

### 3.0 Appendix B – Project Aspire Enhancement Functional Design

<b>ADML ID</b>	1757
<b>ADML Description</b>	Workflow Configuration
<b>ADML Tech#</b>	1757

#### 3.1 Background

##### 3.1.1 Functional Requirement

Workflow configuration for Project Aspire includes multiple Approval and Notification processes. These approval processes are Agency specific, therefore containing a large amount of Workflow objects. The Approval Processes incorporated into this ADML are Requisition, Purchase Order and Voucher Approval. These approval processes use worklist notifications for the routing. Asset Management has a delivered Asset Disposal Notification which will need to be deactivated in Aspire.

The following requirements will be met under this ADML:

- FPP-014: Voucher Approval
- PRT-004: Recurring documents require approval
- PGP-004: Notify when change to document
- PGP-006: Purchase Order Approval
- PGP-006: Requisition Approval
- PGP-012: Approval for changes on Purchase Order
- PGP-012: Approval for changes on Requisition
- PPR-005: Agency specific approvals
- SME-001: Notification for documents
- SGR-004: Pre-Save validation on documents

- SWF-001: Approval for documents
- SWF-005: Prohibit incorrect approvals
- SWF-006: Provide at least 5 levels of approval

### **3.1.2 Delivered Functionality**

PeopleSoft delivers one Approval Rule Set, Business Process and Activity object for each of the Approval Processes (Requisition/Purchase Order/Voucher). This allows for only one configured approval process available for each of the business processes to be shared by all agencies (PO Business Unit/AP Business Unit).

The delivered Approval Rule Sets only contain three approval steps and incorporate Administrative Area and Business Unit as route controls. The corresponding Activity objects are designed to only accommodate these two route controls.

Requirement PRT-004, SME-001 and SGR-004 are met by PeopleSoft delivered functionality. All documents including recurring documents require going through the configured approval process. Worklist notifications are sent to the appropriate people (approvers) that are required to view the document. Ad-hoc email notifications are also available to users for sending out notifications to specific, non-required personnel. Delivered PeopleCode handles Pre-Save validation of values on the document ensuring only correct values and combination of chartfields are selected.

### **3.1.3 Gap Description**

To meet requirements FPP-014, PGP-006, PPR-005, PRT-004, SWF-001, SWF-005, and SWF-006 agency specific approval processes must be configured. Each agency will have its own Approval Rule Set. Only “Amount Approval” will be configured using chartfield values as route controls.

A separate document will contain a detailed description of each agency, and their corresponding approval processes. These will be determined on a wave-by-wave basis.

For Requisition Approvals the following will be available to agencies as route controls:

- Business Unit
- Organization

- Commodity Code

For Purchase Order Approvals the following will be available to agencies as route controls:

- Business Unit
- Organization
- Account

For Voucher Approvals the following will be available to agencies as route controls:

- Business Unit
- Organization
- Account

Each of the Route Controls will have an associated Route Control Type definition.

The “Administrative Area” route control was removed from the delivered approval process to help performance. Each route control performs an outer join during the approval process, which puts a strain on the approval process. Minimizing the number of route controls is critical to the performance of batch and online approval routing.

PeopleSoft delivered approval processes only accommodate two route controls, Business Unit and Administrative Area. PeopleSoft does allow for up to five route controls. New Activities for each Business Process will need to be created accommodating the new combinations of route controls. The route control values used from the document will need to be added onto the corresponding Business Process’s Approval Page. This will be accomplished using a custom view for each document.

For Requisitions the view will select the commodity code from the line level record. If multiple lines exist, the view will select the Distribution line with the largest dollar amount. From this distribution line, the views will select the Organization (Department ID) for routing.

For Purchase Orders the view will select the line with the largest dollar amount. If multiple lines exist, the view will select the distribution line with the highest dollar amount. The views will select the Account and Organization for routing from the distribution line.

For Vouchers, a custom view will be created selecting the distribution line with the largest dollar amount. From this Distribution line, the view will select the Organization and Account for routing.

The approval page for requisitions and purchase orders will be modified to contain “Approval Radio Buttons” similar to the Voucher approval page. The “Save” button will be removed on the three approval pages and FieldChange PeopleCode will be added to the radio buttons. Once a user selects an approval option (Approve/Deny/Recycle), the code will initiate a “DoSave”. This commits the user to their transaction and prevents them from changing their selection. Doing this helps prevent incorrect worklist entries and minimizes incorrect routing.

The search record for the approval pages will also be modified. The search record will now only show documents that are pending approval, and exist in either the user’s worklist, or in nobody’s worklist. This ensures the user only initiates documents into the approval process (in nobody’s worklist), or that they are the appropriate user (in their worklist) approving the document. This helps prevent incorrect worklist entries and minimizes incorrect routing.

The Approval Rule Sets for each agency will have various approval steps. For each distinct approval step defined in all the Rule Sets, a Workflow Security Role must be created.

I.e. The following Business Units have the following Requisition approval steps defined:

52000: Step 1 → Step 2 → Step 3

43000: Step 1 → Step 2

72000: Step 1 → Step 2

→ Step 2B

Combined, there are four (1, 2, 2b, 3) distinct approval steps defined for Requisition Approval. Each of these steps will have a Workflow Security Role defined. Only users with the corresponding role will be notified, and be able to approve that step.

Delivered PeopleCode meets requirement PGP-004 and PGP-012, but a slight modification is still required. When the amount on the requisition is changed, it requires re-approval. This notifies the required people (approvers) that the document has changed. The modification will also check if any of the values used as route controls have also been changed. If so, then the document must be re-approved.

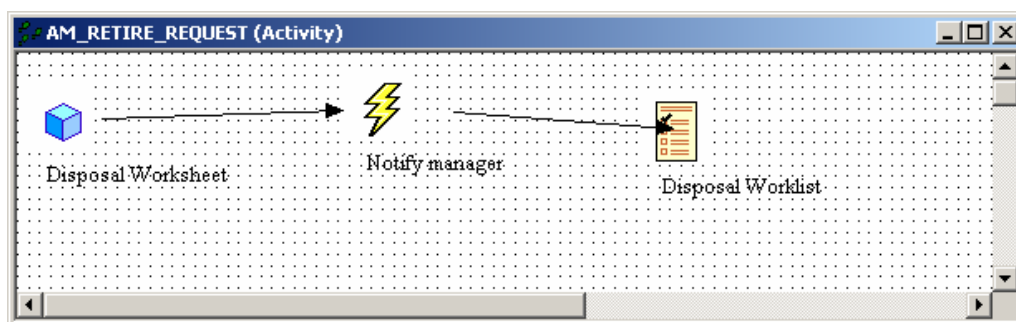
Each of the designated route controls has many values. When routing is based upon different combinations of route controls, one must factor in every combination of values for the route controls used. To associate a user to a specific combination of route control values, Route Control Profiles must be configured. These Route Control Profiles must then be tied to the corresponding Workflow Security Role in the user’s profile. These Route Control Profiles will be created using a SQL script and migrated using a Data Mover script. The user’s profile will also be updated using SQL scripts to associate the Route Control Profiles to the correct users.

For Requisition and Purchase Order Approval, each Purchasing Business Unit must have the appropriate Approval Rule Set configured. This will be created initially using a SQL script, and migrated using a Data Mover script.

For Voucher Approval, each AP Business Unit must have the table set control configured to point to a corresponding Payables Option Set ID. The Payables Options for each Set ID will then have the corresponding Approval Rule Set configured. This will be created initially using a SQL script, and migrated using a Data Mover script.

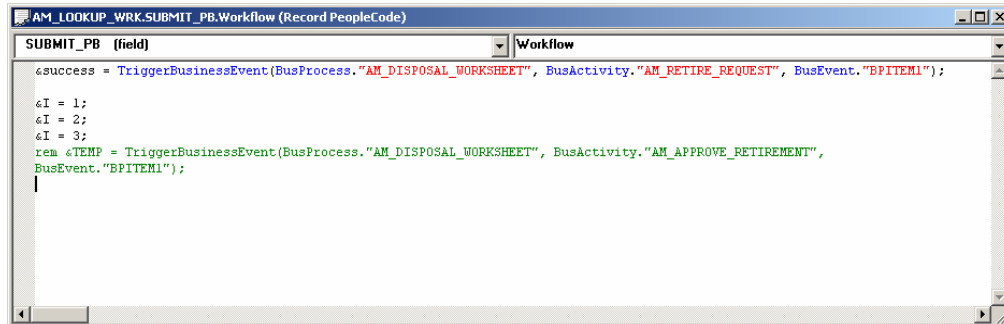
Deactivating the Disposal Worksheet notification will require un-checking the “Active” flag in the associated Activity’s Event. The PeopleCode triggering the Business Process may also be commented out.

**Activity:**



**“Notify Manager” Event Properties**

## PeopleCode



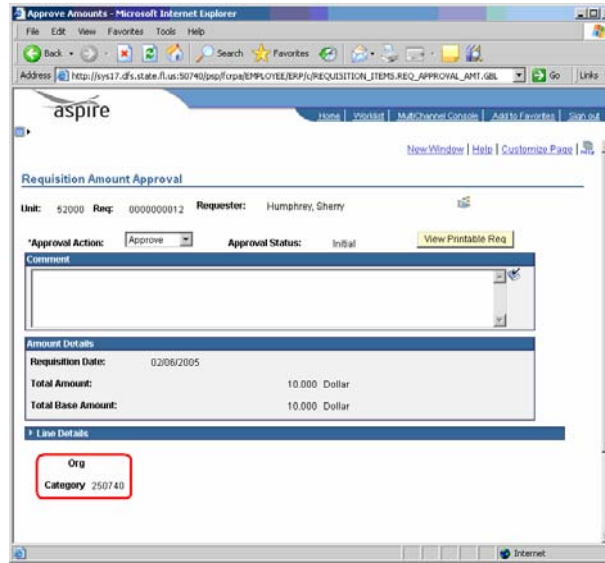
```
<success = TriggerBusinessEvent(BusProcess."AM_DISPOSAL_WORKSHEET", BusActivity."AM_RETIRE_REQUEST", BusEvent."BPITEM1");  
<I = 1;  
<I = 2;  
<I = 3;  
rem <TEMP = TriggerBusinessEvent(BusProcess."AM_DISPOSAL_WORKSHEET", BusActivity."AM_APPROVE_RETIREMENT",  
BusEvent."BPITEM1");  
|
```

### 3.2 Description of New Functionality

This ADML will allow for Agency specific Voucher, Requisition and Purchase Order Approval processes. Agencies will attend Workflow Workshops where they will be presented with options allowing them to configure individual approval rule sets for each business process. They will fill out questionnaires providing the approval configuration required by their agency. The questionnaire responses will be used for creating the Approval Rule Sets, and associating the workflow security roles and corresponding route control profiles to their users. The workshops and configuration data gathering will be handled on a Wave-by-Wave basis. Several modifications are also being done to help minimize workflow errors.

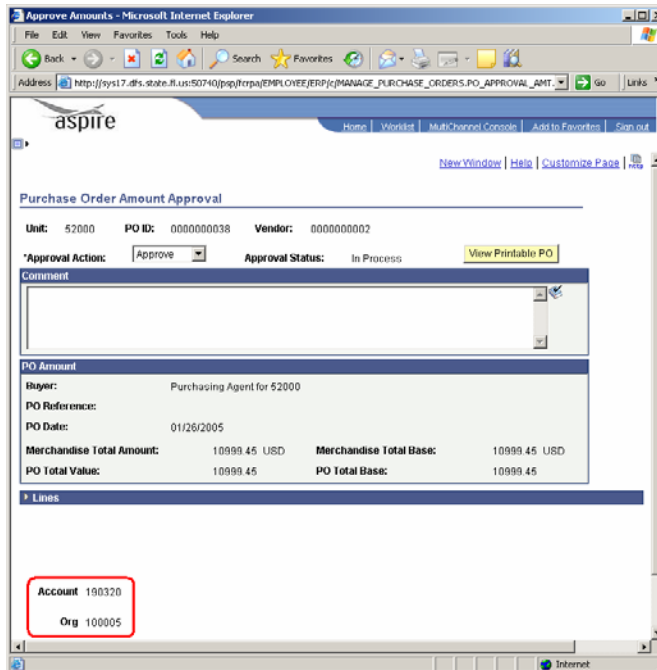
### 3.3 Navigation path

**Requisition Approval:** Purchasing → Requisitions → Approve Amounts



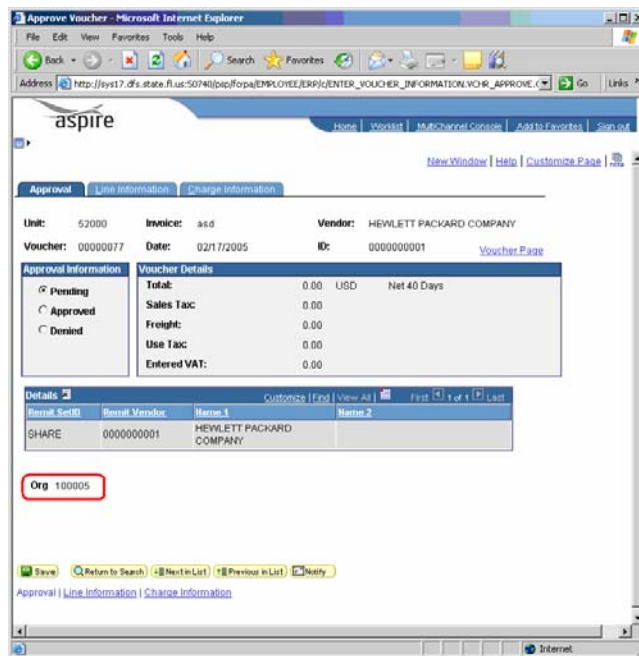
Shown are the additional Route Control values that would be added to the page.

**Purchase Order Approval: Purchasing → Purchase Order → Approve Amounts**

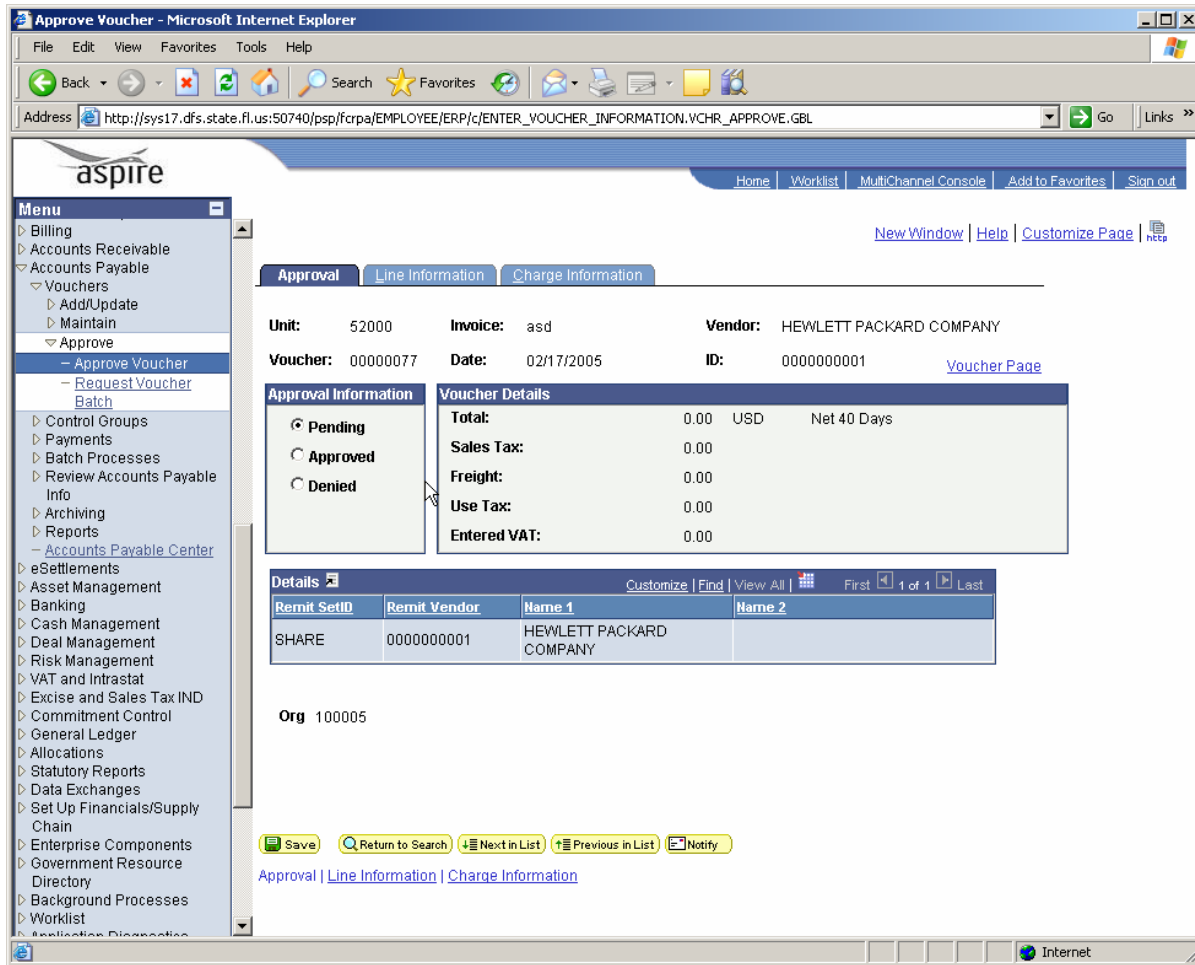


Shown are the additional Route Control values that would be added to the page.

**Voucher Approval: Accounts Payable → Vouchers → Approve → Approve Vouchers**



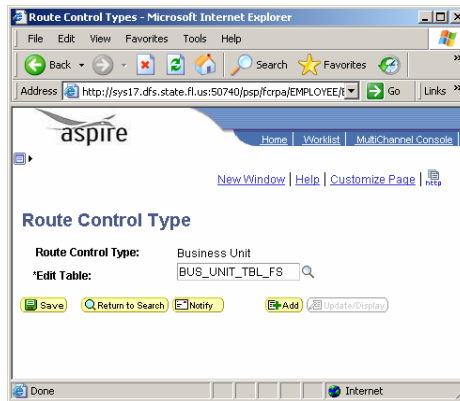
Shown are the additional Route Control values that would be added to the page.



This page shows the approval radio buttons that will be available to the users for selecting their approval option.

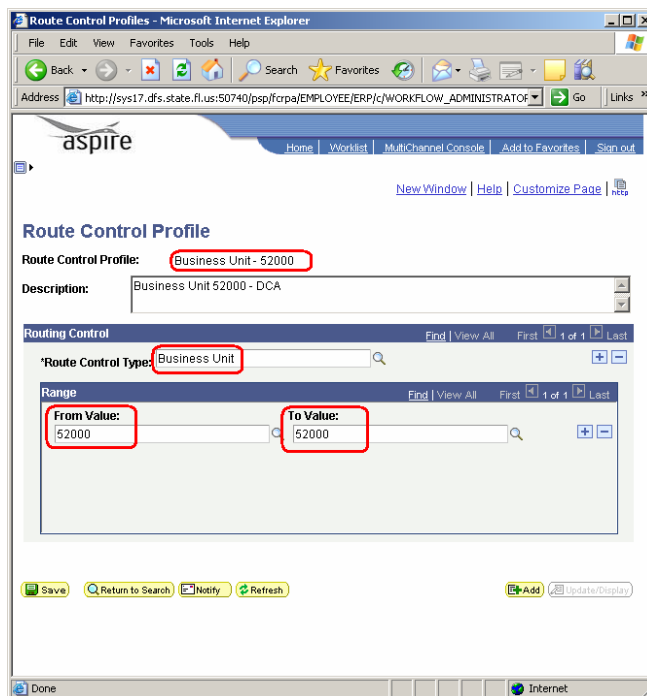
### 3.4 Set Up/Control Data

**Route Control Types:** PeopleTools → Workflow → Routing & Roles → Route Control Types



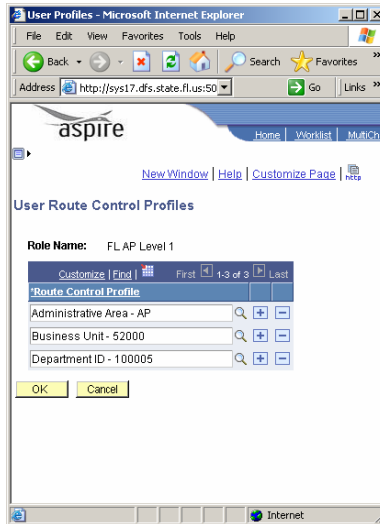
*Shown is the Business Unit Route Control Type*

**Route Control Profiles:** PeopleTools → Workflow → Routing & Roles → Route Control Profiles

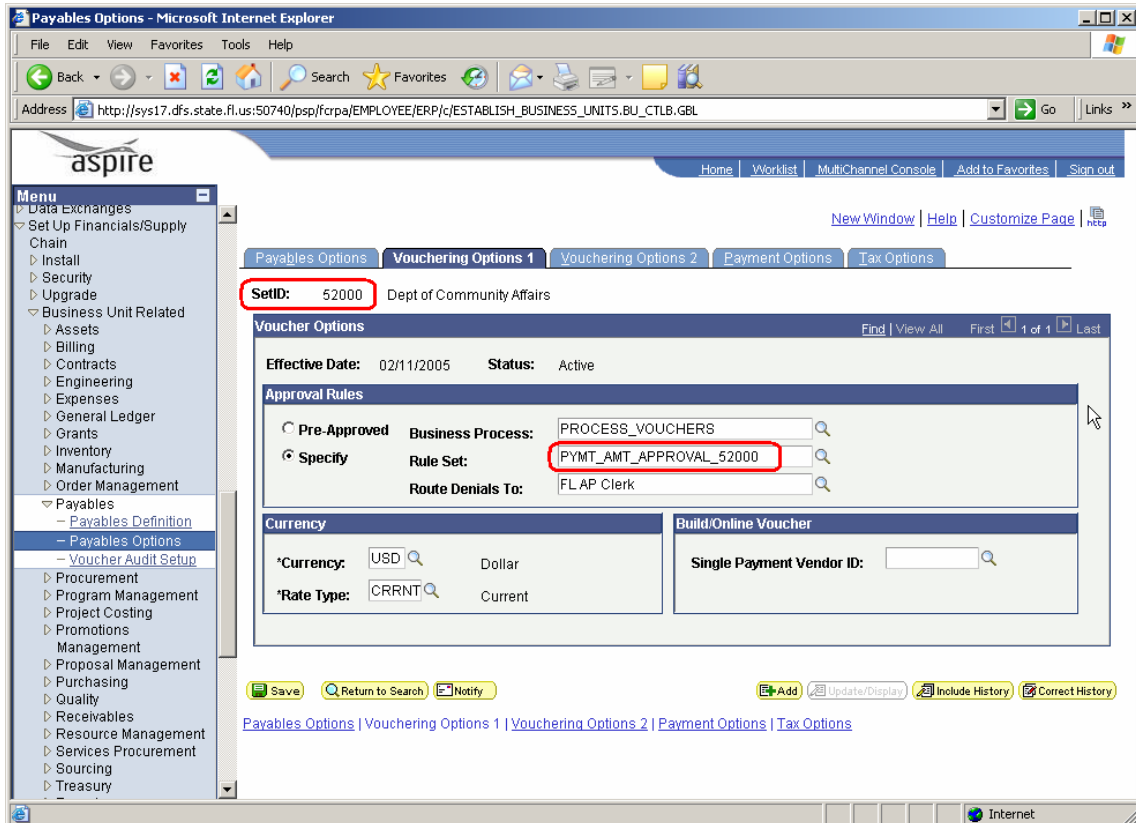


*Shown is a Business Unit Route Control Profile for 52000*

User ID to Route Control Profiles: PeopleTools → Security → User Profiles

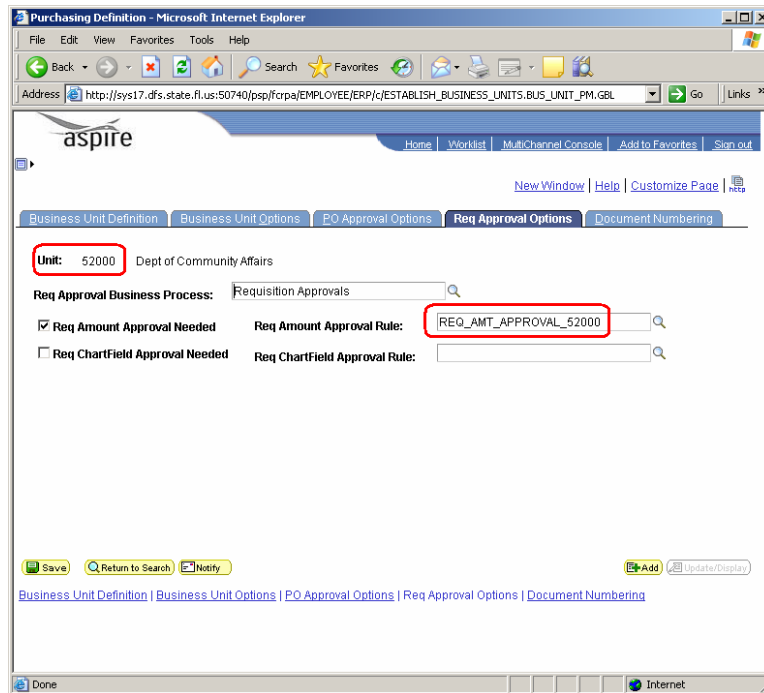
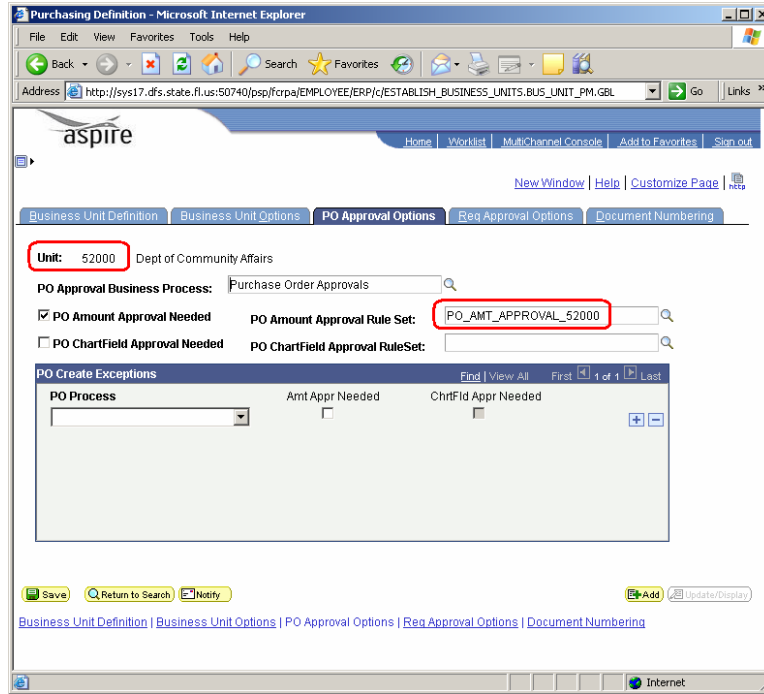


Payables Options: Setup Financials/Supply Chain → Business Unit Related → Payables → Payables Options



Shown is the Approval Rule Set used for Set ID 52000

**Purchasing Definitions: Setup Financials/Supply Chain → Business Unit Related → Purchasing → Purchasing Definitions**



*Shown are the Purchase Order and Requisition Approval Rule Sets used for Purchasing Business Unit 52000.*

### 3.5 Application Changes (e.g., Pages, Components, Menus, Records, App Engines, SQRs, etc.)

#### New Records:

FL\_REQ\_HDR\_VW: Displays the line level fields used as route controls.

- Business Unit
- Requisition ID
- Organization
- Commodity Code

FL\_PO\_HDR\_VW: Displays the line level fields used as route controls.

- Business Unit
- PO ID
- Organization
- Commodity Code

FL\_VCHR\_HDR\_VW: Displays the line level fields used as route controls.

- Business Unit
- Voucher ID
- Organization
- Account

#### Pages:

FL\_REQ\_HDR\_SBP: Contains the Req line level fields on the approval page.

FL\_PO\_HDR\_SBP: Contains the PO line level fields on the approval page.

FL\_VCHR\_HDR\_SBP: Contains the Voucher line level fields on the approval page.

#### Route Control Types:

Administrative Area

Business Unit

Organization

Commodity Code

Account

### **Approval Rule Sets:**

One Approval Rule Set will be configured for:

- Requisition Approval for each Purchasing Business Unit
- Purchase Order Approval for each Purchasing Business Unit
- Voucher Approval for each Accounts Payables Business Unit

### **Activities:**

One Activity must be configured for each Business Process's combination of Route Controls for "Approving" the document. The Activity handles the Worklist notification and routing. This is determined by the route controls configured for the document.

Route Control Types:

Delivered PeopleCode must be modified to change the Approval Status on the document if the total amount or any of the fields used as route controls are changed (I.e. if an approved Requisition's total amount, Organization, or Commodity Code is changed, the document must be re-approved).

## **3.6 Unit Test Considerations**

- A program will be developed to validate all the route control combinations for each Business Process. This will help determine if any combinations do not have a User responsible for approving them.
- Unit testing should factor in denials and recycles throughout the approval process.
- Different combinations of route control values should be tested.
- Ensure routing only forwards to correct users. Ensure users with same approval step role, but different route control profile combinations did not get the approval notification.
- Create each document type with multiple Lines, Schedule lines, and Distribution lines. Ensure the correct route control values are used for determining routing.

### 3.7 Miscellaneous

- Any value added to any of the Route Control fields must have a route control profile created and assigned. Any users added to the system that are responsible for approvals must get the appropriate route control profiles assigned. Any users deactivated from the system must have a user replacing their approval responsibilities. Failure to do so will forward all incorrectly routed items to the Workflow Administrator.
- PeopleSoft Security roles will be created specifically for the workflow approval processes. These workflow roles will contain no actual security access, but only be assigned to specific approval levels. Each role will be assigned to the appropriate users via sql scripts. These roles then get assigned route control values that specify specific authorization that users are able to approve. I.e. Requisition Approval Level 1 for Business Unit 77000, IT Commodity Codes, Org 100005 - 100020

### 3.8 Assumptions

The Workflow Administrator will have a PeopleSoft login. The system will be configured to route items to their user ID.