

APPENDIX B - Requirements

The requirements listed below cover both functional and non-functional requirements for the initial build of the Revisor's MARSS system. Further refinement, elaboration and validation of these requirements will be done at the beginning of and during the system build.

Definitions of users:

Admin User - a user that has access to all aspects of the system and is responsible for creating and managing all user accounts, domain lists and other technical aspects of the system.

Authorized User - a user of the system who has been given log-in credentials by the admin user. The permissions assigned to the authorized user will determine which features and data the user is allowed to access and modify.

Agency User - An authenticated user who is allowed to input data into the system and is responsible for the contents in the rulemaking records.

Legislative User - legislators and legislative staff interested in rulemaking. In the initial build of the system these users will receive notifications from the system.

Public User - A general user of the system who will have access to query and view all public data stored in the system. All users have the access levels of the public.

Functional Requirements			
Use Case	Req	Name	Use Case or Requirement Description
U000		Cross-Cutting Features	A number of desired features apply generally to many or all use cases, as identified below.
U000	R003		The system will provide validation where appropriate, such as for spell checking, valid dates, and valid Statute citations.
U000	R005		The system will provide a timeline representation of the rulemaking process with which all users, including the public and legislative staff, can see the current status and progress of a rulemaking.
U000	R006		The system will support viewing of all screens via a mobil device, with all displays optimized for mobile viewing. This includes being able to use a mobile device to view reports.
U000	R007		A agency user will be able to flag rulemaking events, rulemaking record items and documents as not ready for public viewing. These flagged events, items and documents will NEVER display to a public user. However, all data in MARSS will be treated as public data and will therefore be accessible via a data request.
U000			The system will provide a personal dashboard with information relevant to the authenticated agency user. Dashboards for public and legislative users are a future consideration.
U000	R010		An admin user will be able to leverage, programmatically, real-time events sent to the Xtend system from the MARSS system.
U000	R011		An agency user will be able to delete events, items and documents which the agency user or someone within the agency user's group has entered prior to the formal adoption of a rule revision. After formal adoption of a rule revision, records will be locked for the rule proceeding for any agency user, but an admin user would have the rights to delete records.
U001		Create Rulemaking Proceeding	The agency user will be able to create a rulemaking proceeding - provided they have the permissions to do so.
U001	R001		A revisor ID will be assigned to a rulemaking proceeding in any status provided that it is the initial entry. The Revisor ID will be produced sequentially in the format of R-#####.
U001	R002		The system will enforce that all data required for a rule proceeding has been provided and validated before allowing creation of the proceeding record.
U001	R003		The agency user will be able to select the applicable rulemaking proceeding type (General with Hearing, General without Hearing, Expedited, Exempt...) for a rulemaking proceeding.
U001	R004		The agency user will enter a rulemaking revision description, the statutory authority and effective dates of this authority (no end date for permanent).
U001	R005		The agency user will be able to supply as much of the meta data about a rulemaking proceeding as they choose at creation time. The same features for updating a rulemaking proceeding apply.
U001	R006		More than one user from different agencies might need permissions for the same rulemaking proceeding for instances where the ownership is shared across agencies.
U001	R007		An agency user will be able to get a user-friendly/clean URL permalink from the system's webpage that is specific to the rulemaking proceeding to add to an agency website.
U001	R008		Agency user entered citations to Revisor documents (Statutes, Laws, Rules) should link to the cited documents located on the Revisor of Statutes website (citation algorithm available from Revisor's Office).
U002		Update Rulemaking Proceeding Record	The agency user will be able to update a rulemaking proceeding extending from the creation of a rulemaking proceeding or from a view whereby the specific rulemaking proceeding can be selected for edit.
U002	R001		The agency user will be able to update all data associated with a rulemaking proceeding that is not limited by permissions.
U002	R002		The agency user will be able to cancel a hearing date and enter a cancellation date.
U002	R003		The agency user will be able to update keywords or topics associated with a particular rulemaking proceeding that may later be used as search criteria. Keywords may be selected or entered. Topics may only be selected.
U002	R004		The data entered for rulemaking record items may aggregate up to the rulemaking proceeding, such as an aggregate number of requests for hearing uploaded on different dates. Derived data will be displayed with a rulemaking proceeding.
U002	R005		The agency user will be able to select the committee(s) with jurisdiction for a particular rulemaking proceeding.
U002	R006		The agency user will be able to select the corresponding contacts for a committee and their emails for the purpose of notifications.
U002	R009		The agency user will be able to add rulemaking events to a rulemaking proceeding.
U002	R012		The agency user will be able to add rule provisions to the rulemaking proceeding, subject to validation of a valid citation, in addition to the list automatically received from the Revisor Xtend System.
U002	R013		The agency user will be able to assign detail on a rulemaking provision event as: new, amended or repealed by adding it if it does not already exist or by editing the existing value.
U002	R014		The agency user will be able to remove any rule provisions listed as affected by the rule making proceeding. This includes rule provisions that were supplied by the Revisor Xtend System.

U002	R015		The agency user will be able to enter the OAH Docket number.
U002	R016		The agency user will be able to enter an agency contact for a rulemaking proceeding, with first name, last name, title, phone and email.
U002	R017		If the rulemaking provision effective dates are permanent, the agency user will be able to enter an effective date for the rulemaking provision as well as a compliance date if the compliance date is different than the effective date.
U002	R018		If the rulemaking provision effective dates are temporary, The agency user will be able to enter both an expiration date and an effective date for the rulemaking provision as well as a compliance date if the compliance date is different than the effective date.
U002	R019		The agency user will be able to to apply default values that are then editable for the entry of effective date, expiration date and a compliance date at the rulemaking proceeding level that then populate all associated dates of the same type at the rulemaking provision level. The agency user can then update the dates of any rulemaking provision selectively.
U002	R020		The agency user will be able to change a rulemaking proceeding to a different status , and if changed, the user will be alerted to any impacts such as associated rule events.
U002	R023		Support for notifications sent to legislative staff and other required agencies and committees will be provided.
U003		View Standard Rulemaking Events	The agency user will be presented with a list of standard rulemaking events associated with the rulemaking proceeding type selected.
U003	R001		Based on the agency user's selection of a rulemaking proceeding type, the agency user will be presented with a list of standard rulemaking events with associated rulemaking record items.
U004		Update Rulemaking Events	The agency user will be able to update the list of rulemaking events planned for a specific rulemaking proceeding.
U004	R001		The agency user will be able to update the list of rulemaking events and associated rulemaking record items for a specific rulemaking proceeding without affecting the standard list displayed for other users creating a rulemaking proceeding.
U004	R006		The agency user will be able to select, for a publicly viewable schedule, the planned rulemaking events with associated data for the specific rulemaking proceeding. Items not selected will be viewable by users with permissions to view.
U005		Update My Rulemaking Events	The agency user will be able to update planned or actual events associated with a rulemaking proceeding.
U005	R001		The agency user will be able to create actual standard or non-standard rulemaking events with associated respective standard or non-standard rulemaking record items even when the event was not previously identified as a planned event.
U005	R002		The agency user will be able to update a planned rulemaking event as an actual event with actual dates, other data, and associated events and document uploads.
U007		Create Rulemaking Record Item	The agency user will be able to create a rulemaking record item for a rulemaking event
U007	R001		The agency user will be able to create a rulemaking record item for a rulemaking event. More than one rulemaking record item might apply to a rulemaking event and more than one rulemaking event might relate to the same rulemaking record item.
U007	R002		The agency user will be able to enter specific data corresponding to a particular rulemaking record item, for example, an upload of a set of requests for a hearing will have a corresponding data input for the valid number of requests for a hearing.
U008		Update Rulemaking Record Item	The agency user will be able to update a rulemaking record item.
U008	R001		The agency user will be able to update all rulemaking record item data within permissions.
U009		Upload Rulemaking Record Item Document Version	The agency user will be able to upload rulemaking record item "documents." (Documents is generally used for documents, audio files or any other formats.)
U009	R001		The agency user will be able to upload a version of a rulemaking record document such as an updated version, alternative ADA version, or a State Register version, and associate the document with one or more rulemaking record items (the logical description of the document(s)).
U009	R002		Upon uploading a replacement version for any rulemaking record item, the agency user will be prompted to select whether the replacement is to trigger a permanent delete of the replaced item, or a replacement which leaves the last version as an accessible historical record.
U010		Assign Topics	The agency user will be able to select topics for a particular rulemaking proceeding or rulemaking event or rulemaking record item.
U011		Assign Keywords / Tags	The agency user will be able to select or enter keywords/tags for a particular rulemaking proceeding or rulemaking record item.
U013		View Rulemaking Information	All users will be able to view rulemaking proceeding information in various forms within assigned permissions.
U013	R001		All users will be able to view rulemaking proceeding information via a number of prepared queries and canned reports as well as via the user's ability to customize queries and reports and to apply search criteria (see variations below).
U013	R002		All users will be able to download or export reports/queries in a variety of printer-friendly formats. (PDF, Word)
U013	R003		The system will support the export of information into specific formats which include Excel, PDF, Word, and CSV.
U014		View Report	All users will be able to view a variety of canned reports.
U014	R001		Reports will be created for, but not limited to, legislative staff, agencies and the public. Specifics on reports is TBD.
U015		Search for Records or Topics or Keywords/Tags	All users will be able to search rulemaking proceeding records by a variety of search parameters and filters, including topics and keyword/tags and Revisor ID. More than one search parameter might be chosen at one time, further filtering the results.
U015	R001		All users will be able to input search terms or phrases that will be combined with other search criteria that are matched to metadata for rulemaking proceedings, rulemaking events, rulemaking record items, and/or documents.
U016		View Search Result Set	All users will be able to view a result set from a query and be able to step through any keywords/tags selected.
U016	R001		Upon submitting keyword search criteria, the result set will be aggregated up to a list of rulemaking proceedings where the terms or phrases have matched for any of the levels, but the user will also be presented with a navigable series of highlighted results within the documents that they can step through.
U016	R002		An agency user will be able to save the result set of a query.
U016	R003		All users will be able to select sort by and group by parameters for a result set, and change these parameters.
U017		View Specific Rulemaking Proceeding	All users will be able to view a particular rulemaking proceeding record either by searching for a particular Revisor ID or by selecting a rulemaking proceeding record from another view's result set.
U017	R001		All users will be able to view history for a particular rulemaking proceeding record, such as all previous rulemaking proceeding versions or maintained rulemaking record item history.

U017	R002		All users will be able to conduct faceted searches (i.e. searching within a specific result set) for a topic or keyword or more than one topic or keyword or an intact phrase.
U018		View My Saved Rulemaking Info	An agency user will be able to save and return to a dynamic view of rulemaking proceeding records of personal interest through interaction with various filters and then saving the desired query results. Future system enhancements would allow this feature for legislative and public users as well.
U018	R001		An agency user will be able to name and save the query behind a desired result set of rulemaking proceeding records in order to run the query and obtain dynamic results at a later time.
U018	R002		If an agency user attempts to save the query behind a desired result set of rulemaking proceeding records and is not logged in, the user will be prompted to input his or her credentials to save the query without having to re-specify and rerun the displayed query in focus.
U019		Log In	An authorized user will be able to provide and manage login credentials (username and password).
U019	R001		An authorized user will be able to present credentials (username and password) in order to log into the system.
U019	R003		An authorized user will be able to change his or her password.
U020		Authenticate User	The system will authenticate the credentials entered by the user (see nonfunctional security requirements).
U020	R001		The system will authenticate the user based on the submitted username and password.
U021		Authorize User	The system will determine and control the user's permissions throughout the user's active session.
U021	R001		The system will ensure an authenticated user can only perform functions for which his or her role has assigned permissions, such as entering rulemaking events for a particular agency.
U021	R002		The system will ensure that an unauthenticated user can only perform public functions available to any user.
U022		Manage System Trigger Configurations	An admin user will be able to configure scheduled, on-event or on-demand actions based on data or temporal triggers
U022	R001		The system will allow an admin user to use temporal and/or data trigger(s) that will transfer data via a desired interface protocol to and from the systems of such entities as the Secretary of State, State Archives, Courts, Legislative Committees, or Agencies.
U022	R002		An admin user will be able to adjust and test code generated by the system trigger configuration.
U022	R003		The system will allow an administrative user to configure whether a configured trigger and action is fully automated or whether user approval is needed to launch the action.
U024		Provision User with Permissions	An admin user will be able to manage user accounts and permissions.
U024	R001		The admin user will be able to create, delete (logically) and suspend an account for a user.
U024	R002		A temporary username and password will be provided to any user upon account creation, which can be changed by the user.
U024	R003		The admin user will be able to create an account via copying another account as a starting template.
U024	R004		The admin user will be able to assign a user or a group to a role, and a user to a group.
U024	R005		Any user will be forced to change a temporary password upon its use.
U024	R006		The system will manage expirations of passwords and force the user to change a password at an interval determined by the admin.
U024	R007		The user's account will lock after a certain number of failed attempts, as determined by the admin.
U024	R008		The admin can configure whether a user can log in after an account is locked if after a certain amount of time, or if an admin is required to unlock.
U024	R009		The admin user will be able to assign functional permissions with create, read, update and delete rights specific to a user role.
U024	R010		The admin user will be able to assign permissions to a role based on data classifications with create, read, update and delete rights.
U027		Manage Report Offerings	An admin user will be able to configure canned reports.
U027	R001		Canned reports will be configured by an admin user making these pre-configured reports available to users in a canned report list.
U027	R002		An admin will be able to configure sort by algorithms for data elements with complex structures, such as alpha-numeric Statutory citations that might have more than one sort order behavior within a string.
	R003		A docket will be configured by an admin making the docket available to users in a canned report list.
U029		Establish Notifications	An admin user will be able to establish configured notifications.
U031		Manage Notification Configurations	The agency user will be able to manage notification configurations for particular recipients.
U031			The agency user will be able to manage notification configurations for Legislative Committees.
U032		Manage Domain Value Lists	An admin user will be able to manage domain value lists.
U032	R001		All domain value lists will be configurable by an agency-approved admin with the ability to instruct the system to either migrate old values to new values, leave historical values intact, merge more than one old value into a new value, or split a value into more than one new values).
U033		Manage Standard Rulemaking Events & Items	An admin user will be able to manage standard rulemaking events and rulemaking record items for a particular rulemaking proceeding type.
U033	R001		An admin user will be able to create, update or delete standard rulemaking events and rulemaking record items for a particular rulemaking proceeding type.
U035		Manage Topics	An admin user will be able to manage topics used by users to categorize rulemaking proceedings.
U035	R001		An admin user will be able to manage topics used by users to categorize rulemaking proceedings using an agency determined taxonomy.
U036		Optimize Search Engine Results	An admin user will be able to optimize search engine behavior.
U036	R001		An admin user will be able to optimize search engine behavior to achieve the desired search engine results, such as tweaking the order of display or rank of some search terms over others. Some keywords/tags are user-inputted and assigned to a particular rulemaking proceeding or rulemaking event or rulemaking record item.

Non-Functional Requirements

NF001	R001	Availability	The system shall be made available for state entities (Revisor's, Agencies, Legislature, etc.) 24/7 with the most critical times being the 12 hour period M-F from 6 AM to 6 PM.
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NF001	R002		Public and Office of Administrative Hearing access to the system shall also be 24/7
NF001	R003		System maintenance shall be scheduled outside of the M-F from 6 AM to 6 PM timeframe.
NF002	R001	Flexibility	The system shall allow for the flexibility required as changes in law can occur at any time with various lengths of time to conform.
NF002	R002		The MARSS system will be built with future enhancements in mind. The infrastructure and software architecture shall be such that it allows for ease of future implementation of the following: workflow, public notifications, reviews and electronic signatures, and public comments.
NF004	R001	Hardware Maintenance and Reliability	Hardware failures will not cause more than 4 hours of downtime.
NF005	R001	Software Maintenance and Reliability	The software solution must be viable for at least 10 years
NF005	R002		Custom developed components must be maintainable and expandable by Revisor Staff
NF005	R005		System must pass compliance with the Americans with Disabilities act testing. At a minimum the testing areas must ensure changes to the system will not prevent access to the permanent records or prevent legislature from gaining the oversight of the rulemaking process.
NF008	R001	Disaster Recovery	Time for full recovery of data is 24 hours or less.
NF009	R001	Data Migration	16.724 GB of Beta System documents and data will be migrated into MARSS.
NF009	R002		SONARs from the LRL will be migrated into MARSS.
NF009	R003		Beta System documents and data will be accessible from MARSS on the 1st day of operation.
NF009	R004		14.1 GB of additional data may be added to the Beta System dataset in MARSS after MARSS is operational.
NF009	R005		The Beta System data will be flagged in a way to identify it as such. That is, the system can identify: a) Beta System dataset b) Beta System data entered using MARSS, to augment the Beta system dataset c) MARSS data
NF010	R001	Capacity	2.904 GB of new MARSS documents and data is estimated for the first year of operation.
NF010	R002		The system must be able to increase data capacity as needed.
NF010	R003		Retention of documents in the rulemaking record (RMR) is permanent i.e., forever.
NF011	R001	Data Integrity	Documents shall be verifiable as authentic. This process may follow the same standards as the Revisor's Office has set forth for compliance with Minnesota Statute Chapter 3E .
NF011	R004		Change history will be maintained for rulemaking record items. Metadata will be collected and stored upon every change to official items in the rulemaking record. This change tracking metadata will be accessible by authorized personnel.
NF012	R001	Data Import	Only authorized users can add data or documents to MARSS.
NF012	R003		At the time new data or documents are added to MARSS, the system will perform automated validation of the data to detect errors or inconsistencies.
NF012	R004		Supported file formats for rulemaking record (RMR) documents are[1]: a) PDF/UA (ISO 14289-1-compliant) b) PDF/A (ISO 19005-compliant) c) PDF (highest quality available, with features such as searchable text, embedded fonts, lossless compression, high resolution images, device-independent specification of color, space, content tagging; includes document formats such as PDF/X). d) PDF files containing hidden OCR text. e) PDF files containing only raster or vector data. This is the least desirable format. To support MARSS's text search functions, an OCR program will be used to create and add text to the PDF. The OCR program may misspell words, so it is preferable that the document creator deliver a text PDF.
NF012	R005		If a raster or vector PDF is imported into MARSS, the system will use an OCR program to create and add text to a new copy of the PDF. MARSS will store both the original raster PDF and the second PDF containing OCR text.
NF012	R006		Supported file formats for supporting (non-RMR) documents are: a) Documents b) Audio - MP#
NF012	R007		MARSS needs to support capturing pages out of the State Register. The captured pages will be stored as PDF files.
NF012	R008		The system will confirm to the authenticated user that the data import was successful or unsuccessful.
NF012	R009		Immediately following successful data import, the data will be searchable and retrievable by all users – authenticated and public
NF013	R001	Sensitive Data	Sensitive data will not be stored in MARSS. Only public data will be maintained in the system, with some displayed for public viewing and some not selected for public viewing because of timing or because the data is not the official rulemaking record items, but are, rather, supplemental in nature.
NF013	R004		Protecting sensitive data is the responsibility of the document creator (i.e., an agency responsibility).
NF013	R005		MARSS UIs will: Remind authenticated users to handle sensitive data appropriately "It is the responsibility of the party or their attorney to determine if the document contains not public, confidential or sensitive information"
NF014	R001	Data Export/Delivery	Data being sent from MARSS to any destination will be encrypted.
NF015	R001	Records Retention	Completed rule making records are permanent in nature. They MUST be preserved forever.
NF015	R002		Retention schedule for abandoned rules can be decided by the Agencies. Agencies are allowed to keep their own records retention requirements for non-adopted rules. Change history of data transactions, however, will be maintained in MARSS.
NF016	R001	Preservation	The Minnesota Historical Society will receive and maintain a digital copy of all rulemaking records.
NF016	R002		Only authorized users can delete data and documents
NF017	R001	Security	The system will accommodate a minimum of 300 authorized concurrent users.
NF017	R002		When a user is removed from the list of authorized users, all metadata about the user remains in the system, permanently. A user's authorization may expire, but their account information will remain in the system permanently.
NF018	R001	Authentication	Only Revisor staff can create or delete authorized users.
NF018	R002		Authentication must comply the latest MN.IT Enterprise Identity and Access Management Standard.
NF018	R003		If practical, the system will use the identity management solution implemented by MN.IT.
NF018	R004		As required by statutes, the public shall have access to all documents in the rulemaking record after rule adoption. Documents may be made available via public display prior to adoption at the agency's discretion. All data, whether displayed or not, is considered to be public in the MARSS system.
NF019	R001	Authorization and Permissions	Only Revisor staff control the assignment, and deletion of permissions for authorized users.
NF019	R002		Agency personnel shall have access to create and modify all records assigned to their agency.
NF019	R003		Document level permissions shall be supported.
NF019	R004		Role-based authorization is preferable.
NF020	R001	Performance for the Authenticated User	Performance requirements are to meet the standards set for the current Revisor system.

NF021	R001	Performance for the Public, Non-Authenticated User	The system must support 200 concurrent, public users.
NF021	R007		MARSS will support audio playback of two hour, MP3 files
NF022	R001	Web Support	Supported Browsers are: a) Current version of Internet Explorer b) Current version of Google Chrome c) Current version of Mozilla Firefox d) Current version of Safari
NF022	R002		User interfaces shall adhere to the MN.IT Accessibility Standard.
	R002		Web pages must be displayable on mobile devices.
NF022	R004		All URLs shall be designed as permanent URLs.
NF022	R006		Creating accessible documents remains the responsibility the office creating each document.
NF023	R001	Programatic Interfaces	MARSS will provide a web service so Revisor software applications can dynamically READ MARSS data.
NF032	R002		MARSS will not provide an externally accessible web service to programmatically WRITE MARSS data.
NF023	R003		Using a predefined list of recipients, MARSS can programmatically send a notification to each recipient. Notifications will be sent using a TBD protocol (e.g. email, text, etc.).