JD Edwards World

Invoice Formatting Guide

Release A9.3

E21940-02

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ORACLE

JD Edwards World Invoice Formatting Guide, Release A9.3

E21940-02

Contents

Preface

Welcome to the JD Edwards World Invoice Formatting Guide.

Audience

This document is intended for implementers and end users of JD Edwards World Invoice Formatting system.

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Invoice Formatting Overview

This chapter contains these topics:

1.1 Objectives

- To understand the relationship between formats and invoices
- To understand how formats define an invoice

1.2 About Invoice Formatting

When you use Invoice Formatting to design invoices, you systematically build invoices in sections. The number of sections that you use depends on the complexity of your invoice.

The term invoice layout refers to the overall design of a printed invoice. The term format refers to a section of a printed invoice, such as the header, detail information, and total. You must define each format within an invoice layout to specify the type of information that prints on your invoice and the visual presentation of the information on the invoice.

You should design your invoice on paper first. Use your design to:

- Identify the different formats that you need to define
- Determine how each format fits into the invoice layout

An invoice layout typically includes the following formats:

Format	Description
Header	Appears at the beginning of the first page of the invoice and might include the customer's name and address, remit-to information, the invoice number, and the date.
Alternate header	Appears at the beginning of subsequent pages of the invoice. The alternate header might include the invoice number, the date, the customer's name and address, and invoice page information, such as Page 2 of 4.
Detail information	The itemized charges on an invoice. Detail information can include summarized and detailed charges. A complex invoice might include multiple detail sections with subtotals.

Format	Description
Total	The total amount due and payable. The amount of the total is usually a computed value based on the detail information presented on the invoice.

You define formats to organize each section of information that prints on each customer invoice. A format can include variable information that you direct the system to retrieve from system tables and invariable information that you type directly on the format.

For example, you might type "To:" on a header format, which is invariable information that appears on each invoice. You might then specify that the system prints the customer's name and address on the following lines of the format. You would not type the customer's name and address on the format, because that information is variable and changes from invoice to invoice. Instead, you define a series of codes to direct the system to the customer's name and address that are stored in the system tables.

The following diagram is a sample invoice that illustrates different formats that you can define within an invoice. The italicized text represents variable information. Bold text represents invariable information.

Figure 1–1 Invoice Header Format

Figure 1–2 Detail Formats (header, detail, total)

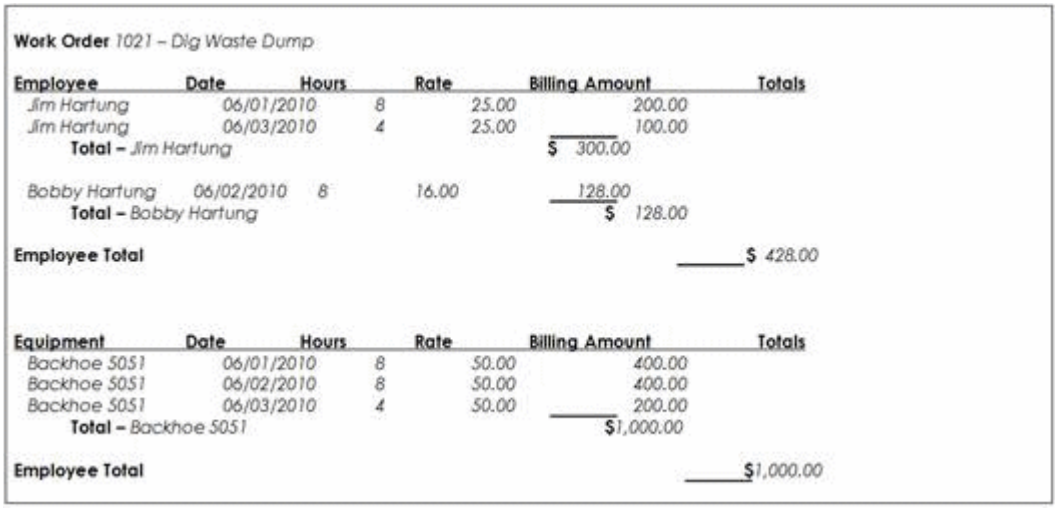

Figure 1–3 Invoice Total Format

1.2.1 Invoice Header

The invoice header prints on the first page of the invoice. Invoice headers might include:

- Invoice number and date
- Customer's name and address
- Remit-to information, such as the name and address of the company to which payment should be sent

You can also design an alternate header for subsequent pages of an invoice. If you do not design a format for an alternate header, all subsequent pages of your invoice print without a header.

1.2.2 Detail Formats (Header, Detail, and Total)

You can define the following detail formats for the major sequence and each of the grouping keys:

- Major sequence header
  - Grouping key detail header
  - Detail sequence header
  - Grouping key detail
  - Detail sequence total
  - Grouping key detail total
- Major sequence total

The following diagram further illustrates the formats defined within the detail formats (header, detail, and total) section of the sample invoice. The italicized text represents variable information. The bold text represents invariable information.

Major Sequence Header

Detail Sequence Header

Grouping Key Detail

Detail Sequence Total

Grouping Key Detail Total

1.2.3 Invoice Total Format

The invoice total format prints at the end of the invoice. The invoice total format might include:

- Total invoice amount

- Text, such as Total Due and Payable
- Currency symbols and underscores
- Seasonal greeting or other information

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Invoice Formatting for Contract Billing and Service Billing

This chapter contains these topics:

2.1 Objectives

- To understand invoice layouts and formats
- To create layouts and formats for printed invoices
- To understand retrieval references
- To access variable information for an invoice from multiple sources

2.2 About Invoice Formatting for Contract Billing and Service Billing

You can use invoice formatting to design printed invoices that meet the specific information requirements of your business and customers. You can design a wide variety of invoices.

For example, an invoice might include only summarized transaction information, such as a single line description for the total for all employee hours. A more complex invoice might also show the total for all employee hours, but present the information in detail to show employee overtime hours, part-time hours, and so on, with a subtotal for each new group of transactions.

The information you choose to print on the invoice can be retrieved from various systems, such as Contract Billing, Service Billing, Address Book, and Work Orders.

Before you design printed invoices, you should have a clear idea about how you want the final invoice to appear. Consider the types of information that you want to include on the invoice, the visual appearance of the information on the invoice, and where that information resides in the system. Then, you can design invoice layouts for your customer invoices.

Invoice formatting for Contract Billing and Service Billing consists of the following tasks:

- Working with invoice layouts
- Working with formats
- Defining formats

- Defining custom retrieval codes

3

Work with Invoice Layouts

This chapter contains these topics:

3.1 Working with Invoice Layouts

The term layout refers to the overall design of a printed invoice. A layout consists of multiple formats. You define formats to organize each section of information that prints on each customer invoice. Before you can define the formats that you want the system to apply to the invoices that you generate on the system, you must define a layout structure to which you can attach the individual formats. You can then identify a series of formats that make up an entire layout by the associated layout structure name.

When you define a layout structure, you determine how the system sequences and groups the billing information that you want to print on the invoice. Invoice Formatting includes the most frequently used data items that you can use to order the billing information on your invoices. You can further customize how billing information prints on invoices by adding invoice format data items to the data items already listed for the system.

After you define a layout structure for each layout that you want to design, you can assign the layouts to the invoices that you generate in the system.

Working with invoice layouts consists of the following tasks:

- Defining a layout structure
- Adding invoice format data items
- Assigning invoice layouts

3.2 Defining a Layout Structure

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Invoice Layout Revisions (P4850)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Invoice Layout Revisions (P4850)

The first step in working with invoice layouts is to define the structure of each layout that you want to design for your printed invoices. You use the layout structure to:

- Create the formats that make up a layout
- Sequence and group the billing transactions within the layout
- Determine the layout that you want to print for each invoice that you generate in the system

You define a layout structure by first assigning it a user-designated invoice format code and invoice type. You assign invoice format codes and invoice types to layout structures so you can create the related header, detail, and total formats that make up your invoice layout. Typically, you define at least one invoice format code for a general invoice layout that meets the needs of the majority of your customers. You can also define invoice format codes for the customized invoice layouts you design for specific customers.

You also use the layout structure to define how you want the system to sequence and group the billing information on the printed invoice. To do this, you must determine how you want to group and sequence workfile transactions on the invoice. Generally, the grouping and sequencing that you use to print differs from the grouping and sequencing that you use to generate the pay items that make up each invoice. To sequence and group billing information on a printed invoice, you must define the following:

- Major sequence
- Grouping key
- Grouping key ranges

You can also sequence and group billing information by defining:

- Detail sequences for each grouping key range

3.2.1 Major Sequence

You must specify at least one data item in the major sequence for every invoice layout that you define. The major sequence controls the grouping and sequencing for the overall invoice layout.

The system uses the first data item in the major sequence to determine when one invoice ends and the next begins. Generally, you use the last data item to identify how billing information is grouped on the printed invoice. If you do not specify a data item in the major sequence, you will be unable to use the layout to print invoices.

3.2.2 Grouping Key

You define a grouping key to control how the system groups individual billing transactions on a printed invoice. The grouping key is generally the last data item that you specify for the major sequence.

3.2.3 Grouping Key Ranges

You must assign grouping key ranges. Grouping key ranges control the sequence in which to print billing transaction groups on invoices, based on your grouping key. For example, if the grouping key for the layout is Object Account, the grouping key ranges that you assign for the layout must refer to valid object account numbers that you have set up in your chart of accounts.

3.2.4 Detail Sequences for Grouping Key Ranges

You can define a detail sequence for each of the grouping key ranges that you include in a layout structure. The detail sequence that you specify further defines the grouping key range you set up for the invoice layout by indicating where you want divisions between groups of transactions and the level of detail you want to print for the transaction groups.

For example, if your layout consists of grouping key ranges for labor and materials, you can assign each range a unique detail sequence. The detail sequence you define for labor might include employee name and date worked. The detail sequence you set up for materials might be grouped by supplier name, invoice number, and date.

For best results, assign a sequence number to at least one data item in a detail sequence. If you assign more than one data item to the detail sequence, the system uses the last item of the detail sequence as the indicator to print the billing detail transaction line. For example, to summarize charges on an invoice by supplier, you define the data item for supplier number as the last line in the sequence definition.

If you do not assign a detail sequence, then the system uses the major sequence as the indicator to print the billing detail information.

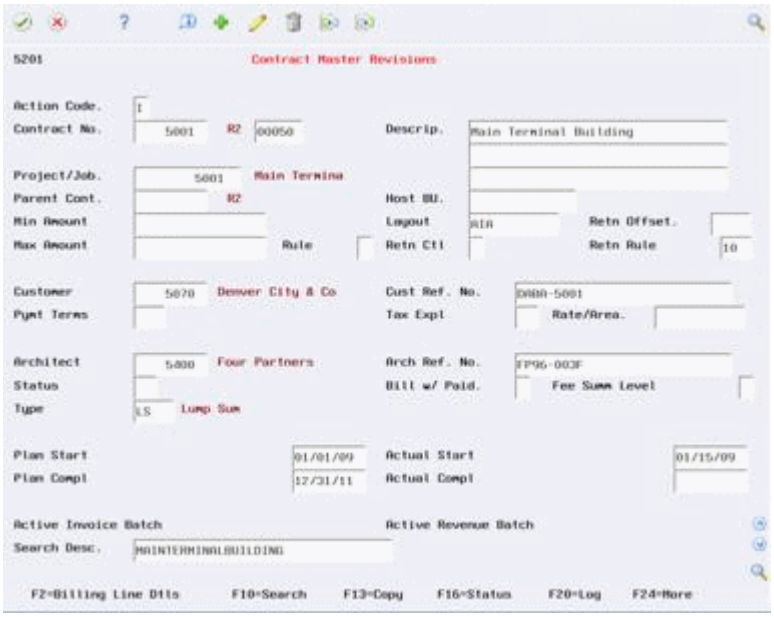
To define a layout structure

On Invoice Layout Revisions

1. Complete the following fields:
   - Invoice Layout Code
   - Invoice Type
   - Description

   Contract Billing

Figure 3–1 Contract Master Revisions screen



Service Billing

Figure 3–2 Layout Definition screen

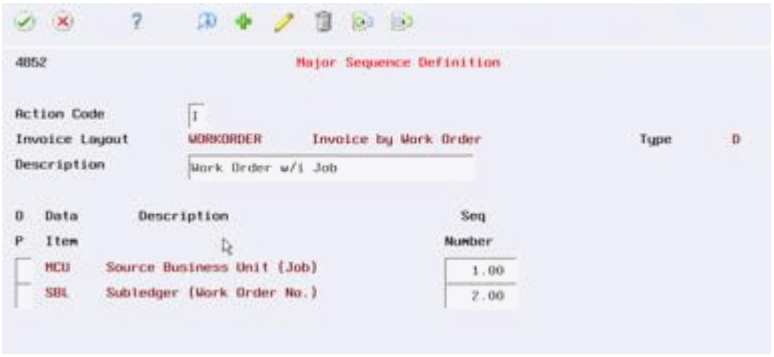
2. Choose Major Sequence Definition (F17).

Contract Billing

Figure 3–3 Layout Exit/Save screen

Service Billing

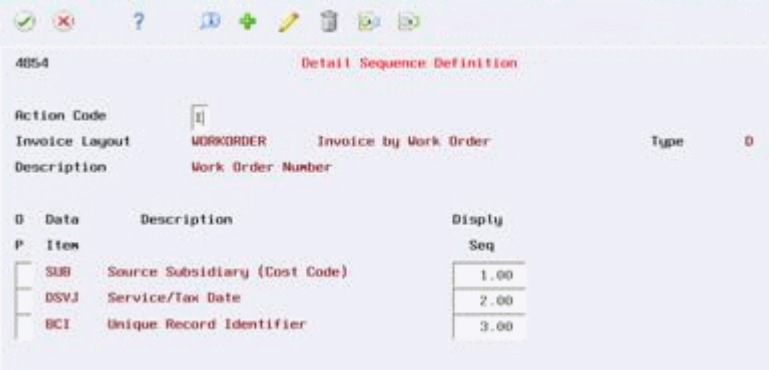
Figure 3–4 Major Sequence Definition screen



3. On Major Sequence Definition, choose Display All Data Items (F16) to see a complete list of the available data items.
4. To define the major sequence, complete the following field:
   - Sequence Number
5. Use the Add action.
6. Choose Exit Program (F3).
7. On Invoice Layout Revisions, complete the following fields to assign a grouping key and grouping key ranges to the layout:
   - Grouping Key
   - Grouping Key Begin
   - Grouping Key End
   - Description

   Contract Billing

Figure 3–5 Detail Sequence Definition screen



Service Billing

Figure 3–6 Layout Definition screen

8. To print component and burden information on the invoice, complete the following optional fields:
   - Print Component Control
   - Print Burden Control
9. To control the order the grouping key ranges appear on Invoice Layout Revisions, complete the optional field:
   - Sequence Number

   This sequence number does not affect the sequence of information on the printed invoice.
10. Use the Add action.

    The system clears the form.
11. To locate the layout, complete the following fields:
    - Invoice Layout Code
    - Invoice Type
12. Use the Inquire action.
13. Choose Detail Sequence (Option 4) for the first grouping key range.

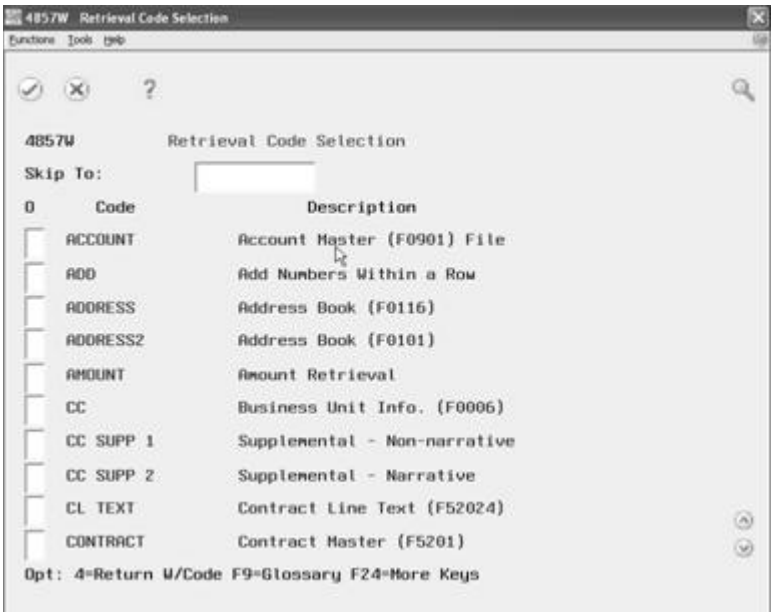
    For best results, define a detail sequence for each grouping key range of transactions that you want to print on the invoice.

Contract Billing

Figure 3–7 Layout Definition Detail

Service Billing

Figure 3–8 Retrieval Code Selection screen



14. On Detail Sequence Definition, choose Display All Data Items (F16).
15. Complete the following field for the data items you want to include in the sequence:
    - Display Sequence
16. Use the Add action.

    The system clears the form.
17. Choose Exit Program (F3).
18. Complete steps 13 through 16 to define a detail sequence for additional grouping key ranges on the Invoice Layout Revisions form.

Field	Explanation
Invoice Format Code (INVF)	A code that uniquely identifies a series of formats and determines the overall layout of the invoice.
Invoice Type (INTY)	A user defined, alphanumeric code that identifies different versions of the same invoice layout. For example, you might use the codes D and F to distinguish draft invoice layouts from final invoice layouts.

Field	Explanation
Grouping Key (GPRK)	You use this code to indicate the lowest level of detail that you want to print on an invoice. The code for the Grouping Key represents a field in the Billing Workfile (F4812) and controls the selection of information for the detail level of the format layout. The system compares the values in the Grouping Key ranges that you define with the value in this field for each Billing Workfile transaction to determine whether the transaction should be included in the format that you create for this level of the invoice. For example, OBJ is the field for the object account. If you use OBJ as the Grouping Key for a layout, the system groups all billing transaction details on the invoice by object account number, depending on the grouping key range that you specify for the layout.
Seq Number (SEQ)	A number that the system uses to sequence information. *Form-specific information* A number that identifies the order in which the grouping key ranges display. This number does not determine the order in which the grouping key ranges actually print on the invoice.
Grouping Key Begin (GRPB)	A beginning value for a range within the Grouping Key. The system uses this range to select transactions it assigns to the detail level format for the invoice. If you leave this field blank, the system includes all values less than or equal to the Group End value.
Grouping Key End (GRPE)	An ending value for a range within the Grouping Key. The system uses this range to select transactions it assigns to the detail level format for the invoice. If you leave this field blank, the system includes all values greater than or equal to the Group Begin value.
Print Burden (PBUR)	A code that indicates whether burden transactions print independently or are always included within the amount of the associated labor transaction. Valid values are: blank – DO NOT print burden transactions separately. Always roll burden amounts into the amounts of the associated labor transaction. 1 – Print burden transactions independently, depending on the sequencing and summarization defined for the invoice format.
Print Components (PCMP)	A code that identifies whether the system prints markup components independently or always includes the markup components within the amount of the associated base workfile transaction. Valid values are: Blank – Print markup components independently, depending on the sequencing and summarization defined for the invoice format. 1 – DO NOT print markup components separately. Always roll markup components into the amounts of the associated base workfile transaction. (When you choose this value, the only way that you can access information related to markup components is by using the third parameter on the AMOUNT retrieval code. The third parameter allows you to specify which component code to print.

3.2.5 What You Should Know About

Topic	Description
Changing sequence numbers of data items	To change the sequence of data items in a major sequence or detail sequence, you can: ■ Enter a new sequence number in place of an existing number ■ Clear the existing sequence number
Deleting sequenced data items	To remove all of the data items in a major or detail sequence, choose Delete (Option 9) for any of the data items. Then, use the Change action. The system removes all the sequence numbers for the data items.
Deleting grouping key ranges	To remove all of the ranges for a grouping key, choose Delete (Option 9) for any of the ranges. Then, use the Change action. The system removes the ranges.
Defining overlapping or repeating grouping key ranges	To print a summarized billing transaction line followed by details of the transactions, you can define grouping key ranges that include overlapping or repeating values for the grouping keys. For example, you might print a summary of the labor charges followed by the details of the burden. To do this, you define a range of grouping keys for your labor accounts as the summary of labor expenses. Then, you define another grouping key range using a subset of the labor accounts for the range of the burden expenses. (In this example, you also need to complete the Print Burden field to print burden on the invoice.)
Assigning sequence numbers to grouping key ranges	You cannot change the print sequence for a layout by adding or reassigning sequence numbers after you define a grouping key range. The changes you make to sequence numbers on the Invoice Layout Revisions form change only the order of the grouping key display on the form. For example, the original grouping keys and their related detail formats were defined in the following object account order: ■ Labor ■ Uniforms ■ Equipment ■ Licenses If you resequence the grouping key ranges so that they are in alphabetical order, the display becomes: ■ Equipment ■ Labor ■ Licenses ■ Uniforms When you print the invoice, the first printed line on the invoice shows the detail formats defined for labor because labor is associated with the first physical line on the form.

3.3 Adding Invoice Format Data Items

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Invoice Layout Data Items (P4849)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Invoice Layout Data Items (P4849)

You use data items to sequence and summarize billing information within an invoice. JD Edwards World includes only the most frequently used invoice format data items in the Available Data Items table (F4849). If you want to sequence your invoices by a data item that is not included in the Available Data Items table, you can add data items from the Billing Workfile (F4812) to the table at any time.

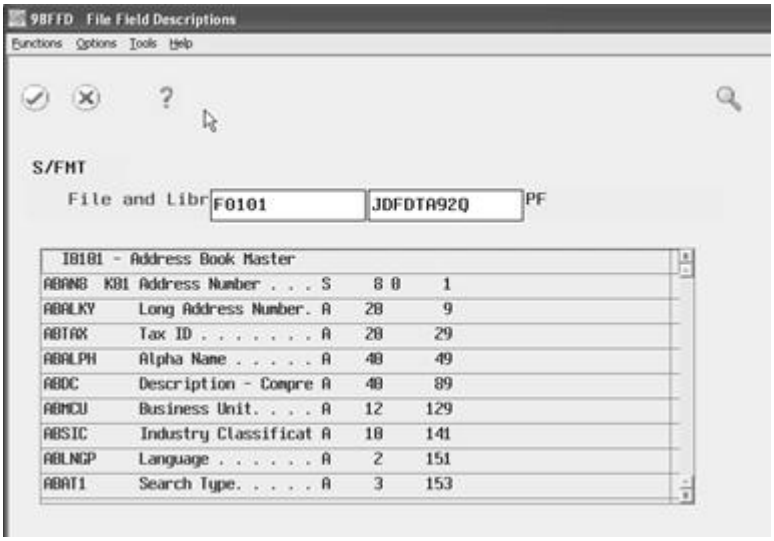
For example, the data item for the supplier's invoice number is not a frequently used invoice format data item. On a given date, you might make two separate purchases from the same supplier so that you can complete work for your customer. The supplier issues two different invoices for the purchases.

To print the billing information for each supplier invoice on a separate line of the invoice that you send to your customer, you use the data item that stores the supplier's invoice number. After you add the data item to the Available Data Items table, you can use the data item to define your major or detail sequence, depending on your invoice layout.

To add invoice format data items

On Invoice Layout Data Items

Figure 3–9 File Field Descriptions screen



1. Locate a blank line.

> **Caution:** Do not type over existing data items on the Invoice Layout Data Items form. Typing over an existing data item deletes it from the Available Data Items table and can cause unpredictable results.

2. Complete the following fields:
   - Data Item
   - Description
3. Complete the following optional field:
   - Sequence Number

Field	Explanation
Seq Numb (SBSQ)	A number that provides an audit trail for the billing detail transactions related to the same billing control ID. The system initially assigns 001 as the sequence number (SBSQ) of the original transaction. If you split a transaction, the system increments the number to the next available sequence numbers (SBSQ) for the resulting transactions. *Form-specific information* On this form, the sequence number determines the order in which the data items will appear on the Major Sequence Definition form and the Detail Sequence Definition form. (Choose Display All Data Items on those forms to review the complete data sequence of valid data items.) **NOTE:** The system displays blank data items before those with sequence numbers. For example, if you enter a sequence number of 1 for DOC, all of the blank data items will be listed with the DOC data item at the end of the list.

Field	Explanation
Data Item (DTAI)	Data items represent the fields that store information throughout JD Edwards World software. You use data items to define the sequence of information on an invoice. Specific fields in the Billing Workfile are designated as valid data items that you can include on an invoice.

See Also:

- Appendix D, "Field Derivations for the F4812"for a list of common data items that you can use when you create invoice layouts.

3.4 Assigning Invoice Layouts

When you assign invoice layouts, you link invoice layouts to invoice information that you generate on the system when you create an invoice batch. The link you establish determines which layouts the system uses to print the invoices. This is especially helpful if you have customers with unique invoice requirements and you create a variety of layouts to accommodate these needs.

You can print all of these invoices in the same batch, regardless of differences between invoice layout designs, provided all layouts contain the same value for the invoice type as the value specified in the processing options for the Print Invoices program.

If you create a standard layout, you can set up a cross-reference to globally assign the layout to all of your customers or to customers that meet specific criteria. The cross-reference you set up is the default that the system uses for printing invoices.

For Contract Billing, you can override the default by assigning a specific layout to a contract.

For Service Billing, you can override the default by assigning a specific layout to an invoice.

Note: You must assign an invoice layout to every invoice you plan to print. If the invoice you want to print does not meet the criteria you set up for global layout assignments, and you have not assigned a specific invoice format code to an invoice, the invoice will not print.

Assigning invoice layouts consists of the following tasks:

- Assigning layouts globally
- Assigning invoice format codes to contracts (Contract Billing)
- Assigning invoice format codes to invoices (Service Billing)

3.4.1 Before You Begin

- Define layout structures. See Section 3.2, "Defining a Layout Structure"

3.4.2 Assigning Layouts Globally

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Invoice Layout Revisions (P4850)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Invoice Layout Revisions (P4850)

You can globally assign the invoice format code that identifies the layout you want to use when you print invoices for specific customers. Assigning layouts globally is helpful if you want to use the same invoice layout design for:

- All customers
- A specific group of customers

This saves time, especially if you print a large number of invoices.

When you print invoices, the system uses the cross-reference information you set up to identify the correct layout you want to use for printing each invoice within a batch of generated invoices. The cross-reference information that you assign to a layout consists of key type and table key combinations that the system uses to match with the values in the billing transactions that make up individual invoices.

For example, you might assign a key type and table key combination for a layout that indicates a specific customer number. When you print invoices, the system matches the key type and table key combination for the layout to the invoice information that includes the specific customer number.

To assign layouts globally

On Invoice Layout Revisions

1. To locate the layout you want to assign, complete the following fields:
   - Invoice Layout Code
   - Invoice Type
2. Use the Inquire action.
3. Choose Format Cross Reference (F16).

Figure 3–10 Parameter and Field Descriptions table

Parameter 1 Value	Parameter 1 Description	F4812 Field	Field Description
1	Units	U	Units
2	Unit Price	UP	Unit Price
3	Cost Amount	AA	Amount
4	Revenue Total Amount	BTOL	Revenue Amount
5	Invoice Total Amount	ITOL	Total Invoiced
6	Invoice Taxable Amount	ITXA	Invoice Taxable
7	Invoice Tax Amount	ITAM	Invoice Tax
8	Invoice Discount Amount	IDSC	Invoice Discount Available
9	Number of Employees/Suppliers	NTRN	Number of Transactions (count)
10	Unit Price - Foreign	PRIF	Unit Price - Foreign
11	Cost Amount - Foreign	AA2	Amount AA2
12	Revenue Total Amount - Foreign	FTOL	Foreign Total Billed
13	Invoice Total Amount - Foreign	CITL	Foreign Invoice Amount
14	Invoice Taxable Amount - Foreign	CITA	Foreign Invoice Taxable
15	Invoice Tax Amount - Foreign	CITX	Foreign Invoice Tax
16	Invoice Discount Amount - Foreign	CIDS	Foreign Invoice Discount

4. On Format Cross Reference, complete the following fields:

   - Key Type
   - Table Key

   After you enter the information, the system updates the Format Cross Reference table (F4858).

5. Choose the Add action.

Field	Explanation
Key Type (TYKY)	A code that the system uses in combination with the table key to locate and edit source and billing detail transactions against the various tables in the Service Billing and Contract Billing systems. Valid key type codes and related tables are: 1 – Work order number - Work Order Master (F4801) 2 – Work order class - User Defined Code (00/W7) 3 – Contract number - Contract Master (F5201) 4 – Parent contract number - Contract Master (F5201) 5 – Customer - Address Book Master (F0101) 6 – Job or business unit - Business Unit Master (F0006) 7 – Job class - User Defined Code (00/11) 8 – Company - Company Constants (F0010) 9 – Default When you select a key type, use the following guidelines: ■ You cannot use the key types for contract number (3) or parent contract number (4) with the Tax Derivation and G/L Offset & Retainage tables. ■ You cannot use the key type for company (8) with the G/L Offset and Retainage tables. ■ You can use the default key type (9) with only the Account Derivation and Cost Plus Markup tables. *Form-specific information* The Key Type field you specify determines the type of transactions that the system assigns to this format code and invoice type. Use the Skip To: Key Type field to limit an inquiry if many key values have been entered for a format series. This field brings the value specified to the top of the display.
Table Key (TKEY)	A value that the system uses in combination with the key type to locate and edit source and billing detail transactions against the various tables in the Service Billing and Contract Billing systems. The value you enter in the Key Type field determines the valid values for the Table Key field. For example, if you specify the key type for work order number (1), you must enter a valid work order number from the Work Order Master (F4801) in the Table Key field. The key type you specify also controls the search window that you access from the Table Key field when you use field sensitive help. For example, when you select Key Type 1, you can use the field sensitive help for the Table Key field to access the Work Order Search window. With Key Type 2, you access the User Defined Codes window for work order class. *Form-specific information* Use the Table Key field to limit the transactions that the system assigns to this format code and invoice type. You can use the Skip To: Table Key field to limit an inquiry if many key values have been entered for a format series. This field brings the value specified to the top of the display.

3.4.3 What You Should Know About

Topic	Description
Assigning keys to multiple layouts	You can assign the same key type and table key to multiple layouts if the layouts have the same invoice format code, but different invoice types.

3.4.4 Assigning Invoice Format Codes to Contracts

From the Contract Billing Processing menu (G52), choose Contract Master Revisions (P5201).

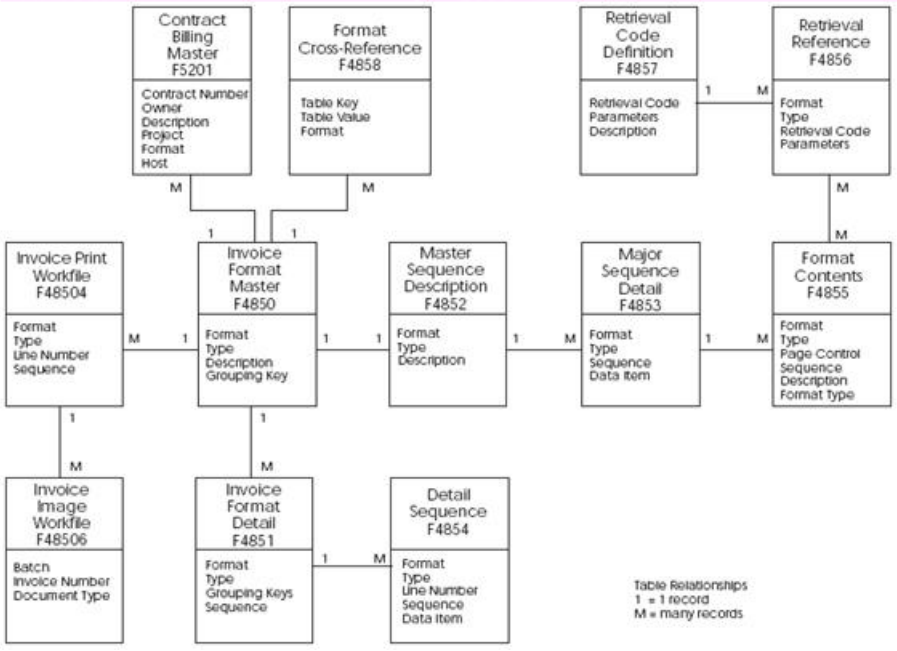
If you use the Contract Billing system, you can assign an invoice format code for a specific layout directly to your contracts without assigning layouts globally. The layout you assign directly to a contract overrides any cross-reference information you set up on the Format Cross Reference form (P4858).

To assign invoice format codes to contracts

On Contract Master Revisions

1. To locate a contract master, complete the following field:
   - Contract Number

Figure 3–11 Table Relationships



2. Choose Field Sensitive Help (F1) for the following field:
   - Layout
3. On Invoice Format Selection, choose Return with Value for the invoice format code of the layout you want to assign to the contract.
4. On Contract Master Revisions, use the Change action.

3.4.5 Assigning Invoice Format Codes to Invoices

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose Service Billing

From Service Billing (G4821), choose Invoice Generation

From Invoice Generation (G4824), choose Batch Review (P48221)

You can assign invoice format codes for a layout to individual invoices that you generate using the Service Billing system. When you assign an invoice format code directly to an invoice, you override any cross-reference information you set up on the Format Cross Reference form (P4858).

For example, you might find that one of the invoices in a batch of invoices should be printed using a different layout than is specified on the Format Cross Reference form. You can enter an override invoice format code on the invoice and print the invoices. Then, if you need to, you can change the cross-reference information you have set up for your system at a later time.

3.4.6 Before You Begin

- Create an invoice batch. See Generating Invoices for Billing or Creating Invoices Manually for Billing in the *JD Edwards World Service Billing Guide* for more information about creating a batch of invoices.

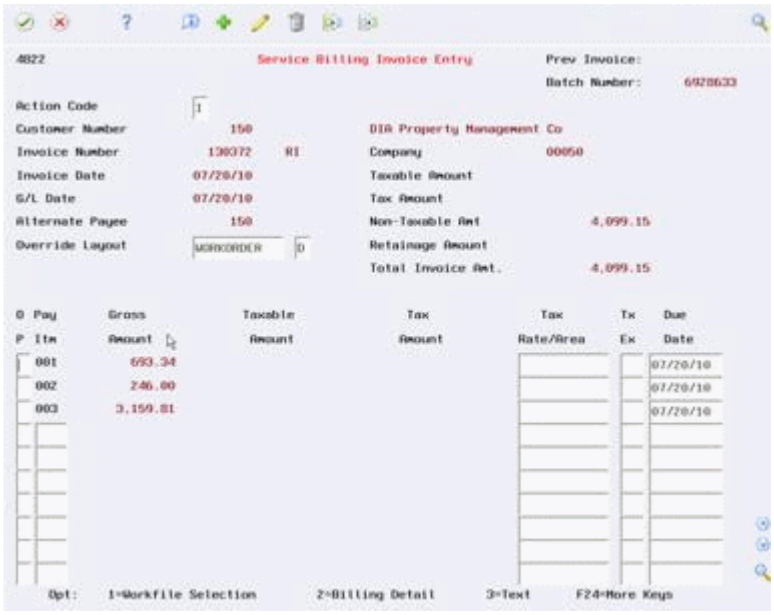
To assign invoice format codes to invoices

On Batch Review

1. To locate the invoice batch, complete the following field and press Enter:
   - User ID
2. Choose Detailed Batch Review (Option 1).
3. On Invoice Entry Review (P48222), choose Review Invoices (Option 1).
4. On Service Billing Invoice Entry (P4822), choose Field Sensitive Help (F1) for the following field:
   - Override Format
5. On Invoice Format Selection, choose Return W/Value for the invoice format code of the layout you want to use.
6. On Service Billing Invoice Entry, use the Change action.

   After you enter the information, the system returns to Service Billing Invoice Entry and displays the code name and type in the Override Format fields.

Figure 3–12 Service Billings Invoice Entry screen



4

Work with Formats

This chapter contains these topics:

4.1 Working with Formats

When you design the layout for a printed invoice, you must determine the information that you want to print on the invoice. You should design your invoice on paper before you begin. For example, you might want to use a preprinted invoice as a model to help you plan:

- The types of headings to print on the invoice
- Where subtotals will be calculated and printed on the invoice
- Billing transaction detail requirements
- How to group billing details on the invoice

After you have determined the appearance for the printed invoice, you can define the specific formats within the layout to accommodate that information. The series of formats that you define for a layout design are grouped in the system by a user-designated invoice format code and invoice type.

You can review the format definitions that already exist on your system. If you want to use an existing format definition, you can copy the definition to a format in your layout. After you copy a format, you can modify it to suit your needs.

Working with formats includes the following tasks:

- Reviewing format definition forms
- Copying formats

4.2 Reviewing Format Definition Forms

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Invoice Layout Revisions (P4850)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Invoice Layout Revisions (P4850)

You define a layout structure by first assigning it a user-designated invoice format code and invoice type. As you add format types to the layout, the system assigns the invoice format code and invoice type to them. A total of 10 different format types exist. You can use any of the format types to define formats. You define formats by placing retrieval references and invariable information on format definition forms. Your placement of retrieval references and invariable information within a specific format definition form determines the overall appearance and organization of information on your printed invoices.

You can review the following format definition forms for the format types associated with a layout structure:

Number of Format Headings	Description
Five heading formats	Overall heading
	Overall alternate heading
	Major sequence heading
	Detail heading (for grouping key range)
	Detail sequence heading
Four totals formats	Overall total
	Major sequence total
	Total by detail (for grouping key range)
	Detail sequence total
One detail format	Detail detail (for grouping key range)

4.2.1 Before You Begin

- Define layout structures. See Section 3.2, "Defining a Layout Structure"

To review format definition forms

On Invoice Layout Revisions

1. To locate a layout structure, complete the following fields:
   - Invoice Layout Code
   - Format Type
2. Use the Inquire action.
3. Choose any of the following functions to review a specific format definition form for the layout structure:
   - Header Format Definition (F13)

- Alternate Header Format Definition (F14)
- Total Format Definition (F15)

The following example shows the Format Definition form for the header of the layout structure.

Contract Billing

Figure 4–1 Layout Definition screen (contract)

Service Billing

Figure 4–2 Layout Definition screen (workorder)

4. Choose Exit Program to return to Invoice Layout Revisions.

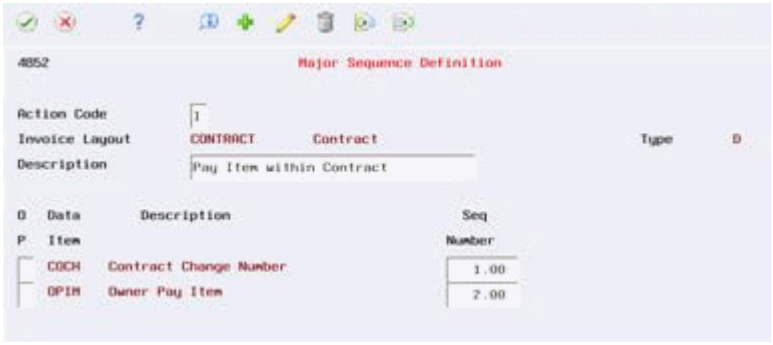
The system displays a message prompting you to save any changes you made to the Format Definition form.

Figure 4–3 Save Changes to Format Definition screen

5. Complete the following field:
   - Save Changes (Y/N)
6. On Invoice Layout Revisions, choose Major Sequence (F17).

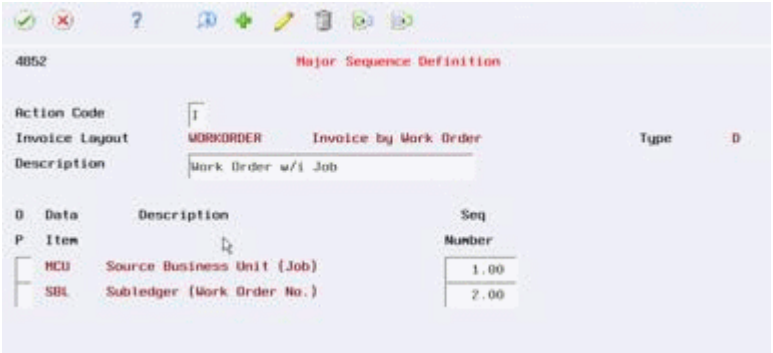
Contract Billing

Figure 4–4 Major Sequence Definition screen (contract)



Service Billing

Figure 4–5 Major Sequence Definition screen (workorder)



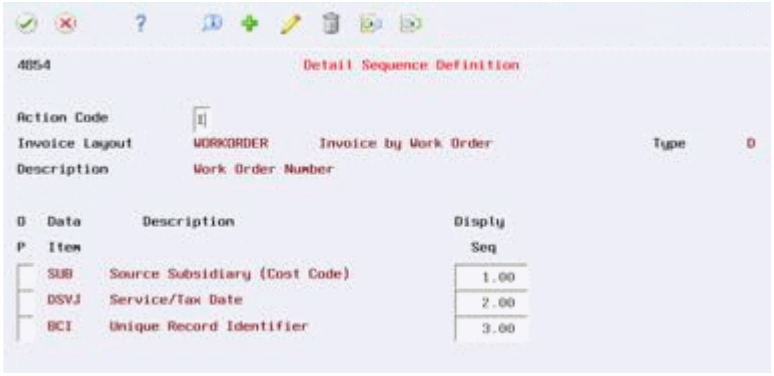
7. On Major Sequence Definition, choose any of the following options to review a specific Format Definition form for a data item in the major sequence:
   - Header (Option 1)
   - Total (Option 3)
8. Complete steps 4 and 5 to return to Invoice Layout Revisions.
9. On Invoice Layout Revisions, choose Detail Sequence Definition (Option 4).

Contract Billing

Figure 4–6 Detail Sequence Definition screen (contract)

Service Billing

Figure 4–7 Detail Sequence Definition screen (workorder)

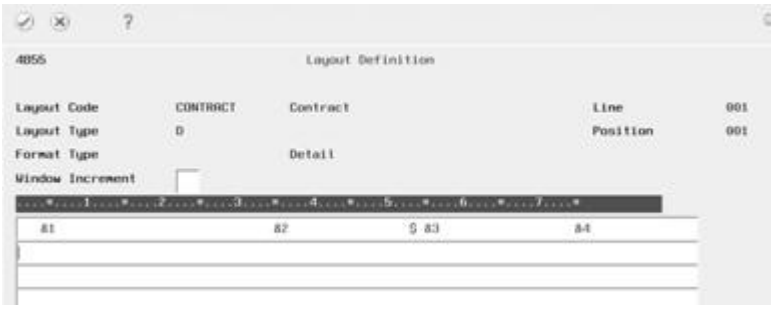


10. On Detail Sequence Definition, choose any of the following options to review a specific Format Definition form for a data item related to a grouping key range:
    - Header (Option 1)
    - Total (Option 3)
11. Complete steps 4 and 5 to return to Invoice Layout Revisions.
12. On Invoice Layout Revisions, choose any of the following options to review a specific Format Definition form for a grouping key range:
    - Detail Header Format (Option 5)
    - Detail Detail Format (Option 6)
    - Detail Total Format (Option 7)

The following example shows the Format Definition form for the Detail Detail Format option for a grouping key range.

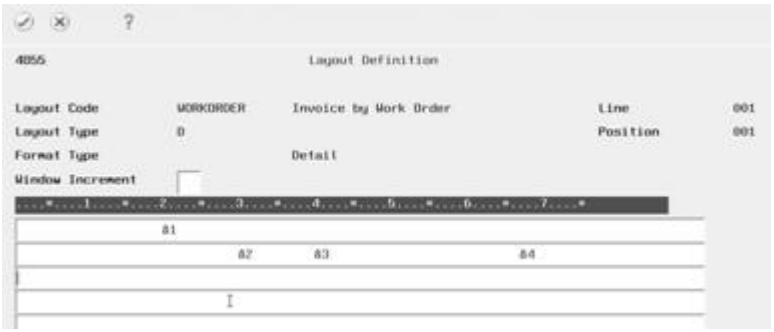
Contract Billing

Figure 4–8 Layout Definition screen (contract)



Service Billing

Figure 4–9 Layout Definition screen (workorder)



13. Complete steps 4 and 5 to return to Invoice Layout Revisions.

4.2.2 What You Should Know About

Topic	Description
Printing headers on a new page	You can use the New Page (Y/N) field to specify that the header formats for data items begin on a new page automatically each time you print the format for your invoices. You might want to do this to prevent billing detail from printing on two separate pages.
Repeating headers on subsequent pages	You can use the Repeat Page field to repeat the header format for data items on subsequent pages. You might want to do this when the billing details exceed one page in length.
Testing format definitions	To test a format definition, verify that invoices exist. Then, choose Print Invoices on the Invoice Generation menu (G5221 for Contract Billing, G4824 for Service Billing).

See Also:

- Section 5.1, "Defining Formats" for more information about retrieval references and invariable information

4.3 Copying Formats

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Invoice Layout Revisions (P4850)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Invoice Layout Revisions (P4850)

You can copy the retrieval references and invariable information that make up a format definition to another format definition. Copying formats is much faster than defining a new format. You might want to copy existing formats if you have already defined formats in your system that are the same or similar to new formats that you need when defining a format for a new layout.

For example, one of your customers might request that all invoices be mailed to a centralized accounting office, but they want the invoice to display the name and location of the remote office site. You copy the formats that comprise your standard layout design to a new layout structure. Then, you change the information on the formats to create a custom layout for that customer that displays the name and location of the remote office site.

You can use the Invoice Format Copy Window (P4855W) to locate the specific format definition forms that you want to review or copy. The Invoice Format Copy Window displays a list of the all the formats defined in your system. The list is arranged alphabetically by the format code. You can identify each of the format types that are associated with a layout structure by using a combination of the following information:

- Line numbers associated with specific grouping key ranges
- Data item names associated with either a major or detail sequence
- Format types, such as detail, header, or total, identified by the respective Format Type codes of blank, 1, or 2

When you use the Invoice Format Copy Window to identify a specific Format Definition form, consider the following questions:

1. What is the format code?
2. What is the invoice type?
3. What is the format type (header, total, detail)?
4. Is the format related to a data item or a grouping key?
5. If the format is related to a data item, is the data item related to a grouping key detail sequence or a major sequence?
6. If the format is related to a grouping key, which grouping key line?

The Invoice Format Copy Window does not display alternate header format definitions.

> **Caution:** Copying a format immediately updates and saves the new information in the Format Definition form. When you copy a format definition to another format definition form, the system replaces any invariable information, codes, and definitions for the retrieval references that are already in the Format Definition form with the invariable information, codes, and definitions from the format you selected to copy. You cannot retrieve the original information that was on the format. Exiting the program and entering N in the Save Changes (Y/N) field has no effect on the changes that you make to a Format Definition form by copying.

To copy formats

On Invoice Layout Revisions

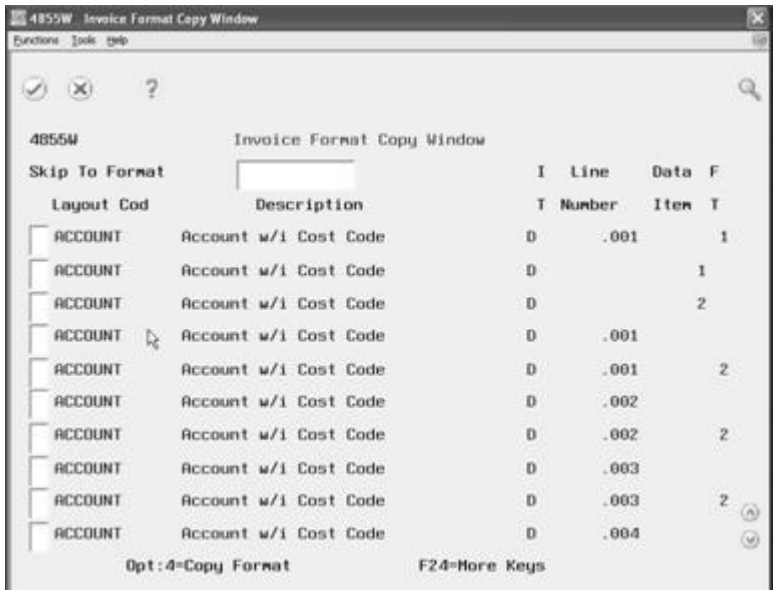
1. Complete the steps for locating a layout structure.

   See Section 4.2, "Reviewing Format Definition Forms"

2. On Format Definition, choose the Copy function (F16).

   The system displays Invoice Format Copy Window.

Figure 4–10 Invoice Format Copy Window screen



3. To locate the format code you want to copy, complete the following optional field:

   - Skip To Format

4. Choose Copy Format (Option 4) for the format code.

   The system copies the format information, including all related invariable information, retrieval reference codes, and code definitions, to the Format Definition form currently displayed. The copied format replaces any existing invariable information, codes, and code definitions that you previously defined on the Format Definition form.

5. Choose Exit Program (F3).
6. Complete the following field:
   - Save Changes (Y/N)

   Entering a Y or an N in the Save Changes (Y/N) field has no effect on the changes that you make to a format definition form by copying.

   See Also:

   - Appendix C, "Format Types"to review a listing of the information combinations that you use to identify specific format types

5

Define Formats

This chapter contains these topics:

5.1 Defining Formats

You use invariable information and retrieval references to define the formats that make up a layout. Invariable information is the static information that prints on an invoice regardless of the customer or billing details, such as currency symbols or remit-to information. Retrieval references direct the system to the variable information you want to include on the invoice, such as totals, a supplier's name, or dates.

Defining formats consists of the following tasks:

- Adding static information to a format
- Defining retrieval references for a format

5.1.1 Lines, Positions, and Rulers

A format definition represents only one section of a layout. A Format Definition form consists of an unlimited number of lines. If you exceed the page length for one format definition, that definition will impact all the definitions for subsequent formats and the entire invoice design.

You enter static information and retrieval references directly onto a line of the Format Definition form. The static information or retrieval reference should begin in the position on the Format Definition form that correlates to the actual location where you want the information to print on your invoice.

Lines

When you first access the Format Definition form, the cursor is located in the first position on the first line of the form. The Line field on the upper-right portion of the form indicates that the location of the cursor is line 001. If your cursor is located within the first 15 lines of the form, the Line field still displays 001 as the line number.

You can page down to view the next 14 available lines. When you do, the Line field displays 15. The first line on the second page is 15, and the last line is 29. The Line field displays the number for the first line within the group of lines currently displayed on the form. You can use the line number to determine approximately how many lines you have defined for a specific format.

Positions

The Format Definition form displays 70 positions horizontally. You can place the cursor anywhere in the existing form display. If you need to place your cursor outside the form display, you must enter a number in the Window Increment field and choose the Window Right function (F20).

If you choose Window Right without entering a value in the Window Increment field, the system automatically enters 70 in the Window Increment field, and the cursor moves to the 70th position on the form display. To return, choose the Window Left function (F19).

Rulers

The Format Definitions form includes a ruler that you can use to reference the position of the cursor within a line. The ruler consists of dots, asterisks, and numbers. Each symbol represents the following space increment:

Symbol	Spaces
Dot	1 space
Asterisk	5 spaces
Number	10 spaces

Use the ruler to find an exact position on the Format Definition form. For example, to place your cursor in the 37th position on a line, you use the ruler to move the cursor to the number 3 position, plus the following asterisk, plus two dots.

In the following graphic, the retrieval reference (&1) is at position 20 and the cursor is at position 37:

Figure 5–1 Layout Definition Ruler Detail

5.2 Adding Invariable Information to a Format

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Invoice Layout Revisions (P4850)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Invoice Layout Revisions (P4850)

The invariable information you include on a layout can consist of symbols or text. Invariable (static) information usually does not change from invoice to invoice. For

example, you might include text, such as Please Remit To: or a symbol, such as a currency sign, on all your printed invoices, regardless of the variable information that appears on the invoice.

You enter invariable information directly onto a line of the Format Definition form. The invariable information should begin in the position on the Format Definition form that correlates to the actual location where you want the information to print on your invoice. You can enter a invariable information on any line of any format definition that makes up your layout.

5.2.1 Special Format Considerations

You can design invoices so that the formats you define for a layout print across the page rather than down the page. This is especially helpful if you want to print invoices using a multi-columnar format to print continuous lines of billing information.

To print the information from more than one format in columns across the page, you use the special invariable information text &ZICR. You can enter &ZICR anywhere within a format in the same way that you would enter any other message. When the system finishes printing the information from one format that includes the &ZICR invariable information, it searches for and prints the next format definition that includes the &ZICR message on the same line of the invoice.

To add invariable information to a format

On Invoice Layout Revisions

1. Complete the steps for reviewing a Format Definition form.

   See Section 4.2, "Reviewing Format Definition Forms"

2. On Format Definition, position the cursor on the line where you want the message to begin.
3. Enter the invariable information.
4. To return to Invoice Layout Revisions, choose Exit Program.

   The system displays a message prompting you to save any changes you made to the Format Definition form.

5. Complete the following field:
   - Save Changes (Y/N)

5.2.2 What You Should Know About

Topic	Description
Changing and removing invariable information	You can change invariable information at any time by entering the new information over the existing information. To enter additional information, use the Insert key. To remove a portion of invariable information, enter spaces over the existing information or use the Delete key. To remove a line, choose the Delete A Line function (F18). After you delete a line, the cursor is repositioned at the top of the window.
Adding blank lines	Position the cursor and choose the Insert A Line function (F17). The system inserts a blank line below the cursor.

Topic	Description
Printing boldfaced text	Some printers can create boldfaced text by printing the same information twice on the same line. Enter &ZICR at the end of the line you want to boldface. On the line directly beneath the &ZICR, type &ZICR and repeat the information exactly as it appears on the preceding line. Some printers are so precise that overprinting does not create boldfaced text.

See Also:

- Section 5.3, "Defining Retrieval References for a Format" for a Format for more information about printing variable information, such as totals, on an invoice

5.3 Defining Retrieval References for a Format

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Invoice Layout Revisions (P4850)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Invoice Layout Revisions (P4850)

Invoices typically include information that varies by invoice and customer, depending on the billing transactions. When you design invoices with Invoice Formatting, you use retrieval references to define the variable information that you want to print on invoices. For example, you can use retrieval references to:

- Direct the system to the information stored in various files that you want to include on an invoice
- Perform calculations, such as add, subtract, multiply, and divide
- Store and recall the results of a previous calculation
- Add special information on an invoice that is not contained in a table, such as the page numbers

Note: Not all of the information defined in retrieval references must print on the customer's invoice. You can specify a register to store the information in memory. Later, you can recall the information for use in another format within the layout structure.

5.3.1 Types of Variable Information

You can use retrieval references to direct the system to the following types of variable information:

- Information related to data items
- Calculations
- Totals

Information Related to Data Items

The information that is stored in system tables is directly related to data items. Each data item corresponds to a particular field in a table. To define retrieval references, you need to know the name and specifications of the data items for the information stored in system tables that you want to print on your invoices.

You can retrieve variable information for your invoices from the following tables:

- Account Master (F0901)
- Address by Date (F0116)
- Address Book Master (F0101)
- Business Unit Master (F0006)
- Business Unit Supplemental Data (F00692)
- Owner Pay Item Text (F52024)
- Contract Master (F5201)
- Invoice Summary Access (F48520)
- Customer Master (F0301)
- Asset/Equipment Master (F1201)
- Invoice Text (F4813)
- Milestone/Progress Billing Information (F5216/F52161)
- Address Book Generic Text (F0016)
- Owner Pay Item Detail (F5202)
- Transaction Parameters (F069116)
- Address Book Phone Numbers (F0115)
- Invoice Summary (F4822)
- Supplier Master (F0401)
- Payment Terms (F0014)
- Who's Who (F0111)
- Work Order Master (F4801)
- Work Order Text (F4802)
- Billing Workfile (F4812)

You can access the File Field Description window to review a list of the names of the data items within a specific table. The File Field Description window also lists the specifications of each data item, such as its size and type.

The size of a data item represents the maximum number of positions you will need to reserve in the line on the Format Definition form to accommodate the variable information. If you know the data item size, you can prevent truncating or overprinting information on an invoice.

The type of a data item refers to whether the information related to the data item is alpha, numeric, or alphanumeric. If you know the data item type, you can determine the exact format specifications for the information stored in the data item. For example, you might want to specify the number of decimal positions and whether commas display for the information that is related to a numeric data item.

Calculations

You can define retrieval references for the mathematical calculations of add, subtract, multiply, and divide. Retrieval references for calculations can include:

- Specific values
- Variable information, based on another retrieval reference
- Combinations of specific values and retrieval references

For example, if payroll details are part of a customer's billing transaction detail, you might define a retrieval reference that performs a calculation such as:

Number of Hours Worked x Hourly Rate

In this example, the number of hours worked might be variable information and the hourly rate might be a specific value, such as 50. In this case, you define a retrieval reference to retrieve the number of hours worked for which you want to bill. The retrieval reference that you define for the calculation specifies to the system to multiply the value retrieved by the retrieval reference for the number of hours worked multiplied by 50.

5.3.2 Totals

You can define a retrieval reference for totals. You can incorporate totals in an invoice as individual subtotals or as totals that are added to make up another total. To add individual totals to create a subtotal on an invoice, you need to use a register.

Registers are storage locations that can be used to:

- Print an amount on an invoice
- Perform calculations
- Accumulate, but not necessarily print, calculated amounts for future calculations

You can define up to 99 unique register locations within a layout structure. You use a retrieval reference to specify whether a register is used to accumulate, store, or recall totals.

The number of times you can add previously calculated totals into a new total depends on your placement of registers within a retrieval reference within the formats you define for the layout.

To print multiple subtotals within a layout structure, you must:

- Determine the correct order of the formats on which you want to recall the totals
- Define a retrieval reference for the format
- Know the number of the appropriate register locations to recall within the retrieval reference

The order of the format definitions containing the appropriate register locations are determined based on the most specific total for group of billing transactions to the overall total for the invoice. You use the following hierarchy to determine the correct format on which to define retrieval references containing the appropriate register locations:

- Individual billing transactions are accumulated in a register to equal a detail sequence data item total.
- Detail sequence data item subtotals are accumulated in a register to equal a grouping key total.
- Grouping key subtotals are accumulated in a register to equal a major sequence data item total.
- Major sequence data item subtotals are accumulated in a register to equal the overall invoice total, or grand total.

You do not have to define all four subtotals. For example, if you do not define a major sequence data item total, you can accumulate grouping key totals in a register to equal the overall invoice (grand) total.

5.3.3 Retrieval Reference Definitions

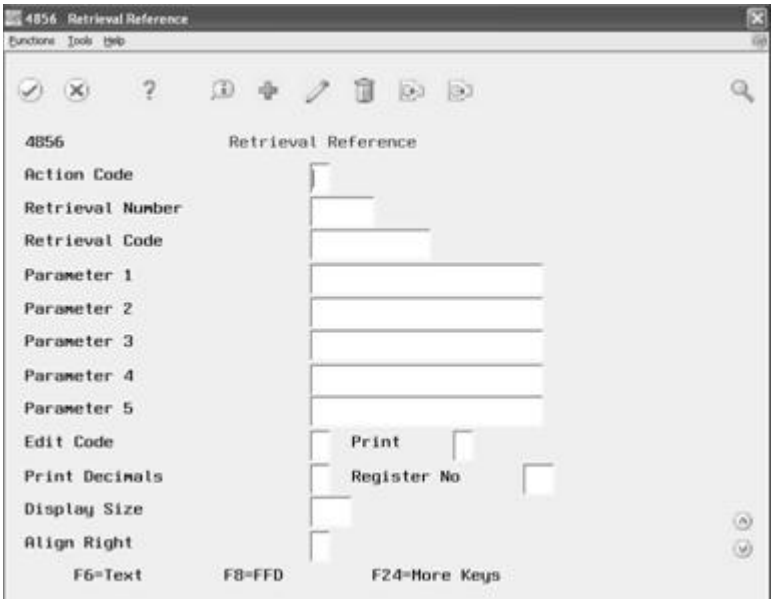
When you access a Format Definition form for the first time, the format display is blank. You must define retrieval references for the format to direct the system to the variable information you want to print for that particular section of the invoice.

You define retrieval references directly on a line of the Format Definition form. The retrieval reference should begin in the position on the form that correlates to the actual location where you want the variable information to print on your invoice. You can enter a retrieval reference on any line of any format definition that makes up your layout.

When you define retrieval references, you must specify how you want the system to use each reference based on the following information:

- Retrieval code
- Parameters
- Format specifications

Figure 5–2 Retrieval Reference screen



Retrieval Codes

The retrieval code you specify for a retrieval reference determines the type of reference that you define. You must specify a retrieval code for each retrieval reference. Retrieval codes tell the system what kind of variable information you want the retrieval reference to retrieve and whether you want the system to display the information as is or to use it to perform a calculation. Retrieval codes can also direct the system to a table from which you can retrieve variable information that is related to a specific data item.

Invoice Formatting includes predefined retrieval codes, such as Add for calculations, Account to specify a table, and Page to specify page numbers. If you need a retrieval code that is not already included in the system, you can define custom retrieval codes.

Parameters

You use parameters in combination with retrieval codes to further define a retrieval reference. For example, you might define parameters for a retrieval code to specify:

- Names of data items within a specific table
- Mathematical applications, such as add
- The code for another retrieval reference

You can assign up to five parameters for a retrieval reference. The number of parameters you are required to specify for a retrieval reference depends on the retrieval code for the reference.

Each retrieval code has different parameter requirements. To determine whether a specific retrieval code requires parameters, choose Field Sensitive Help (F1) for the first parameter. After you define the first parameter, continue choosing Field Sensitive Help for the subsequent parameters. When you choose Field Sensitive Help for the first parameter that is not required for the retrieval code, the system displays the following message:

A generalized 10-character parameter value passed to a called program.

Format Specifications

After you have determined the retrieval code and parameters for a retrieval reference, you can define further specifications to control exactly how the system prints the retrieved information on the invoice. For example, if you define a retrieval reference for a billing amount, you could define format specifications so that the amount prints right justified with decimals.

Note: You must always specify a size for the retrieval reference, regardless of whether you print the retrieved information.

See Also:

- Section 6.1, "Defining Custom Retrieval Codes"
- ASection B.1, "Retrieval Reference Codes"for a listing of retrieval reference codes and their applicable parameters
- Appendix D, "Field Derivations for the F4812"for a listing of the source information for each field in the Billing Workfile

To define retrieval references for a format

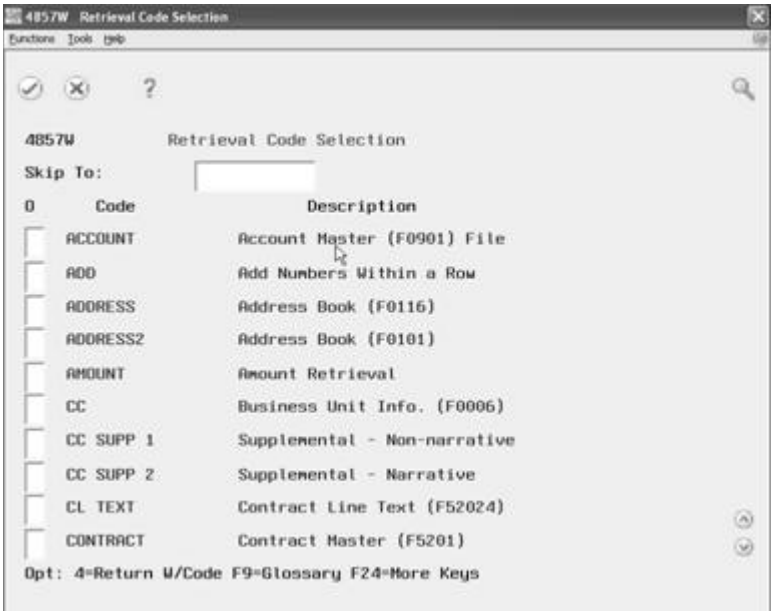
On Invoice Layout Revisions

1. Complete the steps to locate the format definition for a layout structure or data item.

   See Section 4.2, "Reviewing Format Definition Forms"

2. On Format Definition, position your cursor where you want the retrieved information to print.
3. Choose Retrieval Reference (F13).
4. On Retrieval Reference, choose Field Sensitive Help (F1) for the following field to see a list of the predefined retrieval codes:
   - Retrieval Code

Figure 5–3 Retrieval Code Selection screen



5. On Retrieval Code Selection, choose the code you want to use to define the retrieval reference (Option 4).

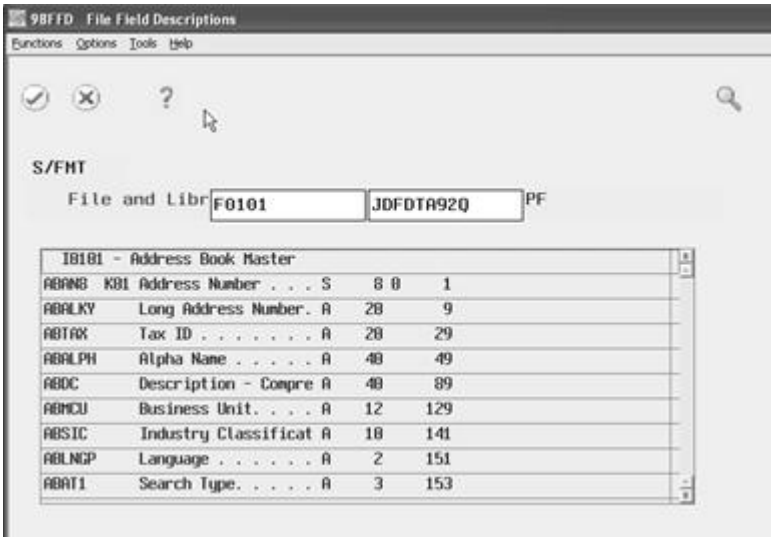
Figure 5–4 Retrieval Reference screen

6. On Retrieval Reference, complete the following fields to specify any of the parameters required for the retrieval code:

- Parameter 1-5

If the retrieval code specifies a table, position your cursor in Parameter 1 and choose File Field Description (F8) to determine the correct data item.

Figure 5–5 File Field Description screen



7. Complete the following field:

   - Display Size

   You must complete the Display Size field. If you do not specify a display size, the reference will not retrieve the related information.

8. To specify a register in which to store the retrieved information, complete the following field:

   - Register Number

9. To control the format specifications for the retrieved information, complete the following fields:

   - Edit Code
   - Print
   - Print Decimals
   - Align Right

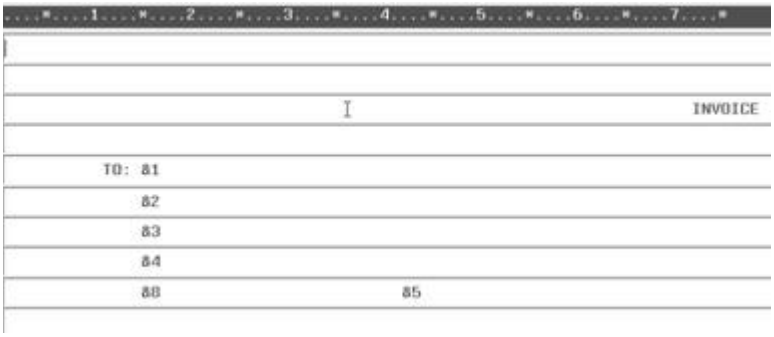
10. Use the Add action.

    The system clears the window.

11. Choose Exit Program (F3).

    The system closes the Retrieval Reference window and displays an ampersand (&.) and the number of the retrieval reference (without leading zeros) in the line and position where you last located the cursor.

Figure 5–6 Layout Definition Ruler Detail



5.3.4 What You Should Know About

Topic	Description
Numbering retrieval references	If you have not defined retrieval references for a particular form, the system assigns Retrieval Number 1 for the first retrieval reference that you define. If 6 retrieval references were already defined for the Format Definition form, the default Retrieval Number would be 7. You can override the default value. The system might not display all the retrieval reference codes for retrieval references that you have previously defined for a Format Definition form. This can happen if you delete the code for the retrieval reference from the form, but not the definition.
Deleting retrieval references	To delete retrieval references, follow the steps to locate a retrieval reference. After you review the information for the reference that you want to delete, use the Delete action to remove the information that defines the reference. When you return to the format definition, clear the code for the retrieval reference from the format by entering spaces in place of the code. **Note:** After you delete a retrieval reference and its code from the Format Definition form, the system does not reassign that number. You can manually assign the number to a new retrieval reference.
Printing page numbers	You can print page numbers anywhere on an invoice. To print page numbers, position the cursor where you want to define the page number within the format and use the retrieval code PAGE.
Total page number counts	You can print a running page count on your invoices along with the current invoice page number. First, define a retrieval reference for the format using the code PAGE. Next, enter invariable information to print the word "of". Finally, define another retrieval reference with the retrieval code PAGE OF.
Printing dates	You can print the system date anywhere on an invoice. To print the date, position the cursor where you want the system date to print within the format. Then, define a retrieval reference with the retrieval code DATE.

Topic	Description
Printing amounts	You can print amounts, such as the cost amount or the unit amount, anywhere on an invoice. To print an amount, position the cursor where you want to define the amount within a format and use the retrieval code AMOUNT. Amounts are retrieved from the Billing Workfile (F4812), based upon the value you select for Parameter 1 in the retrieval reference. A
Printing cumulative totals for contracts	You can print cumulative totals on an invoice using information from the Invoice Summary Access table (F48520). A system constant controls whether the system creates and maintains this table.
Totals within a Format Definition form	Your placement of registers within a Format Definition form is critical to accumulating the correct total on your printed invoices. You must enter the retrieval reference containing the register before the retrieval reference that recalls the accumulated register results. **Note:** You use the TOTAL retrieval code and parameters to recall the specific register number.
Clearing registers	Registers continue to accumulate totals until you clear the totals from the registers. When you clear a register, you set the accumulated amount to zero. Then you can reuse the register to accumulate a new total amount. You clear a register after its accumulated total has been recalled by another retrieval reference within the layout structure. To do this, you must use a 1 in the second parameter of the retrieval reference that recalls the register.
Calculations	You can assign up to four parameters to a retrieval reference that performs a calculation. The system processes the parameters sequentially. You use the parameters in place of parentheses. This is especially helpful if you need to incorporate multiple variables within a single calculation.
Retrieval codes for text	The File Field Description window does not apply when the system retrieves text using the following retrieval codes: ■ CC SUP2 ■ INV TEXT ■ WO TEXT ■ NOTES ■ CL TEXT

Parameter 1 Value	Parameter 1 Description	F4812 Field	Field Description
1	Units	U	Units
2	Unit Price	UP	Unit Price
3	Cost Amount	AA	Amount
4	Revenue Total Amount	BTOL	Revenue Amount
5	Invoice Total Amount	ITOL	Total Invoiced
6	Invoice Taxable Amount	ITXA	Invoice Taxable
7	Invoice Tax Amount	ITAM	Invoice Tax
8	Invoice Discount Amount	IDSC	Invoice Discount Available
9	Number of Employees/Suppliers	NTRN	Number of Transactions (count)
10	Unit Price - Foreign	PRIF	Unit Price - Foreign
11	Cost Amount - Foreign	AA2	Amount AA2
12	Revenue Total Amount - Foreign	FTOL	Foreign Total Billed
13	Invoice Total Amount - Foreign	CITL	Foreign Invoice Amount
14	Invoice Taxable Amount - Foreign	CITA	Foreign Invoice Taxable
15	Invoice Tax Amount - Foreign	CITX	Foreign Invoice Tax
16	Invoice Discount Amount - Foreign	CIDS	Foreign Invoice Discount

6

Define Custom Retrieval Codes

This chapter contains the following topics:

6.1 Defining Custom Retrieval Codes

Contract Billing

Navigation

From Contract Billing Processing (G52), choose 29

From Contract Billing System Setup (G5241), choose Retrieval Code Definition (P4857)

Service Billing

Navigation

From Word Order/Service Billing Processing (G48), choose 29

From Word Order/Service Billing Setup (G4841), choose Retrieval Code Definition (P4857)

The predefined retrieval codes included in the Contract Billing and Service Billing systems represent the most commonly used tables and information you use to print variable information on a customer's invoice. If you need to print special variable information that is stored in an additional system table, such an employee's social security number from the Employee Master table, you must define a custom retrieval code.

Custom retrieval codes can retrieve text or a value or perform special calculations. To define custom retrieval codes, you can:

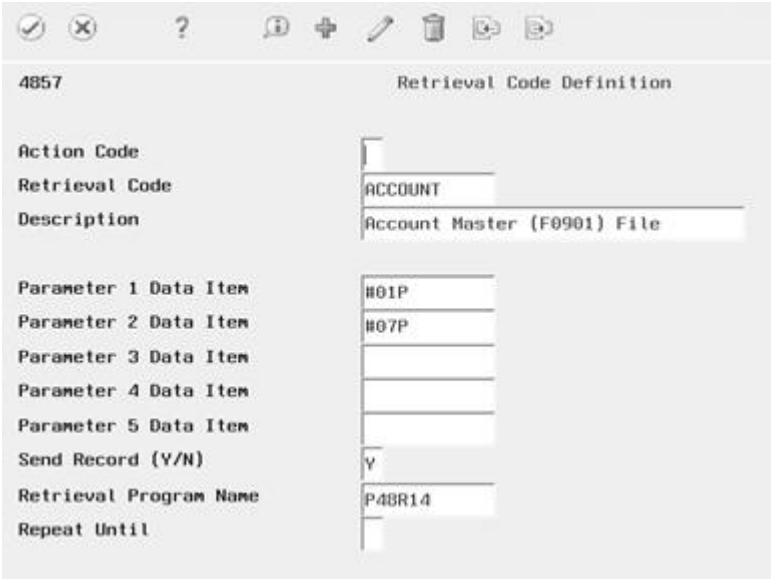
- Locate the data items that you want to use by defining unique parameters
- Create a custom retrieval program
- Enter narrative text to describe the code
- Associate the new code with the File Field Description window

Caution: Do not delete any of the standard codes listed on the Retrieval Code Definition form. Deleting these codes causes unpredictable results.

To define custom retrieval codes

On Retrieval Code Definition

Figure 6–1 Retrieval Code Definition screen



1. Complete the following fields:
   - Retrieval Code
   - Description
   - Parameter 1 Data Item
   - Retrieval Program Name
2. Complete the following optional fields:
   - Parameter 2 Data Item - Parameter 5 Data Item
   - Send Record (Y/N)
   - Repeat Until

Field	Explanation
Parameter 1 Data Item (P1DI)	You must specify a Data Item name if the parameter is used by the specified retrieval code. The Data Item controls the glossary and editing for the parameter at the time the Retrieval Code is being referenced.
Send Record (Y/N)	A Retrieval Code is generally processed in conjunction with an individual Billing Workfile record. Specific Retrieval Codes can require access to all of the information contained on the workfile record. You can use the Send Record code to instruct the system to include the entire workfile record, in one data structure, as one of the parameters passed to the Retrieval Program. You can use this field to determine which parameters from the Billing Workfile (F4812) will be passed to the Retrieval Program. The values are: Y – Yes, send the entire Billing Workfile. N – No, send only the specified parameters.

Field	Explanation
Retrieval Program Name	The Retrieval Program is the name of the program that will be executed to extract the desired data and return a value. The Retrieval Program must exist as a valid program in the user's library list by the time it is called. The program must conform to the common interface standards used by the system and must accept the correct number and type of parameters.
Repeat Until	You can use this code to control information that the system retrieves in a repetitive manner, such as lines of text within a text file. The Invoice Print program continues to use the same Retrieval Code in the same position until the specified condition is achieved. The following values are valid: blank – No repetition. Stop after the first line of text. C – Conflict. Repeat the Retrieval Code in the same position on subsequent lines until a line is reached that contains information in the same positions that the Retrieval Code would use or until the end of the format is reached. You might use this code if you were using a pre-printed form with a restricted number of lines for the information. D – Done. Repeat the Retrieval Code and the associated format line until the Retrieval Program returns an "end of file" value. **Note:** You must assign the same number of characters per line to the retrieval reference code as the retrieved information requires. The text will not wrap. Each line will be truncated when the characters per line is reached.

6.1.1 What You Should Know About

Topic	Description
Adding text to a custom retrieval code	You can attach descriptive text to a custom retrieval code. For example, you might want to add text to explain the specific purpose of the code or to include calculations or other descriptive information. To add text, locate the code you want and choose the View/Update Text function (F6). The system displays a text entry form. After you add text to a retrieval code, you can display the text for the code or change it at any time. The text you enter is informational only. You cannot print the text you associate with a retrieval code on a printed invoice.
Locating text for a retrieval code	You can locate text for a retrieval code from the Retrieval Code Definition form or the Retrieval Code Selection window on the Format Definition form.
Retrieving programs for a custom retrieval code	You must write a custom program to use custom retrieval codes. Use the name of the custom program in the Retrieval Program Name field when you define a custom retrieval code.

A

Data Model

This appendix contains these topics:

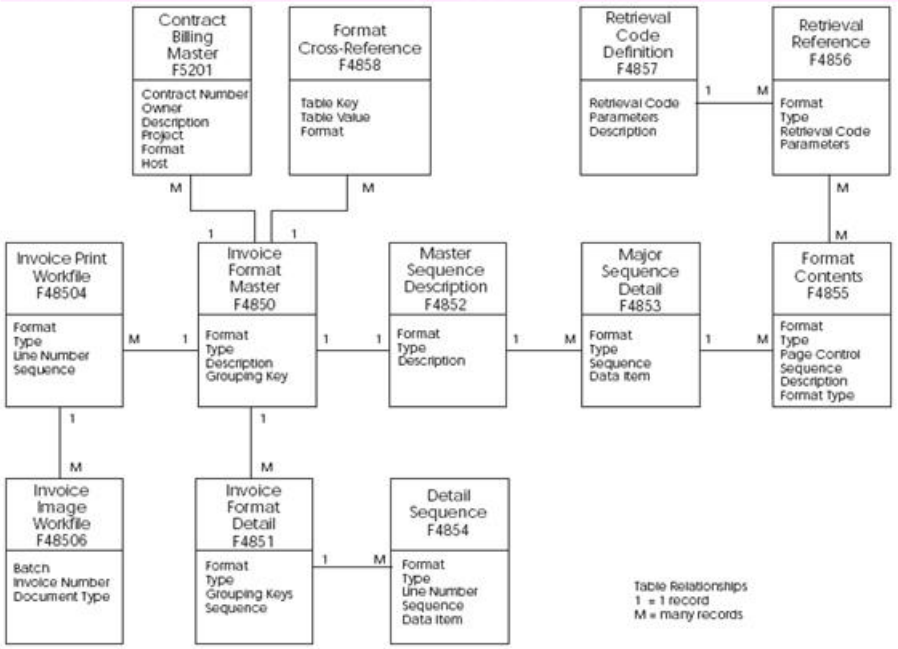
- Appendix A.1, "Contract Billing"
- Appendix A.2, "Contract Billing Invoice Format Definition"
- Appendix A.3, "Service Billing"
- Appendix A.4, "Service Billing Invoice Format Definition"

A.1 Contract Billing

The flowchart on the following page illustrates the relationships between the principal physical tables for invoice formatting for the Contract Billing system.

To present the information in an uncluttered format, the lesser control tables, worktables, and tables for seldom-used features have been omitted.

A.2 Contract Billing Invoice Format Definition



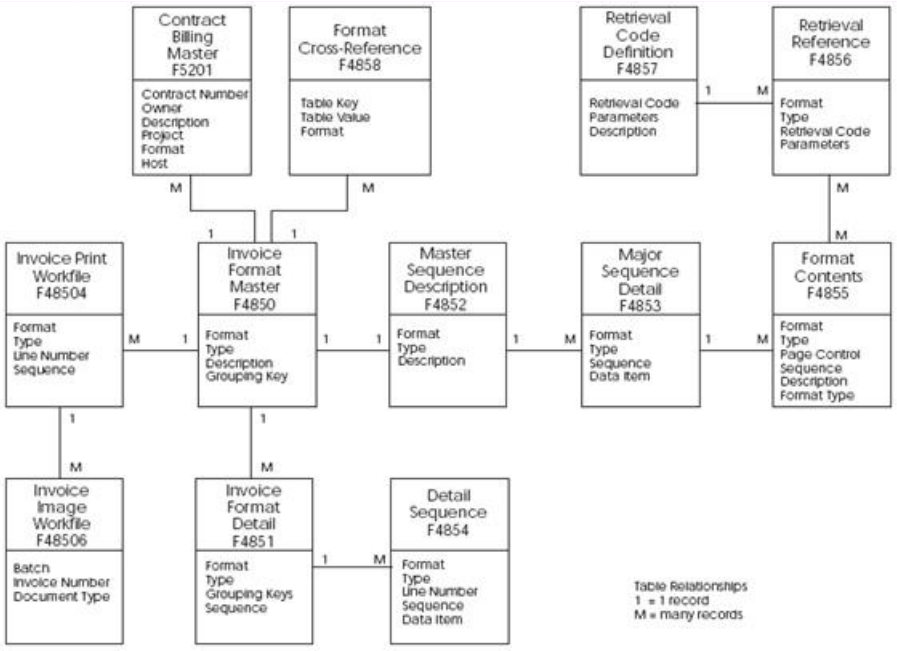
A.3 Service Billing

The flowchart on the following page illustrates the relationships among the principal physical tables for invoice formatting for the Service Billing system.

To present the information in an uncluttered format, the lesser control tables, worktables, and tables for seldom-used features have been omitted.

A.4 Service Billing Invoice Format Definition

Figure A–1 Service Billing System Table Relationships



B

Retrieval Reference Codes

This appendix contains the following topics:

B.1 Retrieval Reference Codes

You set up the retrieval reference codes with the Retrieval Reference window. This window is accessed from the Format Revisions screen. The following table describes the parameters that relate to retrieval codes. Be aware of the following:

- Only the applicable parameters are listed for each retrieval code.
- To display more information about each parameter, use function keys Fl (field help) and F8 (table field descriptions).

> **Caution:** The Display Size field is a required field for the setup of all the retrieval reference codes. If a display size is not specified, the related information is not printed on the invoice.

Retrieval Code and Source Table	Para-meter	Explanation
ADD No source table	1-4	A mathematical function performed over retrieved information. For that information, specify the numbers of the retrieval reference codes in the parameter fields. For example, if the calculation relates to retrieval reference code numbers 7 and 10, you would specify &7 in parameter 1 and &10 in parameter 2. You can also specify other numeric values involved in the calculation, such as -1, .10, or 100.
ADDRESS Address by Date (F0116)	1	The data item related to the information you want to retrieve from the F0116 table.
	2	Determines the address number for the information to be printed. For example, you could specify the address number for the company or job customer.
	3	Determines the address number for the alternate address information, such as the alternate billing number or parent number.

Retrieval Code and Source Table	Parameter	Explanation
	4	The date on which a change of address takes place. It is compared with the effective date for the address number. This parameter applies only if the Addresses by Effective Date field on the Address Book Constants form is set to 1.
ADDRESS2 Address Master (F0101)	1	The data item related to the information you want to retrieve from the F0101 table.
	2	Determines the address number for the information to be printed. For example, you could specify the address number for the company or job customer.
	3	Determines the address number for the alternate address information, such as the alternate billing number or parent number.
ACCOUNT Account Master (F0901)	1	The data item related to the information you want to retrieve from the F0901 table.
	2	Determines whether the account information is related to the original (posting) cost account or the closest previous non-posting account. For example, Professional could be the description for a posting cost account or Labor for a non-posting account.
AMOUNT No source table	1	Determines the type of amount you want printed, such as a cost amount or a unit quantity. An amount can be included on any detail or total format.
	2	This parameter applies to payroll labor and its related burden costs. It determines whether the system prints the total billing amount, only the labor costs, or only the burden costs.
	3	This parameter applies only to a workfile record with associated components. It determines whether the system prints amounts related to the base transactions or to the specified component code.
CC Business Unit (Job) Master (F0006)	1	The data item related to the information you want to retrieve from the F0006 table.
	2	Determines whether the business unit is related to a job, home business unit, or project number.
CC SUPP 1 Business Unit (Job) Supplemental Data Codes (F00692)	1	The data item related to the information you want to retrieve from the F0692 table.
	2	Determines whether the business unit is related to a job, home business unit, or project number.
	3	The data type for the supplemental data that is defined for the code format (C). This data type is non-narrative. If daily job logs are required on the invoice, for example, you specify DL.

Retrieval Code and Source Table	Para-meter	Explanation
	4	A code related to the data type you specified for parameter 3- Such a code is displayed in the first column on the Supplemental Code Entry form. For example, the first column for daily job logs (data type DL) is Log Type.
CC SUPP 2 Business Unit 0ob) Supplemental Data Text (F00693)	1	Determines whether the business unit is related to a job, home business unit, or project number.
	2	The data type for the supplemental data that contains free-form text. In this case, the data type can be defined for either the code format (C) or the narrative format (N). If a legal description is required on the invoice, for example, you specify LG.
	3	This parameter is similar to parameter 4 for the retrieval code CC SUPP 1. Therefore, if the data type in parameter 2 is defined for the code format, you must use parameter 3 to specify a code related to the data type. However, if the data type in parameter 2 is defined for the narrative format, you must leave parameter 3 blank.
CL TEXT Owner Pay Item Text (F52024)	N/A	This retrieval code lets you print on the invoice the text related to contract owner pay items. This is typically used at either the transaction or the transaction summary level of the invoice. These two levels relate to the Service Billing Workfile (F4812) and Invoice Summary Workfile (F4822), respectively. No parameters are applicable to this code.
CONTRACT Contract Billing Master (F5201)	1	The data item related to the information you want to retrieve from the F5201 table.
CUMULATIVE (This retrieval code applies only to contracts.) Invoice Summary Access (F48520)	1	The data item related to the information you want to retrieve from the F48520 table. Be aware that the F48520 table must be built and maintained, which is controlled by the Invoice Summary Access Control field on the System Constants (P48091) form.
	2	Determines the summary level of the billed-to-date total amount in relationship to the contract information. For example, it can be summarized by owner pay item.
	3	Determines the summary level of the billed-to-date total amount in relationship to the G/L account number. For example, it can be summarized by business unit and subsidiary.
	4	Determines whether the summary level of the billed-to-date total is by employee and supplier.

Retrieval Code and Source Table	Para-meter	Explanation
	5	This parameter applies only to pay items for time and materials (T & M) with components. It determines whether the system prints amounts related to the base transactions or to the specified component code.
CUSTOMER Customer Master (F0301)	1	The data item related to the information you want to retrieve from the F0301 table.
	2	Determines the address number for the information to be printed. For example, you could specify the address number for the company or job customer.
	3	Determines the address number for the alternate address information, such as the alternate billing number or parent number.
DATE No source table	N/A	This retrieval code lets you print the system date on the invoice. No parameters are applicable to this code.
DIVIDE No source table	1-4	A mathematical function performed over retrieved information. For that information, specify the numbers of the retrieval reference codes in the parameter fields. For example, if the calculation relates to retrieval reference code numbers 7 and 10, you would specify &7 in parameter 1 and &10 in parameter 2. You can also specify other numeric values involved in the calculation, such as -1, .10, or 100.
EQUIPMENT Item Master (F1201)	1	The data item related to the information you want to retrieve from the F1201 table.
	2	Determines whether the information relates to equipment involved in the work (equipment worked) or equipment on which work is performed (equipment worked on). If you operate a crane, for example, the crane is the equipment worked. If you use a timing machine to fix the crane's motor, the crane then becomes the equipment worked on and the timing machine is the equipment worked.
INV TEXT Service Billing Invoice/Batch Text (F4813)	1	Determines the level within a batch from which the free-form text for the invoices is retrieved. The levels are batch, invoice, pay item, and transaction.
MILE/PROG Milestone/Progress Billing (F5216 and F52161)	1	The data item related to the information you want to retrieve from either the F5216 table or F52161 table. **Note:** To display progress billing information from the Table Field Description window, you must enter F52161.

Retrieval Code and Source Table	Para-meter	Explanation
MULTIPLY No source table	1-4	A mathematical function performed over retrieved information. For that information, specify the numbers of the retrieval reference codes in the parameter fields. For example, if the calculation relates to retrieval reference code numbers 7 and 10, you would specify &7 in parameter 1 and &10 in parameter 2. You can also specify other numeric values involved in the calculation, such as -1, .10, or 100.
NOTES (This retrieval code applies only to Address Book notes.) Generic Text (F0016)	1	Determines the address number for the information to be printed. For example, you could specify the address number for the company or job customer. Do not specify data items for this parameter because only the text can be retrieved.
	2	Determines the address number for the alternate address information, such as the alternate billing number or parent number.
PAGE No source table	N/A	This retrieval code lets you print the page number on the invoice. No parameters are applicable to this code.
PAGE OF No source table	N/A	This retrieval code lets you print the page number and the total page count, such as page 3 of 4 pages. No parameters are applicable to this code.
PAY ITEM Owner Pay Item Detail (F5202)	1	The data item related to the information you want to retrieve from the F5202 table.
PAY TYPE Payroll Transaction Constants (F069116)	1	The data item related to the information you want to retrieve from the F069116 table.
PHONE NO Address Book - Contact Phone Number (F0115)	1	The data item related to the information you want to retrieve from the F0115 table.
	2	Determines the address number for the information to be printed. For example, you could specify the address number for the company or job customer.
	3	Determines the address number for the alternate address information, such as the alternate billing number or parent number.
SUBTRACT No source table	1-4	A mathematical function performed over retrieved information. For that information, specify the numbers of the retrieval reference codes in the parameter fields. For example, if the calculation relates to retrieval reference code numbers 7 and 10, you would specify &7 in parameter 1 and &10 in parameter 2. You can also specify other numeric values involved in the calculation, such as -1, .10, or 100.
SUMMARY Invoice Summary Workfile (F4822)	1	The data item related to the information you want to retrieve from the F4822 workfile.

Retrieval Code and Source Table	Para-meter	Explanation
SUPPLIER Supplier Master (F0401)	1	The data item related to the information you want to retrieve from the F0401 table.
	2	Determines the address number for the information to be printed. For example, you could specify the address number for the company or job customer.
	3	Determines the address number for the alternate address information, such as the alternate billing number or parent number.
TERMS Payment Terms (F0014)	1	The data item related to the information you want to retrieve from the F0014 table.
TIME No source table	N/A	This retrieval code lets you print the system time on the invoice. No parameters are applicable to this code.
TOTAL No source table	1	A register number related to a rolling total amount from any format definition connected to the format layout.
	2	Determines whether the register in parameter 1 is reset to zero after it has been totaled. When the register is reset, the subsequent total does not include the prior total.
WHOSWHO Address Book - Who's Who (F0111)	1	The data item related to the information you want to retrieve from the F0111 table.
	2	Determines the address number for the information to be printed. For example, you could specify the address number for the company or job customer.
	3	Determines the address number for the alternate address information, such as the alternate billing number or parent number.
	4	The line number related to the information you want to retrieve. The number, which is automatically assigned by the system, is displayed on the Mailing Name Addition Window (P0111W), which is accessed from Who's Who (P0111). The primary mailing name is line number 0, and other names related to an address are greater than zero. These numbers begin with 1 and are incremental. CAUTION: If you delete a name on the Who's Who form, the remaining names keep the original line numbers. The line numbers, therefore, would not correlate with the new sequence of names as it appears on the Who's Who form.
WO Work Order Master (F4801)	1	The data item related to the information you want to retrieve from the F4801 table.

Retrieval Code and Source Table	Para-meter	Explanation
WO TEXT Work Order Instructions (F4802)	1	The record type for work orders related to the text you want to retrieve from the F4802 table.
WORKFILE Billing Workfile (F4812)	1	The data item related to the information you want to retrieve from the F4812 workfile.

C

Format Types

You use the Invoice Format Copy Window to locate the specific format definition forms that you want to review or copy. The Invoice Format Copy Window displays a list of all the formats defined in your system, with the exception of alternate header formats. You can identify each of the format types that are associated with a layout structure by using a combination of the following information:

- Line numbers associated with specific grouping key ranges
- Data item names associated with either a major or detail sequence
- Format types, such as detail, header, or total, identified by the respective codes of blank, 1, or 2

The following table lists the field combinations you use to identify the different format types that the system displays in the Invoice Format Copy Window:

Format Type	Field Combinations
Overall header for invoice layout (F13 from Invoice Layout Revisions, P4850)	Line number - blank Data item - blank Format type - 1
Overall invoice total for invoice layout (F15 from P4850)	Line number - blank Data item - blank Format type - 2
Detail header for a grouping key range (Option 5 from P4850)	Line number - XXX Data item - blank Format type - 1
Detail total for a grouping key range (Option 7 from P4850)	Line number - XXX Data item - blank Format type - 2
Detail detail for grouping key range (Option 6 from P4850)	Line number - XXX Data item - blank Format type - blank
Header detail sequence for grouping key range (Option 4 from P4850, then Option 1)	Line number - XXX Data item - AAAA Format type - 1

Format Type	Field Combinations
Total detail sequence for grouping key range (Option 4 from P4850, then Option 3)	Line number - XXX Data item - AAAA Format type - 2
Header major sequence for layout structure (F17 from P4850, then Option 1)	Line number - blank Data item - AAAA Format type - 1
Total major sequence for layout structure (F17 from P4850, then Option 3)	Line number - blank Data item - AAAA Format type - 2

D

Field Derivations for the F4812

The following table shows the source of the information for each field in the Billing Workfile (F4812). For many fields, the source depends on specific conditions and other retrieval information.

Use the following list of table IDs and names to identify the sources specified in the table.

- F0005 User Defined Codes
- F0006 Business Unit Master
- F0014 Payment Terms
- F0101 Address Book Master
- F0411 A/P Account Ledger
- F06116 Employee Transactions Detail
- F0618 Payroll Transaction History
- F0624 Burden Distribution
- F069116 Payroll Transaction Constants
- F0901 Account Master
- F0911 Account Ledger
- F1201 Item Master
- F4111 Item Ledger
- F4311 Purchase Order Detail
- F4801 Work Order Master
- F48091 Billing System Constants
- F48096 Cost Plus Markup Information
- F4812 Billing Workfile
- F48127 Tax Derivation Information
- F5201 Contract Billing Master
- F5202 Contract Billing Line Detail
- F5212 T&M Cross-Reference Accounts

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDAA (Amount)	Default	GLAA / F0911
	GLDCT (Document Type) field in the F0911 record contains T2.	YTGPA (Gross Pay) / F0618 orF06116
	GLDCT field in the F0911 record contains T2. The transaction relates to a burden reconciliation.	J#BDA (Burden Amount) / F06116
	GLDCT field in the F0911 record contains T4.	YTRCPY (Recharge Amount) / F0618 or F06116
	GLDCT field in the F0911 record contains T5.	YTEQGR (Equipment Gross) / F0618 or F06116
WDAA2 (Amount)	This field is currently not active.	
WDACL0 (Rate Group)	GLASID (Serial Number) field in the F0911 record is not blank.	FAACL0 / F1201
WDADCI (Invoice Markup Amount)	WQGTYP (Generation Type) field in the F48096 record contains 1.	WQAA (Amount) / F48096
WDADCR (Revenue Markup)	WQGTYP (Generation Type) field in the F48096 record contains 2.	WQAA (Amount) / F48096
WDAGS (Suspend Aging)	WDAGS	
WDAID (Account ID)	Default.	GLAID / F0911
	The billing transaction is for burden.	GMAID (Short Account ID) for the burden account / F0901
WDAID5 (Account ID)	Contract Billing. G6ACCO (Account Override Flag) field in the F5202 record is blank.	G6MCU, G6OBJ, and G6SUB (Business Unit, Object, and Subsidiary) / F5202
WDAID6 (Account ID)	This field is currently not active.	
WDAN8 (Address Number)	Default.	GLAID / F0911
	GLDCT (Document Type) field in the F0911 record contains T2, T4, or T5.	YTAN8 / F0618 or F06116

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDAN8O (Customer/Receivable Address Number)	Default GLMCU (Business Unit) field in the F0911 record.	MCAN80 for the related business unit / F0006
	GLSBL (Subledger) field in the F0911 record is not blank. GLSBLT (Subledger Type) field in the F0911 record contains W. WZCNBS (Customer Number Basis) field in the F48091 record contains 1.	WAAN8 (Address Number) for the related subledger / F4801
	Contract Billing.	G4AN80 / F5201
WDAREX (Accounts Receivable)	WDAREX / F4812	
WDBCI (Billing Control ID)	Automatically assigned with the Next Numbers facility (system 48. index 02)	
WDBDPN (Burden Pending)	Automatically assigned	
WDBLKK (Block of Composite Key)	Automatically assigned	
WDBRT (Revenue Rate)	WQGTYP (Generation Type) field in the F48096 record contains 2.	WQBRT (Billing Rate) / F48096
WDBRTI (Invoice Rate)	WQGTYP field in the F48096 record contains 1.	WQBRT / F48096
WDBTOL (Total Billed Amount)	Automatically calculated	
WDCAP (Cap or Override Rate)	WQGTYP (Generation Type) field in the F48096 record contains 2.	WQCAP / F48096
WDCAPI (Cap or Override Rate)	WQGTYP field in the F48096 record contains 1.	WQCAP / F48096
WDCBLC (Coding Block Change)	Automatically assigned	
WDCCOD (Component Code)	AFCCOD / F4860	
WDCCR (Component Cost Rate Table)	WQCCR field in the F48096 record is not blank.	WQCCR / F48096
WDCIDS (Foreign Invoice Discount)	This field is currently not active.	
WDCINR (Component Invoice Rate Table)	WQCINR field in the F48096 record is not blank.	WQCINR / F48096
WDCITA (Foreign Invoice Taxable Amount)	This field is currently not active.	
WDCITL (Foreign Invoice Amount)	This field is currently not active.	
WDCITX (Foreign Invoice Tax)	This field is currently not active.	

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDCLNK (Component Link)	Automatically assigned	
WDCO (Company)	GLCO / F0911	
WDCOCH (Contract Change Order Number)	Contract Billing.	G5COCH / F5212
WDCRCD (Currency Code)	GLCO (Company) field in the F0911 record.	CCCRCD related to the company / F0010
WDCRCE (Currency Code)	This field is currently not active.	
WDCRCF (Currency Code)	Billing Currency CRCD/F0301, CRCF/F5202	
WDCRR (Exchange Rate)	Automatically assigned	
WDCRRD (Exchange Rate - Divisior)	Automatically assigned	
WDCRRM (Mode F)	Automatically assigned CRRM/F5202	
WDCRVR (Component Revenue Rate)	WQGTYP (Generation Type) field in the F48096 record contains 2.	WQCRVR / F48096
WDCTRY (Century)	GLCTRY / F0911	
WDDAGO (Age Override Date - B)	WDDAGO	
WDDC (Description -Compr)	YTAN8 (Address Number) field in either the F0618 or F06116 record.	ABDC / F0101
WDDCP (Discount Percent)	WDAN80 (Customer/Receivable Address Number) field in the F4812 record. ABATR (Receivable Y/N) field in the F0101 contains Y.	PMDCP / F0014
WDDCT (Document Type)	GLDCT / F0911	
WDDCTI (Document Type)	Contract Billing.	Processing option for the Invoice Generation program (P52800)
	Service Billing.	Processing option for the Invoice Generation program (P48121)
WDDCTO (Order Type)	Contract Billing.	G5DCTO / F5212
WDDEJ (Date Entered)	Automatically assigned	
WDDGJ (G/L Date)	This field is currently not active.	
WDDGL (G/L Date)	GLDGJ (G/L Date) / F0911	
WDDI (Invoice Date)	GLICUT (Batch Type) field in the F0911 record contains V or W.	RPDGJ (G/L Date) / F0411 or RPDIVJ (Invoice Date) / F0411
WDDOC (Document Number)	GLDOC / F0911	

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDDOCM (Payment/ Item Number)	This field is currently not active.	
WDDOCO (Order Number)	Contract Billing.	G5DOCO / F5212
WDDOCZ (Order Number)	Automatically assigned with the Next Numbers facility (system 03- index 01)	
GLICUT field contains V.	RPDSVJ / F0411	
GLDSVJ and RPDSVJ fields are blank. GLICUT field contains O. The F4111LC file exists.	ILTRDJ (Order Date) / F4111	
WDDWNL (Download Flag)	Automatically assigned	
WDEBAS (Date -Effectivity Basis)	WZEBAS field in the F48091 record contains 1.	GLDGL (G/L Date) / F0911
	WZEBAS field contains 2.	GLDSVJ (Service/Tax Date) / F0911
WDELGC (Eligibility Code)	Default. GLMCU, GLOBJ, and GLSUB (Business Unit, Object Account, and Subsidiary) fields in the F0911 record.	GMBILL (Billable - Y/N) / F0901
	Burden. J#MCU, J#OBJ, and J#SUB (Business Unit, Object Account, and Subsidiary) fields in the F0624 record.	GMBILL / F0901
	WZPRRR (Journal Generation Control) field in the F48091 record contains 3 or 4. GMBILL field in the F0901 record contains 1, 2, 3, or 4.	GMBILL / F0901
	WZPRRR field contains 3 or 4.	GMBILL / F0901
	WZPRRR field in the F48091 record does not contain 3 or 4.	WZPRRR / F48091
WDEQCG (Equipment Worked)	GLDCT (Document Type) field in the F0911 record contains TE.	GLASID (Serial Number) / F0911
	GLDCT field contains T5.	YTEQCG / F0618 or F06116
	GLDCT field does not contain TE, T2, T4, or T5.	Blank
WDEQWO (Equipment Worked On)	GLDCT field contains TE.	Blank
	GLDCT field contains T5.	YTEQWO / F0618 or F06116
	GLDCT field does not contain TE, T2, T4, or T5.	GLASID (Serial Number) / F0911

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDERC (Equipment Rate Code)	GLDCT field contains TE.	GLALTY (ID Type) / F0911
	GLDCT field contains T5.	YTERC / F0618 or F06116
	GLDCT field does not contain TE, T2, T4, or T5.	Blank
WDEXA (Explanation -Name A)	Default.	GLEXA / F0911
	GLDCT field contains T2, T4, or T5. YTAN8 (Address Number) field in either the F0618 or F06116 record.	ABALPH (Alpha Name) / F0101
WDEXR (Explanation - Remark)	WQEXR field in the F48096 record is blank. GLDCT field does not contain T2, T4, or T5.	GLEXR / F0911
	WQEXR field in the F48096 record is blank. GLDCT field contains T2, T4, or T5.	YTEXR / F0618 or F06116
	WQEXR field in the F48096 record is not blank.	WQEXR / F48096
	Burden. Of the following conditions, the one that the system finds first determines the source: A) J#FRTY (Fringe Type) field in the F0624 record contains FB. B) J#PTAX (Tax Type) field in the F0624 record is not blank. C) J#PDBA (PDBA Code) field in the F0624 record is greater than zero. YCDL01 field in the F069116 record is not blank. YCDL01 field in the F069116 record is blank.	DRDL01 (Description) related to the fringe type / F0005 DRDL01 related to the tax type / F0005 YCDL01 / F069116 YCEXA (Explanation - Name A) / F069116
WDEXR1 (Tax Explanation Code)	Contract Billing	G4EXR1 / F5201
	Service Billing.	WOEXR1 / F48127 MCEXR1 / F0006 A5EXR1 / F0301
WDFRTN (Foreign Retainage)	This field is currently not active.	
WDFTOL (Foreign Total Billed)	This field is currently not active.	
WDFY (Fiscal Year)	GLFY / F0911	
WDGLC (G/L Offset)	G6GLC / F5202 (Contract Billing) WIGLC / F48128 (Service Billing)	

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDHDCB (Hold Contract Billing) WDHDCB (Hold Contract Billing) WDHLD (Hold Code)	Automatically assigned (based on Address Book Control Revisions) Automatically assigned (based on Address Book Control Revisions) WDHLD	
WDHMCU (Home Business Unit)	Default.	GLHMCU / F0911
GLHMCU is blank. GLDCT (Document Type) field in the F0911 record does not contain T2, T4, or T5. GLMCU field is blank. GLASID (Serial Number) field in the F0911 record.	FAMCU (Business Unit) related to the serial number / F1201	
GLHMCU is blank. GLICUT (Batch Type) field in the F0911 record contains N. GLDOC, GLDCT, GLKCO, and GLDGL (Document Number, Type, Company, and G/L Date) fields in the F0911 record.	ILMCU / F4111	
GLHMCU is blank. GLICUT field contains either V or W. GLDOC, GLDCT, and GLKCO fields.	RPMCU / F0411	
GLHMCU is blank. GLICUT field contains 0. GLPO, GLPDCT, GLKCO, GLPSFX, and GLLNID (P.O. Number, Document Type, Company, Suffix, and Line Number) fields in the F0911 record.	PDMCU / F4311	
GLHMCU is blank. GLICUT field contains G. GLMCU in the F0911 record.	MCMCUS (Project Number) / F0006	
GLDCT contains T2, T4, or T5.	YTHMCU / F0618 or F06116	
WDICU (Batch Number)	Automatically assigned with the Next Numbers facility (system 00. index 01)	
WDICUA (Active Batch Number)	Automatically assigned with the Next Numbers facility (system 00. index 01)	
WDICUJ (Revenue Batch Number)	Automatically assigned with the Next Numbers facility (system 00. index 01)	
WDIDSC (Invoice Discount Amt)	Automatically assigned	
WDIJST (Invoice Journal Status)	Automatically assigned	
WDITAM (Invoice Tax)	Automatically calculated	

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDITOL (Total Invoiced Amount)	Automatically calculated	
WDITXA (Invoice Taxable Amount)	Automatically calculated	
WDIVD (Invoice Date)	Automatically assigned	
WDJBCD (Job Type)	GLDCT (Document Type) field in the F0911 record does not contain T2, T4, or T5.	GLJBCD / F0911
	GLDCT field contains T2, T4, or T5.	YTJBCD / F0618 or F06116
WDJBST (Job Step)	GLDCT field does not contain T2, T4, or T5.	GLJBST / F0911
	GLDCT field contains T2, T4, or T5.	YTJBST / F0618 or F06116
WDJELN (Journal Entry Line Number)	GLJELN / F0911	
WDJMCU (Host Business Unit)	Default.	MCMCUS (Project Number) / F0006
	Contract Billing.	G4JMCU / F5201
	GLDCT (Document Type) field in the F0911 record contains T2, T4, or T5. G4JMCU field in the F5201 record for the contract is not blank.	MCMCUS / F0006
	A contract does not exist.	
WDJOBN (Workstation ID)	Job name from the program status data structure	
WDJRSP (Journal Status Code)	Automatically assigned	
WDJRST (Journal Status Code)	Automatically assigned	
WDJTAX (Journaled Tax)	WDEXR1 (Tax Explanation Code) field in the F4812 record contains C, E, or V.	
	WDEXR1 field does not contain C, E, or V.	
WDJTXF (Journaled Tax)	This field is currently not active.	
WDKCO (Document Company)	GLKCO / F0911	
WDKCOI (Document Company)	Contract Billing.	G5KCOO / F5212
WDKCOO (Oder Number Document Company)	Contract Billing.	G5KCOO / F5212
	Service Billing.	GLCO / F0911

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDLBAS (Date - Labor Effectivity Basis)	WZLBAS field in the F48091 record contains 1. GLDCT (Document Type) field in the F0911 record contains T2, T4, or T5.	YTDGL (G/L Date) / F0618 or F06116
	WZLBAS field contains either 2 or 3. GLDCT field contains T2, T4, or T5.	YTDWK (Work Date) / F0618 or F06116
	WZLBAS field contains 4. GLDCT field contains T2, T4, or T5.	YTPPED (Pay Period Ending Date) /F0618 orF06ll6
WDLNID (Line Number)	Contract Billing.	G5LNID / F5212
WDLSPM (Pament Completed)	This field is currently not active.	
WDLSSQ (Last Sequence)	Automatically assigned	
WDLT (Ledger Type)	GLLT / F0911	
WDMCU (Business Unit)	Default.	GLMCU / F0911
	Burden.	J#MCU / F0624
WDOBJ (Object Account)	Default.	GLOBJ / F0911
	Burden.	J#OBJ / F0624
WDODCT (Original Document Type)	GLODCT / F0911	
WDODOC (Original Document Number)	GLODOC / F0911	
WDOGNO (Original Line Number)	GLLNID (Line Number) / F0911	
WDOKCO (Original Order Document)	GLOKCO / F0911	
WDOPIM (Contract Billing Line)	Contract Billing.	G5OPIM / F5212
WDOPSQ (Operations Sequence)	GLOPSQ / F0911	
WDOSFX (Original Pay Item)	GLOSFX / F0911	
WDPCFG (Burden Flag)	Default.	Blank
	Burden records exist in F0624 table.	Automatically assigned 1
WDPCIM (Percentage)	Generation type is 1.	WQPERT (Percentage) / F48096
WDPCKO (Document Company)	GLPKCO (Purchase Order Document Company) / F0911	
WDPCTN (Parent Contract Number)	G4PCTN / F5201	
WDPCTT (Parent Contract Type)	G4PCTT / F5201	

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDPDBA (PDBA Code)	Default.	Blank
	GLDCT (Document Type) field in the F0911 record contains T2, T4, or T5.	YTPDBA / F0618 or F06116
	Burden.	J#PDBA / F0624
WDPDCT (Purchase Order Document)	GLPDCT / F0911	
WDPERT (Percentage)	Generation type is 2.	WQPERT (Percentage) / F48096
WDPID (Program ID)	Program name from the program status data structure	
WDPKCO (Purchase Order Document Company)	GLPKCO / F0911	
WDPMSQ (Payment Sequence Number)	This field is currently not active.	
WDPN (G/L Period Number)	GLPN / F0911	
WDPO (P.O. Number)	GLPO / F0911	
WDPRET (Percent Retainage)	This field is currently not active.	
WDPRIC (Unit Price)	Automatically calculated	
WDPRSQ (Parent Sequence Number)	Automatically assigned	
WDPRTF (Printed Flag)	Automatically assigned	
WDPRTR (Transaction Number)	GLDCT (Document Type) field in the F0911 record contains T2, T4, or T5.	YTPRTR / F0618 or F06116
WDPSFX (Purchase Oder Suffix)	GLPSFX / F0911	
WDPTAX (Tax Type)	Default.	Blank
	Burden.	J#PTAX / F0624
WDPTFG (Pass-Through Invoicing)	This field is currently not active.	
WDRDJ (Release Date)	WDRDJ	
WDRGLC (Retention G/L Offset)	WIRGLC / F48128	
WDRP11 (Category Code Oil)	WDHMCU (Home Business Unit) field in the F4812 record.	MCRP11 / F0006
WDRP12 (Category Code 012)	WDHMCU (Home Business Unit) field in the F4812 record.	MCRP12 / F0006
WDRTNG (Retainage)	Automatically calculated	
WDRTPS (Retainage -Prior -)	Automatically calculated	

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDR001 (Bill Item Code)	Default.	GMR001 for the account number in the source transaction / F0901
	Burden.	GMR001 for the burden account number / F0901
WDR002 (Category Code 002)	Default.	GMR002 for the account number in the source transaction / F0901
	Burden.	GMR002 for the burden account number / F0901
WDR003 (Location)	Default.	GMR003 for the account number in the source transaction / F0901
	Burden.	GMR003 for the burden account number / F0901
WDSBAR (Reason Code)	WDSBAR	
WDSBL (Subledger)	GLSBL / F0911	
WDSBLT (Subledger Type)	GLSBLT / F0911	
WDSBL5 (Subledger)	This field is currently not active.	
WDSBL6 (Subledger)	This field is currently not active.	
WDSBSK (Summarization Key)	Automatically assigned	
WDSBSQ (Sequence Number)	Automatically assigned	
WDSBT5 (Subledger Type)	This field is currently not active.	
WDSBT6 (Subledger Type)	This field is currently not active.	
WDSCSQ (Secondary Sequence Number)	Automatically assigned	
WDSFX (Pay Item)	Automatically assigned	
WDSLNK (Split Link)	Automatically assigned	
WDSTA1-WDSTA5 (Tax Authority Amount)	These fields are currently not active.	GLSUB / F0911
WDSTF1 - WDSTF5 (Foreign Tax Amount)	These fields are currently not active.	
WDSUB (Subsidiary)	Default.	
	Burden.	J#SUB / F0624
WDTBDT (Table Basis Date)	WZEBAS (Date - Effectivity Basis) field in the F48091 record contains 1.	GLDGL (G/L Date) / F0911
	WZEBAS field contains 2.	GLDSVJ (Service/Tax Date) / F0911

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDTCLS (Classification)	Components (provisional burdens)	Value is 0.
	GLDCT (Document Type) field in the F0911 record contains either T2 or T4.	Value is 1.
	Burden	Value is 2.
	GLDCT field contains TE.	Value is 3.
	GLDCT field does not contain T2, T4, or T5. A) Related records exist in both F0911 and F1201 tables. Both records have the same serial number (GLASID and FAASID, respectively). B) GLICUT (Batch Type) field in the F0911 record contains N. GLDOC, GLDCT, GLKCO, and GLDGL (Document Number, Type, Company, and G/L Date) fields in the F0911 record. C) GLICUT field contains either V or W. GLDOC, GLDCT, and GLKCO fields in the F0911 record. D) GLICUT field contains G. A related record exists in F0006 table.	Value is 3. Value is 4. Value is 5. Value is 6.
	None of the previous conditions are satisfied, and the GLPO (P.O. Number) field in the F0911 record is not blank.	Value is 5.
WDTOG (Taxable or Gross)	Contract Billing. F4812 record contains tax rate/area and explanation codes.	Value is 1.
	Service Billing. F48127 record contains tax rate/area and explanation codes.	Value is 1.
	Neither of the previous conditions exist.	Blank

F4812 DATA ITEM	CONDITIONS and RETRIEVAL INFORMATION	DATA ITEM / SOURCE TABLE
WDTORG (Transaction Originator) WDTX (Purchasing Taxable)	Contract Billing. F4812 record contains tax rate/area and explanation codes.	Automatically assigned Value is Y.
	Service Billing. F48127 record contains tax rate/area and explanation codes.	Value is Y.
	Neither of the previous conditions exist.	Value is N.
WDTXA1 (Tax Rate/ Areas)	Contract Billing.	G4TXA1 / F5201
	Service Billing.	WOTXA1 / F48127
WDTYKY (Key Type)	This field is currently not active.	
WDU (Units)	Default.	GLU / F0911
	GLDCT (Document Type) field in the F0911 record contains either T2 or T4.	YTPHRW (Hours Worked) / F0618 or F06116
	GLDCT field contains T5.	YTEQHR (Equipment Hours) /F06l8orF06ll6
WDUM (Unit of Measure)	Default.	GLUM / F0911
	GLDCT field contains T2, T4, or T5.	Automatically assigned HR
WDUPMJ (Date Updated)	Automatically assigned	
WDUPMT (Time Last Updated)	Automatically assigned	
WDUSER (User ID)	Automatically assigned	
WDVINV (Invoice Number)	GLVINV / F0911	
WDVOID (Void - V)	Automatically assigned	
WDWR01 (Phase)	GLWR01 / F0911	
WDWR07 (Service Type)	GLSBL (Subledger) field in the F0911 record is blank. GLSBLT (Subledger type) field contains W.	WAWR07 / F4801

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