

MINETA SAN JOSE INTERNATIONAL AIRPORT
METADATA STANDARD COMPLIANCE QC/QA PROCEDURE

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1.0 INTRODUCTION

1.1 Scope

This document details the quality assurance (QA) procedures that are to be carried out on metadata submitted to the Mineta San José International Airport (SJC). Submitting agencies shall provide the required metadata utilizing the provided data submittal form. Metadata relates to all new data submittals and is very important for the development lifecycle of the new airport Capital Improvements occurring over the next several years. Metadata provided in the data submittal forms are part of the overall submittal process for CAD, GIS and other digital documents data.

The QA procedures outlined in this document will check all of the metadata specifications as defined in the Metadata Standards.

1.2 Purpose

The purpose of this document is to detail QA procedures that can be applied to metadata submittals. The document is written as an instruction manual for airport staff or 3rd parties tasked with reviewing drawing submittals. The procedures are not intended for data creators who should be following quality control procedures designed to make sure that data is collected or created to the specifications required by the airport.

2.0 OVERVIEW OF THE QUALITY ASSURANCE PROCESS

Quality Assurance (QA) serves as a final check of the data, to catch any problems that may have been missed by Quality Control (QC) procedures carried out as the data is created. QA also serves as a regular test of whether or not the production and QC processes are producing data of the required quality. QC, on the other hand, occurs during the development of documents that will be submitted to the airport.

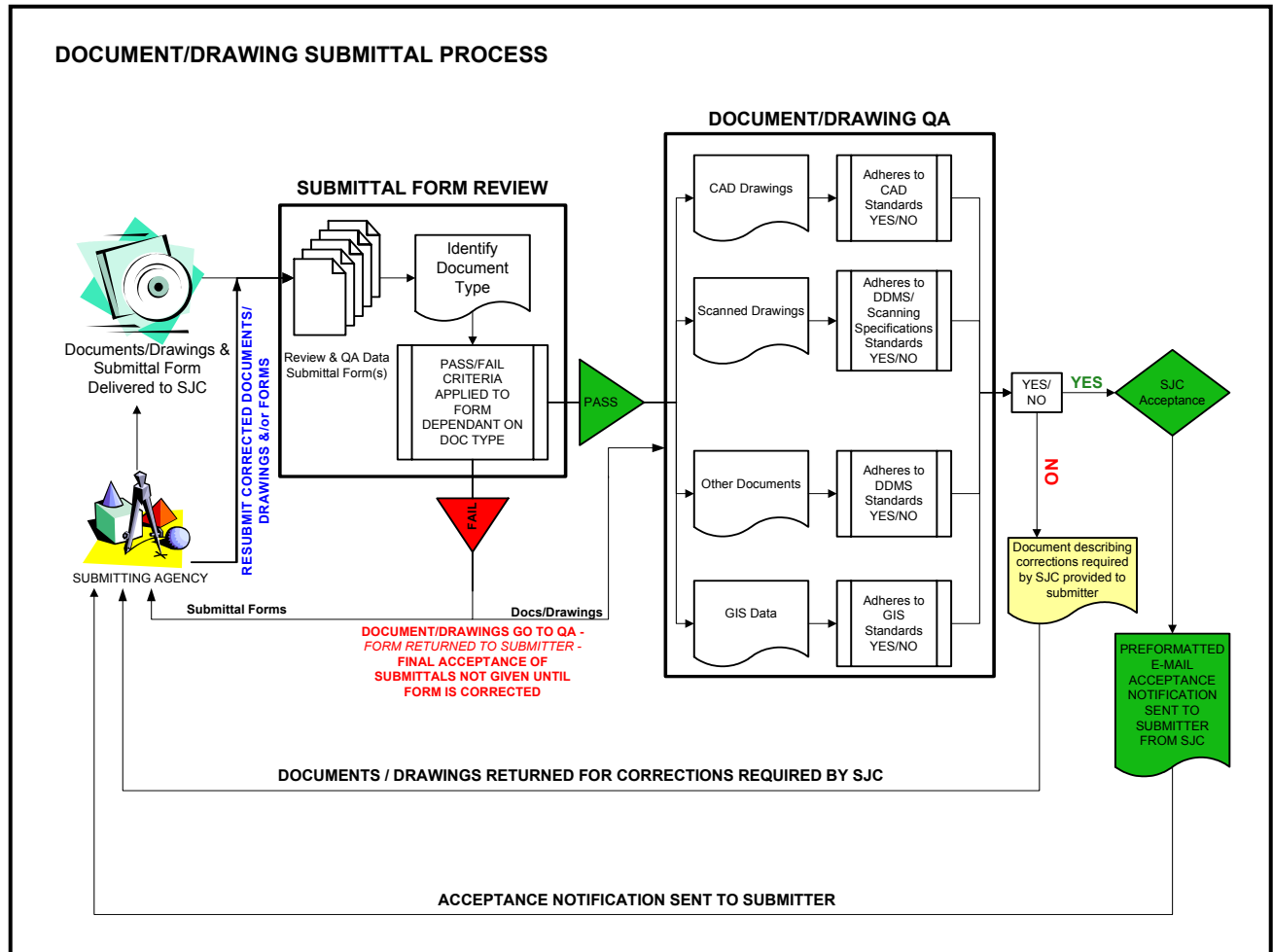
QA procedures will be performed on all metadata submitted to SJC. The QA procedures for metadata submittals have been developed independently from any QC processes that have or will be developed by data creators and are based solely on the acceptance criteria for each product. QC procedures need to be developed by data creators as an integral part of each data production process. They should be administered using checklists on a daily basis by the staff and contractors hired to collect data.

Metadata submittals in which errors are found beyond an acceptable limit will be rejected and returned to the submitter for correction and re-submittal. All metadata that pass the acceptance criteria can be converted into the appropriate format and loaded into the data repository as specified in document SJC-ACM-AIMS-4140. When an agency submits drawings, data or documents they must also submit a set of forms describing the information in the submittals. As part of the overall QC/QA process, the forms and data submittals will have to pass the relevant QC/QA procedures. The submittal form will be reviewed to check that it adheres to the metadata submittal requirements. If it does not meet the PASS/FAIL requirements it should be returned to the submitting agency. Although the submittal form may be returned it does not stop the QC/QA review of the drawings, data or documents that have been submitted. A final acceptance of all



metadata, drawings, document and data submittals should not be granted until both the form and the data have passed the QC/QA processes. The QC/QA Process diagram (see Figure 1) presents a generalized process for performing quality control (QC) and quality assurance (QA) for drawing, data or document submittals.

Figure 1 – Overview of Document QC/QA Process



3.0 METADATA DOCUMENT TYPE SPECIFICATION CRITERIA

The Metadata Standards (SJC-ACM-AIMS-2600) defines the specifications for metadata submitted to SJC. This document details the acceptance criteria for metadata submittals. A document submittal form will be used by the submitting agencies to populate metadata that describes all submittals to SJC. Dependant upon the document type submitted, a particular form is required to be filled out and submitted. The tables for these documents types can be found in the Metadata Standards document (SJC-ACM-AIMS-2600).

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4.0 DETAILED QUALITY ASSURANCE PROCEDURES

4.1 Informal Review

An informal, cursory review of submitted metadata is recommended prior to applying the formal QA procedures. This cursory review should focus on obvious discrepancies in the submittal forms. This should include checking that the form is either a .xls or .mdb file, whether what is contained in the metadata describes the data submittals, etc.

Since this check is informal and prompted by case specific requirements, it is not effective to outline a definitive procedure for this step. Instead, it is intended to be defined on a case-by-case basis by a trained technician or engineer who is familiar with the type and content of data being submitted. Such personnel are more likely to spot the obvious errors that this step is intended to identify. If such errors are found the more time consuming and cost formal QA steps can be avoided. If no such errors are found, then QA can proceed as follows.

4.2 QA Procedures

QA procedures are required to validate that the Metadata Standards are adhered to. All metadata submittals (100%) as defined in this module should be checked for Quality Assurance. The following are the procedures that should be followed as the Quality Assurance Process:

- 1) All fields as defined in the Metadata Document Type Specification Tables above must be filled out in the data submittal form. The reviewer should take note of the exceptions and decide whether or not the exception is relevant to the submitted data. Any forms not filled out completely will be returned to the submitting agency for revisions.
- 2) The Metadata Standard requires that different metadata fields must be populated dependant upon drawing, document or data type. While these are outlined in the Metadata Document Type Specification Tables above, SJC QA staff should take special note of the document type described in the submittal form. This document type is the field that points the reviewer to the required metadata fields that must be filled out in the submittal form. Check the form to ensure that the Document Type has been correctly described.

All documentation, as required by the agreements with SJC, shall be delivered to SJC in the following formats:

- All text documents shall be transferred in Microsoft Word 97 or higher (*.DOC files). All documents that include an executed signature shall also be provided as scanned images in Tagged Image File Format (TIFF) with Group 4 Compression.
- Large format drawings (B-size and above) shall never be bound as a multi-page TIFF. Other multiple page image documents shall generally be provided as multi-page TIFF files. In some cases, vendor documents and certified drawings require individual sheet numbers and shall not be electronically bound.
- Highly complex compound documents with extensive embedding and linking shall be submitted in Adobe PDF (Portable Document Format). The submitting agency shall



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supply the required information as described in the data submittal descriptive attributes section. Where appropriate, the submitting agency shall also supply SJC with the embedded and linked files as separate files in their native format.

- Documents that cannot be delivered in its native electronic form may be scanned and delivered per the scanning specification found in Section 3.3 of this document. Any newly developed documents or drawings for projects under contract with SJC must be submitted in its native format as described above. Scanning is to be used only for documents or drawings previously developed for projects completed in the past and when no current electronic version can be found or delivered.
- 3) Each drawing sheet, individual document, or data set must have a separate submittal form for each. The reviewer should check that the number of documents submitted is equal to the number of submittal sheets submitted. If the numbers do not equal the reviewer will contact the submitting agency either through e-mail or telephone to determine the inconsistency between the document count and the submittal form count. If more submittal sheets are needed then the submitting agency will be required to deliver these before final acceptance is given.

5.0 REPORTING OF QA RESULTS

The results of the QA procedure should be recorded as a means to communicate identified errors to the individuals who will be converting data into the data repository, in the case of drawings that pass QA tests, and to contractors who will be required to correct metadata submittals. The results should identify the submittal set and the nature of the error. The form shown in Appendix A should be used for this purpose.



