report, Appendix A summarizes each process, the section responsible, and the recommendations for automating processes. Appendices B, C, D, and E provide the total number of records processed in each section annually.

#### 4.1.1 Court Records Section

##### *Court Summons Notices (SC4)*

A court summons notice or SC4 pertains to notices for Failure to Appear (FTA) or Failure to Comply (FTC). An FTA indicates a driver failed to appear for a hearing, while an FTC indicates a driver failed to pay a citation. SC4s involve Kentucky drivers who received a citation in a state other than Kentucky. FTAs and FTCs are only added to the driver's record in Kentucky if they involve mandatory hearing charges, such as driving while suspended or a DUI. Therefore, FTAs involving minor charges, such as expired registration or improper equipment, are not keyed into the record. Also, Kentucky does not key an FTA or FTC summons if it is over six months old unless the charge involved a CDL

holder. However, the state issuing the citation can place a suspension on the driver's National Driver Register record to prevent them from obtaining a license in Kentucky or other states.

Court summons notices generally arrive by mail. In some cases, states send faxes or emails, but this is not a common practice. Court summons notices arrive from all 50 states. Every state has different citation formats for reporting the summons. The agent must visually search for crucial information such as dates, names, license numbers, and case numbers within that document, which slows down processing time.

The process begins with the agent reviewing the document from the state that issued the citation before locating all pertinent information. Then the agent searches for the master driver history records in KDLIS using the name, license number, or social security number to confirm the driver has a valid license. The agent then compares the driver's master record with the court summons document to ensure the identifying information matches the information on the summons. Following that, the agent checks for aliases. An alias can consist of a name change, a false name, or licenses issued in other states. If there is an alias, the agent deletes it. The agent also checks the driver's license status in Kentucky and searches for outstanding charges or convictions. The agent checks to make sure the SC4 is not already on the driver's record, which would result in a duplicate entry and a rejection from the KDLIS system. If it is already on the record, the agent deletes it.

After reviewing the document, the agent keys the citation into KDLIS. The agent saves the entry and requests a letter from the system that is addressed to the driver. The letter instructs the driver to contact the court that issued the summons, provides them with the contact information for the court, and informs them they have 60 days to comply with the court's order or face license suspension. The letter is mailed to the driver on the following day.

After requesting the letter, the agent finalizes the record. The agent confirms the system accepted the modification and that it reflects the correct license status or driving record. In the comment section, the agent inputs the state, citation number, and the number for the court. Then the summons is scanned into SharePoint and saved to microfiche. If the driver has a question or claims they did not receive the citation, the agent can retrieve the document for reference.

The labor time required to complete this process is found in Table 18. There is no standardized format for paper citations, so agents spend much of the processing time reviewing the documents to locate identifying information. Given that KDLIS is not built to interface with other states' driver's license information systems, this particular process would be challenging to automate. Unless the states create some sort of universal pass-through program for license transfers, it will be difficult to create a process that can electronically interface with the SDLA systems in other states.

#### *Error List*

The error list pertains to the records which did not successfully update to a driver history record because the change violated database rules created by KDLIS programmers to prevent incorrect status changes, duplicate record entries, or incorrect outcomes of court proceedings.

There are several reasons why KDLIS might reject a record update. KDLIS often rejects updates due to human error. For example, law enforcement inputs the wrong license number, name, or driver's license state on the citation. Another potential error occurs when an agent has already updated the driver record, and the duplicate entry needs to be removed from that record. KDLIS rejects out-of-state citations and convictions because they are sent to the state of record responsible for suspensions and disqualifications. The court may also make errors in the data it sends to KYTC. If the errors are related to Kentucky court records, the citation or the hearing disposition is sent back to the court for correction. However, many courts fail to correct errors.

The error list manual process begins with the employee reviewing the error list. Then the agent begins to work through the list on a case-by-case basis. In each case, the agent queries KDLIS to find the master driver history record. The agent compares the identifying information on the master record with the information on the error list to confirm a valid driver license and the information matches. Following that, the agent searches the record to identify

why KDLIS rejected the entry. If the rejection stems from a duplicate record entry or update, the agent deletes the duplicate entry. KDLIS also rejects records due to an error in demographic data, including name, address, or social security number. In these cases, the agent retrieves the citation from CourtNet and attempts to identify the correct information on the document. If the agent locates the correct information, they correct it in KDLIS. If the agent is not able to find the correct information, the record is printed and sent back to the appropriate court for correction. If the error involves an out-of-state citation or conviction, the record or record entry is deleted from KDLIS, a court abstract is printed from Document Direct, and sent to the state in the mail on the following day.

In addition to researching the various possibilities for a rejected record, the employee must also be on alert for specific codes that indicate why KDLIS rejected a record. Sometimes records are rejected because the citation included a specific charge that requires a hearing, regardless of the driver’s issuing state. This includes DUIs, texting or talking on a phone while driving for CDL holders, eluding law enforcement, or racing. In those cases, they print the record and forward it to the Hearings and Fraud Investigation Section for further processing. The agent also keeps an eye out for error rejections due to orders for IIDs and forwards those to the Driver Education Section.

Once the agent identifies the source of the error, they correct it in KDLIS. The agent saves the modification and inputs a comment that explains the modification. The agent also confirms the change was successfully updated in the system, prints the record, and sends it to the relevant section for processing. The section supervisor must approve any status change. Finally, the agent scans the record change documentation to SharePoint and saves it to microfiche if there are questions about the modification.

The researchers observed and timed an agent who processed five records. As Table 6 below shows, the average amount of time was 2 minutes and 31 seconds. Processing an error record could take as little as 1 minute and 35 seconds to 4 minutes and 9 seconds.

**Table 4.1** Processing Time for Error List

Average	Lowest	Highest
02:31	01:35	04:09

It would be challenging to automate many of the error list tasks since rejections are often the result of typos or low data quality. As a result, the error list process requires time-consuming research and manual corrections to ensure that driver license records have the most accurate information necessary. KDLIS programming language might be modified to accept the latest updates from the courts. This change would improve efficiency for simple errors; however, it threatens to introduce more errors into driver records for more complex issues.

Some aspects of manual tasks could be improved with programming changes. Canadian records frequently appear on the error list because KDLIS does not recognize the location information since it is not included in the location table. Canadian records frequently require agents to override the system and input a makeshift location in the field, which requires further processing. In these instances, the programming language in KDLIS could be changed to include a location field for Canadian licenses.

*Process Bob (J-G List)*

Process Bob is a term DDL Court Records agents use to refer to the J-G List, an error list related to Kentucky court actions and out-of-state drivers. This error list contains records that KDLIS flagged for errors that prevented a court abstract from being printed and sent to the State of Record. Generally, the Process Bob list contains records with incorrect driver license numbers, incorrect demographic data, or no driver license numbers. A DDL agent reviews this list daily, and must identify the error and determine the remedy so that the conviction can be loaded to the KDLIS system.

In the first step, the agent reviews the errors on the Process Bob list. Then the agent works through the list on a case-by-case basis to determine why KDLIS rejected the record. The agent follows the same steps for each record. First, the agent queries KDLIS to locate the state of record and to determine if the driver has a Kentucky license.

Then the agent compares the license number and other information in those records to the information contained in the entry on the Process Bob list. The agent screens the driver’s license number using the State of Record database to confirm that the state on the error list matches the state listed as the driver’s base jurisdiction. Sometimes, a driver’s license number sequence in the error list record does not match the number sequence for the state of record. If they identify the state, the agent modifies the record to reflect the correct state. In the case of a missing social security number, the agent attempts to find the number and correct the record in KDLIS. In some cases, the error is more difficult to detect. When the agent follows all of the previous steps and cannot find the error, they open the citation in Document Direct and compare that information with the driver history record. After identifying and correcting the error in the record, the agent saves the modification and confirms the modification was successfully updated in the system. Then the agent inputs the command to print the court abstract, which is mailed to the state of record on the following day.

Agents also review the Process Bob errors list to identify codes that indicate the record needs to be deleted from the list. Agents look for the code indicating a license suspension because Kentucky cannot enforce a suspension for an out-of-state driver. When an agent identifies records with this code, they also check to see if the driver history record contains a failure-to-appear or court summons notice that is less than six months old. If it is less than six months old, the action is keyed into the driver history record. The agent prints the court abstract and mails it to the State of Record. If an action is over six months old, the agent does nothing to the record. If there are no other actionable items in the driver history record, the agent deletes the suspension from the Kentucky driver history record, and State of Record is responsible for enforcing the sentence under their laws. Once those steps are completed, the agent saves the modifications and deletes the record from the Process Bob list.

Agents also look for CDL specific codes. These include citations for violations that result in a CDL disqualification in Kentucky, citations for using a cell phone while operating a CMV and using a hand-held cell phone while operating a CMV. In these cases, the agent will open the driver history record to ensure that the driver indeed had a CDL and was operating a CMV when they were cited by law enforcement. If neither are true the agent will modify the record to reflect that, save the record, ensure that the system saved the modifications, and then remove the record from the Process Bob List. If the driver was a CDL driver then the records are printed out and sent to the State of Record in the mail on the following day.

Table 7 below shows that the average time to process the Process Bob list task is five seconds. The shortest amount of time is three seconds while the highest is two minutes. However, processing time could be longer if the agent encounters an error that requires more research.

**Table 4.2 Processing Time Process Bob List**

Average	Low	High
.05	.03	2.00

It would be difficult to automate many of the error list tasks, since these rejected records are often the result of typos or poor data quality, which requires time-consuming research and manual corrections. The manual processes ensure that driver license records have the most accurate information necessary.

*Unsatisfied Civil Judgements*

Unsatisfied civil judgments occur when there is a motor vehicle accident where individuals with judgments against them fail to pay restitution or otherwise satisfy the terms of the judgement. These kinds of workflow processes stem from bankruptcy, defaults on payments, new payment arrangements, new judgments, judgements against individuals operating a motor vehicle while under the influence of alcohol or drugs, and fully satisfied judgments. Most civil judgments impacting driver’s license status or driver history records pertain to damage done to another car, building, or transportation infrastructure (e.g., a guard rail, sign, overpass, etc.). The damages can be property damages, medical bills resulting from injury, or other damages not covered by insurance. In most cases, the individual ends up owing money because they were uninsured or underinsured. A driver’s license can be suspended if there is a judgment against an individual, and that individual fails to take action within 60 days of the judgment



being rendered. Conversely, pursuant to KRS 187.440, a court order authorizing payment by installments allows reinstatement of a suspended license if the debtor honors the stipulations of the payment plan.

In the first step, the employees working on unsatisfied civil judgments will sort the TC-94 forms according to the type of civil judgment at hand. Because restoring the driving rights of individuals who have entered into payment plans or fully satisfied a judgment is the first priority, those orders are processed first. Bankruptcies, judgments, and defaults are processed next. During the shift in which researchers shadowed the employee entering the unsatisfied civil judgments, there were two payment arrangements, six judgments, and two defaults.

In the second step, the employee will verify that the individual is in KDLIS if the unsatisfied civil judgment is new. If the individual is not in KDLIS, the employee will create a master file. For all updates to an unsatisfied civil judgment with previous court actions, a master record should already be in the system. It takes about 15 seconds to verify these master records, and an additional minute or two to create a new master record.

Third, the employee will key the details of the civil judgment. Assuming all personal details of the licensed individual are entered, the employee will enter the case number, date of judgment, type of unsatisfied civil judgment, and notes about how long the license status change should stay in effect. Individuals who have satisfied civil judgment obligations will get their licenses reinstated, provided they have also paid the license reinstatement fee. Individuals who have not paid a reinstatement fee will have a note put on their record that such a fee needs to be paid. The amount of time necessary to make entries at this stage depends on the specifics of the civil judgment.

In the final stage, the agent will make a comment in the record entry explaining the modification to the record. Then the agent will scan the report on civil judgment involving a motor vehicle accident into SharePoint and save the document to microfiche in case there are questions at a later date.

The amount of labor time required for the Unsatisfied Civil Judgement process is found in Table 18. Currently, there is no programming that allows CourtNet or KDLIS to automate the processing of these records. Given the routine types of data entry for each type of unsatisfied civil judgment, it may be difficult to automate some of the unsatisfied civil judgment process. Automation of the TC 94-65 form would be the first necessary adaptation. If any of the fields in the top section of the form did not match the master driver file, an individual would have to manually verify the accuracy of a close match. If the unsatisfied judgment were against a CDL holder, human verification of the record could be required, as well as CDLIS data entry. Depending on the complexity of the payment plan or dates, individual judgment may be necessary in some cases. Perhaps an indicator field could be used for such instances. Verification of driver's license reinstatement, provided it is not paid to the court, may also require human monitoring without a sophisticated payment tracking system. This task could be partially, but not entirely, automated.

#### **4.1.2 CDL Section**

##### *Self-Certification, Medical Card, Application*

This process pertains to uploading and verifying the three documents necessary to complete a CDL driver history record. The documents include the self-certification, CDL medical certification, and the CDL/CLP Application. Employees share the responsibility of adding records to KDLIS and verifying the forms per federal requirements of 49 FMCSR, Parts 383 and 384. While employees are performing these duties, they are also taking calls from drivers and circuit court clerks. Before depleting CDLPI funds, these tasks were completed by Federally Funded Temporary Labor (FFTLs). Currently, the tasks are completed by full-time employees who rotate responsibilities each week.

Kentucky's myCDL is the newly implemented CDL document web portal. It is a secure, encrypted site capable of accepting the CDL medical certification form, self-certification form, and the CDL/CLP application. Drivers can access and complete these forms online, as well as upload documents. In addition, drivers receive updates on their application status via email throughout the process, although drivers may still contact the CDL Section by phone. The myCDL portal has decreased call volume and wait time at circuit court clerk offices. It has also decreased processing time in the CDL Section. The employee interviewed by KTC researchers estimated the new CDL portal decreased the amount of time needed for document verification by 50 percent. The CDL application forms continue to be entered manually. However, the documentation is submitted through the portal.

KYTC receives all CDL documents through fax, email, and myCDL. Faxes arriving at DDL are automatically copied into the same dedicated inbox as email. If an applicant contacts the CDL Section with inquiries about their application status, this inbox allows the employee to search by date or name to confirm they received the documents.

*Medical Card Submitted Through the Portal*

First the agent queries KDLIS using the driver license number to find the master record. The agent looks for the medical card status and reviews the driver history record to see if there are any special circumstances of which they should be aware. Then the agent goes to the myCDL portal to view the image of the medical card, which was uploaded by the driver online. The next step is verification. The document submitted by the driver to the portal is the first verification, and the employee performs the second verification. In this step, the agent looks at the image to ensure it is the most up-to-date medical certificate from the FMCSA, all of the information is legible, the proper information is on the document, and there are no extraneous markings on the card. If it does not meet those criteria, then it is returned to the driver for resubmission. Once the form is rejected, and the driver does not have a current medical card on file, the driver’s CDL status is changed to “suspended.” KDLIS is updated to reflect the suspended system. The driver is then informed by mail that their CDL has been suspended, and they must submit a new medical card to have their CDL reinstated. The agent then ensures all of the identifying information on the card matches what is in KDLIS and enters the date the medical card was updated. The agent saves the record in KDLIS, certifies the document is verified in myCDL, marks the document type that was verified, saves the entry, and exits the record.

On the day of observation, the researchers timed an agent while they analyzed the medical card, entered the data, and verified the medical card. As seen in Table 8 below, it takes an average of 18 seconds for an agent to process and verify the medical card. The shortest amount of time was 6 seconds, and the longest was 25 seconds.

**Table 4.3** Processing Time for Medical Card Submitted Through myCDL Portal

Average	Low	High
00:18	00:06	00:25

*Manually Submitted Medical Card*

The manually processed medical card documents follow the same steps as the documents submitted through the myCDL portal, although in this process, the agent adds the scanned document to the myCDL portal. A manually processed document takes the form of a fax, email, or mailed document. However, very few cards are sent by mail. Faxes arrive at the agent’s workstation in the form of email attachments that are routed to a dedicated inbox. The agent opens the email and saves the documents to the desktop. Those files are then uploaded or “dragged and dropped” to the myCDL portal. Then the agent opens the documents for processing. The ability to drag and drop saves time from the previous process, where the items had to be dragged individually rather than saved in one keystroke. Following the drag and drop, the employee indicates the specific forms to upload to the portal.

Once the documents are uploaded, the agent must key the medical card information into the KDLIS system record, including the examination date, the doctor’s registry number, and the type of physician that conducted the examination. Then the agent confirms the form meets all of the requirements for medical forms. The agent saves the record entry in KDLIS and marks the myCDL document as verified.

When the document is submitted by mail, the card is scanned and uploaded to the myCDL document portal in the same manner as the other methods. The agent keys the medical information manually into the system and processes the document as described above.

The manual processing time is lengthier than the documents already submitted online. As shown in Table 9 below, on average, it took the agent 51 seconds to analyze, enter the data, and verify the medical cards. The shortest amount of processing time was 42 seconds, and the longest was 71 seconds (1:18).

**Table 4.4** Processing Time for Manually Submitted Medical Card

Average	Low	High
00:51	00:42	01:18

*Self-Certification through the Portal*

The self-certification process is very similar to the process for medical certificates. In the first step of the process, the agent opens the self-certification document submitted through the CDL portal. Then the agent queries KDLIS for the master driver history record using the driver’s name, social security number, or license number. Once they locate the driver’s master record in KDLIS, the agent compares the identifying information on the self-certification form to confirm a valid driver’s license and that the information matches. The agent also reviews the driver’s history for any special circumstances. Following that, the agent checks the self-certification form to see if the driver requires a medical waiver and whether the driver is exempted. If the driver has already submitted a self-certification on record in KDLIS, they deleted it and reenter it into KDLIS. Once they enter all of the data into KDLIS, the agent saves the entry. The agent then views the self-certification document in myCDL again for verification. The document uploaded to the portal counts as the first verification, and the employee performs the second verification. Following verification, the agent indicates the type of document that was verified and closes the record.

On the day of observation, the researchers timed an agent while they processed five records. As seen in Table 10 below, it took the agent 31 seconds to process a record on average. The shortest amount of time was 10 seconds, while the most extended amount of processing time was 1 minute and 1 second.

**Table 4.5** Processing Time for Self-Certification Though the myCDL Portal

Average	Low	High
31	09	61
00:31	00:09	01:01

*Self-Certification Manual Process*

Processing the self-certification manually is very similar to processing the medical certificate manually. Emailed or faxed documents arrive in a dedicated email inbox. The agent opens the email application to view the documents and saves the PDF files to the desktop. In the case of a mailed document, the agent scans it into the system. The image files are then dragged and dropped into the myCDL portal. Then the agent opens the driver’s master record to verify that the identifying information matches the self-certification form. The agent also checks for any medical waivers, as well as whether the driver is exempted. The necessary data is entered into KDLIS. The myCDL document is then verified and marked certified.

On the day of observation, the researchers timed an agent while they processed five records. On average, it took the agent 37 seconds to process a record. Table 11 below shows that the shortest amount of time was 26 seconds, while the longest processing time was just under 1 minute.

**Table 4.6** Processing Time for Manually Submitted Self-Certification

Average	Low	High
00:37	00:26	00:55

*CDL/CLP Application*

CDL/CLP applications are received by mail, email, or submitted through the portal and processed manually. The process is very similar to the previous processes; however, processing the CDL and CLP application requires an extra step of building a record in KDLIS. If the application is received by email, the images are drag-and-dropped to the desktop and uploaded to the myCDL portal. If the document arrives by mail, it is scanned into myCDL. If the document arrives via the myCDL portal, drag and drop is not necessary. Following those steps, the agent reviews that application. Then they query KDLIS using the driver’s license number, social security number, or name,

confirming the information on the application matches the information in KDLIS and that the driver’s license is valid. Next the agent enters the application data into KDLIS and the document is verified in the portal. The CDL application information is saved in the driver’s KDLIS master record, and the agent confirms the updates saved to KDLIS.

On the day of observation, the researchers timed an agent while they processed five records. As seen in Table 12 below, it took the agent 15 seconds to process a record on average. The lowest amount of time was 2 seconds, while the lengthiest processing time was under 23 seconds.

**Table 4.7** Processing Time for CDL/CLP Application

Average	Low	High
00:15	00:02	00:23

The most obvious option for automation would be to continue automating the CDL/CLP application process. This would mean the portal would have to be programmed to allow drivers to key in in their own data to the portal. This would decrease the amount of time agents spend building records for CDL applications and permit applications. COT programmers initially attempted to implement this feature in myCDL. However, they were unsuccessful in interfacing the portal with KDLIS and the Kentucky Office of Vital Statistics, which houses the birth certificates used to verify a driver’s age.

*State of Record- CDL Section*

This process pertains to licenses transferred from another state to Kentucky. The agent is confirming all endorsements transferred correctly to the record and that any suspensions or disqualifications are accurately reflected in the driver history record. The process is complicated when a driver transfers their license with a DUI. In these instances, the agent must contact the DMV in the previous state of registration to confirm that the driver did not hold a CDL endorsement when they received the DUI. These cases can be quite time-consuming.

To begin, the agent prints a list of driver’s licenses transferred to Kentucky and prints individual records for each case. Then the agent reviews the record and queries KDLIS using the driver’s license number. Once the agent locates the master driver record, the agent compares the printed record with the information in KDLIS to ensure all identifying information is correct. Following that step, the employee examines the record, looking for duplicate licenses and confirming all endorsements are reflected on the driver’s new Kentucky license. If the agent identifies a DUI on the record, the agent contacts the former state of registration to inquire if the driver possessed a CDL when they received the DUI conviction. The agent also looks for errors and corrects them. After that, the processing agent confirms the modification was properly updated in the system. After completing all steps, the agent inputs a comment to explain any modifications. If the agent encounters issues transferring the license, the agent requests a letter from KDLIS, which instructs the driver to visit their local circuit court clerk and rectify the issue. In the final step, the agent scans the modified paper records into SharePoint, chooses the type of document saved from the menu, and saves the document to microfiche.

On the day observation, the agent did not have any State of Records to process. As seen in Table 13, agents estimate that it can take between 2 and 5 minutes to process a record, depending upon whether the record requires a modification. Based on that estimate, this process takes 3 minutes and 30 seconds on average to complete.

**Table 4.8** Processing Time for State of Record

Average	Low	High
03:30	02:00	05:00

Given that KDLIS does not interface with the driver’s license information systems of other states, this particular process would be challenging to automate. Unless the states create some sort of universal pass-through program for license transfers, it would be difficult to create a process that can electronically interface with the SDLA systems in other states. Theoretically, a CDLIS search should be a sufficient means of determining whether an individual got

a DUI while holding a CDL license. However, if the license was issued shortly before being transferred to another state, the DUI might not be reflected in the record. So a procedural change may be beneficial, such that state workers do not contact other SDLAs with as much frequency.

*10-Year History- CDL Section*

When a previous state is notified that a driver has transferred a CDL license to another state, the history is electronically sent to the new state. In the 10-year history process, the agent confirms there have been no suspensions on a driver’s record since transferring into the new state. Agents complete this process through the myCDL portal.

The process begins when the agent goes into the myCDL portal, chooses the “10-Year History” tab, and views a list of all CDL licenses recently transferred into Kentucky. The agent opens the record entry containing the recently transferred license and queries the KDLIS system using the driver's license listed in the record. The agent confirms the KDLIS record indicates the driver has a CDL. The agent looks for a notation indicating the 10-Year History has already been updated in the driver’s master record and opens the AAMVAnet link in KDLIS to access the CDLIS database. The agent queries the CDLIS system using the driver’s license number and confirms the driver has a Kentucky license. Then the agent returns to the driver’s master record and marks the 10-year history as verified. The agent also returns to the myCDL portal and clicks the box marking the record as verified.

On the day of observation, the research team timed an agent as they processed five 10-year history verifications. As seen in Table 14, on average, it took 29 seconds to verify the history. The shortest processing time was 22 seconds, and the longest processing time was 34 seconds.

**Table 4.9 Processing Time for 10-Year History**

Average	Low	High
00:29	00:22	00:34

The options for automating this process are limited. The majority of the process is completed during the state of record process when another agent confirms that suspensions or disqualifications appear accurately in the driver history record. The 10-year history process is mainly a verification step to certify that a 10-year history is attached to the driver’s master record in KDLIS.

**4.1.3 Records Verification Section**

*Child Support Letters*

Parents failing to meet child support obligations can have their license suspended. DDL’s Records Verification Section is responsible for updating the driver’s license record and sending letters informing drivers their license is suspended for not meeting their child support obligation or informing drivers licenses are eligible for reinstatement after compliance. This manual process generally takes the form of two letters: The Failure to Pay Child Support (D51) and Complied with Child Support Arrears (CSC).

*Failure to Pay Child Support*

This process begins when a county child welfare agency informs the Cabinet for Health and Family Services (CHFS) that a parent’s child support obligations have not been met. CHFS sends a secure email to DDL informing them that these obligations were not met. When they receive the email, the DDL agent emails CHFS to let them know they received their email. Then the agent logs into a secure site to review the documents from CHFS and to print out the documents. The agent searches for the driver history record using their name or social security number. When they retrieve the master record, the agent compares the personal information on the document from CHFS with the driver record information. The agent also checks whether the driver has an alias listed in their driving record and deletes them when necessary. Following that, the agent confirms the entry has not already been keyed into the system since KDLIS rejects duplicate updates.

The agent then chooses the screen associated with the Failure to Pay Child Support and inputs the arrears information. Since the parent in arrears for child support may have more than one child, the agent must manually create record entries for all of the children for which the parent owes child support. When the agent completes those record entries, they change the license status to “suspended” and requests a letter from the system. The system prints a letter informing the driver their driving privileges are suspended, and the letter is mailed on the following business day. Then the agent saves the status change and confirms the modification is reflected accurately in the system. The agent also alerts the section supervisor of the status change so that they can review it later.

Following those steps, the agent composes a comment in the record explaining the modification if there are questions. The agent then scans the CHFS document to SharePoint for future reference.

*Complied with Child Support Arrears*

The Complied with Child Support Arrears process begins when a county child welfare agency informs CHFS that a parent met their child support obligations. CHFS sends a secure email to DDL. The agent sends an email to CHFS confirming they received the email. Following that, the agent accesses a secure system to review the email. Then the agent reviews the documents and prints them out.

The agent searches for the driver history record in KDLIS using their name or social security number. When the agent locates the master record, they compare the personal information on the document from the CHFS with the driver history record. The agent also confirms the driver has a Kentucky license and has not surrendered their license to another state. Following that, the agent confirms the entry is not duplicated in the system. The agent reviews the master driver record to verify the parent is not in arrears for other children or has other outstanding issues on their driving record that would continue their suspension. If there are no outstanding issues, the agent inputs the compliance code into the driving record and then changes the license status to active. The system generates an eligibility letter informing the driver that their license is reinstated. The letter also directs the person to visit their circuit court clerk and pay a \$40 fee to reinstate their license. Following that step, the agent adds a notation to the record explaining the modification if there are questions regarding the status change. The agent saves the changes and reviews the record to confirm the system accepted the modification and status change. The final step is scanning necessary documentation into SharePoint.

The researchers observed an agent while they processed five records involving child support letters. The agent printed the documents from CHFS by the time the researcher arrived. Therefore the processing steps included analyzing the document, data entry, and scanning the documents into SharePoint. As shown in Table 15 below, the average processing time was 4:05. The lowest processing time was 3:01, and the highest processing time was 6:02.

**Table 4.10** Processing Time for Child Support Letters

Average	Lowest	Highest
04:05	03:01	06:02

There are options for automating this process. A web portal could be developed which would interface the CHFS system with KDLIS. This would allow CHFS to update the child support data, and the driving statuses would be automatically updated. Letters to the drivers would print out automatically, and the agents would be responsible for verifying the data in the letters. A similar system was developed between the school system and KDLIS for the No Pass No Drive requirement, which is described in further detail in the Court Ordered Reinstatement section.

**4.1.4 Driver Education Section**

*Court Ordered School Reinstatement*

This process relates to KRS 159.051 or the “No Pass No Drive” law. This law, affecting public, private, and home schools, says that schools must use the grades and attendance from the previous semester to determine if students are compliant with the requirements set forth by the law. The law requires students to receive passing grades in four courses, and students cannot be absent nine or more days. If they are not compliant, the student’s driver’s license or learner’s permit privileges are revoked. When a student is out of compliance, the data is reported to a

secure web portal connected to KDLIS. If the student becomes compliant with the law for the entire semester or completes credits in summer school, the driving privileges are reinstated via the web portal. A judge may also reinstate driving privileges if the driver needs the license to meet family or economic obligations, or the student is the only licensed driver in the family.

This process consists of two distinct processes. One is a relatively simple one where DDL mails out the letters to students out of compliance with the law. This process begins when the school reports a non-compliant student through the web portal. KDLIS prints out a record, as well as a letter to be sent to the driver. First, the agent confirms the information on the record matches the identifying information on the letter. The letter informs the driver that their license privileges will be suspended in 10 days, along with the terms or reinstatement. Once the agent confirms the information is correct and does not need any modifications, the letter is mailed the following business day. In 10 days, the KDLIS system automatically suspends the driver's license.

In the second process, a judge reinstates driving privileges by court order. The court-ordered reinstatement begins when the order is received by mail or fax. There are approximately one to two of these orders processed each week. Once the order is received, the agent reviews it to ensure they understand the court's instructions. Then the agent queries the KDLIS system using the social security number or driver's license number to locate the master driving record. The agent then checks the record to ensure that another agent has not already added the court order. Agents also print a hard copy of the record to track any modifications they make to the record. Following that, the agent enters the court order information into the driver history record, including the reinstatement date, the judge issuing the order, the date the entry was keyed into the record, and the reason for the override. At this point, the agent requests the system to print a letter informing the driver of the reinstatement and the necessary steps to obtain their license. The letter is mailed on the following business day. The agent saves the entry, confirming it was saved successfully in the system. Finally, the agent scans the court order and the letter into SharePoint, chooses the type of document from the menu, and saves the document to microfiche.

There were no documents to process on the day of observation. The agent estimated that license suspension letters require one to two minutes for verification. As seen in Table 16 below, the court-ordered reinstatement takes approximately five minutes to review the document, enter the data, and scan the documents into SharePoint. Based on that data, it takes an average of 2 minutes 40 seconds to process the No Pass No Drive documents. Depending on the complexity, the task could take as little as 1 minute to as high as 5 minutes.

**Table 4.11** Processing Time for Court Order

Average	Low	High
02:40	1:00	5:00

Most of this process is already automated. The driver's status automatically updates in KDLIS through the school system's web portal. The agent is mainly verifying that the mailing address is correct. The more time-consuming manual process involves entering court-ordered reinstatements into the system. The primary way these processes could be automated would be to automate the appeals and court order communication between the courts and the DDL. In the case of appeals, all communication during the process could conceivably be electronic. However, this would mean that the court documents would need consistent formatting for all circuit and district courts, and KDLIS would have to be programmed to accept these documents.

#### *Failure to Complete Alcohol Education*

This process pertains to a Kentucky law that requires individuals convicted of a DUI to complete a drug and alcohol treatment program. For the first offense, the driver is required to complete a 90-day program. Subsequent DUIs require a year of treatment. Since some individuals have more than one DUI during the program treatment window, they must complete a separate treatment for each DUI. In the case of IIDs, drivers must have completed their treatment by the time their IID suspension has expired. In this process, the DDL agent is responsible for confirming that a driver has completed alcohol and substance abuse treatment before having their IID uninstalled.

Each IID order has an expiration date, which is keyed into KDLIS when the agent initially enters the IID court order. Two weeks before the expiration, KDLIS automatically prints a notification for an agent to send a letter reminding the driver their IID is eligible for removal in two weeks. The agent confirms whether or not the driver completed treatment. The agent then checks a box on the letter indicating whether the driver has completed treatment. If the driver has not completed alcohol education classes, the letter informs them they must complete the treatment before removing the device. On the date that the IID expires, the agent reviews the completion status of the alcohol treatment classes and changes the license status to “suspended” if the driver failed to complete them. At this point, the judge decides whether to amend the IID order and extend the time.

Researchers observed a DDL agent completing the Failure to Complete Alcohol Education process. First, the agent prints out the driver history record and marks the modifications that need to be made to the record. Then the agent queries KDLIS for the driver's master record using the license number, name, or social security number. The agent confirms that there has been no update to the system that would indicate the driver had completed the treatment classes. Then they enter the information about the original citation, the conviction, the location of the treatment classes, and indicate whether the driver was in a commercial vehicle. Following that, the agent creates a record entry to initiate the driver's license withdrawal process. At this point, the agent inputs a reason for modifying the record in the comment section and saves it for future reference. In the next step, the agent creates the notification letter that informs the driver of the suspension. Unlike the notification letters in other branches that print out automatically, the agent must type in the driver's name and address. The letter is mailed on the following business day. As the final step, the agent notes the reason for the change on the paper record, scans the record with the letter into SharePoint, and saves the file to microfiche.

On the day of observation, the researchers timed the agent, who processed five records. As seen in Table 17 below, the average amount of time was 7 minutes and 9 seconds. The most extended length of processing time was 11 minutes, which involved a suspension and manually composing a suspension letter. The shortest amount of processing time, which was 54 seconds, involved a record entry that had already been updated, so no further action was necessary.

**Table 4.12** Processing Time for Failure to Complete Alcohol Treatment Classes

Average	Low	High
07:09	00:54	11:00

There are possible ways to automate this process. Some state agencies created web portals that interface with KDLIS and automatically update the driving record. In the case of Failure to Complete, a web portal could be developed to let the various treatment programs input the completion data. Then the portal would interface with KDLIS to update the record. When the system detects that an individual has not completed treatment by the time an IID order has expired, KDLIS will change the status to suspend, and a letter would be automatically printed out and sent to the driver.

*Ignition Interlock Device*

This process pertains to the ignition interlock device (IID). KRS 189A.340 allows judges to order the installation of ignition interlock devices on vehicles driven by individuals charged or convicted of driving while intoxicated. These devices are installed during the pre-trial suspension phase or after conviction. Judges can allow drivers to serve their IID time concurrent with their hard suspension or consecutive to the hard suspension. A hard suspension refers to total suspension of driving privileges. The court or the county attorney sends the judge's order to the Driver Education Section of DDL. The driver then applies for the device with KYTC through a field office and is approved after paying the required fees. Next, the driver visits their local circuit clerk's office to pay the driver's license reinstatement fee. After the driver pays the reinstatement fee, the circuit clerk sends a certificate of installation to a DDL agent, who changes the driver's license status to “active with restriction.” Driver's must use a pre-approved IID vendor to install the device. After the driver serves the IID suspension time, a DDL agent informs them that they can remove the device. The vendor removes the device. The driver visits the circuit court clerk's office again, and the clerk removes the restricted status on the driver's license.



The Driver Education Section of DDL receives documents related to ignition interlock devices by mail, email, and fax. The mail is distributed in the morning, while emails and fax go to a dedicated email inbox. The Driver Education Section of DDL is responsible for processing 11 different documents related to IID; two people are currently responsible for the bulk of this work. Most of these documents are related to the driver's application for an IID and the court's approval. Other documents include the IID installation application and the documents confirming the installation of the device. The remaining documents include court orders to modify the IID suspension phase and or applications for indigent drivers who cannot afford the installation and monthly fee for the devices.

There are five main processes for which agents in IID are responsible: adding IID record entries based on pre-trial suspensions, adding IID record entries after conviction, approving the installation of devices, approving the removal of devices, and confirming the completion of alcohol treatment. On the day of observation, the agent processed court orders for IIDs. The process begins with the agent reviewing the court order for the amount of suspension time. Court orders are typically handwritten on triplicate carbon paper that can be difficult to read. If the agent cannot read the copy, they return the document to the clerk. In the next step, the agent searches for the citation or conviction in CourtNet to find the individual's driver license number. Following that, the agent queries KDLIS using the license number to locate the master record for the driver. Then the agent reviews the document to identify the amount of driver's license suspension time, as well as the amount of time the driver is required to have the IID on their vehicle. Next, the agent prints the record from KDLIS to keep track of any modifications they need to make. Depending on the circumstances, the processor may receive an IID order during the pre-trial phase or after conviction. If the order is after the conviction, the agent also has to determine whether the court is requiring the driver to serve the hard suspension concurrently with the IID or consecutively. If the agent has questions about the court order, they must also contact the court or the county attorney to determine the judge's intent when they issued the order. In addition, clerks, judges, or county attorneys may contact the processor to get help filling out the court order forms.

The next step is creating an entry in KDLIS. The agent enters the conviction information into the system, including court case information, the effective date for installation, and the IID's expiration date. Following those steps, the agent checks the driver's record to confirm the driver does not have any other suspensions, outstanding fees, or failure-to-comply orders, which the driver must address before having their license reinstated. Once the agent confirms there are no other issues, the record is marked "approved," and the driver a manually composed letter informing them that they can apply for an IID and obtain their restricted license. The final step is keying a comment into the record explaining the reason for creating the entry and making a notation on the paper record explaining the modifications to the record. Finally, the IID processor scans the record and letter into SharePoint, chooses the document type, and saves it to microfiche.

The labor hours required to complete the IID process are shown in Table 18. At present, no programming allows KDLIS to automate the processing of these forms. Much of the processing requires verifying that the proper signatures are on the documents and confirming dates for suspension and that the IID meet the KRS requirements. Agents also confirm DDL received all required documentation. It could be possible to program KDLIS to allow the clerks to input more of the information about the court order on their end of the process, but KDLIS does not have that capability. Another possibility would be to create a program that would allow drivers and the courts to submit these forms electronically. Electronic submissions would save the time spent contacting the court because the triplicate forms are not legible. The final possibility is programming KDLIS to automatically change the license status once the agent has entered all of the required information.

#### **4.1.5 Conclusion**

As the process narratives indicate, there are many reasons to process documents manually. The most apparent reason for manual processing is that programming capabilities do not exist, or the funding is not available to make those updates. The antiquated nature of KDLIS makes it challenging to make programming changes. In other cases, human judgment is necessary; this includes actions that require correction to errors in court records or systematic errors. Addressing errors requires research and manual corrections to ensure that driver history records are accurate. Human judgment is also necessary in the case of failure to appear (FTA) and failure to comply (FTC) for out-of-state citations. Kentucky only keys those documents that are for mandatory charges such as driving while

suspended or a DUI. Agents do not key minor charges such as expired registration or improper equipment. Also, agents do not key any citations that are older than six months. So it is clear that it takes human judgment to ensure that the relevant documents are added to the system while the others are not.

Additionally, there are limitations due to the decentralized nature of the 50-state law enforcement system. There is no standardized format for citations and court documents. In the case of out-of-state communication for court summonses, court orders, and appeals, it would be tough to automate this process without a unified documentation process and a pass-through system allowing each state to interface with other driver licensing databases.

On the other hand, some processes could and should be automated. Staff members in DDL state that pre-trial suspensions should be automated. These orders take up a significant amount of time because the agent must review the documents, input the status change, and save the documents to microfiche. CDLIS also has to be manually updated in the case of a CDL holder. This process can be automated, given that regular suspensions have been automated for quite a while. KYTC should make automating this process more of a priority. Some processes could be more efficient. Several processes entail triplicate paper, which is often difficult to read and sent back to the clerks. Printed documents would eliminate this problem.

#### 4.2 Labor Hours for Manual Processes in Court Records Branch

Researchers obtained a report from the Court Records Branch that documented the number of labor hours used to process each manual task related to driver history records. The report used labor hours for a sixth-month period in 2016. Table 18 projects the labor hours for 12 months to determine the total minutes spent on these tasks annually, the total minutes per task, and the number of hours spent on the task. In 2016, the Court Records Branch processed 132,382 records requiring 7,244 labor hours. Agents spent 717,120 minutes to complete these tasks, and it took just over three minutes (3:17) to process each record on average.

**Table 4.13** Processing Times for Manual Processes in Court Records Branch for 2016

Tasks	2016 Documents Processed by Task	Employees' Total Hours over 12-months	Average Time Per Task (mm:ss)
Unsatisfied Civil Judgements	1,575	112	04:16
Reversal/Corrections	6,847	1166	10:13
Rejection Reports Keyed	10,608	1440	08:09
Pretrial Suspension and Termination	10,683	706	03:58
Out-of-State Failure to Appear/Convictions	47,741	720	00:54
Mail Outs	1,537	240	09:22
Keyed Court Summons Notices (SC4)	7,255	452	03:44
Keyed PSA	4,138	194	02:49
Ignition Interlock Device Orders	1,624	170	06:17
DUI Suspension List	18,234	120	00:24
Court Orders	4,023	600	08:57
Appeals Processed	136	18	07:56
Amended/Corrections	8,856	860	05:50
CR/CJS/BK	1,043	86	04:57
Failure to Appear/Abstract Errors	7,509	240	01:55
CDLIS Error List	573	120	12:34
<b>Totals</b>	<b>132,382</b>	<b>7,244</b>	<b>03:17</b>

#### **4.2.1 Comparison of Number of Records Processed**

The DUI Suspension List, which is when an agent confirms the driver history record reflects the correct suspension time, had the highest total number of records processed (18,234). This task required a total of 120 labor hours annually. On average, agents process one DUI Suspension record every 24 seconds. The lowest number of tasks completed was for Appeals Processed. In this process, the agent reviews court orders and modifies the driver history record to reflect the court's instructions. During 2016, Court Records Branch agents completed 136 appeals, which required 18 total labor hours. An agent processes an appeal record every 7 minutes and 56 seconds on average.

#### **4.2.2 Comparison of Labor Time Required to Process Records**

The CDLIS Error List requires the most amount of time. In this process, an agent reviews a list to identify the reason CDLIS rejected a record. An agent completes this process in 12 minutes and 34 seconds on average. The DUI Suspension process requires the fewest amount of labor hours to complete.

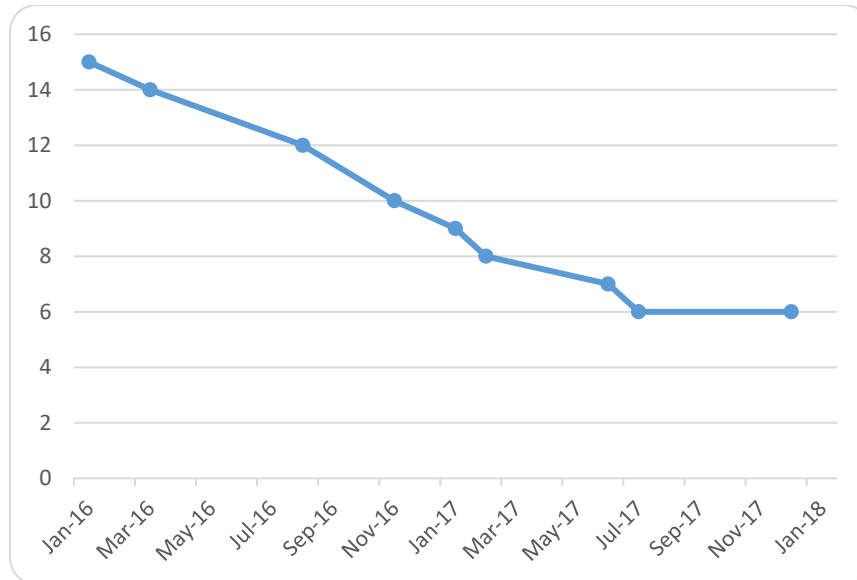
In 2016, the Court Records Branch manager estimated the Court Records Branch maintained 187 labor hours per week totaling 9,750 labor hours for 12 months. Based on the staffing numbers for that year, the branch manager estimated that his area was operating at a deficit of 2,202 hours per year, equivalent to two staff members working 37.5 hours per week.

#### **4.3 MyCDL Portal**

The myCDL document portal is a success story about the benefits of automating CDL-related workflow processes. The CDL Section developed this system to help employees process and verify the medical certificate, self-certification, and the CDL/CLP application. While FFTLs previously helped employees perform these duties, the myCDL portal allowed the section to adapt to the loss of this labor force and decrease the number of days to process the CDL documents.

As mentioned in the previous section, the FFTLs played a crucial role in processing the CDL-related documents and taking calls from drivers. According to the CDL Section staff members, FFTLs were responsible for 50 percent of the workload during their tenure in DDL. Once the CDL section expended the FFTL funds, it shifted the workload to the remaining employees. Researchers interviewed CDL Section staff members shortly before losing the FFTLs. Not surprisingly, the staff members expressed great concern about meeting the 10-day reporting requirements without the FFTLs. CDL Section staff members said they would have to do more with less.

Staffing in the CDL Section has decreased dramatically over two years. Figure 21 below charts the months in which the CDL section lost staff. From January 2016 to January 2018, the CDL section's staffing numbers decreased by 60 percent; the section lost not only FFTLs but also full-time employees. In January 2016, the CDL Section had 15 employees and a section supervisor. That number remained steady until June 2016, when FFTLs began departing from the program. By August 2016, that number decreased to 10 staff members, including FFTLs and a section supervisor. In February 2017, the CDL Section consisted of two FFTLs and six full-time employees. Finally, by July 2017, the section was operating with six employees, all of whom were full-time employees. This number has stayed the same since July 2017.



**Figure 4.1** Staffing Numbers for CDL Section January 2016 through January 2018

#### 4.3.1 MyCDL

At the time of the initial interviews with CDL Section staff members, DDL was still developing myCDL, the online CDL document portal. Researchers conducted follow-up interviews with CDL Section staff members following the loss of the FFTLS and the introduction of myCDL. MyCDL is a secure, encrypted system that reduces paperwork, helps drivers avoid standing in line at Circuit Court Clerk Offices and avoid paying for postage or faxing paperwork. It allows drivers to:

- Complete the CDL application and self-certification online
- Upload medical certificates and waivers electronically
- Receive email notifications throughout the application process

The document portal provides step-by-step instructions for users. A public user's guide in PDF format explains the process for obtaining an account and logging into the portal with screenshots. It also gives instructions on submitting the documents. The website includes a video tutorial that walks applicants through the process.

Programmers developed myCDL for individual CDL holders, employers, and service providers. To access the portal, customers create a username and password in the Kentucky Business One Stop (KBOS); customers use this login each time they visit the portal. If the user owns more than one business or uses more than one of the services, this login works for all of them.

When the customer reaches the home page, it displays options for the commercial application, self-certification, medical certification, and medical waivers. The customer chooses the button corresponding with the document, which takes them to the entry screen containing all of the information and forms needed for successful submission. Drivers upload the relevant documents to the portal. The CDL section accepts photographs of the documents. Once the customer keys in the relevant information and submits the documents, a message will pop-up informing them that they successfully submitted the process. Then the system sends an email to the customer stating that their application, certificate, or waiver has been received, processed, or rejected. The myCDL program also provides a CDL verification portal where CDL holders and their employers can check on their document status using the name of the driver, the driver's license number, and the date of birth.

Once the process is complete, the CDL agent receives a notification to verify the documents. The agent queries the KDLIS system for the driver history record and accesses the portal to locate the newly submitted documents.

Following that, the agent reviews the documents and customer data for accuracy and completeness. Once they confirm that information, the agent marks the file as verified. The computer serves as the first verification. If the instance of missing data or illegible documents, an agent contacts the customer by e-mail to request resubmission.

#### 4.3.2 MyCDL and Workflow Improvements

Before the introduction of myCDL, the steps for processing CDL documents were quite arduous. Staff members reviewed the documents and manually entered customer information into KDLIS. Each time a driver was missing a piece of information, an agent composed a letter explaining what was required and then mailed on the following day. With myCDL, the bulk of the work is now being performed by the customer when they enter their data, although the CDL/CLP application must still be keyed in by CDL staff members. With the portal's introduction, the CDL Section agents primarily confirm the data is accurate in KDLIS, visually check the document is legible, and then verify the document in the portal. The document portal sends emails to the customer when something is missing from their documents. The email does not specify the reason for the rejection.

Figure 22 below shows the number of documents processed by the CDL Section in 2016 (shaded in blue) and 2017 (shaded in orange). In 2016, the CDL Section processed 11,139 CDL/CLP Applications and processed 13,294 in 2017. The CDL Section processed 102,046 medical certificates in 2016 and processed 94,701 in 2017. Regarding the self-certification, the CDL Section processed 36,645 records in 2016 and 45,394 in 2017.

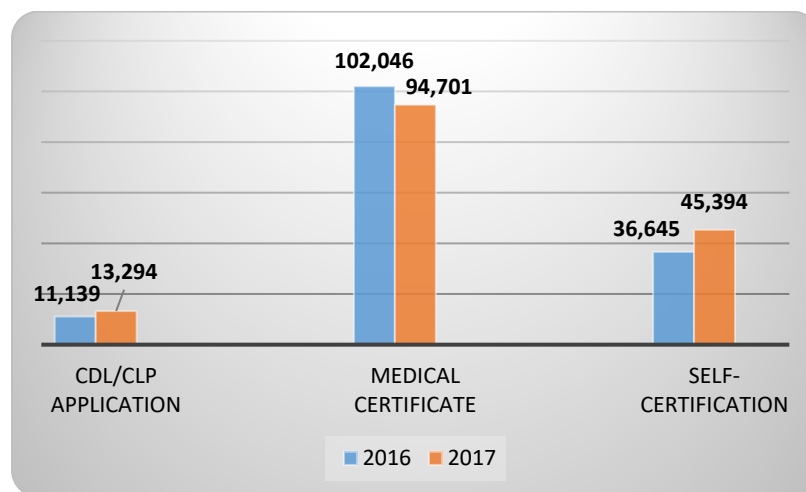


Figure 4.2 CDL Documents Processed in 2016 and 2017

The CDL Section introduced the myCDL portal to the public in August 2017. Table 19 below shows the percentage of documents processed manually and processed through the myCDL portal in 2017. For the CDL/CLP Application, the CDL Section processed 47 percent of the documents manually and 53 percent of the documents through the portal. The CDL Section processed 58 percent of the medical certificates manually and 42 percent using the myCDL portal. Additionally, the CDL Section processed 47 percent of the self-certification documents manually and processed 53 percent of documents through myCDL portal.

Table 4.14 Manual and myCDL Portal Processing Totals 2017

	CDL/CLP Application	%	Medical Certificate	%	Self-Certification	%
Manually	6,184	47%	55,266	58%	21,279	47%
Portal	7,110	53%	39,435	42%	24,115	53%
Total	13,294		94,701		45,394	

The interviews following the introduction of myCDL found that this document portal helped absorb the workload previously performed by FFTLs. Researchers asked the CDL Section supervisor to provide researchers with the

number of days it took to process CDL documents with FFTL labor and processing time after introducing the portal to the workflow. As a result of myCDL, the CDL Section supervisor states they meet the 10-day window, and 95 percent of the time they process the documents well before the 10-day processing requirement. Table 20 shows that the myCDL system has led to a significant decrease in the amount of time it took to process CDL documents. When the CDL Section employed the FFTLs, documents agents typically processed documents between 8 to 10 days. After the loss of the FFTLs, and before the introduction of myCDL, agents processed documents within 8 to 10 days. When the CDL program introduced the portal, processing time decreased to five days or less. The only exception is during the holidays, where there may be a longer processing time.

**Table 4.15** Processing Time for CDL Documents in CDL Section

Processing Method	Processing Time
Using FFTL labor	8 to 10 days
Following FFTL labor	8 to 10 days
Following the introduction of myCDL	5 days or less
Processing time with myCDL during holidays	8 days or less

However, not all of the tasks can be accomplished with myCDL, which has led to another adjustment in workflow.

#### 4.3.3 Conclusion

In the previous interviews with CDL Section staff members, there was a lot of concern about meeting the 10-day processing requirement for the CDL/CLP application, medical certificate, and self-certification. Given the significant drop in staffing numbers, their concern is understandable. However, based on the data gathered from the CDL Section, it is clear that the section is more than meeting the 10-day processing window due to the introduction of the myCDL portal. This tells us that automation can be quite successful in improving workflow efficiency and adapting to changes in staffing numbers. Kentucky’s myCDL portal’s success should serve as a model for other states that are facing similar resource constraints.

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## Appendices

### Appendix A Workflow Process Description and Suggestions for Automation

Workflow Process	Process Description	Responsible Section	Suggestions for Automation
Amendments/ Corrections	Changing a charge or conviction at the request of the court system or correcting a mistake made by a court clerk.	Court Records	The programming in KDLIS could be changed to accept the latest entry from the court clerk for relatively simple clerical errors. In more complex instances, human judgment would still be required since it involves modifying charges and convictions, which have serious consequences for a driver's license privileges.
Appeals	Reviewing court orders and modifying the suspension record to reflect stages of the appeals process.	Court Records	The communication between the courts and DDL could be automated for in-state appeals. It would be very difficult to automate the out-of-state appeals processes.
Court Orders	Reviewing court orders and modifying the driver's history record as ordered by the court	Court Records	The communication about in-state court orders between the courts and DDL could be automated. It would be very difficult to automate the out-of-state court orders processes.
Child Support Letters	Updating the driver's history record to indicate child support arrears or compliance.	Records Verification	A web portal could be developed which would interface the CHFS system with KDLIS. This would allow CHFS to update the child support data and the driving statuses would be automatically updated. Letters to the drivers would print out automatically, and the agents would be responsible for verifying the data in the letters.
CDL Self-Certification, Medical Card, and CDL/CLP Applications	Uploading and verifying the documents necessary to complete a CDLIS record.	CDL Section	Continue to develop CDL/CLP features in myCDL portal.
Court Ordered School Reinstatement	Corresponding with young drivers who have not met the academic requirements for KRS 159.051 the "No Pass No Drive" law as well as modifying the records. Modifying driver history record and communicating with young drivers who have had their license reinstated by a judge after a suspension for not meeting the requirements of KRS 159.051.	Records Verification	The primary way in which these processes could be automated would be to automate the appeals and court order communication between the courts and DDL for the court ordered reinstatement. In the case of appeals, all communication during the process could conceivably be automated. However, this would mean that the court documents would have to be consistently formatted for all circuit and district courts, and KDLIS would have to be programmed to accept these documents.

Court Summons Notices (SC4s)	Reviewing and applying Failure to Appear or Failure to Comply notices to a driver history record.	Court Records	Given that KDLIS is not built to interface with the driver's license information systems of other states, this particular process would be difficult to automate. Unless the states create some sort of universal pass-through program for license transfers, it will be difficult to create a process that can electronically interface with the SDLA systems in other states.
Error List	Identifying and correcting record entries which did not successfully update to a driver history record because they violated KDLIS database rules.	Court Records	It would be difficult to automate many of the error list tasks, since these rejected records are often the result of typos or poor data quality, which requires time-consuming research and manual corrections. It would be a good idea to change programming language in KDLIS to include a location field for Canadian licenses.
Failure to Complete Alcohol Treatment	Confirming a driver completed alcohol treatment prior to IID removal.	Driver Education	Create a web portal could be developed which to allow treatment programs to input the completion data. Then the portal would interface with KDLIS to update the record. When the system detects that an individual has not completed treatment by the time an IID order has expired, KDLIS would change the status to suspend, and a letter would be automatically printed out and sent to the driver.
Ignition Interlock Device	Reviewing and approving documents associated with IID orders as well as modifying driver history records to reflect steps in the process.	Driver Education	Program KDLIS to allow the circuit court clerks to input more of the information about the court order on their end of the process, but at present time KDLIS does not have that capability. Another possibility would be to create a program which would allow drivers and the courts to submit these forms electronically. The final possibility is programming KDLIS to automatically change the license status once the agent has entered all of the required information.
Out-of-State Convictions	Reviewing and verifying records on the list of out-of-state court abstracts.	Court Records	There are a few options for automating various steps in this process. Double validation could be programmed into KDLIS that would help prevent a clerk from keying incorrect information such as the ACD code or the license number into KDLIS. Programming language could be written to direct KDLIS to automatically exclude any court abstracts related to CMV drivers and non-reportable offenses. In addition, the programming language could be programmed to automatically route any mandatory hearing convictions to the hearings and fraud division.
Pre-Trial Suspension	Entering a pre-trial suspension for DUI onto a driver history records.	Court Records	The requisite programming for CourtNet and KDLIS is non-existent for pre-trial suspensions. Both software applications would need to be interfaced, or a replacement created, in order to make automation possible.

Pre-Trial Suspension Termination	Reviewing a document that terminates a pre-trial suspension and modifying the driver history record to remove the pre-trial suspension.	Court Records	The requisite programming for CourtNet and KDLIS is non-existent for pre-trial suspensions. Both software applications would need to be interfaced, or a replacement created, in order to make automation possible.
Proof of Citation Satisfied Letters (PSAs)	Modifying the driver history record to indicate that a driver complied with a FTA or FTC notice.	Court Records	Given that KDLIS is not built to interface with the driver's license information systems of other states, this particular process would be difficult to automate. Unless the states create some sort of universal pass-through program for license transfers, it will be difficult to create a process that can electronically interface with the SDLA systems in other states.
Reversals/ Corrections	Modifying driver history record to a reversal in a court decision and correcting clerical errors made during the reporting process.	Court Records	The amount of automation or improvement of workflow processes in the case of corrections and reversals is limited. In instances where simple clerical errors occur, it might be possible to change the programming language within KDLIS to simply accept the latest data entry from the court. It would be difficult to automate more complex corrections or reversals due to incorrect interpretation of state statutes, existence of duplicate licenses in multiple states, and other issues where significant human judgement is necessary.
State of Record	Certifying that all licensing endorsements transfer correctly when a driver transfers their license into Kentucky and confirming that no DUI convictions were for CDL holders.	CDL Section	Given that KDLIS is not built to interface with the driver's license information systems of other states, this particular process would be difficult to automate. Unless the states create some sort of universal pass-through program for license transfers, it will be difficult to create a process that can electronically interface with the SDLA systems in other states.
Ten-Year History	Verifying the Ten-Year History record for CDL holders that recently transferred into Kentucky.	CDL Section	The options for automating this process are limited. The vast majority of the process has already been completed during the state of record process, when another agent ensures that any suspensions or disqualifications are accurately reflected in the driver history record.
Unsatisfied Civil Judgements	Reviewing and modifying driver history records to indicate when a driver failed to pay restitution as ordered by the court.	Court Records	Given the routine types of data entry for each type of unsatisfied civil judgment, it may be difficult to automate some of the unsatisfied civil judgment process. Automation of the TC 94-65 form would be the first necessary adaptation.

**Appendix B DDL Court Records Yearly Totals 2015**

CODE	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
AMENDED/CORRECTIONS	668	854	1455	648	639	531	856	881	1064	762	351	554	9263
APPEALS PROCESSED	6	19	13	4	7	10	7	15	15	11	9	6	122
CDLIS ERROR LIST	83	92	41	57	71	37	98	73	208	170	46	49	1025
COURT ORDERS	221	219	332	194	303	236	378	317	310	308	307	261	3386
CR/CJS/BK	50	62	111	49	62	55	85	76	47	92	61	78	828
DUI SUSPENSION TIME LIST	1536	1309	1405	1691	1498	1500	1676	1504	1530	1489	1131	1428	17697
ERROR LIST/COURT ABSTRACT	101	151	199	180	172	191	181	233	229	223	196	206	2262
ERROR LIST/FTA/FTIE/FTAR	286	383	470	612	440	614	646	589	459	546	406	387	5838
FIELD OFFICE CORRECTION	21	16	19	34	16	27	43	24	12	26	17	25	280
IGNITION INTERLOCK ORDER	0	0	0	0	0	0	0	0	0	30	69	64	163
KEYED PSA	354	352	495	274	235	254	300	238	263	257	245	308	3575
KEYED SC4	519	466	622	387	548	423	555	725	647	662	478	803	6835
MAIL OOS ABSTRACTS	2	2	7	12	12	5	8	8	73	119	9	103	360
OUT OF STATE - Conviction/Abstract	2886	2364	2290	2571	2659	2798	3178	2576	3080	2565	796	2508	30271
OUT OF STATE - FTA/FTC Abstracts	1584	1591	2299	2035	1850	1585	1768	1549	1764	1721	552	1635	19933
PROCESS BOB - J-G List)	370	440	371	491	437	470	472	483	526	656	320	568	5604
PRETRIAL SUSPENSION AND TERMINATION	826	737	1078	992	806	820	854	971	830	1023	747	688	10372
REJECTION REPORT KEYED	359	863	799	622	680	1027	658	1449	1336	614	579	243	9229
REVERSE/CORRECT	639	567	789	664	610	669	663	633	574	717	508	540	7573
SC4 LETTERS	4895	3980	3589	4515	4913	5820	6501	5371	5667	6145	3247	5109	59752
UCJ/DAO	117	76	89	48	134	115	226	85	100	159	144	180	1473
Monthly Total	15523	14543	16473	16080	16092	17187	19153	17800	18734	18295	10218	15743	195841

**Appendix C DDL Court Records Yearly Totals 2016**

CODE	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
AMENDED/CORRECTIONS	545	1522	940	2318	647	482	378	373	384	452	397	418	8856
APPEALS PROCESSED	8	9	4	16	8	8	4	6	19	19	17	18	136
CDLIS ERROR LIST	45	66	54	44	41	55	46	49	54	40	37	42	573

COURT ORDERS	209	340	285	428	363	250	322	363	348	409	325	381	4023
CR/CJS/BK	52	91	141	95	75	79	85	104	87	78	72	84	1043
DUI SUSPENSION TIME LIST	1498	1609	1765	1344	1442	1702	1459	1648	1465	1567	1365	1370	18234
ERROR LIST/COURT ABSTRACT	202	208	231	218	164	303	190	201		200	176	174	2267
ERROR LIST/FTA/FTIE/FTAR	428	435	431	426	414	494	517	545	433	477	350	292	5242
FIELD OFFICE CORRECTION	19	39	27	14	16	11	7	7	1	11	4	9	165
IGNITION INTERLOCK ORDERS	112	120	145	116	156	106	105	146	137	173	142	166	1624
KEYED PSA	269	325	394	325	344	352	312	440	337	341	447	252	4138
KEYED SC4	542	525	588	567	559	763	437	765	747	527	640	595	7255
MAIL OOS ABSTRACTS	92	279	138	128	139	115	184	108	1	181	82	90	1537
OUT OF STATE - Conviction/Abstract	2516	2736	2905	2669	2533	2768	2578	2234	2349	2232	2234	2016	29770
OUT OF STATE - FTA/FTC Abstracts	1531	1722	1700	1574	1502	1733	1502	1571	1428	1422	1079	1207	17971
PROCESS BOB - J-G List)	628	724	652	599	696	775	656	640	678	732	666	563	8009
PRETRIAL SUSPENSION AND TERMINATION	661	886	1048	897	905	963	881	987	879	820	855	901	10683
REJECTION REPORT KEYED	1949	2348	539	828	959	828	187	695	516	697	523	539	10608
REVERSE/CORRECT	397	687	656	627	601	647	511	601	619	536	428	537	6847
SC4 LETTERS	4887	5191	865	5180	5044	5854	5470	5077	4857	4812	4281	4278	55796
UCJ/DAO	189	98	140	158	134	136	114	104	82	152	118	150	1575
Monthly Total	16779	19960	13648	18571	16742	18424	15945	16664	15421	15878	14238	14082	196352

#### Appendix D Records Processed in the Records Verification Section Totals and Descriptions 2016

Letter	Description	Annual Number	
Complied with Child Support Arrears	The Cabinet for Health and Family Services informs DDL that a parent has met their child support obligations. The information is keyed into the KDLIS system and the agent reinstates the driver's license privileges. A letter is generated that informs a driver that their license has been reinstated.	322	886
Court Ordered School Reinstatement	A judge has ordered that a student who had their driver's license privileges suspended because they did not meet academic requirements have their license privileges reinstated. The driver history record is modified to reflect the reinstatement and a letter is sent to the driver.	105	132
Failure to Complete Alcohol Education	A DDL agent confirms that a driver convicted of a DUI failed to complete the state-required drug and alcohol education program. A letter is generated and sent to the driver informing them that their license privileges were suspended.	52	

Failure to Pay Child Support	The Cabinet for Health and Family Services informs DDL that a parent failed to meet their child support obligations. The agent keys the conviction into the driver history record and suspends the driver's licensing privileges. A letter is generated and sent to the driver informing them of the suspension.	819	3219
Failure to Pay Restitution	An order is received by the court to suspend a license. This section must key the conviction, input a suspension into the driver history record, and send a letter to driver informing them their driver's license privileges are suspended.	130	103
Police Demand Order Returned	A police demand order refers to demand orders to confiscate a driver's license or registration plate because of some offense. A police demand order returned is when the demand order is returned to DDL usually because a driver does not reside at the address or already submitted their driver's license and/or registration plate.	327	210
Referred to State Traffic School/Diversion	A court order is received by DDL informing them that a driver has been assigned to state traffic school or another diversion program. The section agents must key the referral to the driver history record. A letter is generated and sent to the driver.	386	
Restitution Paid	A court order is received indicating that a driver has met their obligation for restitution. The section must modify the driver history record to indicate the driver license privileges are reinstated. A letter is sent to the driver to inform them that their license privileges are reinstated.	176	99
Total			

#### Appendix E Records Processed in Driver Education for 2016

<b>Ignition Interlock Devices</b>	An agent processes 11 different documents related to IID and currently. These documents are related to the driver's request and the court's approval for an ignition interlock device. Other documents include the application to KYTC for the installation of the IID device, and the documents proving the devices were installed. The remaining documents are court orders to modify the IID suspension phase or applications for indigent drivers who are not able to afford the installation	2,328
<b>Failure to Complete Alcohol Education</b>	A DDL agent confirms that a driver convicted of a DUI failed to complete the state-required drug and alcohol education program. A letter is generated and sent to the driver informing them that their license privileges were suspended.	52
<b>Total</b>		