

Electronic Promissory Notes (eNotes) Acceptance Requirements and Guidelines

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Table of Contents

1.	Introduction	5 -
2.	Other Considerations	5 -
з.	Collateral Requirements	6 -
4.	Supporting Documentation Requirements	6 -
5.	eSignature Requirements	7 -
5.1.	Overview	7 -
5.2.	E-Sign Act and UETA	7 -
5.3.	Disclosure and Consent	7 -
5.4.	Identify the Electronic Record to Be Signed	8 -
5.5.	Establishing the Borrower's Intent to Use an eSignature	8 -
5.6.	Attaching or Logically Associating an eSignature to an Electronic Record	9 -
5.7.	Ineligible Types of eSignatures	9 -
5.8.	eNotarization and Presence at Signing	9 -
5.9.	Transferable Record Requirements	10 -
5.10.	Electronic Signing Process Information	11 -
6.	eNote Document Requirements	11 -
6.1.	Overview	11 -
6.2.	eNote Electronic Record Format and Software Licensing Terms	11 -
6.3.	eNote View	12 -
6.4.	Uniform Instruments	12 -
6.5.	eNote Transferable Record Clause	12 -
6.6.	eNote Header	13 -
6.7.	Signature Lines	13 -
6.8.	eNote Footer	14 -
6.9.	MISMO Format(s) Accepted	14 -
6.10.	Exceptions	14 -
7.	eClosing Requirements	14 -
7.1.	Overview	14 -
7.2.	Electronic Record Security	14 -
7.3.	Authoritative Copy and Copies of the Authoritative Copy	15 -
7.4.	Electronic Loan File	16 -
7.5.	Electronic Record	16 -
7.6.	Encryption Requirements	16 -

8. Mortgage Electronic Registration Systems® (MERS®) eRegistry Requirements 17 -		
8.1.	Overview 17 -	
8.2.	Tri-Party Agreement 17 -	
8.3.	Registration 18 -	
8.4.	MERS eRegistry Designations 18 -	
8.5. 8.5. 8.5. 8.5. 8.5. 8.5.	 Controller's Delegatee	
8.6.	Transfer of Control or Location 19 -	
8.7.	Change Data Transactions 19 -	
8.8. 8.8. 8.8. 8.8. 8.8. 8.8. 8.8.	 Registration Reversal	
9.	eNote Vault Requirements 20 -	
9.1.	Authoritative Copy Requirements 21 -	
9.2.	Assignment of FHLB Des Moines to Secured Party and Location Roles in MERS eRegistry 21 -	
9.3.	Length of Time to Support the eNote and Supporting Documents \ldots 21 -	
9.4.	Integrity and Security 22 -	
9.5.	eNote Vault to eNote Vault Transfers and eDelivery 22 -	
9.6.	Verifications 22 -	
9.7.	Encryption Requirements 23 -	
9.8.	eMortgage File Documentation Management 23 -	
10.	Servicing System Requirements 23 -	
10.1.	eMortgage Servicer 23 -	
10.2.	Performing Loans 24 -	
10.3.	Transfer of Servicing of eMortgages 24 -	
11.	Glossary 24 -	

Acknowledgements

This document is adopted from the general Electronic Promissory Notes (eNotes) Model Collateral Acceptance Requirements and Guidelines developed by the Federal Home Loan Bank System (FHLBanks) in order for Federal Home Loan Bank of Des Moines (FHLB Des Moines or the Bank) to accept eNote collateral. These requirements apply only to collateral for extensions of credit and do not apply to loans sold to FHLB Des Moines through the Mortgage Partnership Finance® (MPF®) Program.

Availability

The eNotes Requirements and Guidelines are available for download from www.fhlbdm.com. Send comments regarding the document to Federal Home Loan Bank of Des Moines, 909 Locust Street, Des Moines, IA 50309 or advancecollateral@fhlbdm.com. Material is effective August 11, 2020.

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1. Introduction

MISMO: The voluntary standards development body for the mortgage industry is a wholly owned subsidiary of the Mortgage Bankers Association.

An eNote is a promissory note created, signed and stored electronically versus a traditional paper document that is signed with a wet-ink signature.

The requirements and specifications in this document are based, for the most part, on the requirements of the Electronic Signatures in Global and National Commerce Act (E-Sign Act)—which is a law that was adopted by Congress and signed into law in 2000—and the Uniform Electronic Transactions Act (UETA). UETA was adopted by the Uniform Law Commission (ULC) and recommended for adoption in 1999 by the 50 states, the District of Columbia, and U.S. possessions and territories. Reference the FHLB Des Moines eNotes page for supplemental resources.

For a detailed description of the eSignature laws, general eClosing concepts, legal framework surrounding electronic closing and guidance on requirements for electronic signatures, Members should reference the MISMO eMortgage Closing Guide, a mortgage industry reference tool published by MISMO. To request a copy of the eMortgage Closing Guide, contact the Bank's Collateral Department.

Each Member is responsible for determining that an eNote meets the legal, technological and operational requirements necessary to electronically create valid, enforceable and transferable loan obligations or effectively service loans and comply with the FHLB Des Moines Collateral Procedures. In some cases, this may be in addition to minimum statutory requirements.

Members will need to provide information about the systems and processes it intends to employ to originate, to close, to vault and to service eNotes. Before pledging eNotes, the Bank will work with Members to assess their technology implementations and business processes for conformance to the FHLB Des Moines eNote requirements.

This document is subject to revision at any time at the sole discretion of the Bank. Updates may be made frequently to accommodate this rapidly developing area of eMortgage lending.

2. Other Considerations

Eligible eNote collateral is subject to the Bank's loan collateral eligibility requirements for paper promissory notes. The requirements and guidelines for eNotes do not include provisions that are already covered by the Bank's Advances, Pledge and Security Agreements (APSA) or other policies already in effect. In addition to this document, consult the Bank's Collateral Procedures in conjunction with Agreements and Credit and Collateral Policies.

To protect the Bank and its Members, the Bank reserves the right to consider collateral eligibility on a case-by-case basis.

3. Collateral Requirements

In the first phase of accepting eNotes as pledged collateral, only certain types of mortgage loans are eligible: 1-4 family mortgage loans and closed-end term second mortgage loans. In the future, additional types of mortgage loans may be accepted as collateral when documented using an eNote.

The Bank is developing reporting requirements for eNotes in conjunction with Member Collateral Verification (MCV) review requirements. Additionally, the Bank will define processes for logically associating the eNote retained in the eNote Vault and the loan file supporting documentation.

Imaged loan file supporting documentation may be retained in an eNote Vault.

4. Supporting Documentation Requirements

The Bank will require Members to identify which loans in the pledge portfolio are held as eNotes versus traditional paper notes. There are conditions where additional documents need to be present with an eNote when pledging or reporting on the Borrowing Base Certificate (BBC).

Consult the Bank for acceptance of any mortgage in which supplemental wet-ink signed documents are required for the eNote (e.g., use of the Power of Attorney or a Trust). Discuss with the Bank if there is a requirement to make a permanent conversion from an eNote to a paper note (e.g., mortgages with a New York Consolidation, Extension and Modification Agreement) as they may be considered ineligible as eNotes.

FHLB Des Moines will determine the format of loan file supporting documentation. When originals are not required for collateral eligibility, imaged loan file documentation supporting eNotes is preferred to reduce operational complexities and costs. Imaged loan file supporting documentation may be retained in an eNote Vault; however, there is no current requirement to do so.

All pledged eNotes must be held in the Bank's eNote Vault. FHLB Des Moines will retain loan file supporting documentation in the same manner as paper note loan file documentation. Processes for logically confirming the eNote kept in the eNote Vault and the loan file supporting documentation will be determined as part of the MCV. If paper loan files are held at a document custodian, the supporting documents for an eNote should still be held at the custodian or an eVault.

5. eSignature Requirements

5.1. Overview

ECLOSING: An eClosing is the act of closing a mortgage loan electronically. This occurs through a secure environment(s) where one or more required closing documents are accessed, presented, and signed electronically.

The closing of an eNote requires the use of a specialized computing platform—generally known as an eClosing system—that allows the closing agent and the Borrower to electronically review, sign, store and transfer closing documents.

An electronic signature (eSignature) is an action by a person to electronically apply an electronic sound, a 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. For detailed guidance on legal considerations to consider when pledging eNotes and specific eSignature requirements, view Sections 5 and 7 of the MISMO eMortgage Closing Guide.

For a detailed description on eSignatures, Members should reference the MISMO eMortgage Closing Guide. To request a copy of the eMortgage Closing Guide, contact the Bank's Collateral Department.

5.2. E-Sign Act and UETA

In order to be acceptable as pledged collateral, an eNote must be a valid and enforceable Transferable Record pursuant to UETA, the E-Sign Act or otherwise applicable law. There must be no defect with respect to the eNote that would give the Bank, or a subsequent transferor, less than the full rights, benefits and defenses of Control (as defined by UETA, the E-Sign Act, or applicable law) of the Transferable Record.

E-Sign Act, UETA and other applicable laws will be referred to collectively as the "eSignature Laws" within these guidelines. For a summary of UETA and the E-Sign Act, Members should reference Sections 5.3 and 5.4 of the MISMO eMortgage Closing Guide.

5.3. Disclosure and Consent

- ELECTRONIC RECORD: A contract or other record created, generated, accessed, sent, communicated, received, or stored by electronic means.
- CONSUMER: A person defined as a consumer under the federal E-Sign Act. In the mortgage industry this party has historically been known as the borrower; however, the E-Sign Act legislation referring to the term "consumer" actually references "an individual who obtains, through a transaction, products or services which are used primarily for personal, family, or household purposes," which could include borrowers and sellers for the purpose of consent and disclosure.

Members must be aware of, and comply with, all applicable legal requirements and otherwise follow applicable industry practices regarding electronic disclosures and consents.

Section 101(c) of the E-Sign Act has specific requirements about the type and content of the consent that must be obtained from Borrowers before electronically providing any of the disclosures that are required by law to be given to Borrowers. Additional requirements concerning the use of eSignatures, records, and disclosures may be imposed by regulatory agencies or through state legislation. Some key disclosures, requirements and issues include, but are not limited to:

- Obtaining consumer's express consent to opt-in or opt-out of electronically signing the record;
- Identifying what the consent applies to;
- The right to withdraw consent and the consequences of doing so;
- How to withdraw consent;
- Consumer's right to receive a paper copy of the Electronic Records;
- A statement to the consumer of the necessary hardware, software and system requirements;
- A reasonable demonstration that the consumer can access Electronic Records regarding consent and the information that is the subject matter of the consent; and
- Hardware, software and system changes that require notice of revised hardware and software requirements and right to withdraw consent without fees or consequences not previously disclosed.

View the MISMO eMortgage Closing Guide, especially Sections 5.7-5.9 and Section 7.5.1, for information about consent requirements under the E-Sign Act and UETA, electronic format and delivery of consumer disclosures, a summary of the Federal Board of Governors of the Federal Reserve Bank System's (FRB) Interim Final Rules and for information about consent and disclosure.

5.4. Identify the Electronic Record to Be Signed

The Electronic Record being signed must be clearly identified and clearly display the Borrower's name and must require the Borrower to take action to initiate the eSignature.

The Electronic Record being signed must be individually presented to the Borrower for review and electronic signing. A single eSignature cannot be applied to multiple Electronic Records.

For a detailed description about identification of the Electronic Record, Members should reference the UETA Summary in Section 7.4 of the MISMO eMortgage Closing Guide.

5.5. Establishing the Borrower's Intent to Use an eSignature

Members must ensure that the Borrower is aware of the legal consequences of using an eSignature. Reference Section 7.4.4 (Establishing the Intent to Sign) of the MISMO eMortgage Closing Guide for more information.

5.6. Attaching or Logically Associating an eSignature to an Electronic Record

The eSignature system must be designed to permit the Bank (when reviewing an electronically signed eNote or other Electronic Record and its audit trail) to promptly determine:

- The Borrower's eSignature has been attached to, or is logically associated with, the eNote or other Electronic Record;
- The type of electronic symbol or process used;
- The name of the Borrower (the name must be typed or otherwise expressed in a visible way on the Electronic Record); and
- The time and date stamp of the eSignature.

5.7. Ineligible Types of eSignatures

The eSignature Laws permit eSignatures in various forms, including biometrics (such as fingerprint, voice, facial or retinal recognition systems) and video or audio recordings.

At this time, an eNote that is electronically signed by audio or video recording or by biometric means (such as fingerprint, voice, facial, or retinal recognition) is **ineligible** to serve as **collateral**.

5.8. eNotarization and Presence at Signing

Electronic notarization (eNotarization) is a notarial act performed electronically; i.e., the Borrower's eSignature on an electronic security instrument or other electronic closing documents are remotely and electronically notarized. Notarial law varies widely from state to state and must be considered when contemplating the use of eNotarization.

There are two types of electronic notarial acts: in-person and remote online. In-person Electronic Notarization (IPEN), the notarial act is performed by a notary public and a Borrower in the same physical location where documents are electronically signed and notarized. Remote Online Notarization (RON) is performed by means of an electronic device or process that allows a notary public and a Borrower, who is not in the same physical location as the notary public, to complete a notarial act and communicate with each other simultaneously by sight and sound.

Some state jurisdictions do not permit RON. In a jurisdiction where RON is not authorized but IPEN is authorized, each Borrower must be physically in the presence of the closing agent and/or a notary public coordinating the signing of the eNote, other Electronic Records or paper closing documents. However, all Borrowers do not have to be in each other's presence at the time of signing.

Each Member/Shareholder is responsible for determining that notarization is performed in accordance with and is legally valid under the laws and regulations of the state in which

the notarization is performed, at the time it was performed, and in compliance with the Uniform Electronic Transactions Act, as adopted in such state, and the Electronic Signatures in Global and National Commerce Act.

In states that permit RON, each Member/Shareholder is responsible to ascertain that the notary public is commissioned and physically located in the state where the notarial act occurred and, where required by law or regulation, is specifically approved to perform a RON. If the Borrower and the Mortgaged Premises are located in a State different from the State in which the notary public is licensed and located, each Member/Shareholder is responsible to ascertain that the State law in the State where the notary public is licensed and located must authorize the notary public to engage in such interstate RON transactions.

Each Member/Shareholder should verify that the system used for RON meet the following minimum standards:

- at least two-factor identity authentication, including using a government-issued photo ID that has a signature, credential analysis and identity-proofing;
- Tamper-sealed notarized documents and system security sufficient to (A) prevent interference with the authenticity, integrity and security of the notarial ceremony or corruption or loss of the recording of the same, and (B) protect the communication technology, electronic record and backup record from unauthorized use;
- The remote online notary must keep a secure electronic journal of the notarial act including evidence of identity of the principal (a video and audio conference can be the basis for satisfactory evidence of identification) and maintain a backup of the electronic record; and
- recording of the notarial ceremony with storage for the minimum period required by applicable laws or if no period is specified in the applicable law, for seven years.

Each Member/Shareholder must have the capability to maintain the recording of the notarial ceremony.

If the loan document is required to be recorded, then the county recorder in the state and county where the property is located must accept the remotely notarized document for recording.

Since Notarization and Recording laws and rules, vary by region, please consult with your FHLBank directly for acceptable eNotarizations.

5.9. Transferable Record Requirements

TRANSFERABLE RECORD: An Electronic Record under the E-Sign Act and UETA that (1) would be a Promissory Note under the Uniform Commercial Code if the Electronic Record were in writing; (2) the issuer of the Electronic Record expressly has agreed is a Transferable Record; and (3) for purposes of the E-Sign Act, relates to a loan secured by real property. A Transferable Record is also referred to as an eNote. (Refer to Section 16 of UETA and in Title II, Section 201 of the E-Sign Act.)

To ensure that the eNote is a discrete Transferable Record, closing instructions or other procedures should be created to ensure that the Borrower signs only the eNote at closing and does not also sign a paper version of the promissory Note.

Note: An imaged version of a wet-ink signed paper promissory note is not a Transferable Record or an eNote,

5.10. Electronic Signing Process Information

ATTRIBUTION: A process of linking an Electronic Signature to the individual or legal entity previously authenticated.

To preserve the ability to attribute the signer's signature to their identity, certain documents and system records must be retained in a manner that will provide the Bank with ready access to documents and records (should the Bank request the Member to provide such evidence). In addition to retaining proof of a Borrower's identity in the loan file, additional information about the electronic signing process must be collected and retained in system logs and audit trails. The audit trails and system logs should:

- Establish a temporal and process link between the presentation of identity documents and the electronic signing of a document;
- Provide evidence of the Borrower's agreement to conduct the transaction electronically; and
- Provide evidence of the Borrower's execution of a particular eSignature.

At a minimum, retention of information about the signing process must include:

- The name of the person or a related entity—if the Borrower is not a person—who signed each document in the loan file;
- The date of the signature, and the method by which the document was signed; and
- Any relevant identifying (and other) information that can be used to verify the eSignature and its attribution to the signer's identity.

6. eNote Document Requirements

6.1. Overview

The promissory note must contain certain features and attributes when in an electronic format. This section outlines the requirements for an eNote to be eligible as pledged collateral.

6.2. eNote Electronic Record Format and Software Licensing Terms

Members must ensure that eNote Vaults and eligible eNotes are in an electronic format free from software licensing conditions that would prohibit, limit, or inhibit the Bank from using the eNote and other Electronic Records for any customary business purpose. In addition, the Bank shall not be required to pay any royalties or any other fees for its use of the eNotes and Electronic Records.

6.3. eNote View

The human-readable view of the eNote must not contain any data that is sensitive, personal and identifying information, such as a Social Security Number (SSN).

6.4. Uniform Instruments

It is recommended that eNotes are originated using the Uniform Federal National Mortgage Association (Fannie Mae) or Federal Home Loan Mortgage Corporation (Freddie Mac) form of eNote. This form of an eNote is created by modifying the appropriate Fannie Mae or Freddie Mac Uniform Note that includes the addition of a specific provision that addresses the electronic nature of the note, including that it is a Transferable Record. This special provision also includes a reference to the MERS eRegistry.

Loans that are originated using the uniform Fannie Mae/Freddie Mac form of the eNote, as specified by Fannie Mae and Freddie Mac, are acceptable for pledging. FHLB Des Moines management reserves the right to consider formats other than Fannie Mae/Freddie Mac Uniform Notes.

6.5. eNote Transferable Record Clause

An eNote must contain the following clause as the last numbered section (Fannie Mae/Freddie Mac Uniform Note Section 11, or Section 12 in the case of ARM eNotes) of the eNote before the signature line.

"ISSUANCE OF TRANSFERABLE RECORD; IDENTIFICATION OF NOTE HOLDER; CONVERSION FROM ELECTRONIC NOTE TO PAPER-BASED NOTE

- (A) I expressly state that I have signed this electronically created Note (the "Electronic Note") using an Electronic Signature. By doing this, I am indicating that I agree to the terms of this Electronic Note. I also agree that this Electronic Note may be Authenticated, Stored and Transmitted by Electronic Means (as defined in subsection (F) of this Section [__] (below),),), and will be valid for all legal purposes, as set forth in the Uniform Electronic Transactions Act, as enacted in the jurisdiction where the Property is located ("UETA"), the Electronic Signatures in Global and National Commerce Act ("E-SIGN ACT"), or both, as applicable. In addition, I agree that this Electronic Note will be an effective, enforceable and valid Transferable Record (as defined in subsection (F) of this Section [__] (below) and may be created, authenticated, stored, transmitted and transferred in a manner consistent with and permitted by the Transferable Records sections of UETA or E-SIGN ACT.
- (B) Except as indicated in [__] (subsection (D) and (E) below, the identity of the Note Holder and any person to whom this Electronic Note is later transferred will be recorded in a registry maintained by MERSCORP Holdings, Inc., a Delaware corporation or in another registry to which the records are later transferred (the "Note Holder Registry"). The authoritative copy of this Electronic Note will be the copy identified by the Note Holder after loan closing but prior to registration in the Note Holder Registry. If this Electronic Note has been registered in the Note Holder Registry, then the authoritative copy will be the copy identified by the Note Holder of record in the Note Holder Registry or the Loan Servicer (as defined in the Security Instrument) acting at the direction of the Note Holder, as the authoritative copy. The current identity of the Note Holder and the location of the authoritative copy, as reflected in the Note Holder Registry, will be available from the Note Holder or Loan Servicer, as applicable. The only copy of this Electronic Note that is the authoritative copy is the copy that is within the control of the person identified as the Note Holder in the Note Holder Registry (or that person's designee). No other copy of this Electronic Note may be the authoritative copy.

- (C) If [___] subsection (B) above fails to identify a Note Holder Registry, the Note Holder (which includes any person to whom this Electronic Note is later transferred) will be established by, and identified in accordance with, the systems and processes of the electronic storage system on which this Electronic Note is stored.
- (D) I expressly agree that the Note Holder and any person to whom this Electronic Note is later transferred shall have the right to convert this Electronic Note at any time into a paper-based Note (the "Paper-Based Note"). In the event this Electronic Note is converted into a Paper-Based Note, I further expressly agree that the Paper-Based Note will be an effective, enforceable and valid negotiable instrument governed by the applicable provisions of the Uniform Commercial Code in effect in the jurisdiction where the Property is located; my signing of this Electronic Note will be deemed issuance and delivery of the Paper-Based Note; I intend that the printing of the representation of my Electronic Signature upon the Paper-Based Note from the system in which the Electronic Note is stored will be my original signature on the Paper-Based Note; the Paper-Based Note will be a valid original writing for all legal purposes; and upon conversion to a Paper-Based Note, my obligations in the Electronic Note shall automatically transfer to and be contained in the Paper-Based Note, and I intend to be bound by such obligations.
- (E) Any conversion of this Electronic Note to a Paper-Based Note will be made using processes and methods that ensure that: (i) the information and signatures on the face of the Paper-Based Note are a complete and accurate reproduction of those reflected on the face of this Electronic Note (whether originally handwritten or manifested in other symbolic form); (ii) the Note Holder of this Electronic Note at the time of such conversion has maintained control and possession of the Paper-Based Note; (iii) this Electronic Note can no longer be transferred to a new Note Holder; and (iv) the Note Holder Registry (as defined above), or any system or process identified in subsection (C) above, shows that this Electronic Note has been converted to a Paper-Based Note, and delivered to the then-current Note Holder.
- (F) The following terms and phrases are defined as follows: (i) "Authenticated, Stored and Transmitted by Electronic Means" means that this Electronic Note will be identified as the Note that I signed, saved, and sent using electrical, digital, wireless, or similar technology; (ii) "Electronic Record" means a record created, generated, sent, communicated, received, or stored by electronic means; (iii) "Electronic Signature" means an electronic symbol or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign a record; (iv) "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; and (v) "Transferable Record" means an Electronic Record that: (a) would be a note under Article 3 of the Uniform Commercial Code if the Electronic Record were in writing and (b) I, as the issuer, have agreed is a Transferable Record."

Note: Insert "MERSCORP Holdings, Inc., a Delaware corporation" as the name of the Operator of the Registry, unless directed otherwise by FHLB Des Moines.

6.6. eNote Header

An eNote must contain the following, formatted heading:

Note (For Electronic Signature)

6.7. Signature Lines

Text above or below the signature must not contain the following: "(Sign original only)".

6.8. eNote Footer

The footer for an eNote is similar to the document footer that appears on standard wet-ink signed promissory notes, except there must be clear identification of the document as an eNote.

TAMPER EVIDENT SIGNATURE: A "seal" wrapping an Electronic Record that is created by a Digital Signature. The seal can be verified to ensure that no changes have been made to the Electronic Record since the seal was put in place. Also known as: Tamper Seal, Tamperseal Signature and Tamper-Evident Seal or Signature.

6.9. MISMO Format(s) Accepted

The eNote must be a valid, Version 1.02 MISMO Category 1 SMART Doc®, signed using an eSignature process and secured by a Tamper Evident Signature.

6.10. Exceptions

To protect the Bank and its Members, management reserves the right to consider exceptions to some of the eNote document requirements on a case-by-case basis; however, the eNote Transferable Record clause must be present in the eNote in order to qualify as eligible collateral.

7. eClosing Requirements

7.1. Overview

This section outlines the requirements for eClosing systems. View the MISMO eMortgage Closing Guide, especially Sections 3, 6 and Section 9, for information about the process Members should consider when pledging eNotes and guidelines on Electronic Records and their security requirements. To request a copy of the eMortgage Closing Guide, contact the Bank's Collateral Department.

7.2. Electronic Record Security

- DTD: Document Type Definition is a file that defines the "markup language" that will be used to describe the data. It defines and names the elements that can be used in the document, the order in which the elements can appear, the element attributes that can be used, and other document features.
- W3C: The World Wide Web Consortium was created to lead the World Wide Web to its full potential by developing common protocols and standards (including XML) that promote its evolution and ensure its interoperability.
- X509: A standard for defining a Digital Certificate. It is the signing system used for SSL. See the MISMO XML Digital Signature Guide for more information.

Members are required to tamper evident seal the eNote after each Borrower signs and immediately after the last Borrower signs.

To preserve the integrity of the electronically signed document, an eNote and other electronically signed documents must be tamper-evident sealed using World Wide Web Consortium (W3C) compliant digital signature algorithms and utilizing X.509 certificates issued by an accredited issuing authority. The tamper-evident seal digital signature value must be included in the document and be accessible to validate that the Electronic Record has not been altered after it was electronically signed.

Tamper-evident seals can be created using an individual user certificate or a server-based certificate. If a server-based certificate is used, evidence that the server-based certificate private keys are appropriately stored is required, and a separation of staff roles regarding access to those keys must be provided.

The eClosing system must have the functionality to log and reconcile the eNote Document's interim or final Tamper Evident Signature(s). Confirmations of validations to the SMART Document's DTDs/Schemas must be logged for the eNote. The validation and confirmation processes required by this Section 7.2 must permit the Bank to verify the same.

To maintain collateral eligibility, Members must ensure that Electronic Records created and maintained by the eClosing system are not (and have not been) subject to unauthorized access or alteration. If there has been an incident of unauthorized access or alteration, please notify the Bank.

7.3. Authoritative Copy and Copies of the Authoritative Copy

AUTHORITATIVE COPY (AC): The copy of a Transferable Record that is identified by the Controller, stored in an eNote Vault and evidenced by the System of Record as the single, unique, identifiable and legally controlling copy. In the mortgage industry today, it is the copy of the Transferable Record (eNote), which is stored in an eNote Vault and registered on the MERS eRegistry.

The eClosing system must distinguish the display Authoritative Copy as the original and not as a copy of the Authoritative Copy.

The eNote Vault screen on which the Authoritative Copy of the eNote appears must clearly and conspicuously state that the viewer is viewing the Authoritative Copy. Any other eNote vault screen on which a copy of the Authoritative Copy appears must clearly and conspicuously state that the viewer is viewing a copy of the Authoritative Copy.

7.4. Electronic Loan File

The eClosing system must create and store a record of each eNote and Electronic Record presented and signed ("eClosing Transaction Record"). The eClosing system must also track and log actions related to the creation, signing, and transferring of the eNote and other Electronic Records using the eClosing system. Such information must be contained in the eClosing Transaction Record. The eClosing Transaction Record must be retained and maintained by the Member and, if the servicing of the eNote is transferred, it must be retained and maintained by the subsequent Servicer. At all times, the eClosing Transaction Record must be stored and maintained in a manner that preserves the integrity and reliability of the eClosing Transaction Record for the life of the applicable eNote.

7.5. Electronic Record

All eNotes and other Electronic Records, regardless of format, must have no licensing conditions that would prohibit, limit, or inhibit the FHLBanks, any assignee of an FHLBank or the purchaser of a liquidated portfolio of eNotes, from using the eNote and other Electronic Records for any customary business purpose. In addition, the FHLBanks shall not be required to pay any royalties or any additional fees for its use of the eNotes and Electronic Records.

Electronic Records presented to the Borrower in the eClosing system must comply with all applicable state and federal requirements concerning the content, display and format of information and retention (as is required for paper records).

The eNotes and other Electronic Records must accurately reproduce the fonts, styling, margins, and other physical features when electronically displayed and printed post-execution and as required by state or federal law. Also, the party viewing or printing the Electronic Record must be able to ascertain:

- The content of the Electronic Record;
- The name of the Borrower signing the Electronic Record and the legal capacity in which the Borrower signed; and
- The time and date the Electronic Record was signed.

7.6. Encryption Requirements

HASH: Used as a verb, hashing is the process to calculate a "digital fingerprint" of an electronic document with a mathematical algorithm. The digital fingerprint is unique and entirely based upon the specific content of the electronic document, including any signatures. Any change to the electronic document -- even something as small as the insertion or deletion of a single character -- will create two distinct and unlike digital fingerprints. Comparing the fingerprint and the recalculation of the digital fingerprint at a later date provide evidence of tampering.

Encryption algorithms used by eClosing systems and processes must be compliant with the National Institute of Standards and Technology (NIST) and Federal Information Processing Standards (FIPS) 140-2 guidance.

Any eClosing systems and processes that utilize X.509 digital certificates for device or server-based Transport Layer Security/Secure Sockets Layer (TLS/SSL) session authentication must support a minimum of a SHA-256 signing cryptographic hash. TLS session of eClosing systems and processes must use a minimum of 2048-bit Rivest–Shamir–Adleman (RSA) key and 128-bit Advanced Encryption Standard (AES) key.

eClosing systems and processes must support and utilize multifactor authentication methods such as combinations of unique user ID and password, S/Key, password tokens, biometrics, smart card authentication, and X.509 digital certificates.

Members must conduct due diligence on a digital certificate issuing authority's (Certificate Authority) compliance with industry standards. Failure to do so may result in greater susceptibility to encryption eavesdropping (such as man-in-the-middle attacks) and fraudulent digital signatures and increases the risk to data integrity and confidentiality.

8. Mortgage Electronic Registration Systems® (MERS®) eRegistry Requirements

8.1. Overview

An eRegistry is a ledger that tracks an owner of an asset, any related transactions of that asset (including authentication) and the storage location of the original electronic version. It may be thought of as a shared database repository that shows the transactions concerning a given asset (in this case, eNotes). Such details include:

- Where the asset originated;
- Where it has moved;
- The owner of the asset; and
- Assurance that the asset has not changed in any way.

MERS offers the MERS® System—a national electronic registry that tracks the changes in mortgage servicing, servicing rights and beneficial ownership interests in residential mortgage loans that are registered on the MERS eRegistry. MERS serves as the mortgagee in the land records for loans registered on the MERS System and is a nominee (or agent) for the owner of the promissory note.

MERS also offers an eRegistry and an eDelivery service for eNotes. The MERS eRegistry is different and distinct from the MERS System. The MERS eRegistry component was created in 2003 in response to the eCommerce laws and registration is required for eNotes sold to Fannie Mae and Freddie Mac. The MERS eRegistry meets the safe harbor requirements, as specified in the eCommerce laws, the E-Sign Act and UETA, for transferable records.

For eNotes to qualify as collateral, the Bank requires the use of the MERS eRegistry.

8.2. Tri-Party Agreement

A tri-party Electronic Tracking Agreement (ETA) must be executed with MERS, the Member and the Bank to establish the Bank's interest within the pledged collateral registered in the MERS eRegistry.

8.3. Registration

eNotes must be issued a Mortgage Identification Number (MIN) by MERS and registered in the MERS eRegistry within one business day of the closing. The Member may assign FHLB Des Moines as secured party anytime during the lifecycle of the loan, which is required to be eligible collateral.

The human-readable view of the eNote must not contain a SSN; consult the MERS eRegistry technical support team for information on providing the SSN to the MERS eRegistry for eNote registration to comply with requirement 6.3: eNote View.

8.4. MERS eRegistry Designations

The level of FHLB Des Moines control exercised over changes to MERS entities, location, data, or status, with regards to pledged eNotes, may vary based upon Member organization types, financial condition, risk rating, collateral quality and collateral availability. In certain circumstances, Members changes to an entity association may be automatically accepted. In other circumstances, such changes may require manual acceptance by the Bank as the Secured Party. This level of automated authorization is held to the discretion of the Bank.

8.5. Entities on the MERS eRegistry

8.5.1. Controller

LOCATION: The entity named on the MERS eRegistry that maintains the Authoritative Copy of the eNote and any electronic documents that modify the terms of the eNote, either as Controller or as a custodian on behalf of the Controller.

The Controller is the Party (entity) named on the System of Record that has Control of the eNote. For example, the Controller can be thought of as the "holder," "holder in due course," or "purchaser" of an original paper note as defined under the Uniform Commercial Code.

The Member will be the Controller of the eNote. FHLB Des Moines, as the Secured Party, may replace the Member as the Controller to protect its security interest unless otherwise required by the Member's collateral arrangement with the Bank.

8.5.2. Controller's Delegatee

The Controller Delegatee is a Member of the MERS eRegistry that is authorized by the Controller to perform certain MERS eRegistry transactions on the Controller's behalf. The assignment of the Controller Delegatee is designated at the Member's discretion with prior approval by FHLBank Des Moines.

8.5.3. Secured Party

The Secured Party is the entity named on the MERS eRegistry that has been assigned—or granted—a security interest in the eNote by the Controller. All eNotes must list FHLB Des Moines (Org ID #1003003) in the Secured Party field of the MERS eRegistry for as long as the collateral is pledged.

8.5.4. Secured Party Delegatee

The Secured Party Delegatee is the member of the MERS eRegistry that is authorized by the Secured Party to perform certain transactions on the Secured Party's behalf. This field is determined at the Bank's discretion.

8.5.5. eNote Location

The Location for pledged eNote collateral must be the Bank's eNote Vault.

8.6. Transfer of Control or Location

In the MERS eRegistry, a system transaction is used to request a change to the current Controller or Location of an eNote, of a Member, or Location of a pledged eNote, and may be subject to notification to the Bank or approval depending on the Member's collateral arrangement. Such authorizations are held at the discretion of the Bank, subject to FHLB Des Moines' right as Secured Party to revoke that automatic acceptance.

8.7. Change Data Transactions

Changes to data on the MERS eRegistry for assumptions, naming, or releasing a Servicer or a Delegatee, modifying an eNote or updating data (such as a name change) may not need acceptance by the Bank.

8.8. Change Status Transactions

REGISTRATION REVERSAL: The transaction used to mark a previously registered eNote record on the MERS eRegistry as inactive.

8.8.1. Pay Off and Reversal & Charge Off and Reversal

MERS has the ability to change set restrictions of the Controller—or any other authorized Rights Holder—to deactivate an eNote record while a Secured Party is named. A Member capability to perform deactivations to an eNote record while the Bank is named as Secured Party is established in a tri-party agreement between MERS, the Bank, and the Member as MERS System Member.

If a MERS Member is permitted to perform deactivations to an eNote record while the Bank is named as Secured Party, the Bank will receive a notification. If a MERS System member is not permitted to deactivate an eNote record while the Bank is named as Secured Party, the Bank will need to first release its interest before the eNote can be deactivated.

8.8.2. Registration Reversal

While named as the Secured Party, the Bank will receive notification of registration reversals.

8.8.3. Conversion to Paper and Reversal

MERS has the ability to restrict the Controller to convert an eNote record to paper while a Secured Party is named. A Member's capability to convert an eNote record to paper while the FHLBank is named as Secured Party is established in a tri-party agreement between MERS, the MERS System Member, and the Secured Party.

Before an eNote record can be converted to paper, the Bank as Secured Party will need to first release its interest. eNotes converted to paper notes are not eligible for pledged collateral.

8.8.4. Transfer to Proprietary Registry and Reversal

MERS has the ability to restrict the Controller to transfer an eNote to a Proprietary Registry while a Secured Party is named. A Member's capability to transfer an eNote to a Proprietary Registry while the FHLBank is named as Secured Party, is established in a triparty agreement between MERS, the MERS Member, and the Secured Party.

If a MERS member is permitted to transfer an eNote to a Proprietary Registry while the FHLBank is named as Secured Party, the FHLBank will receive notification.

If a MERS Member is not permitted to transfer an eNote to a Proprietary Registry while the Bank is named as Secured Party, the Bank will need to first release its interest before the eNote will be transferred to a Proprietary Registry.

8.8.5. Modification Reversal

While named as the Secured Party, FHLB Des Moines will receive notification of modification reversals.

8.9. Doing Business As (DBA) Tradenames on eNotes

As a general rule, state law recognizes a DBA or tradename as an alias; it is not a separate legal entity, but merely an alternative name for the legal entity using the tradename. There are special considerations for DBA tradenames on eNotes on the MERS[®] eRegistry.

The relationship between the differing names – the DBA is listed on the eNote and the Members/Shareholder's legal entity name (MERS eRegistry Organization identifier) as the Controller – is not reflected on the MERS eRegistry. This may cause risk to the Member/Shareholder's legal rights as the Controller.

For Members/Shareholder's which intend to utilize DBA tradenames on eNotes:

- (1) the legal entity name must also be included on the face of the eNote (e.g. ABC Financial, Inc., dba XYZ Mortgage), AND
- (2) the initial MERS eRegistry registration reflect the legal entity name as the initial controller.

9. eNote Vault Requirements

ENOTE VAULT: An Electronic Note Vault is a secure storage solution that meets the requirements of eSignature Laws. The concept is analogous to a paper note vault administered by a document custodian in the industry today.

Members must conduct the appropriate due diligence review of their systems and confirm compliance with requirements in this section. If the Member's eNote Vault was not previously reviewed by the Bank, the eNote Vault must go through the Bank's review and due diligence process. If the Member is using one of the reviewed systems, a signed certification form confirming their system is compliant with the Bank requirements, including interfacing and integrating, is required.

Before accepting eNotes as collateral, the Member must execute the necessary legal agreement(s) with the Bank and complete any FHLB Des Moines required initial checks to ensure compatibility with the Bank's eNote Vault.

9.1. Authoritative Copy Requirements

Once approved, the Member must store the Authoritative Copy of an eNote in the Member's eNote Vault until pledged. Once an eNote is pledged and the location of the Authoritative Copy is transferred to the Bank's eNote Vault, the Member must store *a copy* of the Authoritative Copy of the eNote in its eNote Vault. Periodic reconciliation between the Member eNote Vault and the MERS eRegistry to ensure alignment between the two systems is required. Additionally, the Member eNote Vault must have the functionality to perform eNote integrity validation to verify that the tamper-evident seal digital signature is valid and has not been compromised. Proof of periodic audits of the tamper-evident seal digital signature is required.

The eNote Vault used by the Member must interface with the MERS eRegistry. Third parties involved with the process of the eNotes to be pledged must also be set up in the Member's MERS eRegistry profile in MERS and within the eNote Vault application. This includes all related third parties within the eNote process for loans pledged to the Bank (e.g., servicer, sub-servicer and Location). The Member's eNote Vault view screen on which a copy of the Authoritative Copy appears must:

- State that the eNote being viewed is the Authoritative Copy;
- State the eNote being viewed is a copy of the Authoritative Copy; and
- The eNote Vault used by the Member, upon receipt of the eNotes, validates or recomputes all of the eNotes' tamper evident signatures and compares them with the corresponding tamper evident signatures in the MERS eRegistry.

Note: The Bank's eNote Vault automatically completes validation against the MERS eRegistry upon delivery of the Authoritative Copy of the eNote.

9.2. Assignment of FHLB Des Moines to Secured Party and Location Roles in MERS eRegistry

Proper assignment within the MERS eRegistry will need to be performed per loan to support the FHLB Des Moines (Org ID #1003003) as the Secured Party for pledging.

9.3. Length of Time to Support the eNote and Supporting Documents

The eNote Vault used by the Member must preserve the eNote and other electronic documents that relate to pledged collateral for the life of loan plus seven years.

9.4. Integrity and Security

> **AUTHENTICATION:** A process of confirming an identity of an individual or legal entity, either in connection with the creation of a relationship or in connection with the individual's or the legal entity's participation in a transaction.

The eNote Vault used by the Member must support one or more authentication methods to authenticate user access. Additionally, the eNotes Vault used by the Member must:

- Protect system integrity through appropriate measures such as safeguarding against malware, firewall and network perimeter security controls, etc.;
- Verify document integrity, including, but not limited to, compliance with eNote Document Type Definition (DTD) or schema and eNote Tamper Evident Seal before accepting documents;
- Log the validations (re-computations of Hash Values) of eNotes' and any other SMART Documents' Tamper Seals; and
- Periodically reconcile the information stored in the eNote Vault and the information stored on the MERS eRegistry.

9.5. eNote Vault to eNote Vault Transfers and eDelivery

The eNote Vault used by the Member must have the capability to transfer eNotes and any other Electronic Mortgage File Documents in the eNote Vault to another eNote Vault using MERS eDelivery or by other means, as mutually approved in advance by the Member and the Bank.

9.6. Verifications

The Member Collateral Verification (MCV) review process includes verification that there is a physical representation of an eSignature present on the eNote and that the Borrower's name is typed below the eSignature.

Verification of the registry operator (e.g., "MERSCORP Holdings, Inc., a Delaware corporation") is listed as the operator of the Registry in Transferable Record Section of the eNote is required, as excerpted below:

(B) Except as indicated in[11][12](subsections (D) and (E) below, the identity of the Note Holder and any person to whom this Electronic Note is later transferred will be recorded in a registry maintained by MERSCORP Holdings, Inc., a Delaware corporation or in another registry to which the records are then transferred (the "Note Holder Registry").

Refer to Section 5.4 of these guidelines (eNote Transferable Record Clause) for registry operator requirements.

9.7. Encryption Requirements

CERTIFICATE AUTHORITY OR ISSUING AUTHORITY: A trusted third-party organization or company that issues, manages, renews, and revokes Digital Certificates used to create Digital Signatures. The Certificate Authority registers the certificate holder's name and address and allows others to see if the certificate is valid, revoked, or expired. The third-party certificate authority also has the ability to confirm the identity of the certificate holder.

The eNote Vault encryption algorithms used by the Member are compliant with NIST and FIPS 140-2 guidance.

The eNote Vault X.509 digital certificates used by the Member for device/server-based TLS/SSL session authentication support a minimum of SHA-256 signing cryptographic hash. The eNote Vault used by the Member for TLS sessions must use a minimum of 2048-bit RSA key and 128-bit AES key.

The Member should conduct due diligence on a digital certificate issuing authority's (Certificate Authority) compliance with industry standards. Failure to do so may result in greater susceptibility to encryption eavesdropping (such as man-in-the-middle attacks), fraudulent digital signatures and increases the risk to data integrity and confidentiality.

9.8. eMortgage File Documentation Management

The Mortgage File Documents for eNotes pledged may contain paper and electronic documents, so long as the Member maintains records that cross-reference the paper and electronic documents.

If some of the Mortgage File Documents are paper and some are electronic, the paper documents must be retained as required by the Bank's Collateral Procedures and Member Products Policy. The other Electronic Mortgage File Documents must be retained in the Member's eNote Vault.

If the eNote Vault does not allow storage of Electronic Mortgage File Documents other than the eNote, the documents must be securely stored as required by the Bank's Collateral Procedures and Member Products Policy.

10. Servicing System Requirements

10.1. eMortgage Servicer

Note: Servicer in this section may refer to the Member or a third-party servicer.

The servicer must have a FHLB Des Moines-approved eNote Vault or have a third-party arrangement with a custodian or servicer that is holding eNotes on the Member's behalf in an approved eNote Vault to have the ability to perform MERS eRegistry transactions. The Bank may need access to the servicer's eNote Vault or servicing data while collateral is pledged.

The servicer must have the ability to identify all eNotes pledged to the Bank. The servicer must be an approved and active Member and user of the MERS eRegistry and has (and shall maintain at all times) connectivity to the MERS eRegistry and eDelivery.

The servicer must have the ability to record all status changes and required actions that occur during the life of the eNote in the MERS eRegistry. The servicer can confirm that the MERS eRegistry accurately reflects the "Controller," the "Secured Party" and the "Location" at all times.

The servicer must have documented eNote servicing procedures.

10.2. Performing Loans

The servicer must maintain the current status of the eNotes on the MERS eRegistry.

Neither the servicer nor any other party may convert a pledged eNote into a paper-based Note without the Bank's prior specific and express written consent. Once a pledged eNote is converted to a paper-based Note, it can no longer be considered eNote collateral and is no longer considered eligible pledged collateral.

In the event the Bank gives its specific and express written consent to convert a pledged eNote to paper, the Member must comply with the Bank's instructions in connection with such conversion.

10.3. Transfer of Servicing of eMortgages

Members may be required to notify the Bank before any future changes in servicing and document custody of paper loan file documents. Consult the Bank's Collateral Policies and Guidelines before moving servicing or document custody. For changes in servicing, the Member must update the MERS eRegistry. Additional agreements may need to be executed and testing may need to be performed to ensure compatibility with the Bank's eNote Vault.

11. Glossary

Capitalized terms used and not defined in these guidelines shall have the meaning outlined in the 2016 MISMO eMortgage Glossary.