

RA Billing Management System (Version 1.0)

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Rev. No	Date	Purpose	Prepared by	Reviewed by	Approved by





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1. INTRODUCTION

A centralized web application for handling Tender SOR items for RA billing and final executed quantities at project site.

2. FEATURES

- Web based system
- The package is designed in a simple modular way.
- The modules are self-explanatory.
- The package is developed by using ORACLE Relational Database Management System (RDBMS). Relational database approach represents various data elements of the system in the form of normalized relations and conventional files are termed as tables with the key elements and its attributes forming contents of the tables.
- Database approach helps in the integrity consistency and security of the data and avoids redundancy.
- The package can handle large volume of data.
- One point data entry system is provided which is carried over in the relevant modules.

3. SYSTEM REQUIREMENT

This System is web based application. This can be accessed through a web browser with network connection in the client machine. However minimum system requirements of the client machine are as follows.

HARDWARE:

- ✓ Minimum Windows XP or higher Operating System.
- ✓ Minimum 1 GB of Random Access Memory (RAM).
- ✓ Minimum 50 GB of Hard Disk Capacity.
- ✓ Laser Printer.

• SOFTWARE:

- ✓ Google Chrome, Fire fox or Internet Explorer 9 or above
- ✓ Acrobat Reader 5.0 and above.
- Internet for Site users and intranet connectivity for HO users.

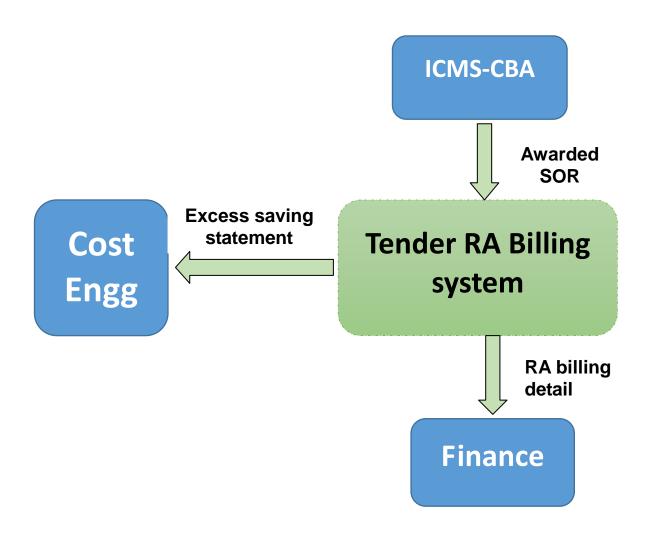


4. BRIEF SYSTEM DETAILS

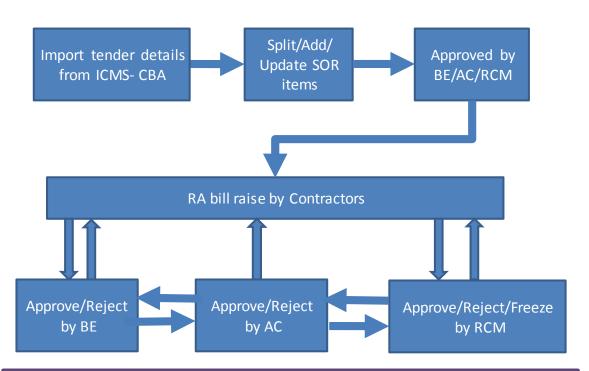
RA Billing System caters to the construction sites for keeping the records of RA bills generated by contractor during the execution of the item rate contract. All activities such as importing tender SOR data from HO, Splitting SOR items based on activity and payments milestones, assigning billing engineer and area coordinator against each contract, adding extra item, uploading measurement sheet by contractor and approval by EIL engineers are taken care of in a modular way.

Web address in the web browser http://www3.eil.co.in/rabilling/

Overall Block Diagram







Reports:

Job No / Tender wise /Unit wise billing information (abstract)

Contractor wise billing information

Final Executed Quantities

Analysis Reports



5. OPERATING DETAILS

To start the application user has to type the following web address in the web browser

http://www3.eil.co.in/rabilling/

Once user types the above address, a web page will appear as shown below.

Login Screen



To Login,

- EIL User has to use his/her EIL **Employee No.** as user Id and **EILDC Domain Password** as Password.
- Contractor user has to use EIL HSE username and password.

This application supports following ROLES:

- RCM
- Area coordinators
- Billing Engineers
- Contractor



Following are the modules for various ROLES:

RCM:

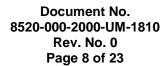
- Populates Job data
- Add/Update Users (Billing Engineers and Area Coordinators)
- Add New SOR Item
- Approval/Editing of RA Bill
- Approval of Splitted Items added by Contractors
- Final Checklist updation
- Generate Output
 - Abstract
 - o RA Bill

Area Coordinator:

- Populates Job data
- Approval of RA Bill
- Final Checklist updation
- Generate Output
 - Abstract
 - o RA Bill

Billing Engineer Module:

- Populates Job data
- Edit Site Quantity
- Approval of RA Bill
- Final Checklist updation
- Generate Output
 - Abstract
 - o RA Bill





Contractor Module:

- Split Activity
- RA Bill entry using Measurement Sheets
- Generate Output
 - o Abstract
 - o RA Bill



Modules:

A. Populates Job data:

This module is used to import awarded Tender SOR data from ICMS – CBA software.

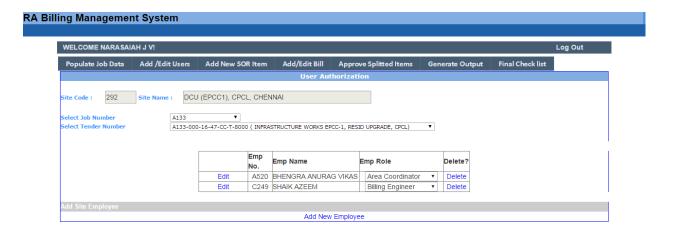
Steps:

- a. Select job number
- b. Click on the **Populate Job Data from ICMS CBA** button.



This will update all awarded data with details into RA billing system

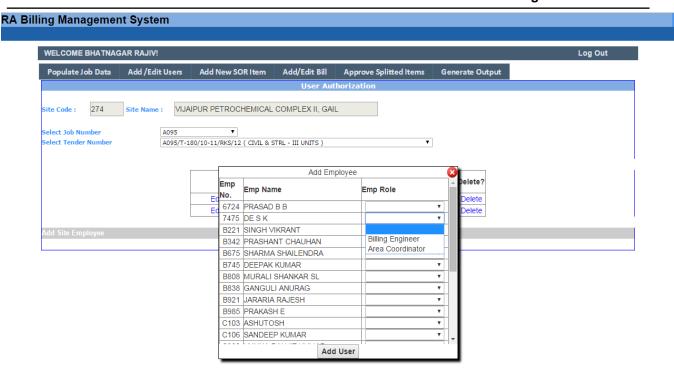
B. <u>Add/Update Users</u>: This module is used to assigning billing engineer and area coordinator against each contact. <u>Only RCM can authorized to use this module</u>



Steps:

- a. Select Job Number
- b. Select Tender Number
- c. Click on the button "Add New Employee", following screen will appear:

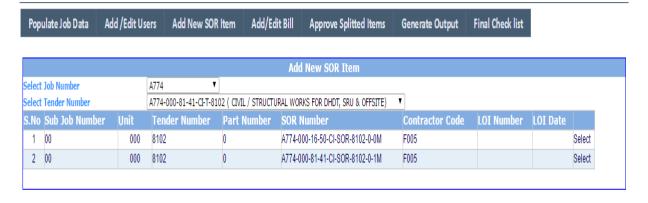




- **d.** Assign the role against employee number (employee number and site code are linked with CPIS database) and click on the button "Add User".
- C. <u>Add New SOR Item</u>: This module is used for adding new SOR item against any SOR at the site.

Steps:

- a. Select Job Number
- b. Select Tender Number, following screen will appear with SOR details:

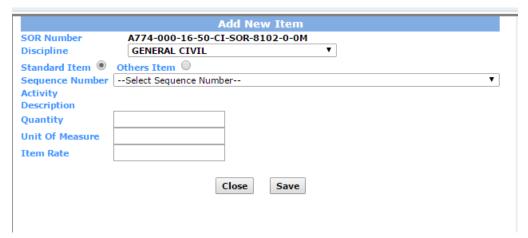


c. Click on the button "Select " to select the SOR against which user want to add new SOR item, all the SOR item will appear on the screen as show below:





d. Click on the button "Add New SOR Item", following screen will appear.



- e. User can add standard SOR items as well as Other miscellaneous items.
- f. Enter all the mandatory details in above screen and press "Save" button to add.
- D. Splitting and Approval of SOR Items for activity / payments: This module is used for splitting the SOR item as per activities and payment condition. Contractor will split the SOR items based on the activities and payments condition and RCM will approve the same.



Steps:

- a. Select Job Number
- b. Select Tender Number, following screen will appear with SOR details:

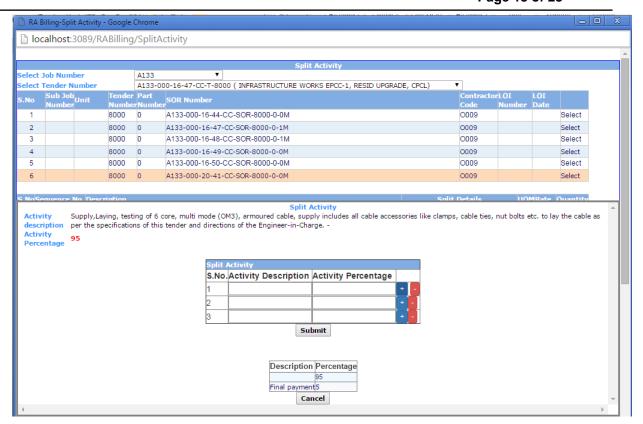


c. Click on the "Select", following screen will appear with SOR item details:



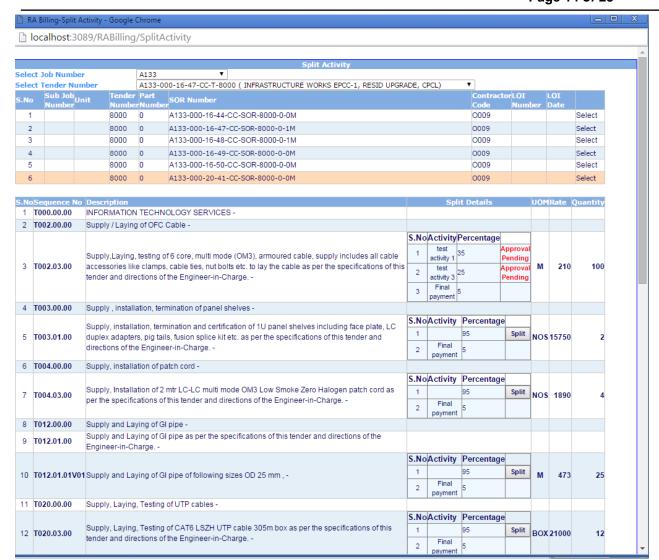
d. Clicking on Split Button, following screen will appear



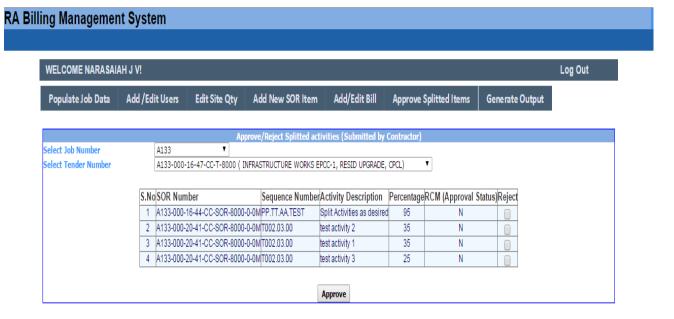


- e. Enter the activities and percentage
- f. Press button "Submit" to save records.
- g. After entering the activity details and percentage, flowing screen will appear:





RCM's Activity approval/Rejection screen: RCM can approved or reject the splitted activities entered by contractor. Screen is show below.





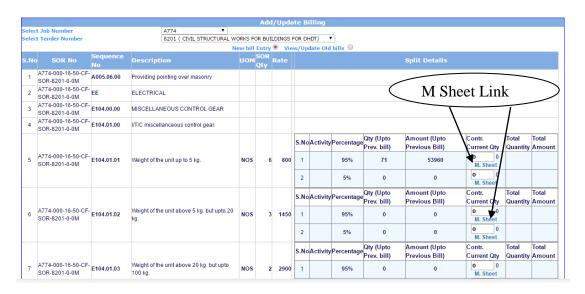
E. RA Bill Entry and approval cycle: After approval of splitting activity, contractor will start the processing of RA bill. Contractor will upload the measurement sheets and Billing engineer / area coordinator and RCM will approved the bills sequentially.

Steps by Contractor:

- a. Select Job Number
- b. Select Tender Number, following screen will appear:

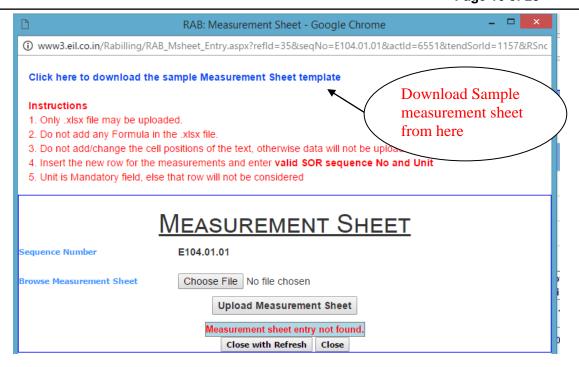


c. Click on the radio button "New bill Entry" to enter a new bill. Next screen will appear with SOR details with breakup.



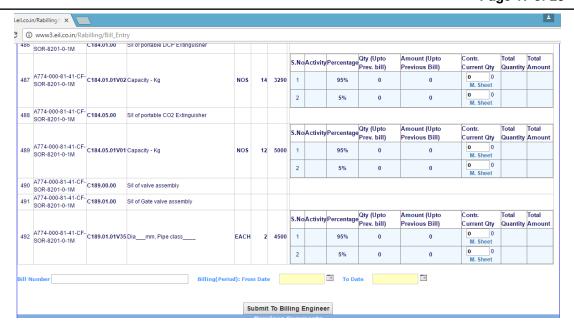
d. Click on the link "M.Sheet" as shown in above screen , next screen will appear .





- e. Click on the button "Choose File" to upload the measurement sheet in standard excel format (User can download the standard measurement sheet format by clicking the link "Click here to download the sample Measurement Sheet template" from the above screen).
- f. Press button "Close" or "Close with Refresh "to go into the main screen to upload measurement sheet for another item. If user press "Close" button, it will save the data but it will not show the total quantity in the main screen. If user press "Close with Refresh" button, it will save the data and it will show the total quantity in the main screen but it will take extra time for refresh whole page. It is suggested that "Close with Refresh "button can be used for last record for fast data retrieval.
- g. After uploading all the measurement sheet, enter the bill number and period of the measurement in the screen show below:





h. After entering all the Measurement Sheets and enter Bill number and billing period, click on the button "Submit to Billing Engineer" for approval of the bill.

F. Approval/Editing of RA Bill entered by Contractor:

a) Approval by Billing Engineer:

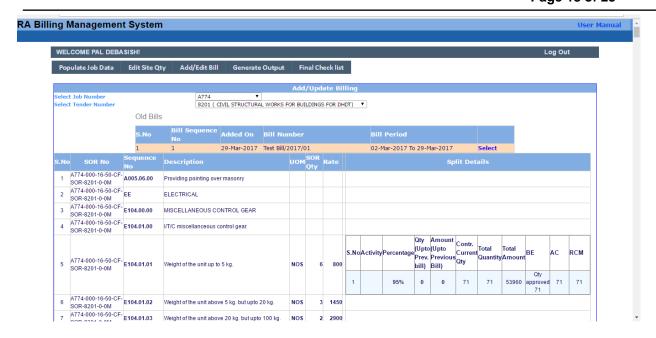
Steps:

- a. Select Job Number
- b. Select Tender Number, following screen will appear:

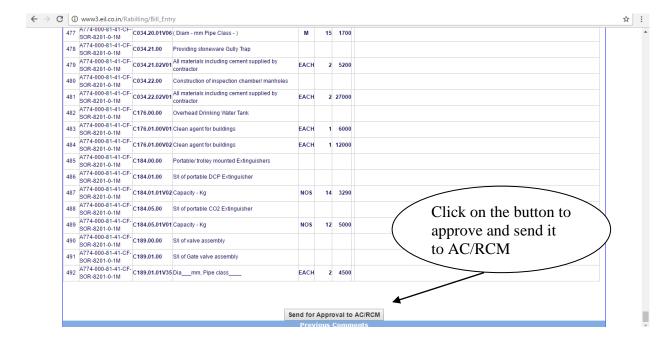


c. After clicking on Select link, following screen will appear:





Scroll the screen for sending it for further approval:



b) Approval by Area Coordinator:

Steps:

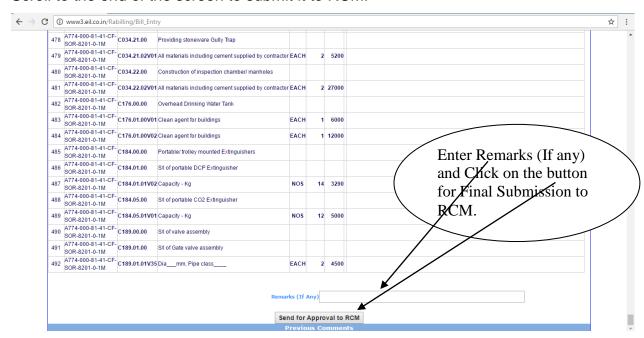
- a. Select Job Number
- b. Select Tender Number, following screen will appear:





After clicking on Select link, following screen will appear:

Scroll to the end of the screen to submit it to RCM:



c) Approval by RCM:

Steps:

- a. Select Job Number
- b. Select Tender Number, following screen will appear:



After clicking on the Select link, following screen will appear:

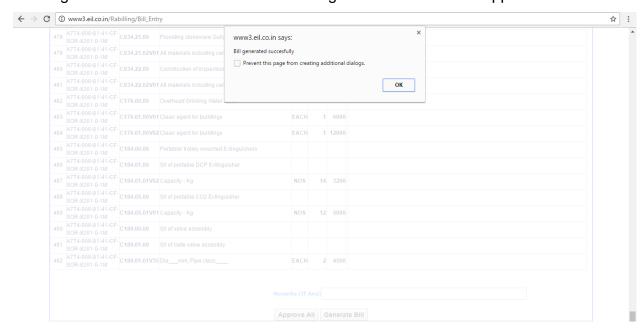




After Clicking on *Approve All* button, data entry by contractor will freeze and following success screen will appear:



Clicking on the Generate Bill button following success screen will appear:

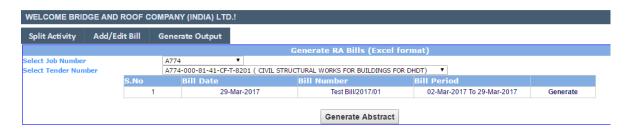




G. Generate Output: This module is used to generate RA bill and abstract.

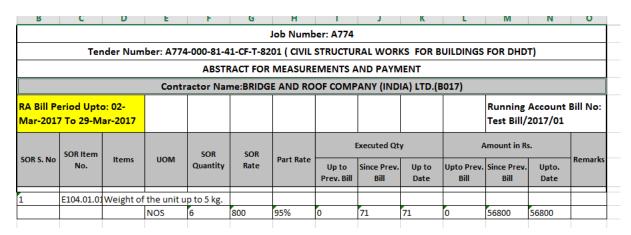
Steps:

- a. Select Job Number
- b. Select Tender Number, following screen will appear with RA bill details:



- c. Click on the button "Generate" for RA billing output
- d. Click on the button "Generate Abstract" for tender abstract.Sample files are shown below:

RA billing Format in Excel:



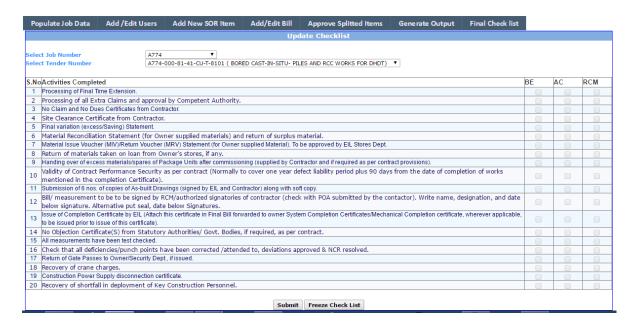
Tender Abstract Format in Excel:

User Manual

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				Jo	b Numb	er: A774							
Tender Number: A774-000-81-41-CF-T-8201 (CIVIL STRUCTURAL WORKS FOR BUILDINGS FOR DHDT)													
			ABSTR	ACT FOR N	/IEASURE	MENTS AN	ID PAYMI	ENT					
		Contra	ctor Nam	e:BRIDGE	AND RO	ОГ СОМРА	NY (INDIA	A) LTD.(B01	L7)				
SOR S. No	SOR Item No.	Items	UOM	SOR Quantity	SOR Rate	Part Rate	Executed Qty		Amount in Rs.				
							Up to Prev. Bill	Since Prev. Bill	Up to Date	Upto Prev. Bill	Since Prev. Bill	Upto. Date	Remarks
1	A000.00.00	ARCHITECTURE -											
2	A002.00.00	FLOOR FINISHING -											
3	A002.01.00	Providing and laying average											
4	A002.01.01	CEMENT SUPPLIED BY THE	Sq.M.	150	370	100%							
5	A002.03.00	Providing and laying average											
5	A002.03.01	CEMENT SUPPLIED BY THE	Sq.M.	1052	780	100%							
7	A002.04.00	Providing and laying 125mm high											
	4002 04 01	18mm thick. CEMENT SUPPLIED	DAA	205	CO	1000/							

H. Final Checklist



6. ERROR MESSAGES

Error messages will be displayed while input parameters are wrongly filled or some validation fails.

Login failed:

If Valid Employee number and Password in not mentioned, following screen will appear:







Error: You are not authorized.

Total Hits - 127



EVALUATION Developed by : Information Technology Services, Engineers India Limited, New Delhi.

Contact Details : Suresh Khalko (ITS,ICOM-2554), Rajesh Gupta (ITS,ICOM-8164)

Invalid Split error message:

