COMPUTERS & STRUCTURES, INC.

STRUCTURAL AND EARTHQUAKE ENGINEERING SOFTWARE

CSiBRIDGE® 2017

Integrated 3-D Bridge Analysis, Design and Rating

CSI Report Contents XML File

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XML File

For SAP2000®, ETABS®, SAFE®
and CSiBridge®

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CSI Report Contents XML File

1 General

The Report Contents file is an XML file. It is used to define the components included in a report. A default report contents file is provided with the program (see Note). When a report is created, the program uses the default report file unless an alternate .xml file has been specified. Use the **File menu > Report Setup** command in SAP2000, ETABS, or SAFE or the **Orb > Report > Report Setup** command in CSiBridge to specify use of an .xml file other than the default file for a report.

Note: The default xxxReportContents.xml must be located in the same directory as the program executable file. The "xxx" is Sap, Etabs, Safe, or CSiBridge, depending on the program in use. The following table identifies the .xml file and the executable file for each CSi Program.

Program-Specific XML File Name and Program Executable File Name

Program	XML File	Program Executable File
SAP2000	SapReportContents.xml	Sap2000.exe
ETABS	EtabsReportContents.xml	Etabs.exe
SAFE	SafeReportContents.xml	Safe.exe
CSiBridge	CSiBridgeReportContents.xml	CSiBridge.exe

The use of the Report Contents file is currently available for SAP2000 Version 12 and later, SAFE Version 12 and later and CSiBridge Version 15 and later. It will become available for ETABS with the next major release of the software.

2 Schema

The schema is in the file named xxxDefaultReportContents.xsd, which is located in the same directory as the program executable file (see preceding table). Again xxx is Sap, Etabs, Safe, or CSiBridge, depending on the program in use.

3   Element Description

As indicated in the schema (see program-specific .xsd file), the root of the Report Contents XML file is <report>, which includes the following complex elements:

```
<report>
   <control>
   <item>
      <section>
      <picture>
      <table>
         <table_id>
      <text>
      <text_add>
      <page_break>
      <blank_line>
      <more>
```

Following is a series of subsections that describe the simple elements included in each complex element. Note that all elements in the .xml file are named using all lower case letters with underscores at the internal spaces.

3.1   <control>

The <**control**> element defines control parameters for the report.

Simple Element	Description	Assumed Value*
<**version**>	The program version to which the report contents file applies.	Not specified
<**format_file**>	The format file that applies to each table in the report unless a table is overwritten by a table-specific format file in the complex table element.	Currently specified format file

<**logo_file**>	This item applies to the report cover page. If a value is specified for this item, it is used to overwrite the default user logo on the cover page. This overwrite may be the full path of any graphics file or one of the following built-in values:
	    Default Undeformed
	    Default Deformed
	    None
	See Notes.
		Not specified

<**company_name**>	This item applies to the report cover page and footer. This company name will be used if no company name is specified in the project information data for the model. See Notes.	Not specified
<**report_title**>	The title of the report on the cover page.	Not specified

*   value assumed by the program if the simple element is not included in the complex element

Notes:

1. By default, the user logo that appears on the middle of the report cover page is picked up from the graphic file named UserLogo.xxx (where xxx is a graphic extension such as .emf, .bmp, etc.). The program looks for the UserLogo.xxx file in the same directory as the SAP2000.exe file (if you are using SAP2000), the Safe.exe file (if you are using SAFE), or the CSiBridge.exe file (if you are using CSiBridge).

   The default user logo behavior can be overwritten using the <**logo_file**> element to specify either another graphics file or one of three built-in options. The Default Undeformed option replaces the user logo with an undeformed plot of the model. The Default Deformed option replaces the user logo with a deformed plot of the model, if a deformed plot is available. Otherwise, it replaces it with an undeformed plot. The None option leaves the user logo area on the cover page blank.

2. To fill in the company name on the report cover page and in the report footer, the program first checks the project information specified for the model. If the company name in the project information is blank, the program checks the <**company_name**> element in the Report Contents XML file. If that is not specified, the program uses the company name that was specified when the program was first installed and saved in the registry.

3.2 <item>

Each <**item**> element contains one of the components of the report as a child element. Two (or more) components **cannot** be included in a single <**item**> element. The following elements are the components of the report:

```
<section>
<picture>
<table>
<text>
<text_add>
<page_break>
<blank_line>
```

3.3 <section> - A child of <item>

The <**section**> element, a child element of the <**item**> element, inserts a section header into the report.

Simple Element	Description	Assumed Value*
<**header**>	Header text for the section	Not specified
<**level**>	1, 2 or 3, indicating the section level	1
<**is_numbered**>	True or false, indicating if the section header is automatically numbered based on its level (true) or not (false)	true
<**alignment**>	Left, Center or Right, indicating the alignment of the header text	Left
<**conditional**>	True or false, indicating if the section is conditional (true) or not (false). See notes below.	true
<**page_break_before**>	True or false, indicating if a page break is inserted before the section header (true) or not (false)	false
<**page_break_after**>	True or false, indicating if a page break is inserted after the section header (true) or not (false)	false
<**blank_line_before**>	The number of blank lines occurring before the section header	0
<**blank_line_after**>	The number of blank lines occurring after the section header	0

* value assumed by the program if the simple element is not included in the complex element

Notes:

1. If the conditional flag is true for a section and if no tables, no pictures, and no subsections exist for inclusion in the section, the remaining contents of the section, including the section header, is omitted from the report. For example, if the Report Contents XML file specifies including data for analysis results but no analysis results are available when the report is created, the analysis results subsection is omitted from the report. If the analysis results are included in a separate section of the report, the entire section would be omitted from the report. Thus, there would be no extraneous text in the report concerning analysis results.

3.4   <picture> - A child of <item>

The <**picture**> element, a child element of the <**item**> element, inserts a picture into the report.

Simple Element	Description	Assumed Value*
<**source**>	The source of the picture: 1 Default undeformed view 2 Default deformed view 3 Specified graphics file 4 Named display 5 Plot function trace named set 6 Pushover named set 7 TH response spectrum named set 8 Function	1
<**source_name**>	This item applies when the <**source**> element is 3 through 8. It is the name of the source item. For example, if the <**source**> element is 3, it is the full path of the graphics file. If the <**source**> element is 4, this is the name of a Named display.	Not specified
<**aspect_ratio**>	This is the desired aspect ratio (width divided by height) of the picture when it is captured. This item does not apply when the <**source**> element is 3.	1
<**max_height_width_units**>	The units used for the <**max_height**> and <**max_width**> elements: 1 inches 2 millimeters	1
<**max_height**>	The maximum desired height of the picture as displayed in the report in the units specified by the <**max_height_width_units**> element; 0 means use the actual picture height; see notes at the end of this table	0
<**max_width**>	The maximum desired width of the picture as displayed in the report in the units specified by the <**max_height_width_units**> element; 0 means use the actual picture width; see notes at the end of this table	0
<**alignment**>	Left, Center or Right, indicating the alignment of the picture	Left
<**is_numbered**>	True or false, indicating if the picture is automatically numbered (true) or not (false)	true
<**caption**>	Text for the picture caption	Not specified
<**caption_location**>	Below or Above, indicating the location of the picture caption with respect to the picture	Below
<**caption_alignment**>	Left, Center or Right, indicating the alignment of the picture caption	Left

Simple Element	Description	Assumed Value*
<**page_break_before**>	True or false, indicating if a page break is inserted before the picture	false
<**page_break_after**>	True or false, indicating if a page break is inserted after the picture	false
<**blank_line_before**>	The number of blank lines occurring before the picture	0
<**blank_line_after**>	The number of blank lines occurring after the picture	0
<**group**>	This item applies only when the <**source**> element is 4. Only objects included in this group will be displayed when the picture is captured from the named display.	All
<**overwrite_loads**>	True or false, indicating if loads are to be overwritten (true) or not (false). It applies only when the <**source**> element is 4 and the specified named display is showing either assigned load pattern data or results.	false
<**load**>	Applies only when the **overwrite_loads**> element is true. If the named display is showing assigned load pattern data, this is the name of the overwritten load pattern. If it is showing results data, this is the name of the overwritten load case or load combination.	Not specified
<**result_type**>	Applies only when the **overwrite_loads**> element is true and the specified named display is showing results. This is an overwrite of the result type. 0 Single value 1 Max and min envelope 2 Max envelope 3 Min envelope 4 Step or time	0
<**step**>	Applies only when the **overwrite_loads**> element is true, the specified named display is showing results for a stepped load case, and the <**result_type**> element is 4. It is the step for which results are desired.	0
<**time**>	Applies only when the <**overwrite_loads**> element is true, the specified named display is showing results for a time history load case, and the <**result_type**> element is 4. It is the time for which results are desired.	0

Simple Element	Description	Assumed Value*
<**response_type**>	Applies only when the <**overwrite_loads**> element is true and the specified named display is showing results for a Steady State load case. 1. Magnitude 2. Phase angle	1
<**phase_angle**>	Applies only when the <**overwrite_loads**> element is true, the specified named display is showing results for a Steady State load case, and the <**response_type**> element is 2 (phase angle).	0

* value assumed by the program if the simple element is not included in the complex element

Notes:

1. When the picture size is adjusted based on the specified <**max_height**> and <**max_width**> items, the size is adjusted to the largest possible size such that the aspect ratio of the picture is not changed from its original aspect ratio, and the specified maximum height and width are not exceeded.

3.5   <table> - A child of <item>

The <**table**> element, a child element of the <**item**> element, inserts a table into the report. Note that the complex <**table_id**> element, discussed in the next subsection, is a child of the <**table**> element.

Simple Element	Description	Assumed Value*
<**is_numbered**>	True or false, indicating if the table is numbered automatically (true) or not (false)	true
<**format_file**>	The name of the format file used for this table. If a valid file name is specified here, that format file is used for this table instead of the format file specified by the complex control element. Specifying None for this element means no format file is used for the table.	Format file specified by complex control element
<**page_break_before**>	True or false, indicating if a page break is inserted before the table (true) or not (false)	false
<**page_break_after**>	True or false, indicating if a page break is inserted after the table (true) or not (false)	false
<**blank_line_before**>	The number of blank lines occurring before the table	0
<**blank_line_after**>	The number of blank lines occurring after the table	0

* value assumed by the program if the simple element is not included in the complex element

3.6 <table_id> - A child of <table>

The <**table_id**> element, a child element of the <**table**> element that itself is a child element of the <**item**> element, specifies which table is to be inserted into the report. The table is specified either by its table key or by its table name, but not both. A value must be specified for one of these elements to include a table in a report.

Simple Element	Description	Assumed Value*
<**key**>	The table key for the table to be inserted into the report	None, element must be specified
<**name**>	The table name for the table to be inserted into the report	None, element must be specified

3.7 <text> - A child of <item>

The <**text**> element, a child element of the <**item**> element, inserts a new text block into the report.

Simple Element	Description	Assumed Value*
<**title**>	Title text for the text block	Not specified
<**data**>	Text data inserted into the current text block. This text should be enclosed in quotes. Quotes should not typically be included within this text.	Not specified
<**page_break_before**>	True or false, indicating if a page break is inserted before the text block (true) or not (false)	false
<**page_break_after**>	True or false, indicating if a page break is inserted after the text block (true) or not (false)	false
<**blank_line_before**>	The number of blank lines occurring before the text block	0
<**blank_line_after**>	The number of blank lines occurring after the text block	0

* value assumed by the program if the simple element is not included in the complex element

3.8 <text_add> - A child of <item>

The <**text_add**> element, a child element of the <**item**> element, appends additional data to the current text block in the report, that is, to the text block last initiated by a <**text**> element. The <**text_add**> element must have been preceded by a <**text**> element.

Simple Element	Description	Assumed Value*
<**data**>	Text data appended to the current text block. This text should be enclosed in quotes. Quotes should not typically be included within this text.	Not specified
<**return**>	An integer value, greater than or equal to 1, indicating the number of paragraph returns inserted into the current text block	Not specified

* value assumed by the program if the simple element is not included in the complex element

3.9 - A child of <item>

The <**page_break**> element, a child element of the <**item**> element, inserts one or more page breaks into the report.

Simple Element	Description	Assumed Value*
<**number**>	An integer value, greater than or equal to 1, indicating the number of page breaks inserted	1

* value assumed by the program if the simple element is not included in the complex element

3.10 <blank_line> - A child of <item>

The <**blank_line**> element, a child element of the <**item**> element, inserts one or more blank lines into the report.

Simple Element	Description	Assumed Value*
<**number**>	An integer value, greater than or equal to 1, indicating the number of blank lines inserted	1

* value assumed by the program if the simple element is not included in the complex element

3.11 <more> - A child of <item>

The <**more**> element, a child element of the <**item**> element, inserts an additional item into the report.

Simple Element	Description	Assumed Value*
<**type**> SAFE only	The type of additional item: 1 Detailed Design output – Strip Design 2 Detailed Design output – Beam Design 3 Detailed Design output – Punching Check	1
<**group**>	The group of objects for which the specified output data is provided.	All

Simple Element	Description	Assumed Value*
<**page_break_before**>	True or false, indicating if a page break is inserted before the specified item (true) or not (false)	false
<**page_break_after**>	True or false, indicating if a page break is inserted after the specified item (true) or not (false)	false
<**blank_line_before**>	The number of blank lines occurring before the specified item	0
<**blank_line_after**>	The number of blank lines occurring after the specified item	0

* value assumed by the program if the simple element is not included in the complex element

4 Example

Following is an example Report Contents XML file for SAP2000:

```xml
<?xml version="1.0"?>

<report xmlns="http://www.csiberkeley.com"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:schemaLocation="http://www.csiberkeley.com
SapDefaultReportContents.xsd">

  <control>
    <version>12.0.0</version>
  </control>

  <item>
    <section>
      <header>Model Definition</header>
    </section>
  </item>

  <item>
    <picture>
      <source>1</source>
      <max_height>6</max_height>
      <max_width>6</max_width>
      <caption>Undeformed Model</caption>
    </picture>
  </item>

  <item>
    <table>
      <table_id>
        <name>Joint Coordinates</name>
      </table_id>
      <is_numbered>true</is_numbered>
    </table>
  </item>

  <item>
    <table>
      <table_id>
        <name>Connectivity-Frame</name>
      </table_id>
      <is_numbered>true</is_numbered>
    </table>
  </item>

</report>
```