

## NPR 7150.2A Requirements Mapping Matrix (Class E)

### Requirement

The Contractor shall record the following in a software plan (e.g., a log, proposal, or research plan):

1. Title
2. Project description (software requirements)
3. Software Manager and contact information
4. Software class = E
5. Start date and estimated completion date
6. Description of how the Contractor will document requirements changes
7. Description of how the Contractor will test software product(s) and/or verify data
8. Description of how the Contractor will keep version control, store, backup, release, deliver, and maintain software product(s) and data

The Contractor shall implement, maintain, and execute the software plan(s).

Guidance: Contractor shall maintain software plans by periodically reviewing the software plan, progress, and issues with the relevant stakeholder's.

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The Contractor shall document the software requirements.

Guidance: The software's requirements can be expressed

- as written statements of expected capabilities, outputs, and any constraints
- as a model (e.g. use cases)
- graphically as storyboards or screen shots

The Contractor shall document changes to the software requirements.

Guidance: The Contractor can document changes:

- Keep a revision history of changes done to the document
- Keep old version to be able to compare
- by implementing a change request system

The Contractor shall perform software testing. Upon completion of testing, the Contractor shall record the following:

1. Software version identifier for the software tested.
2. A copy of the test or a description of the test used to make sure the software and/or the data produced by the software meet the requirements.

Guidance: The description of the test can be actions completed such as comparison of actual software results with lab results and/or similar algorithms.

3. Test inputs, test outputs, and test results.

Guidance: The above should be written with sufficient detail to recreate the test.

The Contractor shall deliver the completed software product(s) and/or data to the Government with appropriate documentation to build, install, and operate the software. If the code is not a deliverable (i.e., only data or analysis is the deliverable or published), appropriate documentation to build, execute, and recreate the data or analysis shall be recorded by the Contractor.

Guidance 1: The extent of documentation to 'build, install, and operate' will depend on the items delivered. For example, a delivered executable may require little or no 'build' documentation.

Guidance 2: Documentation can take the form of text, audiovisual instructions, interactive scripts, help files, man pages, embedded instructions (e.g. invoked by passing a 'help' argument to the software).