



KRS and KAR Review of Models as a Legal Contract Document

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

in cooperation with
Kentucky Transportation Cabinet
Commonwealth of Kentucky

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Research Report
KTC-22-05/SPR22-56-3-1F

KRS and KAR Review of Models as a Legal Contract Document

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16. Abstract State departments of transportation (DOTs) are expanding the use of electronic engineering data (EED) throughout highway projects — from design and construction through asset management. Included under the umbrella of EED are technologies such as building information modelling (BIM), digital terrain models (DTMs), and 3D models and plan sets. The Kentucky Transportation Cabinet's (KYTC) Digital Project Delivery (DPD) Initiative is spearheading the transition to EED in the state. While digital delivery promises to streamline project development and management it does not come without hurdles. This report discusses methods for agency wide implementation of EED and highlights best practices for managing, communicating, and storing data as well as the potential legal ramifications of using 3D models as contract documents. While no state or federal laws preclude the use of EED as contract documents, as KYTC adopts paperless plan sets it must (1) perform its due diligence to ensure all processes comply with relevant statutes and regulations, (2) develop guidance for managing EED and transmitting records to external parties, (3) put clear guidelines into place for creating and preserving records, and (4) partner with internal and external stakeholders to facilitate the rollout of digital delivery.			
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Executive Summary

The Kentucky Transportation Cabinet (KYTC) and state departments of transportation (DOTs) nationwide are making a push to incorporate electronic engineering data (EED) throughout design, construction, and asset management. EED encompasses technologies such as building information modelling (BIM), digital terrain models (DTMs), and 3D models and plan sets. Ultimately, most agencies want to fully transition away from paper plan sets to EED. KYTC's Digital Project Delivery (DPD) Initiative is currently piloting several projects in Kentucky that use digital delivery. As the Cabinet moves toward fully digital representations of roadway project details, it wants to confirm that contracts will remain fully enforceable. This report investigates strategies other states have used when implementing digital delivery and reviews Kentucky Revised Statutes (KRS) and Kentucky Administrative Regulations (KAR) to determine if EED can be legally substituted for printed plan sets.

One challenge associated with switching to EED is that state regulations and agency practices are based on traditional 2D plans. A recent survey of state DOTs found that 13 percent use 3D models for informational purposes and contract documents; 51 percent give 3D models to contractors for informational purposes only. Respondents expressed uncertainty over using 3D models as the contract document. Issues agencies must work through as they implement EED include defining who owns and is permitted to update models, determining how liability is handled when errors are present in the model, developing copyright protection and nondisclosure agreements, and establishing best practices for digital property ownership through the use of digital signatures and legal disclaimers. When agencies hire consultants to work on or create models, it is important for contract documents to specify the terms of joint authorship, identify the model(s) that will be used across project teams, describe authentication methods for people who work on the model, specify ownership and control of data, ensure data are protected and archived, outline responsibilities for handling errors, and specify the responsibilities of collaborators.

Nothing in federal or state law appears to preclude the use of EED as contract documents. However, KYTC must perform its due diligence to ensure it remains compliant with all relevant statutes and regulations. The lists below summarize action items for the Cabinet to pursue in several areas.

KYTC Internal Decision Making

- The Cabinet may want to limit who is authorized to sign documents and make it clear to all parties in a transaction who has this authority.
- Leadership should determine what retention requirements should be imposed on the electronic record retention process.
- Request that the Office of Legal Services (OLS) to develop an opinion on whether uses of EED are in any way governed by Kentucky's Uniform Commercial Code, and if so, what impacts it has on intended usage.

KYTC Internal Process Adjustments

- Ensure agency staff are knowledgeable of and consistently execute an EED process that complies with all relevant statutes and regulations.
- Provide training to authorized users of EED on maintaining regulatory compliance and handling errors.
- Embed into the contract process iterative renewal of the agreement to conduct the transaction electronically.
- Develop a process to trace the use of plan sheets that (1) identifies users and (2) determines why and how they are used to verify that foreseeable users can receive, process, print, and retain information on a system outside the control of KYTC or its agents.
- Establish guidance that describes methods for transferring control of EED external parties. Records should be created, stored, and assigned to ensure that authorized copies of records sent to external parties (1) are unique, identifiable, and unalterable and (2) identify the intended recipient.
- Because paper plan sheets remain necessary, have Division of Right of Way and OLS district attorneys determine (1) the effect of EED on condemnation litigation and (2) how opportunities for expanded detail in EED can be formatted to better support these processes in printed plan sheets.

External Communications and Process Adjustments

- Coordinate with the Commonwealth Office of Technology, which sets standards for the creation, generation, communication, and storage of electronic records, and the process used if electronic records and signatures are to be relied upon. The office also specifies the manner and format in which all this activity is executed.
- Verify the security procedures for internal and external signatories.

Kentucky Department of Library and Archives

- Partner with the Kentucky Department of Library and Archives to determine methods for retaining electronic records and converting written records to electronic records.

Chapter 1 Introduction and Background

The Kentucky Transportation Cabinet (KYTC) has introduced a Digital Project Delivery (DPD) Initiative to incorporate electronic engineering data (EED) throughout design, construction, and asset management. Building common data environments in which information is stored and exchanged during the life cycle of an asset improves efficiency and facilitates data transfer. Although the scale of the DPD Initiative is unprecedented, the Cabinet has considerable experience with EED. For example, in 2006 the Cabinet began providing 3D design data to contractors; in 2009 the provision of 3D design data as a supplemental reference was extended to bidders (Catchings et al. 2020). KYTC is currently piloting several projects that use digital delivery.

As KYTC transitions to fully digital representations of roadway project details, the agency wants to ensure its contracts remain fully enforceable. One component of digital delivery is implementation of (3D) Models as a Legal Contract Document (MALD). This refers to a 3D as-designed digital terrain model (DTM) — or more simply, *model* — of the project surface serving as the sole medium for representing project details relevant to a construction contract. In other words, the paperless representation of plan details. Because EED encompasses much more than a single DTM (e.g., multiple alignments, subgrade details, feature types, drainage structures) we use the EED acronym throughout this report.

This report discusses approaches other states have leveraged to integrate EED into their operations and reviews Kentucky Revised Statutes (KRS) and Kentucky Administrative Regulations (KAR) to determine if EED can be legally substituted for printed plan sets. Our purpose is not to enumerate the benefits of 3D models, but rather to highlight issues KYTC may need to address to streamline the EED transition. Analysis in this report does not constitute legal advice or a legal opinion. Nonetheless, it highlights relevant laws and possible legal issues that Cabinet staff should review. Table 1.1 summarizes the report structure and contents.

Table 1.1 Report Structure

Chapter	Material
2	<ul style="list-style-type: none">Review of EED, legal issues, other state approaches
3	<ul style="list-style-type: none">Review of KRS and KAR, including the Uniform Electronic Transactions Act, the State Board of Licensure for Professional Engineers and Land Surveyors, and Model Procurement Code
4	<ul style="list-style-type: none">Summary of findings and concluding remarks on the use of EED

Chapter 2 Literature Review

A 3D model is “a model-based technology linked with a database of project information, using multidimensional, real-time dynamic modeling software to plan construction. The model encompasses at least geometry, spatial relationships, geographic information, and quantities and properties of components.”¹ 3D models are used as part of building information modeling (BIM), which “characterizes the geometry, spatial relationships, geographic information, quantities and properties of building elements, cost estimates, material inventories, and project schedule” (Azhar 2011). On transportation projects, BIM fosters collaboration and helps planners and designers evaluate different scenarios, maintain data during the project life cycle, and enhance visualization.

Applications of 3D modeling by state departments of transportation (DOTs) vary. Some states are piloting the use of 3D design models as the primary contract document. Other states piloting 3D models will continue making 2D plans available, but for a limited time. Asked to rank different contract types, respondents to Dadi et al.’s (2021) survey of state DOTs placed written specifications first followed by 2D blueprints — 3D models ranked last. Thirty-eight percent of respondents had not used DTMs as a legal document, 24 percent had, and the remainder had not used DTMs but indicated their agency was planning to do so in the next five years. Contractual language adopted by agencies related to DTMs state that these models are for informational purposes only and specify the agency’s liability with respect to their accuracy, survey practices, file management protocols, model handover policy, and plan production methods. Maier et al. (2017) noted some agencies include a legal disclaimer stating models are for informational purposes only.

Nasseriddine et al.’s (2022) survey of state DOTs found 13 percent of agencies use 3D models for informational purposes and contract documents. Fifty-one percent provide 3D models to contractors for informational purposes only, a figure that is expected to increase. Most respondents were uncertain about the prospects for using 3D models as the contract document. Two reasons cited for not using 3D models were needing to train in-office and field staff (inspectors, equipment operators) and lacking necessary processes. Thomas and McDaniel (2013, p. 37) found that no requirements were in place requiring state DOTs to use BIM — “Of the nine departments using BIM, only four stated that they have bidding information, specifications, contract and/or other documents regarding or requiring the use of BIM, and access to and use of BIM and models for their construction projects.” Five states are currently using 3D models as contract documents: Alabama, Florida, New York, Oklahoma, and Utah. Most of these agencies employ EED on less than 10 percent of projects. Where models are used as contracts it is “mostly [for] Automated Machine Guidance (AMG), visualization and communication purposes, inspection, pay quantities verification, quality checks, and quantity takeoff” (p. 11). State DOTs that use approaches where models serve as a contract have established requirements and processes for sealing and stamping models to ensure their integrity. To manage risk, these agencies report adopting quality assurance checks, establishing methods for allocating contract liability, and previewing the model ahead of the letting.

Using 3D models can raise legal issues because state regulations and agency practices were built around traditional 2D plans (Guo et al. 2017). Legal uncertainty thus remains a barrier to implementation (Maier et al. 2017). Legal issues and risk management related to BIMs highlight challenges DOTs will have to negotiate as they shift toward 3D models (Thomas and McDaniel 2013). These include:

- Ownership of the model
- Who is permitted to update the model
- What entities the model can be distributed to
- Potential problems for software developers
- Liability concerns over errors that may be present in the model
- Copyright protection and nondisclosure agreements
- Digital property ownership through the use of digital signatures, disclaimers

¹ <https://www.ncbels.org/wp-content/uploads/2019/03/Signing-and-sealing-Building-Imaging-Modeling-Integrated-Project-Delivery-BIM-IPD-Projects-Guidelines-Revision-effective-1-1-19.pdf>

Pursuant to Title 17 of the United States Code (Copyright Law of the United States²), digital models are covered by federal copyright protections. And DOTs are subject to state-levels laws concerning their ability to copyright work. Both in-house designers and consultants create models. The original creator has ownership of the model and can control its distribution and use. Thomas and McDaniel (2013) recommended that contract documents specify who has the right to use models. When retaining consultants, the state DOT (or consultant) should specify the terms of joint authorship. Contract documents should:

- Identify the model that will be used across the team in collaborative efforts
- Describe how to authenticate anyone working on the model
- Specify ownership and control of the data
- Ensure data are both protected and archived along with model changes as they occur
- Outline responsibilities for handling errors
- Specify the responsibilities of collaborators

Schneider and Unkefer (2017) similarly emphasized that contract language should specify data sources, lay out procedures for managing errors and changes, and provide guidance on documentation. Thomas and McDaniel (2013) also highlighted the importance of specifying the use of digital signatures, establishing a process for tracking and archiving changes to models, and requiring bidders to have interoperable software.

Costin et al. (2018) detailed several challenges that must be dealt with when BIM is used for transportation projects, reiterating several themes invoked by Thomas and McDaniel (2013). Many of the technical issues deal with barriers to entry (e.g., software, scale, workflow) and defining data requirements. Outlining clear roles/responsibilities for those involved in BIM is also critical. Likewise, it is imperative to develop project contracts and standards strongly attuned to how BIM differs from traditional paper documents. When agencies deliberate on whether to use EED, a foremost concern is potential legal hurdles. Key legal issues to resolve are related to the use of digital signatures and stamps, data integrity and confidentiality, and providing insurance updates for responsible stakeholders. Torres et al. (2018) listed several challenges associated with the transition to 3D models, including a lack of standards, data management and privacy, lack of guidance, and contract issues for deliverables.

Among DOTs using EED, Nasseriddine et al. (2022) found that most store data on internal networks. A few rely on cloud-based storage. In most cases, DOT staff are responsible for updating and revising models while agencies pay for these changes. However, some agencies outsource these tasks to contractors. To help manage risks and decision making, internal quality checks are done on models of record. Models are also previewed before letting. The Federal Highway Administration (FHWA 2020) identified several best practices for agencies using BIM:

- Adopt clear contract language
- Establish a well-planned and managed common data environment
- Specify owner data requirements
- Develop voluntary standards for modeling

BIM standards are an important consideration. Bradley et al. (2016, p. 12) noted that, “All standards and supporting documents emphasize the definition of data to be produced and made available throughout the project striving to encourage project stake holders to define the who, what, where, why and how for all information in an effort to improve efficiency and applicability of the work undertaken.” The themes³ and points of emphasis Bradley et al. identified mirror other research as they placed importance on defining model use and responsibilities, desired outcomes, data integrity, and security, data sharing, and software. Having a framework in place to govern all aspects of data is helpful.

² <https://www.copyright.gov/title17/>

³ Project Information, BIM Deliverables, Data Composition, Segregation and Linking, Modelling Standards, and Collaboration Among Participants

Mitchell et al. (2019) analyzed potential returns on investment from embracing 3D models and documented the potential risks of moving 3D models to contract documents. Contractors view making changes to a model without proper documentation as high risk. To mitigate this risk, Mitchell et al. “highly recommended [creating] a process for tracking and monitoring all changes made to the model post-award including, at minimum, file submittal procedures, documentation and reason for the changes, responsible party for making the changes, and conflict resolution/escalation strategy” (p. 11). Other concerns related to EED include:

- Basing design milestones on plan production rather than 3D design
- Insufficient time for review when timelines are compressed
- Duplicative efforts being required when completing the contract plans
- Lack of definition for authorized model uses

Contractors reported that they view 3D models as a lower risk during the bidding process as the models are more consistent with the design intent and plans. Return-on-investment calculations yielded a positive result, a success that was denoted by communicating both the purpose and need for each project deliverable. Contractors felt the best method for transitioning to EED is via a special provision.

Chapter 3 Review of Applicable Kentucky Statutes and Regulations

This chapter reviews statutes most applicable to EED:

- Uniform Electronic Transactions Act (UETA)
- State Board of Licensure for Professional Engineers and Land Surveyors
- Kentucky's Model Procurement Code

KYTC must consider the statutory requirements of these laws in tandem to ensure it remains compliant with them.

3.1 Uniform Electronic Transactions Act

Digital, electronic signatures, or e-signatures on the electronic submission of digital models must be addressed. Gibson (2015) previously reviewed KYTC's use of e-signatures. UETA covers electronic signatures and records, including contracts, created or renegotiated on or after August 1, 2000 (**KRS § 369.101 – 369.120**).⁴ At the federal level, the Electronic Signatures in Global and National Commerce Act (E-SIGN) was passed in 2000 to establish a legal standard for the acceptance of electronic records and signatures. Gibson (2015, p. 9) summarized these laws:

Both E-SIGN and UETA are relevant to the consideration of e-signatures. Both laws hold that e-signatures and records are treated as the legal equivalents of paper or manual signatures or documents. UETA is more comprehensive than E-SIGN; it contains provisions relating to attribution, agreements to use electronic means between the parties, sending and receiving of e-signatures and records, dealing with errors, and admission of electronic records as evidence. UETA also differs from E-SIGN with respect to record keeping by denoting that third parties are permitted to keep records and records should be accessible. E-SIGN does not provide for states to impose paper or manual signatures or documents. UETA also defers to other state laws in applicable situations (p. 9).

KRS § 369.104 applies to legal obligations resulting from a bargained-for exchange and encompasses electronic signatures and symbols, data, text, images, computer programs, software, and databases. UETA authorizes the use of electronic systems for creating, generating, sending, receiving, storing, displaying, or processing information (**KRS § 369.102**). It applies to government agencies and government affairs (**KRS § 369.101 (9), (12), and (16)**). UETA allows the admission of electronic records into evidence during a proceeding. As such, the statute likely applies to application of EED in design and construction contracts.

Individual agencies have the authority to determine whether and to what extent they will create electronic records. Several key points need to be highlighted:

- The Kentucky Department of Library and Archives (DOLA) determines whether and to what extent KYTC will retain electronic records and convert written records to electronic records. As such, the Cabinet must partner with DOLA as it pursues its transition to EED (**KRS § 369.117**).
- KYTC must also coordinate with the Commonwealth Office of Technology (COT). COT sets standards for the creation, generation, communication, storage of electronic records, and the process to use if the electronic records and signatures are to be relied upon (**KRS § 369.118(1)**). COT also specifies the manner and format for executing these activities.
- COT and DOLA may specify appropriate control processes and procedures to ensure adequate preservation, disposition, integrity, security, confidentiality, and auditability of electronic records (**KRS § 369.118**).
- When prompted by security concerns KYTC may specify other required attributes for electronic records that are required for corresponding nonelectronic records or which are reasonably necessary under the circumstances.

⁴ See the full text of **KRS § 369.101 – 369.120** in the Appendix.

3.1.1 Applicability and Enforcement Requirements for Electronic Transactions

A record or signature cannot be denied legal effect or enforceability solely because it is in electronic form⁵ (**KRS § 369.107**). Nor can a contract lack legal consequence solely because an electronic record was used in its formation. This rule holds even if a law requires a signature or record to be in writing. When determining the consequences of electronic transactions, all other applicable laws are in effect so decisions about the interpretation and enforceability of transactions are consistent, whether they have an electronic or non-electronic form (**KRS § 369.106**).

Most of the provisions in **KRS § 369** provide details which allow for enforcement of the terms of an electronic record, the rules related to changes or errors, notarization and retention requirements, and the transfer of records from one party to another. *As KYTC moves forward with EED, KYTC staff must be familiar with a process that complies with these rules.*

When conducting electronic enforceable transactions, all parties must agree to conduct a transaction electronically. Once an agreement is in place, an electronic transaction is enforceable, even if a law requires the information be in writing. The agreement to conduct business electronically does not mandate that all future transactions be conducted electronically. The agreement to do business electronically can be revoked, even if the original agreement specifies all future transactions will be conducted electronically. *KYTC should consider embedding into the contract process iterative renewal of the agreement to conduct the transaction electronically.*

An important enforcement restriction related to electronic record transferability is that the recipient of an electronic record must not be prevented or inhibited from printing or storing a record after it is transferred. The contract is unenforceable if the party who receives a record is prevented from executing these functions. This may be problematic, especially when the recipient of plan sheets cannot access a computer, printer, or engineering software (e.g., a disadvantaged small business vying for an engineering contract, a property owner during right of way negotiations, or parties to a condemnation action, including court offices (e.g., judges and circuit court clerks). It may also impact appraisers during the initial appraisal process.

Vesper v. Commonwealth provides an example of a plan sheet being incorporated into a binding contract and indicates what evidence a court will use to interpret contracts that include plan sheets.⁶ This case also illustrates

⁵ See *Univ. of Ky. v. Regard*, No. 2021-CA-0020-MR, 2022 Ky. App. LEXIS 17 (Ct. App. Mar. 4, 2022) wherein the Court of Appeals allowed a case to proceed against UK under the theory of breach of contract. The contract in question was formed at the time of student registration, which was done electronically.

⁶ A condemnation case was filed and had, as an exhibit to the Petition, Exhibit A which showed the metes and bounds description of the property and highway plans which included two entrances. The case was mediated and the parties agreed to compensation. They also discussed a third entrance to the highway preferred by the property owners. Exhibit 1 was prepared for use during the mediation and included the third entrance. Following mediation, another exhibit was prepared, Exhibit B, which was signed by both parties and attached to an Agreed Order. Exhibit B included a new metes and bounds description and new highway plans. While Exhibit B showed three entrances, only two entrances were stubbed into the plans.

After construction was underway, the owner realized the construction did not include the third entrance. They sought enforcement of the Agreed Order. The disagreement related to the terms reached during mediation about the third entrance and who would be responsible for its construction. The owners argued that KYTC agreed to absorb the cost of the third entrance at no cost to the landowners. They requested the Exhibit be redrawn to show a third entrance like the other two. KYTC claimed that the landowners agreed to pay for the cost of the third entrance. It argued that Exhibit 1 and Exhibit B do not conflict, nor did Exhibit B conflict with 8 points of agreement written on Exhibit 1 during the mediation.

The Court of Appeals noted of the law governing the case: (1) that settlement agreements are contractual in nature and their interpretation is a question of law; and (2) ambiguity of a contract is also a question of law to be decided by the Court.

how plans are amended during the highway project development process — even during condemnation litigation — and serves as a reminder that plans are used as court evidence in condemnation cases.⁷

The ruling in this case indicates the Statute of Frauds and Parole Evidence Rule does not apply when attempting to enforce the terms of a contract involving plans. That is important because the UETA does not apply to KRS 355, Kentucky's Uniform Commercial Code (UCC) (**KRS § 369.103**). This statute imposes a legal concept (the Statute of Frauds) onto certain agreements.⁸ A related legal concept referenced in the UCC — the Parole Evidence Rule — prohibits previous oral statements about the agreement from being used to interpret the agreement during enforcement. The legal rationale is that those statements are merged into the writing which represents the final agreement of the parties.

Based on the *Vesper*⁹ decision allowing parole evidence and previous statements about the contract as evidence to determine the parties' agreement, we can infer highway project contracts incorporating plan sheets do not fall within the restrictions of the UCC. Since these contracts are not covered by Kentucky's UCC statute — parts of which are an exception to the UETA — UETA applies to them.

KYTC's leadership should ask OLS to develop an opinion on whether uses of EED are in any way governed by Kentucky's UCC, and if so, what impact it has on intended usage. Vesper offers insights into that question. According to OLS, in the last 20 years no legal argument has been made that road design or construction contracts are covered by Kentucky's UCC statute.

Because paper plan sheets will remain necessary, the Division of Right of Way and OLS district attorneys also need to determine (1) the effect of EED on condemnation litigation and (2) how opportunities for expanded detail in EED can be formatted to better support these processes in printed plan sheets.

An electronic record or signature is binding on a person if it can be shown to be their act. UETA defines who is the owner of the record and how a person's signature can be proven. Evidence of the efficacy of security procedures can be used to verify who a signature belongs to. Context and surrounding circumstances at the time the record or signature were created are also competent evidence, as are the terms of any agreement between the parties (**KRS § 369.109**).

In that circumstance a trial court was allowed to consider parole and extrinsic evidence involving the circumstances surrounding execution of the contract. *Cantrell Supply, Inc. v. Liberty Mutual Insurance Co.*, 94 S.W.3d 381, 385 (Ky. App. 2002) (citations omitted.) *Vesper v. Commonwealth*, No. 2013-CA-000211-MR, 2014 Ky. App. Unpub. LEXIS 374, at *6 (Ct. App. May 23, 2014).

The Appellate Court determined that because Exhibit 1 and Exhibit B were both referenced in the Agreed Order, they were part of the final judgement and therefore part of the contract.

Exhibit 1 had the following terms written on it:

1. Three (3) entrances requested by the property owners
2. No owner contribution to the construction costs
3. \$80,000 per acre taking; \$72,000 easement
4. Construction plans currently submitted as minimally amended for entrances
5. Approval of Fiscal Court
6. Property owner's request for permits into easement not unreasonably withheld
7. Close by 30 September 2010
8. Separate check to Sunset Valley Farm, LLC for \$120,000.00 — (part of total settlement).

Ultimately the Court upheld the trial court's decision finding that "...the evidence established that while the Department of Highways agreed to a third entrance, it did not agree to build it." *Id.*, at *11-12.

⁷ Evidence can include electronic plans so long as other statutory requirements are met. (**KRS § 369.113**)

⁸ The Statute of Frauds requires that a contract for the sale of goods be in writing sufficient to show the terms of the contract and has been signed by parties or their agents, otherwise it is not enforceable.

⁹ Cited and discussed in footnote 5.

There has been scant litigation related to UETA, but one example documents how ownership of a signature was proven.¹⁰

3.1.2 Errors and Changes in Electronic Transactions

Errors are unavoidable. UETA contains rules that govern changes or errors in an electronic record that occur during transmission.

- If the parties have agreed to use a security procedure to detect changes or errors and only one party has followed this procedure, the party in compliance can avoid the effect of the change or error if they can show the non-conforming party would have detected the error or change had they followed the agreed-upon protocol.
- When an individual is involved in a transaction and makes a mistake, they can avoid the effect of the change/error if they:
 - Promptly notify the other party of the error and state they did not intend to be bound by the document that contains the error
 - Take reasonable steps, including following the other party's instructions to return the document to the other person or — if instructed — destroy the consideration received because of the change/error
 - Have not used or received any benefit or value from the consideration received from the other person

KYTC should provide training on handling errors to authorized users of EED. The Cabinet may also want to limit who is authorized to sign documents and make it clear to all parties in a transaction who possess this authority.

If the individual has met the above criteria, the other party must provide an opportunity to prevent or correct the error. The parties cannot agree to vary the rules related to an individual error outlined above. If none of the above scenarios apply, the change or error has the effect as provided by other laws, including the terms of the contract (if any) and the law(s) governing contract mistakes (see **KRS § 369.110**).

3.1.3 Notarization and Acknowledgment of Electronic Records

If a law requires that a signature be notarized, acknowledged, verified, or made under oath, the law is satisfied if the notary's signature (or other person authorized to perform those actions) and all other information that the law requires be included (e.g., a seal) are attached or logically associated with the signature of record (**KRS § 369.111**).

3.1.4 Originals and Retention of Electronic Records

If a law requires that a record be retained, retention must be done to (1) accurately reflect how it looked in its final form without further changes and (2) preserve accessibility for later reference. This includes electronic retention of a record. Electronic retention satisfies laws requiring records for evidence, audits, and similar purposes unless a law passed after August 1, 2000, prohibits the use of an electronic record for a particular purpose. Other people can fulfill retention requirements. The retention requirement does not apply if the only purpose of the record was to enable it to be sent, communicated, or received. Government agencies can specify additional requirements for electronic record retention for records that are under the agency's jurisdiction (**KRS § 369.112**).

KYTC leadership should consider additional retention requirements it wants to apply to the electronic record retention process.

¹⁰ In *LP Pikeville, LLC v. Lozier*, No. 2019-CA-000407-MR, 2020 Ky. App. Unpub. LEXIS 196 (Ct. App. Mar. 20, 2020) the trial court determined that the daughter of a nursing home resident had not signed an arbitration agreement based on: (1) her insistence she had not signed the agreement either in person or electronically, (2) the nursing facility had no security protocol that might be useful in establishing the authenticity of the signature, and (3) the facility's admissions director had no memory of interacting with the daughter to explain the document and witness her signature.

3.1.5 Automated Transactions

Enforceable contracts can be formed by the interaction of electronic agents of parties to the contract, even if no individual was aware of or reviewed the electronic agent's actions or the terms of the contract. Enforceable contracts can be formed by the interaction of an electronic agent and individual acting on their own behalf or for another, including those transactions where the individual is free to refuse to act and which the person knows or should know the action will cause the electronic agent to complete the transaction. In all cases, the terms of the contract are determined by the law applicable to it (**KRS § 369.114**).

3.1.6 Time and Place of Sending and Receipt

Unless the sender and recipient agree otherwise, an electronic record qualifies as sent (1) when it is addressed or properly directed to an information processing system which was designated/used by the recipient to receive electronic records or information of the type sent from which the recipient is able to retrieve the electronic record; (2) it is in a form capable of being processed by that system; and (3) the information enters the processing system outside the control of the sender or the sender's agent or enters a region of the processing system designated/used by the recipient and/or under the control of the recipient.

Unless the sender and recipient agree otherwise, such information qualifies as received by the recipient when it enters the processing system designated/used by the recipient for the purpose of receiving the information of the type sent and the recipient can retrieve the information and the information is in a form the system can process. This is true even if the processing system is in a different location from the point of receipt.

If there are multiple locations, the record is deemed to have been sent to the both the place of business of the sender and recipient, respectively, if:

- The document is sent to the location having the closest relationship to the underlying transaction
- If there is no place of business, the residence of the sender or recipient is considered the place of business
- These rules can be amended by the electronic record itself
- The record is deemed to be received even if no one is aware of its receipt

An electronic acknowledgement from a processing system establishes that a record was received, but it does not prove that the content sent corresponds to the content received.

If either person is aware that the information was not sent or received, the legal effect of sending or receipt is determined by other applicable law. Except to the extent permitted by the other law, none of the above requirements can be varied by agreement (**KRS § 369.115**).

3.1.7 Transferable Records

A transferrable record is any information inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form according to Kentucky's UCC and is considered a negotiable instrument, receipt, or bill of lading under Articles 3 and 7 and which the issuer of the record as agreed is transferable (**KRS § 355(ae) and KRS § 369.116(1)(a)**).

A person has control over a transferable record if a system used for evidencing the transfer of interests in the transferrable record reliably establishes that person as the recipient. To prove the person has this control, the record must be created, stored, and assigned so that (a) one authorized copy of the record exists that is unique, identifiable, and unalterable and that the person to whom the record was sent was identified in the record as the intended recipient; or (b), the authoritative copy identifies the person asserting control as the person to whom the transferrable record was issued; or if the authoritative copy indicates the record has been transferred, the person to whom it was most recently transferred.

Any records that revise, add, or change an identified assignee of the authorized copy can only be made with the consent of the person asserting control. Any duplicates of the authorized record must be identifiable as a copy. Any revision of the authorized copy must be identified as *authorized* or *unauthorized*.

Any person having control of a transferable record is deemed the holder and has the same legal protections as a holder as set forth in Kentucky's UCC. Likewise, any person who is an obligor under a transferable record has the same legal protections as an obligor as set forth in Kentucky's UCC.

If a person wants to enforce terms of a record, they must provide proof that the one against whom enforcement is sought is the holder of the record. Proof may include access to the authorized copy and related business records which show the terms of the record and establish the person having control of the record (**KRS § 369.116**).

The Electronic Signature Recordkeeping Guidelines¹¹ published by the Kentucky Department for Libraries and Archives (KDLA) provide guidelines for planning, documentation, technology compatibility, and updating processes to account for e-signatures.

3.2 State Board of Licensure for Professional Engineers and Land Surveyors

KRS Chapter 332 covers regulations that apply to engineers and land surveyors. The State Board of Licensure for Professional Engineers (PE) and Land Surveyors (LS) directs engineers and land surveys to use a seal or stamp to certify all reports, specifications, drawings, and plans presented to a client or public or governmental agencies (**KRS § 322.340 (3)**). 201 KAR 18:104 states that digital signatures carry the same weight, authority, and effect as an original signature if the following conditions are met:

- The digital signature is a unique identification of the licensee
- The digital signature is verifiable
- The digital signature is under the licensee's direct and exclusive control
- The digital signature is linked to the electronic document in a manner that causes changes to be easily determined and visually displayed if any data in the electronic document file is changed after the digital signature was affixed to the electronic document
- An attempt to change the electronic document after the digital signature is affixed shall cause the digital signature to be removed or altered significantly enough to invalidate the digital signature
- In the case of an electronic document to be electronically transmitted, the electronic document is converted to a read-only format (201 KAR 18:104 (3)).

According to the National Society of Professional Engineers' summary of digital signing and sealing practices in Kentucky, an electronic signature can be used if:

- It is a unique identification of the licensee
- It is verifiable
- It is under the licensee's direct and exclusive control
- It is linked to the electronic document in such a way that any changes to the document are easily displayed
- Any attempt to change the document invalidates the electronic signature
- The document is transmitted in a read-only format.¹²

Industry stakeholders have expressed concern that 201 KAR 18:104 indicates electronic signatures are only verifiable but lacks specific language related to third-party verification. Future changes to this regulation will be of interest to KYTC. The merging of requirements of UETA and the Licensure Board for PEs and LSs is good example of were KYTC should consult with COT to determine all relevant requirements of electronic transactions.

¹¹ <https://kdla.ky.gov/records/Documents/Electronic%20Signature%20Recommendation%20Version%201.pdf>

¹² <https://www.nspe.org/shop/product/digital-signing-and-sealing-engineering-documents>

3.3 Model Procurement Code

Under the Model Procurement Code KYTC can procure the services of professional engineers (**KRS § 45A.807**). The agency and engineering firm must give and obtain written notice during various stages of the contracting process. KRS § 45A.838 lets KYTC establish a pool of firms to provide professional contract services as long as it follows the process set out in KRS § 45A.800 – 845 and requires certain communications be in writing. Neither the statute nor regulations (**600 KAR 6:040 and 600 KAR 6:065**) prohibit the use of electronic documents and signatures. Thus, no law or regulation appears to proscribe the use of EED so long as the process also follows UETA and the laws governing the licensing of PEs and LSs.

Chapter 4 Summary and Conclusion

The Cabinet's DPD Initiative will be driven by EED use throughout design, construction, and asset management. As KYTC transitions from paper plan sets to digital only, it must have enforceable contracts. Our review of federal and state statutes and regulations illuminated potential legal issues KYTC should attend to when it substitutes EED for printed plans. Other states that use EED have developed processes and requirements to handle these issues, such as contracting approaches that identify responsibilities; establish guidelines for authentication, data reliability, and documentation; and outline protocols for maintaining model integrity. Equally important when using EED are sound risk management practices, including a rigorous quality assurance program, assignment of liability, and conducting model previews prior to letting.

As KYTC continues its transition to EED it should pursue the following action items:

KYTC Internal Decision Making

- The Cabinet may want to limit who is authorized to sign documents and make it clear to all parties in a transaction who has this authority.
- Leadership should determine what retention requirements should be imposed on the electronic record retention process.
- Request that the Office of Legal Services (OLS) develop an opinion on whether uses of EED are in any way governed by Kentucky's Uniform Commercial Code, and if so, what impacts it has on intended usage.

KYTC Internal Process Adjustments

- Ensure agency staff are knowledgeable of and consistently execute an EED process that complies all relevant statutes and regulations.
- Provide training to authorized users of EED on maintaining regulatory compliance and handling errors.
- Embed into the contract process iterative renewal of the agreement to conduct the transaction electronically.
- Develop a process to trace the use of plan sheets that (1) identifies users and (2) determines why and how they are used to verify that foreseeable users can receive, process, print, and retain information on a system outside the control of KYTC or its agents.
- Establish guidance that describes methods for transferring control of EED external parties. Records should be created, stored, and assigned to ensure that authorized copies of records sent to external parties (1) are unique, identifiable, and unalterable and (2) identify the intended recipient.
- Because paper plan sheets remain necessary, have Division of Right of Way and OLS district attorneys determine (1) the effect of EED on condemnation litigation and (2) how opportunities for expanded detail in EED can be formatted to better support these processes in printed plan sheets.

External Communications and Process Adjustments

- Coordinate with the Commonwealth Office of Technology, which sets standards for the creation, generation, communication, and storage of electronic records, and the process used if electronic records and signatures are to be relied upon. The office also specifies the manner and format in which all this activity is executed.
- Verify the security procedures for internal and external signatories.

Kentucky Department of Library and Archives

- Partner with the Kentucky Department of Library and Archives to determine methods for retaining electronic records and converting written records to electronic records.

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Appendix

369.102 Definitions for KRS 369.101 to 369.120.

As used in KRS 369.101 to 369.120, unless the context requires otherwise:

- (1) "Agreement" means the bargain of the parties in fact, as found in their language or inferred from other circumstances and from rules, regulations, and procedures given the effect of agreements under laws otherwise applicable to a particular transaction;
- (2) "Automated transaction" means a transaction conducted or performed, in whole or in part, by electronic means or electronic records, in which the acts of records of one (1) or both parties are not reviewed by an individual in the ordinary course in forming a contract, performing under an existing contract, or fulfilling an obligation required by the transaction;
- (3) "Computer program" means a set of statements or instructions to be used directly or indirectly in an information processing system in order to bring about a certain result;
- (4) "Contract" means the total legal obligation resulting from the parties' agreement as affected by KRS 369.101 to 369.120 and other applicable law;
- (5) "Electronic" means relating to technology having electrical, digital, magnetic, wireless, optical, electromagnetic, or similar capabilities;
- (6) "Electronic agent" means a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part, without review or action by an individual;
- (7) "Electronic record" means a record created, generated, sent, communicated, received, or stored by electronic means;
- (8) "Electronic signature" means an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record;
- (9) "Governmental agency" means an executive, legislative, or judicial agency, department, board, commission, authority, institution, or instrumentality of the federal government or of a state or of a county, municipality, or other political subdivision of a state;
- (10) "Information" means data, text, images, sounds, codes, computer programs, software, databases, or the like;
- (11) "Information processing system" means an electronic system for creating, generating, sending, receiving, storing, displaying, or processing information;
- (12) "Person" means an individual, corporation, business or statutory trust, estate, trust, partnership, limited partnership, limited liability company, association, limited cooperative association, joint venture, governmental agency, public corporation, or any other legal or commercial entity;
- (13) "Record" means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form;
- (14) "Security procedure" means a procedure employed for the purpose of verifying that an electronic signature, record, or performance is that of a specific person or for detecting changes or errors in the information in an electronic record. The term includes a procedure that requires the use of algorithms or other codes, identifying words or numbers, encryption, or callback or other acknowledgment procedures;
- (15) "State" means a state of the United States, the District of Columbia, Puerto Rico, the United States Virgin Islands, or any territory or insular possession subject to the jurisdiction of the United States. The term includes an Indian tribe or band, or Alaskan native village, which is recognized by federal law or formally acknowledged by a state; and
- (16) "Transaction" means an action or set of actions occurring between two (2) or more persons relating to the conduct of business, commercial, or governmental affairs.

Effective: June 24, 2015

History: Amended 2015 Ky. Acts ch. 34, sec. 62, effective June 24, 2015. -- Created 2000 Ky. Acts ch. 301, sec. 2, effective August 1, 2000.

369.103 Scope of KRS 369.101 to 369.120.

- (1) Except as otherwise provided in subsection (2) of this section, KRS 369.101 to 369.120 applies to electronic records and electronic signatures relating to a transaction.
- (2) KRS 369.101 to 369.120 does not apply to a transaction to the extent it is governed by:

- (a) A law governing the creation and execution of wills, codicils, or testamentary trusts;
 - (b) KRS Chapter 355 other than KRS 355.1-107 and 355.1-206, and Articles 2 and 2A of KRS Chapter 355; and
 - (c) A law governing the creation or transfer of any negotiable instrument or any instrument establishing title or an interest in title to a motor vehicle and governed by KRS Chapter 186 or 186A.
- (3) KRS 369.101 to 369.120 applies to an electronic record or electronic signature otherwise excluded from the application of KRS 369.101 to 369.120 under subsection (2) of this section to the extent it is governed by a law other than those specified in subsection (2) of this section.
- (4) A transaction subject to KRS 369.101 to 369.120 is also subject to other applicable substantive law.

Effective: January 1, 2020

History: Amended 2019 Ky. Acts ch. 86, sec. 38, effective January 1, 2020. -- Created 2000 Ky. Acts ch. 301, sec. 3, effective August 1, 2000.

369.104 Prospective application of KRS 369.101 to 369.120.

KRS 369.101 to 369.120 applies to any electronic record or electronic signature created, generated, sent, communicated, received, or stored on or after August 1, 2000.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 4, effective August 1, 2000.

369.105 Use of electronic records and electronic signatures -- Variation by agreement.

- (1) KRS 369.101 to 369.120 does not require a record or signature to be created, generated, sent, communicated, received, stored, or otherwise processed or used by electronic means or in electronic form.
- (2) KRS 369.101 to 369.120 applies only to transactions between parties each of which has agreed to conduct transactions by electronic means. Whether the parties agree to conduct a transaction by electronic means is determined from the context and surrounding circumstances, including the parties' conduct.
- (3) A party that agrees to conduct a transaction by electronic means may refuse to conduct other transactions by electronic means. The right granted by this subsection may not be waived by agreement.
- (4) Except as otherwise provided in KRS 369.101 to 369.120, the effect of any of its provisions may be varied by agreement. The presence in certain provisions of KRS 369.101 to 369.120 of the words "unless otherwise agreed," or words of similar import, does not imply that the effect of other provisions may not be varied by agreement.
- (5) Whether an electronic record or electronic signature has legal consequences is determined by KRS 369.101 to 369.120 and other applicable law.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 5, effective August 1, 2000.

69.106 Construction and application of KRS 369.101 to 369.120.

KRS 369.101 to 369.120 must be construed and applied:

- (1) To facilitate electronic transactions consistent with other applicable law;
- (2) To be consistent with reasonable practices concerning electronic transactions and with the continued expansion of those practices; and
- (3) To effectuate its general purpose to make uniform the law with respect to the subject of KRS 369.101 to 369.120 among states enacting it.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 6, effective August 1, 2000.

369.107 Legal recognition of electronic records, electronic signatures, and electronic contracts.

- (1) A record or signature may not be denied legal effect or enforceability solely because it is in electronic form.
- (2) A contract may not be denied legal effect or enforceability solely because an electronic record was used in its formation.
- (3) If a law requires a record to be in writing, an electronic record satisfies the law.
- (4) If a law requires a signature, an electronic signature satisfies the law.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 7, effective August 1, 2000.

369.108 Provision of information in writing -- Presentation of records.

(1) If parties have agreed to conduct a transaction by electronic means and a law requires a person to provide, send, or deliver information in writing to another person, the requirement is satisfied if the information is provided, sent, or delivered, as the case may be, in an electronic record capable of retention by the recipient at the time of receipt. An electronic record is not capable of retention by the recipient if the sender or its information processing system inhibits the ability of the recipient to print or store the electronic record.

(2) If a law other than KRS 369.101 to 369.120 requires a record to be posted or displayed in a certain manner, to be sent, communicated, or transmitted by a specified method, or to contain information that is formatted in a certain manner, the following rules apply:

(a) The record must be posted or displayed in the manner specified in the other law.

(b) Except as otherwise provided in subsection (4)(b) of this section, the record must be sent, communicated, or transmitted by the method specified in the other law.

(c) The record must contain the information formatted in the manner specified in the other law.

(3) If a sender inhibits the ability of a recipient to store or print an electronic record, the electronic record is not enforceable against the recipient.

(4) The requirements of this section may not be varied by agreement, but:

(a) To the extent a law other than KRS 369.101 to 369.120 requires information to be provided, sent, or delivered in writing but permits that requirement to be varied by agreement, the requirement under subsection (1) of this section that the information be in the form of an electronic record capable of retention may also be varied by agreement; and

(b) A requirement under a law other than KRS 369.101 to 369.120 to send, communicate, or transmit a record by United States mail may be varied by agreement to the extent permitted by the other law.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 8, effective August 1, 2000.

369.109 Attribution and effect of electronic record and electronic signature.

(1) An electronic record or electronic signature is attributable to a person if it was the act of the person. The act of the person may be shown in any manner, including a showing of the efficacy of any security procedure applied to determine the person to which the electronic record or electronic signature was attributable.

(2) The effect of an electronic record or electronic signature attributed to a person under subsection (1) of this section is determined from the context and surrounding circumstances at the time of its creation, execution, or adoption, including the parties' agreement, if any, and otherwise as provided by law.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 9, effective August 1, 2000.

369.110 Effect of change or error.

If a change or error in an electronic record occurs in a transmission between parties to a transaction, the following rules apply:

(1) If the parties have agreed to use a security procedure to detect changes or errors and one (1) party has conformed to the procedure, but the other party has not, and the nonconforming party would have detected the change or error had that party also conformed, the conforming party may avoid the effect of the changed or erroneous electronic record.

(2) In an automated transaction involving an individual, the individual may avoid the effect of an electronic record that resulted from an error made by the individual in dealing with the electronic agent of another person if the electronic agent did not provide an opportunity for the prevention or correction of the error and, at the time the individual learns of the error, the individual:

(a) Promptly notifies the other person of the error and that the individual did not intend to be bound by the electronic record received by the other person;

(b) Takes reasonable steps, including steps that conform to the other person's reasonable instructions, to return to the other person or, if instructed by the other person, to destroy the consideration received, if any, as a result of the erroneous electronic record; and

(c) Has not used or received any benefit or value from the consideration, if any, received from the other person.

(3) If neither subsection (1) of this section nor subsection (2) of this section applies, the change or error has the effect provided by other law, including the law of mistake, and the parties' contract, if any.

(4) Subsections (2) and (3) of this section may not be varied by agreement.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 10, effective August 1, 2000.

369.111 Notarization and acknowledgment.

If a law requires a signature or record to be notarized, acknowledged, verified, or made under oath, the requirement is satisfied if the electronic signature of the person authorized to perform those acts, together with all other information required to be included by other applicable law, is attached to or logically associated with the signature or record.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 11, effective August 1, 2000.

369.112 Retention of electronic records -- Originals.

(1) If a law requires that a record be retained, the requirement is satisfied by retaining an electronic record of the information in the record which:

(a) Accurately reflects the information set forth in the record after it was first generated in its final form as an electronic record or otherwise; and

(b) Remains accessible for later reference.

(2) A requirement to retain a record in accordance with subsection (1) of this section does not apply to any information the sole purpose of which is to enable the record to be sent, communicated, or received.

(3) A person may satisfy subsection (1) of this section by using the services of another person if the requirements of that subsection are satisfied.

(4) If a law requires a record to be presented or retained in its original form, or provides consequences if the record is not presented or retained in its original form, that law is satisfied by an electronic record retained in accordance with subsection (1) of this subsection.

(5) If a law requires retention of a check, that requirement is satisfied by retention of an electronic record of the information on the front and back of the check in accordance with subsection (1) of this subsection.

(6) A record retained as an electronic record in accordance with subsection (1) of this section satisfies a law requiring a person to retain a record for evidentiary, audit, or like purposes, unless a law enacted after August 1, 2000, specifically prohibits the use of an electronic record for the specified purpose.

(7) This section does not preclude a governmental agency of this state from specifying additional requirements for the retention of a record subject to the agency's jurisdiction.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 12, effective August 1, 2000.

369.113 Admissibility in evidence.

In a proceeding, evidence of a record or signature may not be excluded solely because it is in electronic form.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 13, effective August 1, 2000.

369.114 Automated transaction.

In an automated transaction, the following rules apply:

(1) A contract may be formed by the interaction of electronic agents of the parties, even if no individual was aware of or reviewed the electronic agents' actions or the resulting terms and agreements.

(2) A contract may be formed by the interaction of an electronic agency and an individual, acting on the individual's own behalf or for another person, including by an interaction in which the individual performs actions that the individual is free to refuse to perform and which the individual knows or has reason to know will cause the electronic agent to complete the transaction or performance.

(3) The terms of the contract are determined by the substantive law applicable to it.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 14, effective August 1, 2000.

369.115 Time and place of sending and receipt.

(1) Unless otherwise agreed between the sender and the recipient, an electronic record is sent when it:

(a) Is addressed properly or otherwise directed properly to an information processing system that the recipient has designated or uses for the purpose of receiving electronic records or information of the type sent and from which the recipient is able to retrieve the electronic record;

(b) Is in a form capable of being processed by that system; and

(c) Enters an information processing system outside the control of the sender or of a person that sent the electronic record on behalf of the sender or enters a region of the information processing system designated or used by the recipient which is under the control of the recipient.

(2) Unless otherwise agreed between a sender and the recipient, an electronic record is received when:

(a) It enters an information processing system that the recipient has designated or uses for the purpose of receiving electronic records or information of the type sent and from which the recipient is able to retrieve the electronic record; and

(b) It is in a form capable of being processed by that system.

(3) Subsection (2) of this section applies even if the place the information processing system is located is different from the place the electronic record is deemed to be received under subsection (4) of this section.

(4) Unless otherwise expressly provided in the electronic record or agreed between the sender and the recipient, an electronic record is deemed to be sent from the sender's place of business and to be received at the recipient's place of business. For purposes of this subsection, the following rules apply:

(a) If the sender or recipient has more than one (1) place of business, the place of business of that person is the place having the closest relationship to the underlying transaction.

(b) If the sender or the recipient does not have a place of business, the place of business is the sender's or recipient's residence, as the case may be.

(5) An electronic record is received under subsection (2) of this section even if no individual is aware of its receipt.

(6) Receipt of an electronic acknowledgment from an information processing system described in subsection (2) of this section establishes that a record was received but, by itself, does not establish that the content sent corresponds to the content received.

(7) If a person is aware that an electronic record purportedly sent under subsection (1) of this section, or purportedly received under subsection (2) of this section, was not actually sent or received, the legal effect of the sending or receipt is determined by other applicable law. Except to the extent permitted by the other law, the requirements of this subsection may not be varied by agreement.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 15, effective August 1, 2000.

369.116 Transferable records.

(1) In this section, "transferable record" means an electronic record that:

(a) Would be a note under Article 3 of KRS Chapter 355 or a document under Article 7 of KRS Chapter 355 if the electronic record were in writing; and

(b) The issuer of the electronic record expressly has agreed is a transferable record.

(2) A person has control of a transferable record if a system employed for evidencing the transfer of interests in the transferable record reliably establishes that person as the person to which the transferable record was issued or transferred.

(3) A system satisfies subsection (2) of this section, and a person is deemed to have control of a transferable record, if the transferable record is created, stored, and assigned in such a manner that:

(a) A single authoritative copy of the transferable record exists which is unique, identifiable, and, except as otherwise provided in paragraphs (d), (e), and (f) of this subsection, unalterable;

(b) The authoritative copy identifies the person asserting control as:

1. The person to which the transferable record was issued; or

2. If the authoritative copy indicates that the transferable record has been transferred, the person to which the transferable record was most recently transferred;

(c) The authoritative copy is communicated to and maintained by the person asserting control or its designated custodian;

(d) Copies of revisions that add or change an identified assignee of the authoritative copy can be made only with the consent of the person asserting control;

(e) Each copy of the authoritative copy and any copy of a copy is readily identifiable as a copy that is not the authoritative copy; and

(f) Any revision of the authoritative copy is readily identifiable as authorized or unauthorized.

(4) Except as otherwise agreed, a person having control of a transferable record is the holder, as defined in KRS 355.1-201(20), of the transferable record and has the same rights and defenses as a holder of an equivalent record or writing under KRS Chapter 355, including, if the applicable statutory requirements under KRS 355.3-302(1), 355.7-501, or 355.9-330 are satisfied, the rights and defenses of a holder in due course, a holder to which a negotiable document of title has been duly negotiated, or a purchaser, respectively. Delivery, possession, and indorsement are not required to obtain or exercise any of the rights under this subsection.

(5) Except as otherwise agreed, an obligor under a transferable record has the same rights and defenses as an equivalent obligor under equivalent records or writing under KRS Chapter 355.

(6) If requested by a person against which enforcement is sought, the person seeking to enforce the transferable record shall provide reasonable proof that the person is in control of the transferable record. Proof may include access to the authoritative copy of the transferable record and related business records sufficient to review the terms of the transferable record and to establish the identity of the person having control of the transferable record.

Effective: July 1, 2001

History: Amended 2000 Ky. Acts ch. 301, sec. 23, effective July 1 2001. -- Created 2000 Ky. Acts ch. 301, sec. 16, effective August 1, 2000.

369.117 Creation and retention of electronic records by governmental agencies -- Conversion of written records by governmental agencies.

Each governmental agency of this Commonwealth shall determine whether, and the extent to which, it will create electronic records. The Kentucky Department for Libraries and Archives shall determine whether, and the extent to which, the Commonwealth will retain electronic records and convert written records to electronic records.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 17, effective August 1, 2000.

369.118 Acceptance and distribution of electronic records by governmental agencies.

(1) Except as otherwise provided in KRS 369.112(6), each governmental agency of this state, in compliance with standards established by the Commonwealth Office of Technology, shall determine whether, and the extent to which, it will send and accept electronic records and electronic signatures to and from other persons and otherwise create, generate, communicate, store, process, use, and rely upon electronic records and electronic signatures.

(2) To the extent that a governmental agency uses electronic records and electronic signatures under subsection (1) of this section:

(a) The Commonwealth Office of Technology, giving due consideration to security, may specify the manner and format in which the electronic records must be created, generated, sent, communicated, received, and stored and the systems established for those purposes;

(b) If electronic records must be signed by electronic means, each governmental agency, giving due consideration to security, may specify the type of electronic signature required, the manner and format in which the electronic signature must be affixed to the electronic record, and the identity of, or criteria that must be met by, any third party used by a person filing a document to facilitate the process;

(c) The Commonwealth Office of Technology and the Department for Libraries and Archives, giving due consideration to security, may specify control processes and procedures as appropriate to ensure adequate preservation, disposition, integrity, security, confidentiality, and auditability of electronic records; and

(d) Each governmental agency, giving due consideration to security, may specify any other required attributes for electronic records which are specified for corresponding nonelectronic records or reasonably necessary under the circumstances.

(3) Except as otherwise provided in KRS 369.112(6), KRS 369.101 to 369.120 does not require a governmental agency of this state to use or permit the use of electronic records or electronic signatures.

Effective: June 20, 2005

History: Amended 2005 Ky. Acts ch. 85, sec. 693, effective June 20, 2005. -- Created 2000 Ky. Acts ch. 301, sec. 18, effective August 1, 2000.

369.119 Interoperability.

The Commonwealth Office of Technology, which adopts standards pursuant to KRS 369.118(2)(a), may encourage and promote consistency and interoperability with similar requirements adopted by other governmental agencies of this and other states and the federal government and nongovernmental persons interacting with governmental agencies of this state. If appropriate, those standards may specify differing levels of standards from which governmental agencies of this state may choose in implementing the most appropriate standard for a particular application.

Effective: June 20, 2005

History: Amended 2005 Ky. Acts ch. 85, sec. 694, effective June 20, 2005. -- Created 2000 Ky. Acts ch. 301, sec. 19, effective August 1, 2000.

369.120 Severability of provisions.

If any provision of KRS 369.101 to 369.120 or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions or applications of KRS 369.101 to 369.120 which can be given effect without the invalid provision or application, and to this end the provisions of KRS 369.101 to 369.120 are severable.

Effective: August 1, 2000

History: Created 2000 Ky. Acts ch. 301, sec. 20, effective August 1, 2000.