Oracle Public Sector Permitting and Licensing

Implementing Permitting and Licensing

25B

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Author: Oracle Permitting and Licensing User Assistance

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Get Help

There are a number of ways to learn more about your product and interact with Oracle and other users.

Get Help in the Applications

Use help icons to access help in the application. If you don't see any help icons on your page, click your user image or name in the global header and select Show Help Icons.

Get Support

You can get support at *My Oracle Support*. For accessible support, visit *Oracle Accessibility Learning and Support*.

Get Training

Increase your knowledge of Oracle Cloud by taking courses at *Oracle University*.

Join Our Community

Use *Cloud Customer Connect* to get information from industry experts at Oracle and in the partner community. You can join forums to connect with other customers, post questions, and watch events.

Learn About Accessibility

For information about Oracle's commitment to accessibility, visit the *Oracle Accessibility Program*. (if videos) Videos included in this guide are provided as a media alternative for text-based topics also available in this guide.

Share Your Feedback

We welcome your feedback about Oracle Applications user assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we'd like to hear from you.

You can email your feedback to *oracle_fusion_applications_help_ww_grp@oracle.com*.

Thanks for helping us improve our user assistance!

2 Setting Up Transactions

Setting Up Transaction Groups

Transaction groups are the first level of categorization that you can select when you define your business license, permit, and planning application types.

If desired, you can set up transaction groups. This setup is not required.

Adding Transaction Groups

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering.
3. From the **Functional Areas** list in the left panel, select *Agency Profile*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select **Manage Transaction Application Groups** from the tasks list.
5. On the Transaction Group page, click **Add** to add a new group.
6. On the **New transaction group** drawer, enter values for the transaction group fields:

Page Element	Description
Group	Enter a group name for the transaction types.
Description	Enter a description of the group.
Applicable Classification	Select one or more offerings from these options: - *Business Licenses* - *Permits* - *Planning and Zoning*

7. Verify that the **Enabled** switch is turned on. The option is active by default for a new transaction group.
8. Click **Save**.

Modifying Transaction Groups

1. Navigate to the Transaction Group page and select the row for the group that you want to modify.
2. On the **Transaction group details** drawer, you can:
    - Edit the description.
    - Add or remove applicable classifications.
    - Enable or disable the transaction group.

> **Note:** You cannot change the group name.

3. Click **Save** to save any changes.

Deleting Transaction Groups

You can delete a transaction group only if it is not associated with any application type.

1. Navigate to the Transaction Group page and select the row for the group that you want to delete.
2. On the **Transaction group details** drawer, click the **Delete** button.

Setting Up Transaction Categories

Transaction categories are the second level of categorization that you can select when you define your business license, permit, and planning application types.

If desired, you can set up categories for the different types of business licenses, permits, and planning applications. This setup is not required.

Adding Transaction Categories

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering.
3. From the **Functional Areas** list in the left panel, select *Agency Profile*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select **Manage Transaction Categories** from the tasks list.
5. On the Transaction Category page, click **Add** to add a new transaction category.
6. On the **New transaction category** drawer, enter values for the transaction category fields:

Page Element	Description
Category	Enter a category name for the transaction type.
Description	Enter a description of the category.
Applicable Classification	Select one or more offerings from these options: o *Business Licenses* o *Permits* o *Planning and Zoning*

7. Verify that the **Enabled** switch is turned on. The option is active by default for a new category.
8. Click **Save**.

Modifying Transaction Categories

1. Navigate to the Transaction Category page and select the row for the category that you want to modify.
2. On the **Transaction category details** drawer, you can:
3. On the Transaction Category Details page you can:
    - Edit the description.
    - Add or remove applicable classifications.
    - Enable or disable the transaction category.

    > **Note:** You cannot change the category name.
4. Click **Save** to save any changes.

Deleting Transaction Categories

You can delete a transaction category only if it is not associated with any application type.

1. Navigate to the Transaction Category page and select the row for the category that you want to delete.
2. On the **Transaction category details** drawer, click the **Delete** button.

Setting Up Transaction Subcategories

Transaction subcategories are the third level of categorization that you can select when you define your business license, permit, and planning application types.

If desired, you can set up subcategories for the different types of business licenses, permits, and planning applications. This setup is not required.

Adding Transaction Subcategories

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup**drop-down list, select your offering.
3. From the **Functional Areas** list in the left panel, select *Agency Profile*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select **Manage Transaction Subcategories** from the tasks list.
5. On the Transaction Subcategory page, click **Add** to add a new subcategory.
6. On the **New transaction subcategory** drawer, enter values for the transaction subcategory fields:

Page Element	Description
Subcategory	Enter a subcategory name for the transaction type.
Description	Enter a description of the subcategory.
Applicable Classification	Select one or more offerings from these options:

Page Element	Description
	○ *Business Licenses* ○ *Permits* ○ *Planning and Zoning*

7. Verify that the **Enabled** switch is turned on. The option is active by default for a new subcategory.
8. Click **Save**.

Modifying Transaction Subcategories

1. Navigate to the Transaction Subcategory page and select the row for the subcategory that you want to modify.
2. On the **Transaction subcategory details** drawer, you can:
    - Edit the description.
    - Add or remove applicable classifications.
    - Enable or disable the transaction subcategory.

    Note: You cannot change the subcategory name.
3. Click **Save** to save any changes.

Deleting Transaction Subcategories

You can delete a transaction subcategory only if it is not associated with any application type.

1. Navigate to the Transaction Subcategory page and select the row for the subcategory that you want to delete.
2. On the **Transaction subcategory details** drawer, click the **Delete** button.

Setting Up Transaction Statuses

Oracle provides a set of statuses for transactions to control system events. Some system statuses can be mapped to an agency-defined transaction status.

Your agency assigns statuses for different transactions in the system. You can't delete the system-delivered transaction statuses, but you can modify the description. You can also define additional transaction statuses, but you must associate any new transaction status with one of the system-delivered statuses to ensure correct processing.

Using Delivered Transaction Statuses

This table lists the system-delivered transaction statuses for business licenses, permits, code enforcement, and planning applications, and indicates whether they can be associated with a user-defined status.

For information about permit inspection statuses, see *Setting Up Inspection Statuses*.

For information about permit plan review statuses and decision statuses, see *Setting Up Plan Review Statuses*.

Transaction Status	System Status Code	Type of Transaction (Business Licenses, Code Enforcement, Permits, or Planning Applications)	Can be mapped to a user-defined record status?
About to Expire	ATE	All	No
Active	ACT	Business Licenses	Yes
Application Accepted	ACP	All	Yes
Certificate of Occupancy	COO	Permits	Yes
Closed	CLS	Business Licenses Code Enforcement	Yes
Completed	CMP	All	Yes
Delinquent	DLQ	All	No
Denied	DNI	All	Yes
Expired	EXP	All	No
Hearing	HER	Planning Application Code Enforcement	Yes
In Process	IPC	All	Yes
Inactive	INA	Business Licenses	Yes
Inspection	INS	Permits Business Licenses Code Enforcement	Yes
License Issued	LCI	Business Licenses	Yes
Payment Pending	PAY	All	No
Pending	PND	All	No
Pending Submittal	PDS	All	No

Transaction Status	System Status Code	Type of Transaction (Business Licenses, Code Enforcement, Permits, or Planning Applications)	Can be mapped to a user-defined record status?
Permit Issued	PTI	Permit Application	Yes
Plan Review	PLR	Permit Application	Yes
Revoked	RVK	Business Licenses	No
Submitted	SUB	All	No
Suspended	SPD	Business Licenses	No
Unreported	URT	Business Licenses	No
Voided	VOD	All	Yes
Withdrawn	WTH	All	No

When a guest submits a business license, permit, or planning application, the transaction status is updated as follows:

Record and System Status	Description
Pending (PND)	Applied when the guest saves an application.
Pending Submittal (PDS)	Applied when the guest submits the application and workflow can't be started.
Payment Pending (PAY)	Applied when fees are due.
Submitted (SUB)	• Applied when no fees are due. • Applied after successful payment.

Adding Transaction Statuses

Define any additional statuses that your agency will use for permit and planning applications on the Transaction Status page. You must associate a new transaction status with a system status.

1. Select **Common Setup** > **Transaction Status**.
2. Select a transaction statuses tab, such as **Business License Status**, **Permit Status**, **Planning Status** or **Code Enforcement Status**.
3. Click **Add** to define a new transaction status.

4. On the respective transaction details page, enter values for these fields:

Page Element	Description
Status	Enter a transaction status name.
Description	Enter a description for the transaction status.
System Status for Business License Applications	Select the business license transaction status that you want to use from the drop-down list: o *Application accepted* o *Active* o *Closed* o *Completed* o *Denied* o *Voided* o *Inactive* o *Inspection* o *In process* o *License issued*
System Status for Permit Applications	Select the permit transaction status that you want to use from the drop-down list: o *Application accepted* o *Completed* o *Certificate of occupancy* o *Denied* o *Voided* o *In process* o *Permit issued* o *Plan review* o *Inspection*
System Status for Planning Applications	Select the planning transaction status that you want to use from the drop-down list: o *Application accepted* o *Completed* o *Denied* o *Voided* o *In process* o *Plan review* (This status is for future use.)

Page Element	Description
	○ *Hearing*
System Status for Code Enforcement	Select the case transaction status that you want to use from the drop-down list: ○ Mandatory Abatement ○ Appeal ○ Citation ○ Closed ○ Compliance ○ Void ○ Hearing ○ Legal ○ Violation

5. Verify that the **Enabled** switch is turned on. The switch is turned on by default for a new transaction status.
6. Turn on the **Available to Manually Select as New Status** switch if you want to enable the agency staff to manually change the status on the case related pages. Users can click the **Edit** button to open the Update Status page and select one of the values you have set up, from the **Update Status** field.

   Note: This option is available only for the Case Status tab. Also note that at least one transaction status value must be set up for this option to be available.
7. Click **Save**.

Modifying Transaction Statuses

You can modify the transaction statuses that you have defined for your agency's transactions on the details pages.

1. Select **Common Setup** > **Transaction Status**.
2. Select a transaction statuses tab, such as **Business License Status**, **Permit Status**, **Planning Status**, or **Code Enforcement**.
3. Select the row for the transaction status that you want to modify.
4. On the Details page you can:
   - For user-defined statuses, edit the description or the system status that you want to set on a record with this record status. You can't edit the **Status** field.
   - For system-delivered statuses, you can only edit the description. You can't edit the **Status** field.
   - Turn on the **Enabled** switch to enable a user-defined record status. You cannot disable system-delivered statuses.
   - Turn on the **Available to Manually Select as New Status** switch if you want to enable the agency staff to manually change the status on the case related pages. Users can click the **Edit** button to open the Update Status page and select one of the values you have set up, from the **Update Status** field.

     Note: This option is available only for the Case Status tab. Also note that at least one transaction status value must be set up for this option to be available.
5. Click **Save** to save any changes.

Deleting Transaction Statuses

You can delete the statuses that you have defined for your agency on the Permit Status Details or Planning Status Details page.

> **Note:** You cannot delete most of the system-delivered statuses; you can only modify their descriptions. Oracle recommends that you disable statuses instead of deleting them.

1. Select **Common Setup** > **Transaction Status**.
2. Select a transaction statuses tab, such as **Business License Status**, **Permit Status**, **Planning Status**, or **Code Enforcement Status**.
3. Select the row for the transaction status that you want to delete.
4. On the Details page, click **Delete**, if the button is available.
5. If you want to delete multiple record statuses, you can delete them from the grid on the Transaction Status page:
    a. Click the **Edit** icon.
    b. Select the checkboxes for the status rows to delete.
    c. Click the **Delete** icon.

3 Migrating Legacy Data

Migrating Data Using Oracle Integration Cloud

Use Oracle Integration Cloud (OIC) to migrate your legacy data to Oracle Permitting and Licensing.

Using OIC integrations delivered by Oracle Permitting and Licensing, you can migrate data for planning applications, permits, and code enforcement.

OIC Data Migration Process Flow

1. Review the Oracle Permitting and Licensing objects for which legacy data migration using OIC is supported.

   For a list of supported Permitting and Licensing objects, see *Migrating Data to Oracle Permitting and Licensing Using OIC*.
2. Determine which legacy data needs to be migrated.

   Completed transactions will have no workflow associated with them. In-flight transactions will require configuring workflow and assigning migration statuses.
3. Define your Permitting and Licensing workflow.

   See *Setting Up Process Definitions for Workflow*.
4. Identify legacy transaction status values to migrate and the corresponding workflow process definition user task.

   See *Generating Workflow Status for Migrated Transactions*.

   > **Note:** Make sure that the latest workflow process definition is selected for a transaction type before running a migration integration associated with it. Otherwise, you will be unable to migrate the workflow status associated with the transactions.
5. Review, configure, and run the delivered OIC integrations.

   See *Migrating Data to Oracle Permitting and Licensing Using OIC* in My Oracle Support (Doc ID 2757199.1).
6. Review and verify migrated data.
7. Run the Prepare Migrated Data for PSCR process.

   See *Preparing Migrated Data for Oracle Permitting and Licensing*.
8. Generate transaction workflow.

   See Running the Generate Transaction Workflow Process in *Generating Workflow Status for Migrated Transactions*.

Migrating Data Using Import Management

Use Import Management to migrate your legacy data to Oracle Permitting and Licensing.

Using Import Management, you can migrate data for planning applications, permits, and code enforcement.

> **Note:** To specifically migrate only your parcel details, such as address, parcel and owner (APO) data, see the topic *Migrating APO Data*.

To import your data:

1. Map your source data to Oracle Cloud Applications object attributes. This tells the import process where to insert the information.
2. Create the source CSV file with the data you want to import.
3. Kick off an import activity.
4. Review and verify the imported data.

Map Your Source Data to Target Object Attributes

You import data into Oracle Cloud Applications from a CSV file containing your source data that's mapped to target Oracle Cloud Applications object attributes.

You need to do the following before creating the CSV file for data import:

- Identify how your source data attributes map to the target object attributes in Oracle Cloud Applications.
- Ensure prerequisite steps are complete, such as understanding what attributes are required for importing your objects.
- Understand your options for uniquely identifying the records.
- Ensure parent records exist before importing child records.
- Identify the target object attributes that are required in the CSV file for a successful import.

Before You Start

You must do some basic checks before starting your import. For example, make sure that:

- You have completed all the prerequisites for importing each attribute in your source data.
- You have all parent records in place before importing child records.

Select a Unique Identifier for Your Records

All records must be unique in the application. You can use one of these to identify records:

- Public unique identifiers: If you're creating records, then you can provide an easily understandable public unique identifier. These are usually denoted with 'Number' and visible in the business object's UI. PUID attributes are usually named <object> Number. If you're updating a record with a Number attribute, then use the Number attribute to identify the record.
- Source system and source system reference: Source system is an identifier for the external system, and source system reference is a unique identifier within the external system. If you're importing new accounts or are updating accounts that have source system reference data, then provide the source system and source system reference values.

Required Attributes and Validations for Activity Assignee Object

To import data successfully into Oracle Cloud Applications, your CSV file must include the required attributes. Make sure that you provide valid values for these attributes so that they pass import validations inbuilt into the application.

For a complete list of required attributes and validations for Oracle Permitting and Licensing objects, see *Migrating Data to Oracle Permitting and Licensing Using Import Management*.

Create Source CSV File

You include the data that you want to import into Oracle Permitting and Licensing in a source CSV file.

You can use the templates available in the Import Objects UI page to create the source CSV file.

To download a template:

1. Go to **Navigator** > **Tools** > **Import Management** > **Import Objects**.
2. Select the Activity Assignee object in the table and click **Download**.

You can now edit the downloaded file and provide valid values for the required attributes.

Create Import Activity

After you have the CSV file ready, create an import activity to import the activity assignee information. To create an import activity:

1. Go to **Navigator** > **Tools** > **Import Management** > **Import Queue**.
2. Click **Create Import Activity** in the Manage Imports page.
3. In the Enter Import Options page, provide a name for the import activity, and select *Activity Assignee* from the **Object** drop-down list.
4. Select the CSV file in the **File Name** field, and click **Next**.
5. The source and target attributes are automatically mapped in the Map Fields page. Review and edit the mappings if required.
6. Check the file for unmapped columns or data format issues by clicking **Validate Data**. Click **Next**.
7. Review the import details on the Review and Submit page, and click **Submit** when you're ready.

Review Import Results

Confirm that your import succeeded on the Manage Imports page. This page shows the status of all active, completed, and unsuccessful imports. To check the status of the import activity:

1. Go to **Navigator** > **Tools** > **Import Management** > **Import Queue**.
2. Click **All Imports** and search for the import activity that you created earlier.
3. Check the **Status** column for the import activity. The import is successful if the status displayed is *Completed*. You can drill down on the import activity to go to the Import Status page which provides the status details of the import activity.

Delete Migrated Transactions

You can delete migrated transaction data for permits, planning applications, code cases, incidents, business licenses and related objects. This allows for a hard delete of imported transactions for each test run before converting to a production environment.

Note: To delete migrated transactions, ensure that you have a role with the assigned privilege Delete Public Sector Migrated Data (PSC_DELETE_MIGRATED_DATA_PRIV).

1. Access the process by selecting **Common** > **Delete Migrated Transactions**.
   You can also access this process from the Process Monitor. See *Using the Process Monitor*.
2. On the Schedule tab, select the **As soon as possible** option to immediately add the process to the queue.
   Select the **Using a schedule** option to schedule when you want the process to run.
3. (Optional) Turn on the **Notify Me When This Process Ends** switch to send yourself a notification when the process finishes.
   Click **Add** on the Notification tab, and enter the recipient and conditions of the notification.
4. Click **Submit.**

After you run the Delete Migration Transactions process, you can run another process so that the deleted records no longer appear on the Transactions List page.

1. Log in to your FA Home page as an Administrator.
2. Go to **Navigator** > **Tools** > **Scheduled Processes**.
3. Click **Schedule New Process**.
4. Search for and select the process name: "ESS job to create index definition and perform initial ingest to OSCS."
5. In the **Index Name to Reingest** field, enter "fa-psc-applications."
6. Click **Submit**.

The time this process takes depends on the amount of data you're deleting.

Preparing Migrated Data for Oracle Permitting and Licensing

After you complete your data migration, run the **Prepare Migrated Data for PSCR** process to update your migrated data.

Running the Prepare Migrated Data for PSCR Process

1. Access the process by selecting **Common** > **Prepare Migrated Data for PSCR**.
   You can also access this process from the Process Monitor. See *Using the Process Monitor*.
2. On the Schedule tab, select the **As soon as possible** option to immediately add the process to the queue.
   Select the **Using a schedule** option to schedule when you want the process to run.
3. (Optional) Turn on the **Notify Me When This Process Ends** switch to send yourself a notification when the process finishes.
   Click **Add** on the Notification tab, and enter the recipient and conditions of the notification.
4. Click **Submit**.

The process makes updates to your migrated data that couldn't be made during the import process. For example, the process synchronizes your migrated data with data that were imported independently, such as fee payments and the fee record.

Generating Workflow Status for Migrated Transactions

After you complete your data migration, run the Generate Transaction Workflow process to generate or assign the correct workflow status to migrated transactions.

Mapping Legacy Statuses to Oracle Permitting and Licensing Statuses

Before running the process, you need to map your legacy transaction statuses to the correct Oracle Permitting and Licensing statuses as defined in your workflow process definitions as human tasks. For example, you might map your legacy permit statuses as follows:

Legacy Permit Status	Workflow Process Definition User Task	Oracle Permitting and Licensing Permit Status
Submitted	Accept Application	INS (Inspection)
Plan Review	Complete Plan Review	PLR (Plan review)
In Process	Issue Permit	SUB (Submitted)
Issued Permit (no inspection)	Complete Permit	CMP (Completed) or COO (Certificate of Occupancy)
Issued Permit (inspection required)	Approve Final Inspection	PTI (Permit issued)

You define this mapping by adding the PSC_MIGRATION_TASK as a custom property to your process definition tasks.

Note: For the first process definition task you must assign a value of *SUB* to the PSC_MIGRATION_TASK.

For more information on process definitions and custom properties, see *Setting Up Process Definitions for Workflow* and *Using Custom Properties*.

Running the Generate Transaction Workflow Process

1. Access the process by selecting **Common** > **Generate Transaction Workflow**

   You can also access this process from the Process Monitor. See *Using the Process Monitor*.
2. Select your process parameters on the Parameters tab.

Page Element	Description
All Offerings	Select to run the process for all offerings.

Page Element	Description
Specify Offerings	Select to run the process only for the offerings you select in the **Specify Offerings** field. The available offerings include *Permits*, *Planning Applications* and *Code Enforcement*.
Include Processed Transactions	Turn this switch on to run only the unprocessed transactions for the selected offerings.
Reprocess Errors	Turn this switch on to reprocess the transactions, which had previously resulted in error, for the selected offerings.

> **Note:** Before running the process for all records, it's recommended that you test the process with just a few records to make sure that the process definition mapping is set up correctly.

3. On the Schedule tab, select the **As soon as possible** option to immediately add the process to the queue.

   Select the **Using a schedule** option to schedule when you want the process to run.
4. (Optional) Turn on the **Notify Me When This Process Ends** switch to send yourself a notification when the process finishes.

   Click **Add** on the Notification tab, and enter the recipient and conditions of the notification.
5. Click **Submit.**

   For Permits and Planning Applications, the Generate Transaction Workflow process instantiates workflow for migrated transactions and assigns the correct Oracle Permitting and Licensing workflow user task to them. For transactions with statuses not mapped in the process definition, the process instantiates workflow and updates the migration status to undefined (U). These will need to be fixed manually by altering the workflow. See *Using Workflow*.

   For Code Enforcement, the process instantiates workflow for both incidents and cases based on the Process Definition Group assigned at the issue subtype level. The process will advance the workflow as per the current status of the migrated transaction. For example, if an incident is in the Inspection status, then the workflow activates the Inspection stage and the related tasks, if already configured. The process will not activate the Reported stage. Similarly, if a case is in the Citation status, once the process is run, only the Citation stage is activated and not the Violation stage. For more information, see *Linking Process Definitions to Issue Subtypes*.

> **Note:** The Generate Transaction Workflow Process instance gets instantiated only when the **Enable Workflow** switch is turned on in the Code Enforcement Options page. See *Setting Up Agency-Level Options for Code Enforcement*.

4 Setting Up Applications

Setting Up Application Display Groups

Use the Display Group setup pages to show groups of business license, permit, and planning applications on your agency's landing page, where you start an application.

An application display group identifies a meaningful grouping of the application types displayed as a list on the Apply page. The list appears as the business license, permits, or planning applications that an agency staff or a guest user can select to initiate the application process.

For more information about how the Apply page looks and is used, see *Choosing an Application Type*.

Before setting up application display groups, you must set up the application types that your agency offers. See *Setting Up Permit Types*, *Setting Up Planning Application Types*, and *Setting Up Business License Types*.

Adding Application Display Groups

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering.
3. From the **Functional Areas** list in the left panel, select <*offering*>*Types*:
    - **Permits** > Permit Types
    - **Planning and Zoning** > Planning Application Types
    - **Business Licenses** > Business License Types
4. The right panel shows the required tasks for the selected functional area. Select **Manage** <*offering*> **Type Display Groups** from the tasks list:
    - Permit Types > *Manage Permit Type Display Groups*
    - Planning Application Types > *Manage Planning Application Type Display Groups*
    - Business License Types > *Manage Business License Type Display Groups*
5. On the Application Display Group page, click **Add** to add a new group:

Page Element	Description
Display Group Sequence	When you add a new group, it will default to the next number. You can overwrite the default value, and also update the existing sequence numbers. **Note:** The groups marked for Permits will have a higher priority than those for Planning and Zoning, and then Business License.
Display Group ID	Enter an identifier of the display group.

Page Element	Description
Display Group	Enter a name for the display group that appears on the Apply page for guests and agency staff.
Description	Enter a description of the display group.
URL	Enter a URL that agency staff can use to access additional information. This page is the only place that the URL appears, so it is not available to guests.
Applicable Classification	Select the checkbox for the applications to which this display group applies. Choose from these options: ○ *Business Licenses* ○ *Permits* ○ *Planning and Zoning* This option determines whether a display group type is shown on the Apply page for public users. A display group can be included with more than one classification.

6. Verify that the **Enabled** switch is turned on. The switch is turned on by default for new display groups.
7. In the **Display group lines** section, search and select from existing group lines. To view a list of existing application types, click the **View transaction types** link, which opens the Transaction Types page in a separate browser window to show the applicable transactions.

   Click **Add** to set up a new line on the **New display group line** drawer. The display group lines are application types that make up the list in the new display group.

   > **Note:** A mix of different application types can be added to a display group. For example, you can add a planning application type to a permit application display group and the other way around.

Page Element	Description
Display Order	Enter a numerical value in this field to specify the order in which you want the application type to be displayed, if desired. The default value is *0* and upon saving, the system automatically assigns the next value.
Application Type ID	Select an existing application type ID.
	Review the attribute information for the application type to verify you have selected the correct application type ID: ○ **Application Type** ○ **Classification**

Page Element	Description
	○ **Application Group** ○ **Category** ○ **Subcategory**

8. Click **Save**.

Attaching Images to Display Groups

Use the Attachments section to upload an image for a display group. The Attachments section is enabled only after you have enabled the *Enable Images on Apply Page* option on the Agency Features page. For more information, see *Setting Up Agencies*.

To attach a display group image:

1. In the Attachments section, click the **Add** button.
2. Select the image from your image repository.
3. On the New attachment dialog box, add text in the **Description** box, and click **Upload**.

Note: You can have only one image uploaded at a time. To replace an image, delete the previously uploaded image, and upload the new image.

Once an image is uploaded you can preview the image by clicking the File Name link or selecting *Actions, Preview.* The Actions menu also enables you to download, delete, and view the image details.

Modifying Application Display Groups and Lines

You can modify application display groups and the applications in the list on the Application Display Group Details page and **Display group line details** drawer, respectively.

1. Navigate to the Application Display Group page and select the row for the display group that you want to modify.
2. On the Application Display Group Details page, you can:
    a. Modify the display group name and description. You can't change the display group ID.
    b. Enable or disable the display group.
3. If you made any changes, click **Save**.
4. To modify the display group lines (the list of applications in a display group), select the row for the application group that you want to modify on the Application Display Group page.
5. On the Application Display Group Details page, select a display group line in the **Display group lines** grid.
6. On the **Display group line details** drawer, you can change the values in these fields:
    ○ Update the **Display Order** field to change the order in which the lines appear.
    ○ Update the **Application Type ID** field with another existing application type ID.
7. If you made any changes, click **Save**.

Deleting Application Display Groups and Lines

1. Navigate to the Application Display Group page and select the row for the display group that you want to delete.

2. Click **Delete** on the Application Display Group Details page.
3. To delete a display group line, go to the Application Display Group Details page and select a display group line in the **Display group lines** grid.
4. On the **Display group line details** drawer, click **Delete**.

Setting Up Validation Groups

Validations can run on contractor license information provided in an application to ensure that contractors comply with specific requirements when a business license, permit, or planning application is submitted. After defining the validation group, you associate it with an application type to provide application-level validations.

The agency configures the contractor criteria required for a permit type and determines whether to prevent application submittal if the criteria aren't met. Criteria can be based on the license type, insurance, license classification, and license expiration. When contractors or other registered users apply for a business license, permit, or planning application with validations, they see alerts about the requirements that aren't met for an individual contractor and for the combination of contractors associated with the application.

> **Note:** You can only set up job cost validations for license types and license classifications on permit applications that collect job cost using an Oracle-delivered job cost field on the intake form. Job cost isn't applicable to business license or planning applications.

After setting up the validation group criteria, apply the validation group to an application type. For more information, see *Setting Up Business License Types*, *Setting Up Permit Types*, and *Setting Up Planning Application Types*.

Here's how to set up the validation options in the validation group. Start by creating a validation group, like this:

1. In the navigation menu, select **Common Setup** > **Validation Group**.
2. On the Validation Group page, click the **Add** button.
3. On the Validation Group Details page, enter the details for the group:

Page Element	Description
Group ID, **Group Name**, and **Description**	Enter the validation group identifier, name, and description.
Validation Type	The validation type is *Contractor*.
Usage	Select which classification of application this validation group will be used for: - *Business Licenses* - *Permits* - *Planning Applications* When you link the validation group to an application type, you can only select a validation group with a corresponding usage. For example, you can only select a validation group with a *Permits* usage when setting up a permit type definition.

Page Element	Description
Allow Application Submit	Turn on this switch to allow applicants who are public registered users to submit the application even though contractor license requirements aren't met. When you turn off this switch, registered users can save but not submit applications that don't meet contractor license requirements.
Agency staff can override	This option is only available when the **Allow Application Submit** switch is turned off. Select this option to allow agency staff with a contractor management role to submit an application even though contractor license requirements aren't met.

4. After you've set up the criteria, click **Save** to save the validation group.

Validating Contractor Insurance

1. On the Validation Option Details page, click the **Add** button in the **Validation Options** section.
2. On the Option Details page, select the *Insurance* option.
3. Enter the insurance criteria:

Page Element	Description
Insurance	Select an insurance type from the drop-down list. For example, *Workers' Compensation Insurance*. You can set up different requirements in each insurance type row. Each insurance requirement is validated independently of the requirements for other insurance types. For each insurance type, you can set up the **Apply Validation** field to require (a) all licenses to have the insurance type or (b) at least 1 license to have the insurance type, as well as expiration requirements in the expiration fields.
Expiration Validation	Turn on this switch to activate the **Expiration Basis** and **Add Grace Period** fields.
Expiration Basis	Select the basis that's used for calculating insurance expiration dates: o *Effective date* - The date the insurance policy started. o *Expiration date* - The date the insurance policy expires.
Add Grace Period	Enter a number and unit of time to add to the expiration calculation. The units of time include *Days, Months, Weeks,* and *Years.*
Apply Validation	Select the number of licenses that must meet this requirement for the application: o *All licenses* - All licenses must meet the insurance requirement for the application to pass the validation.

Page Element	Description
	○ *At least one license* - At least one license must meet this insurance requirement for the application to pass the validation.

4. Turn on the **Enabled** switch to enable the validation option.
5. Click the **Add** or **Delete** button in the row to add another row or delete the current row.
6. Click **Save**.

Validating by License Classification

1. On the Validation Option Details page, click the **Add** button in the **Validation Options** section.
2. On the Option Details page, select the *License classification* option.
3. Enter the criteria for the license classification validation:

Page Element	Description
Classifications	Click the license classifications field to select one or more required classifications for each license from the list. If you select multiple classifications, you can set up the **Apply Validation** field to require all licenses or at least one license added to the application to have all of the listed classifications. Or you can require all licenses or at least one license added to the application to have at least one of the listed classifications.
License Requirements	Select the requirements that apply to an individual license: ○ *All classifications* - Whether you select one or more classifications for validation, when you select this option, you can set up the **Apply Validation** field to require (a) each contractor license to have all of the listed classifications or (b) at least one license to have all of the listed classifications. ○ *At least one classification* - When you select this option, you can set up the **Apply Validation** field to require (a) each license to have at least one of the listed classification or (b) at least one license to have at least one of the listed classifications.
Apply Validation	Select the number of licenses that must meet this requirement for the application: ○ *All licenses* - All licenses must meet the license classification requirement for the application to pass the validation. Depending on the selection in the **License Requirements** field, (a) every license must have all of the classifications or (b) every license must have at least one classification. ○ *At least one license* - At least one license must meet this license classification requirement for the application to pass the validation. Depending on the selection in the **License Requirements** field, (a) at least one license must have all of the classifications or (b) at least one license must have at least one of the classifications.

4. Turn on the **Enabled** switch to enable the validation option.

5. Click the **Add** button to set up requirements for classifications selected in the validation group.
   When the validation setup applies to *At least one license*, then you set up the job cost and insurance validations for each classification. When the validation setup applies to *All licenses*, then all classifications are validated based on the same job cost and insurance criteria.

Page Element	Description
Allowed Job Cost	Available only in validation groups with a *Permits* usage. Select a logical operator from the available options and corresponding monetary values: *Between, Not Between, Less than, Less than or equal to, More than, More than or equal to, Not Applicable,* or *No Limit*. The currency is USD. **Note:** Your agency must design the permit intake form using the Oracle-delivered job cost field to collect the job cost. You can find the **Job Cost** field in the Ready to Use fields on the permit application design page. The validation won't work with a custom job cost field.
Required Insurances	Select an insurance from the drop-down list. For each insurance that you select, you can turn on the **Expiration Validation** switch and enter expiration criteria.

6. Click **Save**.

Validating the License Expiration Date

1. On the Validation Option Details page, click the **Add** button in the **Validation Options** section.
2. On the Option Details page, select the *License expiration* option.
3. Enter the criteria based on the license expiration date:

Page Element	Description
Grace Period	Enter a number and unit of time to add to the license expiration date. The units of time include *Days, Months, Weeks,* and *Years.*
Apply Validation	All licenses added to the application must meet the expiration criteria.

4. Turn on the **Enabled** switch to enable the validation option.
5. Click **Save**.

Validating by License Type

You can validate applications by license type with or without an integration with an external licensing body.

1. On the Validation Option Details page, click the **Add** button in the **Validation Options** section.
2. On the Option Details page, select the *License type* option.

3. Enter the criteria for the license type validation:

Page Element	Description
License Types	Click the license classifications field to select one or more required license types for the application from the list. For example, you can select *Building Contractor, General Contractor,* or other license types defined by your agency.
License Requirements	Displays *At least one license type* when multiple license types are selected to indicate that (a) each license must have one of the listed license types or (b) at least one license must have at least one license type, depending on your selection in the **Apply Validation** field. A license can only have one license type.
Apply Validation	Select from the drop-down list: o *All licenses* - All licenses must meet the license type requirement for the application to pass the validation. o *At least one license* - At least one license must meet the license type requirement for the application to pass the validation.

4. Turn on the **Enabled** switch to enable the validation option.
5. Click the **Add** button to set up requirements for each license type selected in the validation group.

Page Element	Description
Allowed Job Cost	Available only in validation groups with a *Permits* usage. Select a logical operator from the available options and corresponding monetary values: *Between, Not Between, Less than, Less than or equal to, More than, More than or equal to, Not Applicable,* or *No Limit*. The currency is USD. **Note:** Your agency must design the permit intake form using the Oracle-delivered job cost field to collect the job cost. You can find the **Job Cost** field in the Ready to Use fields on the permit application design page. The validation won't work with a custom job cost field.
Required Insurances	Select an insurance from the drop-down list. For each insurance that you select, you can turn on the **Expiration Validation** switch and enter expiration criteria.

6. Click **Save**.

Setting Up Option for Submitted Applications

Use the application post-submission landing page for agency staff feature to select either the Application List or Application Details page to transfer to after submitting an application.

The *Application Post-Submission Landing Page for Agency Staff* feature allows agencies to configure where to transfer agency staff after submitting an application. The default is the Application List.

Agencies can enable the feature like this:

1. Navigate to **Setup and Maintenance** on the agency springboard.
2. Select the offering, such as Public Sector Permits.
3. Click the **Change Feature Opt In** link.
4. Select the **Features** icon for Public Sector Permits.
5. In the feature grid, select the **Application Post-Submission Landing Page for Agency Staff** .
6. Click **Enable** and select either the Application List or Application Details page.

Importing Solution Packages

Oracle Permitting and Licensing system administrators and implementation consultants use the Oracle Cloud Customer Connect to access the Oracle Permitting and Licensing Solution Library – a collection of configurations that address common community development and licensing functionality with industry best practices, provided in the form of Solution Packages.

A solution package contains all the necessary configuration files in a compressed file format along with a metadata file.

Review the solution package contents online, download specific solutions that contain the corresponding setup data, review them and deploy those solutions to your pre-production environment for your understanding. Each solution package provides a link that allows you to download and review a technical reference paper describing the contents of the particular solution package. You can review the technical reference paper before you decide to download the solution package.

To access the Solution Library, follow this link *Oracle Permitting and Licensing Solution Library*.

Note: You will find 2 Solution Packages to select, based on the Workflow and DMN Source options:

- Oracle Integration Cloud (OIC)
- Oracle Cloud Infrastructure Process Automation (OCI Process Automation)

5 Setting Up Permits

Setting Up Agency-Level Options for Permits

Set up agency-level options for permits, including the Oracle Intelligent Advisor. Configure the summary title and text for the Anonymous User Landing Page and the Registered User Landing page. You can also configure pending inspections, interactive voice response (IVR), plan reviews, and required comments for your agency.

To configure agency-level options for permits:

1. Select **Common Setup** > **Agency**.
2. Click a row on the Agency Information tab.
3. Select the Features tab.

   Oracle delivers the list of offerings on the Features tab.
4. Click **Review Options** for the Permits offering.

Configuring Issuance and Reissuance Dates for Permits

Select an option from the **Issuance and Reissuance Dates** field to determine how the original date of permit issuance must be used for date calculations:

- Override the original issuance date: When the permit is reissued, the original issue date is replaced by the date on which the permit was reissued. Accordingly, the expiration date is calculated based on the most recently updated date. This option is the default selection.
- Track both dates: When a permit is reissued, the original issue date as well as the reissue date are displayed on the permit's Overview page. The reissue date is updated upon every reissuance and the same is used for the expiration date calculation.
- Use the original issuance date only: When a permit is reissued, the reissued date is neither displayed nor used for the expiration date calculation. Expiration date calculation uses the original issue date.

> **Note:** If you select the **Use the original issuance date only** option, then the expiration rules setup page automatically disables the **Automatically recalculate the expiration date when the permit is reissued** checkbox and is unavailable for edit. Also note that whenever you change the options, for example to **Use the original issuance date only**, you must review and resave the Expiration Rules page so that the option to automatically recalculate the expiration date is turned off.

See *Setting Up Permit Expiration Rules*.

Select an option from the Instructional Text for Permits field to set up and manage instructional or assistive text that can be configured to appear on applications.

Managing Instructional Text

Setting Up the Oracle Intelligent Advisor

In the **Oracle Policy Automation ID** field, enter the unique identifier for the Oracle Policy Automation policy model to be used for this offering.

The offering-specific policy model that you specify here takes priority over any agency-wide policy definition that you enter on the main Agency Information page.

For more information on Oracle Intelligent Advisor, see *Overview of Oracle Intelligent Advisor Configuration*.

Defining the Landing Page Message

In the Landing page message definition section of the Permit Options page, enter values for the following fields:

Page Element	Description
Message Title	Enter a short text version of the landing page message in a title format. If you leave this field blank, the value in the **Label** field on the Link Details page for the menu navigation link Online Permits is displayed.
Message Summary	Enter a longer version of the landing page message title in a sentence format. If you leave this field blank, the value in the **Description** field on the Link Details page for the menu navigation link Online Permits is displayed.
Button Content URL	Enter a content URL for the **Read More** button. Public users click this button to access the agency's own permit information page, outside of Oracle Permitting and Licensing. If you leave this field blank, the **Read More** button opens a dialog box that displays the **Landing Page Message**. **Note:** If you want to link to a page outside of Oracle Permitting and Licensing, you must enter a URL here.
Landing page message	Enter a welcome message in rich text to appear in a dialog box on the landing page, if a URL to access the agency's page is not defined.

For more information on the Landing Page Message Definition, see *Defining Summary Details*.

Configuring Pending Inspections

As part of the permit application review process, some agencies prefer to identify all required inspections and preschedule them as pending inspections. This enables applicants to view a list of all required inspections for a particular permit. Applicants can then use this list to track and manage inspection scheduling.

Agency staff can create and manage inspections, including pending inspections, as long as the application isn't in a presubmittal or terminal status, such as *Void, Denied, Withdrawn,* or *Completed*. Applicants can only create inspections or schedule pending inspections when the permit is in an *Inspection, About to Expire,* or *Permit Issued* status. Applicants can't create pending inspections. When agency staff or applicants postpone scheduled inspections, the inspection stays in a *Pending* status until further action is taken.

Use the **Inspections** section of the Permit Options page to configure how your agency handles pending inspections.

Page Element	Description
Enable creation of pending inspections	Turn on this switch to enable the manual and automatic creation of inspections in a *Pending* status.

Page Element	Description
	When this setup switch is turned on, the **Pending** option appears for agency staff when requesting inspections. Applicants can't create pending inspections when requesting inspections. However, if the agency allows applicants to postpone inspections by turning on the switch to **Enable Postpone Inspection**, the postpone action moves inspections to a *Pending* status. The **Pending** filter switch always appears on the application-level Inspections page and agency-level Inspections console page for viewing inspections in a pending status. A **Pending** tab displays pending inspections on the Task Management page accessed through the My Inspections link.
Enable automatic creation of pending inspections	Turn this switch on to automatically create pending inspections when a permit application is submitted. A pending inspection is created for each selected inspection type in the inspection group associated with the permit type of the submitted permit. For more information on configuring inspection groups for automatic creation, see *Setting Up Permit Types*. **Note:** This switch is available only if the **Enable Pending Inspection** switch is turned on.

For information about the setting for public users to postpone inspections, which puts them into a *Pending* status, see the next section.

Configuring Inspection Actions for Public Users

Use the **Inspections** section of the Permit Options page to configure whether your agency allows applicants and contacts with permit access to postpone or cancel inspections.

Page Element	Description
Enable postpone inspection	Turn on this switch to allow public users to take scheduled inspections off the schedule or revoke an inspection request. Agency staff can always postpone inspections. The **Postpone** action puts an inspection into a *Pending* status. When you update the preferred time for or assign the inspection, the status changes from *Pending* to *Requested* or *Scheduled*, respectively.
Public User Cancel Options	Select an option: • *Cancel All* - Public users can cancel any of their inspections. • *Cancel Nonrequired* - Public users can only cancel the inspections of theirs that aren't required. • *Cancel None* - Public users can't cancel inspections at all. The option for public users to cancel inspections, based on the agency setup, is available on the Inspection request page only.

For more information, see *Managing Inspections for a Permit*.

Requiring Inspection Comments

Agencies have the option to require inspection comments. Use the **Inspections** section of the Permit Options page to configure how your agency handles permit inspection comments.

Page Element	Description
Required Inspection Comments	Configure whether comments are required for permit inspections. Select an option: • *None* - Comments are optional. • *All results and cancellations* - Comments are required for all inspection results and inspection cancellations. • *Cancellations and failed results* - Comments are required for inspection cancellations and inspections that receive a failed result.

Setting Up Inspection Options by Scheduling Method

Agencies can configure these inspection options based on the scheduling method (*Ready, Request,* or *Schedule*) for an inspection:

- **Time Entry Method** - Determines whether the inspection time can be entered during request or scheduling as a date only, a time range (such as "Morning"), or a specific time.
- **Arrival Display** - Determines how the inspector's scheduled arrival information is displayed, such as a date only, a time range (such as "Morning"), or a specific time.
- **Assignment Method** - Determines how the inspector's daily workload is managed, based on the duration of inspections or by limiting the number of inspections.

  For more information about setting up the assignment method, see *Setting Up Inspection Assignment*.

You must define the time ranges here on the Permit Options page and Business License Options page before you implement the time range option for time entry or arrival display. See the next section, "Configuring Inspection Time Ranges."

You can configure the time entry method, assignment method, and arrival display for each scheduling method as described here:

> **Note:** For more information about choosing a scheduling method for an inspection type, see *Setting Up Inspection Types*.

1. **Request** scheduling method

Time Entry Method	Assignment Method	Arrival Display
Time range	Duration	○ Specific time - Displays both a date and time as assigned by the inspection supervisor.

Time Entry Method	Assignment Method	Arrival Display
This method provides both **Preferred Date** and **Preferred Time** (a time period) fields on the inspection request page.	**Note:** *Count* isn't available as an option when the time entry method is *Time range*.	○ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ○ Date only
Date only This method provides only the **Preferred Date** field on the inspection request page.	Duration	○ Specific time - Displays both a date and time as assigned by the inspection supervisor. ○ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ○ Date only
Date only This method provides only the **Preferred Date** field on the inspection request page.	Count	Date only

2. **Ready** scheduling method

Time Entry Method	Assignment Method	Arrival Display
Time range This method provides both **Ready-by Date** and **Ready-by Time** fields on the inspection request page.	Duration **Note:** *Count* isn't available as an option when the time entry method is *Time range*.	○ Specific time - Displays both a date and time as assigned by the inspection supervisor. ○ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ○ Date only
Date only This method provides only the **Ready-by Date** field on the inspection request page.	Duration	○ Specific time - Displays both a date and time as assigned by the inspection supervisor. ○ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ○ Date only
Date only This method provides only the **Ready-by Date** field on the inspection request page.	Count	Date only

3. **Schedule** scheduling method

Time Entry Method	Assignment Method	Arrival Display
Specific time This method provides both **Date** and **Time** fields on the inspection scheduling page. Inspector supervisors can see the inspector names.	Duration **Note:** *Count* isn't available as an option when the time entry method is *Specific time*.	◦ Specific time - Displays both a date and time. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ◦ Date only
Time range This method provides both **Date** and **Time** fields on the inspection scheduling page. Only inspector supervisors can see the inspector names.	Duration **Note:** *Count* isn't available as an option when the time entry method is *Time range*.	◦ Specific time - Displays both a date and time as assigned by the inspection supervisor. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ◦ Date only
Date only This method provides only the **Date** field on the inspection scheduling page. Only inspector supervisors can see the inspector names.	Duration	◦ Specific time - Displays both a date and time as assigned by the inspection supervisor. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ◦ Date only
Date only This method provides only the **Date** field on the inspection scheduling page. Only inspector supervisors can see the inspector names.	Count	Date only

For more information, see *Setting Up Permit Types*, *Setting Up Business License Types* and *Requesting and Scheduling Inspections*.

Configuring Inspection Time Ranges

You can set up your permit and business license inspections to show a time range or period when requesting or scheduling inspections. Configure the **Scheduled Time Range** fields in the **Inspections** section on the Permit Options page and Business License Options page to display time range values when using the *Time entry* time entry method and arrival display. For more information, see "Setting Up Inspection Options by Scheduling Method" in this topic.

Page Element	Description
Scheduled Time Range Breakpoint	Select the time of day used as a breakpoint for displaying a description of a time range before the breakpoint and a time range after the breakpoint. Inspections scheduled before the breakpoint display the value you enter in the **Time Range Before Breakpoint** field as the inspection time. Inspections scheduled after the breakpoint display the value you enter in the **Time Range After Breakpoint** field as the inspector arrival time. For example, you might select a breakpoint of *12:00 PM* to distinguish between morning and afternoon time ranges.
Time Range Before Breakpoint	The text that appears in the **Inspector Arrival** field on the Inspection Request and Inspection Details pages when the inspection scheduled start time is before the time selected in the **Scheduled Time Range Breakpoint** field. For example, if the breakpoint is 12:00 PM, you might enter a value of *Morning* to appear in the **Inspector Arrival** field for any inspections scheduled before 12:00 PM.
Time Range After Breakpoint	The text that appears in the **Inspector Arrival** field on the Inspection Request and Inspection Details pages when the inspection scheduled start time is equal to or after the time selected in the **Scheduled Time Range Breakpoint** field. For example, if the breakpoint is 12:00 PM, you might enter a value of *Afternoon* to appear in the **Inspector Arrival** field for any inspections scheduled for 12:00 PM or later.

Configuring an Interactive Voice Response System

Your agency can set up an interactive voice response (IVR) system to allow registered public users to hear permit information and schedule inspections by phone. The IVR system provides for users to enter a 4-digit access code or PIN on the registration page that they'll use when they call into the system.

You must activate IVR in the permit options to integrate with the agency's IVR system. This option is not turned on when you initially set up your agency.

When you turn on the Enable IVR switch in the agency's permit options, you'll see the Enable IVR Access Code checkbox on the Public User Setup page. This setting determines whether an access code is required during user registration. The IVR Access Code field on the Register page and in account management is only available when you select the Enable IVR Access Code checkbox.

Here are the steps for configuring an IVR system in Oracle Permitting and Licensing:

1. Go to the **Inspections** section of the Permit Options page.
2. Turn on the **Enable IVR** switch if your agency is integrating with an IVR system.
3. Go to the Public User Setup page. See *Setting Up Public Users*.
4. In the **IVR Access Code** section, verify that the **Enable IVR Access Code** checkbox is selected to require an IVR access code on the Register page. Deselect the checkbox to hide the **IVR Access Code** entry field on the Register page and in account management.

For information about setting up IVR integration with Oracle Permitting and Licensing in FSM, see *Setting Up a Proxy Role and User for Interactive Voice Response*. For information about IVR access code entry during registration and managing access, see *The Public User Registration Process* and *Managing Public User Accounts*.

Configuring Plan Reviews

Use the Plan Reviews section of the Permit Options page to configure electronic plan reviews and define how your agency handles due dates and names for permit plan reviews.

Page Element	Description
Enable cascading cycle due date	When this switch is turned on, the due date that you enter at the plan review cycle level is automatically entered for any reviewer due dates that are blank. This includes the due dates for any reviewers subsequently added to the plan review. For more information on setting plan review and plan reviewer due dates, see *Managing Plan Review Cycles*.
Enable default of plan review name	When this switch is turned on, newly created plan reviews are given the name of the associated permit type by default. When this switch is turned off, the name of newly created plan reviews is blank and must be updated manually. For more information on naming plan reviews, see *Managing Plan Review Cycles*.
Enable electronic plan review	Turn on this switch to support electronic plan reviews for permits. Your agency must integrate with Bluebeam Studio™ to use this functionality. When this switch is turned off, you can't start an electronic plan review. For more information on starting a Bluebeam Studio™ Session during a plan review cycle, see *Working with Electronic Plan Reviews*.
Protected Documents	Configure protected document handling for plan reviews. Select an option: • **Allow Protected Documents** - This is the default setting for handling protected documents. When you allow protected documents, applicants can upload protected PDF documents while filling out an application form or after submittal in the application details. You can use protected PDF documents in both manual and electronic plan reviews, but the PDF files can't be edited. • **Prevent Protected Documents** - You can't upload protected PDF documents while filling out an application form or after submittal in the application details. • **Remove Document Protection** - You can upload protected PDF documents. The system creates an unprotected copy of the PDF that can be edited and used with a Bluebeam Studio™ integration for electronic plan reviews. Manual plan reviews can be performed with archived documents. **Note:** Regardless of the protected documents setting you choose, the system will always prevent you from uploading to an application password-protected documents that require a password to open. For more information about working with protected documents, see *Managing Plan Review Documents*.
Required Plan Review Comments	Configure whether comments are required for permit plan reviews. Select an option: • *None* - Comments are optional. • *All decisions and cancellations* - Comments are required for all plan review decisions and cycle cancellations.

Page Element	Description
	• *Cancellations, approved with comments, and negative decisions* - Comments are required when the plan review decision is Approved with Comments, Rejected, or Revision Required, as well as for all canceled plan reviews.

Setting Up Permit Types

Define the types of permits supported by an agency. You add a permit type and associate workflow process definitions on the Permit Type definition page.

Before you can create an application form, you must first create a permit type on the permit type definition page.

Adding Permit Type Definitions

1. Select **Permit Setup** > **Permit Type** > **Permits**.
2. On the Transaction Type – Permit Types page, click the **Add** button.
3. On the Permit Type page, enter values for the following fields:

Page Element	Description
Classification	Displays the type of application. The classification for this page indicates this is a permit application.
Subclassification	For use with planning applications. Accept the default value, *Not Applicable*.
Permit Type	Enter a name for the type of permit type.
Permit Type ID	Enter a unique alphanumeric code or short name for the permit type. Do not use special characters, including symbols or punctuation, or spaces.
Status	Select from the following to indicate the permit type status: o *Preliminary:* The permit type is being defined but is not available for use. o *Ready:* The permit type is ready to be accessed from the landing page for testing or production use, depending on the environment. o *Void:* The transaction type is no longer available. **Note:** The form design can be in published status or draft status and be set to *Ready.* In draft status, the form can be accessed from outside the form designer—such as the Apply page—for testing purposes in the development or test environment. For more information on testing intake forms, see *Testing Intake Forms*.

Page Element	Description
Form Design Status	A read-only field indicating whether the form design is published or currently being developed. o *Draft:* The form design is currently being created or modified. Form designs in draft status are not migrated to other environments and can't be cloned. o *Published:* The form design is complete. Form designs in published status can be migrated to other environments and can be cloned.
Autonumber Rule	Select the autonumbering rule to increment numbers for permits. You can delete an autonumbering rule when it isn't being used by any transaction types. **CAUTION:** The system generated permit ID is based on the autonumber rule definition. Therefore, when selecting the autonumber rule, you must ensure that its rule definition generates a unique permit ID. Failing to do so can result in duplicate permit IDs, which will cause issues in the permit. For more information, see *Setting Up Autonumbering*.
Valid from Date and **Valid to Date**	Enter a range of dates when this permit type is valid. The default from date is the current date. The default end date is *Open*. You can update these dates as needed.
Public User Enabled	Select from the following to indicate whether the intake form can be accessed and by which user types: o *Enabled for all users:* Only registered public users and agency users can access the intake form. o *Enabled for registered users:* Only registered public users and agency users can access the intake form. o *Not enabled for public users* (default): Only agency users can access the intake form. **Note:** Currently, *Enabled for all users* and *Enabled for registered users* have equivalent access.
Contractor Validation	Enter a contractor validation group with license requirements that must be met for permits with this permit type. Agencies can decide whether to prevent application submittal if the criteria aren't met. For more information, see *Setting Up Validation Groups*.
Application Group	Select a permit application group that you want to associate with the permit type. For more information, see *Setting Up Transaction Groups*.

Page Element	Description
Category	Select an application category that you want to associate with the permit type. For more information, see *Setting Up Transaction Categories*.
Subcategory	Select an application subcategory that you want to associate with the permit type. For more information, see *Setting Up Transaction Subcategories*.
Document Group	Select a document group to manage attachments for the application type. When you specify a document group, document attachments can be classified into categories and subcategories during the application process and when you upload files. Then you can see the category for a document on the attachments page in the application details. If you add a document group to this permit type and the document group includes document categories that are configured to identify required documents, the **Required Documents** section appears on the application intake form and the Attachments page in the permit details. The system checks for uploaded attachments with the required category or category and subcategory pair at different steps in the application and displays an error if the required documents haven't been added. For more information about required documents, see *Setting Up Required Documents*. For more information, see *Setting Up Document Groups*.
Fee Schedule	Select a fee schedule that you want to associate with the permit type. A department is required if the permit type has a fee schedule ID. For more information, see *Setting Up Fee Schedules*.
Bill Type	Select a bill type to associate with the permit type. The billing type identifies the type of invoice that can be generated from the record. The bill type is required. For more information, see *Setting Up Bill Types*.
Department	Select a department that you want to associate with the permit type. A department is required if you add a Fee Schedule ID to the permit type. If a department is specified on the Fee Item setup page, the fee item department overrides the department specified here on the permit type. For more information, see *Setting Up Departments*.

Page Element	Description
Terms of Use ID	Select a terms of use definition to associate with the permit type. When you set up terms of use, you can make the terms available to the public user registration process, to the permit application process, or to both. The user must accept the terms and conditions for using online permits. For more information, see *Setting Up Terms of Use*.
Description	Enter a user-facing description of the permit type. On the Apply page, this description appears under the permit type name. The description helps public users understand the purpose of the permit type.
URL	Enter a URL for a web page that gives public users more information about the permit type. If you enter a URL, then a **Learn More** link appears at the end of the permit type description on the Apply page. The user clicks this link to open the specified URL. If you leave this field blank, the **Learn More** link is not visible on the Apply page.

Associating a Permit Certificate

First, your agency sets up the certificate template in the reports catalog, then associates the report ID with the permit type in the **Certificate** section. When the permit is issued, you can print it from the permit overview page.

Page Element	Description
Allow Public User to View	Turn on the switch to allow public users to view the issued permit document, which is accessed from the permit summary on the Overview page. This option is enabled by default.
Report ID	Enter the report ID for the permit template associated with this permit type. Use the delivered permit report or configure your own. See *Setting Up Reports*.

For information about viewing the permit document, see *Viewing the Permit Overview*.

Setting Up Permit Expiration

In the **Expiration** section, you can configure the option to allow renewal of expiring permits as well as associate the expiration group that defines the expiration rules for permits with this permit type. Expiration rules determine the expiration dates that correspond to permit activity. For more information about permit expiration, see *Setting Up Permit Expiration Rules*.

Page Element	Description
Allow Renewal	Turn on the **Allow Renewal** switch to allow the renewal of the expiring permits. By default, the option is turned off. After you enable renewals, you define the workflow for renewals in the "Setting Up Workflow for a Permit Type" section below.
Expiration Group	Enter the expiration group that defines the expiration rules for permits with this permit type. For reference, use the **Expiration Group** link, which opens the Permit Expiration Group page in a new tab. When the **Allow Renewal** switch is turned on, the Expiration Group becomes a mandatory field. When you use the lookup icon to search for expiration groups, the result returns only those expiration groups which also have the permit renewal enabled.
Permit Period Format and **Permit Period Preview**	Choose the format and a preview in the selected format displays. **Note:** The recommended format for permit renewal is to use both the month and year. For example, if the yyyy format is used for a quarterly permit renewal, the permit period will show the same renewal year for all the four renewals in the year. You will not be able to identify the renewal made for each quarter.

Setting Up Workflow for a Permit Type

Workflow provides a defined structure for business licenses, permits, planning applications, and code enforcement life cycles. Each transaction is associated with a workflow process definition that guides the transaction automatically through the process of application submission to completion. For more information, see *Using Workflow* and *Setting Up Process Definitions for Workflow*.

You set up workflow using the Oracle Integration Cloud (OIC) before associating the workflow with the permit type.

Select the **No Application Workflow** checkbox if you want to process the permit application without Workflow functionality. Inspections and plan reviews are automatically disabled for the permit applications without workflow. When applicants submit the form and pay the due fees, the application status changes to *Completed*. There are no actions for the agency staff.

You can configure the Business Rules Framework and the communication event to send out notifications to applicants and contacts on permit applications. The system sends notification to contacts and applicants on the intake form when the application status changes to Completed.

To configure the business rules framework, access the **Permit Application Updated** event for permits and add a new business rule to trigger the Send Communication action. In the business rule details, set the value for the field No Application Workflow = Yes so that the Send Communication action is triggered for permits set up without workflow. To configure communication, access the **Permit Application Updated** communication event and define a new communication template that will be triggered by the business rule framework's action. For information on setting up actions related to workflow, see *Setting Up Update Workflow Actions* and for information on setting up communications, see *Delivered Communication Events* and *Setting Up Send Communication Actions*.

You'll see the workflow setup fields for applications but also for renewals, depending on how you've set up your permit type. The columns will have headers like this:

- **Application**: Default column when you're creating the permit type.

- **Renewal**: Additional column when you turn on the **Allow Renewal** switch in the Expiration section.

In the **Workflow Setup** section on Permit Type page, enter values for the following fields to set up workflow for a permit:

> **Note:** When the **Allow Renewal** switch is turned on in the Expiration section, the **No Application Workflow** checkbox appears unchecked and disabled. This is because a workflow setup is required for permit renewals and hence, when the option to allow renewals is enabled, the workflow cannot be turned off for the permit type.

Page Element	Description
Space Name	Enter the space where the workflow process application is stored. You can group related applications in a space as well as enable users to collaborate when developing applications. **Note:** This field is available only if your agency has selected the **Oracle Integration Cloud (OIC)** option for the Workflow and DMN Source feature in the Functional Setup Manager. If the **Oracle Cloud Infrastructure Process Automation** option is selected, then the **Space Name** field is not available.
Application ID	Enter the name of the workflow process application in OIC. For more information, see *Creating and Managing Applications*.
Version	Enter the version of the workflow process application. Only active versions are displayed in the drop-down list. For information on activating, retiring, starting up, and shutting down workflow applications in OIC, see *Manage Active Applications*. **Note:** If you update the version, the new version will apply only to applications submitted after the new version has gone into effect. The existing submitted applications will continue to use the version that was effective at the time the application was submitted.
Process Definition	Enter the name of the workflow process definition that applies to this particular permit.

Here are a couple of items to note:

- Different permit types can utilize the same workflow definition.
- For renewal permit types, in both the origination and renewal workflows, ensure that the workflow has inspections before permit issuance.

Setting Up Inspections for a Permit Type

Select an inspection group for the permit type, and define how inspection times are displayed for permits associated with the permit type.

Page Element	Description
Inspection Group	Select an inspection group to associate with the permit type. The inspection group identifies all inspections necessary for the permit. For more information, see *Setting Up Inspection Groups*.
Automatically Create Inspections	Click to access a page where you can select the inspection types for which pending inspections are automatically created when a permit application associated with this permit type is submitted. This link appears only when the **Enable Creation of Pending Inspections** switch is turned on for the agency. For more information, see *Setting Up Agency-Level Options for Permits*.

Setting Up Plan Reviews for a Permit Type

Define how plan reviews are conducted for permits associated with the permit type.

1. Select **Permit Setup** > **Permit Type** > **Permits**.
2. On the Transaction Type – Permits page, click the **Add** button or select an existing permit type.
3. In the **Plan Reviews** section on Permit Type page, enter values for the following fields:

Page Element	Description
Enable Plan Review	Select this option to enable plan review for permits associated with this permit type. When plan review is enabled, you can create both manual and electronic review cycles for a permit. Plan review is on by default.
Enable Auto Assignment	Select this option to enable the automatic assignment of plan reviewers for permits associated with this permit type. When a permit technician gives a permit associated with this permit type a status of *Accepted - Plan Review Required*, the automatic assignment process: a. Adds a reviewer row to the plan review cycle for each plan reviewer department selected for the permit type. If no plan reviewer departments are selected for the permit type, the process creates the plan review cycle, but doesn't add any reviewer rows. b. Adds the designated department lead to the **Reviewer** field for each reviewer row. If a department doesn't have a department lead selected, the process still creates a row for the department, but leaves the **Reviewer** field blank.
Cycle Time Rule	Select the time rule ID for calculating and automatically populating the cycle due date when you add a plan review cycle to the permit. The time rule description appears next to the time rule ID that you selected.
Time Rule Setup	Click the link to open the Time Rule setup page. For more information about time rules, see *Setting Up Time Rules*.

4. Enter time rules in the plan reviewer department grid to calculate and automatically populate the departmental due dates using the associated time rule. Enter values for the following fields:

Page Element	Description
Plan Reviewer Department	Displays the departments that can be added to plan reviews. **Note:** A plan reviewer department is available to configure only if the Permits classification is selected for it on the Plan Reviewer Department page. For more information, see *Setting Up Plan Reviewer Departments*.
Required Department	Turn on the required switch to indicate that this department must review the plans for this permit in each plan review cycle. The reviewers grids on the Plan Review page and Plan Reviews console page display the required departments that you select here. Plan coordinators assign reviewers from each of the required departments.
Time Rule and **Description**	Select the time rule for calculating and automatically populating the departmental due date when you add a plan review cycle to the permit. You can reuse time rules for multiple plan reviewer departments. The time rule description appears next to the time rule ID that you selected. If you leave the time rule blank for a required plan reviewer department, the departmental due date won't be automatically calculated and populated in the **Reviewers** grid.

For more information about plan reviews, see *Plan Review Overview*.

Cloning Permit Types

Click the **Clone** button to create a clone of the current permit type, which you can then use to create a different permit or to create a different version of the current permit.

For more information on cloning permits, see *Cloning Transaction Type Definitions*.

Designing Intake Forms

After you have entered the appropriate initial information for a permit, you can then begin to design the intake form that end users will use to submit an online application. You create an application form using the Intake Form Designer. To access the designer, click **Design Form**.

For more information on designing intake forms, see *Using the Intake Form Designer*.

Setting Up Permit Expiration Rules

You can set up expiration rules for the different phases of the permit application lifecycle.

You set up expiration rules for permit applications to define:

- When an inactive pending application expires.
- When the application expires.
- When the permit expires.

First, you define the rules in an effective-dated group. After setting up the expiration rules, you add the rules group ID to the application type definition and periodically run batch rules processing to update permit expiration statuses. You can track updated application expiration statuses on the transaction list page and the permit's expiration status on the Overview page in the permit details.

> **Note:** Because expiration start and end dates require specific statuses, workflow processes must include status update tasks for Application Accepted (*Accepted*) and Certificate of Occupancy (*Certificate*) or Completed (*Completed*). See *Setting Up Transaction Statuses* and *Using Workflow*.

Setting Up Expiration Rule Groups

Here's how to set up the rule group:

1. Select **Permit Setup** > **Permit Expiration Group** > **Permits**.
2. On the Permit Expiration Group page, enter values for these fields:

Page Element	Description
Expiration Group ID, **Expiration Group Name**, and **Description**	Enter an ID for the expiration group, a group name, and description.
Effective Start Date and **Effective End Date**	Enter the range of dates when the group is effective. If you want to leave the effective dates open-ended, don't enter a date for the end date. **Note:** You can't update the start date after saving the expiration group details.
Show All Dates	Click to access the effective-dated history of the rules definition. This button is available after you create the first rule. See the next section for details about the history data.

3. Turn on the **Allow Renewal** switch to enable the applicant and agency staff to submit an application for a permit renewal using this permit type. By default, the option is turned off.

4. Verify that the **Enabled** switch is turned on. The option is active by default for a new expiration group.
5. Create expiration rules in the **Expiration Rules** section.

Expiration Group History Data

The Permit Expiration Group – History Data page shows the list of rules definition records with their effective date history. You can search history by effective start date. Click *Add* to create a new effective-dated row for an expiration group.

You can delete effective dated entries using the **Delete** icon in each row. You can only delete effective dated rows that have their effective end date in the future or are open ended. The **Delete** option is not available for effective dated rows that have the start and end dates earlier than the current date.

> **Note:** Only the agency staff with the job role PSC_MANAGE_EFFECTIVE_DATES_PRIV assigned to them can delete an expiration group with any effective dated entry. Turn on the **Correction Mode** switch to enable deletion of the record. The **Delete** option will appear for the rows on the History Data page as well as on the Permit Expiration Group page. Also note that only when the **Correction Mode** is enabled, you can update the effective start date for the expiration group.

Defining Expiration Rules

Here's how to set up the details about the expiration rules in the group:

1. Select **Permit Setup** > **Permit Expiration Group** > **Permits**.
2. Click **Add** in the **Expiration Rules** section.
3. Enter these values to create each rule:

Page Element	Description
Expiration Basis	Select the type of expiration for the rule, based on the status of the application: - *Inactive pending application* – When the application is in a pending status, users must submit the application before the expiration date. The expiration timeframe begins when the user saves an application and ends with application submission. - *Application expiration* – Users must complete permit requirements such as the plan review before the permit can be issued. If the permit is not issued by the expiration date, the application and all tasks are canceled. The expiration timeframe begins when the agency accepts application and ends when the permit is issued. - *Permit expiration* – Users must complete the final inspection before the permit expires. The expiration timeframe begins when the agency issues the permit and ends when the Certificate of Occupancy is issued or the permit is completed. **Note:** Because expiration start and end dates require specific statuses, workflow processes must include status update tasks for Application Accepted (*Accepted*) and Certificate of Occupancy (*Certificate*) or Completed (*Completed*). See *Setting Up Transaction Statuses* and *Using Workflow*.

Page Element	Description
Expiration Duration	Enter the amount of time that the user has before the expiration date. **Note:** The expiration date is calculated as follows: a. For pending applications, *Expiration date = Date when the application was saved + Expiration duration*. b. For permits, *Expiration date = Issue date + Expiration duration*. Because the expiration timer starts the day after the issue date, enter a duration that is one day less than the desired timeframe.
About to Expire	Enter when you would like a notification to appear on the application that shows the user how long until the application expires. For example, you can enter 2 days to show that a pending application expires in 2 days. You can manually extend a permit on the Overview page in the transaction details during the about to expire period. For example, if the about to expire period is 15 days, the permit can be manually extended starting at 15 days before the expiration date.
Grace Period	Enter the amount of time the application is valid beyond the expiration date. For example, if a pending application expires in 30 days, you may want to provide a grace period of an additional 3 days. You can also manually extend a permit on the Overview page in the transaction details during the grace period.
Number of Extensions	Enter the number of allowed extensions beyond the expiration date. For example, to allow up to 2 extensions you would enter 2. You can manually extend the expiration during the About to Expire and Grace Period timeframes, when the **Extend** link is available on the Overview page in the application details. This link is available only for agency staff with appropriate permissions. You can't manually extend the expiration for applications in a pending status.

Note: In the fields for **Expiration Duration**, **About to Expire** and **Grace Period**, the number you can add is limited to a 3-digit value. For example, the highest value you can add for any of these fields is 999.

4. Verify that the **Enabled** switch is turned on for each rule. The option is active by default for a new expiration rule.
5. Click **Save**.

Setting Up Communication Rules

You can set up communication rules to send communications when the permit application or permit is about to expire or expired. Agency staff and the contact listed on the application receive the notifications. Click **Add** in the Communication column and select **About to Expire**, **Expired**, or both, and the recurrence of the communication.

Depending on the expiration communication rules you define, you must also set up communication templates for these delivered events:

- *About to Expire Permit* – The communication event is triggered when the inactive pending application, application, or permit is about to expire.
- *Expired Permit* – The communication event is triggered when the inactive pending application, application, or permit expires.

For more information about configuring the communication templates for the email or notification you want to send when the event occurs, see *Setting Up Communication Templates*.

> **CAUTION:** After setting up communication rules, you must periodically run batch expiration rule processing to update the *About to Expire* and *Expired* statuses. The system updates the statuses and sends out the communications according to the setup. Oracle recommends that you schedule expiration rule processing to run daily.

Setting Up Automatic Permit Extensions

After you add a permit expiration rule, you have the option to automatically extend a permit's validity based on inspection activity. This is how it works: You define whether the extension occurs only when the inspection is completed with a pass result or any result, and specify the duration of the extension in number of days. Automatic extensions are counted toward the number of available extensions defined in the rule. Agency staff with system administrator permissions can still manually extend the expiration.

Here's how to automatically extend a permit:

1. Select the option to automatically push out the permit expiration date.
2. In the **Result** field, select one of the options:
    - *Any Result*: Extend the expiration date when an inspection is completed regardless of the inspection result.
    - *Pass Only*: Extend the expiration date only when an inspection is complete with a passing result.
3. In the **Extension Duration** fields, select the number of days, months, or weeks to extend the permit.

You might have multiple inspections for a permit, in which case the system extends the permit with each completed inspection.

If you have communications set up, notifications are sent when the extended permit is about to expire or when it expires. You must run expiration rule processing to update the statuses and send communications.

Setting Up Permit Expiration Based on Inspection Activity

When you set up inspection commencement rules, permits will automatically expire due to inactivity if the first inspection is not scheduled or does not pass within a specified period of time after permit issuance. A notification is sent out when the permit is about to expire based on the inspection activity.

Here's how to set up a permit to expire based on the inspection commencement:

1. Create a rule for permit expiration.
2. Select **Permit expires based on inspection commencement**.
3. Select the timeframe the permit is valid after issuance in the **Expiration Duration** fields, during which the first inspection must be scheduled or pass.
4. In the inspection commencement date field, select one of the options:
    - *Schedule date*: The first inspection must be scheduled by this date for the permit to remain active.
    - *Pass date*: The first inspection must pass by this date for the permit to remain active.

Depending on the communications you defined for the permit expiration rule, notifications are sent when the permit is about to expire or when it expires.

Setting Up Permit Expiration Based on Permit Reissuance

The Expiration Rules section enables you to configure rules to recalculate the expiration date based on the permit reissuance date.

When a permit is reissued, the expiration date for the permit is calculated based on the **Issuance and Reissuance Dates** setting on the Permit Options page. If the Override the original issuance date or the Track both dates option is selected, then automatically the expiration rule uses the reissuance date for expiration date calculation. In case the permit's reissue date is not available, then the original issue date is used to determine the expiration date.

See *Setting Up Agency-Level Options for Permits*.

To restrict the expiration rule from using the permit reissue date, you must turn off the **Automatically recalculate the expiration date when the permit is reissued** checkbox.

> **Note:** If the **Issuance and Reissuance Dates** setting on the Permit Options page uses the Use the original issuance date only option, then the **Automatically recalculate the expiration date when the permit is reissued** checkbox is disabled and unavailable for edit. Accordingly, selecting any of the remaining two options will enable the checkbox by default and allows you to turn it off.

Expiration date for a reissued permit: The system compares the newly calculated expiration date with the expiration date set at the time of permit issuance. The date that is resulting in a longer expiration due period is applied.

For example, if the expiration date calculated at reissuance is January 8 and the expiration date at the time of permit issuance was January 12, then the expiration date applicable for the reissued permit will be January 12.

Depending on the communications you defined for the permit expiration rule, notifications are sent when the permit is reissued. See *Setting Up Communication Templates*.

> **CAUTION:** Oracle recommends that you review and save these expiration rule settings whenever you change the issuance and reissuance dates. See *Setting Up Agency-Level Options for Permits*.

Associating Expiration Rules with Permit Types

After you create an expiration group, you associate the group of rules with a permit type.

1. Select **Permit Setup** > **Permit Type** > **Transaction Type** > **Permits**.
2. Click the row for the permit type.

3. On the selected Permit Type page, enter the expiration group ID. You can look up the expiration group by expiration group name and description.
4. Click **Save**.

For more information about assigning rules to a permit type, see *Setting Up Permit Types*.

Running the Expiration Rule Process

After setting up expiration rules and adding an expiration rule group ID to the permit type definition, you must set up expiration rule processing to periodically update the expiration statuses.

Run the process that updates permit and planning application expiration statuses on the Process Expiration Rules page, which you access by selecting **Common** > **Process Expiration Rules**. Oracle recommends that you schedule expiration rules processing to run daily.

> **CAUTION:** You must periodically run batch expiration rule processing to update the about to expire and expired statuses for permits that have been extended. The system updates the statuses and sends out the communications according to the setup.

For information about setting up expiration rules processing, see *Updating Application Expiration Status*.

Updating Application Expiration Status

You update the application expiration status using a process that runs against predefined rules.

You run the process that updates expiration statuses on the Process Expiration Rules page, which you access by selecting **Common** > **Process Expiration Rules**. Oracle recommends that you schedule expiration rules processing to run daily.

> **Note:** After setting up expiration rules, you must periodically run batch expiration rule processing to update the *About to Expire* and *Expired* statuses. The system updates the statuses and sends out communications according to the setup.

Here's an example of how the processing works: An agency created a rule for solar permits that indicates application expires in 30 days. The period of time when a notification appears for applications about to expire is 5 days. During processing, the system updates the status to *Expired* when the application expires. That is, when the permit is not issued within 25 days, the application is about to expire, and at 30 days, the application expires. If the rule includes a grace period, such as 3 days, the system status changes to *Expired* after 30 days, but resets if there is activity within the 3-day grace period. Processing triggers alerts and notifications when the application is about to expire and upon expiration.

When an application or permit expires, processing changes the system status to *Expired* and cancels all associated open tasks.

Entering Parameters to Process Expiration Rules

1. Access the Parameters tab on the Process Expiration Rules page.
2. Select the **Classification** for which you are updating expiration dates: *Planning and Zoning* or *Permits*.

Scheduling the Process

1. Access the Schedule tab.
2. To immediately add the process to the queue, select the **As soon as possible** option.
3. To create a schedule for the process, select the **Using a schedule** option, and enter values using the following fields:

Page Element	Description
Frequency	Select how frequently you want to run the process. Values are: - *Once:* Select to run the process one time only. - *Hourly or minute:* Select to run the process at regular time intervals. - *Daily:* Select to run the process at regular intervals in days. **Note:** *Daily* is the recommended option for running the expiration status update process. - *Weekly:* Select to run the process at regular intervals in weeks. - *Monthly:* Select to run the process on specific days of the month. - *Yearly:* Select to run the process during specific months.
Start Date	Enter the date on which you want to begin your scheduled processing.
End Date	Enter the date on which you want to end your scheduling processing.
Hours and **Minutes**	Enter the time interval between scheduled processes. For example, if you enter *2* in the **Hours** field and *30* in the **Minutes** field, the process will run every 2 hours and 30 minutes beginning on the specified start date. **Note:** These fields are available only if you select a process frequency of *Hours* or *Minutes*.
Days	Enter the number of days between scheduled processes. For example, if you enter *3*, the process will run every 3 days beginning on the specified start date. **Note:** This field is available only if you select a process frequency of *Daily*.
Weeks	Enter the number of weeks between scheduled processes. For example, if you enter *6*, the process will run every 6 weeks beginning on the specified start date.

Page Element	Description
	Note: This field is available only if you select a process frequency of *Weekly*.
Repeat – By day	Select this option to run the process on specific days of the month irrespective of the date. For example, if you select the **Second**and **Wednesday** options, the process will run on the second Wednesday of every month. You can select more than one week of the month and day of the week option. For example, you could schedule the process to run on the first and third Monday of every month. **Note:** This option and its associated fields are available only if you select a process frequency of *Monthly* or *Yearly*.
Repeat – By date	Select this option to run the process on specific dates of the month. You can select more than one date. **Note:** This option and its associated fields are available only if you select a process frequency of *Monthly* or *Yearly*.
Month	Select the months in which you want your process to run. **Note:** This option and its associated fields are available only if you select a process frequency of *Yearly*.

Setting Up Process Notifications

You can set up the process to send notifications to you and others when it runs.

1. Turn on the **Notify Me When This Process Ends** switch to send yourself a notification when the process finishes.
2. Access Notification tab.
3. Click **Add**.

4. On the Create Notification page, enter the email address of the person you want to receive notifications.

   By default, the recipient will receive a notification when the process ends with the following conditions:

   - On success
   - On error
   - On warning

   You can remove any of these process notification conditions.
5. Click **OK** to save the notification recipient.
6. (Optional) To delete a notification recipient, select the recipient in the Notification tab and click **Delete**.

Submitting the Process

Once you've entered your process parameters, scheduling information, and notification recipients, you're ready to submit the process. Enter any additional information in the **Submission Notes** field and click **Submit**. Click **Process Monitor** to check the status of your process.

6 Setting Up Planning Applications

Setting Up Agency-Level Options for Planning Applications

Configure how your agency handles plan reviews for planning applications, including due dates, plan review names, plan review documents, and comments.

To configure agency-level options for planning applications:

1. Select **Common Setup** > **Agency**.
2. Click a row on the Agency Information tab.
3. Select the Features tab.

   Oracle delivers the list of offerings on the Features tab.
4. Click **Review Options** for the Planning and Zoning offering.

Configuring General Settings

Administrators use the General settings to manage the display of planner information on the Overview page for a planning application or preapplication.

Page Element	Description
Instructional Text for Planning Applications	Select an option from the Instructional Text for Permits field to set up and manage instructional or assistive text that can be configured to appear on applications. For more information, see *Managing Instructional Text*.
Display Assigned Planner Information to Public Users	Select from one of the options to determine what information the public user will view: • *Planner name and email*: The name of the assigned planner and their email. • *None*: No detail will display related to planner. • *Planner name*: Only the name of the assigned planner. • *Planner name and general email*: The name of the assigned planner and the agency's general email address.
Planner's General Email	Enter your agency's general email ID that the registered users can use to contact the agency. This field is available only when the *Planner name and general email* option is selected from the above field.

Note: When the assigned planner is no longer associated with the agency and if the *Planner name and email* option is selected, then only the planner's name is displayed to the registered user.

Configuring Plan Reviews

Use the Plan reviews section of the Planning and Zoning Options page to configure electronic plan reviews and define how your agency handles due dates and names for planning application plan reviews.

Page Element	Description
Enable cascading cycle due date	When this switch is turned on, the due date that you enter at the plan review cycle level is automatically entered for any reviewer due dates that are blank. This includes the due dates for any reviewers subsequently added to the plan review. For more information on setting plan review and plan reviewer due dates, see *Managing Plan Review Cycles*.
Enable default of plan review name	When this switch is turned on, newly created plan reviews are given the name of the associated permit type by default. When this switch is turned off, the name of newly created plan reviews is blank and must be updated manually. For more information on naming plan reviews, see *Managing Plan Review Cycles*.
Enable electronic plan review	Turn on this switch to support electronic plan reviews for planning applications. Your agency must integrate with Bluebeam Studio™ to use this functionality. When this switch is turned off, you can't start an electronic session. For more information on starting a Bluebeam Studio™ Session during a plan review cycle, see *Working with Electronic Plan Reviews*.
Protected Documents	Configure protected document handling for plan reviews. Select an option: • **Allow Protected Documents** - This is the default setting for handling protected documents. When you allow protected documents, applicants can upload protected PDF documents while filling out an application form or after submittal in the application details. You can use protected PDF documents in both manual and electronic plan reviews, but the PDF files can't be edited. • **Prevent Protected Documents** - You can't upload protected PDF documents while filling out an application form or after submittal in the application details. • **Remove Document Protection** - You can upload protected PDF documents. The system creates an unprotected copy of the PDF that can be edited and used with a Bluebeam Studio™ integration for electronic plan reviews. Manual plan reviews can be performed with archived documents. **CAUTION:** Regardless of the protected documents setting you choose, the system will always prevent you from uploading to an application password-protected documents that require a password to open. For more information about working with protected documents, see *Managing Plan Review Documents*.
Required Plan Review Comments	Configure whether comments are required for planning application plan reviews. Select an option: • *None* - Comments are optional. • *All decisions and cancellations* - Comments are required for all plan review decisions and cycle cancellations.

Page Element	Description
	• *Cancellations, approved with comments, and negative decisions* - Comments are required when the plan review decision is Approved with Comments, Rejected, or Revision Required, as well as for all canceled plan reviews.

Configuring Decisions and Hearing

Use the **Allow public users to submit appeal for themselves** switch in the Decisions and hearing section of the Planning and Zoning Options drawer to control whether the public users can submit a hearing appeal or not. Turning off the switch prevents the registered public users from submitting an appeal. By default, the switch is turned on.

Setting Up Notices and Reports

A notice or a report is a document issued by an agency to the concerned party to inform them of the status of their transactions. You have to set up notices and reports specific to your transactions before generating and sending them to the concerned parties.

Adding Notices and Reports

To add a notice or report:

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering.
3. Select **Analytics and Reporting** from Functional Areas and then select the **Manage Notices and Reports** task.
4. The Notice and Report page lists all the notices and reports. Click **Add** to add a new notice or report.
5. On the **New notice and report** drawer, enter values for the notice or report.

Page Element	Description
ID	Enter a unique identifier for the notice or report.
Name	Enter a name for the notice or report.
Report Mapping	Click to view a list of all the enabled notices and reports from the Report Configuration setup.
Classification	Click the drop-down arrow and select the transaction for which the new notice or report is being set up.

Modifying Notices and Reports

To modify notices and reports:

1. On the Notice and Report page, select the row for the notice or report you want to modify.

2. On the **Notice and report details** drawer, you can:
    a. Change the name of the notice or report.
    b. Change the Report Mapping.
    c. Use the **Enabled** switch to enable or disable the notice or report.
3. Click **Save** to save changes.

Deleting Notices and Reports

To delete notices and reports:

1. On the Notice and Report page, select the row for the notice that you want to delete.
2. On the **Notice and report details** drawer, click the **Delete** button.

Setting Up Notice and Report Groups

A notice and report group is a set of notices and reports grouped together on the basis of the status of a transaction. The notices and reports within a group follow a sequence that you configure, to send to the concerned parties as and when required.

Adding Notice and Report Groups

To add a notice and report group:

1. Select **Common Setup** > **Notice and Report Group**.
2. The Notice and Report Groups page lists all the notice and report groups. Click **Add** to add a new group.
3. On the Notice and Report Group Details page, enter values for the group.

Page Element	Description
Group ID	Enter a unique identifier for the notice and report group.
Group Name	Enter a name for the notice and report group.
Classification	Select the transaction for which the notice and report groups are being set up.
Enabled	Verify that the **Enabled** switch is turned on.
Create System Notice on Case Creation	Turn off the switch to create a case without automatically generating a notice of violation. **Note:** Agencies can set up issue subtypes and turn off this switch in the associated notice and report group. This will ensure that a case creation with that particular issue subtype will not automatically generate a notice of violation.

Page Element	Description

4. In the **Status Associations** section, you can configure the notices and reports that are to be sent in a defined sequence, based on the status of the application or case.

Page Element	Description
Status	Select a status to associate with the new notice and report group.
Sequence	Select a value to determine the sequence of the selected notice and report within the hierarchy. For example, if the value 2 is set as sequence, then the selected notice and report will appear second within the hierarchy for the selected status.
ID	Select a notice and report specific to the status and the sequence value.
Name	The name of the notice and report auto populates when you select the status and ID.
Enabled	Verify that the **Enabled** switch is turned on.
Delete	Use the **Delete** button to delete a status association record.

Use the **Add** and **Download** icons for adding and downloading a notice and report status association record.

5. In the Ad Hoc Associations section, you can configure an ad hoc notice and report that the agency staff can manually add to a transaction.

Page Element	Description
Category	Select a category from the list of values set up by your agency.
Count	Enter a numeric value as a reference to determine when the ad hoc notice and report must be applied. **Note:** This field currently applies only to Code Enforcement.
ID	Select a notice and report specific to the transaction.
Name	The name of the notice and report auto populates when you select the ID.

Page Element	Description
Enabled	Verify that the **Enabled** switch is turned on.
Delete	Use the **Delete** button to delete an ad hoc association record.

Use the **Add** and **Download** icons for adding and downloading an ad hoc association record.

6. Click **Save** to save your changes.

Modifying Notice and Report Groups

To modify the notice and report group:

1. Select **Common Setup** > **Notice and Report Group**.
2. On the Notice and Report Group page, select the row for the notice and reports group you want to modify.
3. On the Notice and Report Group Details page, you can:
    - Change the name of group.
    - Delete status and ad hoc associations and create new ones.
    - Click the **Enabled** switch to enable or disable the notice and report group.
4. Click Save to save changes.

Deleting Notice and Report Groups

To delete a notice and report group:

1. Select **Common Setup** > **Notice and Report Group**.
2. On the Notice Group and Report page, select the row for the notice and report group that you want to delete.
3. On the Notice Group and Report Details page, click the **Delete** button.

Setting Up Planning Application Types

Define the types of planning applications supported by an agency, including preapplications. You add a planning application type and associate workflow process definitions on the Planning Application Type definition page.

Before you can create an application form, you must first create a planning application or preapplication type on the Planning Application Type definition page. The type defines attributes that will be available for the planning application or preapplication.

Adding Planning Application Type Definitions

1. Select **Planning and Zoning Setup** > **Planning Application Type** > **Planning Applications**.
2. On the Transaction Type – Planning Applications page, click the **Add** button.
3. On the Planning Type Applications page, enter values for the following fields:

Page Element	Description
Classification	Displays the type of application. The classification for this page indicates this is a planning application.
Subclassification	Displays the subclassification of the application type. If you would like to create a preapplication type, select *Pre-Application* from the drop-down list. The default value is *Not Applicable*, which indicates a standard planning application.
Planning Application Type	Enter a name for the type of planning application.
Planning Application Type ID	Enter a unique alphanumeric code or short name for the planning application type. Do not use special characters, including symbols or punctuation, or spaces.
Status	Select from the following to indicate the planning application type status: o *Preliminary:* The planning application type is being defined but is not available for use. o *Ready:* The planning application type is ready to be accessed from the landing page for testing or production use, depending on the environment. o *Void:* The transaction type is no longer available. **Note:** The form design can be in published status or draft status and be set to *Ready.* In draft status, the form can be accessed from outside the form designer—such as the Apply page—for testing purposes in the development or test environment.
Form Design Status	A read-only field indicating whether the form design is published or currently being developed. o *Draft:* The form design is currently being created or modified. Form designs in draft status are not migrated to other environments and can't be cloned. o *Published:* The form design is complete. Form designs in published status can be migrated to other environments and can be cloned.
Autonumber Rule	Select the autonumbering rule to increment numbers for planning applications. You can delete the autonumbering rule when it isn't being used by any transaction types. **CAUTION:** The system generated application ID is based on the autonumber rule definition. Therefore, when selecting the autonumber rule, you must ensure that its rule definition generates a unique application ID. Failing to do so can result in duplicate application IDs, which will cause issues in the planning application.

Page Element	Description
	For more information, see *Setting Up Autonumbering*.
Valid from Date and **Valid to Date**	Enter a range of dates when this planning application type is valid. The default from date is the current date. The default end date is *Open*. You can update these dates as needed.
Public User Enabled	Select from the following to indicate whether the intake form can be accessed and by which user types: o *Enabled for all users:* Only registered public users and agency users can access the intake form. o *Enabled for registered users:* Only registered public users and agency users can access the intake form. o *Not enabled for public users* (default): Only agency users can access the intake form. **Note:** Currently, *Enabled for all users* and *Enabled for registered users* have equivalent access.
Hearing	Select whether public hearings are applicable or not applicable to this planning application type. For more information, see *Setting Up Hearing and Decision Making Bodies* and *Setting Up Hearing Decisions*.
Application Group	Select an application transaction group that you want to associate with the planning application type. For more information, see *Setting Up Transaction Groups*.
Category	Select a transaction category that you want to associate with the planning application type. For more information, see *Setting Up Transaction Categories*.
Subcategory	Select a transaction subcategory that you want to associate with the planning application type. For more information, see *Setting Up Transaction Subcategories*.
Activity Group	Select an activity group with the activities that you want to use for tracking planning application task due dates. Whenever an application of this application type is submitted, activities set up and mapped to the transaction type are added to the planning application's activity tracking page. For more information, see *Setting Up Activity Tracking*.
Document Group	Select a document group to manage attachments for the planning application type.

Page Element	Description
	When you specify a document group, document attachments can be classified into categories and subcategories during the application process and when you upload files. Then you can see the category for a document on the attachments page in the application details. If you add a document group to this planning application type and the document group includes document categories that are configured to identify required documents, the **Required Documents** section appears on the application intake form and the Attachments page in the planning application details. The system checks for uploaded attachments with the required category or category and subcategory pair at different steps in the application and displays an error if the required documents haven't been added. For more information about required documents, see *Setting Up Required Documents*. For more information, see *Setting Up Document Groups*.
Fee Schedule	Select a fee schedule that you want to associate with the planning application type. A department is required when you enter a fee schedule ID. For more information, see *Setting Up Fee Schedules*.
Bill Type	Select a bill type to associate with the planning application type. The billing type identifies the type of invoice that can be generated from the record. The bill type is required. For more information, see *Setting Up Bill Types*.
Department	Select a department that you want to associate with the planning application type. A department is required if you add a Fee Schedule ID to the planning application type. If a department is specified on the Fee Item setup page, the fee item department overrides the department specified here on the planning application type. For more information, see *Setting Up Departments*.
Meeting Template	Select a meeting template that should be applied to this planning application type. For more information, see *Setting Up Meetings*.
Terms of Use ID	Select a terms of use definition to associate with the planning application type. The available values for planning applications are determined by the usage on the terms of use ID. For more information, see *Setting Up Terms of Use*.

Page Element	Description
Report Group	Enter the name of the notice and report group to be associated with the planning application type. For more information, see *Setting Up Notice and Report Groups*.
Description	Enter a user-facing description of the planning application type. On the Apply page, this description appears under the application type name. The description helps public users understand the purpose of the application type.
URL	Enter a URL for a web page that gives public users more information about the planning application type. If you enter a URL, then a **Learn More** link appears at the end of the application type description on the Apply page. The user clicks this link to open the specified URL. If you leave this field blank, the **Learn More** link is not visible on the Apply page.

Setting Up Conditions of Approval

In the **Conditions of Approval** section, you enter the report ID and template that associate with this planning application type. The report ID determines the type of report that should be printed to list the conditions of approval and the conditions of approval template determines the conditions of approval that will be applied to the planning application.

For more information about conditions of approval, see *Setting Up Conditions of Approval Templates*.

Setting Up Planning Application Expiration

In the **Expiration** section, you can enter the expiration group that defines the expiration rules for this planning application or preapplication type. Expiration rules determine the expiration dates that correspond to application activity. For more information about planning application and preapplication expiration, see *Setting Up Planning Application Expiration Rules*.

Setting Up Workflow for a Planning Application

Workflow provides a defined structure for business licenses, permits, planning applications, and code enforcement life cycles. Each transaction is associated with a workflow process definition that guides the transaction automatically through the process of application submission to completion.

You set up workflow process definitions in OCI Process Automation before associating the workflow with the planning application type.

For more information, see *Using Workflow* and *Setting Up Process Definitions for Workflow*.

Select the **No Application Workflow** checkbox if you want to process the planning application without Workflow functionality. Plan reviews is automatically disabled for the planning applications without workflow. When applicants

submit the form and pay the due fees, the application status changes to *Completed*. There are no actions for the agency staff.

You can configure the Business Rules Framework and the communication event to send out notifications to applicants and contacts on planning applications and preapplications. The system sends notification to contacts and applications on the intake form when the application status changes to Completed.

To configure the business rules framework, access the **Planning Application and Preapplication Updated** event for planning application or preapplication and add a new business rule to trigger the Send Communication action. In the business rule details, set the value for the field No Application Workflow = Yes so that the Send Communication action is triggered for applications set up without workflow. To configure communication, access the **Planning Application and Preapplication Updated** communication event and define a new communication template that will be triggered by the business rule framework's action. For information on setting up actions related to workflow, see *Setting Up Update Workflow Actions* and for information on setting up communications, see *Delivered Communication Events* and *Setting Up Send Communication Actions*.

To set up workflow for a planning application:

1. In the **Workflow Setup** section on Planning Application Type page, enter values for the following fields:

Page Element	Description
Space Name	Enter the space where the workflow process application is stored. You can group related applications in a space as well as enable users to collaborate when developing applications. **Note:** This field is available only if your agency has selected the **Oracle Integration Cloud (OIC)** option for the *Workflow and DMN Source* feature in the Functional Setup Manager. If the **Oracle Cloud Infrastructure Process Automation** option is selected, then the Space Name field is not available.
Application ID	Enter the name of the workflow process application in OIC. For more information, see *Creating and Managing Applications*.
Version	Enter the version of the workflow process application. **Note:** If you update the version, the new version will apply only to applications submitted after the new version has gone into effect. The existing submitted applications will continue to use the version that was effective at the time the application was submitted.
Process Definition	Enter the name of the workflow process definition that applies to this particular planning application.

Note: Different planning application types can utilize the same workflow definition.

Setting Up Plan Reviews for a Planning Application Type

Define how plan reviews are conducted for planning applications associated with the planning application type.

1. Select **Planning and Zoning Setup** > **Planning Application Type** > **Planning Applications**.
2. On the Transaction Type – Planning Applications page, click the **Add** button or select an existing planning application type.
3. In the **Plan Reviews** section on Planning Application Type page, enter values for the following fields:

Page Element	Description
Enable Plan Review	Select this option to enable plan review for planning applications associated with this planning application type. When plan review is enabled, you can create both manual and electronic review cycles for a planning application. Plan review is on by default.
Enable Auto Assignment	Select this option to enable the automatic assignment of plan reviewers for planning applications associated with this planning application type. When the assigned planner gives a planning application associated with this planning application type a status of *Completed - Plan Review Required*, the automatic assignment process: a. Adds a reviewer row to the plan review cycle for each plan reviewer department selected for the planning application type. If no plan reviewer departments are selected for the planning application type, the process creates the plan review cycle, but doesn't add any reviewer rows. b. Adds the designated department lead to the **Reviewer** field for each reviewer row. If a department doesn't have a department lead selected, the process still creates a row for the department, but leaves the **Reviewer** field blank.
Cycle Time Rule	Select the time rule ID for calculating and automatically populating the cycle due date when you add a plan review cycle to the permit. The time rule description appears next to the time rule ID that you selected.
Time Rule Setup	Click the link to open the Time Rule setup page. For more information about time rules, see *Setting Up Time Rules*.

4. Enter time rules in the plan reviewer department grid to calculate and automatically populate the departmental due dates using the associated time rule. Enter values for the following fields:

Page Element	Description
Plan Reviewer Department	Displays the departments that can be added to plan reviews.

Page Element	Description
	Note: A plan reviewer department is available to configure only if the Permits classification is selected for it on the Plan Reviewer Department page. For more information, see *Setting Up Plan Reviewer Departments*.
Required Department	Turn on the required switch to indicate that this department must review the plans for this permit in each plan review cycle. The reviewers grids on the Plan Review page and Plan Reviews console page display the required departments that you select here. Plan coordinators assign reviewers from each of the required departments.
Time Rule and **Description**	Select the time rule for calculating and automatically populating the departmental due date when you add a plan review cycle to the permit. You can reuse time rules for multiple plan reviewer departments. The time rule description appears next to the time rule code that you selected. If you leave the time rule blank for a required plan reviewer department, the departmental due date won't be automatically calculated and populated in the **Reviewers** grid.

Cloning Planning Application Types

Click the **Clone** button to create a clone of the current planning application type, which you can then use to create a different planning application or to create a different version of the current planning application.

For more information on cloning permits and planning applications, see *Cloning Transaction Type Definitions*.

Designing Intake Forms

After you've entered the appropriate initial information for the planning and zoning type, you can then begin to design the intake form that end users will use to submit an online planning application. You create an intake form using the designer. You access the designer by clicking the **Design Form** button.

For more information on designing intake forms, see *Using the Intake Form Designer*.

Setting Up Planning Application Expiration Rules

You can set up expiration rules for the different phases of the planning application lifecycle.

You set up expiration rules for planning applications to define:

- When an inactive pending application expires.
- When the entitlement expires.

First, you define the rules in an effective-dated group. After setting up the expiration rules, you add the rules group ID to the application type definition and periodically run batch rules processing to update permit expiration statuses.

Setting Up Expiration Rule Groups

Here's how to set up the rule group:

1. Select **Planning and Zoning Setup** > **Expiration Group** > **Planning Applications**.
2. On the Planning Expiration Group page, enter values for these fields:

Page Element	Description
Expiration Group ID, **Expiration Group Name**, and **Description**	Enter an ID for the expiration group, a group name, and description.
Subclassification	Select *Not Applicable* for a planning application or *Pre-Application*. Use *Pre-Application* if you are applying this group of rules to a preapplication transaction type.
Effective Start Date and **Effective End Date**	Enter the range of dates when the group is effective. If you want to leave the effective dates open-ended, don't enter a date for the end date. **Note:** You can't update the start date after saving the expiration group details.
Show All Dates	Click to access the effective-dated history of the rules definition. This button is available after you create the first rule. See the next section for details about the history data.

3. Verify that the **Enabled** switch is turned on. The option is active by default for a new expiration group.
4. Create expiration rules in the **Expiration Rules** section.

Expiration Group History Data

The Planning Application Expiration Group – History Data page shows the list of rules definition records with their effective date history. You can search history by effective start date. Click *Add* to create a new effective-dated row for an expiration group.

You can delete effective-dated entries using the **Delete** icon in each row. You can only delete rows that have their effective end date in the future or are open ended. The **Delete** option is not available for effective dated rows that have the start and end dates earlier than the current date.

Note: Only the agency staff with the job role PSC_MANAGE_EFFECTIVE_DATES_PRIV assigned to them can delete an expiration group with any effective dated entry. Turn on the **Correction Mode** switch to enable deletion of the record. The **Delete** option will appear for the rows on the History Data page as well as on the Permit Expiration Group page. Also note that only when the **Correction Mode** is enabled, you can update the effective start date for the expiration group.

Defining Expiration Rules

Here's how to set up the details about the expiration rules in the group:

1. Select **Planning and Zoning Setup** > **Expiration Group** > **Planning Applications**.
2. Click **Add** in the **Expiration Rules** section.
3. Enter values to create each rule:

Page Element	Description
Expiration Basis	Select the type of expiration for the rule, based on the status of the application: - *Pre-application expiration* – Applies only to preapplications. Users must complete the preapplication within the specified period of time. The expiration timeframe begins when the user saves the preapplication and ends when the user starts the planning application. - *Inactive pending application* – When the planning application is in a pending status, the user must submit the application before the expiration date. The expiration timeframe begins when the user saves a planning application and ends with application submission. - *Entitlement expiration* – Applies only to entitlements for planning applications. Users must submit a permit application after the entitlement is issued and before the expiration date. The expiration timeframe begins when the agency issues the completed entitlement and ends when the user submits the permit application. **Note:** Because start and end dates require specific statuses, workflow processes must include status update tasks for Application Accepted (*Accepted*) and Certificate of Occupancy (*Certificate*) or Completed (*Completed*).
Expiration Duration	Enter the amount of time that the user has before the expiration date. **Note:** The expiration date is calculated as follows: a. For pending applications, *Expiration date = Date when the application was saved + Expiration duration*. b. For permit and license issuance, *Expiration date = Issue date + Expiration duration*. Because the expiration timer starts the day after the issue date, enter a duration that is one day less than the desired timeframe.

Page Element	Description
About to Expire	Enter when you would like a notification to appear on the application that shows the user how long until the application expires. For example, you can enter 2 days to show that a pending application expires in 2 days.
Grace Period	Enter the amount of time the application is valid beyond the expiration date. For example, if a pending application expires in 30 days, you may provide a grace period of an additional 3 days.
Number of Extensions	Enter the number of allowed extensions beyond the expiration date. For example, to allow up to 2 extensions you would enter 2. You can manually extend the expiration during the About to Expire and Grace Period timeframes, when the **Extend** link is available on the Overview page in the application details. This link is available only for agency staff with appropriate permissions. You can't manually extend the expiration for applications in a pending status. Both manual extensions and extensions that occur automatically due to inspection activity count toward the number of available extensions.

4. Verify that the **Enabled** switch is turned on for each rule. The option is active by default for a new expiration rule.
5. Click **Save**.

Setting Up Communication Rules

You can set up communication rules to send communications when the preapplication or planning application is about to expire or expired. Agency staff and the contact listed on the application receive the notifications. Click **Add** in the Communication column and select **About to Expire**, **Expired**, or both, and the recurrence of the communication.

Depending on the expiration communication rules you define, you must also set up communication templates for these delivered events:

- *About to Expire Pre-application* – The communication event is triggered when the inactive pending application or preapplication is about to expire.
- *Expired Pre-Application* – The communication event is triggered when the inactive pending application or preapplication expires.
- *About to Expire Planning and Zoning Application* – The communication event is triggered when the inactive pending application or planning application is about to expire.
- *Expired Planning and Zoning Application* – The communication event is triggered when the inactive pending application or planning application expires.

For more information about configuring the communication templates for the email or notification you want to send when the event occurs, see *Setting Up Communication Templates*.

> **CAUTION:** After setting up communication rules, you must periodically run batch expiration rule processing to update the *About to Expire* and *Expired* statuses. The system updates the statuses and sends out the communications according to the setup. Oracle recommends that you schedule expiration rule processing to run daily.

Associating Expiration Groups with Application Types

After you create an expiration group, you associate the group of rules with a planning application type.

1. Select **Planning and Zoning Setup** > **Planning Application Type** > **Transaction Type**.
2. Click the row for the planning application type.
3. On the selected Planning Application Type page, enter the expiration group ID. You can look up the expiration group by expiration group name and description.
4. Click **Save**.

For more information see *Setting Up Planning Application Types*.

Running the Expiration Rule Process

After setting up expiration rules and adding an expiration rule group ID to the planning application type definition, you must set up expiration rule processing to periodically update the expiration statuses.

Run the process that updates permit and planning application expiration statuses on the Process Expiration Rules page, which you access by selecting **Common** > **Process Expiration Rules**. Oracle recommends that you schedule expiration rules processing to run daily.

For information about setting up expiration rules processing, see *Updating Application Expiration Status*.

Setting Up Meetings

Meetings are the initial step in the application process for business licenses and planning and zoning applications. Meetings are scheduled to allow the business owners or property owners to work with agency staff to receive feedback prior to submitting license applications.

Business Licenses: A consultation meeting is scheduled between the business owner and agency specialists to determine the necessary applications and approvals for the license procurement.

Pre-applications and Planning applications : A meeting is scheduled between the property owner or developers and agency planners to determine the necessary applications and approvals for the project.

Setting Up Meeting Templates

Administrators set up and manage meeting templates to determine meeting parameters such as what level of control is given to the users and agency staff for scheduling meetings.

Meeting templates are associated with planning application types, which determine the type of template that is applied to the business consultation, preapplication, or planning application. See *Setting Up Planning Application Types* and *Setting Up Business License Types*.

Viewing, Modifying, and Deleting Meeting Templates

To view all the meeting templates added to the system:

1. Select **Common Setup** > **Meeting Template**.
2. The Meeting Setup Template page lists all the meeting templates in the system.
3. Click on any record to open a detail view of the template.

4. On the Meeting Setup Template page, you can review the template details.
5. If you make any changes to the detail, click **Save**.
6. To delete the template record, click the **Delete** button. If you want to delete multiple templates, you can delete them from the Meeting Setup Template page:
    a. Click **Edit**.
    b. Select the checkboxes for the template rows to delete.
    c. Click the **Delete** icon.

Adding a Meeting Template

To add a new template:

1. Select **Common Setup** > **Meeting Template**.
2. Click **Add**.
3. On the Meeting Setup Template page, enter details related to the new template:

Page Element	Description
Template ID	Enter an identifier for the meeting template.
Template	Enter a name for the meeting template.
Description	Enter a description about the template.

4. Turn on the **Enabled** switch to make the template active.
5. The Applicant Access section allows you to set up applicant privileges. Enter values for the following fields:

Page Element	Description
Applicant can request	Select to allow an applicant to request a meeting. Applicants can access the Meetings page and schedule a meeting based on the availability of the agency staff. See *Working with Meetings*.
Applicant can reschedule and cancel	Select to allow an applicant to reschedule or cancel their meeting.

6. The Meeting Availability section allows you to set up the parameters for scheduling meetings, determined by:
    a. Staff Meeting Schedule or
    b. Agency Meeting Schedule

    Staff meeting schedule: Select to allow users to schedule meetings based on the availability of their assigned agency staff such as a planner for preapplication and planning application meeting, or a specialist for business consultation meeting.

    > **Note:** For preapplication and planning application meetings, you must ensure that all your planners are assigned a meeting work schedule on the Agency Staff Profile.

Enter values for the following fields:

Page Element	Description
Meeting Duration in Hours	Select a value to set the maximum amount of time the meeting can be scheduled for. Users will see this value as the duration of the meeting, and they are not allowed to edit the field. See the section Scheduling a Meeting under *Working with Meetings*.
Schedule after Number of Days	Select a value to set the number of days from the current date, so that users can schedule a meeting on a date available after the number of days specified here. For example, if you select a value 5 on the 10th day of this month, the calendar on the Meeting Request page displays the dates that are available after the 15th day of the month.
Schedule up to Number of Days	Select a value to set the number of days that will be available for the users to select a date on the calendar for scheduling the meeting. For example, if you select a value of 90, the calendar on the Meeting Request page displays 90 calendar days starting from the date the user is making the selection.

Agency meeting schedule: Select to allow users to schedule meetings based on the schedule of the agency. In addition to the fields described above, enter values for the following fields:

Page Element	Description
Work Schedule	Select the agency level work schedule that should be considered while determining the availability for the consultation, preapplication, or planning application meeting.
Maximum Concurrent Meetings	Select a value to determine the maximum number of meetings that can be scheduled at a time – for a planner or a specialist.

> **Tip:** With this option selected, meetings can be scheduled before assigning a planner or specialist to an application.

7. The **Meeting Details** section allows you to set up the subject, agenda, and the location for the meeting.

Page Element	Description
Include Subject	Select the checkbox and enter the meeting subject in the **Subject** field.
Include Agenda	Select the checkbox and enter the agenda in the **Meeting Agenda** field. You can use Rich Text formatting options.

Page Element	Description
Include Location	Select the checkbox and search for the desired location of your agency using the **Agency Information** look up. The address of the location you select is displayed in the **Meeting Location** field.

> **Note:** Users can edit the entries for the agenda and location fields while scheduling the meeting on the meeting request page.

8. Click **Save**.

Setting Up Hearing and Decision Making Bodies

With Oracle Permitting and Licensing, you'll use the Public Hearing feature to configure hearing and decision making bodies and hearing hierarchies, schedule hearings, and record decisions.

Setting Up Public Hearing

A public hearing is an official meeting where members of the public, the hearing and decision making body, and the applicant of the planning and zoning application come together to discuss the facts about the application submitted by the applicants.

The following topics apply to administrators for setting up and maintaining the Public Hearing process:

- Setting up Hearing and Decision Making Body
- Setting up Hearing Decision

Setting Up Hearing and Decision Making Body

A hearing and decision making body is a group of individuals formed to evaluate the testimony presented by applicants and to provide feedback.

Adding a Hearing and Decision Making Body

To add a hearing and decision making body:

1. Select **Hearing Setup** > **Hearing Body**.
2. Click **Add** on the Hearing and Decision Making Body page and enter values for the following fields:

Page Element	Description
Classification	Displays the classification under which the decision making body falls.
Enabled	Turn on the switch to make the decision making body available for use.

Page Element	Description
Decision Making Body Code	Enter a unique identifier of the decision making body.
Decision Making Body Name	Enter a name for the decision making body.
Decision Making Body Report Template	From the lookup, select a template to print the agenda report for the decision making body. **Note:** Oracle Permitting and Licensing supports multiple templates for printing hearing agendas. For details, see *Setting Up Reports*.
Additional Information	Enter any text as details about the decision making body.
Maximum Agenda Items	Select a value from the options. As an agency user you can configure the maximum number of agenda items that can be heard on a day.
Set as First Body	Turn on the switch to make the decision making body as the primary body. **Note:** When you enable this switch, you get the option to add additional appeal bodies.
Appeal Period in Days	Use the up and down arrows to select the number of days after the public hearing, within which an appeal is allowed. **Note:** If zero or a blank value is selected for the appeal period, then the appeal process will be stopped, as an appeal won't be allowed.

3. Select a pattern of recurrence of the meeting from these fields:

Page Element	Description
Recurrence Pattern	Select the pattern for the recurrence of the public hearing: - Weekly - Monthly
Address fields	The agency address. The **Country** field displays *US*.

Page Element	Description
	As you enter a **Postal Code**, the type-ahead list shows values that include appropriate state and city combinations. After you select a value, the city and state appear as read-only fields, and two address fields appear so that you can enter the rest of the address. If you don't know the postal code, click the **Don't know** link to display a full set of address fields.

4. Select the Weekly recurrence if you want to schedule the meeting every week. Enter values for the following fields:

Page Element	Description
Weeks between Occurrences	Select the number of weeks between one meeting occurrence and the next.
Days of the Week	Select the days of the week on which you want the meeting to recur.
Recurrence Start Date Time	Select a date and time from which the meeting recurrence should be effective.

5. Select the Monthly recurrence if you want to schedule the meeting every month. Enter values for the following fields:

Page Element	Description
Months between Occurrences	Select the number of months between one meeting occurrence and the next.
Days of the Week	Select the checkbox if you want to schedule the meeting on particular days of the week. Click **Add** to open the Days of the Week page and select the days of the week, for example *First Monday*: - **Occurrence**: Select – First, Second, Third, Fourth, or Last the day of week - **Weekday**: Select the day of the week from Monday, Tuesday, and so on. Turn on the **Enable** switch to make the setting available for use and click **Save**. Use the **Add** button to include multiple rows. **Note:** You can modify or delete the entry. Click the row and use the Days of the Week page to make the change.
Dates	Select the checkbox if you want to schedule the meeting on particular dates of the week. Click **Add** to open the Dates page and select from all the available dates.

Page Element	Description
	Turn on the **Enable** switch to make the setting available for use and click **Save**. Use the **Add** button to include multiple rows. **Note:** You can modify or delete the entry. Click the row and use the Dates page to make the change.
Recurrence Start Date Time	Select a date and time from which the meeting recurrence should be effective.

6. Click **Save** to save the new decision making body and return to the Hearing and Decision Making Body page.

Modifying a Hearing and Decision Making Body

To modify a hearing and decision making body:

1. Select **Hearing Setup** > **Hearing Body**.
2. On the Hearing and Decision Making Body page, click the record of the hearing and decision making body you want to edit.
3. On the Hearing and Decision Making Body details page you can make changes to the fields and click **Save**.

   Note: You can make changes to all the fields except the Decision Making Body Code.

4. The Hearing and Decision Making Body page now lists the updated record.

Deleting a Hearing and Decision Making Body

To delete a hearing and decision making body:

1. Select **Hearing Setup** > **Hearing Body**.
2. On the Hearing and Decision Making Body page, click the record of the Decision Making body you want to delete.
3. On the Hearing and Decision Making Body details page you can click the **Delete** button. Click OK on the confirmation message.
4. The Hearing and Decision Making Body page lists only the existing records.

Setting Up Hearing Decisions

The outcome of a public hearing is referred to as hearing decision. Agency staff such as assigned planners update the decision from the hearing body into the system.

System-defined Public Hearing Decisions

Oracle delivers hearing decisions for use during the hearing process. System administrators can configure the decisions specific to their agency, which are mapped to one of the system-defined decisions listed below:

- Approved
- None
- Denied
- Continue

Adding a Hearing Decision

1. Select **Hearing Setup** > **Hearing Decision**.
2. The Hearing Decision page lists all the decisions you have configured. Click **Add**.
3. One the Hearing Decision Status detail page, enter values for the following fields:

Page Element	Description
Code	Enter a unique identifier of the hearing decision.
Name	Enter a name to identify the decision. Example, Approved with Conditions, Not Result, and so on.
Description	Enter any text to describe the decision.
Applies To	Select the decision checkbox for which the status applies to: o Hearing Decision (This is the default selection.) o Staff Recommendation
System Status	Select one of the system-defined statuses to map to the new decision you are creating: o Approved o None o Denied o Continue
Enabled	Turn on the switch to make the decision available to use.

4. Click **Save** to save the new hearing decision and return to the Hearing Decision page, which lists the newly created decision.

Modify a Hearing Decision

To modify a hearing decision:

1. Select **Hearing Setup** > **Hearing Decision**.
2. The Hearing Decision page lists all the decisions you have configured. Click the row of the decision you want to modify.
3. On the Hearing Decision detail page, make changes to the fields and click **Save**.

   > **Note:** You can make changes to all the fields except the Code.

4. The Hearing Decision page lists the updated row.

Deleting a Hearing Decision

To delete a hearing decision:

1. Select **Hearing Setup** > **Hearing Decision**.
2. The Hearing Decision page lists all the decisions you have configured. Click the row of the decision you want to delete.
3. On the Hearing Decision detail page, click **Delete** and confirm deletion by selecting OK.
4. Click **Save** and return to the Hearing Decision page. The page lists the updated decision rows.

7 Setting Up Conditions of Approval

Setting Up Conditions of Approval Categories

Use categories to organize the various types of conditions of approval that are applied to planning applications. You set up conditions of approval categories and subcategories on the Conditions of Approval Category page.

Adding Conditions of Approval Categories and Subcategories

1. Select **Conditions of Approval Setup** > **Conditions of Approval Category**.
2. The Conditions of Approval Category page lists all the condition categories that are set up. Click **Add** to add a new condition category.
3. On the Conditions of Approval Category details page, enter a category ID, category name, and a description.
4. Click the **Enabled** switch to enable or disable the category.
5. If you want to add a subcategory, click the **Add** button to add the subcategory in the Conditions Subcategory Setup section. Click the **Add** icon for additional subcategories.
6. On the Conditions of Approval Subcategory details page, enter a subcategory ID, subcategory name, and a description.
7. Click the **Enabled** switch to enable or disable the subcategory.
8. Click **Save**.

Modifying Conditions of Approval Categories

1. Select **Conditions of Approval Setup** > **Conditions of Approval Category**.
2. On the Conditions of Approval Category page, select the row for the category that you want to modify.
3. On the Conditions of Approval Category details page, you can only modify the category name and description. You cannot change the category ID.
4. Click **Save**.

Modifying Conditions of Approval Subcategories

1. Select **Conditions of Approval Setup** > **Conditions of Approval Category**.
2. On the Conditions of Approval Category page, select the row for the category with the subcategory that you want to modify.
3. Select the subcategory that you want to modify in the Condition Subcategory Setup section.
4. On the Conditions Subcategory Setup details page, you can only modify the category name and description. You cannot change the subcategory ID.
5. Click **Save**.

Deleting Conditions of Approval Categories

When you delete a condition category, all associated subcategories are also deleted

1. Select **Conditions of Approval Setup** > **Conditions of Approval Category**.
2. On the Conditions of Approval Category page, select the row for the category that you want to delete.
3. On the Conditions of Approval Category details page, click **Delete**.
4. If you want to delete multiple condition categories, you can delete them on the Conditions of Approval Category page:

a. Click the **Select Multiple** icon.
b. Select the checkboxes for the category rows to delete.
c. Click the **Delete** icon.

Note: You can't delete a condition category if its conditions are applied to an application.

Deleting Conditions of Approval Subcategories

1. Select **Conditions of Approval Setup** > **Conditions of Approval Category**.
2. On the Conditions of Approval Category page, select the row for the category with the subcategory that you want to delete.
3. On the Conditions of Approval Category Details page, select the row for the subcategory that you want to delete.
4. Click the **Delete** button on the Condition Subcategory Setup details page
5. If you want to delete multiple condition subcategories, you can delete them on the Conditions of Approval Category details page:
   a. Click the **Select Multiple** icon.
   b. Select the checkboxes for the subcategory rows to delete.
   c. Click the **Delete** icon.
   d. Click **Save**on the Conditions of Approval Category details page.

Note: You can't delete a condition subcategory if its conditions are applied to an application.

Setting Up Conditions of Approval

You create and configure your agency's conditions of approval using the Conditions of Approval page. Categorize conditions based on the condition type, category, subcategory, and the compliance period. Conditions can be applied automatically through templates or added manually to a submitted planning application.

Adding Conditions of Approval

1. Select **Conditions of Approval Setup** > **Conditions of Approval**.
2. The Conditions of Approval page lists all the conditions that are set up. Click **Add** to add a new condition of approval.
3. On the Conditions of Approval details page, select values for the following fields:

Page Element	Description
Detail	Enter a description about the condition of approval. You can use the Rich Text functionality for formatting options.
Conditions of Approval ID	Enter an identifier of the condition of approval.

Page Element	Description
Condition Type	Select a type of condition: o *Standard* o *Plan*
Category	Select a category for the condition of approval. See *Setting Up Conditions of Approval Categories*.
Subcategory	Select a subcategory for the condition of approval. See *Setting Up Conditions of Approval Categories*.
Compliance Period	Select one or more types of compliance period that are applicable to the new condition.

4. Ensure that the **Enabled** switch is turned on.
5. Click **Save** to save and return to the Category Sequence page.

   Use the **Save and New** button to save this condition and clear the values so that you can enter values for another condition of approval .

Modifying Conditions of Approval

1. Select **Conditions of Approval Setup** > **Conditions of Approval**.
2. On the Conditions of Approval page, select the row for the condition that you want to modify.
3. On the Conditions of Approval details page, you can modify all the field values except the conditions of approval ID.
4. Click **Save**.

Deleting Conditions of Approval

1. Select **Conditions of Approval Setup** > **Conditions of Approval**.
2. On the Conditions of Approval page, select the row for the condition that you want to delete.
3. On the Conditions of Approval details page, click **Delete**.
4. If you want to delete multiple conditions, you can delete them on the Conditions of Approval page:
   a. Click the **Select Multiple** icon.
   b. Select the checkboxes for the condition rows to delete.
   c. Click the **Delete** icon.

Note: You can't delete a condition if it is applied to an application.

Setting Up Conditions of Approval Templates

Conditions of approval are automatically applied to planning applications through templates. As agency administrators, you create and configure conditions of approval templates by selecting the conditions of your choice.

Conditions of approval templates are associated with planning application types, which determine the type of template that is applied to a submitted planning application. See the section Setting Up Conditions of Approval in *Setting Up Planning Application Types*.

Viewing and Reordering Conditions in Templates

Use the Conditions of Approval Template page to view the templates configured in the system. To view the conditions of approval added to the template:

1. Select **Conditions of Approval Setup** > **Conditions of Approval Template**.
2. Select the template in which you want to view the conditions of approval.
3. The Conditions of Approval Template detail page lists all the conditions that belong to the template. You can view the details of each condition, such as the type, category, subcategory, compliance period, and enable switch.
4. If you want to reorder the conditions of approval, click the **Reorder** button to open the Reorder Conditions of Approval page and then select a condition record. You can reorder the conditions in two ways:

   (a) Use the reordering icons:

Page Element	Description
	Click to move the selected record to the top of the list.
	Click to move up the selected record by one step.
	Click to move down the selected record by one step.
	Click to move the selected record to the bottom of the list.

   (b) Drag and drop the selected record to a new position in the list.

   Note: You can also sort the conditions by their type, category, and subcategory using the column headers.

5. Click **Save** to save and return to the Conditions of Approval Template page, which refreshes to show the reordered condition list.

Adding Conditions of Approval Templates

Use the Conditions of Approval Template page to set up conditions of approval templates.

1. Select **Conditions of Approval Setup** > **Conditions of Approval Template**.
2. The Conditions of Approval Template page lists all the templates set up in the system. Click **Add** to add a new template
3. The Conditions of Approval Template details page lists all the conditions that belong to the template. Enter values for the following fields:

Page Element	Description
Template ID	Enter an identifier of the template.
Template	Enter a name for the template.
Description	Enter a description of the template.
Add	Click the button to open the Conditions of Approval Template list page to add one or more conditions.

4. The Conditions of Approval Template list page lists all the conditions in the system with details of the category, subcategory, type, and compliance period. Search and select the conditions using the checkboxes next to the condition.
5. Click **Save** to save and return to the Conditions of Approval Template detail page.
6. Ensure that the **Enabled** switch is turned on.
7. Click **Save** to save and return to the Conditions of Approval Template page.

8 Setting Up Code Enforcement

Setting Up Corrective Actions

Define the various corrective actions that can be applied to resolve code violations identified by an agency.

A corrective action can resolve more than one code violations. You add a corrective action using the Corrective Action page and assign the action to one or more code references on the code configuration page.

Adding Corrective Actions

1. Select **Code Enforcement Setup** > **Corrective Action**.
2. Click **Add** on the Corrective Action page to add a new corrective action.
3. On the Corrective Action Details page, enter values for the corrective action.

Page Element	Description
Corrective Action ID	Enter a unique identifier for the corrective action.
Summary	Enter a summary about the action that is to be taken to resolve the violation.
Description	Enter longer descriptions or instructional information that can be formatted using a rich text editor.

4. Verify that the **Enabled** switch is turned on. The option is active by default for a new corrective action.
5. Click **Save**.

Modifying Corrective Actions

You can modify corrective actions for the code violations on the Corrective Action page.

1. Select **Code Enforcement Setup** > **Corrective Action**.
2. On the Corrective Action page, select the row for the corrective action that you want to modify.
3. On the Corrective Action Details page, you can edit the summary and description. Click the **Enabled** switch to enable or disable the corrective action.
4. Click **Save** to save the changes.

Deleting Corrective Actions

You can delete corrective actions for the code violations on the Corrective Action page.

1. Select **Code Enforcement Setup** > **Corrective Action**.
2. On the Corrective Action page, select the row for the corrective action that you want to delete.
3. On the Corrective Action Details page, click the **Delete** button.

Adding Corrective Actions

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select *Public Sector Code Enforcement*.
3. From the **Functional Areas** list in the left panel, select *Incidents and Cases*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select **Manage Corrective Actions**from the tasks list.
5. Click **+** on the Corrective Action page to add a new corrective action.
6. On the New corrective action drawer, enter values for the corrective action.

Page Element	Description
Corrective Action ID	Enter a unique identifier for the corrective action.
Summary	Enter a summary about the action that is to be taken to resolve the violation.
Description	Enter longer descriptions or instructional information that can be formatted using a rich text editor.

7. Verify that the **Enabled** switch is turned on. The option is active by default for a new corrective action.
8. Click **Save**.

Modifying Corrective Actions

You can modify corrective actions for the code violations on the Corrective Action page.

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select *Public Sector Code Enforcement*.
3. From the **Functional Areas** list in the left panel, select *Incidents and Cases*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select **Manage Corrective Actions**from the tasks list.
5. On the Corrective Action page, select the row for the corrective action that you want to modify.
6. On the Corrective Action Details drawer, you can edit the summary and description. Click the **Enabled** switch to enable or disable the corrective action.
7. Click **Save** to save the changes.

Deleting Corrective Actions

You can delete corrective actions for the code violations on the Corrective Action page.

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select *Public Sector Code Enforcement*.
3. From the **Functional Areas** list in the left panel, select *Incidents and Cases*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select **Manage Corrective Actions**from the tasks list.
5. On the Corrective Action page, select the row for the corrective action that you want to delete.
6. On the Corrective Action Details drawer, click the **Delete** button.

Setting Up Code References for Code Enforcement

Code references are pointers to the documentation for a specific code used on a violation. These references instruct readers to refer to documentation for the specific item. Set up the Oracle Permitting and Licensing system to point the user to a specific documentation regarding that code violation.

Adding Code References

1. Select **Code Enforcement Setup** > **Code Reference**.
2. Click **Add** on the Code Reference page to add a new code reference.
3. On the Code Reference Details page, enter values for the code reference.

Page Element	Description
Code Reference ID	Enter a unique identifier of the code reference.
Summary	Enter a summary about the violation that is related to the incident.
Description	Enter longer descriptions or instructional information that can be formatted using a rich text editor.
Corrective Action	Select the corrective action that can be applied to resolve the violation.
Summary	Displays information about the corrective action that will be taken to resolve the violation.

4. Verify that the **Enabled** switch is turned on. The option is active by default for a new code reference.
5. Click **Save**.

Modifying Code References

You can modify code references on the Code Reference page.

1. Select **Code Enforcement Setup** > **Code Reference**.
2. On the Code Reference page, select the row for the code reference that you want to modify.
3. On the Code Reference Details page, you can:
    - Change the values for the summary, description, and corrective action fields.
    - Click the **Enabled** switch to enable or disable the corrective action.
4. Click **Save** to save changes.

Deleting Code References

You can delete code references on the Code Reference page.

1. Select **Code Enforcement Setup** > **Code Reference**.
2. On the Code Reference page, select the row for the code reference that you want to delete.
3. On the Code Reference Details page, click the **Delete** button.

Setting Up Code Reference Groups

A code reference group is a set of code references grouped together on the basis of the nature of violations. You set up code reference groups on the Code Reference Group page.

Adding Code Reference Groups

1. Select **Code Enforcement Setup** > **Code Reference Group**.
2. The Code Reference Group page lists all the code reference groups. Click **Add** to add a new group.
3. On the Code Reference Group Details page, enter values for the code reference group.

Page Element	Description
Code Reference Group ID	Enter a unique identifier for the code reference group.
Name	Enter a name for the code reference group.

4. Verify that the **Enabled** switch is turned on. The option is active by default for a new code reference group.
5. In the **Code References** section, click **Add** to search and include one or more code references to the group. Use the **Add** and **Delete** action icons for adding and deleting code reference records.
6. Click **Save**.

Modifying Code Reference Groups

You can modify code references groups on the Code Reference Group page.

1. Select **Code Enforcement Setup** > **Code Reference Group**.
2. On the Code Reference Group page, select the row for the code reference group that you want to modify.
3. On the Code Reference Group Details page, you can:
    - Change the name of the group.
    - Use the **Code References** section to add new or delete existing code references.
    - Click the **Enabled** switch to enable or disable the code reference group.
4. Click **Save** to save changes.

Deleting Code Reference Groups

You can delete code reference groups on the Code Reference Group page.

1. Select **Code Enforcement Setup** > **Code Reference Group**.
2. On the Code Reference Group page, select the row for the code reference group that you want to delete.
3. On the Code Reference Group Details page, click the **Delete** button.

Setting Up Notices and Reports

Define the types of notices and reports that are supported by your agency. You can configure a notice or report that is specific to a particular transaction type, generate, and send the document to the applicant or responsible party.

For details about setting up notices, reports, and their groups, see *Setting Up Notices and Reports* and *Setting Up Notice and Report Groups*.

Setting Up Inspection Counts

Define the number of inspections that are carried out to assess code violations reported at the agency. You use the Inspection Count page to set up the inspection count value and its description.

Adding Inspection Counts

1. Select **Code Enforcement Setup** > **Inspection Count**.
2. Click **Add** on the Inspection Count page to add a new inspection count.
3. In the new row, enter the count value in the **Inspection Count** field and a description in the **Description** field.

   > **Note:** The inspection count values must follow an incremental sequence of numbering, such as 1, 2, 3, and so on.

4. Verify that the **Enabled** switch is turned on. The option is active by default for a new inspection count.
5. Click **Save**.

Deleting Inspection Counts

1. Select **Code Enforcement Setup** > **Inspection Count**.
2. On the Inspection Count page, click the **Delete** icon for the row of the inspection count you want to delete.

   > **Note:** You must ensure that the sequencing of numbers in the inspection count is maintained.

Setting Up Referral Bodies

Referral bodies are those departments that an agency can refer to in cases of code violations that are not in the scope of the agency. The agency can assign the issue to the referral body based on the referral type.

Adding Referral Bodies

1. Select **Code Enforcement Setup** > **Referral Body**.
   The Referral Body page lists all the referral bodies that are configured by the agency.
2. Click **Add** on the Referral Body page to add a new referral body and enter values for the following fields:

Page Element	Description
Referral Code	Enter an identifier of the referral body.
Name	Enter a name for the referral body.
Description	Enter a description about the referral body on the basis of which, an incident or case can be referred to the body.
Referral Type	Select the type of referral, which can be a department within the agency or an external agency: o Agency Department. o External Agency.

3. Verify that the **Enabled** switch is turned on. The option is active by default for a new referral body.
4. Click **Save**.

Modifying Referral Bodies

1. Select **Code Enforcement Setup** > **Referral Body**.
2. On the Referral Body page select the row for the corrective action that you want to modify.
3. On the referral body details page, you can:
   - Change the name, description, and referral type values.
   - Click the **Enabled** switch to enable or disable the referral body.

     Note: You cannot delete a referral body.
4. Click **Save** to save changes.

Setting Up Time Rules

Transactions for permits, planning applications, and code enforcement use time rules to calculate due dates for various activities.

Time policies, which are grouped together to form a time rule for a specific classification, are defined by priority and occurrence of each transaction that is related to the due date type set up for the time rule.

In general, the following logic is used to calculate due date:

Due Date = Trigger date + Dates based on the time rule

If the number of transactions created exceed the policy count, then the time rule that is defined for the highest policy occurrence will be triggered.

Based on the transaction classification, time rules are assigned to transaction types:

Transaction	Assigned to
Code Enforcement	Incident's issue type and subtype. See *Setting Up Agency-Level Options for Code Enforcement* and *Setting Up Issue Subtypes*.
Permit	Permit type. See *Setting Up Agency-Level Options for Permits* and *Setting Up Permit Types*.
Planning Application	Planning application type. See *Setting Up Agency-Level Options for Planning Applications* and *Setting Up Planning Application Types*.

Note: Agency administrators add and modify time rules and assign them to transaction types so that appropriate rules are applied for each transaction type. Every transaction type must have a time rule assigned for every system-defined due date type. The following table shows the various delivered due date types and their details:

Due Date Type	Description	Classification	Events that calculate the due date	Trigger Date	Usage	Policy Occurrence Count value
ORA_PER_REVIEW_DUEDT	Permit plan review	Permit	Plan review cycle creation for a permit	Cycle creation date	The plan review cycle due date and department due dates are generated when the plan review cycle is created. The permit type must be configured to use time rules.	1 or more
ORA_PNZ_PLAN_REVIEW_DUEDT	Planning and zoning plan review	Planning and Zoning	Plan review cycle creation for a planning application	Cycle creation date	The plan review cycle due date and department due dates are generated when the plan review cycle is created. The planning application type must be configured to use time rules.	1 or more
ORA_ABATE_APPL_PRD_DUEDT	Appeal in case of mandatory abatement	Code Enforcement	Case status change to	Date on which the case status changed to	The appeal due date is updated with	1 or more

Due Date Type	Description	Classification	Events that calculate the due date	Trigger Date	Usage	Policy Occurrence Count value
			Mandatory Abatement	Mandatory Abatement	this date when the case status is changed to mandatory abatement.	
ORA_INC_REV_DUEDT	Incident review date	Code Enforcement	Incident creation	Incident report date	The incident in the worklist is marked with a status of Overdue when the calculated review due date is less than the current date.	1
ORA_INIT_INS_DUEDT	Initial inspection date	Code Enforcement	Initial inspection creation	Inspection schedule date	The Inspection due date is updated with this date when the initial inspection is scheduled.	1
ORA_RE_INS_DUEDT	Re-inspection date	Code Enforcement	Re-inspection creation	Reinspection schedule date	The Inspection due date is updated with this date when the re-inspection is scheduled.	2 or more
ORA_VIOL_CMPL_PRD_DUEDT	Due date for compliance	Code Enforcement	• Case creation • Inspection resulting in Violation or Remains in Violation.	Case creation date	The date is displayed as the compliance date on the Case page. The value for the policy occurrence count is one (1) at the time of case creation.	1 or more 2 or more for subsequent inspections that result in Violation or Remains in Violation.
ORA_VIOL_APPL_PRD_DUEDT	Violation appeal period	Code Enforcement	• Case creation • Case status change to violation as a result of a hearing decision. • Inspection resulting in	• Case creation date • Inspection completion date • Hearing decision date	Ensures that the Request Appeal option is available only during the calculated appeal period.	1 for case creation and 2 or more for either an inspection that resulted in Remains in Violation or a hearing decision that

Due Date Type	Description	Classification	Events that calculate the due date	Trigger Date	Usage	Policy Occurrence Count value
			Violation or Remains in Violation.			was updated to Violation.
ORA_CITATN_CMPL_PRD_DUEDT	Due date for citation compliance	Code Enforcement	• Citation issuance • Inspection resulting in Remains in Citation.	• Citation issue date • Inspection completion date that resulted in Remains in Citation.	Updates the compliance date displayed on the Case detail page.	The first issuance of citation. Subsequently, this rule is applied when citations are issued or when inspections result in Remains in Citation.
ORA_CITATN_DUEDT	Due date for citation payment	Code Enforcement	Payment initiation	Citation issue date	Late fee is added after the citation payment due date.	1 or more
ORA_CITATN_APPL_PRD_DUEDT	Citation appeal period	Code Enforcement	Case status change to Citation.	Citation Issue Date Inspection completion date	Ensures that the Request Appeal option is available only during the calculated appeal period.	1 or more as per citation issuance.

Adding Time Rules

You configure the time rules and policies using the Time Rule page.

1. Select **Common Setup** > **Time Rule**. The Time Rule page lists all the time rules that are configured by the agency.
2. Click **Add** on the Time Rule page to add a new time rule.
3. On the Time Rule Detail page, add values to the following fields:

Page Element	Description
Time Rule	Enter a name for the time rule.
Classification	Select a transaction type: o Code Enforcement o Planning and Zoning o Permit

Page Element	Description
Description	Enter a description about the time rule.
Due Date Type	Select the type of due date, which determines the time period or due date for a transaction.

4. Verify that the **Enabled** switch is turned on. The option is active by default for a new time rule.
5. In the Time Policy section, click the **Add** button to define a time policy.
6. On the Time Policy Details page, select values for the time policy:

Page Element	Description
Priority	Select the priority for the time policy: - High - Normal
Unit of Measure	Displays the unit of measure of time, which is days.
Unit of Measure Value	Select the number of days.
Policy Occurrence Count	Select an occurrence count value for the event, such as an inspection. **Note:** The value can't be 0.
Default	Turn on this switch to set the time policy as the default for the time rule. The first time policy that you create for each priority type is set as the default policy. When you create additional time policies for a priority type, you can select any one of them as the default policy. Designating a time policy as the default removes the default designation from the previously designated policy.

Modifying Time Rules

1. Select **Common Setup** > **Time Rule**.
2. Select the time rule row you want to modify.
3. On the Time Rule Detail page you can change the time rule description, due date type, and the time policy.
4. Click the **Enabled** switch to enable or disable the time rule.
5. Click **Save** to save changes.

Deleting Time Rules

1. Select **Common Setup** > **Time Rule**.
2. Select the time rule row you want to delete.
3. On the Time Rule Detail page, click the **Delete** button.

Modifying Time Policies

1. Select **Common Setup** > **Time Rule**.
2. On the Time Rule page, select the time policy row to open the Time Policy Detail page. You can change values for priority, unit of measure, unit of measure value, and policy occurrence count.
3. Click **Save** to save any changes.

Deleting Time Policies

1. Select **Common Setup** > **Time Rule**.
2. On the Time Rule page, select the time rule row for which you want to change the time policy.
3. On the Time Rule Detail page, click the time policy row to open the Time Policy Detail page.
4. Click the **Delete** button.
5. To delete multiple time policies from the Time Rule Detail page, click the **Edit** button in the Time Policy section and select the checkboxes for the rows you want to delete.
6. Click **Delete**.

Related Topics

- Setting Up Plan Review Due Dates

Setting Up Process Definition Groups

Set up a group that defines the processes for the Code Enforcement workflows and allows you to enable or disable the workflow transactions.

You have to set up a workflow process definition using OCI Process Automation before associating the workflow with Code Enforcement transactions. Code Enforcement transactions have two workflow setups: incident workflow and case workflow. The Process Definition Group page allows you to select the workflow process definitions available to use for these workflow types. You can use this page to enable or disable the Code Enforcement workflows associated with the process definition group.

> **Note:** Based on your organization's business needs, you can configure workflows for either incident or case or for both incident and case.

For more information, see *Setting Up Workflow and Decision Applications in OCI Process Automation*.

To set up process definition groups:

1. Select **Code Enforcement Setup** > **Process Definition Group**
2. Click the **Add** button, on the Process Definition Group page.
3. Enter values for the following fields, on the Process Definition Group page:

Page Element	Description
Group ID	Enter a unique identifier for this Process Definition Group.
Enabled	Turn on this switch to enable the workflow for this Process Definition Group.
Space	Enter the space where the workflow process application is stored. You can group related applications in a space as well as enable users to collaborate when developing applications. **Note:** This field is available only if your agency has selected the **Oracle Integration Cloud** (OIC) option for the *Workflow and DMN Source* feature in the Functional Setup Manager. If the **Oracle Cloud Infrastructure Process Automation** option is selected, then the Space Name field is not displayed.
Application	Enter the name of the workflow process application in OIC. For more information, see *Creating and Managing Applications*.
Version	Enter the version of the workflow process application. **Note:** If you update the version, the new version will apply only to issues submitted after the new version has gone into effect. The existing submitted issues will continue to use the version that was effective at the time they were submitted.
Process Definition ID	Enter the name of the workflow process definition that applies to the incident or case.
Global Task ID	Enter the name of the global task available within the process definition selected.
Additional Events for Advancing Workflow	Turn on the desired switch to enable the corresponding event to advance the case workflow: o **Case Functional Status Update**: Once enabled this event advances the case workflow when the case functional status changes. Here, the case system status remains unchanged. For example, when a case system status is *Violation*, the functional case statuses can change to *Work Order Pending*, or *Work Order Submitted*. When this event is enabled, every time the functional case status changes, the case workflow is advanced. o **Ad Hoc Notice Status Update**: Once enabled this event advances the case workflow when an ad hoc notice is created, or the notice status is updated for the case. o **System Notice Status Update**: Once enabled this event advances the case workflow when the system notice status is changed, for example from *Pending* to *Generated and Sent*.

Page Element	Description
	Note: The event switches can be turned on only when there are no active transactions linked to the process definition. For more information, see *Preparing the Process Definition for Use*. Use the **View History** link to view a list of all previous additional events that advanced the case workflow.
Issue Subtype Details	Use this section to identify the issue subtypes that use the current process definition group.

Related Topics

- Setting Up Process Definitions for Workflow

Setting Up Agency-Level Options for Code Enforcement

Agency-level options for code enforcement include several settings related to the public user experience, assignment and autonumbering rules, and default settings for newly created issue types.

Agency-level options for code enforcement include settings such as:

- Whether public users can report issues anonymously.
- Whether incidents are automatically routed based on the issue type and subtype.
- The work schedule of the agency.
- The time period used for displaying recent issues on the public user map.
- Autonumbering rules for notices, citations, and inspections.
- Configuration for the public user landing page.
- Default code reference groups for issues types.
- Default time-based processing rules for issue types.

For more information about agency setup, see *Setting Up Agencies*

To configure agency level options for code enforcement:

1. Select **Common Setup** > **Agency.**
2. Click a row on the Agency Information tab.
3. Select the **Features** tab.
4. Click **Options** for the *Code Enforcement* offering.

   The Code Enforcement Options window opens.
5. Configure the General Settings.

Page Element	Description
Contact Information Required for Issue Reporting	Enable this switch to require contact information from users who submit issue reports. If the switch is not enabled, then the page where users supply contact information includes a **Hide my contact information** switch. When users hide their contact information, name and contact information is no longer required, and any data currently in those fields gets cleared. Even if you don't require contact information, users must be registered and signed in to report an issue.
Automatically Route Issues	Enable this switch to activate issue routing based on the issue type and subtype. When automatic routing is active, the Incoming Incidents worklist tab displays only incidents with the issue types and subtypes that are part of the user's job function. If there's only one code enforcement technician responsible for a particular issue type or subtype, then those issues are assigned to that technician automatically.
Agency Work Schedule	Select an agency schedule from a list. This enables inspections to be scheduled based on the availability of the code officers. Due date calculations are based on the time rules set up and the schedule you select here. If the resulting due date is on a non-working day, then the next working day is set as the due date.
Enable Workflow	Enable this switch to activate the workflow processes for incidents and cases in Code Enforcement.

6. Configure the settings in the **Recent Cases** section.

   Public users can view a map with markers identifying recent issues. These settings define which issues appear on the map.

Page Element	Description
Period	Choose how far back to look for issues by entering number of days or months, and then selecting *Days* or *Months.* Issues that were created within the specified time period appear on the map.
Status	Select *All* to display all recent issues, regardless of status. Select *Active* to display only issues that haven't been closed yet.

7. Use the **Inspection** section to configure inspection autoassignment.

Page Element	Description
Autoassignment	Indicate whether to enable automatic scheduling and assignment of incident and case inspections.
Maximum Inspections per Day per Code Officer	Enter the maximum number of inspections per day for code officers. The autoassignment process will not assign inspections to officers who are at the maximum, but users can manually exceed this maximum. If you don't enter a maximum, inspections will not be autoassigned.

8. Use **Autonumber Rules** section to select the following autonumber rules:

Page Element	Description
Notice Autonumber Rule	Select the autonumbering rule to increment numbers for notices.
Citation Autonumber Rule	Select the autonumbering rule to increment numbers for citations.
Inspection Autonumber Rule	Select the autonumbering rule to increment numbers for inspections.
Fee Autonumber Rule	Select the autonumbering rule to increment numbers for fees.

> **Note:** For more information, see *Setting Up Autonumbering*. These fields are required if the Code Enforcement offering is enabled for your agency.

9. Use the **Landing Page Message Definition** section to enter these settings for the code enforcement landing page:

Page Element	Description
Message Title	Enter a short title or welcome statement for the code enforcement landing page. For example, *Welcome* or *<City Name> Code Enforcement.* This appears message appears as a title, in large text.
Message Summary	Enter a subtitle for the code enforcement landing page. For example, *Keeping our city safe and healthy.* This text appears is medium-sized text under the larger main title for the page.

Page Element	Description
Content URL	Enter a content URL for the **Read More** link that appears on the landing page next to the Message Summary text. Public users click this link to access a code enforcement information page that your agency maintains. If you leave this field blank, the **Read More** link opens a dialog box that displays the **Landing Page Message**. **Note:** If you want to link to a page outside of Oracle Public Sector Code Enforcement, you must enter a URL here.
Landing Page Message	If you do not provide a Content URL that points to an agency-maintained information page, enter the text that will appear in the Read More dialog box. Rich text formatting tools are available for this message.

10. Use the **Code Reference Group** section to define the default code reference groups for new issue types.

    Enter the first code reference group in the blank row that appears. Use the **Add** button to add additional rows. Each row has the following elements:

Page Element	Description
Group ID	Select a code reference group that will be added by default to all newly created issue types.
Enabled	Turn this switch on to have the code group added by default to newly created issue types. If the switch is off, the code group is not added to newly created issue types.
Delete	Click to remove the row from the list of default code reference groups.

11. Use the **Time-Based Rules** section to define the default time-based rules to be entered automatically into newly created issue types.

    This section displays rows for all of the due date types that require time rules. You can't add or remove rows. Instead, you must supply a time rule for each due date.

    For more information about time rules, see *Setting Up Time Rules*.

Page Element	Description
Due Date Type ID	Displays the unique identifier for the type of due date.

Page Element	Description
Due Date Type	Displays the description of the type of due date — for example, *Incident review date*
Time Rule ID	Select the time rule ID that specifies how the due date is calculated. The time rule ID includes a time policy that states how many days or hours until the due date. Time rules IDs are available for selection if they have the specified due day type and they are enabled.

12. Click **Save**, then close the window.

Agency Features for Code Enforcement

Use the **Agency Features** section to optionally enable or disable specific code enforcement features.

To enable or disable specific agency features for code enforcement:

1. Select **Common Setup** > **Agency.**
2. Click a row on the Agency Information tab.
3. Select the **Agency Features** tab.

Page Element	Description
Feature Code	Enter the code for the feature to be enabled. The available feature codes are - *ORA_PSCR_CREATE_ADDRESS*, for the *User can create a new address on applications* feature. - *ORA_PSCR_CREATE_INCIDENT*, for the *Guest Users Can Report Incidents* feature. This feature enables public users to report issues without registering or signing in first. - *ORA_PSCR_ESTIMATE_FEE*, for the *Guest Users Can Estimate Fees*. This feature enables public users to estimate fees without registering or signing in first. - *ORA_PSCR_RST_DIRECT_CASE*, for the *Restrict Direct Case Creation Without Incident* feature. For details, see the next section on *Restricting the Direct Creation of Incidents and Cases in Oracle Permitting and Licensing*. - *ORA_PSCR_RST_DIRECT_INCIDENT*, for the *Restrict Direct Incident Creation* feature. For details, see the next section on *Restricting the Direct Creation of Incidents and Cases in Oracle Permitting and Licensing*.
Name	Displays the name of the selected feature code.
Enabled	Use this switch to enable or disable the feature.
Delete	Click this icon to remove a feature from the grid.

Restricting the Direct Creation of Incidents and Cases

Agencies can now control whether an external CRM system will exclusively handle the creation of incidents and cases. When your agency chooses this option, the direct creation of incidents and cases needs to be restricted in the Oracle Permitting and Licensing system.

To enable the agency features to restrict the direct creation of incidents and cases:

1. Select **Common Setup** > **Agency.**
2. Click a row on the Agency Information tab.
3. Select the **Agency Features** tab.
4. Depending on the agency feature to enable, select the switches to turn on for the corresponding feature codes:
    - To restrict the creation of incidents: Turn on the switch for the feature code *ORA_PSCR_RST_DIRECT_INCIDENT*.

      > **CAUTION:** Before enabling this agency feature, ensure that the option to report an issue is unavailable for public users.

      Public users can report issues from both the public user landing pages and code enforcement landing page. Hence, disable the Report An Issue menu item on both the Products and Code Enforcement menus to completely hide the navigation menus from public users.

      To do so, select the Report An Issue menu items from the Products and Code Enforcement menus. Use the **Edit** button and set the **Show On** option to *None*. This hides the menu items from all devices. For details see, *Configuring Menu Structure*, "Selecting a Menu Item" and "Configuring General Menu Item Properties".
    - To restrict the creation of cases: Turn on the switch for the feature code *ORA_PSCR_RST_DIRECT_CASE*.
5. Click Save, then close the window.

Once this feature is completely enabled, all options for the public users to report an issue on the public landing pages and code enforcement pages will be hidden. For the agency staff, the options to report incidents and create cases using buttons on Incident and Case List pages, and worklist pages will be hidden.

> **Note:** You must provide the following privileges to allow selected agency staff to still access and complete the corresponding restricted tasks, if required:
>
> - PSC_CREATE_STANDALONE_INCIDENT_PRIV: Allows selected agency staff to report new incidents.
>
>   However, users with System Administrator roles will have access to report incidents without any special privileges.
> - PSC_CREATE_STANDALONE_CASE_PRIV: Allows selected agency staff to record violations or create cases without reported incidents.

Setting Up Issue Types

Issue types are broad categories that are used to report code enforcement issues.

Adding an Issue Type

To create a new issue type:

1. Select **Code Enforcement Setup** > **Issue Type.**
2. On the Issue Type page, click **Add.**
3. On the Issue Type Details page, enter the following general information about the issue type:

Page Element	Description
Issue Type ID	Enter a unique alphanumeric code for the issue subtype. Do not use special characters, including symbols or punctuation, or spaces.
Issue Type	Enter a short name for the issue type.
Valid From Date	Enter the first date that the issue type is available for issue reporting.
Valid To Date	Enter the last date that the issue type is available for issue reporting. The default value is *Open,* indicating that the issue type will remain available indefinitely.
Status	Select *Active* or *Inactive.* Inactive issue types are not available for issue reporting. They also are not available to add to an issue subtype definition.
Icon	Select an icon for the tile that public users click when reporting this type of issue.
Process Definition Group	Click the look-up prompt to view a list of enabled process definition groups for this issue type. Click the **Group Setup** link next to the **Process Definition Group** field, to set up a new group or edit an existing one. The Process Definition Group page opens in a new tab.
Description	Enter a description of the issue type. This description appears on the back of the tile that users click when reporting this type of issue.

4. Click **Save.**

   When the issue is saved, three additional sections appear: **Issue Subtypes, Code Reference Group,** and **Time-Based Rules.**

   You don't need to enter information in the **Issue Subtypes** section. The relationship between issue types and issue subtypes is established when you set up the issue subtype. After you create the related subtypes, you can return to the Issue Type Details page to view a complete list of subtypes for the issue type.

5. Configure the list in the **Code Reference Group** section.

    a. Expand the section and review your agency's default values, if any.

    The default values come from the Code Enforcement Options page. For more information, see *Setting Up Agency-Level Options for Code Enforcement*.

    If your agency does not have default code reference groups, a blank row appears.

    b. For each code reference group, review or enter the following settings:

Page Element	Definition
Group ID	Select a code reference group that will be added by default to all newly created issue subtypes.
Enabled	Turn this switch on to have the code reference group added by default to new issue subtypes for this issue type. If the switch is off, the code group is not added to new issue subtypes for this issue type.

    c. To add additional code reference groups to this issue type, click the **Add** icon and enter information in the new row.

    d. To remove code reference groups from the issue type, click the **Delete** icon.

6. Configure the list in the **Time-Based Rules** section:

    This section displays rows for all of the due date types that require time rules. You can't add or remove rows from this list. Instead, you must supply a time rule for each due date.

    For more information about time rules, see *Setting Up Time Rules*.

    To set up time rules for the issue type:

    a. Expand the section and review your agency's default values.

    These default values also come from the Code Enforcement Options page.

    b. For each rule, review or enter the following settings:

Page Element	Definition
Due Date Type ID	Displays the unique identifier for the type of due date.
Due Date Type	Displays the description of the type of due date — for example, *Incident review date.*
Time Rule ID	Select the time rule ID that specifies how the due date is calculated. The time rule ID includes a time policy that states how many days or hours from the trigger date until the due date.

Page Element	Definition
	Time rules IDs are available for selection if they have the specified due date type and they are enabled.

7. Click **Save** again if you made any changes in the sections for code reference groups and time-based rules.

Viewing or Modifying an Issue Type

To view or modify an issue type:

1. Select **Code Enforcement Setup** > **Issue Type.**
2. Click the row for the issue type you want to view or modify.

   The Issue Type Detail page appears. Because the issue type has already been saved, the page displays all fields, including the sections for **Issue Subtype Details, Code Reference Group,** and **Time-Based Rules.**
3. Make any necessary updates.
4. Click **Save** if you made any updates.

Inactivating an Issue Type

You cannot delete issue types, but you can make them unavailable for use by changing the status to *Inactive.*

To inactivate an issue type:

1. Select **Code Enforcement Setup** > **Issue Type.**
2. Click the row for the issue type you want to modify.

   The Issue Type Detail page appears.
3. Change the **Status** to *Inactive.*
4. Click **Save.**

Setting Up Issue Subtypes

Code enforcement issue subtypes are the lowest level of categorization for code enforcement issues. When you set up an issue subtype, you also create the intake form and define processing rules for issues that are reported under this subtype.

Adding an Issue Subtype

To create a new issue subtype:

1. Select **Code Enforcement Setup** > **Issue Subtype.**
2. On the Issue Subtype page, click **Add.**

3. On the Issue Subtype Details page, enter the following general information about the issue subtype:

Page Element	Description
Issue Subtype ID	Enter a unique alphanumeric code for the issue subtype. Do not use special characters, including symbols or punctuation, or spaces.
Issue Subtype	Enter a short name for the issue subtype.
Issue Type ID	Select the issue type that represents the broad category under which this issue subtype falls. Only active issue types are available for selection. If an issue type is later inactivated, the issue type and all of its associated issue subtypes become unavailable to public users. **Note:** When you select an issue type ID, and if this issue type is already associated with a process definition group, then the **Process Definition Group** field in this page gets auto populated.
Status	Select from the following to indicate the issue subtype status: o *Preliminary:* The issue subtype is being defined but is not available for use. o *Ready:* The issue subtype is ready for testing or production use, depending on the environment. o *Void:* The issue subtype is no longer available. **Note:** The issue subtype can be set to ready regardless of whether the intake form is in published status or draft status. A form in draft status can be accessed for testing purposes in the development or test environment.
Valid From Date	Enter the first date that the issue subtype is available.
Valid To Date	Enter the last date that the issue subtype is available. The default value is *Open,* indicating that the issue subtype will remain available indefinitely.
Public User Enabled	Select from the following to indicate which types of users can access the intake form outside of the form designer: o *Enabled for all users:* Both registered public users and agency users can access the intake form. o *Enabled for registered users:* Both registered public users and agency users can access the intake form. o *Not enabled for public users* (default): Only agency users can access the intake form.

Page Element	Description
	Note: *Enabled for all users* and *Enabled for registered users* provide equivalent access. For more information, see *Publishing Intake Forms*.
Case Autonumber Rule	Select the autonumbering rule to increment numbers for cases based on this issue subtype. For information, see *Setting Up Autonumbering*.
Incident Autonumber Rule	Select the autonumbering rule to increment numbers for incidents based on this issue subtype.
Fee Schedule	Select the fee schedule to use for citations based on this issue subtype. For more information, see *Creating Decision Models for Fees*.
Group ID	Select the notice group to use when generating notices for a case based on this issue subtype. For more information see *Setting Up Notice and Report Groups*.
District Type	Select the code enforcement district type to be used for incidents with this issue subtype. For example, if issues with this subtype are handled by the fire department and inspected based on fire prevention districts, then the district type might be your fire prevention district type.
Icon	Select an icon for the tile that public users click when reporting issues with this subtype.
Process Definition Group	Click the look-up prompt to view a list of enabled Process Definition Groups for this issue subtype. Here, you can search for and select a Process Definition Group ID to associate with this issue subtype. **Note:** If the issue type for this issue subtype is already associated with a process definition group, then this field gets auto populated when you enter the issue type ID. To clear an auto populated group ID, click the look-up prompt to open the Process Definition Group page. Search for and select another group ID to associate with this issue subtype. Click the **Group Setup** link next to the **Process Definition Group** field, to set up a new group or edit an existing one. The Process Definition Group page opens in a new tab.

Page Element	Description
	Note: All issue subtypes need not be associated with Process Definition Groups.
Description	Enter a description of the issue subtype. This description appears on the back of the tile that users click when reporting issues with this subtype.

4. Click **Save.**

   When the issue is saved:

   - The **Design Form** button is activated and the **Form Status** appears at the top of the page.
   - The **Code Reference Group** and **Time-Based Rules** sections appear.

5. Review the read-only **Form Status,** which indicates whether the intake form is published or in development.

   These are the status values for the intake form:

   - *Draft:* The form design is incomplete. Form designs in draft status are not migrated to other environments and can't be cloned.
   - *Published:* The form design is complete. Form designs in published status can be migrated to other environments and can be cloned.

6. Configure the list in the **Code Reference Group** section.

   a. Expand the section and review the default values, if any.

      The default values come from the associated issue type. For more information, see *Setting Up Issue Types*.

      If your agency does not have default code reference groups, a blank row appears.

   b. For each code reference group, review or enter the following settings:

Page Element	Definition
Group ID	Select the code reference group with the code references to be included by default in notices of violation that are based on this issue subtype. The person who generates the notice can remove specific code references from the notice.
Enabled	Turn this switch on to make the code reference group available for issues with this subtype.

   c. To add additional code reference groups to this issue subtype, click the **Add** icon and enter information in the new row.

   d. To remove code reference groups from the issue subtype, click the **Delete** icon.

7. Configure the list in the **Time-Based Rules** section.

   This section displays rows for all of the due date types that are defined in the issue type. You can't add or remove rows. Instead, you must supply a time rule for each due date.

   For more information about time rules, see *Setting Up Time Rules*.

   To set up time rules for the issue subtype:

   a. Expand the section and review the default values.

      The default values come from the issue type that you entered when creating the subtype. Changing the issue type does not update these values.
   b. For each rule, review or enter the following settings:

Page Element	Definition
Due Date Type ID	Displays the unique identifier for the type of due date.
Due Date Type	Displays the description of the type of due date — for example, *Incident review date.*
Time Rule ID	Select the time rule ID that specifies how the due date is calculated. The time rule ID includes a time policy that states how many days or hours until the due date. Time rules IDs are available for selection if they have the specified due day type and they are enabled.

8. Click **Save** if you made any changes in the sections for code reference groups and time-based rules.
9. Create the issue intake form for this issue subtype.

   > **Note:** Oracle provides a template for code enforcement intake forms. Even if you plan to use the delivered form as-is, you still need to go through the process of creating the form based on the delivered template.

   a. Click the **Design Form** button.
   b. Review the default issue intake form and add any user-defined fields to the drop zone on the **Just a Few More Questions** page tab.
   c. Save the form, and when you're done designing the form, publish it.

   For detailed instructions on creating the issue intake form, see *Using the Intake Form Designer for Code Enforcement*.
10. To make the issue subtype available to end users:

    a. Return to the Issue Subtype Detail page.
    b. Confirm that the **Public User Enabled** field is either *Enabled for all users* or *Enabled for registered users.*
    c. Change the **Status** to *Ready.*
    d. Click **Save.**

Modifying an Issue Subtype

To modify an issue subtype:

1. Select **Code Enforcement Setup** > **Issue Subtype.**
2. Click the row for the issue subtype you want to modify.

   The Issue Subtype Detail page appears. Because the issue subtype has already been saved, the page displays all fields, including the sections for **Code Reference Group** and **Time-Based Rules.**
3. Make any necessary updates to the issue subtype.
4. Click **Save.**
5. Use the **Design Form** button to access the form designer if you need to make changes to the intake form.

Deactivating an Issue Subtype

You cannot delete issue subtypes, but you can mark them as void.

To deactivate an issue subtype:

1. Select **Code Enforcement Setup** > **Issue Subtype.**
2. Click the row for the issue subtype you want to modify.

   The Issue Subtype Detail page appears.
3. Change the **Status** to *Void.*
4. Click **Save.**

Cloning Issue Subtypes

> **Note:** When you clone an issue subtype, the intake form from the original subtype is *not* copied to the newly created subtype. If you added user-defined fields to the standard code enforcement intake form, you will need to recreate any necessary fields for the new subtype.

To clone an issue subtype:

1. Select **Code Enforcement Setup** > **Issue Subtype.**
2. Click the row for the issue subtype you want to clone.
3. On the Issue Subtype Detail page, click the **Clone** button.
4. On the Clone Issue Subtype page, review or enter the following information:

Page Element	Description
Original Issue Subtype and **Original Issue Subtype ID**	These fields display identifying information about the issue subtype that you're cloning.
New Issue Subtype and **New Issue Subtype ID**	Enter a new identifier and short description for the issue subtype that you're creating.
Clone Code Reference Groups	When this switch is on, the code reference groups in the original issue subtype are copied over to the newly created issue subtype.

Page Element	Description
	When this switch is off, the new issue subtype will have the default code reference groups from the issue type.
Clone Time-Based Rules	When this switch is on, the time-based rules in the original issue subtype are copied over to the newly created issue subtype. When this switch is off, the new issue subtype will have the default time–based rules from the issue type.
Clone Form Design	When this switch is on, the original issue subtype's form design is copied to the new issue subtype. When the switch is off, the new issue subtype does not have an intake form until you design one.

5. Click **Create.**

   A new issue subtype is created. The information on the Issue Subtype Details page is identical to the cloned subtype, except that the **Status** is always *Preliminary.*
6. Make any necessary modifications to the issue subtype and save.
7. Make any necessary changes to the intake form (or create the form if you did not copy it from the original issue subtype).
8. Publish the intake form.
9. Make the subtype available to end users by updating the **Status** and, if necessary, the **Public User Enabled** setting.

Setting Up Calculate Overdue Case Fee Actions

This topic describes how to configure the Calculate Overdue Fee action to apply fees for past due payments.

For Code Enforcement, you can have the Business Rules Framework trigger the calculation and application of case fees using the Calculate Overdue Case Fee action. When the rule triggers this action, the Business Rules Framework sends a request to the decision model defined in Oracle Integration Cloud. The Calculate Overdue Case Fee action is available only for scheduled rules.

The prerequisites for this action are:

- Decision model in Oracle Integration Cloud with late fees defined.

  For more information on setting up decision models, see *Creating Decision Models for Fees*.
- Fee Schedule with a fee item added having the Mapping Source value set to *Code Enforcement Overdue Fees* with the appropriate fee mappings set.

  For more information on configuring Fee Schedules, see *Setting Up Fee Schedules*.

- Associate the Fee Schedule with the issue subtype definition for appropriate case(s).

  For more information on setting up issue subtypes, see *Setting Up Issue Subtypes*.

To set up a Calculate Overdue Case Fee action:

1. From the Business Rules Framework landing page, select Scheduled Rules.
2. On the Scheduled Rules page, click **Add.**
3. Select *Code Enforcement Overdue Case Fees* from the **Business Object** drop-down list.
4. Add a **Rule Name** and **Rule Description.**
5. Turn on the **Enabled** switch so the rule is available to be run.
6. Expand the Criteria section and add the criteria you want to evaluate and compare for your rule.

   This example illustrates a scheduled rule that will run the Calculate Overdue Case Fee action.

   ```
   ${Fee Amount Due} > "0"
   AND ${Due Date} => ${Current Date}
   ```

7. Expand the Action section and select *Calculate Overdue Case Fee* from the **Action Name** drop-down list.

9 Setting Up Business Licenses

Setting Up Agency-Level Options for Business Licenses

Set up agency-level options for business licenses, including displaying or hiding business information and associated licenses from public view.

Here's how to configure agency-level options for business licenses:

1. Select **Common Setup** > **Agency**.
2. Click a row on the Agency Information tab.
3. Select the Features tab.

   Oracle delivers the list of offerings on the Features tab.
4. Click the **Review Options** link for the Business Licenses offering.

Configuring General Settings

Administrators use the General settings to manage the display of business information on Business Overview and Details pages for a business license application.

Page Element	Description
Allow hiding business information and associated licenses from public view	Use this switch to manage the display of business information to public users. By default, this switch is turned off. When the switch is turned on, the agency allows authorized users to hide the business and all associated business licenses from appearing on global search results for public users and Geographic Information Systems (GIS). Once the agency-level switch is turned on, the authorized users can then turn on the **Hide Business from Public View** switch at the business entity level, on the Business Overview and Business Details pages. For more information see, *Managing Business Information*.
Display Assigned Specialist Information to Public Users	Select from one of the options to determine what information the registered public user will view: • *Specialist name and email*: The name of the assigned specialist and their email ID. • *None*: No detail will display related to specialist. • *Specialist name*: Only the name of the assigned specialist. • *Specialist name and general email*: The name of the assigned specialist and the agency's general email ID.
Copy assigned specialist for amendments and renewals	Turn on this switch if you want to retain a business license's assigned specialist in its amendment and renewal applications. The amendment and renewal applications will have the same specialist that is assigned to the business license. This switch is turned off by default.

Page Element	Description
Instuctional Text for Business Licenses	Select an option from the Instructional Text for Permits field to set up and manage instructional or assistive text that can be configured to appear on applications. For more information, see *Managing Instructional Text*.
Specialist's General Email	Enter your agency's general email ID that the registered users can use to contact the agency. This field is available only when the *Specialist name and email* option is selected from the above field.
Enable confidential attachments	Turn on this switch to enable confidential attachments for business licenses only. The business license applicant or agency staff with permissions can mark an individual document as confidential when adding an attachment during application intake. Only agency staff with permissions can upload confidential attachments or update the confidential designation in the transaction details or on the business record, including credential attachments; confidential attachments are hidden from view for other agency staff. When a document is confidential, only agency staff with permissions, the applicant, and the application contacts with full or print, pay, and view access can view the confidential document in the list of attachments for the business license transaction or business record, including credentials. For more information, see *Working with Attachments* and *Working with Credentials*.

Note: When the assigned specialist is no longer associated with the agency and if the *Specialist name and email* option is selected, then only the specialist's name is displayed to the registered user.

Configuring Business Settings

Administrators use the Business settings on the Business License Options page to manage the display of business information for a business record.

Page Element	Description
Report ID	Configure this parameter to generate the business license certificate.
Allow public user to view consolidated certificate	Use this switch to manage the display of the consolidated business license certificate. By default, this switch is turned off. When the switch is turned on, the agency can allow public users to view the consolidated certificate for multiple business licenses.
Business Entity Document Group	Select a document group to organize the various categories of attachment files into a grouping for business entities. For more information, see *Setting Up Document Groups*.

Note: For all agency users, and the registered public user who is the applicant, business owner, or contact with full access, the business license information is always displayed in the global search results regardless of the status of the switches. For all other users the business information is hidden only when both the agency-level and business entity-level switches are turned off.

Configuring Business License Groups

Page Element	Description
Enable multiple application selection	Turn on this switch to allow public users to apply for multiple licenses for a location without having to repeat the same business information.
General Information Type	Select the General Information transaction type that defines the **General Information** section displayed when an applicant selects multiple applications. General information can include the applicant, business location, name, and owner, for example. For more information on configuring general information types, see *Setting Up General Information for Business License Types*.

Configuring Pending Inspections

As part of the business license application review process, some agencies prefer to identify all required inspections and preschedule them as pending inspections. This enables applicants to view a list of all required inspections for a particular business license. Applicants can then use this list to track and manage inspection scheduling.

Agency staff can create and manage inspections, including pending inspections, as long as the application isn't in a presubmittal or terminal status, such as *Void, Denied, Withdrawn,* or *Completed*. Applicants can only create inspections or schedule pending inspections when the permit is in an *Inspection, About to Expire,* or *Permit Issued* status. Applicants can't create pending inspections. When agency staff or applicants postpone scheduled inspections, the inspection stays in a *Pending* status until further action is taken.

Use the **Inspections** section of the Business License Options page to configure how your agency handles pending inspections.

Page Element	Description
Enable creation of pending inspections	Turn on this switch to enable the manual and automatic creation of inspections in a *Pending* status. When this setup switch is turned on, the **Pending** option appears for agency staff when requesting inspections. Applicants can't create pending inspections when requesting inspections. However, if the agency allows applicants to postpone inspections by turning on the switch to **Enable Postpone Inspection**, the postpone action moves inspections to a *Pending* status. The **Pending** filter switch always appears on the application-level Inspections page and agency-level Inspections console page for viewing inspections in a pending status. A **Pending** tab displays pending inspections on the Task Management page accessed through the My Inspections link.
Enable automatic creation of pending inspections	Turn this switch on to automatically create pending inspections when a permit application is submitted. A pending inspection is created for each selected inspection type in the inspection group associated with the permit type of the submitted permit. For more information on configuring inspection groups for automatic creation, see *Setting Up Business License Types*. **Note:** This switch is available only if the **Enable Pending Inspection** switch is turned on.

Page Element	Description

Note: With these settings enabled, when a business location changes from outside the agency's jurisdiction to within its jurisdiction, the system automatically creates the pending inspections set up in the inspection group. The system automatically creates inspections in a *Pending* status for all the in-process business license transactions that are associated with the selected location. For more information, see *Working with Business Location Information*.

For information about the setting for public users to postpone inspections, which puts them into a *Pending* status, see the next section.

Configuring Inspection Actions for Public Users

Use the **Inspections** section of the Business License Options page to configure whether your agency allows applicants, business owners, and contacts with business license application access to postpone or cancel inspections.

Page Element	Description
Enable postpone inspection	Turn on this switch to allow public users to take scheduled inspections off the schedule or revoke an inspection request. Agency staff can always postpone inspections. The **Postpone** action puts an inspection into a *Pending* status. When you update the preferred time for or assign the inspection, the status changes from *Pending* to *Requested* or *Scheduled*, respectively.
Public User Cancel Options	Select an option: • *Cancel All* - Public users can cancel any of their inspections. • *Cancel Nonrequired* - Public users can only cancel the inspections of theirs that aren't required. • *Cancel None* - Public users can't cancel inspections at all. The option for public users to cancel inspections, based on the agency setup, is available on the Inspection request page only.

For more information, see *Managing Inspections for a Business License Application*.

Requiring Inspection Comments

Agencies have the option to require inspection comments. Use the **Inspections** section of the Business License Options page to configure how your agency handles business license inspection comments.

Page Element	Description
Required Inspection Comments	Configure whether comments are required for permit inspections. Select an option: • *None* - Comments are optional. • *All results and cancellations* - Comments are required for all inspection results and inspection cancellations. • *Cancellations and failed results* - Comments are required for inspection cancellations and inspections that receive a failed result.

Setting Up Inspection Options by Scheduling Method

Agencies can configure these inspection options based on the scheduling method (*Ready, Request,* or *Schedule*) for an inspection:

- **Time Entry Method** - Determines whether the inspection time can be entered during request or scheduling as a date only, a time range (such as "Morning"), or a specific time.
- **Arrival Display** - Determines how the inspector's scheduled arrival information is displayed, such as a date only, a time range (such as "Morning"), or a specific time.
- **Assignment Method** - Determines how the inspector's daily workload is managed, based on the duration of inspections or by limiting the number of inspections.
  For more information about setting up the assignment method, see *Setting Up Inspection Assignment*.

You must define the time ranges here on the Permit Options page and Business License Options page before you implement the time range option for time entry or arrival display. See the next section, "Configuring Inspection Time Ranges."

You can configure the time entry method, assignment method, and arrival display for each scheduling method as described here:

> **Note:** For more information about choosing a scheduling method for an inspection type, see *Setting Up Inspection Types*.

1. **Request** scheduling method

Time Entry Method	Assignment Method	Arrival Display
Time range This method provides both **Preferred Date** and **Preferred Time** (a time period) fields on the inspection request page.	Duration **Note:** *Count* isn't available as an option when the time entry method is *Time range*.	○ Specific time - Displays both a date and time as assigned by the inspection supervisor. ○ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ○ Date only
Date only This method provides only the **Preferred Date** field on the inspection request page.	Duration	○ Specific time - Displays both a date and time as assigned by the inspection supervisor. ○ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ○ Date only
Date only This method provides only the **Preferred Date** field on the inspection request page.	Count	Date only

2. **Ready** scheduling method

Time Entry Method	Assignment Method	Arrival Display
Time range This method provides both **Ready-by Date** and **Ready-by Time** fields on the inspection request page.	Duration **Note:** *Count* isn't available as an option when the time entry method is *Time range*.	◦ Specific time - Displays both a date and time as assigned by the inspection supervisor. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ◦ Date only
Date only This method provides only the **Ready-by Date** field on the inspection request page.	Duration	◦ Specific time - Displays both a date and time as assigned by the inspection supervisor. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ◦ Date only
Date only This method provides only the **Ready-by Date** field on the inspection request page.	Count	Date only

3. **Schedule** scheduling method

Time Entry Method	Assignment Method	Arrival Display
Specific time This method provides both **Date** and **Time** fields on the inspection scheduling page. Inspector supervisors can see the inspector names.	Duration **Note:** *Count* isn't available as an option when the time entry method is *Specific time*.	◦ Specific time - Displays both a date and time. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ◦ Date only
Time range This method provides both **Date** and **Time** fields on the inspection scheduling page. Only inspector supervisors can see the inspector names.	Duration **Note:** *Count* isn't available as an option when the time entry method is *Time range*.	◦ Specific time - Displays both a date and time as assigned by the inspection supervisor. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon." ◦ Date only
Date only This method provides only the **Date** field on the inspection scheduling page. Only	Duration	◦ Specific time - Displays both a date and time as assigned by the inspection supervisor. ◦ Time range - Displays a date and the agency-configured time range, such as "Morning" or "Afternoon."

Time Entry Method	Assignment Method	Arrival Display
inspector supervisors can see the inspector names.		◦ Date only
Date only This method provides only the **Date** field on the inspection scheduling page. Only inspector supervisors can see the inspector names.	Count	Date only

For more information, see *Setting Up Permit Types*, *Setting Up Business License Types* and *Requesting and Scheduling Inspections*.

Configuring Inspection Time Ranges

You can set up your permit and business license inspections to show a time range or period when requesting or scheduling inspections. Configure the **Scheduled Time Range** fields in the **Inspections** section on the Permit Options page and Business License Options page to display time range values when using the *Time entry* time entry method and arrival display. For more information, see "Setting Up Inspection Options by Scheduling Method" in this topic.

Page Element	Description
Scheduled Time Range Breakpoint	Select the time of day used as a breakpoint for displaying a description of a time range before the breakpoint and a time range after the breakpoint. Inspections scheduled before the breakpoint display the value you enter in the **Time Range Before Breakpoint** field as the inspection time. Inspections scheduled after the breakpoint display the value you enter in the **Time Range After Breakpoint** field as the inspector arrival time. For example, you might select a breakpoint of *12:00 PM* to distinguish between morning and afternoon time ranges.
Time Range Before Breakpoint	The text that appears in the **Inspector Arrival** field on the Inspection Request and Inspection Details pages when the inspection scheduled start time is before the time selected in the **Scheduled Time Range Breakpoint** field. For example, if the breakpoint is 12:00 PM, you might enter a value of *Morning* to appear in the **Inspector Arrival** field for any inspections scheduled before 12:00 PM.
Time Range After Breakpoint	The text that appears in the **Inspector Arrival** field on the Inspection Request and Inspection Details pages when the inspection scheduled start time is equal to or after the time selected in the **Scheduled Time Range Breakpoint** field. For example, if the breakpoint is 12:00 PM, you might enter a value of *Afternoon* to appear in the **Inspector Arrival** field for any inspections scheduled for 12:00 PM or later.

Configuring an Interactive Voice Response System

Your agency can set up an interactive voice response (IVR) system to allow registered public users to schedule business license inspections by phone. The IVR system provides for users to enter a 4-digit access code or PIN on the registration page that they'll use when they call into the system.

You must activate IVR in the agency-level options to integrate with the agency's IVR system. This option is not turned on when you initially set up your agency.

When you turn on the **Enable IVR** switch in the agency's options, you'll see the **Enable IVR Access Code** checkbox on the Public User Setup page. This setting determines whether an access code is required during user registration. The **IVR Access Code** field on the Register page and in account management is only available when you select the **Enable IVR Access Code** checkbox.

Here are the steps for configuring an IVR system in Oracle Permitting and Licensing:

1. Go to the **Inspections** section of the Business License Options page.
2. Turn on the **Enable IVR** switch if your agency is integrating with an IVR system.
3. Go to the Public User Setup page. See *Setting Up Public Users*.
4. In the **IVR Access Code** section, verify that the **Enable IVR Access Code** checkbox is selected to require an IVR access code on the Register page. Deselect the checkbox to hide the **IVR Access Code** entry field on the Register page and in account management.

For information about setting up IVR integration with Oracle Permitting and Licensing in FSM, see *Setting Up a Proxy Role and User for Interactive Voice Response*. For information about IVR access code entry during registration and managing access, see *The Public User Registration Process* and *Managing Public User Accounts*.

Setting Up Business License Types

Define the types of business licenses supported by an agency, including consultations and contractor registration. You add a business license type and associate workflow process definitions on the Business License Type definition page.

Before you can create an application form, you must first create a business license type on the Business License Type definition page. The type defines attributes that will be available on the business license application.

Adding Business License Type Definitions

1. Select **Business License Setup** > **Business License Type** > **Business Licenses**.
2. Click **Add**.
3. Let's take a look at the fields for defining a business license type:

Page Element	Description
Classification	Displays the type of business license. The classification for this page indicates that this type is associated with a business license application.
Subclassification	Displays the subclassification. Select an option: ○ *Not applicable* - Displays as the default value and indicates a standard business license application.

Page Element	Description
	○ *Contractor Registration* - Select to create a contractor registration intake form. ○ *General Information* - Select to create a General Information section for allowing multiple business license types to be combined into a single intake form. For more information, see *Setting Up General Information for Business License Types*. ○ *Consultation* - Select to create a consultation application.
Business License Type	Enter a name for the type of business license.
Business License Type ID	Enter a unique alphanumeric code or short name for the business license type. Do not use special characters, including symbols or punctuation, or spaces.
Status	Select from the following to indicate the business license type status: ○ *Preliminary:* The business license type is being defined but is not available for use. ○ *Ready:* The business license type is ready to be accessed for testing or production use, depending on the environment. ○ *Void:* The business license type is no longer available. **Note:** The form design can be in published status or draft status and be set to *Ready.* In draft status, the form can be accessed from outside the form designer — such as the Apply page — for testing purposes in the development or test environment.
Form Design Status	A read-only field indicating whether the form design is published or currently being developed. ○ *Draft:* The form design is currently being created or modified. Form designs in draft status are not migrated to other environments and can't be cloned. ○ *Published:* The form design is complete. Form designs in published status can be migrated to other environments and can be cloned.
Autonumber Rule	Select the autonumbering rule to increment numbers for business license applications. You can delete an autonumbering rule when it isn't being used by any transaction types. **CAUTION:** The system generated license ID is based on the autonumber rule definition. Therefore, when selecting the autonumber rule, you must ensure that its rule definition generates a unique license ID. Failing to do so can result in duplicate license IDs, which will cause issues in the business license. For more information, see *Setting Up Autonumbering*.
Valid from Date and **Valid to Date**	Enter a range of dates when this business license type is valid. The default from date is the current date. The default end date is *Open*. You can update these dates as needed.

Page Element	Description
Public User Enabled	Select from the following to indicate whether the business intake form can be accessed and by which user types. - *Enabled for all users:* Only registered public users and agency users can access the intake form. - *Enabled for registered users:* Only registered public users and agency users can access the intake form. - *Not enabled for public users* (default): Only agency users can access the intake form. **Note:** Currently, *Enabled for all users* and *Enabled for registered users* have equivalent access.
Contractor Validation	Enter a contractor validation group with license requirements that must be met for contractor registration with this business license type. Agencies can decide whether to prevent application submittal if the criteria aren't met. Only validation groups with the **Usage** defined as *Business License* are available to select. For more information, see *Setting Up Validation Groups*.
Application Group	Select an application transaction group that you want to associate with the business license type. For more information, see *Setting Up Transaction Groups*.
Category	Select a transaction category that you want to associate with the business license type. For more information, see *Setting Up Transaction Categories*.
Subcategory	Select a transaction subcategory that you want to associate with the business license type. For more information, see *Setting Up Transaction Subcategories*.
NAICS Group	Select a group of North American Industry Classification System (NAICS) codes for the business license type. The NAICS group associated with the business license type determines which NAICS codes are available to select when applying for a business license. For more information, see *Setting Up NAICS Groups*.

Page Element	Description
	Note: If you don't select a value in this field, applicants using this business license type can select any NAICS code that is added and enabled for any NAICS group.
Tax Class	Select a tax class that should apply to the business license. A class tax defines the attributes that will apply to the license, its renewal, and on amendments. For more information, see *Setting Up Business License Tax Classes*. **Note:** The predefined field group for Tax Related Details must be included in the intake form design to ensure that the tax related detail section is included in the intake form and the license detail.
License Period Format and **Period Format Preview**	Select the format for displaying the license period, when the license is valid as defined in the application. This value will be displayed on the business license in the format you select, as shown in the preview field. For example, an annual license period displays the year if you select *yyyy*, where yyyy indicates the year. If the license period is quarterly, semi-monthly, or fiscal year, you might select *MMM yyyy*, where MMM indicates the first three letters of the month.
Document Group	Select a document group to manage attachments for the business license type. When you specify a document group, document attachments can be classified into categories and subcategories during the application process and when you upload files. Then you can see the category for a document on the attachments page in the application details. If you add a document group to this business license type and the document group includes document categories that are configured to identify required documents, the **Required Documents** section appears on the application intake form and the Attachments page in the business license transaction details. The system checks for uploaded attachments with the required category or category and subcategory pair at different steps in the application and displays an error if the required documents haven't been added. For more information about required documents, see *Setting Up Required Documents*. For more information, see *Setting Up Document Groups*.
Fee Schedule	Select a fee schedule that you want to associate with the business license type. A department is required when you enter a fee schedule ID. For more information, see *Setting Up Fee Schedules*.

Page Element	Description
Bill Type	Select a bill type to associate with the business license type. The billing type identifies the type of invoice that can be generated from the record. The bill type is required. For more information, see *Setting Up Bill Types*.
Department	Select a department that you want to associate with the business license type. A department is required if you add a Fee Schedule ID to the business license type. If a department is specified on the Fee Item setup page, the fee item department overrides the department specified here on the business license type. For more information, see *Setting Up Departments*.
Meeting Template	Select a meeting template that should be applied to this business license type. This field appears only if you have selected Consultation from the **Subclassification** field. For more information, see *Setting Up Meetings*.
Terms of Use ID	Select a terms of use definition to associate with the business license type. The available values for business licenses are determined by the usage on the terms of use ID. For more information, see *Setting Up Terms of Use*.
Description	Enter a user-facing description of the business license type. On the Apply page, this description appears under the application type name. The description helps public users understand the purpose of the application type.
URL	Enter a URL for a web page that gives public users more information about the business license type. If you enter a URL, then a **Learn More** link appears at the end of the application type description on the Apply page. The user clicks this link to open the specified URL. If you leave this field blank, the **Learn More** link is not visible on the Apply page.

Note: You associate credentials with a business license by referencing the credential group in the Credentials predefined element on the business license application design. For more information, see *Setting Up Credential Groups*.

Associating a Business License Certificate

First, your agency sets up the certificate template in the reports catalog, then associates the report ID with the business license type in the **Certificate** section. You can generate the certificate for this type of business license from the business license overview page when the license is issued.

Page Element	Description
Allow Public User to View	Turn on the switch to allow public users to view the issued business license certificate, which is accessed from the business license summary on the Overview page.
Report ID	Enter the report ID for the business license certificate template associated with this business license type. Use the delivered business license certificate report or configure your own. See *Setting Up Reports*.

For information about viewing the business license certificate, see *Viewing the Business License*.

Setting Up License Activity and Expiration Options

Depending on the business license type definition, businesses can renew or amend their licenses or contractor registration online. You also associate expiration rules with the business license type in the **License Activity** section.

Page Element	Description
Allow Amendment	Turn on the switch to enable the applicant and agency staff to submit an application for an amended business license using this business license type. For business license types with a contractor registration subclassification, contractors can amend their registration online. After you enable amendments, you define the workflow for amendments in the **Workflow Setup** section.
Allow Renewal	Turn on the switch to enable the applicant and agency staff to submit an application for a license renewal using this business license type. For business license types with a contractor registration subclassification, contractors can renew their registration online. After you enable renewals, you define the workflow for renewals in the **Workflow Setup** section.
Expiration Group	Enter the expiration group that defines the expiration rules for this business license type. Expiration rules determine the expiration dates for the application and business license, contractor registration, or consultation. For more information about business license expiration, see *Setting Up Business License Expiration Rules*.

Setting Up Workflow for Business Licenses

You set up a workflow for the initial application as well as amendments and renewals, if applicable, when you define the business license type. Before you begin, you must define a workflow for each type of application using OCI Process Automation.

For more information about setting up workflow, see *Setting Up Process Definitions for Workflow*.

You'll see the workflow setup fields for applications but also for amendments and renewals, depending on how you've set up your business license type. The columns will have headers like this:

- **Application**: Default column when you're creating the business license type.
- **Amendment**: Additional column when you turn on the **Allow Amendment** switch.
- **Renewal**: Additional column when you turn on the **Allow Renewal** switch.

Page Element	Description
Space Name	Enter the space where the workflow process application is stored. You can group related applications in a space as well as enable users to collaborate when developing applications. **Note:** This field is available only if your agency has selected the **Oracle Integration Cloud (OIC)** option for the *Workflow and DMN Source* feature in the Functional Setup Manager. If the **Oracle Cloud Infrastructure Process Automation** option is selected, then the Space Name field is not available.
Application ID	Enter the name of the workflow process application in OIC. For more information, see *Creating and Managing Applications*.
Version	Enter the version of the workflow process application. **Note:** If you update the version, the new version will apply only to applications submitted after the new version has gone into effect. The existing submitted applications will continue to use the version that was effective at the time the application was submitted.
Process Definition	Enter the name of the workflow process definition that applies to this particular business license.

Note: Different business license types can utilize the same workflow definition.

Setting Up Inspections for a Business License Type

Select an inspection group for the business license type, and define how inspection times are displayed for the business license application associated with the business license type.

Note: Pending business license inspections can be automatically created when the business location falls within the agency's jurisdiction. You must enable pending inspections for the business license type and turn on the switch that indicates the business location is within the agency's jurisdiction. For more information, see *Working with Business Location Information*.

Page Element	Description
Origination Inspection Group **Amendment Inspection Group** **Renewal Inspection Group**	Select an inspection group to associate with each type of business license activity associated with the business license type: origination, amendment, and renewal. The inspection group identifies all inspections necessary for origination, amendment, and renewal applications for the business license type. For more information, see *Setting Up Inspection Groups*.
Automatically Create Origination Inspections **Automatically Create Amendment Inspections** **Automatically Create Renewal Inspections**	After selecting an inspection group, click the link to access a page where you can select the inspection types for which pending inspections are automatically created when an application associated with this business license type is submitted. This link appears only when the **Enable Automatic Creation of Pending Inspections** switch is turned on for the agency. For more information, see *Setting Up Agency-Level Options for Business Licenses*.

Cloning Business License Types

Click the **Clone** button to create a clone of the current business license type, which you can then use to create a different business license or to create a different version of the current business license.

For more information on cloning transaction types, see *Cloning Transaction Type Definitions*.

Designing Intake Forms

After you've entered the appropriate initial information for the business license type, you can then begin to design the intake form that end users will use to submit an online application for a business license. You create an intake form using the designer. You access the designer by clicking the **Design Form** button.

Note: You associate credentials with a business license by referencing the credential group in the Credentials predefined element on the business license application design. For more information, see *Setting Up Credential Groups*.

For more information on designing intake forms, see *Using the Intake Form Designer* and *Using Predefined Field Groups*.

Setting Up General Information for Business License Types

This topic describes how to set up General Information sections for Business Licenses.

General Information Overview

General Information sections apply when you are implementing the option to allow multiple license types to be selected and combined into a single intake form. The General Information section is designed to contain the information that is common to all your business types so that applicants don't need to enter the same common information repeatedly for each license type.

Creating a General Information section is like creating a miniature transaction type and intake form. First you must create the General Information transaction type, and then you create the General Information intake form.

Setting up single intake for multiple license types involves these tasks.

Task	Documentation
1) Set up General Information for business license types	This topic.
2) Create General Information forms for business licenses	*Creating General Information Forms for Business Licenses*
3) Enable selecting multiple business license types on the Apply page	*Setting Up Agency-Level Options for Business Licenses*

Creating a General Information Transaction Type

To create a General Information transaction type:

1. Select **Business License Setup** > **Business License Type** > **Business Licenses**.
2. Click **Add**.
3. Note the **Classification** is Business Licenses to indicate the offering.
4. For **Subclassification** select *General Information*.

   > **Note:** The number of fields displaying on the Business License Type page greatly reduces. For General Information sections, you don't need to provide all of the information required for a typical business license type, like fee schedules, workflow, inspections, and so on. The General Information transaction type uses only a subset of the typical business license type attributes and features.

5. Enter a **Business License Type** value, such as *General Information.*
6. Enter a **Business License Type ID** value, such as *GeneralInfo2023.*
7. Refer to the Business License Types documentation for information on the remainder of the attributes.

   For more information on the business license type attributes, see *Setting Up Business License Types*.

   > **Note:** If all your business licenses will be using a unified Terms of Use document, you can set the **Terms of Use ID** for the General Information license type. That way all the business license types included in the single intake form will use the selected Terms of Use document. If you have different Terms of Use documents that apply to different license types, set the Terms of Use separately for each individual license type.

8. Click **Save.**

Setting Up Business License Expiration Rules

You can set up expiration rules for business licenses, consultations, and contractor registration that will be associated with the business license types your agency offers.

You can set up expiration rules for business licenses to define:

- When an inactive pending application expires.
- When the business license expires based on either a fixed date or when the license was issued.

For business license consultations, you can set up rules to define when an inactive pending application expires or when the consultation recommendations expire. As you set up the expiration rules, keep in mind the type of business license the rules are for.

First, you define the rules in an effective-dated group. After setting up the expiration rules, you add the rules group ID to the business license type definition and periodically run batch rules processing to update the expiration statuses. Oracle recommends that you schedule expiration rule processing to run daily.

Setting Up Expiration Rule Groups

Here's how to set up the rule group:

1. Select **Business License Setup** > **Business Expiration Group**.
2. Select **Add** on the Expiration Group page.

   You enter values for these fields on the Business License Expiration Group page to define the group.

Page Element	Description
Expiration Group ID, **Expiration Group Name**, and **Description**	Enter an ID for the expiration group, a group name, and description.
Subclassification	Select *Not Applicable* for a business license or *Consultation* for a business license consultation. Use *Consultation* if you are applying this group of rules to a business license type definition with a consultation subclassification.
Effective Start Date and **Effective End Date**	Enter the range of dates when the group is effective. If you want to leave the effective dates open-ended, don't enter a date for the end date. **Note:** You can't update the start date after saving the expiration group details.
Show All Dates	Click to access the effective-dated history of the rules definition. This button is available after you create the first rule.

Page Element	Description
	See the next section for details about the history data.

3. Verify that the **Enabled** switch is turned on. The option is active by default for a new expiration group.
4. Create expiration rules in the **Expiration Rules** section.

Expiration Group History Data

The Business License Expiration Group – History Data page shows the list of rules definition records with their effective date history. You can search history by effective start date. Click *Add* to create a new effective-dated row for an expiration group.

You can delete effective dated entries using the **Delete** icon in each row. You can only delete effective dated rows that have their effective end date in the future or are open ended. The **Delete** option is not available for effective dated rows that have the start and end dates earlier than the current date.

> **Note:** Only the agency staff with the job role PSC_MANAGE_EFFECTIVE_DATES_PRIV assigned to them can delete an expiration group with any effective dated entry. Turn on the **Correction Mode** switch to enable deletion of the record. The **Delete** option will appear for the rows on the History Data page as well as on the Permit Expiration Group page. Also note that only when the **Correction Mode** is enabled, you can update the effective start date for the expiration group.

Defining Expiration Rules

Here's how to set up the details about the expiration rules in the group:

1. Click **Add** in the **Expiration Rules** section on the Business License Expiration Group page.
2. Select the **Expiration Basis** for your rules. The expiration basis is the type of expiration rule you are defining. For business licenses, you can create these rules:
    - *Inactive pending application*

      When the business license application is in a pending status, the applicant must submit the application before the expiration date.

      The expiration timeframe begins when the applicant saves a business license application and ends when the application is submitted.
    - *License expiration - fixed date* or *License expiration - issued date*

      You must select whether the license expiration is based on a fixed date or when the license is issued. For example, if you want to set up the license to expire every year on June 30, you select the fixed date expiration rule. You must enter the expiration interval for licenses that expire on a fixed date. You define

whether the license expires monthly, quarterly, yearly, and so on. Or you can set up the rules so that the license is valid for an amount of time, such as 6 months, from the time when the license was issued.

Both fixed date and issued date expiration rules are initiated when the business license has an *Active* status.

- *Consultation expiration*

  This rule type is only available when the expiration group subclassification is *Consultation*.

  The expiration timeframe begins when the business license consultation is complete and recommendations have been made. The business owner must submit the business license application before the consultation findings expire, as defined by the rule.

3. For each expiration basis, you enter details to define the rule.

Page Element	Description
Expiration Period	Enter the amount of time that the user has before the expiration date. For example, the applicant must submit an application within 30 days before the application expires, or a license is valid for 1 year from when it was issued. For fixed-date expirations, enter the date the license expires. **Note:** The expiration date is calculated as follows: a. For pending applications, *Expiration date = Date when the application was saved + Expiration duration*. b. For business license issuance, *Expiration date = Issue date + Expiration duration*. Because the expiration timer starts the day after the issue date, enter a duration that is one day less than the desired timeframe.
About to Expire	Enter when you would like a notification to appear on the application or license that shows the user how long until the application or license expires. For example, you can enter 5 days to show that a pending application expires in 5 days.
Grace Period	Enter the amount of time the application, license, or consultation findings are valid beyond the expiration date defined in the rules. The grace period for the inactive pending application rule is the amount of time the business is allowed to submit the application after the pending application expires. For the consultation expiration rule, the grace period is the amount of additional time that the consultation findings are valid after the consultation expires. If the business renews during the grace period defined in the license expiration rule, no penalties and interest are charged.

4. Verify that the **Enabled** switch is turned on for each rule. The option is active by default for a new expiration rule.

5. Click **Save**.

Setting Up Communication Rules

You can set up communication rules to send communications when the application, license, or consultation is about to expire or expired. Agency staff and the business owner listed on the application, license, or consultation receive the notifications. Click **Add** in the Communication column and select **About to Expire**, **Expired**, or both, and the recurrence of the communication.

Depending on the expiration communication rules you define, you must also set up communication templates for these delivered events:

- *About to expire business license* – The communication event will be triggered when the inactive pending application or license is about to expire.
- *Expired business license*– The communication event will be triggered when the inactive pending application or license expires.
- *About to expire business license consultation*– The communication event will be triggered when the inactive pending consultation application or license consultation is about to expire.
- *Expired business license consultation*– The communication event will be triggered when the inactive pending consultation application or license consultation expires.

For more information about configuring the communication templates for the email or notification you want to send when the event occurs, see *Setting Up Communication Templates*.

> **CAUTION:** After setting up communication rules, you must periodically run batch expiration rule processing to update the *About to Expire* and *Expired* statuses. The system updates the statuses and sends out the communications according to the setup. Oracle recommends that you schedule expiration rule processing to run daily.

Sending Consolidated Expiration Communication to Multiple Business Licenses

Your agency can send consolidated expiration communication to multiple business licenses for a single location by enabling the **Enable consolidated expiration communication** option on the Business License Options page. When you enable this option, the communications configured on the Business License Expiration Group is ignored. However, this does not impact in sending consolidated communication while processing the Expiration Rules.

The consolidated communication for multiple business licenses can be sent like this:

1. Click **Page Finder** icon on the Agency Springboard, and type *Agency*.
2. On the Agency Information page, select your agency and click the Features tab.
3. On the Business Licenses row, click **Options** link. The Business License Options page opens in a new window.
4. Select **Enable consolidated expiration communication** in the Business section, and click **Save** .

To define the expiration communication rules, you must set up the communication template like this:

1. Click **Page Finder** icon on the Agency Springboard, and type *Communications Event*.
2. Select *BL-EXPIRATION-BY_LOC*, and click **Add** button in the Communication Template section to configure the communication template.
3. Click **Add Grid** button on the Communication Template Details screen.
4. Select *Business Licenses of the location* from the drop-down list, and then select the appropriate grid for *About to expire*, *Expired*, *Expired past grace date*, or *All licenses*.

> **Note:** When you select the *All licenses* option, all business licenses are displayed irrespective of the expiration status.

5. Complete the communication template and navigate to *Common Setup* > *Business Rules Framework* > *Common* > *Expiring Business License by Location*.
6. Click **Add** button to configure the rule.

Associating Expiration Groups with Business License Types

After you create an expiration group, you associate the group of rules with a business license type.

1. Select **Business License Setup** > **Business License Type** > **Transaction Type**.
2. Click the row for the business license type.
3. On the selected Business License Type page, enter the expiration group. You can look up the expiration group by expiration group name and description.
4. Click **Save**.

For more information see *Setting Up Business License Types*.

Running the Expiration Rule Process

After setting up expiration rules and adding an expiration rule group ID to the business license type definition, you must set up expiration rule processing to periodically update the expiration statuses.

Run the process that updates transaction expiration statuses on the Process Expiration Rules page, which you access by selecting **Common** > **Process Expiration Rules**. Oracle recommends that you schedule expiration rules processing to run daily.

For information about setting up expiration rules processing, see *Updating Application Expiration Status*.

Setting Up Business License Renewals

Agencies generally issue business licenses for a fixed period of time and offer the option to renew the license to continue business operation. Several setup steps are required for your agency to support business license renewals.

- Define expiration rules for business license expiration, including when the license is about to expire and expires. Businesses can renew their business licenses starting when the license is about to expire. They can also renew the license when the license expires and after the license has expired.

  > **Note:** You must run expiration rule processing to update the expiration status after you set up the expiration rules.

  See *Setting Up Business License Expiration Rules*.
- Set up renewal fee items and fee schedule.
  Select the Renewals option and map to the decision model you'll use for calculating the item on the Fee Item Details page in the fee schedule.
  See *Setting Up Fee Schedules*.
- Identify tax attributes that apply to renewal applications.

Define the tax class and the attributes that are applicable to renewal applications on the Business License Tax Class setup page.

See *Setting Up Business License Tax Classes*.

- Set up the business license type to support renewals.

  Associate the business license type with an expiration group and select the option to allow renewals. The **Expiration Group** code is required when you select **Allow Renewal**. You also select a tax class, fee schedule, and workflow that will be used for renewals.

  See *Setting Up Business License Types*.

- Design the intake form for the renewals application.

  The **License Activity** display settings on the predefined elements in the intake form determine what information can be entered or updated as part of the renewals application process. For example, you can enable predefined elements such as Business Information and Retail Business Details with fields for the business to fill out.

  See *Configuring Activity Filtering for Business Licenses*.

Related Topics

- Renewing and Amending Contractor Registration

Setting Up Business License Amendments

Businesses that want to update business information for their license can apply for an amendment. Several setup steps are required for your agency to support business license amendments.

- Set up amendment fee items and fee schedule.

  Select the **Amendment** option and map to the decision model you'll use for calculating the item on the Fee Item Details page in the fee schedule.

  See *Setting Up Fee Schedules*.

- Set up the business license type to support amendments.

  Select the option to allow amendments. You also select a workflow that will be used for amendments.

  See *Setting Up Business License Types*.

- Design the intake form for the amendments application.

  The **License Activity** display settings on the predefined elements in the intake form determine what information can be entered or updated as part of the amendments application process. For example, you can enable predefined elements such as Business Information and Retail Business Details with fields for the business to fill out.

  See *Configuring Activity Filtering for Business Licenses*.

Related Topics

- Renewing and Amending Contractor Registration

Setting Up Business License Tax Classes

Define the types of taxes that will be used to calculate taxes applicable to business licenses. You add a tax classification and associate various tax attributes on the Business License Tax Class page.

Tax classes define the tax attributes that will be applied to business licenses. Applicable taxes are calculated based on the values entered by registered users in their license application.

Adding Business License Tax Class Definitions

1. Select **Business License Setup** > **Business License Tax Class**.
2. On the Business License Tax Class page, click the **Add** button.
3. On the Business License Tax Class detail page, enter values for the following fields:

Page Element	Description
ID	Enter an identifier of the business class.
Name	Enter a name for the tax class.
Description	Enter any information, such as details about the type of business to which this tax class can apply.
Sequence Number	Select a number to determine where in the list should this attribute appear on the business license application. For example, if the value 2 is selected, the attribute will be the second in the list.
Tax Attribute	Select a tax attribute that should apply to the business license.
Description	Enter a description about the tax attribute, which will be displayed in the business license application. The description helps public users understand the purpose of the tax applied.
Applies To	Select the license type to which the attribute will apply: o *Origination*: The attribute will be applicable to the origination license. o *Renewal*: The attribute will be applicable to the license when it is being renewed.

Page Element	Description
	You choose the attributes that should be displayed in the application according to the activity status of the business license — *Origination* and *Renewal*.

4. Turn on the **Enabled** switch. The switch is turned off by default for new attributes.
5. Click the **Add** icon to include a new attribute record. Use the **Delete** icon to remove the attribute row.
6. Click **Save**.

Setting Up Meetings for Business Licenses

Agency staff such as specialists and business owners schedule meetings to discuss the necessary applications and approvals for the license procurement. Administrators set up and manage meeting templates to determine meeting parameters. See *Setting Up Meetings*.

Managing Business License Tax Attributes

Define tax attributes to better represent their business license tax classes. You can use the Business License Tax Attributes page to define the new custom tax attribute labels and descriptions.

Tax attributes are configured to better represent their business license tax classes. For more information on tax classes, see *Setting Up Business License Tax Classes*.

Defining Business License Tax Attributes

1. Select **Business License Setup** > **Business License Tax Attributes**.
2. On the Business License Tax Attributes page, enter label and description for the tax attributes:

Page Element	Description
Attribute Name	Displays the tax attribute name. There are system-delivered attributes and 200 rows of custom attributes.
Label	Enter a label for a tax attribute, which will be displayed in the business license application.
Description	Enter a description about the tax attribute, which will be displayed in the business license application. The description helps the users understand the tax attribute applied.

3. Turn on the **Enabled** switch. By default, this switch is turned on for all system-delivered attributes and turned off for all custom attributes.
4. Click **Save**.

Setting Up Business Categories and Subcategories

A business category identifies the type of business being run at a location. Examples of business categories are commercial, residential, sports equipment, retail store, etc.

The agency defines these categories and subcategories.

You add, modify, and delete business categories and subcategories on the Business Category page.

Adding a Business Category

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the Setup drop-down list, select your offering.
3. Select Agency Profile from **Functional Areas** and then select the **Manage Agency Business Categories** task.
4. On the **Business Category** page, click **Add**.
5. On the **New business category** drawer, enter values for the following fields:

Page Element	Description
Category ID	Enter a unique identifier for the category.
Category	Enter a name for the category.
Description	Enter a description of the business category.
Enabled	Turn on the Enabled switch to make the row available as a value on other pages. (Optional) Turn off the Enabled switch to make the row unavailable as a value on other pages.

6. Click Save.
7. If you want to specify a business subcategory (optional), click Add in the Business Subcategory section.
8. In the **New business subcategory** drawer, enter values for the following fields:

Page Element	Description
Subcategory ID	Enter a unique identifier for the subcategory.
Subcategory	Enter a name for the subcategory.
Description	Enter a description of the subcategory.
Enabled	Turn on the Enabled switch to make the row available as a value on other pages.

Page Element	Description
	(Optional) Turn off the Enabled switch to make the row unavailable as a value on other pages.

9. Click Save.

Modifying or Deleting a Business Category

1. On the Business Category page, select the row for the category you want to modify.
2. On the Business category details page you can:
    - Update the Category or Description field values.

    Note: You cannot edit the Category ID field.

    - Enable or disable the category.
    - Delete the business category. You will be prompted to confirm the permanent deletion.
3. Click Save.

Modifying or Deleting a Business Subcategory

1. On the Business Category page, select the row for the category you want to modify.
2. In the Business Subcategory section, select the row for the subcategory you want to modify.
3. On the Business subcategory details drawer you can:
    - Update the Subcategory or Description field values.

      Note: You cannot edit the Subcategory ID field.

    - Enable or disable the subcategory.
    - Delete the subcategory. You will be prompted to confirm the permanent deletion.
4. Click Save.

Setting Up NAICS Codes

Federal statistical agencies use the North American Industry Classification System (NAICS) to classify business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

As we move forward with the Redwood Experience, NAICS will be referred to as Industry Classifications.

When you access the Industry Classification page, it will open in a new browser tab.

Understanding NAICS Code Setup

NAICS codes enable an applicant to select an industry standard classification for a business when applying for a license. To set up NAICS codes for your agency:

1. Add NAICS codes on the NAICS Codes page.
2. Create subsets of NAICS codes on the NAICS Groups page.

   For more information, see *Setting Up NAICS Groups*.
3. Select a NAICS group for each business license type on the Business License Type page.

   The NAICS group associated with the business license type determines which NAICS codes are available to select when applying for a business license.

   For more information, see *Setting Up Business License Types*.

Adding an Industry Classification

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering.
3. Select **System Administration** from Functional Areas and then select the Manage Industry Classification task.
4. On the **Industry Classification** page, click **Add**.
5. On the **New industry classification** drawer, enter values for the following fields:

Page Element	Description
Industry Classification	Enter the industry classification code.
Industry Title	Enter a short descriptive title for the industry classification.
Description	Enter a long description for the industry classification.

6. Verify that the **Enabled** switch is turned on. The switch is turned on by default for new industry classifications.
7. Click **Save**.

Modifying or Deleting an Industry Classification

1. On the **Industry Classification** page, select the row for the industry classification you want to modify.
2. On the **Industry classification details** drawer you can:
   - Edit the industry title and description.
   - Enable or disable the industry classification using the **Enabled** switch.

     If you disable an industry classification, but it's still included in the list of enabled codes for a NAICS group, it will continue to be available to select on business license applications. You can't add a disabled industry classification to a NAICS group.
   - Delete the industry classification. You will be prompted to confirm the permanent deletion.
3. Click **Save**.

Setting Up NAICS Groups

North American Industry Classification System (NAICS) groups are subsets of NAICS codes.

The NAICS group associated with a business license type determines which NAICS codes are available to select when applying for a business license. You add, modify, and delete NAICS groups on the NAICS Group page.

Adding NAICS Groups

1. Select **Common Setup** > **NAICS Group**.
2. On the NAICS Group page, click **Add**.
3. On the NAICS Code Details page, enter values for the following:

Page Element	Description
NAICS Group ID	Enter the unique identifier for the group.
NAICS Group	Enter a name for the group.
Description	Enter a description for the group.

4. Turn on the **Enabled** switch to make the group available on other pages. The switch is turned off by default for new NAICS groups.
5. To add NAICS codes to the group:
    a. In the NAICS Code grid, click **Add**.
    b. Select the code that you want to add in the **NAICS Code** column.

       If you want to view a list of available NAICS codes, click **NAICS Code** to access the NAICS Code page.
    c. Turn on the **Enabled** switch to enable the code for the group. The switch is turned off by default for added codes.
6. Click **Save**.

Modifying NAICS Groups

1. Select **Common Setup** > **NAICS Group**.
2. On the NAICS Group page, select the NAICS group that you want to modify.

3. On the NAICS Group Details page you can:
    - Edit the description.
    - Enable or disable the NAICS group using the **Enabled** switch.

      Disabled NAICS groups can't be selected in the prompt list for a business license type.

      > **Note:** The enabled codes associated with a disabled group continue to be available to select for business license applications.

    - Add, delete, enable, or disable the NAICS codes associated with the group.

      A disabled code can no longer be selected for a business license application.
    - Delete the NAICS group. You will be prompted to confirm the permanent deletion.
4. Click **Save**.

Deleting NAICS Groups

1. Select **Common Setup** > **NAICS Group**.
2. Click **Select Multiple**.
3. Select the checkboxes next to all the NAICS groups that you want to delete.
4. Click **Delete**. You will be prompted to confirm the permanent deletion.

Setting Up Credentials

Your agency can collect credential information specific to a business license during the origination, amendment, and renewal application processes. You must first set up the credential attribute layout applicable to all credentials in your Business License system and identify required attributes for each credential on the Credential Layout and Credentials pages, respectively.

A credential is any type of official document, such as a certificate, bond, permit, or license, that is associated with a business license. For each credential, your agency can collect this information:

- Qualifier name (the name of the qualifying individual on the credential)
- Business name
- Description
- Amount
- Currency
- Start date
- Expiration date
- Exemption status and reason

If the exemption attributes for a credential are configured, applicants who indicate that they are exempt from a credential on the business license application form don't need to provide any other information for the credential that the agency requires.

After defining the layout of credential attributes at the system level and identifying required attributes for credentials as described in this topic, you group the credentials and associate the group with a business license application on the intake form. For more information, see *Setting Up Credential Groups*.

Defining Credential Attributes

You must set up and enable the credential attributes in the system here before they're available for configuration on individual credentials.

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select the Business Licenses offering.
3. From the **Functional Areas** list in the left panel, select *Agency Profile*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select the **Manage Credential Layout and Credentials** link in the tasks list.
5. On the Credential Layout tab of the Credentials page, click the attribute code row to set up the credential attributes that apply to all credentials.

Page Element	Description
Attribute Code	Configure each attribute code in the system. For example, you can enter a label of **Business Name** for the OraBusinessName attribute code.
Label	Enter the attribute label that will appear in the Credentials section on the business license application, if enabled.
Type and **Length**	View the attribute type and character length.
Enabled	Turn on the **Enabled** switch to enable the attribute for all credentials set up in the system. An attribute must be enabled here for it to be configured on an individual credential.
Required	Turn on the **Required** switch to make this credential attribute required by default on all credentials. You can change the requirement for each credential.

> **Note:** You can enable additional attributes that you want to collect after the credential setup is already in use, but you can't make the attributes required due to potential conflicts with missing credential data in existing records.

Adding Credentials

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select the Business Licenses offering.
3. From the **Functional Areas** list in the left panel, select *Agency Profile*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select the **Manage Credential Layout and Credentials** link in the tasks list.
5. Click the **Credentials** tab on the Credentials page.
6. Click the **Add** (+) button.

7. On the New credential drawer, add the credential that your agency wants to collect and the attributes that you want to require, and repeat for each credential.

Page Element	Description
Credential Code	Configure each credential in the system.
Short Description and **Description**	Enter the attribute label that will appear in the Credentials section on the business license application, if enabled.
Expiration condition section	Set up credential expiration conditions using the business license condition options. This information is required for applying conditions when credentials expire. See *Setting Up Credential Conditions*.
Business License Condition	Select a business license condition from the agency-defined conditions in the drop-down list.
Apply conditions to transactions	Turn on this switch to apply the credential expiration condition to new transactions associated with the business license. You turn off the switch if you don't want the condition to be applied to the related transactions.
Include in-process transactions	Turn on this switch to apply the condition to business license transactions already in progress. This option is available only if the switch to apply conditions to transactions is turned on.
Enabled	Turn on the **Enabled** switch to make the credential setup active in the system.

   Click **Save** to save the credential and close the drawer.
8. In the list of credentials on the Credentials tab, click the **Select Required Attributes** link to select the attributes that you want to require for the selected credential. On the drawer, mark the checkbox for each required attribute. Only the attributes that you configured on the Credential Layout tab are available to select. Click **Save**.
9. In the list of credentials on the Credentials tab, click a credential row to open the Credential details drawer, where you can make changes to the description and expiration condition fields, as well as enable the credential for use and save changes or delete the credential.
10. Click the **Export** icon button above the grid to download the credentials to a CSV file.

Setting Up Credential Exemption Reasons

Your agency can collect credential information specific to a business license during the origination and reviewal processes. You can set up exemption reasons for use when an applicant is claiming an exemption for a required credential.

Use the Exemption Reasons (ORA_PSC_CC_EXEMPT_REASON) lookup type to set up the exemption reason lookup values. For more information, see *Setting Up Lookups*.

1. Select **Common Setup** > **Credential Exemption Reasons.**
2. On the Credential Exemption Reasons page, click the **Add** button.
3. On the Credential Exemption Reasons Details page, select a credential from the drop-down list. The description is displayed when you make your selection.
4. Select the **Reason** from the drop-down list. The description is displayed when you make your selection.
5. Turn on the **Enabled** switch to enable the reason.
6. Select the **Add** and **Delete** action buttons to add or delete reason rows.
7. Click **Save.**

   You can also delete the reasons by clicking the **Delete** button.

Setting Up Credential Groups

Your agency can collect credential information specific to a business license during the origination, amendment, and renewal application processes. After setting up the credential attributes and layouts, you group credentials to associate them with a business license. You must complete this setup before you can reference the credential group on the business license application design form.

1. Select **Common Setup** > **Credential Groups.**
2. On the Group Details page, enter values for the following fields:

Page Element	Description
Group ID	Enter a group ID.
Group Name and **Description**	Enter the group name and description.
Usage	Displays Business License to indicate that these credentials apply to business licenses only.
Effective Start Date and **Effecitve End Date**	Enter the start and end dates that the group definition is effective.
Enabled	Turn on the **Enabled** switch to make this group available for use.

3. Add credentials to the group in the **Credentials** section. Only credentials that you set up on the Credentials page are available to select here.

Page Element	Description
Credential and **Description**	Select the credential name from the list of credentials that you enabled on the Credentials page. The description is displayed.

Page Element	Description
View Required Attributes	Click the link to view the required attributes.
Applies To	Select one or more application types for which this credential information will be collected: o Origination o Amendment o Renewal
Enabled	Turn on the **Enabled** switch to make this credential setup active.

4. Use the **Add** and **Delete** action buttons to add or delete credential rows.

Setting Up the Business License Application

After defining the credential group, you associate the group with the business license on the business license form design.

1. On the Design Business License Application page for the business license type, add the **Credentials** field group to the form.
2. In the **Element Attributes**, select the group name from the **Credential Group** drop-down list.

   The credentials defined in the group appear on the form.
3. Select the types of applications where you want to collect the credential information in the **License Activity** fields: Origination, Amendment, and Renewal.

For more information, see *Setting Up Business License Types* and *Using the Intake Form Designer*.

Setting Up Contractor Registration

Contractor registration in the Business Licenses offering provides the process for contractors to register their contractor licenses with the agency. Your agency can configure a business license transaction type with the contractor registration subclassification.

The *Contractor* field group on the business license application designer allows the agency to collect contractor license information such as classification, insurance, bond, and more in the registration intake form. Agencies can optionally add instructional text to provide guidance and instructions in each contractor license section as well as hide sections they don't want to use.

The agency can also set up communications, fees, expiration, and the renewal and amendment process for contractor registration transactions, as for business license transactions. When contractors renew or amend their registration, the original contractor license information is copied over to the renewal or amendment.

Several steps are required for your agency to set up contractor registration:

- Set up and manage instructional text.

The agency staff can set up and manage instructional text which will help them to configure the contractor page on the intake form. Create the instructional text and group the instructional text using categories on the Instructional Text page. For contractor registration, you can embed instructional text in each section of the contractor field group when designing the intake form.

See *Managing Instructional Text*.

- Set up contractor license sections.

  The Contractor License Sections page allows the users to customize section titles. When you change the description, the section labels on all contractor pages are changed. This includes contractor information in the Contractors list page, intake form, and application or transaction detail pages for permits, planning applications, and business licenses.

  See *Setting Up Contractor License Sections*.

- Set up contractor license options.

  In the **Section** tab on the Contractor License Options Details page, you can enable the sections on all contractor pages including the agency's contractor list and the **Contractor** field group on intake forms and application details pages for permits, planning applications, and business licenses. The field **Limit License Usage to Authorized Contacts** allows only authorized applicants to use the contractor license. A contact is authorized to use the contractor license only when its status is *Verified* or *Active* for the contractor license.

  See *Setting Up Contractor License Options*.

- Set up validation groups.

  The contractor validation group will validate contractor licenses on the transaction for expiration date, license type, classification, and insurance. The usage values are *Permits*, *Business Licenses*, and *Planning Applications*. The usage field identifies the offering where the validation group is used. When you add a license on an application, the validation group performs the contractor validation. The validation is also displayed on the Application Details page.

  See *Setting Up Validation Groups*.

- Set up business license expiration rules.

  For business licenses, you can set up rules to define when an inactive pending application expires or when the business license expires. As you set up the expiration rules, keep in mind the type of business license the rules are for.

  See *Setting Up Business License Expiration Rules*.

- Set up business license applications.

  Set up contractor registration applications using the *Contractor Registration* subclassification.

  Associate a contractor validation group with the business license type for the system to perform validations on the entered contractor license. The validations are also performed on the Contractor page in the transaction details.

  The application will require at least 1 contractor license on the application, depending on the agency configuration of the **Contractor** field group in the intake form designer. Only applications using the *Contractor Registration* subclassification require a contractor license.

  See *Setting Up Business License Types* and *Using the Intake Form Designer for Business Licenses*.

When a contractor registers using the configured form, they add contractor licenses and contacts:

- Add contractor licenses.

  Agency staff with appropriate permission can automatically or manually add a contractor license to the contractor records.

  See *Entering Contractor Information* and *Adding Contractor Licenses*.

- Add contractor license contacts.

  Agency staff with appropriate permission can automatically or manually add contractor license contacts to the contractor records. *Active* and *Verified* contacts are authorized users of the contractor license and can be referenced on application transactions.

  These fields provide information for contractor registration on the **Contacts** grid:

  - **License Holder**: Identifies the contact as the license holder.
  - **Active**: Indicates whether the contact is active.

  You can review and update this information on the Contact Details page:

  - Verification status: When the field is changed to *Verified*, the **Active** checkbox will be selected. When the verification is pending or fails, the checkbox will be deselected.
  - **Active**: Indicates whether the contact is active.
  - **Active Status Last Updated**: Indicates when the active field was last updated.
  - **License Holder**: Identifies the contact as the license holder.

  See *Adding Contractor License Contacts*.

Setting Up Credential Conditions

Agencies can now apply restrictive conditions to business licenses when credentials associated with a business license expire.

Credential conditions can be applied manually or automatically using scheduled rules set up in the Business Rules Framework. The credential condition can be set up to apply to business licenses and also to be inherited by related business license transactions.

The business rule called Business License Credential Expiration looks for a credential that expired the previous day for active and expired business licenses and then apply the condition. The delivered scheduled rule can be copied and the copied rule can be modified by the agency to suit business needs. You can also set up communications using the Business License Credential Expiration communication event. The communication template can be set up to list all the credentials for the business license in the notification text.

Here's how to set up credential conditions:

1. Configure conditions with the **Object Type** set to *Business License*.

   See *Setting Up Conditions*.
2. Configure the credential to designate a business license condition as the expiration condition. In the credential details, set up these options:

Page Element	Description
Expiration condition	Select a business license condition from the drop-down list.
Apply conditions to transactions	Turn on this switch to apply the credential expiration condition to new transactions associated with the business license. You turn off the switch if you don't want the condition to be applied to the related transactions.
Include in-process transactions	Turn on this switch to apply the condition to business license transactions already in progress. This option is available only if the switch to apply conditions to transactions is turned on.

See *Setting Up Credentials*.

3. Configure the credential group.

   Select the credentials required for a business license type. For each credential in the group, the agency defines the business license activities, including origination, amendment, and renewal applications, for which the credential is applicable.

   See *Setting Up Credential Groups*.
4. Set up credential exemption reasons in the lookup type.

   See *Setting Up Lookups*.
5. Associate credentials with credential exemption reasons.

   See *Setting Up Credential Exemption Reasons*.
6. Add the Credentials predefined field group to the intake form for the business license type where the credential is required. In the **Element Attributes**, select the credential group that you configured in a previous step.

   See *Using Predefined Field Groups*.
7. Verify the delivered scheduled rule called *Business License Credential Expiration* in the Business Rules Framework.

   The default scheduled rule checks the credential expiration date and credential exemptions for active and expired business licenses.

   See *Setting Up Scheduled Rules*.
8. Set up the communication template for the *Business License Credential Expiration* (LIC_CREDENTIAL_EXP) communication event if you want to send communications to applicants and application contacts.

   See *Setting Up Communication Templates*.

When the credential expires, the scheduled rule is triggered and the condition is applied to the business license. The applied conditions appear on the Conditions page in the business license details. See *Applying Conditions to Business Licenses*. If the conditions were set up to be inherited by the business license transactions for the business license, you'll see the conditions on the Conditions page in the business license activity details. See *Applying Conditions to Applications*.

10 Setting Up Reference Entities

Setting Up Reference Entity Auto Numbers

The reference entity feature is for internal testing and demonstration. Reference entities are planned for support in a future release.

For more information on setting up auto numbers, see *Setting Up Autonumbering*.

Setting Up Reference Entity Type Auto Numbers

> **Note:** The reference entity feature is included for internal testing and demonstration purposes only. Reference entities aren't supported for production use. Reference entities are planned to be supported in a future release only. For more information on setting up autonumbers, see *Setting Up Autonumbering*.

Setting Up Reference Entity Categories

> **Note:** The reference entity feature is included for internal testing and demonstration purposes only. Reference entities aren't supported for production use. Reference entities are planned to be supported in a future release only. For more information on categories, see *Setting Up Transaction Categories*.

Setting Up Reference Entity Subcategories

> **Note:** The reference entity feature is included for internal testing and demonstration purposes only. Reference entities aren't supported for production use. Reference entities are planned to be supported in a future release only. For more information on subcategories, see *Setting Up Transaction Subcategories*.

Setting Up Reference Entity Application Groups

> **Note:** The reference entity feature is included for internal testing and demonstration purposes only. Reference entities aren't supported for production use. Reference entities are planned to be supported in a future release only. For more information on application groups, see *Setting Up Application Display Groups*.

Setting Up Reference Entity Feature Services

Note: The reference entity feature is included for internal testing and demonstration purposes only. Reference entities aren't supported for production use. Reference entities are planned to be supported in a future release only.

For information about setting up feature services for reference entities, see *Setting Up GIS Feature Services*.

Setting Up Reference Entity Map Profiles

The reference entity feature is for internal testing and demonstration. Reference entities are planned for support in a future release.

For more information on setting up map profiles, see *Setting Up Map Profiles*.

Setting Up Reference Entity Types

Note: The reference entity feature is for internal testing and demonstration. Reference entities are planned for support in a future release.

You would create a reference entity type similar to creating a permit type. After the type is created, you create the associated intake form by clicking **Design Form**.

Your agency can use custom fields to include any additional information you want to collect in addition to the standard general, address and location, and contact information.

Page Element	Description
Classification	Displays the type of application. The classification for this page indicates this is a reference entity application. This value can't be changed.
Subclassification	For use with planning applications. Accept the default value, *Not Applicable*.
Reference Entity Type	Enter a name for the type of reference entity.
Reference Entity Type ID	Enter a unique alphanumeric code or short name for the reference entity type. Do not use special characters, including symbols or punctuation, or spaces.
Autonumber Rule	Select the autonumbering rule to increment numbers for reference entities. You can delete an autonumbering rule when it isn't being used by any transaction types.

Page Element	Description
	CAUTION: The system generated ID is based on the autonumber rule definition. Therefore, when selecting the autonumber rule, you must ensure that its rule definition generates a unique ID. Failing to do so can result in duplicate IDs, which will cause issues in the reference entity. For more information, see *Setting Up Autonumbering*.
Description	Enter a user-facing description of the reference entity type. On the Apply page, this description appears under the reference entity type name. The description helps public users understand the purpose of the reference entity type.
Additional Information URL	Add a URL for applicants to click to view more information helping to describe a reference entity.
Status	Select from the following to indicate the reference entity type status: • *Preliminary:* The definition type is being defined but is not available for use. • *Ready:* The definition type is ready to be accessed from the landing page for testing or production use, depending on the environment. • *Void:* The transaction type is no longer available. **Note:** The form design can be in published status or draft status and be set to *Ready.* In draft status, the form can be accessed from outside the form designer—such as the Apply page—for testing purposes in the development or test environment. For more information on testing intake forms, see *Testing Intake Forms*.
Form Design Status	A read-only field indicating whether the form design is published or currently being developed. • *Draft:* The form design is currently being created or modified. Form designs in draft status are not migrated to other environments and can't be cloned. • *Published:* The form design is complete. Form designs in published status can be migrated to other environments and can be cloned.
Public User Enabled	Select from the following to indicate whether the intake form can be accessed and by which user types: • *Enabled for all users:* Only registered public users and agency users can access the intake form. • *Enabled for registered users:* Only registered public users and agency users can access the intake form. • *Not enabled for public users* (default): Only agency users can access the intake form. **Note:** Currently, *Enabled for all users* and *Enabled for registered users* have equivalent access.
Category	Select a category that you want to associate with the reference entity type. For more information, see *Setting Up Transaction Categories*.

Page Element	Description
Subcategory	Select a subcategory that you want to associate with the reference entity type. For more information, see *Setting Up Transaction Subcategories*.
Application Group	Select an application group that you want to associate with the reference entity type. For more information, see *Setting Up Transaction Groups*.
GIS Mapping	Enable to allow attributes to be mapped to a GIS map layer. You map the attributes on the second page of the Intake Form Designer. Click **Next** at the top right of the intake form design. For more information on setting up GIS, see *Setting Up GIS Feature Services*.

For more information about how this information is displayed in the reference entity data entry form, see *Adding a New Reference Entity*.

11 Creating Intake Forms

Intake Form Designer Topics

The following topics apply to using the Intake Form Designer to create and publish intake forms, which registered users access online to initiate transactions, like submitting a permit application, reporting an issue, and so on.

- *Using the Intake Form Designer*
- *Using the Intake Form Designer for Code Enforcement*
- *Working with Sandboxes*
- *Managing Labels for Application Form Elements*
- *Working with Pages*
- *Working with Predefined Field Groups*
- *Using Predefined Field Groups*
- *Working with Group Boxes*
- *Working with Fields*
- *Working with Grids*
- *Defining Fields Displaying a List of Values*
- *Displaying Form Elements Conditionally*
- *Adding Logic*
- *Adding Rich Text Areas*
- *Adding Contextual Help to Forms*
- *Reordering Intake Form Elements*
- *Configuring Activity Filtering for Business Licenses*
- *Setting Form Options*
- *Mapping Form Fields to Decision Model Attributes*
- *Configuring Simplified Fee Estimates*
- *Considering User Experience*
- *Testing Intake Forms*
- *Publishing Intake Forms*
- *Cloning Transaction Type Definitions*
- *Managing Transaction Type Configurations*
- *Exporting and Importing Intake Forms*
- *Creating General Information Forms for Business Licenses*
- *Managing Intake Form Performance*

Using the Intake Form Designer

This topic describes the purpose of the Intake Form Designer, lists the prerequisites that must be completed prior to creating a form, and introduces you to the designer interface.

To initiate a transaction, such as a permit, an intake form needs to be submitted to capture the information required for that process. Examples of transactions include permit applications, planning and zoning applications, and so on. You use the Intake Form Designer to create application forms that public users can access online, fill out, submit, and monitor.

Oracle does not deliver a predefined form for each type of transaction because for each form and for each municipality, the information required will be unique. For example, for a fence permit, the City of San Diego may require only basic information about the material to be used and the measurements. On the other hand, the City of Sacramento may require the same information as San Diego, but also require the contact information of the contractor building the fence, the exact location of the fence, the area enclosed by the fence, and so on. Each municipality has its own set of requirements, and the Intake Form Designer enables you to tailor the forms to reflect your agency's requirements.

With the Intake Form Designer, you can create unique application forms for each transaction type offered. The Intake Form Designer provides modular sets of common fields, called predefined field groups, which are ready-to-use form elements you can assemble like building blocks to create the intake form. If a predefined field group does not contain all the fields you require, you can add user-defined fields to capture the additional information.

For more information see *Working with Fields*.

The type of intake form you create depends on the offering.

Oracle Permitting and Licensing Offering	**Intake Form Types**
Permits	Permit applications
Planning and Zoning	• Planning preapplication • Planning application
Code Enforcement	Report an issue
Business Licenses	Business license: You can design an intake form to be used for one or more business license activities. • Origination • Amendment • Renewal The consultation, contractor registration, and general information subclassifications are used to design specialized intake forms. Contractor registration: You can design an intake form to be used for one or more registration activities. • Origination • Amendment

Oracle Permitting and Licensing Offering	Intake Form Types
	• Renewal For more information on General Information forms, see *Creating General Information Forms for Business Licenses*.

Once you have created, configured, and tested your form, you can publish the form for public users to access, complete, and submit for review and approval.

> **Note:** For simplicity in this documentation, the Intake Form Designer is often referred to as "the designer," and an intake form is often referred to as a "form."

Completing Prerequisites

Before creating a form, you need to:

- Create a transaction type.

  A transaction type represents the type of intake form you will create such as a permit application, a business license application, and so on.

  For more information on creating a transaction type, see *Setting Up Permit Types*, *Setting Up Business License Types*, *Setting Up Planning Application Types*, *Setting Up Issue Types*.
- Set up any fees associated with the form.

  For more information on fees, see *Setting Up Fee Items*and *Setting Up Fee Schedules*.
- Set up workflow for the transaction.

  For more information on workflow, see *Setting Up Process Definitions for Workflow*.

Accessing the Designer

Before you can create an application form, you must first create a transaction type on the Transaction Type page.

From the Transaction Type page for the appropriate offering, select the **Design Form** button.

> **Note:** When your pod is undergoing an upgrade, update, or patch, the Intake Form Designer will be unavailable until the process is complete. If you encounter this downtime, try again later.

Working with the Designer Interface

> **Note:** While the Intake Form Designer interface is practically identical for all offerings, using the designer for Code Enforcement uses only a subset of the designer's features. For more information on using the designer to create intake forms for Code Enforcement, see *Using the Intake Form Designer for Code Enforcement*.

Page Element	Description
Status	Indicates the status of the current design. • *Draft*: the form is in sandbox mode, and currently being designed and tested. • *Published*: the form design is complete and it no longer needs to be in sandbox mode. A published form can be migrated to other environments. For more information on form status, see *Working with Sandboxes* and *Publishing Intake Forms*.
Add Logic	Enables you to add programming logic scripts using the Groovy programming language. For more information on Groovy, see *Adding Logic*.
View Form	Enables you to select options for viewing and testing the form design from the Intake Form Designer. Select *View Form* to access your form for testing the current layout and behavior as it would appear at runtime. For more information on testing forms, see *Testing Intake Forms*. Select *Fee Estimate* to view the intake form as if a user were requesting a fee estimate for the current intake form. For more information on end users requesting fees, see *Getting an Online Fee Estimate* and *Estimating Fees*. **Note:** Disable the pop-up blocker on your browser so this feature can display the runtime form design.
Save	Saves changes made to the form design.
Manage Design	Enables you to access various tasks for the intake form related to reordering form elements, managing the sandbox, exporting forms, and publishing forms. For more information on sandboxes, see *Working with Sandboxes*. For more information on publishing, see *Publishing Intake Forms*. For more information on reordering form layouts, see *Reordering Intake Form Elements*. For more information on exporting and importing forms, see *Exporting and Importing Intake Forms*. For more information on working with intake form versions, see *Creating Intake Form Versions*.
Next	Takes you to the Fee Mapping page, which is the next step in the form design process. If the transaction type is not associated with a fee schedule, the Fee Mapping page is not displayed. For more information on mapping fees, see *Mapping Form Fields to Decision Model Attributes*.
Form Options	Click to display the Form Options dialog box where you can set options that apply to the entire form. For more information on form options, see *Setting Form Options*.

Page Element	Description
Elements panel	The Elements panel contains all of the items that you use to build an intake form. It displays lists of all pre-defined field groups and user-defined elements you can add to your form design by dragging and dropping. The *Ready to Use* section contains: • *Field Groups:* predefined sets of fields. • *Fields:* user-defined fields you have created and set to be *reusable fields,* which can be defined once and included in multiple intake forms. The *Add New* section contains: • *General:* the list of all the field types for user-defined fields you add manually to intake forms. • *Layout:* HTML constructs, such as group box containers, that you add to your intake forms. For more information see, *Working with Predefined Field Groups*, *Working with Pages*, and *Working with Fields*.
Add Tab	Adds additional pages to your form. You navigate between the pages by using the page tab for each page. For more information, see *Working with Pages*.
Workspace	The area where you drag and drop form elements from the Elements panel and configure them. This is the main work area used for creating, configuring, and designing the layout out your forms.
Attributes panel	Displays the available attributes that you can configure for the currently selected form element. For example, if you have a field selected, the attributes panel reads "Field Attributes," and it contains attributes specific to that field type. If you have a group box selected, the attributes panel reads "Group Box Attributes," and it contains attributes specific to group boxes.

Using the Keyboard to Drag and Drop Elements

You can drag and drop form elements manually using your mouse, or you can use keyboard hot keys.

Key	Description
Enter	Use to: • Expand or collapse the Ready to Use or Add New element lists. • Drop a selected element onto the selected drop zone
Tab	Use the tab key to select either the first element in the list or the last selected item in the list if a previous visit was made to the list.
Up and Down Arrows	Use to: • Select an item in the Ready to Use or Add New element lists. • Select a location from the drop zone list. The selected drop zone is highlighted.

Key	Description
Space	When an element is selected, the space key highlights the selected element and displays available drop zones for the current page on the Select a Drop Zone dialog box. The drop zones can be the page or group boxes contained by the page. For user-defined fields, the drop zones are group boxes.

Organizing the Tasks for Creating Forms

This section provides the core set of tasks to complete when creating an intake form. The remaining topics in this chapter discuss the details of each task.

Step	Link
Add page tabs.	*Working with Pages*
Add predefined field groups.	*Working with Predefined Field Groups*
Modify field attributes in predefined field groups.	*Working with Fields*
Add group boxes.	*Working with Group Boxes*
Add user-defined fields.	*Working with Fields*
Testing intake forms.	*Testing Intake Forms*
Publishing intake forms.	*Publishing Intake Forms*

Importing Legacy Intake Form Transaction Data

If you are importing legacy intake form transaction data from your previous system, this can often be done with CSV files imported using a utility like the CRM Data Import tool, or similar. When performing the import, ignore the Record_Number and Prefix values. Leave these columns blank so that the Oracle Permitting and Licensing system can assign its own record numbers and prefix values. Assigning custom record numbers and prefixes can cause unexpected issues.

Using the Intake Form Designer for Business Licenses

This topic describes how to use the Intake Form Designer for business license types, including business license applications and contractor registration.

These predefined field groups are required when designing business license intake forms:

- **Application**

- **Applicant**
- **Business Details**
- **Business Owners**
- **Contacts**
- **Locations**

For more information about the required field groups, see the sections, "Common Predefined Field Groups" and "Predefined Business License Field Groups" in *Using Predefined Field Groups*.

For business license applications, you can set up your intake form to allow applicants to select multiple business license types to be combined into a single intake form. For more information on this option, see *Creating General Information Forms for Business Licenses*.

The **Contractor** field group is optional and requires additional configuration.

Using the Contractor Field Group

Agencies can use the **Contractor** field group to collect contractor license information during the intake process when their systems are set up for contractor management. If you want to create a contractor registration form, start by selecting the *Contractor Registration* subclassification for a business license type. For more information about setting up contractor registration, see *Setting Up Contractor Registration*.

The agency sets up the intake form to collect 1 contractor license or multiple contractor licenses in the **Contractor** field group in the intake form designer.

If you want to make a contractor license required for specific permit, planning, and business license application types, turn on the switch to **Require at least 1 contractor license**. When the agency activates the requirement, the applicant must provide a contractor license to submit the application. The requirement is active by default when agencies set up contractor registration applications. Applicants who self-identify as contractors or agents in an application always need to provide a contractor license. If the **Contractor** field group isn't used in the form designer or the **Contractor** field group is conditionally hidden based on the configuration of other fields in the form designer, the requirement isn't enforced. Applicants can't delete the license they added as part of the requirements for the application; only administrators can delete the license after the application is submitted.

You can also indicate whether a particular contractor section should appear for this business license type and add instructional text to each section to provide assistance with filling out the application or contractor registration.

Here's how to configure the **Contractor** field group:

1. Select the **Contractor** field group on the page and expand the **Contractor Properties** in the element attributes panel.
2. Turn on the **Require at least 1 contractor license** switch to make a contractor license required for this business license application. The requirement is active by default when you set up contractor registration applications.
3. In the **Text Category** drop-down list, select an option to filter the instructional text that appears on the Select Display Options page. See a later step here for information about the Select Display Options page.

   For more information about instructional text categories, see *Managing Instructional Text*.

4. In the **Display Mode** drop-down list, select an option for collecting the contractor license information for this application or registration form:
    - *Single Entry* - Restrict the number of licenses entered to 1 contractor license.
    - *Multiple Entry* - Allow the registrant to enter more than 1 contractor license.
    - *Select from List* - Require the registrant to select a license from the agency's approved contractor license list.

    Note: Whereas system and business license administrators can update contractor license information on an application regardless of the option you select here, agency staff with the Business License Manager, Business License Specialist, and Business License Analyst roles can only update contractors on applications using the *Single Entry* and *Multiple Entry* collection method. For more information, see *Working with Contractors and Agents in Applications*.

    Note: The **Limit License Usage to Authorized Contacts** switch in the agency's contractor license options allows only authorized contacts access to the agency-maintained list of approved contractors when selecting a contractor license and only applies to business license applications using the *Select from List* option for collecting contractor information. For more information, see *Setting Up Contractor License Options*.

5. Click the **Display Options** link to open the Select Display Options page. The sections available here were enabled at the agency level on the Contractor License Options Details page.You can choose the sections and instructional text to display on this application or registration form:

Page Element	Description
Instructional Text ID	Select instructional text for each section to embed additional information for the applicant or registrant. For more information, see *Managing Instructional Text*.
Display Section	Turn on the switch for each available contractor section that you want to display on the intake form. If you turn off the switch for a section, the section isn't available on the form. For more information, see *Setting Up Contractor License Sections*.

Related Topics

- Using the Intake Form Designer
- Using Predefined Field Groups

Using the Intake Form Designer for Code Enforcement

This topic describes how to use the Intake Form Designer for the Code Enforcement offering.

Public users access an online form, fill out it out, and submit it to report issues. You use the Intake Form Designer to create intake forms for Oracle Permitting and Licensing offerings, including Code Enforcement.

Using the Intake Form Designer to create intake forms for the Code Enforcement offering is similar to creating intake forms for the other Oracle Permitting and Licensing offerings, such as permits or planning applications. However, in the case of Code Enforcement, creating intake forms relies on a delivered template that has all the pages and fields already in place for a working form right from the start. You can add user-defined fields in specific areas to capture additional information if needed. This underlying template both simplifies and streamlines the form design process, requiring you to create little, if anything, from scratch.

This topic describes the concepts and steps you'll need to understand to create intake forms specifically for the Code Enforcement offering. For concepts that apply to all Oracle Permitting and Licensing offerings, you will be linked to that common topic in the "Creating Intake Forms" chapter of this guide.

Prerequisites

Before creating an intake form for a Code Enforcement issue subtype, these items must exist:

- Issue type
- Issue subtype

For more information see *Setting Up Issue Types* and *Setting Up Issue Subtypes*.

Accessing the Intake Form Designer for Code Enforcement

An intake form for a Code Enforcement incident is associated with an issue subtype.

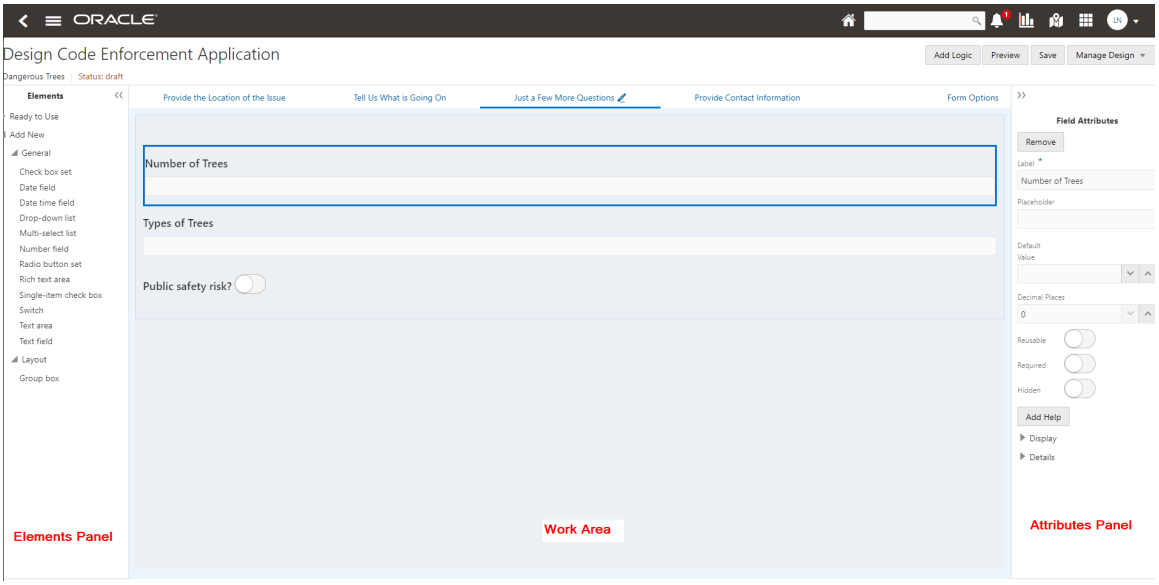
To access the Intake Form Designer, click **Design Form** from the Issue Subtype page.

For more information on creating issue subtypes, see *Setting Up Issue Subtypes*.

Working with the Intake Form Designer

After you have created an issue subtype, you use the Intake Form Designer to create the form public users will access to report issues to your agency.

This example illustrates the general user interface of the Intake Form Designer used to create issue intake forms for Code Enforcement.



Page Element	Description
Status	Indicates the status of the current design. • *Draft*: the form is in sandbox mode, and currently being designed and tested. • *Published*: the form design is complete and it no longer needs to be in sandbox mode. A published form can be migrated to other environments. For more information on form status, see *Working with Sandboxes*.
Add Logic	Enables you to add programming logic scripts using the Groovy programming language. For more information on Groovy, see *Adding Logic*.
Preview	Enables you to preview your form to get a quick snapshot of the current layout. For more information, see *Testing Intake Forms*.
Save	Saves changes made to the form design.
Manage Design	Enables you to access various tasks for the intake form related to reordering form elements, managing the sandbox, exporting forms, and publishing forms. For more information on sandboxes, see *Working with Sandboxes*. For more information on publishing, see *Publishing Intake Forms*. For more information on reordering form layouts, see *Reordering Intake Form Elements*. For more information on exporting and importing forms, see *Exporting and Importing Intake Forms*.
Form Options	Click to display the Form Options dialog box where you can set options that apply to the entire form. For more information on form options, see *Setting Form Options*.
Elements panel	Displays the list of user-defined elements you can add to your form design, such as the fields you can add to your form by dragging and dropping into the drop zone on selected pages. **Note:** The elements within the Ready to Use node are not intended to be added to your intake forms manually. They have already been added by way of the underlying template. For Code Enforcement, the Ready to Use node is intended to be used by internal Oracle development teams.
Workspace	This is the main area displaying page tabs and drop zones used for configuring your forms.
Attributes panel	Displays the available attributes that you can configure for the currently selected form element. For example, if you have a field selected, the attributes panel reads "Field Attributes," and it contains attributes specific to fields. If you have a group box selected, the attributes panel reads "Group Box Attributes," and it contains attributes specific to group boxes.

Working with Page Tabs

Page tabs appear across the top of the work area.

Each page tab represents a separate page that the public user will access at runtime to provide the necessary information when reporting an issue. The majority of the intake form for Code Enforcement is defined by the underlying template, which you can't modify. Because the page tabs are defined in the underlying template, you can't add or remove page tabs that appear in the default Code Enforcement intake form.

Note: You can't add or remove page tabs from the default intake form template.

The page tab containing the pencil icon indicates where the drop zone resides. The drop zone is the area of the intake form where you can add user-defined fields and group boxes to configure the intake form to include any additional requirements for that issue subtype.

For example, if you want to add a field to capture the length of the overgrown grass being reported, you can drag and drop a Number field type into the drop zone.

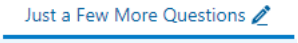
The following table provides descriptions of the default page tabs provided by the template. The page tabs derived from the template are:

Page Tab	Description
Provide the Location of the Issue	Used for specifying the location of an issue that's being reported. This tab includes a map with a crosshair marker for identifying a location. A search field enables user to easily find a location and place it in the crosshairs. A separate text field captures additional location information such as an apartment number or a description of where to find the issue at the given address.
Tell us what's going on	Used to describe the issue that's being reported. This tab includes a freeform text field for describing the issue. The tab also supports attachments so that users can upload photos, videos, or other documentation.
Just a Few More Questions	Used to collect additional information about the issue that's being reported. In the delivered template, the only field on this page is a switch for indicating if the issue is a health hazard or public safety risk. This tab also has a drop zone where you can add your own fields for collecting additional information.
Provide Contact Information	Used to collect the name and contact information for the person who is reporting the issue. The template includes a switch for hiding the user's information, but this switch is visible to the end user only if the agency allows anonymous reporting. This option is configured on the Code Enforcement Options page. See *Setting Up Agency-Level Options for Code Enforcement*.

Working with the Drop Zone

The drop zone is the area of the issue subtype intake form where you can add user-defined fields and group boxes. You can locate drop zones by selecting the page tabs with the pencil icon.

This example illustrates the pencil icon on a page tab, which indicates which tab(s) a drop zone resides where you can add custom fields.

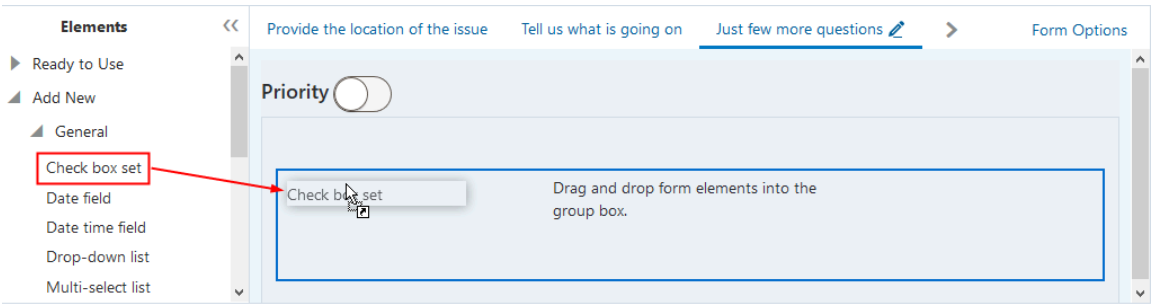


Note: The drop zone is the only area on the form that you can add and configure group boxes and fields.

You can drag and drop these form elements into a drop zone:

- User-defined fields
- Group boxes

This example illustrates dragging and dropping a user-defined field type from the Elements panel into the drop zone.



The drop zone itself is a group box into which you can drag user-defined fields and other group boxes if needed.

Note: While the drop zone is technically a group box, you can't modify its attributes or remove it from the page.

Working with User-Defined Fields

You can drag and drop user-defined fields directly into the drop zone, or you can add group boxes to the drop zone and drag and drop user-defined fields into the group boxes.

To add a user defined field to the drop zone:

1. Expand the Add New list.
2. Expand the General list.
3. Select the desired field type by clicking and holding.
4. Drag and drop the field type onto the drop zone.

To modify field attributes:

1. Select the field in the drop zone.
2. Use the Field Attributes panel to configure the field.
3. Click **Save.**

For more information on working with fields, see *Working with Fields*.

Working with Group Boxes

You can use group boxes to organize user-defined fields you add to the drop zone. User-defined fields can be added only to the drop zone or to group boxes.

For more information on group boxes, see *Working with Group Boxes*.

Displaying Form Elements Conditionally

In some cases, you may want to display or hide certain elements in the drop zone only if the public user has made specific selections on previous fields also in the drop zone.

> **Note:** The fields that you want to display conditionally must be within a group box container. You can display group boxes conditionally, but not a field on its own. You can't control the display of the drop zone. Conditional display applies only to elements contained within the drop zone.

For more information on conditional display, see *Displaying Form Elements Conditionally*.

Setting Form Options

Form options enable you to configure features that apply to the entire form. For example, for the Code Enforcement issue intake form, you can control whether a review page displays to show the public user all their selections before submitting.

For more information on form options, see *Setting Form Options*.

Working with Sandboxes

When developing intake forms, you design and modify the form layout within a sandbox. A sandbox is an Oracle Fusion Applications technology that enables intake form developers to work on projects simultaneously, save, and test their work without affecting other developers or testers in the environment.

For more information on sandboxes, see *Working with Sandboxes*.

Testing Intake Forms

After creating an issue intake form, you can test it by:

- Viewing it in preview mode.
- Making it available from the landing page where you can select *Report an Issue,* which can be done in draft mode and published mode.

For more information on testing, see *Testing Intake Forms*.

Publishing Intake Forms

While you are actively designing or modifying an intake form, the intake form resides in draft mode in a development sandbox. You can test the intake form in draft mode while it is still in the sandbox. To make the intake form available to migrate to another environment, the intake form needs to be published.

For more information on publishing forms, see *Publishing Intake Forms*.

Cloning Transaction Type Definitions

You can clone issue subtype definitions and the associated intake form layout to:

- Avoid duplicating work while creating similar issue subtypes and intake forms.

- Create a new version of an existing issue subtype and intake form.

To clone an issue subtype and its associated intake form, click **Clone** on the Issue Subtype page.

For more information on cloning, see *Cloning Transaction Type Definitions*.

Managing Transaction Type Configurations

After developing your intake forms on your development and/or test environment, you need to migrate the setup data and configuration data from the source development/test environment to the target production environment.

For more information on migrating setup data and configuration data from one environment to another, see *Managing Transaction Type Configurations*.

Example: Adding User-Defined Fields to an Intake Form for an Issue Subtype

While the default intake form based on the underlying template is ready to be used without any changes, this section illustrates how you can add user-defined fields to the drop zone if you need to capture additional information.

This example creates an intake form for an issue subtype that enables public users to report an issue for an abandoned vehicle. Assume that the code enforcement organization wants to capture all of the information in the default intake form and also a user-defined field to indicate if there are multiple vehicles on the property.

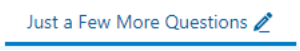
To create an intake form for an issue subtype:

1. Ensure a valid issue and issue subtype exist.

   You create issue types and issue subtypes separately.

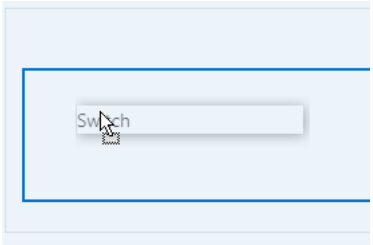
   For more information see *Setting Up Issue Types* and *Setting Up Issue Subtypes*.
2. While on the Issue Subtype page, make sure your issue subtype is saved and click **Design Form.**
3. In the Intake Form Designer, locate the page tab with the drop zone.

   This example illustrates the pencil icon on a page tab, which indicates which tab(s) a drop zone resides where you can add custom fields.

4. Expand the Add New list in the Elements panel.
5. In the General list, select *Switch,* and drag and drop it in the drop zone.

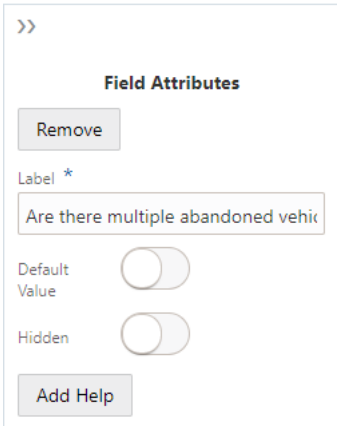
   This example illustrates dragging and dropping a field type into the drop zone.

6. Select the switch, and observe the attributes you can configure for that field in the Field Attributes panel on the right.
7. Update the **Label** value.

For example *Are there multiple abandoned vehicles on the property?*

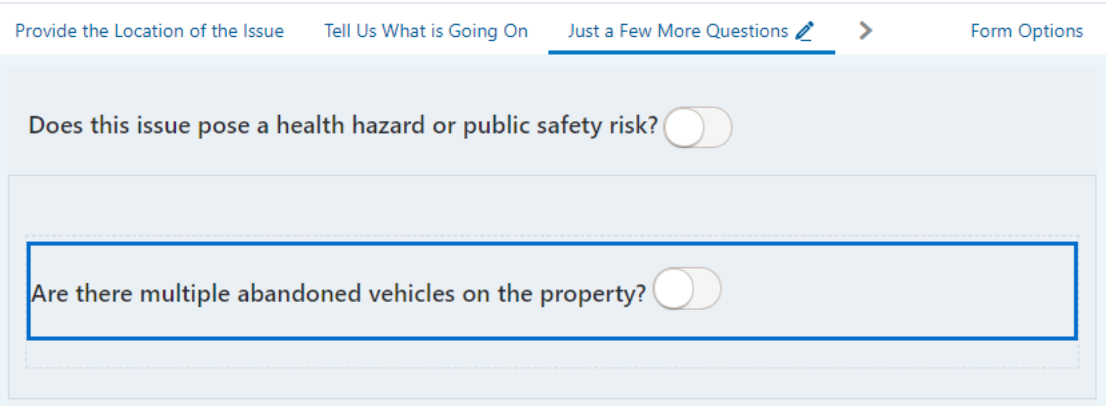
This example illustrates setting the label attribute.



8. Click **Save.**

Result:

This example illustrates a user-defined field added to the drop zone of an issue subtype form layout.



Working with Sandboxes

This topic provides an overview of the concept of sandboxes and how they are used within the Intake Form Designer, and it describes sandbox usage and behavior.

Most modern development environments typically require several different individuals to work simultaneously on application changes while sharing the same data model and configuration starting point. The Intake Form Designer utilizes the Oracle Fusion Applications technology referred to as *sandboxes* to enable form developers to work on projects simultaneously, save their work, and test their forms without affecting other members of the implementation team in the environment.

The sandbox acts as the development and test mode of your application form. During sandbox mode, the form design can be viewed only internally by application developers or business analysts. In sandbox mode you can create your form, add required form elements, add UI elements, and test your changes. When you have completed all of your

design, development, and test work, you can then publish the form so it can be migrated to other environments and be accessed by public users.

> **Note:** Creating and modifying transaction types and intake forms should be completed on your development environment or your test environment. After making changes, publishing, and testing transaction types and intake forms on your development or test system, you would then migrate the new and modified definitions to your production system. Refer to the Functional Setup Manager documentation for information on migrating data from the test system to the production system, as well as *Managing Transaction Type Configurations*.

Types of Sandboxes

Oracle Fusion Applications provides these types of sandboxes:

- Classic sandboxes
- Unified sandboxes

Classic sandboxes are the default sandboxes that are enabled out-of-the-box and always stay enabled. During implementation, ensure that unified sandboxes are enabled.

> **Note:** To create intake forms, the unified sandboxes feature *must be enabled.*

For Oracle Permitting and Licensing offerings, unified sandboxes are an opt in feature that you enable in Functional Setup Manager. It is required to have unified sandboxes on your development and/or test environment (depending on the number of pods you have licensed). *Do not* enable unified sandboxes on your production environment. Unified sandboxes are utilized during development and configuration work, which should not be taking place on your production environment. If the unified sandboxes feature is enabled on your production environment, it can lead to unexpected results, especially during the migration of data from a source environment to the target production environment.

For more information on sandboxes, see the Oracle Applications Cloud documentation: *Overview of Sandboxes* in the *Configuring and Extending Applications* guide.

Starting a Sandbox Instance for a New Application Form

Before you can create an application form in Intake Form Designer, you must first create the transaction type. For example, for the permit offering, the transaction type is a permit. When you save a permit type, the application creates a sandbox instance. From that point, the transaction type and the associated form design exist within the newly created sandbox instance.

Each form your implementation team is currently developing exists within its own, separate sandbox instance.

Until you publish the form, the transaction type and the form design remain in the sandbox instance. When you publish a transaction type, the system eliminates its sandbox instance.

Starting a Sandbox Instance for a Published Intake Form

After an application form has been published, you can initiate sandbox instances to make any required changes discovered after the initial publication.

To initiate a sandbox for a published form:

1. Open the transaction type for the form.

2. Select **Design Form.**
3. Begin making the desired changes.
4. Click **Save.**

   By clicking **Save,** the Intake Form Designer creates a new sandbox instance to store the current changes.

Viewing the Sandbox Status

You can determine if a form is in sandbox mode using the Status indicator located in the top left-hand corner of the Intake Form Designer. The Status indicator appears when you are creating the form or previewing the form. The sandbox status does not appear on the published version of the form.

Status	Description
draft	The form is in sandbox mode. All changes exist in the sandbox instance only.
published	The form design is complete and is not in sandbox mode. When a form is published it can be migrated to other environments.

Managing Sandboxes

Use the **Manage Design** drop-down list to select one of the following actions for the current sandbox.

Page Element	Description
Publish	Select when your initial testing and design work is complete and you no longer require the use of the development sandbox. The sandbox is deleted and the form design is set to a state of *published.* Form designs in the published state can't be modified until they are back in the draft state inside of a different sandbox instance. A form design that is published can be migrated from the source environment to the target environment.
Refresh	Select to synchronize the current sandbox with current system data. Sandboxes share common elements, such as field groups, reusable fields, and other system metadata. If those common elements are updated, sometimes that requires the sandbox to be refreshed so that it is synchronized with current system metadata to enable successful saving or publishing.
Revert to Last Published	Select to remove all current changes and modifications and return the form design to the state of the most recent successful publish. Use this option when you are making changes that you no longer need and you'd like to return to the previous published state or you have encountered an issue with the sandbox. **Note:** When selecting Revert to Last Published, newly added references from your form design to objects stored outside the development sandbox, including lookup types, help text, and rich text area content, will not be reverted. These objects exist outside of your draft form design and you may need to update references to these objects or recreate them, as needed.

Page Element	Description
Manage Sandbox (FA)	Select to go to the Sandboxes page in Oracle Fusion Applications to view details about the sandbox or update it manually. The sandbox naming convention is: *<Offering Code><Agency ID><Transaction Type Code>__sb_<date/time>.* Where: • *Offering Code* identifies the offering, such as permits (*LNP*), business licenses (*BL*) and so on. • *Agency ID* identifies your agency number, which is 1 currently. • *Transaction Type Code* is the transaction type ID, such as the permit type code. For example, if for a permit, the Transaction Type Code value is *REMODEL_c,* • *sb* identifies the object as a sandbox. • *date/time* indicates the date and time the sandbox was created. For information on managing sandboxes using the Sandboxes page, refer to the Fusion Applications Common sandbox documentation.

Managing Labels for Application Form Elements

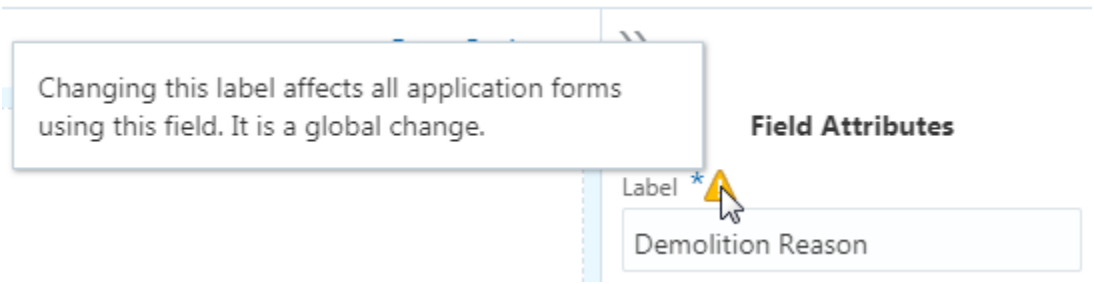
This topic describes how to manage changes made to labels for existing and user-defined form elements.

When making changes to the labels for elements within your application form, you need to consider what type of element it is. Changing the label of some elements is a global change, while changing the label of other elements is a local change.

- Global: A global label change means that a change to the label affects *every* intake form definition using that field or element.
- Local: A local label change means that a change to the label affects *only* the current intake form definition where the field or element appears.

When you select a form element or field and a label change would have global effects, a warning icon appears above the Label field in the attributes panel.

When selecting an item in the workspace, if changing the label for that item has global effect on all application forms using the item, the system displays a warning icon.



Note: If you change the label of a field after a form has been migrated and used in the production system, keep in mind this can affect reporting and the storage of historical data. You may have multiple labels representing the same data.

Form Element	Scope of Label Change	Label Change Considerations
Predefined Field Group	Global	The label of a predefined field group is the heading used to describe the grouping of the fields it contains. Changing the label of a predefined field group is a global change. For example, if you change the label in the Applicant predefined element used in the fence permit intake form, that change will be reflected in the Applicant predefined element used in the electrical permit intake form (and any other application form using the Applicant predefined field group).
Predefined Field Group: Parent Field	Local	Some fields appearing in predefined form elements are part of the parent record within the data structure storing the transaction data. You know a field in a predefined field group is part of the parent record when the warning icon *does not* appear above the **Label** field in the attributes panel. For example, the Description field in the Application predefined field group does not display the warning icon. Changing this label affects only the current intake form definition. It is a local change.
Predefined Field Group: Child Field	Global	Some fields appearing in predefined field groups are part of a child record within the data structure storing the transaction data. You know a field in a predefined field group is part of a child record when the warning icon appears next to the **Label** field in the attributes panel. For example, the Demolition Reason field in the Demolition predefined field group displays the warning icon. Changing this label affects all intake form definitions using the Demolition predefined element. It is a global change.
User-Defined Fields	Local	You can change the labels for the fields that you add to your application forms, such as text fields, number fields, drop-down lists, and so on. Because you add these fields manually to your application form, you can change the default labels as needed to suit your business requirements.

Form Element	Scope of Label Change	Label Change Considerations
		The scope of any changes to the label for user-defined fields apply *only* to the current intake form.
HTML Constructs	Local	A general HTML construct refers to layout elements such as group boxes and page tabs. You can change the labels for general HTML constructs as needed to suit your business requirements. The scope of the construct and any changes to the label apply *only* to the current intake form definition. For example, changing the label of the default label for HTML constructs such as *Group box* or *Field 0* to your desired label affects only the current intake form definition. **Note:** If you change a label for a page tab or a group box used in an intake form after the form has been migrated and used in the production system, make sure to update any instructions or documentation that may reference the previous label.

Note: For HTML constructs, such as pages and group boxes, and for user-defined fields the labels display using the language used to create or modify the application form layout. There is no automatic translation of these elements. For example, if you created the intake form in English, but then signed in using Korean for testing, you will see the English labels for those constructs, unless you have provided translated values using the Fusion Applications User Interface Text tool. For more information on the User Interface Text tool, see Oracle Applications Cloud documentation: *Tools for Changing Text* in *Configuring and Extending Applications*.

Working with Pages

This topic describes how to add page tabs to your intake form and how to modify page attributes.

An intake form can include one or more page tabs to contain the field groups and fields that you want to add to your form.

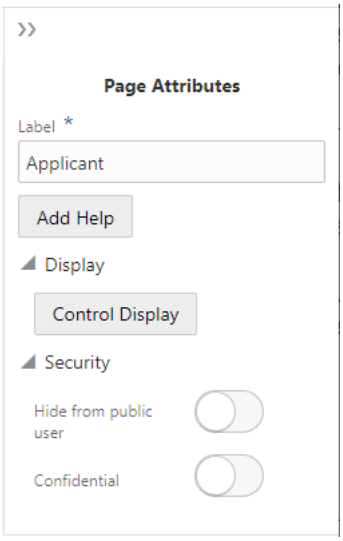
Adding Pages

When you create an intake form, by default, the application includes one page tab for your form.

To add additional page tabs to your intake form, click the **Add Tab** button at the top of the workspace.

Setting Page Attributes

This example illustrates the page attributes. Details are in the surrounding text.



Page Element	Description
Label	The name of the page that appears on the page tab. The default name is Page 1, Page 2, and so on. Change the name to your desired label.
Add Help	Click to launch the Contextual Help page, which you can use to add help information to aid end users in completing the application form. Page-level help should provide information pertaining to the overall page content. If the information applies to a specific UI element on the page, such as a field group, group box, or field, consider adding help directly to that UI element. For more information on adding contextual help, see *Adding Contextual Help to Forms*.
Control Display	Expand the Display section to view this attribute. Determine if the page displays or is hidden based on the value of a previous element in the form, such as a single-item checkbox or a switch. For more information on controlling page display, see *Displaying Form Elements Conditionally*.
Hide from public user	Expand the Security section to view this attribute. Hides the page tab and all the elements on the page from the public user at runtime. Only agency staff can view and update information for a page with this attribute turned on. In addition to hiding the UI element from the public user in the interface, the application also secures the back end for that specific UI element, such as preventing any unauthorized access to the fields within the UI element using a REST API, for example. **Note:** An intake form must have at least one page that is viewable to the public user. That is, Hide from public user must *not be enabled* for at least one page tab in the form.

Page Element	Description
	Note: You can't add a predefined field group to a page set to be hidden from the public. The Hide from public user attribute can be set only for pages and group boxes, and it applies only to user-defined fields within those containers. You can't apply the Hide from public user attribute to field groups. **Note:** The Hide from public user setting and the Confidential setting are mutually exclusive. **Note:** For fields within elements set to be hidden from the public, the default value for that field entered on the intake form design can be used to calculate fees for the intake form application at runtime.
Confidential	**Note:** The Confidential attribute applies only to the Business Licenses offering. Expand the Security section to view this attribute. Turn this attribute on to specify that the user-defined fields within the page container hold confidential information. At run time, fields with confidential information will be hidden to all users except for users without the appropriate privilege. These users can see the confidential information: • Agency users directly associated with processing the business license. • The public user who entered the information. **Note:** The fields do appear in the JSON payload for the page, however the field value will be null. **Note:** You can't add a predefined field group to a page with the Confidential attribute turned on. The Confidential attribute can be set only for pages, group boxes, and grids. It applies only to user-defined fields within those containers. You can't apply the Confidential attribute to field groups. **Note:** The Hide from public user setting and the Confidential setting are mutually exclusive.

Deleting Pages

If you delete a page from your form, keep in mind that any UI elements you have added to the page, such as predefined form elements, group boxes, and fields will also be removed from your form.

To delete a page from your form:

1. Click the **Remove** button on the page tab (the “x”).
2. On the Confirm dialog box, click **OK.**
3. Save your changes.

Working with Predefined Field Groups

This topic provides an overview of predefined field groups and how you use them to build your application forms.

Oracle provides a handful of predefined field groups to help you build application forms easily. Each predefined field group contains a collection of fields commonly used to capture information for a particular facet of the transaction type. For example, the Applicant field group captures information about the person applying for a permit.

Predefined field groups are:

- Pre-mapped to attributes in the application view object (VO).
- Grouped logically to provide descriptive metadata for a particular element of an intake form, such as Applicant, Property, and so on.

You drag the desired predefined field group from the Elements panel onto the workspace and use various combinations of predefined and user-defined form elements to assemble your application forms.

For example, assume that you need to create a form for applying for a fence permit. In this case, you can drag the Applicant field group, the Fence field group, along with other field groups you need onto the workspace to build your form.

For more information on the delivered predefined field groups, see *Using Predefined Field Groups*.

Adding Predefined Field Groups

To add a predefined field group to your form:

1. Make sure the page to which you want to add the predefined field group is the active page.
2. Expand the Ready to Use list in the Elements panel to the left of the workspace.
3. Click on the desired field group to activate it.
4. Select the field group to drag and drop it in the workspace.

> **Note:** Intake Form Designer places the predefined field groups in the workspace in the same order in which they are dropped, in sequence, from top to bottom.

> **Note:** When adding the Terms of Use predefined field group, it is recommended to add the field group to a page tab that also includes at least one other form element. Otherwise, the page may appear blank to agency staff when accessed at runtime because the Terms of Use field group is displayed only to public users, not to agency staff.

Adding Required Predefined Field Groups

The field groups you add to your intake form design will vary, depending on the type of form you are creating. While most field groups are optional to add to your forms, some field groups are required to ensure that specific information is

captured or represented in the underlying data structure. In some cases, it is the offering that requires the data, while in other cases a field group may have built-in dependencies on another field group.

Offering	Required Field Groups
Permits	Applicant Application Fee Summary (recommended)
Planning and Zoning	Applicant Application Fee Summary (recommended)
Business Licenses	Applicant Application Business Details Business Owners Business Locations Fee Summary (recommended) **Note:** The Business Owners and Business Locations field groups depend on the Business Details field group. They must appear *after* the Business Details field group in the sequence, either in a subsequent page tab or below it on the same page tab.

The Applicant predefined field group is required to be added to your application forms. The internal save logic checks for a valid applicant address when an end user attempts to save or submit an application form. The Application predefined field group displays useful information, including the transaction ID, status, description, important dates related to the application, and so on.

Note: Including the Fee Summary field group isn't mandatory, but it's recommended. For more information on the Fee Summary usage, see *Using Predefined Field Groups*.

Deleting Predefined Field Groups from a Form

To delete a predefined field group, click the **Remove** button in the Attributes panel.

Setting Predefined Field Group Attributes

Select the field group to view its attributes in the Attributes pane. To select the field group, click around the border or within empty space within the field group. If you click near a field, the field will become selected.

Page Element	Description
Remove	Click to remove the field group from the page.
Label	The name of the predefined field group that describes the set of fields in the field group. For example, the fields in the Photovoltaic field group apply to solar projects. Modify the label to suit your requirements. For example, you may want to change the delivered field group named *Contact Details* to *Contact Information.* **Note:** Changing the label for predefined field groups is a global change, affecting other intake forms using the field group. After changing the label, note that the label of the field group in the left panel's field group list is updated to reflect the modified label. The change you make will be available globally only after you publish the current intake form. Make sure future intake form developers on your implementation team are aware of the change to avoid confusion.
Show Label	Control whether to show the label. By default, the system shows labels for predefined field groups (Show Label is on). To hide the label, turn off Show Label. When turned off, the system hides the label at both design-time and runtime. Typically, you'd want the label to be visible to describe the logical grouping of the fields in the form element. In some cases, the page tab name and the predefined field group label might be redundant, in which case you may opt to hide the label. You may also want to group multiple predefined field groups within a single group box. In this case, you can hide the individual predefined field group labels within the group box container, using the group box label to represent the combined set of fields. **Note:** When you turn off Show Label, the system disables the collapsible feature for a predefined field group if enabled. **Note:** If the predefined field group is delivered without a label, the Show Label attribute does not appear when you select that form element.
Collapsed	Turn on to have the field group render collapsed upon the initial load of the intake form, which can streamline the initial display of the intake form. Applicants can expand the group box to view the contents as needed. **Note:** The **Collapsed** option isn't supported in the Redwood UI. Field groups appearing in the Redwood UI can't be collapsed at runtime.
Add Help	Click to launch the Contextual Help dialog box, which you can use to add help text to a predefined field group for assisting users with interacting with your intake form. When adding help for a predefined field group, the help text should apply to the overall contents of the predefined field group. You can add help also at the page level and the field level, depending on the scope of the help text.

Page Element	Description
	For more information on adding contextual help to your intake form, see *Adding Contextual Help to Forms*.
License Activity	**Note:** This attribute applies only to the Business Licenses offering. Expand the Display section to view this feature. License activity filtering enables you to control the display of field groups, depending on the current business license activity selected by the applicant. For more information on setting display filters, see *Configuring Activity Filtering for Business Licenses*.
Fee Estimate	Expand the Display section and the Fees section to view this feature. Select to incorporate this field element into simplified fee estimates that users can perform while making decisions regarding the transaction associated with an intake form. For more information on configuring simplified fee estimates, see *Configuring Simplified Fee Estimates*.
Control Display	Expand the Display section to view this feature. Click to define other elements in the form to control wether the field group displays. For more information on controlling the display of form elements, see *Displaying Form Elements Conditionally*.

Adding a Predefined Field Group Multiple Times to the Same Form

The same predefined field group can be dragged into your form multiple times. This is referred to as a multiple-instance element. How you adjust the Multi-Instance Options attribute determines how the application stores the data for that predefined field group.

Note: The Multi-Instance Options attribute appears only for the Comments and the Attachments field groups.

If you make no changes to the Multi-Instance Options attribute, the data entered within that predefined field group corresponds to one row of data only. In this case, the system duplicates the display of the data in each area of the form it is displayed. This option enables you to show the same data on a different tab within the form, if necessary. Updating the data in one instance of the predefined field group updates the data displayed in the other instances as well.

For example, assume you want the same comment text to appear on multiple pages in your form. You can do this by adding the Comments field group to the desired pages without making any updates to the Value field in the Multi-Instance Options attribute.

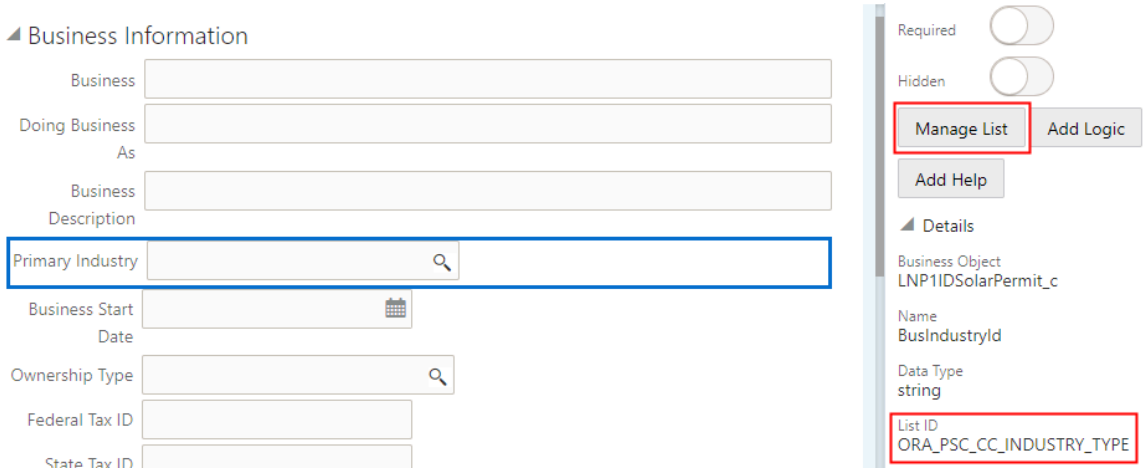
If you make changes to the Multi-Instance Options attribute, the application considers each instance of the predefined field group unique, and then each individual occurrence of the predefined field group is associated with its own row of data.

For example, assume you wanted to incorporate multiple comment sections in your form. In this case, you can add the Comments field group to multiple locations of your form, and then you set the Multi-Instance Options attribute to different values. One might relate to fencing comments while another might relate to contractor comments. Another example would be to enable the end user to upload multiple attachments that apply to separate documents. One attachment might be photos of a property while another attachment might be blueprint or design documents.

Managing Lookups for Predefined Field Groups

Some of the existing field groups contain fields associated with delivered lookup types. For example, the Primary Industry lookup is associated with the ORA_PSC_CC_INDUSTRY_TYPE lookup type.

This example illustrates a field on a field group associated with an existing lookup. Details are in the surrounding text.

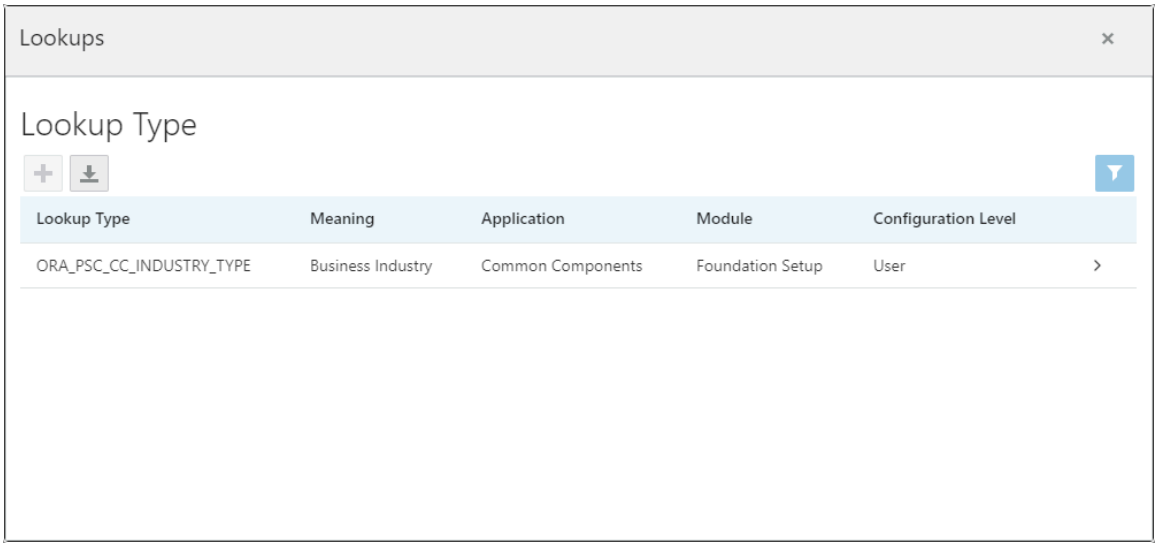


To manage a lookup for a predefined field group:

1. Identify the lookup fields in a field group, which contain the magnifying glass icon, like the Primary Industry field on the Business Information field group.
2. Select the field.
3. Expand the Details section in the Field Attributes panel.
4. Make note of the List ID associated with the field. This is the lookup type that you will access and update on the Lookups page.

5. Click **Manage List** to open the Lookups page displaying the associated lookup type.

   This example illustrates the Lookups page displaying the lookup type associated with a field on a field group. Details are in the surrounding text.



For more information on managing lookup types, see *Setting Up Lookups*.

Managing Grids in Predefined Field Groups

For some predefined field groups that contain grids, such as the Property field group, you can control the amount of rows an applicant adds to the grid. The **Minimum Rows** field enables you to require the specified number of rows to be added, while the **Maximum Rows** field enables you to limit the number of rows added to the grid.

Using Predefined Field Groups

This topic lists and describes the set of predefined field groups delivered to help you build forms quickly and consistently.

Predefined field groups are prebuilt user interface modules that you can use in your forms for capturing business information for common objects, such as Applicant, Application, Property, and so on.

Common Predefined Field Groups

Field Group	Description
Applicant	Identification and contact information for the public user who is filling out the form (or on whose behalf an agent is completing the form). This field group includes the applicant's name, address, phone, and email, as well as the business name and job title for the business, if relevant. When updating address, email, and phone information, the user has the option to save the changes to the user's account profile.
Application	Displays information about the form itself, such as status, relevant dates, and descriptions.

Field Group	Description
Attachments	Enables you to attach and download files, such as documents or images. The Attachments field group displays the grid for adding attachments. The applicant selects document properties such as category and subcategory during upload. If you add a document group to the application type and the document group includes document categories that are configured to identify required documents, the **Required Documents** section appears on the application intake form. Contains multiple instance options to create unique instances of the attachment field group. For more details on the Attachments field group, see the section below "Working with the Attachments Field Group."
Comment	Enables you to enter additional comments or descriptions pertaining to information on the form. Contains multiple instance options to create unique instances of the comments field group.
Contact Details	Enables you to add information for individuals or organizations that are contacts for an application. The applicant is automatically added as the primary contact in the grid, but you can add or select a different primary contact. You can also change the contact type, but you can't remove the applicant contact. When users enter contact information in an application, they can create new contacts or choose existing profile contacts. When creating a new application contact, the user can indicate whether the new contact should also be added as a profile contact. When choosing an existing profile contact, the user can modify contact details and indicate whether the original profile contact record should be updated as well.
Contractor	Enables applicants to provide information about 1 or more licensed contractors who are performing the work for a permit or planning application. For information about using this field group for business licenses, see "Predefined Business License Field Groups" in this topic. This field group includes an integration option that is configured as part of your agency-level contractor options. For more information, see *Setting Up Contractor License Options*. If you want to make a contractor license required for specific permit or planning application types, turn on the switch to **Require at least 1 contractor license** in the **Contractor Properties** section of the field group. When the agency activates the requirement, the applicant must provide a contractor license to submit the application. Applicants who self-identify as contractors or agents in an application always need to provide a contractor license. If the **Contractor** field group isn't used in the form designer or the field group is conditionally hidden based on the configuration of other fields in the form designer, the requirement isn't enforced. For more information, see *Adding Licenses to an Application Form* and *Entering Contractor Information on Permit and Planning Applications*.
Fee Summary	Lists the items selected, the cost for each item, and the total amount to be paid when submitting the form. **Note:** This does not include additional inspection or other fees which may be assessed at a later time. While there is no technical requirement to include the Fee Summary field group, it is typically recommended to provide a predictable user experience. If you don't include the Fee Summary field

Field Group	Description
	group, fees will still be calculated upon submitting the application, however, consider the following items to ensure they are acceptable for your user experience and business requirements. • The applicant won't know what fees are due upon submitting the application. • The fee summary can be useful in double-checking that the applicant correctly entered the form values, which drive the fees. • When the applicant submits the application, they won't be directed to the Make a Payment page for the application. Rather, they'll be transferred to the Application List page. This may lead to delays in receiving the initial payment to start the workflow and to begin the approval process.
Property	Describes the parcel as it is registered with the municipality, such as the parcel ID, parcel type, and so on. You can also define these attributes for this field group: • **Agency Map Profile** and **Public Map Profile**: Link the intake form to two separate map profiles, one for agency users and one for public users. • **GIS Object Selection**: Define which users can select GIS objects in the map profile that are not related to a specific property, such as sewer laterals and streets, and associate them with the transaction. Enable object selection for *None*, *Agency users only*, or *All users*. **Note:** You can set parameters on the grid using the **Minimum Rows** and **Maximum Rows** settings. Use the **Minimum Rows** field to set the required number of properties that an applicant must add. Use the **Maximum Rows** field to set a limit on the number of properties that an applicant can add. For more information, see *Setting Up Map Profiles* and *Using the Main Map and Explore Your City Map*.
Map Layer Content	Identifies the GIS attributes and values that are collected from a map service when a property is entered on a permit or planning application. The **Property** field group is required to use the **Map Layer Content** field group. For more information, see the section "Working with Property Field Groups" in this topic.
Related Transactions	Enables applicants and agency users to link their consultation, business license, permit, or planning applications to other transactions. In Code Enforcement, agency staff can link cases to transactions.
Terms and Conditions	Provides access to the terms and conditions regulating the usage of the online form, and provides a way for the user to accept the terms. This field group is hidden from agency staff when they fill out a permit, planning application, or business license application form on behalf of a public user. This field group doesn't identify which Terms of Use definition to use, so if you add this field group to an application intake form, you need to also add a Terms of Use definition on the application type setup page. The **Display Mode** property has these options: • *Link:* the form displays a **Terms and Conditions** link that the user clicks to open a window with the full terms and the checkbox for accepting the terms. • *Embedded:* the full text of the terms appears directly on the form. If the display mode is *Link,* these two additional properties are available: • **Help Text:** Enter informational text that appears on the form along with the Terms and Conditions link.

Field Group	Description
	• **Display Label:** Enable this option to display the description of the Terms of Use definition on the form along with the Terms and Conditions link. **Note:** This field group is not used to set up public user registration terms and conditions. The Public User Setup page includes all registration-related configuration.

Predefined Business License Field Groups

Field Group	Description
Business Details	Captures information to help describe the business, such as name, ownership type, mailing address, and so on. **Note:** You must add this field group to all business license intake forms. It must come before the Business Locations and Business Owners field groups either in a previous tab, or above them in the same tab.
Location	Captures information about the physical location of the business such as address, parcel number, and phone number. Your agency can collect property reference information from GIS map layers for parcels associated with business license applications. For more information, see *Working with Business Location Information* **Note:** You must add this field group to all business license intake forms. It must come after the Business Information field group either in a subsequent tab, or below it on the same tab.
Business Owners	Captures information about the business owners or corporate officers. **Note:** You must add this field group to all business license intake forms. It must come after the Business Information field group either in a subsequent tab, or below it on the same tab.
Contractor	When used for contractor registration or business license applications for contracting businesses, this field group enables agencies to collect contractor, contractor license, and contact information from contractors. For more information, see *Using the Intake Form Designer for Business Licenses*. For example, if you want to collect the business license for a contracting business, include the **Contractor** field group in the business license application design. Whether or not a contractor registration subclassification is used, the contractor license and contractor license contact information can be updated. After the license is approved, the contractor and contact information is updated in the contractor list. This field group includes an integration option that is configured as part of your agency-level contractor options. For more information, see *Setting Up Contractor License Options*.

Field Group	Description
	If you want to make a contractor license required for a business license transaction type, turn on the switch to **Require at least 1 contractor license** in the **Contractor Properties** section of the field group. When the agency activates the requirement, the applicant must provide a contractor license to submit the application. The requirement is active by default when agencies set up contractor registration applications. Applicants who self-identify as contractors or agents in an application always need to provide a contractor license. If the **Contractor** field group isn't used in the form designer or the field group is conditionally hidden based on the configuration of other fields in the form designer, the requirement isn't enforced. For more information, see *Entering Contractor Information*.
Credentials	Captures credential information associated with a business license. The credential, such as a food service certificate for a restaurant, becomes part of the details stored with the business license. See *Working with Credentials*. You associate credentials with a business license by selecting a value in the **Credential Group** drop-down list when designing the application. An applicant provides credential information for the associated credentials in the **Credentials** grid on the application form. When an exemption reason is provided, the applicant isn't required to provide the credential information. For information about setting up conditions that can be applied to business licenses based on credential expiration, see *Setting Up Credential Conditions*.
Industry Classification	Captures the North American Industry Classification System (NAICS) code for the business. You can configure whether an applicant can select one or more NAICS classifications for a business license type to represent more than one classification for that business license application. When adding the Industry Classification (NAICS) field group to the intake form in the Intake Form Designer, you can specify the minimum and maximum rows that are allowed for the License Type.
Tax Related Details	Captures measurable attributes used to calculate taxes, such as number of employees, estimated or actual gross receipts, square footage, number of rental units, and so on.

Working with the Attachments Field Group

You can configure the attachments field group and add it into your form multiple times. Attachments provide supporting documentation needed by agency staff when processing a transaction.

Configurable Features	Description
Element Attributes	You can name the attachments element title in the **Label** field.
Multi-Instance ID	Use these multiple instance options to create unique instances of the attachment field group: • **ID** • **Value** For more information about multiple instance options, see *Working with Predefined Field Groups*.
Attachment Columns:	You can configure these attachment properties in the attachments list:

Configurable Features	Description
	• **File Name**: Display the file name of the uploaded file. • **Description**: Display the user-entered description. • **File Size**: Display the size of the uploaded file.
Business Columns: • **DocumentCategory** • **DocumentSubcategory**	Agency-defined document categories and document subcategories enable you to organize the various types of attachments. You can configure these fields for document categories and document subcategories: • **Label**: Change the field name. • **Show in List**: Display the field in the attachments grid. • **Show in Detail**: Display the field in the attachment detail information. • **Show in Upload**: Display the field on the modal page for uploading an attachment. • **Searchable**: Enable search on the document category or document subcategory field. • **Sortable**: Enable sorting for the document category or document subcategory field.

Working with Property Field Groups

Agencies can configure the property field groups including **Property** and **Map Layer Content** to collect GIS information for a parcel based on the attributes in map layers. The GIS attributes and values are saved with the application in the **Additional Property Reference** information when the application is submitted.

1. Add the **Property** field group to the application design and select the applicable property field group settings.
2. Add the **Map Layer Content** field group to the application design on the same page.
3. Click the **Select Attributes** link in the **Display GIS Attributes** section of the field group settings.
4. The Select Attributes modal page opens. You'll see the list of the GIS attributes, including the map services, layers, and attribute names, that were defined on the GIS Attribute Mapping page. For more information, see *Setting Up GIS Attribute Mapping*.

   For each GIS attribute row, determine whether you want to collect the GIS information for the transaction type and if so, display the GIS information to both agency and public users:

Page Element	Description
Capture Attribute	Turn on the switch to collect the GIS attribute and value for the property and save them to the application.
Display to Public User	Turn on the switch for an attribute row to display the attribute to public users on the application.

5. Click **Save**.

   The **Select Attributes** link reflects the number of attributes selected. For example, the link is renamed to **2 attributes selected**.

For more information, see *Working with Property Information* for permits and planning applications and *Working with Business Location Information*.

Managing Lookup Types Associated with Fields in Predefined Field Groups

Some field groups have fields that are associated with existing lookup types delivered with your offering. To view or modify the lookup type, you can access the lookup from the Intake Form Designer using the **Manage List** button.

For more information on managing lookup lists for predefined field groups, see the section "Managing Lookups for Predefined Field Groups" in *Working with Predefined Field Groups* and refer to *Setting Up Lookups*.

Configuring the Display of Field Group Fields

Depending on the field group, in some cases you can use the **Display Settings** button in the Element Attributes panel to configure the behavior of the field group fields. For example, this option is available for the Business Owners field group, which is available in the Business Licenses offering.

You can set these display options for field group fields:

Page Element	Description
Required	Sets the field to be required, where the applicant must provide a value before advancing within the intake form.
Hidden	Select to prevent a field from being displayed on the intake form.

Working with Group Boxes

This topic describes how to add group boxes to your form and discusses group box layout options and attributes.

Use group boxes as containers to indicate the items contained within a group box are grouped logically. Once you add a group box to a page, you can drag these items into the group box:

- Predefined field groups
- User-defined fields
- Other group boxes (nested group boxes)

Adding Group Boxes

To add a group box:

1. Open the Add New list in the Elements panel.
2. Open the Layout list.
3. Click and hold on the Group box option.
4. Drag and drop the group box into the workspace.

Deleting Group Boxes

To delete a group box:

1. Select the group box.

2. Click the **Remove** button in the Attributes panel.

Note: If you remove a group box from a page, the system removes all of the contents of that group box also.

Setting Group Box Attributes

Select a group box to view the Group Box Attributes panel.

Page Element	Description
Remove	Click to remove the group box from the page.
Label	Add a name for the group box, describing the collection of items within it.
Collapsible	Turn on to enable the group box to be collapsed when an end user clicks it, hiding items it contains. If not turned on, the group box is always expanded and its content is always visible. **Note:** The **Collapsible** option isn't supported in the Redwood UI. Group boxes appearing in the Redwood UI can't be collapsed at runtime.
Collapsed	Turn on to have the group box render collapsed upon the initial load of the intake form. Having group boxes collapsed can streamline the initial display of the intake form. Applicants can expand the group box to view the contents as needed. **Note:** The **Collapsed** option isn't supported in the Redwood UI. Group boxes appearing in the Redwood UI can't be collapsed at runtime.
Flexible Box Layout	Use the Flexible Box Layout attribute to establish a group box container based on the CSS flexible box layout model. In the flexible box layout model, the items contained within the parent container assume a layout position automatically, based on space in the container. As the available unused space grows or shrinks, the items in the container grow to fill the unused space or shrink to avoid overflowing the parent. With Flexible Box Layout enabled, the system displays as many controls within the group box in one line until all of the space is utilized, then the system wraps the row, beginning a new line. When disabled, the controls within the group box display as stacked items, with each additional control displaying directly beneath the previous control.
Show Label	Select to hide the group box label (specified in the Label field). **Note:** You can add help only to group boxes with **Show Label** turned on. If Show Label is turned off, the **Add Help** button does not appear on the attributes panel and any help icons associated with any previously added help no longer appear.

Page Element	Description
Hide Border	Hides the element border. When turned on, the border is not visible. **Note:** The **Hide Border** option isn't supported in the Redwood UI. Group boxes appearing in the Redwood UI don't display a border, so it can't be hidden.
Add Help	Click to launch the Contextual Help page, which you can use to add help information to aid public users in completing the intake form. The **Add Help** button appears only if **Show Label** is turned on. Help text added for grids should apply to the overall group box content. Help can be added also at the page level, field group level, and field level depending on the scope of the help text. For more information on adding Contextual Help, see *Adding Contextual Help to Forms*.
License Activity	**Note:** This attribute applies only to the Business Licenses offering. Expand the Display section to view this feature. License activity filtering enables you to control the display of group boxes, depending on the current business license activity selected by the applicant. For more information on setting display filters, see *Configuring Activity Filtering for Business Licenses*.
Fee Estimate	Expand the Display section and the Fees section to view this feature. Select to incorporate this field element into simplified fee estimates that users can perform while making decisions regarding the transaction associated with an intake form. For more information on configuring simplified fee estimates, see *Configuring Simplified Fee Estimates*.
Control Display	Expand the Display section to the view this attribute. Click to select an element in the form that controls the display of the group box. For more information, see *Displaying Form Elements Conditionally*.
Hide from public user	Expand the Security section to view this attribute. Hides the group box and all the elements in the group box container from the public user at runtime. Only agency staff can view and update information within a group box with Hide from public user turned on. In addition to hiding the UI element from the public user in the interface, the application also secures the back end for that specific UI element, such as preventing any unauthorized access to the fields contained within that UI element using a REST API, for example. **Note:** The Hide from public user setting and the Confidential setting are mutually exclusive.

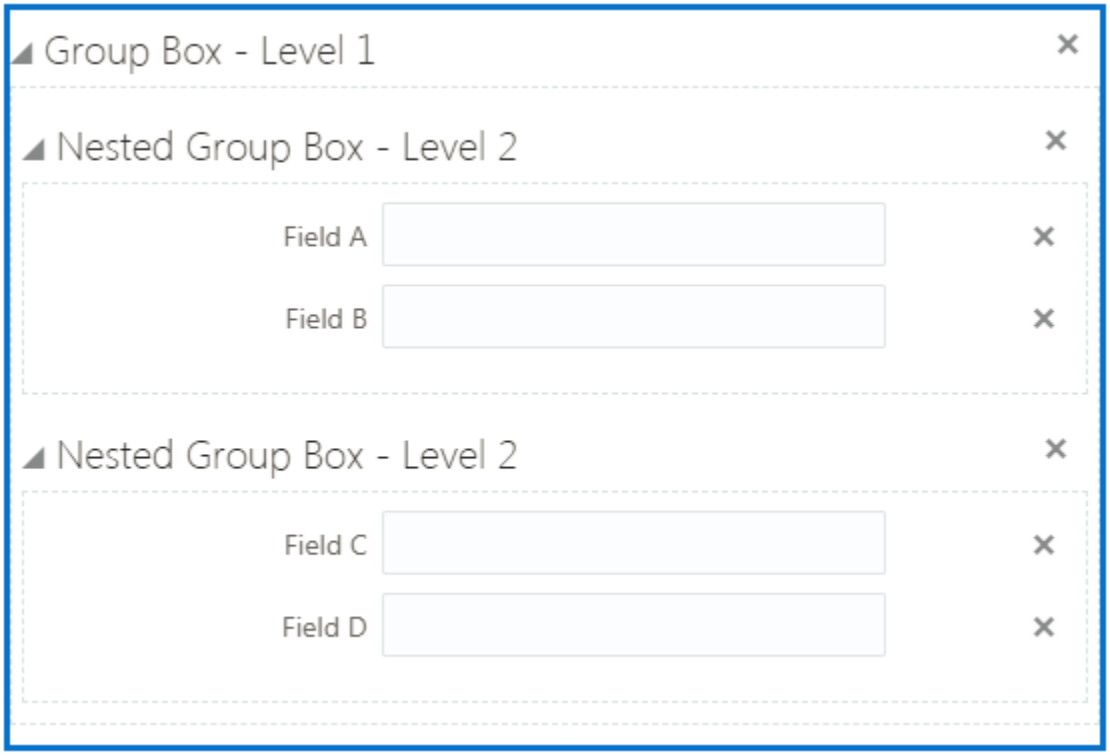
Page Element	Description
	Note: For fields within elements set to be hidden from the public, the default value for that field entered on the intake form design can be used to calculate fees for the intake form application at runtime.
Confidential	**Note:** The Confidential attribute applies only to the Business Licenses offering. Expand the Security section to view this attribute. Turn this attribute on to specify that the user-defined fields within the group box container hold confidential information. At run time, fields with confidential information will be visible only to users with the appropriate privilege. These users can see the confidential information: • Agency users directly associated with processing the business license. • The public user who entered the information. **Note:** The fields in the group box appear in the JSON payload for the page, however the field value will be null. **Note:** You can't add a predefined field group to a group box with the Confidential attribute turned on. The Confidential attribute can be set only for pages, group boxes, and grids. It applies only to user-defined fields within those containers. You can't apply the Confidential attribute to field groups. **Note:** The Hide from public user setting and the Confidential setting are mutually exclusive.

Example: Nesting Group Boxes

Nested group boxes can be used to represent subcategories of information and to enhance layout options, such as creating columns for form elements.

The following example illustrates nested group boxes, which you achieve by dropping group boxes within group boxes.

This example illustrates an outer group box container with two inner group boxes nested within to logically divide page content.



When setting up nested group boxes, keep these considerations in mind:

- The system does not impose a limit to the depth of nested group boxes you can insert. For more complicated pages, for example, you may find that group boxes could be nested to 4–5 levels deep. Make sure to consider how a page with multiple levels of nested group boxes will render on all the devices you intend to support for your user base.
- If a parent group box has the Flexible Box Layout attribute enabled, the child group box consumes 50 percent of the parent group box width on medium and large form factor devices and 100 percent of the width on small form factor devices.
- If a nested group box is hidden due to the Hide from public user feature or the control display feature, the space it would have occupied is consumed by elements coming after it in sequence to the right of it. To avoid fields and other elements shifting into these spaces, it is recommended to either add controlled or hidden group boxes to their own row (with the Flexible Box Layout attribute *turned off* in the parent group box), or put them in the right column (with the Flexible Box Layout attribute *turned on* in the parent group box).

Note: The system does not impose a limit to the depth of nested group boxes you can insert. For more complicated pages, for example, you may find that group boxes could be nested to 4–5 levels deep. Make sure to consider how a page with multiple levels of nested group boxes will render on all the devices you intend to support for your user base.

Example: Using Group Boxes to Combine Predefined Elements

In some cases you may want to give the appearance of multiple field groups being combined. You can do this using a group box to act as the outer container for the set of field groups. When using a group box to contain field groups, consider the following items:

- The collapsible attribute of the group box container controls the visibility of the contained field groups. If the group box container is set to be collapsible, when the user collapses that group box, all of the elements within that group box will be hidden.
- If you want the field groups within the group box to be categorized under just the label of the group box, turn off the Show Label attribute of the contained field groups.

In the following example, assume you want to combine the Fence Information and Comment field groups, giving the appearance that Fence Information field group also contains a Comment field.

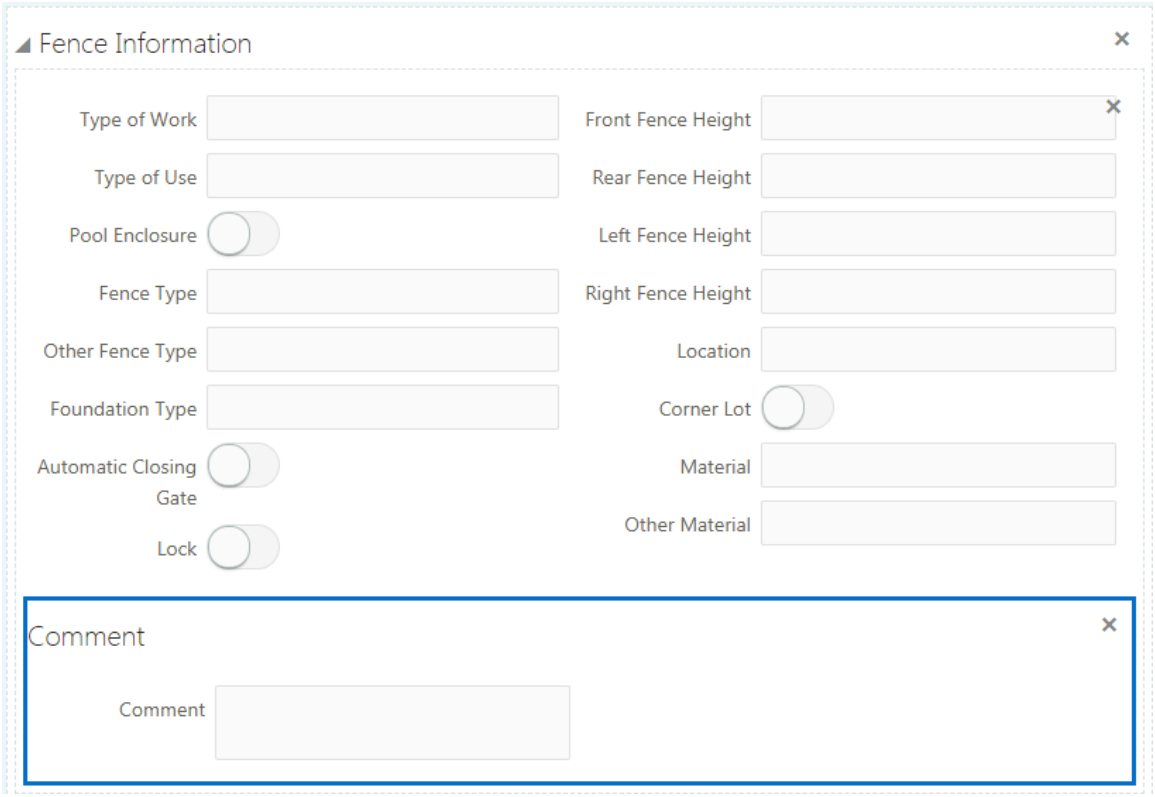
To combine field groups within a group box container:

1. Open the Add New list in the Elements panel.
2. Open the Layout list.
3. Drag and drop a Group box into the workspace.
4. Select the group box and make these changes on the Group Box Attributes panel:

Group Box Attribute	Sample Value
Label	Fence Information
Flexible Box Layout	Off

5. Open the Ready to Use list.
6. Open the Field Groups list.
7. Drag and drop the Fence field group into the group box
8. Select the Fence field group, and turn off Show Label on the Attributes panel.

9. Drag and drop the Comment field group into the group box.

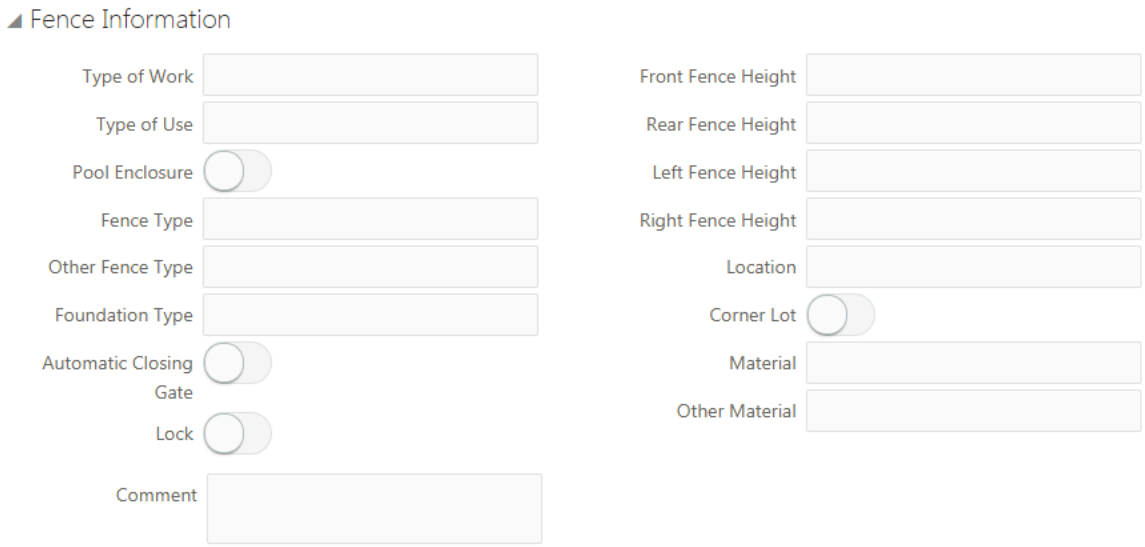


10. Select the Comment field group, and turn off Show Label on the Attributes panel.
11. Save your changes.

At runtime, the example steps above produce a single, collapsible section in the form that includes both the Fence Information and the Comment predefined elements.

This example illustrates the collapsed Fence Information group box.

This example illustrates the expanded Fence Information group box containing multiple field groups.



Example: Using Group Boxes to Combine Field Groups and User-Defined Fields

Similar to combining field groups within a single group box container, you can also combine field groups and user-defined fields within a single group box container creating the appearance of user-defined fields being part of a delivered field group.

In the following example, assume you need to associate a field with the Fence Information element to capture the color of a proposed fence.

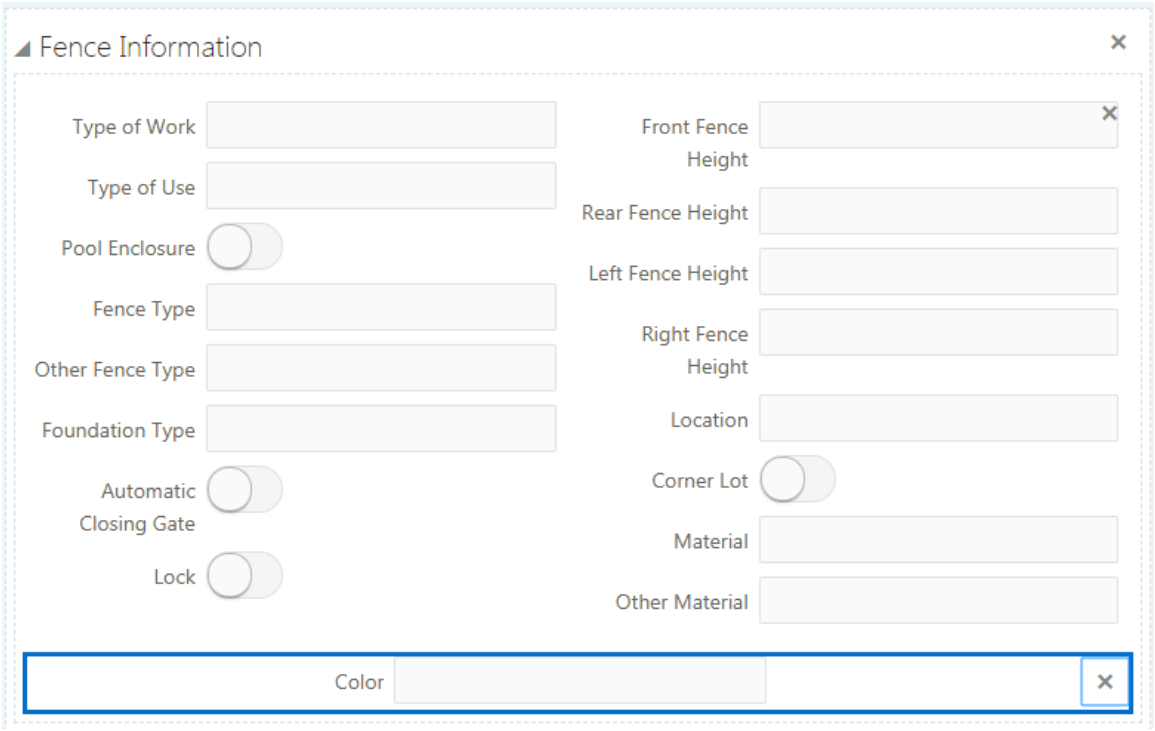
To combine predefined elements and user-defined elements with group boxes:

1. Open the Add New list in the Elements panel.
2. Open the Layout list.
3. Drag and drop a group box into the workspace.
4. Select the group box and make these changes on the Group Box Attributes panel:

Group Box Attribute	Sample Value
Label	Fence Information
Flexible Box Layout	Off

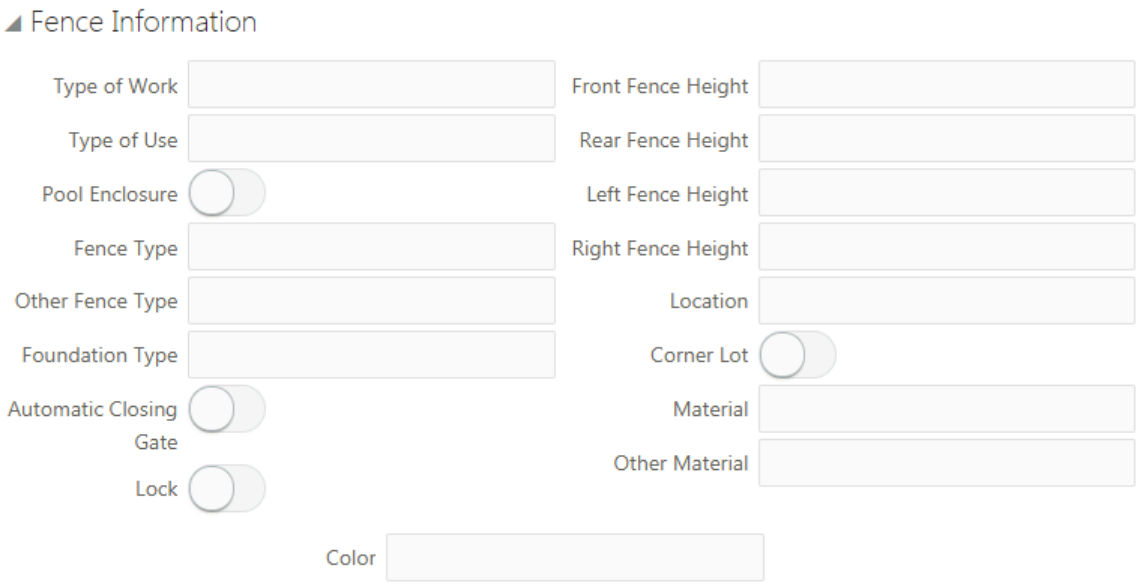
5. From the Ready to Use > Field Groups list, drag and drop the Fence field group into the group box.
6. Select the Fence field group, and turn off Show Label on the Attributes panel.
7. From the Add New > General list, drag and drop a text field into the Fence Information group box.

8. Select the text field, and enter *Color* for the Label in the Field Attributes panel.



9. Save your changes.

The following example illustrates how at runtime, the group box containing the field group and the user-defined field create the appearance of the manually created field being part of the delivered field group.



Working with Fields

This topic describes how to modify field attributes and add user-defined fields to your intake forms.

When end users are completing an application for a transaction, such as a permit, they enter the required information in fields. Fields can be added to intake forms by:

- Adding user-defined fields to your form. You create user-defined fields manually according to the data you need to collect in your form.
- Adding predefined fields to your form. The predefined fields, such as the Job Cost field, are delivered by default in the Elements panel for use in your forms.
- Adding predefined field groups to your form. Each field group is delivered with a set of fields.

Setting Field Attributes

Select a field to view the Field Attributes panel. Fields in predefined field groups and user-defined fields typically have the same set of attributes. Not all attributes apply to each field type.

The type of field you select determines the attributes appearing in the Field Attributes panel. For example, for a number field, you can set a default value and a placeholder value, but for a single-item checkbox, neither of these attributes apply and therefore don't appear.

The following table describes the field attributes.

> **Note:** Not all attributes apply to every field type. Only the attributes that apply to the currently selected field appear.

Page Element	Description
Remove	Click to remove the selected field from the layout. The **Remove** button appears only for user-defined fields you added manually. You can't remove fields from a delivered field group. **Note:** If your form has been used in a production environment, rather than removing a field it is recommended to hide the field. Removing a field that is already storing production data can lead to unexpected results and data inconsistencies.
Label	Add a custom label to the field. **Note:** In the case of a user-defined field, the system forces the field ID value to match the Label value, but removes any spaces. The field ID represents how the field appears in the underlying data model. For example, a user-defined field with the label *Additional Requests,* will have a field ID value of **AdditionalRequests_c.** For more information on working with field labels and field IDs, see the section below named "Working with Field Labels and Field IDs."

Page Element	Description
Placeholder	Add descriptive text to provide hints for entering data. For example, the placeholder text could read: *Enter date in this format" MM/DD/YY,* or simply *MM/DD/YY.* The placeholder value does not get saved to the database when a form is submitted.
Default Value	Enter a default value required for the field. The default value gets saved at runtime if the user does not change it. The control you use to set the default value is consistent with the field type you added to the intake form. For example, for the date field you use a date picker control, for a switch field you use a switch, and so on. **Note:** In cases where both the Placeholder and Default Value attributes appear for a field type and you have provided values for both, the default value supersedes the placeholder value. That is, at runtime, users see the default value, not the placeholder value, but if they delete the default value, the placeholder value appears to help users enter a valid value.
Decimal Places	Applies to number fields only. Set the number of decimal places for number fields, depending on what you are measuring and the precision you require. The limit is 10 decimal places. When adding decimal places to a number field, keep in mind that the number of digits contained within a number field can't exceed 16. The total number of digits is the sum of all integer digits and decimal digits. For example, if a field has 2 decimal places, that field has 14 integer digits that can be entered without exceeding any limits. If this limit is reached, this can cause unexpected rounding results.
Reusable	Enable if you want to reuse a user-defined field on other intake forms. When you save the intake form, fields that are set to be reusable appear within the Ready to Use > Fields section in the Elements panel. **Note:** A reusable field can't be set to be required or hidden. For more information, see the "Creating Reusable Fields" section below.
Required	Enable if this is a required field for which a user must enter a value. **Note:** A required field can't be hidden or reusable.

Page Element	Description
	Note: You can't delete a field that has been set to be required. You must first turn off the Required attribute, save the form layout, and then delete the field. Deleting a required field from an intake form that has already been published may affect forms submitted previously.
Hidden	Hides the field from the user. If a predefined element contains fields that you do not need, select this option so the user does not have access to the field. **Note:** A hidden field can't be required or reusable.
Read-only	Set user-defined fields to be read-only, including grid fields and reusable fields. Read-only fields can have the following behaviors: • **Read-only fields are read-only for *all* users.** This is the *default behavior* and requires no further configuration other than setting the field(s) to be read-only. In this case, the field's data is read-only for *all* users, which includes both agency users and public users. • **Read-only fields are read-only for public users *but* the read-only fields can be edited by selected agency users.** If this is the desired behavior, further configuration is required. You must create a custom security role and apply it to the agency users you want to be able to update read-only field values. For information on creating the security role for updating read-only fields, see the "Creating a Custom Role to Enable Editing for Read-Only Fields" section in *Creating Custom Roles for Oracle Permitting and Licensing*. The **Read-only** switch isn't available for: • Rich text areas. • Single-item checkboxes. • Field group fields. • Delivered fields, like *Job Cost*. **Note:** Read-only fields can't be set to be hidden or required.
Show in Summary	Turn on for this reference entity field to display in this reference entity's summary grid, which shows the most critical fields for easier recognition.
Manage List	Add values for fields containing a list of values, such as checkboxes, lists, and so on. **Note:** Depending on the lookup type, the location where you manage the lists differs. For existing lookups delivered on predefined field groups, you use the Lookups page. For lookups that you associate with a user-defined field, such as a drop-down list, you use the Custom Lookups page. The **Manage List** button takes you to the appropriate page for the lookup type, with the correct list displayed. For more information, see *Defining Fields Displaying a List of Values*.
Add Help	Click to launch the Contextual Help page, which you can use to add help information to aid public users in completing the intake form. Help text added at the field level should apply specifically to that field.

Page Element	Description
	You can also add help to predefined elements, group boxes, and pages, depending on the scope of the help text. For more information on adding Contextual Help, see *Adding Contextual Help to Forms*.
Add Logic	Click to add scripting logic using the Groovy programming language. **Note:** For user-defined fields that you have added to your intake form manually, the **Add Logic** button appears only after you have saved your form. For more information on adding logic to your forms, see *Adding Logic*.
Edit	Click to display the Rich Text Editor dialog box for entering formatted text to the application form. Appears only for rich text areas. For more information on rich text areas, see *Adding Rich Text Areas*.
Full Width	Expand the Display section to view the **Full Width** switch. Increases the visible area of certain field types so that users can view the content for fields containing larger amounts of information more easily. For more information, see the section below titled "Increasing the Display Area for Field Content."
Control Display	Expand the Display section to view the **Control Display** button. This option enables you to control the display of form elements based on the values entered or selected on other elements in the form. For more information, see *Displaying Form Elements Conditionally*.

Using the Field Details Section

Under the main controls used to configure fields described above is the field details section. It provides additional information that you may need to know for various tasks such as reporting or writing business logic.

Page Element	Description
Business Object	The business object to which this instance of a field belongs.
Name	Also referred to as the field ID. This value is the internal name of the field as it appears in the database view object, the REST request JSON, or how you'd refer to it in a Groovy script for example.
Data Type	The data type of the values the field stores, such as *string* or *number*.
List ID	Applies to lookup fields, containing a list of values (LOVs). Knowing this value can make it easier to confirm the lookup list you need to access if values on the list need to be updated.

Page Element	Description
	Note: Depending on the lookup type, the location where you manage the lists differs. For existing lookups delivered with the Fusion offering, you use the Lookups page. For lookups that you associate with a user-defined field, such as a drop-down list, you use the Custom Lookups page.

Adding User-Defined Fields

Note: You can add user-defined fields to group boxes only. You can't add user-defined fields directly to a page or to a delivered field group.

To add a user-defined field:

1. Expand the Add New section of the Elements panel.
2. Open the Layout list.
3. Add a group box to the current page.
4. Open the General list in the Add New section.
5. Select a field type, and drag and drop it in the desired group box.
   Note: User-defined fields must be contained by a group box.
6. Select the user-defined field you added, and use the Field Attributes panel to configure your field.
   Note: User-defined fields and fields provided in predefined field groups use the same set of attributes.
7. Save your changes.
   Once saved, the system applies your user-defined field to the application data model so field data can be captured, stored, and retrieved.

Working with Field Labels and Field IDs

Fields are identified by the label and the field ID. The label is displayed on the user interface for the end users, and the field ID is used internally at the database level. In some cases, such as when working with reporting or when writing business logic, you will need to know a field's label and the associated field ID.

All fields have a field ID whether they are field group fields or user-defined fields. A user-defined field has **_c** appended to the field ID to indicate that it is custom. The field IDs for user-defined fields are automatically generated by concatenating the label when they are first saved. For example, the field ID for the label *My Field* is **MyField_c.**

Use the Field Details section in the Field Attributes panel or the Field ID Search feature in the Groovy Script Editor to find the field ID for the selected field.

For more information on the Field Details section, see the "Using the Field Details Section" in this topic.

For more information on the Field ID search feature, see *Adding Logic*.

When adding a user-defined field, a default label and field ID is automatically assigned based on the order in which the field was added, such as *Field 1* (**Field1_c**), *Field 2* (**Field2_c**), and so on. When you first save a user-defined field, the field ID gets created at the database level and can't be changed.

Note: If you save a user-defined field *without* providing a custom label, the field ID will remain the default field ID value, even if you provide a custom label later. For example, if you save a user-defined field with the default label of *Field 1* and later change it to *My Field,* the field ID will still be **Field1_c.**

When you add a field and save it, that field gets created in the database, and remains in place regardless if you remove it from the form design later. If you remove a field from a form that has already been saved, the string **- Retired** is appended to the field ID, which helps you to identify and avoid them when setting up features like reports or audits, for example. These unused fields are considered orphaned fields because they are no longer mapped to a field in the intake form.

Because there are a limited number of user-defined fields that can be created for a single intake form (roughly 625), there is an internal process in place to manage orphaned fields. To conserve database resources, if you later create a field of the same name and the same data type as an orphaned field, the orphaned field may be assigned to the new field based on the following criteria:

- Unique field IDs, such as *lamaContractor_c,* are reassigned if the orphaned field ID value and data type the same.
- Default field IDs, such as *Field1_c,* are reassigned if the orphaned field ID is also default and the data type is the same.

Choosing User-Defined Field Types

Expand the Add New section in the Elements panel and open the General list to view the field types you can add to your forms.

Note: You must first add a group box to your form, and then you can drop one or more user-defined field types into the group box container.

Field Type	Description
Text field	Adds a character field to hold text values. A text field is limited to a length of 200 characters. If you need to provide a field that enables users to enter more characters, consider a text area field.
Number field	Stores numeric values. The value can be an integer or it can contain decimals depending on how you set the Decimal Places attribute. **Note:** The total number of digits allowed is 16.
Date field	Stores date values, such as 09-26-2020.
Date time field	Stores date *and* time values, such as 09-26-2020 11:25 AM.
Switch	On-off field, such as an “active” field indicating whether an item is active or not, which would be either on or off (yes or no).

Field Type	Description
Text area	A long character field enabling the user to enter longer descriptions. A text area field is limited to a length of 1500 characters.
Rich text area	A long character field enabling the user to enter longer descriptions or instructional information that can be formatted using a rich text editor. For more information on rich text area fields, see *Adding Rich Text Areas*.
Single-item checkbox	Displays a single option for the end user to select, such as, "I have read the terms and conditions, and I agree to the terms and conditions." This is different from a checkbox set, which displays a list of multiple items for an end user to select. In the case of a single-item checkbox, the label of the field acts as the text the end user reads and responds to on the application form.
Check box set	A set of checkboxes from which the end user can make multiple selections. For example, the label for the checkbox set might be Heating Source(s), with values such as *Oil, Gas, Wood, Solar,* and so on. This field needs to be associated with a list of lookup values. **Note:** If this field will be used to drive fee calculations, then the fee model input should be configured as a list type. For more information, see *Defining Fields Displaying a List of Values*.
Radio button set	A set of radio buttons from which the end user can make a single selection. For example, the label for the checkbox set might be Fence Type, with values such as *Stone, Wood, Vinyl,* and so on. This fields needs to be associated with a list of lookup values. For more information, see *Defining Fields Displaying a List of Values*.
Drop-down List	A drop-down list allowing the user to select a single item. This field needs to be associated with a list of lookup values. For more information, see *Defining Fields Displaying a List of Values*.
Multi-select List	A drop-down list allowing the user to select multiple items. This field needs to be associated with a list of lookup values. **Note:** If this field will be used to drive fee calculations, then the fee model input should be configured as a list type. For more information, see *Defining Fields Displaying a List of Values*.

Creating Reusable Fields

You may want to include some user-defined fields on multiple intake forms. Rather than recreating the same field multiple times for each intake form, you can create the field on one intake form and set it to be reusable, which enables that field to be available to add to other intake forms for your agency.

> **Note:** Fields set as reusable can be used on intake forms within the same offering only. For example, if you create a reusable field in the Permits offering, and you have also licensed the Planning and Zoning offering, that reusable field *won't be* available to use for Planning and Zoning intake forms.

Prior to setting a user-defined field to be reusable, consider these items:

Consideration	Description
Single instance	Only one instance of a reusable field can be added to an intake form design.
Fees	Reusable fields, like other user-defined fields, can be incorporated in the fee calculations run through decision models defined in OCI Process Automation. For more information on configuring fields to drive fee calculations, see *Mapping Form Fields to Decision Model Attributes*.
Deletion	Currently, you can't delete reusable fields from the Fields list in the Elements panel, but you can remove unnecessary fields from the intake form.
Limited quantity	You can define up to 625 fields as being reusable.
Required fields	Currently, required fields can't be set to be reusable and visa versa.
Hidden fields	Hidden fields can't be set to be reusable and visa versa.
Groovy	You can add logic to reusable fields, however, the logic should be specific to that field only. If the logic applies to the transaction type level, such as a specific permit type, then add the logic at the transaction type level using the **Add Logic** button in the toolbar.
Creation	The reusable field is created, when you click **Save.** **Note:** Once the field is saved with the Reusable switch turned on, the field is reusable, *and the Reusable switch becomes disabled.* You can't convert a reusable field to be a non-reusable field. Likewise, you can't convert a non-reusable field to be a reusable field, once the intake form design including the field(s) has been saved.
Updating	Changing the label, placeholder, or default value on any reusable field will update those values for all transaction types using the field.
Cloning	When you clone a transaction type, reusable fields are also cloned.

Consideration	Description
	Note: During the cloning process, the new intake form design is saved. The save process, disables the Reusable switch for both reusable and non-reusable fields.

To make a user-defined field reusable:

1. Review the guidelines above and carefully determine if the field should be reusable.
2. Select the user-defined field.
3. Turn on the **Reusable** switch in the Field Attributes panel.
4. Click **Save.**
5. Confirm that the label for the reusable field appears in the Ready to Use > Fields section in the Elements panel.

Note: The reusable fields added will be available for all record types for the offering.

See *Working with Fees and Payments*.

Adding Predefined Fields

Predefined fields are delivered with the designer, and you can add them straight to a group box in your form design. Predefined fields are delivered:

- with built-in validation and formatting.
- ready to be incorporated into your fee calculations.

Find the predefined fields in the Elements panel by expanding the Ready to Use section and the Fields section.

Drag and drop the predefined fields into group boxes, just as you would a user-defined or reusable field.

Note: You can add only one instance of a predefined field to an intake form design.

Hiding Fields

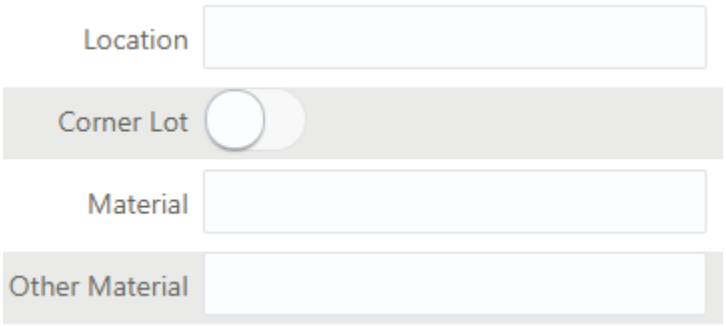
In some cases, you may not want to display all of the fields associated with a delivered field group you've added to a form. You can hide unneeded fields so they do not appear to the user at runtime.

To hide fields:

1. Place your cursor in the field to select it.
2. Turn on the Hidden switch on the Field Attributes panel.

Once you have hidden a field, the design-time interface continues to display the field, but places a darkened background around the field to indicate it is a hidden field. The application does not display the field at runtime.

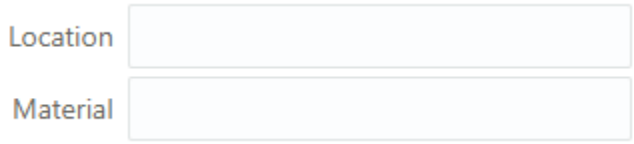
This example illustrates the shading around a field to indicate that is hidden during design time.



In this example of the design-time interface, Location and Material are not set to be hidden, but Corner Lot and Other Material are. Notice that the hidden fields display with the darkened background.

The following example of the runtime illustrates that the hidden fields do not display when an end user accesses the form. Only Location and Material render on the form at runtime, while Corner Lot and Other Material are not rendered.

This example illustrates the fields indicated as hidden in the previous example in design time do not appear on the form at runtime.



> **Note:** Required fields can't be hidden fields. If you set a field to be required, the Hidden switch becomes disabled. If a field is set to be hidden, and you set it to be required, the system sets the Hidden switch to off automatically and disables the Hidden switch.

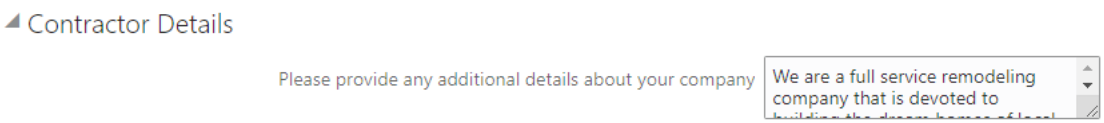
Increasing the Display Area for Field Content

> **Note:** Increasing the display area for field content is available only for user-defined fields where the group box containing the field has the **Flexible Box Layout** option off (not enabled).

In some cases, you may want to provide more field content visible to users filling out and managing intake forms. Examples include:

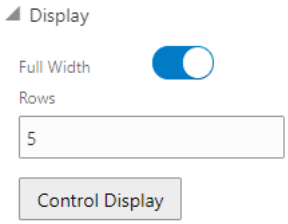
- Text fields where users enter large amounts of information.
- Drop-down lists containing longer phrases for users to select.

This example illustrates a Text area field type displaying the default amount of visible space.



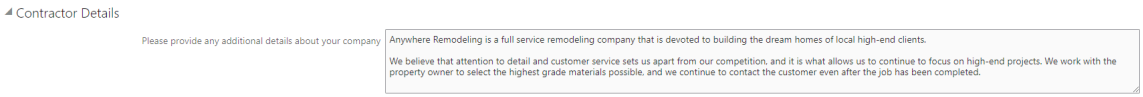
Use the **Full Width** and **Rows** field attributes to expand the display size of certain field types.

This example illustrates the **Full Width** and **Rows** display options. Details are in the surrounding text.



Page Element	Description
Full Width	Select to increase the display area of these field types: • Text field • Text area • Drop-down list • Multi-select list
Rows	Applies only to Text area field types. The value you enter for **Rows** determines the height of the viewable area in terms of rows of text. Enter a value between *1-20*. **Note:** For text area fields, the **Rows** value remains active once set regardless if container group box has **Flexible Box Layout** on or off.

This example illustrates a rich text field type with the **Full Width** option enabled and the **Rows** value set to *5* to display more field content for users.



Note: If the field is a reusable field, the **Full Width** and **Rows** settings carry into form designs reusing the field when the container group box has the **Flexible Box Layout** setting turned off.

Defining Fields Displaying a List of Values

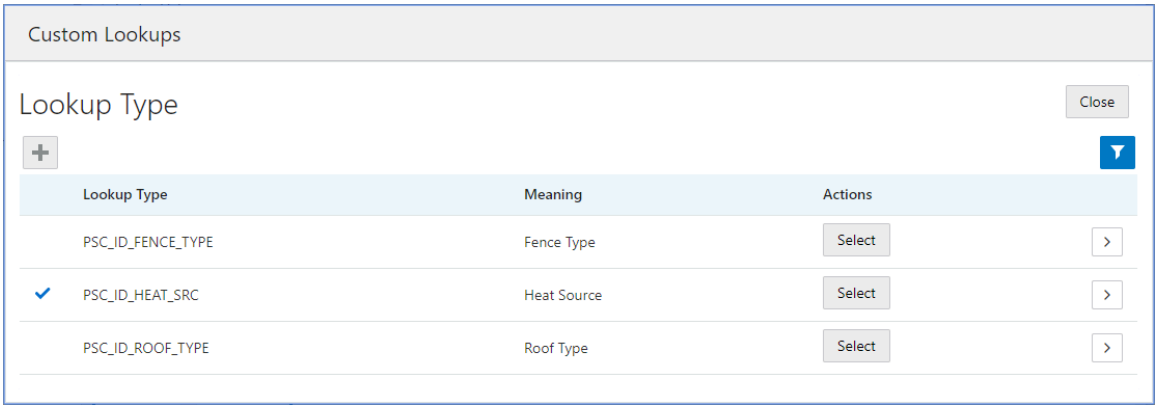
This topic describes how to add a list-of-values (LOV) to user-defined fields.

Some of the user–defined fields that you can add to your form are considered “list-of-value” fields, or LOV fields. List-of-value fields enable end users to select field values from a predefined set of values (a lookup) to populate the field when entering data on the form. For example, radio sets and drop-down lists are list-of-value fields.

The list of values is a *lookup type,* and the individual items in the lookup type are *lookup values.*

When adding a list-of-value field type to your application form, you first add the field to the form, just as you would any other field. You then either select an existing lookup type to associate with the field, or you can create a new lookup type if needed. To manage lookup types you use the Custom Lookups page.

This example illustrates the Lookup Type page.

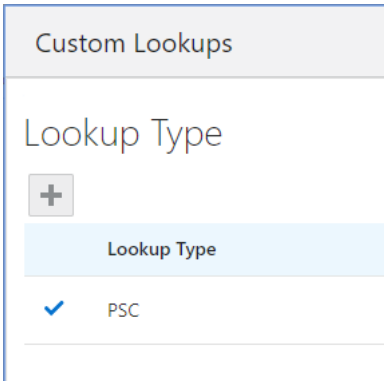


A list of values is a set of fixed field values defined for a specific purpose that is not expected to change over time. Removing items from the list, for example, could make previously saved data invalid.

An example of a field with a list of values could be the Property Zone Type field, where the values for a user to select are: *Business, Residential,* and *Agricultural.*

Once you have clicked the **Select** button, for a lookup type row, a check mark appears next to that lookup type to indicate it is the lookup type associated with the current LOV field.

This example illustrates the check mark that appears to the left of the lookup type to indicate lookup type selected for the current field.



Note: A single user-defined lookup type should be used by only one user-defined field.

Note: Once you have saved a user-defined field with a lookup type selected, its lookup type can’t be changed.

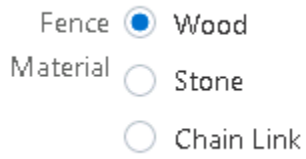
Identifying List of Value Type Fields

You associate a list of values with these field types:

- Radio button set
- Check box set
- Drop-down list
- Multi-select list

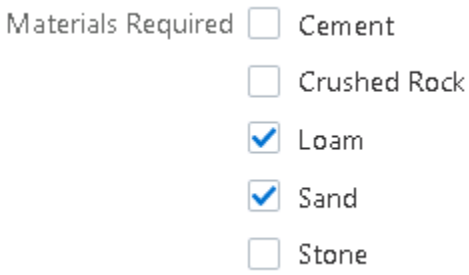
The following example illustrates a radio set, which is a set of radio buttons allowing a user to select a single value from the list of values.

Text surrounding the image describes it.



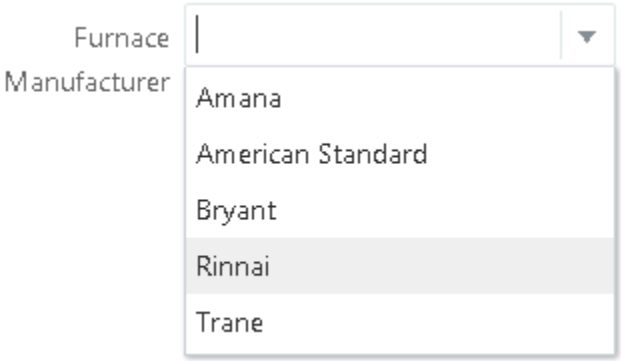
The following example illustrates a checkbox set, which is a list of multiple items allowing a user to select multiple values from the list of values.

Text surrounding the image describes it.



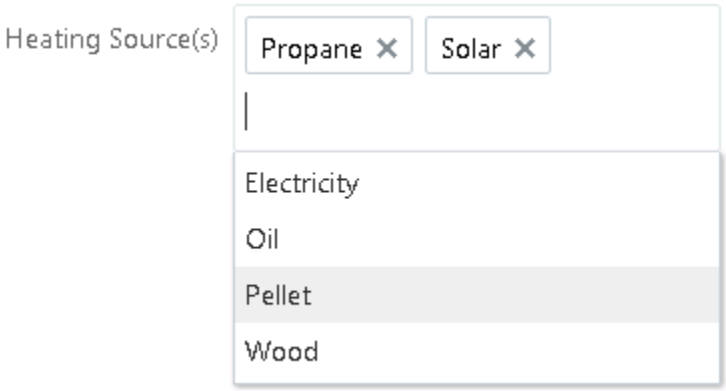
The following example illustrates a drop-down list, which is a list allowing a user to select a single value from the list of values.

Text surrounding the image describes it.



The following example illustrates a multi-select list, which is a drop-down list allowing a user to select multiple values from the list of values.

Text surrounding the image describes it.



Note: If the field type is a Check box set or a Multi-select list and the field will be used to drive fee calculations, then the fee model input should be configured as a list type. As in, select the **is List?** checkbox when defining the decision model input data.

Selecting an Existing Lookup Type for a Field

To select an existing lookup type:

1. Add the list-of-value type field to your form layout.
2. Select the new field.
3. Click **Manage List** in the Field Attributes panel.

   This opens the Lookup Type page.
4. On the Custom Lookups page, identify the lookup type to associate with the list-of-value field you added.

   Use the Meaning column to identify the appropriate list, or you can click **View More Details** to view the description and the actual lookup values in the lookup type.
5. Click **Select** in the Actions column to associate the desired lookup type with your field.

   Note: Once you select a lookup type, the Lookup Type page closes automatically. You can click **Manage List** to confirm your selection if needed.
6. Save the form layout.

Adding a New Lookup Type for a Field

1. Add the list-of-value type field to your form layout.
2. Select the new field.
3. Click **Manage List** in the Field Attributes panel.

   This opens the Lookup Type page.
4. On the Custom Lookups page, click **Add.**
5. On the Lookup Type Details page, enter these values.

Page Element	Description
Lookup Type	The system name, beginning with *PSC,* using uppercase letters, numbers, or underscores. For example, *PSC_ROOF_TYPE.* **Note:** All lookup types created and used within the Intake Form Designer *must* begin with *PSC.*
Meaning	Add a short, user-friendly description. This value appears in the Meaning column of the list of lookup types, which can help to identify the contents of the list. For example, *Roof Type.*
Description	Provide any additional information to help identify the purpose and intended usage of the lookup type.

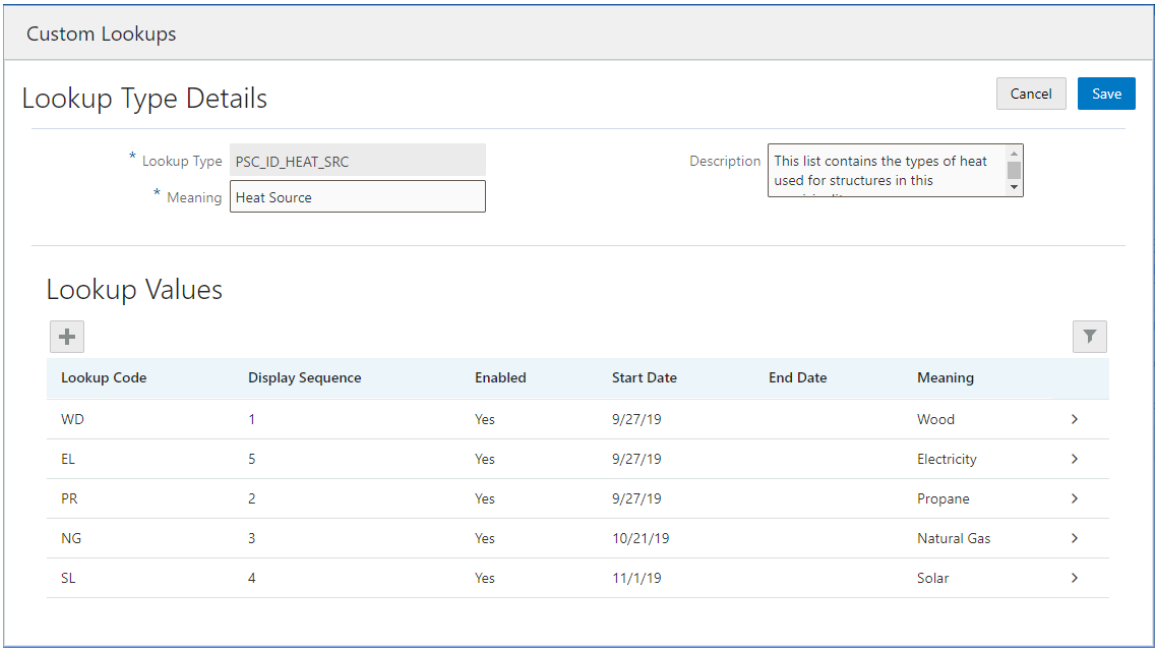
6. Add lookup values to the lookup type.
   a. In the Look Up Values grid, click **Add.**
   b. Modify these values:

Page Element	Description
Lookup Code	A short code used to identify the lookup value to the system, like a key value.
Display Sequence	If required, you can set the sequence in which lookup values display in the lookup list, using a numeric sequence.
Enabled	By default, a new lookup value is enabled. To disable a lookup value, turn off this switch.
Start Date	Date on which a lookup value becomes valid.
End Date	Date on which a lookup value is no longer valid.
Meaning	The value that displays to the end user at runtime to select from the list.
Description	Any additional information to describe the content or purpose of a lookup value.

c. Click **Save.**
d. Repeat for additional lookup values in the lookup type.

Example:

This example illustrates the Lookup Type Details page, showing a completed lookup type with a set of lookup values.



7. On the Lookup Types page click **Select** to associate the new lookup type with the field.

   Or, click **Close** to associate the lookup type with another field later.
8. Save the form layout.

Understanding the Scope of Lookup Types Created in the Intake Form Designer

The items in the following table describe the scope of the list of value fields that you can create and use in the Intake Form Designer.

Scope Item	Description
User-defined fields	You can create a list of values for user-defined fields only. You can't create a list of values for a field contained within a delivered field group. Some of the list of value fields in predefined field groups are associated with lookup lists that you can manage using the **Manage List** button.

Scope Item	Description
	Note: Once you create a lookup list for a user-defined field and publish the intake form, that lookup list can also be viewed outside of the designer using the Lookup Type page. However, it is recommended to manage lookup lists for user-defined fields only in the Intake Form Designer. For more information on the Lookup Type page, see *Setting Up Lookups*.
Intake Form Designer-only	The lookup types that you create within the Intake Form Designer can be used *only* within the Intake Form Designer. Only in specific circumstances can you associate a field in your form layout with lookup types created outside the Intake Form Designer. The interface used to create and select lookup types for use in your intake forms looks identical to the Lookups page (Navigator > Common Setup > Lookups), which is the interface used to manage lookups for Public Sector Community Development offering pages, such as the permit offering or the planning and zoning offering. However, the lookup types created on the Lookup pages *can not be used* for your intake forms nor visa versa. For example, you can't use the UOM Type lookup type (ORA_PSC_CC_UOM_TYPE) from the Lookup Type page for your intake form fields.
Other licensed offering(s) in the same database	In select cases, if you are an existing Fusion Application Cloud customer, and you have other licensed offerings in the same database as the Oracle Permitting and Licensing offerings, you can utilize lookup types not beginning with *PSC* for your intake form fields if required. For example, if you also license Fusion Application Cloud for Financials, which shares the same database as the Oracle Permitting and Licensing offerings, you can select lookup types using the Intake Form Designer interface, assuming you are aware of the values it displays and how it is maintained. To access these lookup types, you need to modify the filtering on the Lookups page. By default, the Intake Form Designer filters on PSC or the exact name of the selected lookup. Refer to the following example for more information on modifying the filtering option.

Example: This example illustrates modifying the default filtering for the Intake Form Designer lookups.

To modify the filtering on the Lookup Type page:

1. Click the Filter By button.
2. Select how you want to filter, as in by *Lookup Type* or by *Meaning*.
3. Select the operator to use for your filtering, such as *Starts with, Contains,* and so on.
4. Click **Apply.**

Working with Grids

This topic describes how to add grids to your intake forms to collect and display data in a tabular format.

To collect and display data in a tabular fashion, with rows and columns, you can add grids to your intake form design. Grids can be added for these offerings:

- Permits
- Planning and Zoning
- Business Licenses

You can create grids for only the current intake form you are creating, or you can also create reusable grids, which you create once and can add to multiple forms.

Adding a Grid

To add a grid:

1. Expand the Add New > Layout section in the Elements panel.
2. Select the Grid layout element, and drag it onto the workspace of your form design.

   Note: You can drop grids directly onto a page tab, or you can drop them within a group box.

3. Select the grid, and set the required attributes in the Grid Attributes panel.

Page Element	Description
Remove	Click to remove the element from the page. **Note:** Remove all grid columns before removing a grid. The grid must be empty before you can remove it.
Label	Add a name for the element, describing the collection of items within it.
Collapsible	Turn on to enable the element to be collapsed when an end user clicks it, hiding items it contains. If not turned on, the grid is always expanded and its content is always visible. **Note:** The **Collapsible** option isn't supported in the Redwood UI. Grids appearing in the Redwood UI can't be collapsed at runtime.
Show Row Numbers	Turn on to display row numbers for every row in the grid. Row numbers can help users to identify rows in larger grids. If enabled, at design-time a Rows column displays on the left-hand side of the grid to remind you that space will be occupied by the row number at runtime.
Show Label	Select to hide the element label (specified in the Label field). **Note:** You can add help only to grids with **Show Label** turned on. If Show Label is turned off, the **Add Help** button does not appear on the attributes panel and any help icons associated with any previously added help no longer appear.
Hide Border	Hides the element border. When turned on, the border is not visible.

Page Element	Description
	Note: The **Hide Border** option isn't supported in the Redwood UI. Grids appearing in the Redwood UI don't display a border, so it can't be hidden.
Reusable	Enable if you want to reuse the grid on other intake forms. You can set a grid to be reusable only *before the initial save* of the intake form design. You can continue editing the reusable grid until you publish the intake form. When you publish the intake form, grids that are set to be reusable are locked from further editing and appear within the Ready to Use > Grids section in the Elements panel. **Note:** Reusable grids aren't available for Code Enforcement. For more information on reusable grids, see the section below titled "Working With Reusable Grids."
Initial Sort	Select the grid column by which you want the grid sorted when it first displays at runtime.
Sort Order	Displays only when you've selected a column from the **Initial Sort** drop-down list. You can set how the grid is sorted as it first renders on the page. Options are: • *Ascending* • *Descending* The end user can change the sort order at runtime as needed.
Add Help	Click to launch the Contextual Help page, which you can use to add help information to aid public users in completing the intake form. The **Add Help** button appears only if Show Label is turned on. Help text added for group boxes should apply to the overall group box content. Help can be added also at the page level, field group level, and field level depending on the scope of the help text. **Note:** You can add help at the grid-level only. You can't add help to individual grid columns. For more information on adding Contextual Help, see *Adding Contextual Help to Forms*.
Control Display	Expand the Display section to the view this attribute. Click to select an element in the form that controls the display of the group box. For more information, see *Displaying Form Elements Conditionally*.
Hide from public user	Expand the Security section to view this attribute. Hides the *entire* grid and all the grid columns it contains from the public user at runtime.

Page Element	Description
	Note: Individual columns in the grid can't be hidden from or exposed to the public. Only agency staff can view and update information within a grid with **Hide from public user** turned on. In addition to hiding the UI element from the public user in the interface, the application also secures the back end for that specific UI element, such as preventing any unauthorized access to the fields contained within that UI element using a REST API, for example. **Note:** For fields within elements set to be hidden from the public, the default value for that field entered on the intake form design can be used to calculate fees for the intake form application at runtime.
Confidential	**Note:** The Confidential attribute applies only to the Business Licenses offering. Expand the Security section to view this attribute. Turn this attribute on to specify that the grid field content is confidential information. At run time, fields with confidential information will be visible only to users with the appropriate privilege. These users can see the confidential information: • Agency users directly associated with processing the business license. • The public user who entered the information. **Note:** The grid fields appear in the JSON payload for the page, however the field value will be null. **Note:** The Hide from public user setting and the Confidential setting are mutually exclusive.
Business Object	Indicates the name of the custom object created for the current intake form.
Collection ID	The name of the child object within the parent business object created for the grid. When writing Groovy business logic or setting up integrations, you will need to refer to the data within the grid child object using the collection ID. For example: *LNP1IDBuildPermit2207g1Collection_c* Where *LNP1IDBuildPermit2207* is the permit ID and *g1Collection_c* is the first grid in the form design.

Page Element	Description
	Note: The name of the grid is automatically generated based on the transaction ID, such as the permit ID, and the index number of the grid within the intake form layout, indicated by *g1, g2, g3,* and so on. The index number is determined by *when* you added the grid to the form layout, not *where* the grid displays in terms of sequence. For example, the third grid you added to an intake form would contain *g3Collection_c* in its collection ID. For a reusable grid, the collection ID will look like the following: *LNP1ResBuildPermit2023g1_rel_LNP1ResBuildPermit2023g1_LNP1ResBuildPermit2023_Tgt*

Adding Fields to a Grid

Adding fields creates the columns in the grid.

To add fields to a grid:

1. Expand the Add New > General section in the Elements panel.
2. Select a field type, and drag it onto the grid.

   Each field type you add to the grid becomes a column in the grid.

   You can add these field types to a grid:

   - Date field
   - Date time field
   - Drop-down list
   - Number field
   - Single-item checkbox
   - Text field

   Note: You can't add ready-to-use field groups or fields, such as Job Cost or user-defined reusable fields, to a grid.

3. Select the column header cell to display the Grid Column Attributes panel, and set the required attributes for that field type.

   The same attributes that apply to fields apply also to grid columns. For more information on field attributes, see *Working with Fields*.

   The following attributes apply specifically to grid columns.

Page Element	Description
Rows	The Rows column appears only if Show Row Numbering is enabled in the Grid Attributes panel. Each grid row is assigned a sequential row number automatically. At design-time, the row numbers appear to remind you that the left-hand column is reserved for the automatic row

Page Element	Description
	numbers. At runtime, when the user saves each new row of data, the next sequential number is assigned to that row.
Sequence	Adjust the order, from left to right, in which the selected grid column appears. For example, if the **Sequence** for a grid column is set to *1,* it will be the first grid column appearing on the left of the grid.
Wrap	Select to wrap the field content so that all the required text is visible to users. Applies to text fields and drop-down lists.
Read-only	Select to make the grid column read-only at runtime so it can't be edited. Use this option for any field value that you don't want edited, such as for data imported into the grid from outside data sources that you want to appear for informational purposes only or for fields containing default values.
Field ID	If performing tasks like writing Groovy, importing data, configuring integrations, and so on, use the field ID to identify the grid column.

Working with Reusable Grids

When creating reusable grids, keep these items in mind:

- You can set a grid to be reusable only prior to the initial save of the form that the initial grid was created on. Once you save the form, the **Reusable** switch in the elements panel is disabled for that grid on that form, as well as any other new or cloned form to which it's added.
- After you've saved the intake form, you can continue to add fields, and update the available attributes for the grid or grid fields.
- Once the form on which the original grid was created has been published, the grid and the grid fields become locked, with only certain attributes available to modify, such as labels.

Page Element	Description
Grid Labels Grid Field Labels	You can update the labels for a published reusable grid and the grid fields, but make sure to consider that doing so affects *every* intake form using that grid. When labeling reusable grids and the grid fields, consider all of the forms in which they'll be used, and use labels general enough to apply to all contexts.
Intake Form Versions	Reusable grids don't support versioning. You can have reusable grids on intake forms that are versioned, but you can't make changes to a reusable grid and apply them to a specific intake form version.

Page Element	Description
Hide from public user Help Control Display	You can modify these attributes for reusable grids and the setting applies only to the instance of the reusable grid on the current intake form.

Importing Intake Forms with Grids

If you are importing an intake form with a grid in the layout, you need to either save or publish the form after a successful import to make sure the grid layout and database object are created completely in the target environment.

For more information on exporting and importing forms, see *Exporting and Importing Intake Forms*.

Working with Grids and Groovy

You can reference grid data in object-level Groovy, but you can't add Groovy directly to grids or a particular grid field.

When referencing data in grids in your object-level business logic, follow the syntax described in "Accessing Data Within Grids" in *Adding Logic*.

> **Note:** Currently, iterating through grid column rows in your logic by way of a trigger is not currently supported. It is recommended to use Groovy only for validations.

Displaying Form Elements Conditionally

This topic describes how you can show or hide elements on your forms depending on selections users make on other form elements.

You can configure some form elements to be either displayed or hidden, depending on the value of other fields in the form. Displaying form elements conditionally enables you to streamline and simplify the form to show only information that is relevant for the current intake form being filled out.

For example, assume you want to display a page tab displaying fields related to a solar panel project only if the public user selected a the "Solar" single-item checkbox in a “Building Options” section of a permit application form. In this case, you can set the Solar single-item checkbox as the controlling element for the Solar page tab, having the Solar page (the controlled element) display only when the Solar single-item checkbox is selected.

Form elements that can control the display of other elements are *controlling elements.* Form elements that can be shown or hidden based on the value of a controlling element are *controlled elements.* The following table describes the elements involved in conditional display.

> **Note:** The conditional display of form elements applies during the initial application process prior to submitting the intake form as well as after the intake form is submitted and modified, such as when using the Application Details page.

Display Type	Element Types	Description
Controlling Element	• Single-item checkbox • Switch • Number field • Date field • Date time field • Drop-down list • Multi-select list • Radio button set • Check box set	Form elements that determine whether another form element is displayed, depending on the value selected by the user. **Note:** Fields contained in delivered field groups, can't be selected as controlling elements.
Controlled Element	• Field group • Group box • Page • User-defined field • Grid	Form elements that can be displayed conditionally, depending on the value of the associated controlling element. To control when these elements appear, click the **Control Display** button in the Display section on the Attributes tab. The **Control Display** button appears only for these element types.

Configuring Conditional Display

To configure conditional display for a form element:

1. Add the controlling element to a group box in your application form.

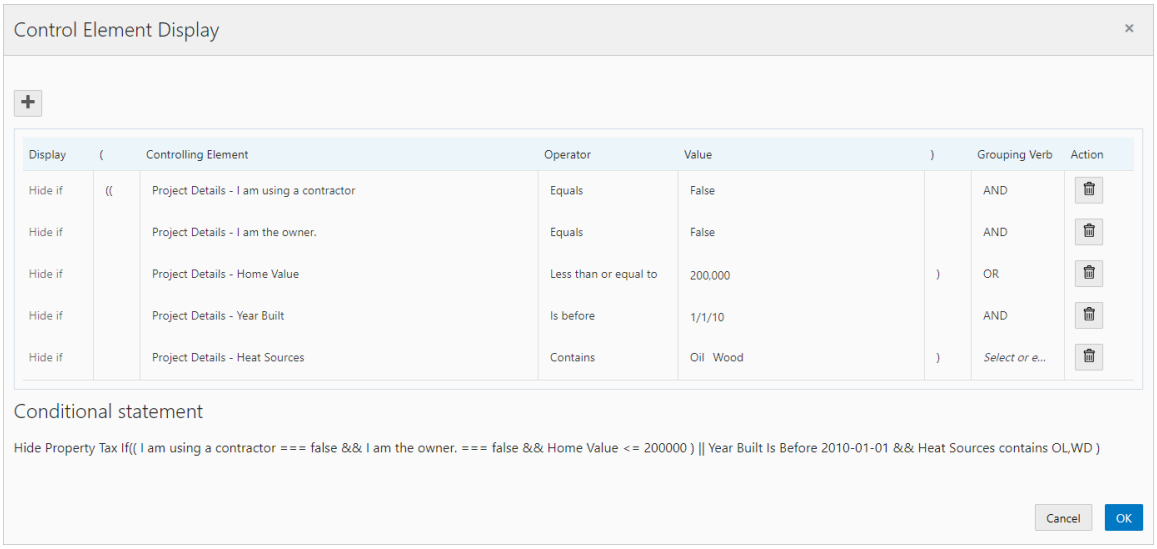
   > **Note:** The controlling element must be located *before* the controlled element in the sequence of the form layout. The controlling element must reside on the previous page tab or, if on the same page tab, above the controlled element.

2. Add the form element that you want to display or hide conditionally (the controlled element).
3. Select the controlled element you just added so that it is the active element in the layout.
4. In the Attributes panel, expand the Display section, and click **Control Display.**

5. On the Control Element Display dialog box, click **Add** to add a row to the grid, then double-click in the newly added row to activate it.

> **Note:** Once you add a row to the grid and activate it by double-clicking, you must enter a value before clicking **OK.**

This example illustrates the Control Element Display dialog box set to show a set of condition expressions of a controlling element, using multiple expressions that are evaluated to determine of a controlled element is displayed or hidden.



Element	Description
Add	Click to add a new row to the grid. After adding a row, double-click the row to make it active.
Opening Grouping	Use the opening parentheses to establish the beginning of a grouping of one or more conditions in the expression. You can nest groupings up to three levels using (, ((, and (((. Make sure to balance (pair) the opening and closing groupings. That is, you need the same amount of left parentheses as you do right parentheses.
Controlling Element	Select the form element that will control the display of the selected predefined form element or group box. The drop-down list displays all eligible controlling elements that exist on or before the current page tab in the form. Selecting the controlling element appearing before the controlled element adheres to the logical sequence a user would take when completing the application form.
Operator	Select the operator to be used when evaluating the expression for each row in the condition grid. Depending on the field's data type, the list of operators changes to show only those that

Element	Description
	apply. For example, if you are evaluating a date field, the operators you can select are different for those available for a number field. - Equals - Not equal to - Greater than - Less than - Greater than or equal to - Less than or equal to - Contains - Does not contain - Is before - Is after **Note:** If a controlling element field value is empty in the user interface and the operator is any of the following, the system assumes the condition to be true. - Less than - Less than or equal to - Not Equal To - Is before - Does Not Contain
Value	Select or enter the value selected on the controlling element the expression uses to compare and evaluate. Depending on the data type of the field, the controls you use to specify the value will differ. For example, for a date field, you use a date picker control, for number fields you enter the value manually, for drop-down lists you select the value from a drop-list, and so on. **Note:** For multi-select lists and checkbox sets you can select multiple values.
Closing Grouping	Use the closing parentheses to establish the end of a grouping of one or more conditions in the expression. You can nest groupings up to three levels using),)), and))). Make sure to

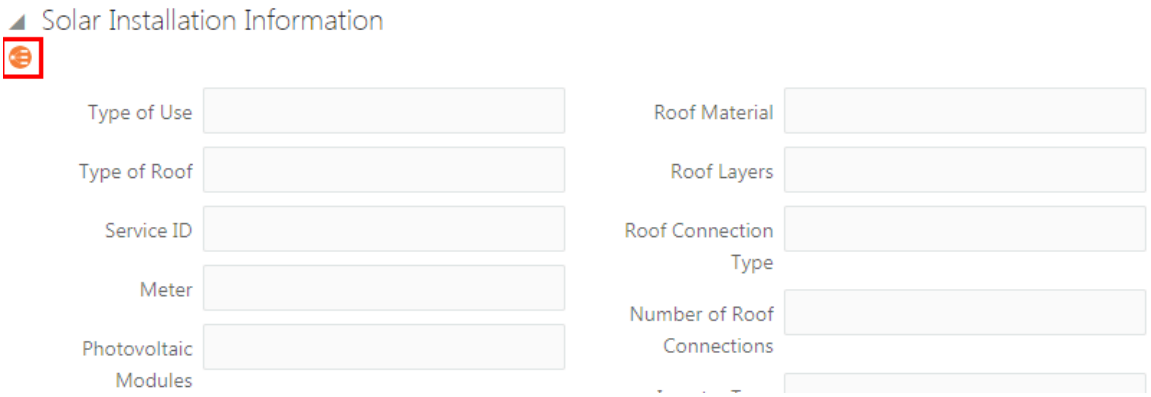
Element	Description
	balance (pair) the opening and closing groupings. That is, you need the same amount of left parentheses as you do right parentheses.
Grouping Verb	Select AND or OR to include a logical operator. All condition rows in the grid require a grouping verb, except for the last condition in the sequence, which can't have a grouping verb selected.
Action	Displays the **Delete** button to remove the row from the grid.
Condition Statement	As you build your set of conditions by adding individual expressions on each row, the **Condition Statement** dynamically displays the entire logical expression enabling you to visualize the statement and verify your logic.

6. Click **OK.**
7. Save your form.

Identifying Controlled and Controlling Elements

The controlled element appears with an icon below the element label to indicate it is an item whose display is controlled by another element in the intake form.

This example illustrates the icon displayed for a controlled element.



When you have selected a controlled element or a controlling element, you can see a list of the associated elements in the Attributes panel. Expand the Display section and look beneath the **Control Display** button.

For example, for a controlling element, you can see text similar to:

Controls the display of:

<page tab name> - <element name>

And, in the case of a controlled element, you can see text similar to:

Controlled by:

<page tab name> - <element name>

Working with the Conditional Display of Pages

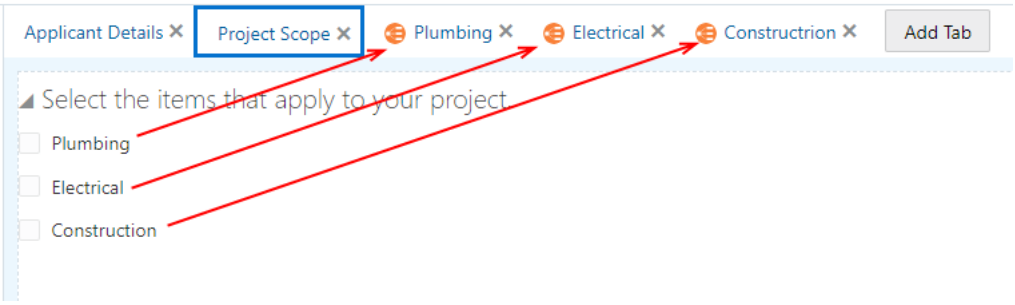
This section describes items to consider when using the conditional display feature with pages, which includes:

- Hiding a page based on a controlling element.
- Hiding all elements on a page.

> **Note:** A page can become hidden if the page itself is a controlled element and also if all items on the page are controlled elements and all become hidden.

You can control the display of an entire page based on the value of a controlling element in the intake form. Doing so introduces dynamic display features to your intake form that can streamline the form significantly. Based on the user's previous field selections can determine whether a page displays or is hidden, providing users an improved experience. Using this feature, only the pages relevant to the user's transaction would be displayed. As selections are made, the pages appear or become hidden accordingly.

This example illustrates single-item checkboxes controlling the display of the corresponding intake form pages.

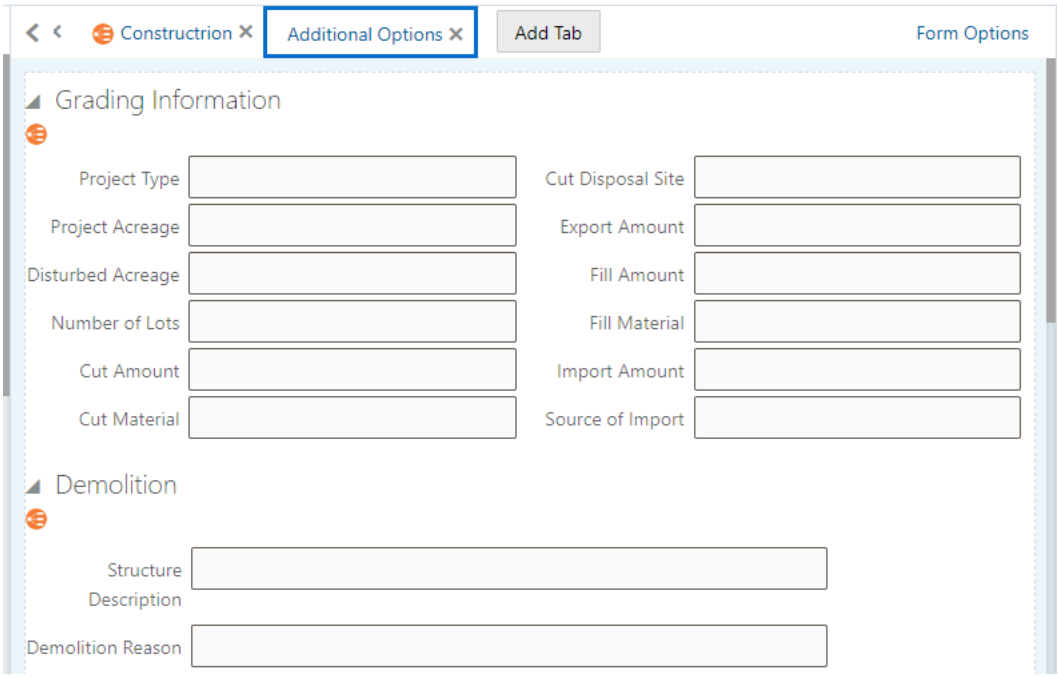


> **Note:** The train stop drop-down list also changes dynamically to reflect the current set of pages as pages appear or become hidden.

In cases where all of the elements on a particular page are controlled elements and each element's controlling element's display conditions cause all the elements on the page to be hidden, the system will hide the entire page.

In the following example, each element on the page is a controlled element. If each element becomes hidden as a result of the values selected for the controlling element, the entire page becomes hidden.

This is an example of all elements on a page being controlled elements. Details are in the surrounding text.



Adding Logic

This topic describes how to add business logic to intake forms using the Groovy programming language.

Groovy Overview

You can add business logic to your intake form using the Apache Groovy programming language.

Groovy is an:

- Object oriented language that can be used for scripting or programming.
- Extension of the Java programming language, using similar constructs and syntax.

For Java developers, Groovy can be compared to other programming languages, such as Python or Ruby, that don't intend to replace Java, but act as a companion language, extending capabilities and providing additional flexibility.

When designing intake forms, you can add Groovy scripts to provide:

- Validators
- Triggers
- Object functions
- Global functions

The logic can be added at these levels:

- Field: Field-level logic applies only to the currently selected field.
- Object: Object-level logic can be used within a single intake form design.

- Global: Global functions can be called from any intake form in your offering.

The types of scripts you can add depends on the level on which you are adding the logic (field or object).

Script Type	Level
Validator	Field and Object
Trigger	Object
Object Function	Object
Global Function	Object

Before adding Groovy to your intake forms, you will need to become familiar with the Groovy language and how it is intended to be used within Oracle Fusion applications.

For more information on Groovy usage within Oracle, refer to *Oracle Applications Cloud: Groovy Scripting Reference.*

For general information on the Groovy language, see *Apache Groovy documentation.*

Working with the Groovy Script Editor

To access the Groovy Script Editor:

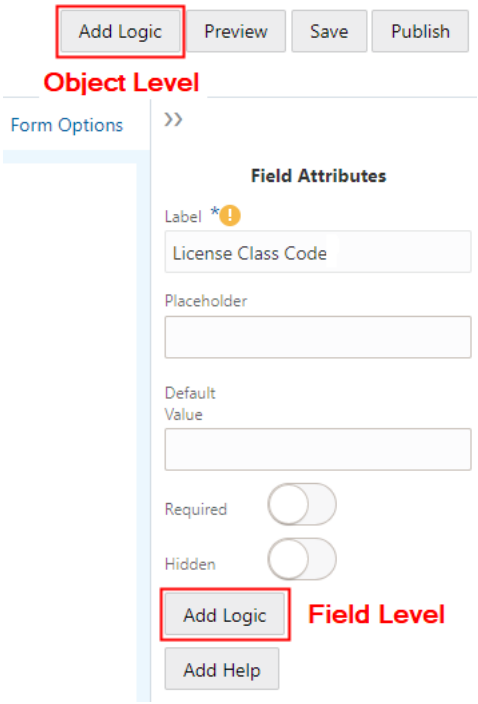
1. Save the intake form you are creating.

   The field(s) you reference in your logic at the field level or the object level must exist in the underlying database object, which occurs when you save the form after adding any new elements.

   > **Note:** For the user-defined fields you added manually to your intake forms, the **Add Logic** button doesn't display in the Field Attributes panel *until* you have saved your intake form.

2. Click the **Add Logic** button in the Field Attributes panel or in the intake form header.
   - When clicking **Add Logic** in the Field Attributes panel, your code operates at the field level.
   - When you click **Add Logic** in the intake form header, your code operates at the object level.

   This example illustrates the separate field-level and object-level **Add Logic** buttons.



3. Use the Groovy Script Editor to add the logic, script name, error message, and additional options, depending on the type of script you are writing.

Only the page elements that apply to the type of script you are writing appear in the editor.

Page Element	Script Type	Description
Work Area	All	In the work area, add your logic. The first line in the comments (/* <text> */) is automatically generated, and it provides you the field name and object name as they are referenced internally. For a field contained in a delivered field group, the field name will be similar to the field label, such as *DemOverallHeight*. In the case of a user-defined field, the field name will match the field label you have entered, with a "_c" as a suffix to indicate it is a custom field. For example, if you have a user-defined field named Rooms, the field name appearing in the script will be *Rooms_c*.

Page Element	Script Type	Description
		The custom object name is the type code as defined on the Transaction Type page, and it is preceded by the offering code, such as *LNP1* or *PZ1* and a "_c" suffix. LNP1 is the prefix for permits and PZ1 is the prefix for planning and zoning applications. For example, if for a permit the Transaction Type Code is *Fence*, the custom object name in the script will be *LNP1Fence_c.*
Minimap	All	In between the work area and the attributes panel, there is a narrow column serving as a minimap for your script. For longer scripts, you can use the minimap to help locate where you are within the lines.
Script Name	All	By default, the script name follows this structure: field_script type or object_script type For example, the user-defined field Years Experience would have the following default validator script name: *YearsExperience_c_ validator.* You can change the script name if needed. To add multiple scripts of the current type, select *New* from the drop-down list.
Description	All	Add text to describe the purpose of the script.
Type	Triggers	Used only for triggers. Defines when the trigger runs, such as during the *Create* event. See the "Add Triggers" section below for more information.
Error Message	Validators Triggers	Provide the message that the system displays the user to correct any issues. For example, in the case of a validator script, the message appears if the data entered for the field does not pass the validation logic.
Field ID Search	Validators Triggers	Use the **Label** field to search for the **Field ID** value, which reflects the name under which the field is stored in the database and how you'd refer to it in your script.

Page Element	Script Type	Description
Parameters	Object Functions Global Functions	Used only for object functions and global functions. Enables you to define the parameters the function will accept.
Return Type	Object Functions Global Functions	Used only for object functions and global functions. Enables you to set the data type for the return value of the function.
Error Message	Validators Triggers	Provide the message that the system displays the user to correct any issues. For example, in the case of a validator script, the message appears if the data entered for the field does not pass the validation logic.
Save	All	Saves the current code.
Remove	All	Removes the business logic from the associated field or object. This may be required in some cases prior to removing the field from the intake form.
Close	All	Closes the editor without first saving any changes.

Note: While you can delete fields with Groovy logic associated with them, make sure the Groovy logic evaluates to True prior to deleting the field, otherwise you risk making the entire transaction type invalid.

Note: When referencing a field for *field level* logic, use *newValue* and *oldValue* to reference the current field value. At the object level, use the internal field name, such as *YearsExperience_c*. You can access the internal name of the field a few ways. You can select the field, and click **Add Logic,** to see how the field is referenced in the Groovy Script Editor. You can also review how the field is referenced in the JSON payload from a REST request, such as a describe request.

Setting the Scope of a Groovy Script

The following table outlines the possible scope of a Groovy script.

Scope	Description	Where Set
Field	You can add Groovy logic to act on a single field. The code you add runs only against the selected field. You can add Groovy to fields in delivered predefined field groups or to user-defined fields you have added manually.	Select the field to which you want to add validation logic, and click **Add Logic** in the Field Attributes panel for that field.

Scope	Description	Where Set
Object	If your script involves more than one field, you need to add that code at the object level. The *object* refers to the current intake form you are creating. For example, if you are creating a fence permit, the logic you add for the current object applies to fields in that fence permit definition.	When in the designer with the intake form open, click the **Add Logic** button at the top of the form, next to the **Preview** button.
Global	You can create global functions that can be called by any field-level script or object-level script in your offering.	When in the designer with a intake form open, click the **Add Logic** button in the header at the top of the form. You can access the Global Functions option only by opening the Groovy Script Editor at the object level.

Note: When you add logic at the field level, you can add Validator scripts only.

When you add logic at the object level, you can add these types of scripts:

- Validators
- Triggers
- Object Functions
- Global Functions

Note: For scripts at the field level use *newValue* and *oldValue* to reference the current field. At the object level, use the field name, such as *NumberofRooms_c* to reference fields.

Working With the Transaction Type Data Structure

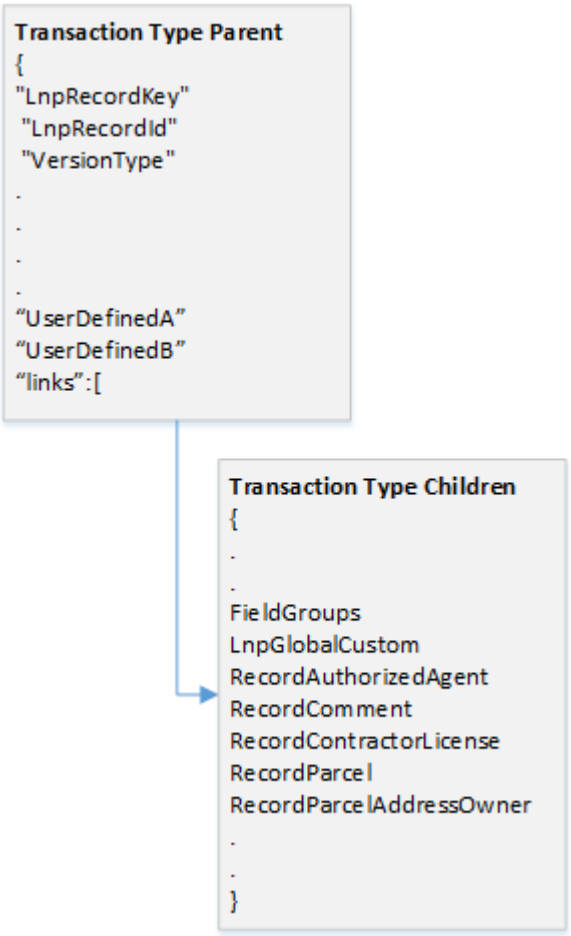
Accessing data stored within the transaction type business object requires and understanding of the underlying data structure. To understand the data structure, you need to become familiar with the JSON payload for a transaction intake form.

Use your REST client utility such as cURL or Postman to access the REST endpoint for an intake form. To find the name of the business object for your intake form, open the Details section in the Attributes panel for a field or grid and note the Business Object value.

You can use a “describe” request to view the data structure of the intake form, using a GET operation. For example:

```
https://servername.fa.us2.oraclecloud.com/fscmRestApi/resources/11.13.18.05/LNP1<transaction_type>_c/
describe
```

This example illustrates the parent-child relationship of the data within a transaction type.



The describe results show you the metadata for the business object, such as the name, type, and so on, such as LnpRecordKey, integer, and so on.

You can also submit a request to access data for a specific transaction by including the LnpRecordKey value to the request. For example:

```
https://servername.fa.us2.oraclecloud.com/fscmRestApi/resources/11.13.18.05/LNP1<transaction_type>_c/
<LnpRecordKey>
```

This example illustrates transaction type JSON returned in a REST client.


```
{
  "LnpRecordKey": 300100185175048,
  "LnpRecordId": "53",
  "VersionType": "O",
  "Classification": "PMT",
  "Status": "Submitted",
  "SystemStatus": "SUB",
  "Applicant": 300100170576056,
  "PersonPreNameAdjunct": "MR.",
  "PersonFirstName": "Peter",
  "PersonMiddleName": null,
  "PersonLastName": "Skate",
  "PersonNameSuffix": null,
  "PersonTitle": null,
  "DateOfBirth": null,
```

The top portion of the JSON reflects the parent object, and the sections within the "links" block are the child objects. The parent object contains attributes from the transaction type, some general field groups, such as Application and Applicant, and any user-defined fields you have added.

The majority of the fields in the field groups reside in a single object, the FieldGroups object (FieldGroupsVO). Reusable fields reside in LnpGlobalCustom object (LnpGlobalCustomVO).

> **Note:** Lnp refers to the Permits offering. Other offerings, such as Planning and Zoning or Business Licenses, use other naming conventions, such as PnzGlobalCustomVO.

Knowing the object on which you are writing your logic is essential for achieving the desired scope of your results. When you write logic at your transaction type level, as in `Custom Object LNP1FencePermit_c`, that logic applies locally, only for that transaction type. If you write logic at a child object level, as in `Custom Object FieldGroupsVO`, that logic is global and would apply to any instance of that field group or field group field in any transaction type where it appears.

> **Note:** Be very careful when writing logic globally to the FieldGroups child object, because the logic runs for *all* record types, not a specific record type. Logic that applies in one scenario, may not apply to all. Logic at the FieldGroups level always fires even if a particular field in that object isn't used in the current transaction. If you write logic at the FieldGroups level, consider including code to check if the value(s) of field(s) is not null prior to running a validation, for example.

When you open the Groovy Script Editor, comments at the top of the work area indicate where the logic you write will apply. For example:

```
/* Object Validator for Custom Object LNP1FencePermit_c */
```

What element you have selected in the workspace and where you click the **Add Logic** button (in the header or in the Field Attributes panel) determines where your logic applies, either locally to the current transaction type only, or globally. The following table provides selected scenarios to illustrate how the comments at the top of the work area indicate the scope of the logic for that script.

Workspace Selection	Comment	Logic Scope
1. Select a field in a child field group, such as Front Fence Height in the Fence field group. 2. Click **Add Logic** in the Field Attributes panel.	`/* Field Validator for field FenHeightFront Custom Object FieldGroupsVO */`	The Logic applies to the Front Fence Height field in the selected field group. This field is stored in the child Field Groups view object, where all other fields appearing in field groups are stored. Logic written at this level for this field will apply globally to all instances where this field group is used.
1. Select a field in a child field group, such as Front Fence Height in the Fence field group. 2. Click **Add Logic** in the header.	`/* Object Validator for Custom Object FieldGroupsVO */`	The Logic applies to the Field Groups view object, and logic applies globally to all instances where this field group is used. Because the logic is written at the object level it can apply to multiple fields in the Field Groups view object.

Workspace Selection	Comment	Logic Scope
		Note: Most field groups are considered child objects with the fields being stored in the Field Groups view object. Applicant and Application are considered parent objects, with their fields stored in the transaction type parent object.
1. Select a user-defined field (in this case Years Experience). 2. Click **Add Logic** in the Field Attributes panel.	`Field Validator for field YearsExperience_c`	The logic applies to the user-defined field *Years Experience* locally for that transaction type. **Note:** If the field is set to be reusable, then the logic you add applies to all instances where that field is used.
1. Select a group box or page tab. 2. Click **Add Logic** in the header.	`Object Function for Custom Object LNP1IDFencePermit_c`	The logic applies locally to multiple fields to the current transaction type.
1. Reusable user-defined field selected. 2. Click **Add Logic** in the Field Attributes panel.	`Field Validator for field ContractorName_c Custom Object LnpGlobalCustomVO`	The logic applies globally to that reusable in *any* intake form where it is used.

Accessing Data within Child Objects

When you are writing logic on a field or object at the child level, such as FieldGroups, you can reference the fields that reside on that object directly. For example:

```
/* Object Validator for Custom Object FieldGroupsVO */

FenHeightFront < FenHeightRear
```

If you are writing logic that is local to your transaction type intake form, and you want to access values in a child object, such as FieldGroups, for validations and comparisons, you can't directly reference the field names in your logic. The FieldGroups view object is a collection, so you need to parse the child record using the **hasNext()** method. For example:

```
/* Object Validator for Custom Object LNP1InfoDevResFence01_c */

// Identify and assign the object.
def vo = FieldGroups

while (vo.hasNext()) {
 // Access the next row in the row iterator.
 def currow = vo.next()
 // Run validation.
 currow.FenHeightFront < currow.FenHeightRear
 }
```

This resolves to a row iterator where you can use built-in functions, such as next() and first(), to navigate through the child object.

If you are writing logic that is local to your transaction type intake form, and you want to access values in a child object, such as LnpGlobalCustom, for validations and comparisons, you need to write code similar to accessing FieldGroups, but because LnpGlobalCustom isn't a collection, you don't need to use the **hasNext()** iteration method. For example:

First, instantiate the child object:

def vo = LnpGlobalCustom

Then use dot notation to access the desired field:

vo.EstimatedCost_c > 100

> **Note:** You can also use dot notation to access the field, such as **LnpGlobalCustom.EstimatedCost_c**.

> **Note:** This same approach can be used for accessing values in grandchild objects. See the section below named "Example: Accessing Field Values in a Grandchild Object."

Accessing Data Within Grids

When you add a grid to an intake form layout, a child object for each grid gets added to the intake form custom object. The following example illustrates a grid child object in the JSON for an intake form REST resource.

```
{
 "rel" : "child",
 "href" : "https://servername.fa.us2.oraclecloud.com/fscmRestApi/resources/11.13.18.05/
 LNP1BuildingPermit2022_c/{id}/child/BuildingPermit2022g1Collection_c",
 "name" : "BuildingPermit2022g1Collection_c",
 .....
 }
```

Use the Details section of the Grid Attributes and note the name of the grid. The name of the grid child object follows this syntax:

<transaction type ID>g*N*Collection_c

Where *transaction type ID* is the value entered as the type ID, such as **Permit Type ID**, on the Permit Type page. *N* reflects the sequential order of the grid within the form layout.

For example, if you've added two grids to a permit with a permit type ID of BuildingPermit2022, the two child objects for the grids are:

- BuildingPermit2022g1Collection_c
- BuildingPermit2022g2Collection_c

You access data within grids the same as you do other child objects, such as the field groups object. For example:

```
def vo = BuildingPermit2022g1Collection_c

while (vo.hasNext()) {
// Access the next row in the row iterator.
def currentRow = vo.next()
// Run validation.
return currentRow.TotalCost_c < 5000
}
return true
```

Where the *BuildingPermit2022g1Collection_c* identifier is the grid name.

TotalCost_c is the grid field identifier.

When working with grids in Groovy, keep these items in mind:

Src_* object	Don't use the Src_* child object. This object references: • All rows saved to the database for the record type, regardless of record key. • Extraneous rows for the specific record key.
*_Tgt child object	Always use the *_Tgt child object. • Validator: The *_Tgt object references only the rows that are saved in the database. Unsaved rows in the grid UI are excluded. • Triggers: The *_Tgt object references all the rows in the grid. Rows saved in the database are included, and unsaved rows in the grid UI are included.
Use Triggers	Groovy accessing grid data should run only within a triggers event.

Using the Field ID Search

When you reference a field in your script, you use the internal field ID, not the label that you see on the form design. For fields stored in child objects, you also need to know the object name. The Field ID search feature enables you to find the internal field name and object name.

1. Use the **Label** drop-down list to select or search for the label of the field as it appears in the form design.

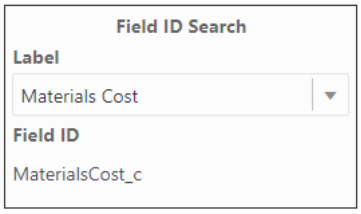
   Initially, the drop-down list contains only a subset of the fields stored in the transaction type parent object. To search for additional fields, you need to enter partial search criteria to begin building a result list matching possible fields.
2. Select the desired field label from the result list.

3. Use the value displayed for the **Field ID** in your script.

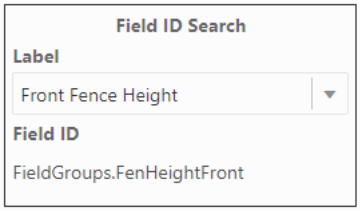
   Fields stored on the transaction intake form object do not list an object, while fields stored in the field groups or global custom object show the object and field in dot notation, as in **ObjectName.FieldName**.

   The following examples illustrate that depending on where the field is stored, it may or may not include an object name.

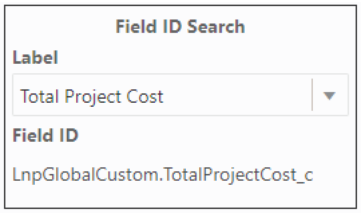
   This example illustrates using field ID search on a user-defined field, showing just the field name.



   This example illustrates using field ID search on a field group field, showing the object and field.



   This example illustrates using field ID search on a reusable field, showing the object and field.



Running Groovy Depending on Request Type

You can have your Groovy logic run depending on the current request type. The supported request types are:

- Submit
- Save
- Import

You can use built-in Groovy functions to return the request type to evaluate and then selectively run your logic depending on the result. For example, in some situations you may want a validation to run only when an intake form is submitted, but not when it is saved or when legacy data is being imported into the system for that transaction type.

Request Type	Function	Description
Submit	`isSubmit ()`	Returns true if the request type indicates the intake form is being submitted.

Request Type	Function	Description
Save	`isSave ()`	Returns true if the request type indicates the intake form is being saved.
Import	`isImport ()`	Returns true if the request type indicates legacy data is being imported into the transaction type associated with the intake form using the supported import utilities.

These functions are supported for:

- Validations
- Triggers
- Object functions

Note: The request type built-in functions can't be used for global functions.

Note: Validation for fields you've set to be required fields runs *only* for the submit request type. By default, validations for required fields do not run for the import request type.

For example, to run a validation only when an intake form is submitted, you could use:

```
if(isSubmit())
 TotalCosts_c <= EstimatedCosts_c;
```

Or, to run the logic only if it's not a data import request, you could use:

```
if(!isImport())
 return true;
/* Continue with validation logic. */
```

Using Intake Form Built-In Functions

You can use these built-in functions to get information about the intake form and run specific logic based on the return.

Function	Description
`getLayoutVersion`	Returns the layout version.
`getTransactionType`	Returns the transaction type, such as the permit type, planning and zoning type, and so on.
`getObjectName`	Returns the underlying custom object name.

Adding Validation Logic

A *validator script* provides data integrity for end user input. A validator script is a logical construct that returns either *true* or *false.*

The essential components of a validator script include:

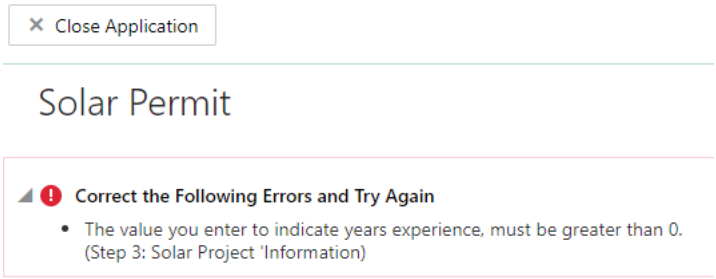
- Groovy logic
- Error message

For example, assume you have a form with the field *Years Experience* to indicate the number of years experience of a solar panel installer. To meet permit criteria for your agency policy, you can validate that the applicant doesn't enter zero by adding the following validation script to the field.

```
newValue > 0
```

At runtime, if the field value entered does not meet your validation logic criteria during a save or submit request. The validator script returns either true or false. If the return is false, the system displays the error message so the user can resolve the issue.

This example illustrates the runtime message displayed by a Groovy validation script.



Validator scripts can be run at the field level and at the object level. Field-level validation is for single-field validation, and object-level validation involves validation of multiple fields. Use the object level when you reference multiple fields in the validation, and use the field name, not *newValue*. For example:

```
TotalCosts_c <= EstimatedCosts_c
```

> **Note:** The Groovy script executes only when the user either saves or submits the form. If there is any delivered validation for a field contained within a delivered field group, that delivered validation runs before any Groovy validation you have added. Before adding Groovy logic to a field delivered in a predefined field group, make sure to test the field group at runtime to become familiar with any existing, internal validation.

> **Note:** In the case of multiple field-level validations, each runs independently. If you have added object-level validations also, the object-level validation runs *only* if all field-level validations have passed.

Adding Triggers

Triggers enable you to invoke processing logic based on an event.

In addition to the common attributes, including Script Name, Description, and Error Message, you also set the Type. Setting the type is how you define the event on which the trigger is based.

Type	Description
On Initialize	Runs only when the intake form is saved the first time. It does not run on subsequent saves or submits. Use to assign programmatic default values to one or more fields.
On Invalidate	This trigger type isn't currently used. Fires on a valid parent object when a child row is created, removed, or modified, or also when the first persistent field is changed in an unmodified row.
On Remove	This trigger type isn't currently used. Fires when an attempt is made to delete an object. Returning false stops the row from being deleted and displays the trigger error message.
Before Insert	Fires before a new object is inserted into the database. This event runs on the first submit for an intake form.
Before Update	Fires before an existing object is modified in the database. This event runs on each save or submit of the intake form.
Before Delete	This trigger type isn't currently used. Fires before an existing object is deleted from the database.

Adding Functions

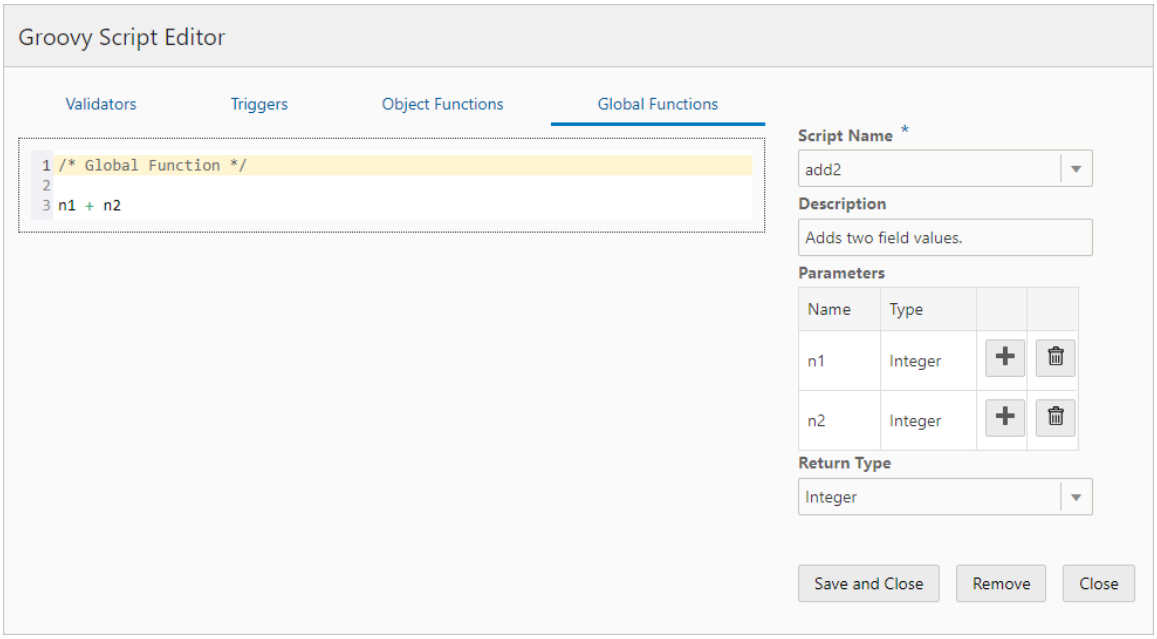
You can create functions at the object and the global level.

> **Note:** Groovy functions have an elevated access to be able to update fields, even if they are set to be hidden, confidential, or read-only. While users, such as the registered public user filling out an application, might not have access to certain fields, an object function does have the access to update these fields.

Level	Description
Object	Object functions provide business logic to be used within the scope of the current business object, which is the current transaction type, such as an intake form for a permit.
Global	Global functions can be called from any intake form design within the offering.

The interface for creating functions is the same for creating object or global functions, and it contains the same general options in the editor, such as Script Name, Description, and Error Message, plus the additional items listed below.

This example illustrates defining a function, parameters, and return type. Details are in the surrounding text.



Page Element	Description
Parameters	Define the parameters received by the function when it is called. Add the name of the parameter and its data type. Refer to the following table for data type descriptions. Click **Add** to include multiple parameters in the grid. Click **Delete** to remove a row from the grid.
Return Type	Define the data type of the value returned by the function. Refer to the following table for data type descriptions.

Note: Make sure to add all the required parameters and set your return type prior to saving a new function. Once you save a function, you can't change its signature.

You can apply these data types.

Data Type	Description
Void	Applies only to return values. Use in situations when the function does not provide a return value to the caller, such as when the functions performs a task, writes an output line, and so on.
String	A text value.
Integer	A whole number, either positive or negative.
Boolean	A logical true or false value.

Data Type	Description
Long	An integer value in the range of $\pm 2^{63}$-1.
BigInteger	An integer of arbitrary precision.
Double	A floating-point decimal value in the range of $\pm 1.79769313486231570 \times 10^{308}$
Big Decimal	A decimal number of arbitrary precision.
Date	A date value with optional time component.
List	An ordered collection of objects.
Map	An unordered collection of name/value pairs.
Object	An entire business object, which in this case refers to an instance of an intake form.

Once you create the function, you can call it from other scripts. For example:

```
/* Object Trigger for Custom Object LNP1SolarPermit_c */

/* Define variables and explicitly cast the type (Integer).*/

def n1 = (Integer) EquipmentCosts_c
def n2 = (Integer) LaborCosts_c

/* Call the global function add2 to add total costs, passing in the variables.*/

TotalCosts_c = adf.util.add2(n1, n2)
```

For a function defined at the object level, you can call the function using just the function name, such as `add2`.

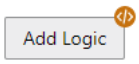
For a function defined at the global level, you need to add as a prefix `adf.util`. For example, if the global function name is add2, you call the function using `adf.util.add2(param1, param2).`

In this example, there is global function named `add2`, which adds two parameters passed in. On the Triggers page, the trigger script is set to run on the Create event type, and the values for *EquipmentCosts_c* and *LaborCosts_c* are passed to the function to calculate the value of the *TotalCosts_c* field.

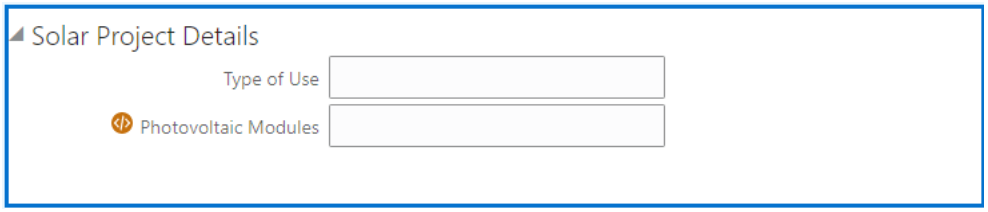
> **Note:** When defining variables for number data types, explicitly cast the data type of the parameters you define. So, if the field is an integer, explicitly specify *(Integer),* or if the field is a float number, specify *(Double).* For example: `def n1 = (Integer) EquipmentCosts_c`

Identifying Where Groovy Is Located

When adding Groovy to your intake forms, the Intake Form Designer displays an icon to indicate which elements have Groovy business logic associated with them. The Groovy icon enables you to find your business logic quickly to assist development and troubleshooting efforts.



If you've added Groovy logic at the object level, the icon appears on the **Add Logic** button at the top of the form design.



If you've added Groovy logic at the field level, the icon appears next to the field where you've added Groovy logic.

Example: Basic Calculations

You can use functions to calculate, but you can also use basic expressions, such as A + B, A - B, and so on. For example:

```
TotalCost_c = EquipmentCosts_c + LaborCosts_c
```

Example: Accessing User Security Context

To access information regarding the current user, instantiate the getSecurityContext() object. In this example, the script checks if the user is assigned a particular role, and if not, displays the error message.

```
/*Get the security context.*/

def secCtx = adf.context.getSecurityContext()

/*Check if the user has the desired role.*/

if (secCtx.isUserInRole('PSC_ROLE_NAME')) {

/*If user has role, then check if field is not blank. If field is blank,
returns false, showing error message.*/

 return newValue != null
}

/*If the user doesn't have the role, returns true, bypassing the error message.*/

return true
```

Example: Using Regular Expressions

To validate the format of a phone number, such as 111–222–3333, you can use a regular expression. For example:

```
newValue ==~ /^(\d{3}\-\d{3}-\d{4})/
```

Example: Copying a Field Value to Another Field

To make a field reflect the value of another field (to copy it), you can use a trigger. For example, you may have a field named Estimated Project Cost that will be reflected in the Final Cost field once the permit has been processed. To do this:

1. Use the Triggers tab.

2. Enter this code:

```
FinalCost_c = EstimateProjectCost_c
```

3. Select *Before Update* from the **Type** drop-down list.

Example: Working with Dates

When working with dates, switches and so on, and you are checking for null values, it is recommended to use the following construct:

```
(!ExpirationDate_c)
```

Instead of using something like:

```
(ExpirationDate_c == null || ExpirationDate_c == "")
```

This can help to avoid script saving issues and unexpected validation results.

Example: Validation Return Value

When writing validation, your code must always return either a true or false when exiting. Failing to do so can cause validation to fail a validation by mistake. If an exit occurs, such as at the end of the code, without returning a true or false, the assumed return is false. To avoid this, consider the following approach.

```
if (TotalProjects_c < 10)
 return false;
else
 return true;
return true;
```

Example: Validation by Business License View Type

When defining validation logic for a specific from view, such as a business license amendment view, you must insure that it only runs within that view to prevent erroneous save or submit errors.

For example, some fields that have Groovy validation may only be visible in the amendment view of that form. However, validation logic runs regardless of the view. As such, saving or submitting while in another view type, such as origination, will cause erroneous error messages.

To prevent this, your logic should be written to detect the view by checking the version type (**VersionType**). The version type can be:

- A: Amendment
- O: Origination
- R: Renewal

For example, the following validation logic runs only if the amendment view is active.

```
if (VersionType == "A"){
 if (BusinessLocations_c < 5)
 return false
 else
 return true
 }
 return true
```

Example: Accessing Field Values in a Grandchild Object

The following sample JSON illustrates two objects within the object hierarchy of a permit custom object.

```
"item" : {
 "links" : [ {
 "rel" : "child",
 "href" : "https://servername.fa.us2.oraclecloud.com/fscmRestApi/resources/11.13.18.05/LNP1PERMITNAME_c/
{id}/child/RecordContractorLicense/{id}/child/RecordContractorLicFact",
 "name" : "RecordContractorLicFact",
 "kind" : "collection",
 "cardinality" : {
 "value" : "1 to *",
 "sourceAttributes" : "LnpLicenseKey, LnpRecordId, LnpRecordKey",
 "destinationAttributes" : "LnpLicenseKey, LnpRecordId, LnpRecordKey"
 }
```

Parent/Child Relationship	Object
Parent	LNP1PERMITNAME_c
Child	RecordContractorLicense
Grandchild	RecordContractorLicFact

The following example shows how you can use the hasNext () function to iterate through child and grandchild objects.

```
 //Define child object.
 def vo = RecordContractorLicense

while (vo.hasNext()) {
 //Access the next row in the row iterator.
 def currow = vo.next()
 //Define grandchild object.
 def factVO = currow.RecordContractorLicFact
 //Run validation on the record contractor license.
 while (factVO.hasNext()){
 def factRow = factVO.next()
 if (factRow.LicFactCode != "C46" && Jobvalue_c > 5000)
 return false
 }
}
return true
```

Example: Running Groovy Depending on Intake Form Layout Version

Unless specified, Groovy logic will apply to all intake form layout versions.

Use the `getIntakeVersion()` built-in function to get the current intake form version, and run your business logic for specific version. For example:

```
def version = getLayoutVersion()
if (version == "V2"){
 if (TotalCost_c < 5000)
 return false;
 else
 return true;
 }
 return true
```

For more information on intake form layout versioning, see *Creating Intake Form Versions*.

Example: Setting Default Values for Secured Fields

When a field has been set to be hidden from the public user, confidential, or read-only, to set a default value, it is recommended to use Groovy to set the default value *in addition to* setting the values, set the **Default Value** field in the Attributes panel. Doing so covers the widest range of use cases.

When setting the default value with Groovy, use an object function to set the field values, and call the function from a trigger.

> **Note:** Groovy functions have an elevated access to be able to update fields, even if they are set to be hidden, confidential, or read-only. While users, such as the registered public user filling out an application, might not have access to certain fields, an object function does have the access to update these fields.

For example, in the case of a switch named Environmental Inspection that you want turned on (enabled) by default, create an object function containing:

```
EnvironmentalInspect_c = 1
```

Assume the object function is named *setSwitchDefaultValues* with **Return Type** set as *Boolean.* You don't need to define any parameters.

> **Note:** To avoid potential data type casting errors, if you group multiple field default values within the same function make sure they are of the same data type. For example, if the default values are switches, group them together in a function with a return type of *Boolean*, or if the default values are for number fields, group them together in a function with a return type of *Integer*.

In the trigger, select the desired event type, such as *On Initialize, On Insert,* or *On Update,* and call your function like the following:

```
setSwitchDefaultValues()
```

> **Note:** Currently, default values set for fields that are hidden from the public user:
> - Aren't included in the application fee summary.
> - Don't appear in a copied application until the new application has been saved.

> **Note:** Default values are set only on the initial save of the form. Groovy should be used if there is a requirement to set default values for newly added fields that will appear on in-flight forms.

Example: Setting the Value of a Reusable Field

You can set the value of a reusable field for all forms that it appears on using an object-level trigger.

1. Directly select the reusable field within the intake form design.
2. With the reusable field selected, click **Add Logic** at the top of the form design (not within the Field Attributes panel).
3. Select the Trigger tab.

   The context text in the work space should appear similar to *Object Trigger for Custom Object BIGlobalCustomVo,* depending on your offering. Recall that the GlobalCustomVO objects store the reusable

fields. This context text indicates the Groovy will run at the GlobalCustomVO object-level and will run for each instance of a reusable field (in each form consuming it).

4. Set the value of the field.

   For example:

```
InterestRate_c = 0.06
```

Example: Calculating Grid Column Total

In this use case, *ItemsTotal_c* is a user-defined field containing the sum of the *NumericItemValue_c* column of the grid.

Use a trigger to run this Groovy.

```
def grid = LNP1RMOLNPGROOVYGRIDg1_rel_LNP1RMOLNPGROOVYGRIDg1_LNP1RMOLNPGROOVYGRID_Tgt

if ( grid.hasNext() ) {

 while (grid.hasNext()) {
 def currentRow = grid.next()
 ItemsTotal_c = ItemsTotal_c + currentRow.NumericItemValue_c
 }
} else {
 <your additional logic>
}
```

Example: Validating a Grid During Submit

In this example, the Groovy verifies if a grid has rows or not and validates any rows as needed.

Use a trigger to run this Groovy.

```
if (!isSubmit()) {
 return true
}
// Get reference to the grid.
def grid = LNP1RMOGRIDGROOVYg1_rel_LNP1RMOGRIDGROOVYg1_LNP1RMOGRIDGROOVY_Tgt

if (!grid.hasNext()) {
 // No valid rows, throw an exception
 throw new oracle.jbo.ValidationException("Grid is empty.")
} else {
 // Check for at least one valid row in the grid
 // Example: a required field has a value on submit
 def validRowFound = false
 while ( grid.hasNext() ) {
 row = grid.next();
 // Checking number field
 // Checking string field is similar
 if ( row.GridField1_c != null && row.GridField1_c != "" ) {
 validRowFound = true
 }
 }

 if (!validRowFound) {
 // No valid rows, throw an exception
 throw new oracle.jbo.ValidationException("Valid row not found in grid ")
 }
}
```

Example: Accessing a Lookup Value

In this example, Groovy is used to access a lookup value stored in the PscCcLookupValueVO object.

```
/* Object Validator for Custom Object LNP1Building_c */
def vo = newView("PscCcLookupValueVO");
def vc = newViewCriteria(vo);
def vcr = vc.createRow()
def vciName = vcr.ensureCriteriaItem("LookupType")
vciName.setOperator("=")
vciName.setValue('PSC_COM_CC_EVENT_RUN_TYPE')
vo.appendViewCriteria(vc)

while (vo.hasNext())
{
 println("inside while")
 def row = vo.next()
 if (row.LookupCode == 'ORA_SYNC')
 println(row.Description)
}
```

Adding Rich Text Areas

This topic describes how to add rich text areas to your intake forms so that you can display formatted text in application intake forms.

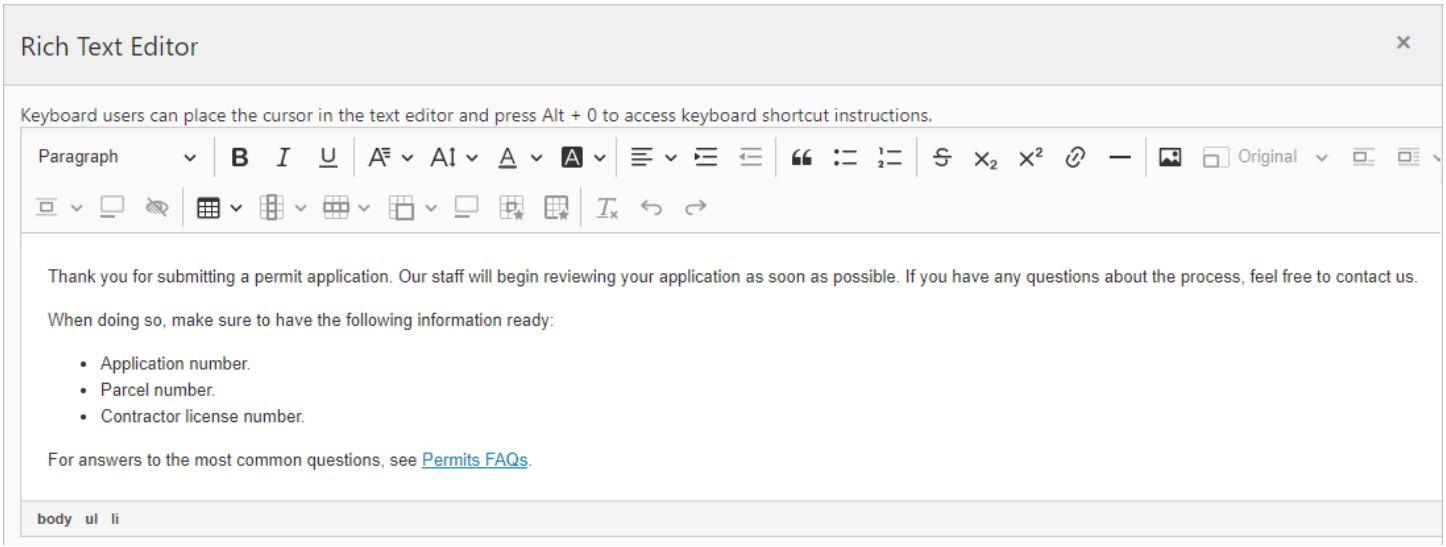
Rich Text Area Overview

In some cases, you may need to add rich text areas to your application forms so that you can display formatted text for users filling out the application. For example, if you needed to provide additional information, such as instructions or reference material, you can provide that within a rich text area.

> **Note:** The rich text area provides a way for *your agency* to provide read-only formatted text for end users. A rich text area does not enable the end user to insert formatted text into the form.

When you add a rich text area element to your form, an Edit button appears in the Field Attributes panel when you select the rich text area element. Click the **Edit** button to launch the Rich Text Editor dialog box.

This example illustrates the Rich Text Editor dialog box displaying bold, colored, and italicized text; normal text; and text within a bulleted list.



The Rich Text Editor dialog box provides these formatting options:

- Font size
- Bold, italic, underline
- Copy formatting
- Text color
- Text background color
- Numbered and bulleted lists
- Undo and redo
- Increase and decrease indentation
- Links
- Horizontal line
- Images

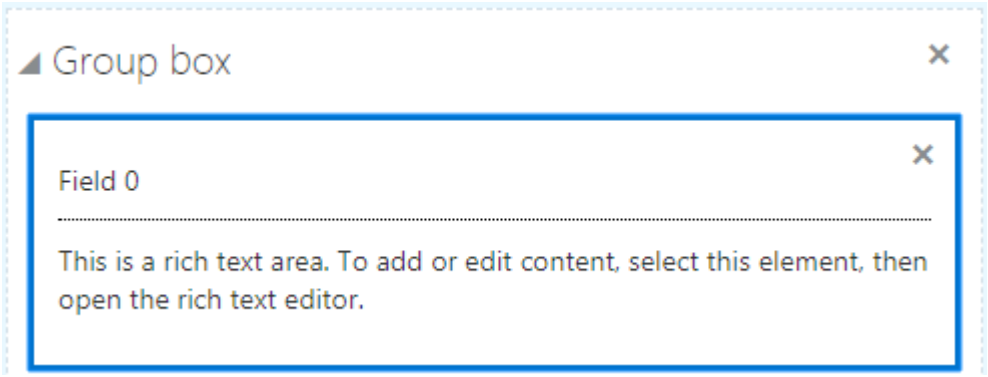
Adding a Rich Text Area to a Form

To add a rich text area:

1. Insert a group box into your form where you want to place the rich text area.
2. From the Add New > General list, drag and drop a rich text element into the group box.

3. Select the rich text area element.

   This example illustrates the rich text area element being selected prior to rich text being added.



4. In the Field Attributes panel, click **Edit** to open the Rich Text Editor dialog box.

   > **Note:** If needed, you can use the **Description** field to enter a description of the contents of the rich text area for other implementation team members. The description you enter only appears in the designer; it is not be displayed at run time.

5. Add text and use the desired formatting options.
6. Click **OK.**
7. Save your form layout.

Adding Contextual Help to Forms

This topic describes how to add help text to various parts of your intake forms to aid public users when they are filling out an application form.

Working with Contextual Help

If you determine that the end user needs additional information to understand a user-interface element in your intake form, you can add contextual help text to that user-interface element. If you add contextual help to a user-interface element in your intake form design, the system displays a Help icon next to the label of that user-interface element.

You can see the Help icon in both the design and runtime mode. At runtime, end users click the Help icon to display your help text in a pop-up, without leaving the page.

> **Note:** At design time, the Help icon does not display the help text popup when clicked.

You can add contextual help text to these intake form elements:

- Page tabs
- Field groups
- Group boxes
- Fields (applies to fields in field groups and to user-defined fields)

Note: For group boxes and field groups, you can add help only when the Show Label attribute is turned on.

You can't add contextual help text to these intake form elements:

- Radio sets
- Check box sets

If you need to add help for radio sets or checkbox sets, use a group box to contain the control and add the help text to the group box container.

Adding Contextual Help

To add contextual help:

1. Select the page element to which you want to add contextual help.

   Note: You cannot add help text directly to radio sets and checkbox sets. Add help text to a group box surrounding the radio sets or checkbox sets.

2. Click the **Help** button in the attributes panel.
3. On the Contextual Help Setup page, note the Type Code, Page Name, and Page Object values.

   These values uniquely identify the page element to which you are associating the contextual help. You can't change these values. They are read-only and maintained by the application.

Item	Value
Type Code	An automatically generated value consisting of the internal product code and the permit type code derived from the permit type definition.
Page Name	The name of the page tab on which you are adding help. Regardless of what the page label is on the tab, the application displays each tab using the default name in sequence, such as tabs1, tabs2, and so on. For example, the second page tab in an intake form may have the name *Fence Information,* however in the Page Name field it will appear as *tabs2.*
Page Object	Identifies the page element for which you are adding help. Regardless of the page element's label, the application displays the internal naming convention as the field value, which is the page element type code + sequence added. For example, for the second field added to the form the field value is *fields2,* which indicates the element is a field and it is the second field added to the form. The page element type codes are: o Field groups: *ccas* o Group boxes: *widgets* o Fields in field groups: *<field group>_<internal field name>* (such as *ccas2_ReleaseDate*)

Item	Value
	○ User-defined fields: *fields*

4. In the **Description** field, add text to describe the purpose of the help text so other implementation team members can understand the content.
5. Click the **Add New** button in the Contextual Help Details grid to display the Add Context Help Details dialog box.

   The **Type** drop-down list will show *Agency Defined.*

   > **Note:** Help topics of type *System Defined* are provided by Oracle and should not be altered or removed. Use the *Agency Defined* help topic type to add help topics specific to your implementation. If you want your custom help text to display instead of delivered help text, disable the System Defined help topic, create your custom topic, and enable it.

6. Activate the **Help Content** edit box by clicking to the right of the **Help Content** field label.
7. In the Help Content edit box, enter your help text.

   The system provides rich-text editing features, which enables you to implement limited formatting options, as needed.
8. When you've added the content, and you are ready for it to be viewed by end users, turn on the Enabled switch.

   > **Note:** To prevent the help content from displaying at run time, turn off the Enabled switch.

9. Click **Save** on the Contextual Help Details page.
10. Click **Save** on the Contextual Help page.
11. Confirm that the help icon appears on the page tab or next to the page control label in your intake form design.

For more information on contextual help, see *Setting Up Contextual Help*.

Reorder Intake Form Elements

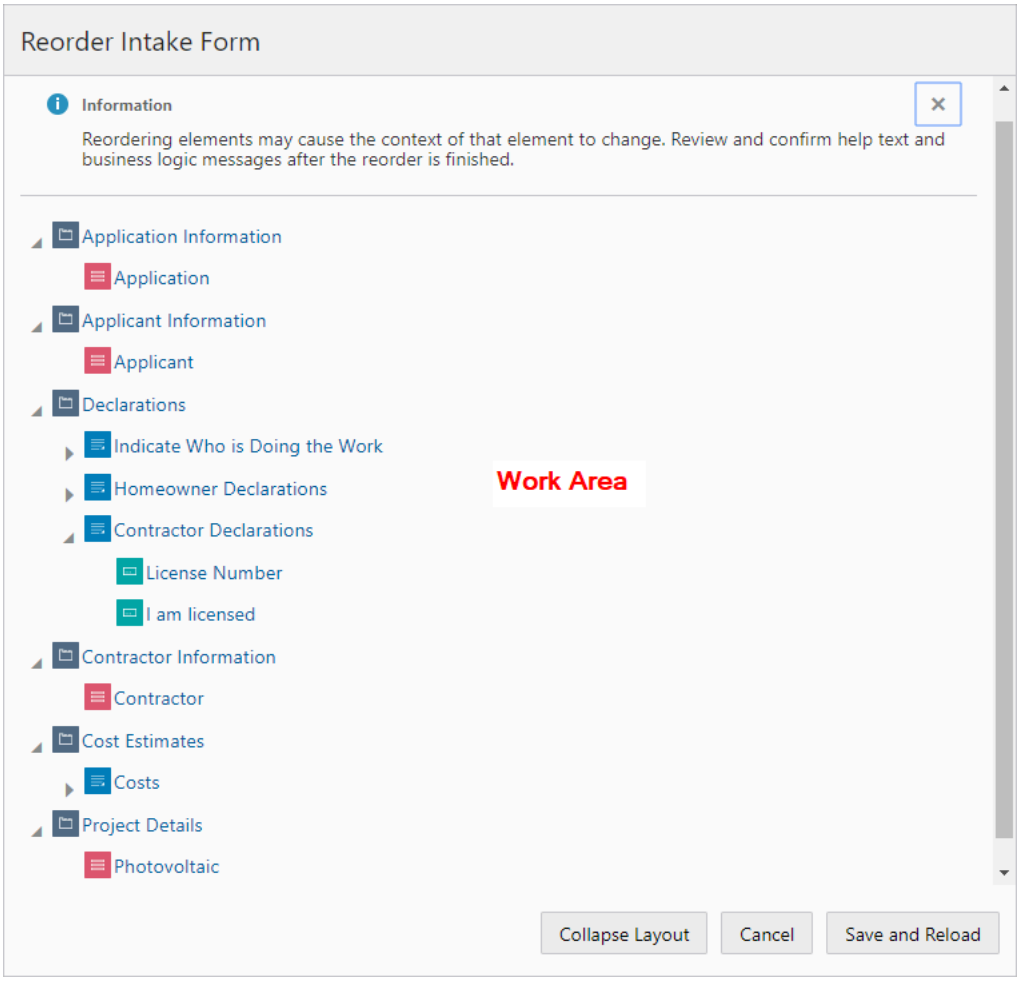
This topic describes how you can move form elements, such as pages, field groups, group boxes, and user-defined fields to different locations within the form design.

As you build intake form designs, you may need to move form elements from one location to another for a variety of reasons, such as improved logical grouping, control display requirements, end-user feedback, and so on. You use the Reorder Intake Form modal page to move form elements and reorder the intake form design.

> **Note:** For Code Enforcement intake forms, you can reorder the elements within the drop zone only.

To access the Reorder Intake Form window, select **Manage Design** > **Reorder.**

This example illustrates the Reorder Intake Form page. Details are in the surrounding text.



Note: The label of the element appears as it is defined in the form design. Any label that is set to be hidden, such as the label for a field group or group box, will appear in the element tree.

Page Elements	Description
Work Area	The work area is where you view the current structure and order of your intake form in the element tree and perform any required reordering tasks. The work area displays each page tab, field group, group box, and user-defined field in the form design as a node within a hierarchical element tree.
Collapse Layout	Collapses element tree view to display only the highest-level node in the hierarchy, the page tabs.
Expand Layout	Expands the element tree to display more detail in the hierarchy, exposing field groups, group boxes, and user-defined fields (if the their group box container was previously expanded). The **Expand Layout** button appears only after the element tree has been collapsed. **Note:** By default, user-defined fields are hidden to simplify the initial display. You need to manually expand the group box node that contains them.

Page Elements	Description
Cancel	Closes the window and does not save any changes made.
Save and Reload	Saves the changes you have made to the order and reloads the form design to display the new order.

You can identify the element nodes in the hierarchical tree using this key.

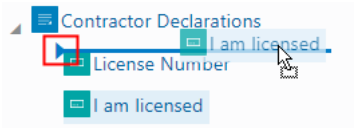
Page Element	Description
	Indicates a page tab.
	Indicates a field group.
	Indicates a group box.
	Indicates a user-defined field. **Note:** The individual fields contained in a field group are not displayed.

Moving Elements Using Drag and Drop

1. Left-click and hold to select the element you want move.
2. Drag the selected element to the desired location, using the drop indicator as a guide.

   The drop indicator shows you whether you are dropping an element before, within, or after another element.

   This example illustrates dragging and dropping form elements in the element tree. Details are in the surrounding text.

3. Release the left mouse button to drop the element in the indicated position.

Moving Elements Using Cut and Paste

1. Cut the element you want to move by selecting it and:
   - Pressing Ctrl + X.
   - Right-clicking and selecting *Cut* from the pop-up actions menu.

2. Paste the element to the desired location by selecting the new location and:
    - Pressing Ctrl + V and selecting the appropriate action from the pop-up menu.
    - Right-clicking and selecting the appropriate action from the pop-up menu.

Menu Item	Description
Cut	Cuts the selected item to the clipboard.
Paste Before	Pastes a cut item before the currently selected element.
Paste After	Pastes a cut item after the currently selected element.
Paste Inside	Pastes a cut item inside the currently selected element, such as a page tab or group box.
Paste First	Pastes a cut item as the first item within the currently selected container, such as page tab or a group box.

Moving Elements Using the Keyboard

You can use these keyboard shortcuts when reordering form elements.

Shortcut	Description
Tab	Use to arrive at the first focusable element in the work area, which is the first page element node, and then to each button in the order they appear.
Shift + Tab	Use to go the reverse direction of Tab.
Up and Down Arrows	Use to move up and down the: • Element tree • Popup actions menu
Right Arrow	Use to expand an element node to reveal the elements it contains. For example, use Right Arrow to show the user-defined fields contained within a group box.
Left Arrow	Use to collapse an element node.
Shift + F10	Use to display the pop-up menu displaying available actions.
Esc	Use to close the actions pop-up menu.
Enter	Use to select an item on the actions pop-up menu.

Shortcut	Description
Ctrl + X	Cuts the selected element.
Ctrl + V	Displays the actions pop-up menu after an element has been cut, enabling you to select a paste option.

Reordering Page Element Considerations

The designer does not allow you to move form elements into invalid positions within the hierarchy, and the same rules applied when creating the initial form design apply also when reordering the form design. The following table outlines the rules governing each form element and any items you may need to consider when reordering elements in a form design.

Form Element	Reordering Rules and Considerations
Page tabs	Page tabs can't be dropped into another element. They can only be reordered within the element tree.
Field groups	You can: • Drop into another page tab • Drop into a group box • Reorder position within its container You can't: • Drop into another field group • Drop outside of a page tab or group box • Drop on a user-defined field • View or move fields contained by field groups
Group boxes	You can: • Drop into another group box • Drop into a page tab **Note:** By default, a dropped group box is added as the last element on the containing page or group box. You can't: • Drop into a field group or a user-defined field • Drop outside of a page tab
User-defined fields	You can: • Drop into group boxes only • Move location within a group box

The following table describes various conditions to consider when reordering form elements.

Condition	Description
Security	You can't drop an element into a page tab or group box that has security settings applied, such as the **Hide from public user** or the **Confidential** attribute enabled. **Note:** The **Confidential** attribute applies only to the Business License offering. Elements set to contain confidential information for the Business License offering can't be reordered.
Control Display	A controlled element can't appear before its controlling element in the form design order. For example, if a group box's display is controlled by a single-item checkbox, you can't move that group box to a position above that single-item checkbox.
Add Logic (Groovy)	Groovy logic executes when the form is being submitted, so the order of the form design does not affect the logic. However, it is recommended that you review the error messages displayed by your Groovy scripts to make sure the context is still valid after reordering.
Add Help	The display of help text does not depend on the order of the form design. However, it is recommended to review any help you have added to form elements to make sure the context is still valid after reordering.
Display Filtering	You can't move a form element into or out of a group box that has different filtering options selected. Review the filtering options for the element you want to move into the group box, set the filtering options to match, and then you can move the element into the group box. For example, you can't move a group box set only for origination into a group box that is set only for renewal.

Configuring Activity Filtering for Business Licenses

This topic describes how to configure display filtering for business license intake forms so that only applicable form elements appear in the intake form for the current business license activity.

Activity Filtering Overview

A business license can be involved in different activities, including:

- Origination: the initial application to be approved to establish and originate the business license.
- Amendment: the license holder makes changes to a submitted application or an existing business license.
- Renewal: the license holder renews the existing license for the next license period.

When creating a business license type, you have the options of enabling the license for renewal and amendment activity by turning on the **Allow Amendment** and **Allow Renewal** switches.

Note: License activity filtering does not apply to intake forms for business license consultations, which are separate intake form types.

Depending on the activity, it may not be necessary to view and edit all of the information contained in the business license. However, it would be inefficient to design a separate form for each license activity. Use license activity filtering so that you can create a single intake form that can be used for all the business license activities.

For example, using license activity filtering you can set some form elements to display only for license origination, or only for amendments, while others can be set to display for all business license activity.

You can apply license activity filtering to:

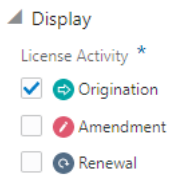
- Field groups
- Group boxes

Setting Filtering Display Options

To view the license activity display options:

1. Select the form element.
2. Expand the Display section in the Attributes panel.

   This example illustrates the license activity filtering options. Details are in the surrounding text.



Page Element	Description
Origination	The element is available for origination activity.
Amendment	The element is available for amendment activity.
Renewal	The element is available for renewal activity.

3. Select at least one license activity for the element.

   Note: You can select any combination of license activities, but at least one license activity filtering option must be selected for a field group or group box being added to a business license intake form design.

4. Save your changes.

Viewing the Runtime Display

This table illustrates how the selected license activity filtering options behave at runtime.

Origination	Amendment	Renewal	Behavior
Selected	Not Selected	Not Selected	Form element displays and is editable only for the origination activity. **Note:** An element set to display for only origination will display in both amendment and renewal as read-only.
Selected	*Selected*	Not Selected	Form element displays for the origination and the amendment activities.
Selected	*Selected*	*Selected*	Form element displays for the origination, amendment, and the renewal activities.

Setting Form Options

This topic describes the options you can set for the entire form to control the ways public users interact with the form.

Enabling the Review Page

The review page presents all the fields of a multi-tab form on a single, scrollable page for efficient review of the entered data prior to submitting the form.

By default, the review page displays:

- Form fields as read-only, but the end user can click the Edit button for each field group to modify the fields as needed.
- All field groups expanded.
- For multi-page view or single-page view.
- For all forms, unless disabled.

To disable the review page:

1. In the Intake Form Designer, click the Form Options link.
2. On the Form Options dialog box, turn off Review Page.
3. Click **OK.**
4. Click **Save.**

Setting a Confirmation Step

You can enable one of the pages in a form as a confirmation page to display after the end user has filled in the information and submitted the form. You create the confirmation step in the designer and then set it to be the confirmation step in the Form Options.

When set as the Confirmation Step, the page displays:

- At design time with the page tab filled in grey to indicate it is the confirmation step.
- At runtime as the last page in the train stop drop-down list.

Note: The confirmation step does not display as part of the single page view.

To enable the review page:

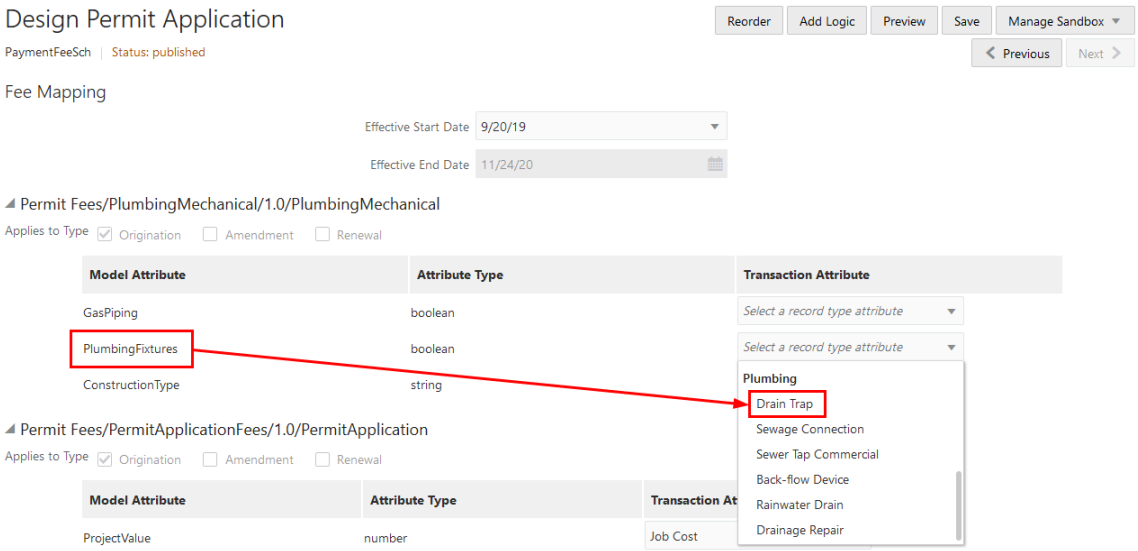
1. In the designer, click the Form Options link.
2. On the Form Options dialog box, select the desired page from the Confirmation Step drop-down list.
3. Click **OK.**
4. Click **Save.**

Mapping Form Fields to Decision Model Attributes

This topic describes how the fields added to an intake form in the designer are mapped to the fee model defined for the transaction type.

The Fee Mapping page in the designer is used to map attributes in the decision model to the fields added to the intake form. The Fee Mapping page is the second step in the Intake Form Designer, where designing the layout is the first step.

This image illustrates the Fee Mapping page in the design of a permit application.



You assign a fee schedule to an application type on the Transaction Type page using the **Fee Schedule** field. You map attributes from the fee schedule's underlying decision model created in OCI Process Automation to the fields you have added to your intake form either through delivered field groups or by adding fields manually.

If you added a grid to the intake form, you must map the grid attributes to the decision model using the Fee Mapping page. You select the grid from the **Transaction Object** field and then select its attribute from the **Transaction Attribute** field.

> **Note:** Not all model attributes need to be mapped. Because a fee schedule can be reused by multiple transaction types, only the model attributes required for fee calculations for the current application type need to be mapped. All other model attributes can be left blank.

For more information on setting up fee schedules, see *Setting Up Fee Schedules*.

For more information on decision models, see *Creating Decision Models for Fees*.

Mapping Application Fields to the Fee Item in the Decision Model

To access the Fee Mapping page in the form designer:

1. Navigate to the Transaction Type page:
    - **Business License Setup** > **Business License Type**
    - **Permit Setup** > **Permit Type**
    - **Planning and Zoning Setup** > **Planning Application Type**
    - **Code Enforcement Setup** > **Issue Subtype**
2. Select the transaction type that you want to view in the designer.
3. Click the **Design Form** button.
4. Click the **Next** button while in the application form setup step.
5. The fields on the Fee Mapping page are as follows:

Page Elements	Description
Effective Start Date and **Effective End Date**	The effective-dated entry for the fee schedule associated with the transaction type. If multiple effective dates exist, you must map fee items for each effective date.
Applies to Type	The type of application that the fee item applies to as defined in the fee schedule: - *Origination* - Original applications. This is the default value. - *Amendment* - Applications for amendments to business licenses. - *Renewal* - Business license renewal applications.
Model Object	The name of the grid in the decision model. This field appears only when the decision model includes an input that accepts multiple values.
Model Attribute	The name of the attribute as it appears in the decision model in Oracle Integration Cloud.

Page Elements	Description
	Not all model attributes must be mapped. Because fee schedules can be reused by multiple transaction types, only the model attributes required for fee calculations for the current transaction type need to be mapped. All other model attributes can be left blank.
Attribute Type	The data type of the model attribute, such as string, number, boolean, and so on.
Transaction Object	Select the grid that you manually added to the intake form. This field appears only when there are multiple fee values sourced from a grid.
Transaction Attribute	Select an attribute for the object you selected from the above field. The attributes are the column names of the grid you added. This field appears only when there are multiple fee values sourced from a grid.
Record Type Attribute	The field added to the intake form layout either contained in a predefined form element or a user-defined element you have added manually.

6. Select the record type attribute from the drop-down list that you want to map to the decision model attribute.
7. Click **Save**.

Configuring Simplified Fee Estimates

This topic describes how to configure intake forms to be able to show only the relevant fields for users completing fee estimates.

Fee Estimate Overview

Before submitting an intake form, public users can estimate the fees associated with the transaction so they can prepare to meet any financial obligations. During a consultation, agency users also use this feature to inform public users of the fees involved with specific transactions, such as building permits, business license renewals, and so on.

Based on how the intake form is designed, users can perform these types of fee estimates:

Fee Estimate Type	Description	Configuration Required
Standard	The user launches the fee estimate interface by clicking the estimate fees icon on the Apply page. The user navigates through the entire form providing values into fields involved in fee processing.	• Associate a fee schedule with the transaction. • Add the Fee Summary field group to the intake form. • Map form fields to the fee model.

Fee Estimate Type	Description	Configuration Required
Simplified	The user selects the Estimate Fees option from the **I Want To** menu on the landing page, and then launches the fee estimate from the Fee Estimate page. Only fields relevant to fee processing are displayed to the user, enabling quicker fee estimates. **Note:** Simplified fee estimates are not available for Code Enforcement applications.	• Associate a fee schedule with the transaction. • Add the Fee Summary field group to the intake form. • Map form fields to the fee model. • Use the information in this topic to configure specific form elements to display in the simplified fee estimate.

Note: Both registered and non-registered users (guest users) can estimate the fees involved with an application prior to submitting the intake form. For information on enabling guest user fee estimates, see *Setting Up Agencies*.

For more information on how users estimate fees, see *Estimating Fees*.

For more information on working with fees and intake forms, see *Mapping Form Fields to Decision Model Attributes*.

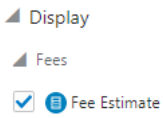
Configuring Form Elements for Simplified Fee Estimates

For a simplified fee estimate, you set the form elements in the form design that you want to display for users when they estimate fees. You can set these element types to display in a simplified fee estimate:

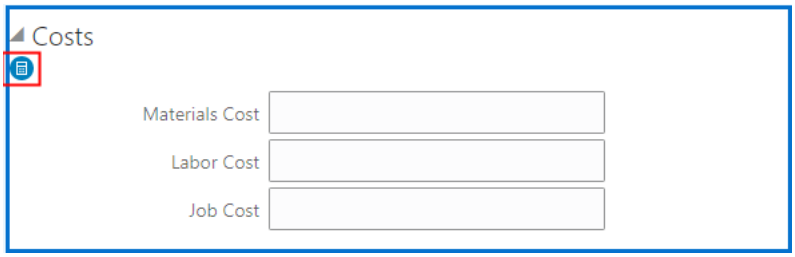
- Group boxes
- Field groups

To enable a form element for a simplified fee estimate:

1. Determine the fields you want to involve in the fee estimate.
2. Select the form element containing the fields.
3. Expand the Display section and the Fees section in the Attributes panel, and select **Fee Estimate.**



4. Confirm the selected form element displays the fee estimate icon, indicating it has been selected for simplified fee estimate display.



Note: The Fee Summary field group is included in the fee estimate by default, so it will always show the fee estimate icon. You need to add the Fee Summary field group to your form manually.

Note: If you have nested group boxes or field groups within group boxes, if the parent group box has been selected to display in the fee estimate so will the child elements contained in that group box, and the Fee Estimate option is read-only for the group boxes and field groups contained in the parent group box. If a parent group box is not selected to display in the fee estimate, child elements can be selected individually to appear in the fee estimate.

Testing Simplified Fee Estimates

You can test the simplified fee estimate straight from the intake form using the View Form feature. Select **View Form** > **Fee Estimate** to launch the fee estimate as it would appear for a user selecting it from the Fee Estimate page at runtime. The fee estimate launches in a new browser tab. Use this option to confirm the elements and fields displayed for the user and confirm the fee summary is correct.

Note: The fee estimate option is enabled only for forms that contain group boxes or field groups with the **Fee Estimate** option selected.

Note: The Fee Estimate page does not allow you to save or submit, and because of this any validation or business logic Groovy scripts that affect the fields involved in the fee calculations won't be triggered.

For more information on testing intake forms, see *Testing Intake Forms*.

Considering User Experience

This topic describes concepts related to using forms that implementation teams need to consider when designing forms.

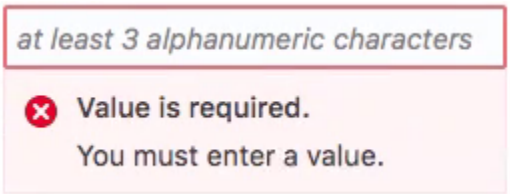
In general, when designing forms always seek to optimize usability and accessibility and consult industry-standard design guidelines to help address any challenges.

Required Fields

The system validates that required fields contain values prior to a submit request.

If a required field is empty the system displays the following error message on the page.

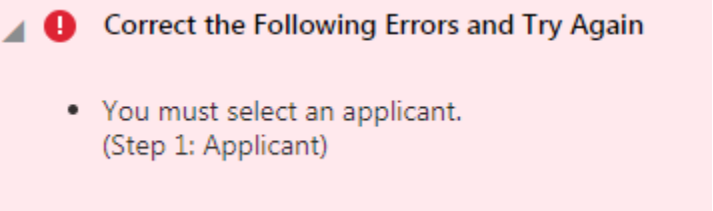
This example illustrates how the system displays messages to indicate what is required for a field.



The system displays an itemized list at the top of the form when clicking Submit so that in the case of multiple pages, the user can navigate quickly to the item and provide an acceptable value. The error message lists the error and the

location to which the end user must navigate to correct the error. The list if errors can be expanded and collapsed as needed.

This example illustrates an error message appearing at the top of the form, displaying in the list the error, and the location of the offending field.



Runtime Application Form Save Behavior

You can save an intake form as a draft prior to submitting it. You may need to save an intake form as a draft for a variety of reasons, such as needing to gather additional information or the form requiring more time than anticipated. After saving the form, the user can return to it to provide more information and ultimately submit the form.

Note: Saving a form is not currently an option for the Code Enforcement offering.

When saving a form as a draft, not all of the data validation occurs. However, the user will need to resolve any critical errors that the application can't save, such as adding a value with an incompatible data type. For example, the system can't save an alphabetic character entered into a field of a number data type.

The complete data validation process and logic runs for user-defined fields and field groups when the form is submitted.

When users take advantage of saving forms, consider these items:

Consideration	Description
Save	• Validates user-defined fields. • Ignores empty required fields. • Validates field groups fields.
Submit	• Validates user-defined fields. • Flags empty required fields. • Validates field groups fields.

Groovy	To compensate for the ability to bypass Groovy validation during a save, incorporate the "pending" status in your logic. An intake form is in "pending" status when it has been saved but not submitted. For example, add the following to the top of applicable Groovy scripts:
	`if (Status == "Pending") {`
	`return true`
	`}`

Upgrade	Intake forms from previous releases with fields set as required need to be updated to include the validation adjustments associated with the ability to ignore required fields during a save. 1. Open the intake form.

Consideration	Description
	2. Locate all the fields set as required, and *turn off* the **Required** switch. 3. Save and publish the form. 4. Locate all the fields that need to be set as required, and *turn on* the **Required** switch. 5. Save and publish the form.

Runtime Train Stop Drop-Down Behavior

The train stop drop-down list, appears in the center of the application form header to provide:

Feature	Description
Context	The system automatically prepends the appropriate step number to the application form page name. The step numbers are assigned in the order the pages appear in the designer (from left-to-right). For example, assume you have three pages in your form: Application Details, Fence Details, Property Details. The train-stop drop-down list displays the pages as: • Step 1: Applicant Details • Step 2: Fence Details • Step 3: Property Details
Current Page	To show the current page the user is viewing, the system displays a single, right-pointing, chevron character (>) to the left of page label in the drop-down list.
Navigation	Select any page in the application form, including the review page, to access it immediately.
Switch to Single/Multi-page view	Toggle between the multi-page view or the single-page view.

Using the Single-Page View

When accessing the single-page view in review or advanced-edit mode, end users will notice these characteristics of the page elements.

Page Element	Behavior
Edit button	Enables the end user to activate the form fields for editing. Initially, the system displays them in read-only mode. Once clicked, the system toggles the Edit button to the Done button.
Done button	Once the end user completes any changes, clicking Done: 1. Performs any configured data validation. 2. Saves changes to the database. 3. Returns the form fields to read-only. 4. Toggles the button back to read Edit.
Group boxes	If a group box contains multiple group boxes, only the outer (parent) group box displays an Edit/Done button.

Page Element	Behavior
Field groups	If there are multiple field groups in a group box, they will appear to be a single page section, with one Edit/Done button controlling all the field groups within the parent group box. Otherwise, if the field groups are on the page tab separately (not within the same parent group box container), then the system displays an Edit/Done button for each field group.
Expand All/Collapse All	Expands or collapses all the elements on the page, including group boxes and field groups within parent group boxes.

Note: The Edit button and the Done button do not appear on a page rendered in advanced edit mode if the form is displayed in a read-only context. For example, if the user viewing the form does not have sufficient privileges or if the user has already submitted the form, the fields in the form will be disabled and the Edit button and Done button will not be rendered on the page.

Advanced-Edit Mode

If needed, agency staff members can update a form after a public user has submitted the form. Agency staff members access the submitted form using the Permit Details page in the Permit List or by deep linking. Editing a form after a public user has submitted it is referred to as *advanced-edit mode.*

When in advanced-edit mode, the system:

- Displays only the field groups enabled for advanced-edit mode.
- Presents the form in the single-page view.

Agency staff members click the Edit button to activate fields and update data, and they click Done to save changes.

Note: Customers cannot configure whether a delivered field group appears in advanced-edit mode. Field groups enabled for advanced-edit mode are controlled and delivered by Oracle development. Only the field groups that are appropriate for agency staff members to update are enabled for advanced-edit mode.

Testing Intake Forms

This topic describes the methods and considerations involved with testing your application intake forms.

You design, create, and test application forms on your development or test environment. Depending on what you have licensed, you may have a combined development and test environment, or you may have a separate development and test environment.

You can test forms using these options:

- View Form feature
- Sandbox mode

Once your forms have been created and thoroughly tested, you then migrate the newly created forms to your production system for public user access.

Using View Form

Select the **View Form** menu in the Intake Form Designer to launch the:

- Runtime view of the intake form.
- Simplified fee estimate view.

For more information on simplified fee estimates, see *Configuring Simplified Fee Estimates*.

Depending on the type of form you are designing, the options in the View Form menu differ. For example, for Permits, Planning and Zoning, and Code Enforcement, you select *View Form* to launch the runtime. For Business Licenses, select *Origination* to launch items filtered for that view of the form.

The View Form option opens the form design in a separate browser tab and provides the full runtime behavior, which includes all the ability to:

- Add input.
- Save.
- Submit.
- Run Groovy validations and logic.
- Test Control Display.

Note: For Business Licenses, the Amendment and Renewal runtime views are not available using the View Form menu. Those views will need to be accessed and tested from the landing page.

Note: Disable the pop-up blocker on your browser so this feature can display the runtime form design.

Enabling Sandbox Mode Testing

You can test your intake form thoroughly in scenarios public users will encounter while the form design is still in the draft state within the sandbox. Testing in sandbox mode enables you to fully test and interact with the intake form without having to publish it. For example, you can:

- Access the intake form from the landing page in the same way public users will.
- Run any data validations or business logic while filling out the form.
- Engage process automation definitions associated with the intake form, such as workflow and fee models.
- Test the other processes involved in the entire lifecycle of the permit, such as approvals, inspections, and so on.

To enable sandbox mode testing:

1. Save your intake form.
2. Return to the Transaction Type page for your offering, such as the Permit Type page.
3. Open the transaction type associated with the intake form you want to test.
4. Set **Status** to *Ready.*
5. Set the **Public User Enabled** to either *Enabled for all users* or *Enabled for registered users.*

6. Specify any other required definitions related to the intake form, such as workflow process definitions, fee schedules, and so on.

   Note: You need to update your workflow definitions to allow access from a transaction type within a sandbox. The workflow process definitions need an additional integration implemented called the Sandbox Connector. For more information on updating workflow definitions for sandbox testing, see *Setting Up the Sandbox Connector*.

7. Click **Save.**
8. Configure security for user IDs you intend to use for sandbox testing.

   When testing in sandbox mode, the user IDs you use to access the landing page and the intake forms require additional security roles.

Role	Access Description
PSC Custom Sandbox Access (CUSTOM_SANDBOX_ACCESS)	You create this role during implementation, and it enables access to definitions that exist within a sandbox. User IDs without this role can access published transaction types only. This role should be used only in non-production environments, such as the development or the test environment. For more information on setting up this role, see *Creating Custom Roles for Oracle Permitting and Licensing*.

Note: The data you enter and save during testing on your development and/or testing environments remains in the underlying database tables after the form is migrated to the production system.

Migrating Application Forms Between Environments

After you have completed your testing of the application form on the development or the test environment, you can publish the intake form. To migrate an intake form from the current environment to another environment, the intake form must be published.

Note: Intake forms in draft status are ignored by the migration process.

For more information on publishing forms, see *Publishing Intake Forms*.

To migrate data from a source environment to a target environment, follow the procedure in Functional Setup Manager for migrating transaction type metadata and intake form layout metadata.

For more information on migrating definitions between environments, see *Managing Transaction Type Configurations*.

Publishing Intake Forms

This topic describes the steps to complete to publish intake forms.

You need to publish intake forms in order to:

- Clone intake forms and transaction types.
- Migrate intake forms from a source environment to a target environment, such as when migrating from the test environment to the production environment.

Before you publish an intake form, it is highly recommended that you ensure it is thoroughly tested in sandbox mode.

For more information on testing options, see *Testing Intake Forms*.

> **Note:** Intake forms in draft status can't be cloned or migrated.

To publish a form:

1. Confirm that you have saved and tested all changes made to your form.
2. In the Intake Form Designer, click **Publish.**
3. Navigate to the Transaction Type page:

   To navigate to the Transaction Type page for the offering, such as the Permit Type page for Permits.
4. On the Transaction Type page, open the appropriate transaction type, and set these values:
   - **Transaction Type Status**: *Ready*
   - **Public User Enabled**: *Enabled for all users* or *Enabled for registered users*.
   - Specify any related definitions required for your transaction type, such as workflow process definitions, fee schedules, and so on.
5. Click **Save.**

> **Note:** After publishing a transaction type application, the application may not be accessible immediately. It can take several minutes to apply the most recent changes and transfer the application from the sandbox to the live runtime system.

Creating Intake Form Versions

This topic describes how to create and manage effective-dated versions of intake form layouts.

Intake Form Versioning Overview

> **Note:** Effective-dated versions of intake forms are supported for Permits, Planning and Zoning, and Business Licenses.

Over the life cycle of an intake form, there are changes to business processes that may require you to create a new version of an intake form layout. For example, assume that a new mandate requires all commercial building permits to include information that tracks compliance with environmental regulations beginning at the start of a new year. In this case, you can create a new version of the form layout containing fields to capture the environmental compliance that becomes active on January 1 just as the new mandate becomes active. All new commercial building applications submitted on or after January 1, will use the new form layout version, while all applications submitted prior to January 1 will continue to use the previous version of the form.

With the versioning feature, you can keep previous versions of forms for historical reasons, have the current form live in production, and have future versions of the form ready to roll out on the specified effective date.

Only the layout of the form changes when creating a new version. The data from the transaction type entered on the Permit Type page, for example, is not included in the effective-dated version. While the layout of the form can change from version to version, the back-end custom object associated with the layout versions contains a superset of all the fields and elements used in all the versions of the form layout. For example, if a field is removed in version 3 of a form layout, that field still exists in the custom object for form layouts still using version 1 and 2. The custom object for an intake form is the database entity storing data as well as the REST endpoint for the intake form.

Because the custom object remains the same for all layout versions, no changes to reporting need to be made other than including any newly added fields to your report definitions. Likewise, if you have developed integrations for the custom object, the REST endpoint for an intake form remains the same for all versions. This is different to cloning an intake form, where you'd need to create new reports and integrations because the name of the underlying custom object changes.

For more information on cloning intake forms, see *Cloning Transaction Type Definitions*.

Creating a New Intake Form Version

When you create a new intake form, initially the default first version of a form is *V1*, with an open-ended effective date. If you want to make changes to these defaults, you need to make those prior to publishing the form for the first time. When you want to create the second version of a form, open the current version of the form and create the new version prior to making any changes to the existing form.

To create a new version of a form layout:

1. Open the existing intake form design, and before making any changes to it, select **Manage Design** > **Manage Version**.
2. On the Layout Version dialog box, click **Show All Versions.**
3. On the Layout Version page, click **Add.**
4. On the Layout Version dialog box, select a date for **Effective Start Date.**

   The **Effective End Date** is always open-ended for a new version. If you create another version in the future, the end date for previous version becomes the start date of the new version minus one day. For example, if the start date for version 3 is January 1, 2023, then the end date for version 2 becomes December 31, 2022.

   > **Note:** You can't update the effective end date. It is always updated automatically.

   > **Note:** You can't create a layout version between the date range of two currently published versions.

5. For **Layout Version,** enter a value, such as *V2, V3,* and so on, according to your agency version naming conventions.

   The default value is *V1.* The value can also be more free-form, such as *Jan 2023 for proposition 5.*

   The value you enter must be unique from all other versions created for the current record type.
6. In the **Description** field, describe the changes made to the form for reference.
7. Click **Save.**

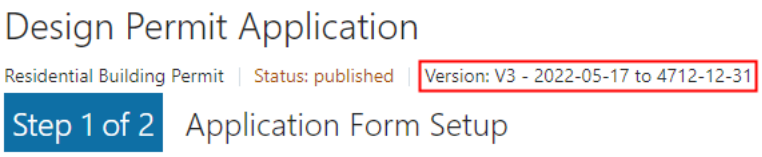
   > **Note:** The effective start date will be locked once you save.

8. Click **Select Version** to load the new version in the designer workspace.

Note: Only one draft version of an intake form can be open at a time in the Intake Form Designer workspace.

Understanding the Version Indicator

You can confirm the new version is loaded by viewing the version indicator text in the header of the form layout.



By default, the first version of a form layout is *Version: V1 <current date> to 4712-12-31.* Where *4712-12-31* is a random value far out into the future to indicate "open end date." The newest layout version always has an open ended effective date.

Managing Intake Form Versions

To manage intake form versions:

1. Open the existing intake form design, and before making any changes to it, select **Manage Design** > **Manage Version**.
2. On the Layout Version dialog box, click **Show All Versions.**
3. Use the Layout Version dialog box to view and manage your intake form versions.

Page Element	Description
Add	Click to add a new layout version.
Correction Mode	Displays only when signed in using a system administrator ID (PSC System Administrator Job Role). Enables you perform advanced administrative tasks when required, such as to delete expired layout versions if needed.
Effective Start Date	The date when this version of the intake form layout becomes active. If the form is published, the version becomes active just after midnight on the selected date.
Effective End Date	A read-only field displaying *Open end date* for all new intake form versions. The end date is automatically populated for a previous version once a new version has been created. The end date for a previous version becomes the start date of the new version minus one day. For example, if the start date for version 3 is January 1, 2023, then the end date for version 2 becomes December 31, 2022.
Layout Version	Displays the version entered when the layout version was created. Determine a naming scheme for your versions to create consistency. It can be *V1, V2,* and so on, or more free-form, such as *Jan 2023 for proposition 5 mandate.*
Description	Add the details regarding what was modified in each version for your agency's reference.
Published State	Indicates the state of the layout version, which determines whether a form layout can be migrated to another pod, such as from the test pod to the production pod.

Page Element	Description
	• *N:* The specific version was never published and will not be migrated. **Note:** You can't create a new version if the previous version hasn't been published. • *Y:* The specific version is published and will be migrated. • *D:* The specific version was published previously but it is now in *Draft* status with new changes. This version can be migrated because there is a published version of the form. Only the published version gets migrated.
Delete	You can delete versions that have not yet reached their effective end date. You can't delete versions that have already become inactive (expired) unless you have enabled correction mode. A version becomes expired when its effective date window is in the past. **Note:** In the event that you need to delete a version that has expired, enable the Correction Mode switch.
View More Details	Click to drill into the version and display the details for that version.

Understanding Which Layout Version Opens in the Designer Workspace

When you click **Design Form** on the record type page to open the form layout, a number of factors determine which layout version opens in the designer workspace.

Note: Always make sure you have opened the correct version of the layout that you want to view or modify before making changes.

- If there is one or more draft version that has been published at least once, the version with the earliest effective start date opens.
- If there is *no* draft version that has been published at least once, but there is one or more never-published versions open, the never-published version with the earliest effective start date.
- When there are only published versions, the version that is currently effective opens.

Runtime Assignment of Layout Versions

The display and assignment of the layout version is automatic, and applicants aren't aware of the version they are interacting with, nor do they need to be aware of the version. Use the information in the following table to understand how layout versions are displayed and assigned at runtime.

Runtime Action	Layout Version Behavior
An applicant accesses an intake form to begin an application.	The most current effective layout version is displayed.

Runtime Action	Layout Version Behavior
An applicant returns to a previously saved intake form.	The most current effective layout version is displayed, regardless of the layout version used initially, prior to the save.
An applicant submits the intake form.	The submitted intake form is stamped with the most current effective layout version at the time of submittal. All future access, updates, and workflows use the form layout version effective when the application was submitted.

Layout Version General Considerations

Typical reasons for creating a new version of a form layout include:

- Adding or removing fields.
- Configuring control display.
- Making fields hidden from the public.
- Setting existing fields to be required.

Other form element changes may not be incorporated into a specific version as they may not support the concept of effective dates. These cases may require additional consideration or modification to be fully unique with separate versions. Use the information in the table below to help your agency determine your layout version efforts.

Consideration	Description
Groovy	Groovy business logic applies to all layout versions unless you modify your code to incorporate built-in functions that enable you to specify specific versions, such as getLayoutVersion(). For more information on working with layout versions and Groovy, see "Running Groovy Depending on Layout Version" in *Adding Logic*.
Labels	Changing a label is applicable to all versions. If you change a label in a future layout version, it affects all previous versions once you publish that version.
Fees	Ensuring fee calculations remain consistent amongst multiple form layout versions requires additional considerations and modification. Review the section below titled "Layout Versions and Fee Schedule Considerations."
Record types	Only the form layout is versioned. Record type data, such as the permit type data or the planning and zoning application type data, are not included in a new version. Changes to the record type apply to all versions of the form layout, not to a specific version.
Workflow	Ensuring workflow remains consistent amongst multiple form layout versions requires additional considerations and modification. Review the section below titled "Layout Versions and Workflow Considerations."
Revert to Last Published	Applies only to the currently open layout version in draft mode.
Text Area and Help	Field types like text area and help use the built-in Rich Text Editor feature. The data contained in help and text area fields is not stored within the form layout so it is not included in the layout version. If

Consideration	Description
	you want to update help or text area content and you *don't* want the change to affect all form layout versions, remove the previous field and create a new field for the new form layout version.
Lookups	If you change the reference to the lookup associated a list of values field, that change affects all versions of the form. **Note:** Lookup values have effective start and end dates, which you can use to coincide with the effective dates of a layout version.
Decimal Places	Changes to the Decimal Places attribute for a number field apply to all versions. **Note:** To avoid loss of data, never decrease the decimal places for a number field on an active form in production.
Cloning	When cloning a record type and you've selected **Clone Form Design** when cloning a record type, only the most current effective layout version is cloned along with the record type. The version defaults to *V1* with the same effective date as the cloned layout version, with an open-ended effective end date. You can't modify the effective start date of the cloned layout version. If you need to set a new effective start date, you can immediately create a new version of the cloned intake form and set the date as desired.

Layout Version Business License Considerations

In general, the versioning feature works the same for a business license form layout as it does for a permit or planning and zoning application. However, with business licenses you need to take into account the various filters being applied to the form elements, such as origination, amendment, and renewal filters.

When you establish a business license, you are storing the information entered through the origination filter. When you then initiate a renewal or amendment of the existing business license, the origination information is copied into the layout for that renewal or amendment. Origination, renewals, and amendments can all have slightly different form elements displayed because each filter may need to capture different information. On top of the filters, consider that between filling out an origination intake form and a renewal or amendment, there can be a new version of the form displaying new changes to the applicant.

For example, let's look at a few scenarios to help illustrate.

Scenario	Description
Applicant fills out an origination on V1 of a license type	Applicant views V1, enters all V1 origination information and submits.
Applicant fills out an origination on V1 of a license type *as a new* V2 becomes effective	• If the applicant has already submitted the V1 version of the form, the information submitted remains V1.

Scenario	Description
	• If the applicant has only saved the V1 version of the form, the next time they open the form, it will display the V2 version with the new changes active.
Applicant has submitted a V1 version of a license type, a new V2 version is now effective, *and* the applicant wants to either amend or renew the license.	• Information from the origination is copied into the renewal or amendment application. • V2 is active displaying all new or changed elements as required for either the renewal or amendment filter, while not displaying any elements that were removed, set to be hidden from pubic view, and so on. With fields set to be confidential, they will now be visible only to the applicant and agency users with the required security access.

Layout Version and Fee Schedule Considerations

Because fee schedules are also effective dated, you can coordinate changes to layout versions and fee models by aligning the effective dates. For example, assume you need to roll out a new version of form layout with fee increases beginning the first day of a new year.

In this case, you would:

1. Create a new effective fee schedule, with the same effective start date as the new form layout version.
2. Update the fee mappings page for the intake form to reference effective start date for that new fee schedule (and include any new field mappings, as needed).
3. Migrate your updated data using Functional Setup Manager and Configuration Set Migration from test to production pod *prior* to January 1.
4. On Jan 1, the new form rolls out live, referencing the updated fee schedule, which is also now live, because of the effective dates.

For more information on mapping intake form fields to fee decisions models, see *Mapping Form Fields to Decision Model Attributes*.

For more information on setting up fee schedules, see *Setting Up Fee Schedules*.

For more information on decision models, see *Creating Decision Models for Fees*.

Layout Version and Workflow Considerations

While workflow process definitions don't utilize effective dates, you can created incremental versions and coordinate the roll out of layout versions with updated workflow processes.

For example, assume that there is a new municipal ordinance requiring environmental impact inspections for all commercial building permits starting on January 1 of the new year. This new mandate requires you to add fields to the intake form to capture information related to the environmental impact as well as add a new human task to the underlying workflow process definition.

In this scenario, you would:

1. Create a new layout version of the intake form to include the new fields.
2. Create a new version of the associated workflow process definition to include the new human task.
3. Specify the new version of the workflow process definition from the **Version** drop-down list, in the Workflow Setup section of the Permit Type page.
4. Migrate your updated data using Functional Setup Manager and Configuration Set Migration from test to production pod *on* January 1.
5. On January 1, the new form rolls out live, referencing the updated workflow process, which is also now the effective workflow process for any intake forms submitted on or after January 1.

For more information on setting up workflow for a record type, see *Workflow Basics*.

Layout Version Test to Production (T2P) Migration Considerations

T2P Migration refers to migrating data from a testing or development pod to a production pod using Functional Setup Manager and Configuration Set Migration.

> **Note:** The published state of the form, as displayed in the Published State column of the History Data grid on the Layout Versions dialog box indicates if a layout version will be migrated. Only published versions of the intake form are migrated from one environment to another using Functional Setup Manager and Configuration Set Migration.

For more information on migrating data using Functional Setup Manager and Configuration Set Migration, see *Managing Transaction Type Configurations*.

For more information on migrating data using the Intake Form Designer Export/Import feature, see *Exporting and Importing Intake Forms*.

Configuration Set Migration overwrites data on the target if the source and target share definitions. This is the main reason it is recommended to make changes *only* in source environments, such as the development environment, and to carry those changes through to the test environment (if present) and the production environment.

If the layout is already present in the target and the migration process is trying to add a new effective-dated row where the start date is less than the current date, you will see a message similar to the following in the migration logs, indicating there is a collision between objects shared between the source and the target environments.

JBO-Can't create a current effective dated row: [LNP, LNP1PERMIT_c],in update mode, start date: 2022-05-05:....

This can occur in a number of situations, including the scenarios described in the following table.

T2P Scenario	Description
Grids	This is true for custom parent objects and child objects, such as grids. If the objects exist on both the source and the target environments, the two custom object names may appear the same, but they point to different physical tables (objects). When you try to run Configuration Set Migration it will fail to move the grids in this case. Until this issue is resolved, all migration will be blocked.
Expired Versions	The T2P migration will fail for an intake form layout version that: • Is expired on the source environment (development or test). • Has never been migrated to the source environment. An expired intake form means its effective date window is in the past. For example, assume you have these three layout versions on your test environment, and you are migrating to production on December 31, 2022. • V1 <Jan 01 2021- Dec 31 2021> (Migrated) • VTest <Oct 01 2021- Oct 31 2021> (Not Migrated) • V2 <Jan 01 2022- Dec 31 2022> (Migrating) In this case, the migration will fail due to the VTest version. To resolve: 1. Sign in using a system administrator ID (has the PSC System Administrator job role assigned).

T2P Scenario	Description
	2. Open the intake form listed in the migration logs. 3. Select **Manage Design** >**Manage Version**. 4. Click **Show All Versions.** 5. Turn on the **Correction Mode** switch. 6. Delete the expired intake form layout version with the effective date window in the past as mentioned in the migration logs.

Layout Version Export/Import Considerations

The following scenarios illustrate the behavior of the Intake Form Designer export/import feature with regard to layout versions.

For more information on exporting and importing forms, see *Exporting and Importing Intake Forms*.

Source Environment	Target Environment	Export/Import Behavior
Multiple versions exist.	Intake form not present.	The currently effective layout version will be exported even if it's not published. So the version imported on the target will need to be published.
Latest version exported, but changes are ongoing.	Latest version imported prior to ongoing changes.	Changes to the same version, if no additional versions are made, then target layout version is overwritten by subsequent export/imports.
Initial version exported. New version created and exported.	Initial version imported. New version *also created* on target environment, prior to import.	Import of the layout on the target environment will fail. Importing layout versions does not support multiple versions on the target environment of the same form being imported. **Note:** All changes should be completed on the source environment, such as the development or test environment.
Export a record type where fee schedules are created for each layout version, with the fee schedule effective dates and mappings matching the layout version effective dates exactly.	Import.	Effective layout version with matching effective fee schedule and mappings will be exported and imported.

Cloning Transaction Type Definitions

This topic describes how to clone transaction type definitions and the associated form design. It also covers the attributes that will be shared between the source and clone definition and the attributes you will need to modify on the cloned definition.

You can clone a transaction type to:

- Save time when creating a similar transaction type, rather than creating a new transaction type for each situation from scratch.
- Create a new version of a currently published transaction type after making a significant correction or addition to the transaction definition.

In some cases, it may be more efficient to create a new transaction type and form, while in other cases, it may be more efficient to clone an existing transaction type and form.

When you clone a transaction type, you make a cloned copy of:

- Most of the transaction type metadata, such as the specified Classification, Auto Number Rule, Department, Fee Schedule, and so on. Some of the metadata is not cloned, such as Transaction Type, Transaction Type Code, Transaction Type Status, Help Text and so on, as you'll need to modify those values for the cloned copy.
- All of the intake form layout in the Intake Form Designer, including pages, group boxes, field groups, and user-defined fields you have added to your application form.

When deciding to clone a transaction type, you may consider:

- The number of fields and pages within the existing application form layout that you'd need to change.
- Similarity between the existing transaction type and new transaction type.
- Number of shared attributes.

Note: In general, if you intend to make numerous modifications to the cloned copy, it may be more efficient to start a new transaction type from scratch.

When cloning to make a new transaction type, you will want to make sure you are aware of:

- The attributes that will be shared between the source definition and the clone.
- The attributes you need to modify to create unique values between the source definition and the clone.

Note: All modifications you make to a should be done in your test environment and not on your production environment. After you have thoroughly tested your changes in the test environment, your modifications should be migrated using the Functional Setup Manager task flows.

Transaction Type Metadata Considerations

All of the field values on the Transaction Type page will appear in the cloned transaction type, except for selected field values listed in the following table.

Make sure to update any of the copied information on the Transaction Type page to reflect the requirements of the new transaction type. For example, if the Department, Fee Schedule, or Workflow information, should be different, make sure to update it for the new transaction type definition so it is associated with the correct items.

Page Element	Description
Type	The type name doesn't have to be unique. You can create a new transaction type by using a unique value or enter the same value as the source transaction type, if you are creating a new transaction definition with the same transaction type.

Page Element	Description
Type Code	The type code must be unique. Enter a transaction type code that identifies this version of the transaction type definition.
Status	Initially, for a newly created transaction type the status on the Transaction Type page is always set to *Preliminary*.
Valid From Date	The application inserts the current date for the cloned transaction type.
Valid To Date	Update to reflect your business requirements.
Public User Enabled	Initially, for a newly created transaction type this is always set to *Not enabled for public users.*

For more information on the fields on the Transaction Type page, see *Setting Up Permit Types*.

Intake Form Layout Attribute Considerations

The following table describes specific considerations for UI elements in your form layout with respect to cloning transaction types and what gets copied from the initial source intake form to the target clone.

Element	Description
Field groups	The cloned copy of the transaction type contains the same layout as the source definition. If the intake form utilized any of the delivered field groups, the application copies the field groups into the cloned copy of the definition, using the same layout as the source definition. For example, if you added the Fence field group to the source permit definition to the second page tab, the Fence field group would appear in the cloned copy of the transaction type on the same page tab.
Labels	The labels for fields and UI elements, such as pages, group boxes, field groups, and so on, are the same between the source and cloned definition.
User-defined fields	Any fields you have added manually to the source will be copied, as is, to the cloned definition. For any fields that you have defined a list of values, make sure it applies to your new transaction type.
Security	The cloned definition will have the same security configuration as the source definition for: • Data security for column authorization and data redaction. • Cases where Hide from public user has been implemented.
Help	If any help has been added to the form for a page, field group, group box, or field, for the source definition, the application does not copy help references into the cloned definition. **Note:** You can remove the help references from the cloned form, but do not delete the help text from the Contextual Help page if other forms are still using that help text.

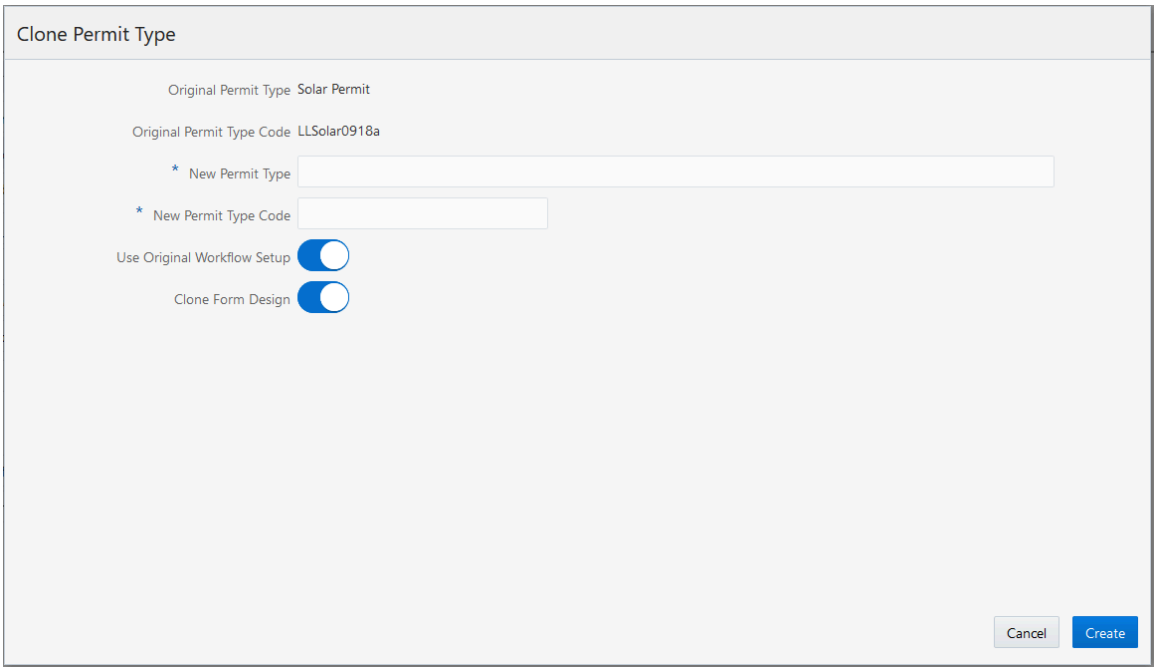
Element	Description
Groovy scripts	If any Groovy logic has been added to the source intake form, the cloning process does not copy the Groovy logic into the target clone definition.
Fees	Any fee mapping, which is defined in the second step of the Intake Form Designer, is copied to the target clone definition.

Cloning a Transaction Type to Create a New Transaction Type

When you clone a transaction type, you also clone the associated form design. You can clone just the transaction type definition without cloning the application form design; however, you can't clone just the form design by itself.

> **Note:** When you clone a transaction type, the type status defaults to *Preliminary* on the new transaction type, and the status of the new application form defaults to *Draft* in the Intake Form Designer.

This example illustrates the Clone Permit Type page, which is described in the steps for cloning a permit type.



To clone a permit transaction type:

1. Select **Permit Setup** > **Permit Type.**
2. Open the desired transaction type.

   > **Note:** Only transaction types with a status of Published can be cloned.

3. Click the **Clone** button.

4. On the Clone Type page, enter the following values:

Page Element	Description
New Transaction Type	Enter a transaction type name. The transaction type name can be the same as an existing transaction type name so that you can have different versions of the same transaction type. For example, if the original transaction type name is *Fences*, you can reuse the name for the new transaction type definition, but you must enter a unique type code to distinguish the two.
New Transaction Type Code	Enter a unique transaction type code. Oracle recommends manually adding a version number to the source transaction type code if you want different versions of the same transaction type definition. For example, if the original type code is *Solar-001*, you can enter a new code, *Solar-001-v2*
Use Original Workflow Setup	Turn on the switch to use the original workflow setup as defined in the original transaction type. Turn off the switch to leave the workflow setup fields blank on the new transaction type. You must enter a workflow setup values.
Clone Form Design	Turn on the switch on to clone the application form design associated with the original transaction type. Turn off the switch to create a completely new application form using the Intake Form Designer.

> **Note:** Providing a unique type code is required to make the transaction type definition unique.

5. Click the **Create** button.

   The cloning process opens the cloned copy of the transaction type.

> **Note:** When saving the cloned definition, the application places the cloned definition within a sandbox.

6. Make any other required changes to the cloned transaction type definition and form design.

   See the previous sections for more information regarding what items to check.

> **Note:** If there are numerous custom fields in the application form, when you have the layout open in Intake Form Designer, it can take several minutes to perform the initial save. While saving, the application is creating all of the custom fields, creating the other elements, and running validation.

7. Publish the application form in the Intake Form Designer.

   For more information on publishing a transaction type, see *Publishing Intake Forms*.
8. Return to the Transaction Type page to change the status to *Ready for Use*.

Considerations for Creating a New Version of a Transaction Type Using Cloning

In some cases, you may want create a new version of an existing, published transaction type to correct an error or make a change.

If the change made is insignificant, as in it does not change the meaning of a field or page element, then in most cases cloning is not required, and you can simply make the change directly to the transaction type definition. For example, assume you have a field for an email address on your form, and it had been requested to change the label from *E-mail* to *Email* (removing the hyphen). In this case, the change can be made directly to the form and republishing it.

However, in other situations, the change may be significant, in that it affects reporting associated with transaction type, alters historical data, makes future data out of sync with historical data, and so on.

Significant changes where cloning a transaction type is recommended include:

Transaction Type Element	Examples of Significant Changes
Field groups	• Changing the label of a field group. • Adding • Removing • Updating the security (Hide from public user) • Changing the label, hidden, or required setting of a field within a field group.
User-defined form elements	• Adding • Removing • Setting to required • Updating a default value • Updating the security (Hide from public user)
HTML UI constructs	• Adding page tabs • Removing page tabs • Adding group boxes • Removing group boxes

Creating a New Version of a Transaction Type Using Cloning

Creating a new version of a transaction type using the cloning feature involves:

- Deactivating the published version of the transaction type.
- Cloning the published version of the transaction type.
- Activating the cloned copy of the transaction type.

To deactivate a published transaction type:

1. Select **Permit Setup** > **Permit Type.**
2. Open the definition for the published transaction type.

3. Set the **Transaction Type Status** field to *Void.*
4. Click **Save.**

To clone the published transaction type:

1. With the transaction still open from the previous steps, click **Clone.**
2. Enter the same Transaction Type value as used for the recently deactivated transaction type.
3. Enter a unique Transaction Type Code.

   > **Note:** Providing a unique transaction type code makes the transaction type definition unique. To keep track of versions, you can add v2, v3, v4 to the code, for example.

4. Save the cloned definition.

   > **Note:** When saving the cloned definition, the application places the cloned definition within a sandbox.

5. Make any other required changes to the cloned definition transaction type and form design.

   See the previous sections for more information regarding what items to check.
6. Click **Publish** in the Intake Form Designer to publish the cloned definition.

   For more information on publish a transaction type, see *Publishing Intake Forms*.

To activate the new transaction type:

1. Select **Permit Setup** > **Permit Type** or press Back from the Intake Form Designer interface.
2. Open the definition for the published transaction type.
3. On the Transaction Type page, set these values:
   - Transaction Type Status: *Ready for Use.*
   - Public User Enabled: *Enabled for all users* or *Enabled for registered users.*
4. Click **Save.**

Impact of Updating Existing Transaction Types and Republishing

This table describes the impact of various changes when you update and republish a transaction type.

Modification	Impact
Update a label for a user-defined field	• Submitted transactions: applies to all submitted transactions. • New transactions: available on all new transaction intake forms. • Auditing: No impact. Labels don't appear in auditing; the audit goes against the field IDs. • Reporting: o OTBI: no impact to OTBI, which doesn't incorporate fields. o CSA: New label will not appear in CSA. Manual update of the label in CSA and republish. Once done this applies to all transactions, old and new. o BIP: if BIP depends on CSA, then the BIP report template needs to have the new label manually updated.
Add a new user-defined field	• Submitted transactions: the field will appear on all submitted transactions, which means if an update is required for a submitted transaction this field will also appear on the page and be part of the payload.

Modification	Impact
	• New transactions: the field appears on all new transactions. • Auditing: available for auditing, but the field needs to be added to the auditing report. • Reporting: o CSA: available after you edit the CSA, include the new field, and republish. o BIP: available after the new field is included in the report template and the CSA is republished.
Set a field as required	• Submitted transactions: any update to the transaction will require that this field have a value. • New transactions: appear as required for any new transaction. • Auditing: no impact. • Reporting: n impact.
Add or edit Groovy script	• Submitted transactions: if modifying, the new logic will fire. • New transactions: applies to all new transactions. • Auditing: no impact. • Reporting: no impact.
Hide a field	• Submitted transactions: field will be hidden for all submitted transactions. • New transactions: hidden for any new transactions. • Auditing: field would be still part of the audit report until removed. • Reporting: BIP - remove from template o CSA: manually remove field from CSA and republish, o BIP: manually remove field from template.
Add a user-defined list of values (LOV) field	• Submitted transactions: applies to all submitted transactions. • New transactions: applies to all new transactions. • Auditing: same as adding a user-defined field. • Reporting: same as adding a user-defined field.
Add or edit a list of values (LOV)	• Submitted transactions: no impact. • New transactions: applies to all new transactions. • Auditing: no impact. • Reporting: immediately reflected in CSA.
Update list of values (LOV) display criteria (Enabled/Disabled) (Start Date/End Date)	• Submitted transactions: applies to all submitted transactions. • New transactions: applies to all new transactions. • Auditing: no impact. • Reporting: immediately reflected in CSA.
Add or edit control display settings	• Submitted transactions: may impact submitted transactions. • New transactions: applies to all new transactions.

Modification	Impact
	• Auditing: no impact. • Reporting: no impact
Make changes to reusable field	• Submitted transactions: applies to all submitted transactions. • New transactions: applies to all new transactions. • Auditing: available for audits after being incorporated into the audit report. • Reporting: no impact.

Impact of Cloning the Transaction Type and Retiring the Previous Version

This table describes the impact of various changes when you clone a transaction type to replace the previous version.

When cloning, you are creating a new transaction type, so in general, you should expect these impacts as the standard update:

- Auditing: any new transaction that is created is available to audit framework, which requires you to enable the object to be audited and configure the report as needed.
- Reporting: a new CSA needs to be created for each new transaction type.

Modification	Modification
Update a label for a user-defined field	• Submitted transactions: no impact as there are no submitted transaction yet. • New transactions: appears for all new transactions. • Auditing: standard uptake. • Reporting: standard uptake. You can reuse the same BIP or create a new BIP template.
Add a new user-defined field	• Submitted transactions: no impact. • New transactions: appears for all new transactions. • Auditing: standard uptake. • Reporting: standard uptake. You can reuse BIP template after editing and republishing or create a new BIP template.
Set a field group field or a user-defined field as required	• Submitted transactions: no impact. • New transactions: appears for all new transactions. • Auditing: standard update. Layout changes are not auditable. • Reporting: no impact to BIP.
Add or edit Groovy script	• Submitted transactions: no impact. • New transactions: appears for all new transactions. • Auditing: Groovy changes are not tracked by audits. • Reporting: no impact to BIP. Groovy changes to not affect reporting.
Hide a field	• Submitted transactions: no impact. • New transactions: appears for all new transactions.

Modification	Modification
	• Auditing: layout changes are not tracked in Audits. • Reporting: no impact to BIP. Layout changes are not reflected in reporting.
Add a user-defined list of values (LOV) field	• Submitted transactions: If the LOV is pointing to an existing list then updates to this list will affect submitted transactions. If a new list is created for the user-defined field, then there is no impact to existing fields. • New transactions: appears for all new transactions. • Auditing: same as adding a user-defined field. • Reporting: no impact to BIP.
Update a user-defined list of values (LOV)	• Submitted transactions: If the LOV is pointing to an existing list then updates to this list will affect submitted transactions. If a new list is created for the user-defined field, then there is no impact to existing fields. • New transactions: appears for all new transactions. • Auditing: no impact. • Reporting: LOVs are immediately reflected in CSA.
Update list of values (LOV) display criteria (Enabled/Disabled) (Start Date/End Date)	• Submitted transactions: If the LOV is pointing to an existing list then updates to this list will affect submitted transactions. If a new list is created for the user-defined field, then there is no impact to existing fields. • New transactions: appears for all new transactions. • Auditing: no impact. • Reporting: may affect reporting on submitted transactions as both values can be incorporated depending on date settings.
Control display settings	• Submitted transactions: no impact. • New transactions: applies to all new transactions. • Auditing: no impact. • Reporting: no impact.
Reusable custom fields	• Submitted transactions: applies to all submitted transactions. • New transactions: applies to all new transactions. • Auditing: standard uptake. • Reporting: not currently supported.

Managing Transaction Type Configurations

This topic describes the considerations and steps related to migrating transaction type definitions, such as permits, planning and zoning applications, and code enforcement, from your test environment to your production environment.

Transaction Type Lifecycle Overview

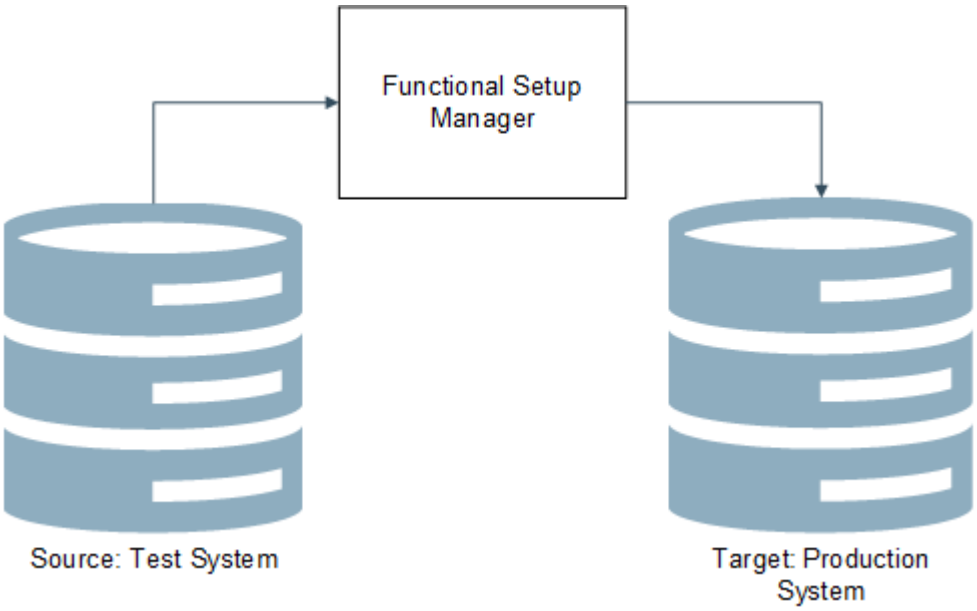
Any implementation of Oracle Applications Cloud usually requires migrating setup data from one environment to another at various points in the subscription lifecycle.

For example, you set up your initial configuration of the Oracle Permitting and Licensing offerings in the test environment, which is your source system. Then, after thorough testing and verification, you move the setup and configuration data from your test environment to the target environment, which is your production system.

You use the Fusion Applications Functional Setup Manager to perform these migration tasks.

This example illustrates that you use Functional Setup Manager to migrate data between your test and your production environment.

This example illustrates Functional Setup Manager in relation to a test and production environment. Details are in the surrounding text.



You access Functional Setup Manager by selecting **Navigator** > **Setup and Maintenance** or by clicking the Setup and Maintenance tile on the springboard. To access Functional Setup Manager, you need to have the System Administrator role associated with your user account.

The functional areas in Functional Setup Manager that apply to your transaction type definitions and application form definitions are:

Offering	Functional Area
Public Sector Permits	Permit Types
Public Sector Planning and Zoning	Planning Application Types
Public Sector Code Enforcement	Incident and Case Types

Like using Functional Setup Manager to setup your configuration, when migrating data, you use a top-down approach. That is, if you are not exporting the entire configured offering, and you are exporting by functional area, you need to export the functional areas in the order they appear.

For more information on using Functional Setup Manager, see *Using Functional Setup Manager*.

> **Note:** All configuration changes should be completed and tested in your test environment and then migrated to the production environment. Changes made directly to the production environment might be overridden during subsequent test-to-production migration activity.

For additional information related to migrating configuration data from your test environment to your production environment for the Oracle Permitting and Licensing offerings, see *Oracle Public Sector Community Development: Test to Production* (Doc ID 2551940.1) on My Oracle Support.

Set the Target Instance URL

On the source system (your test environment), you need to define the URL target system (your production environment) so that setup data and configuration data can be sent to the target.

To set the target instance URL:

1. Sign on to the test environment.
2. Click the Setup and Maintenance tile on the springboard to access Functional Setup Manager.
3. On the right side of the Functional Manager Setup interface, click the Tasks tab to open the Tasks drawer.
4. Click Search, and search for *Manage Configuration Set Migration Target Security Policy.*
5. On the Manage Configuration Set Migration Target Security Policy page, enter the URL for your target environment, and the appropriate security credentials for the System Administrator role.

   > **Note:** It is recommended to include the port number when you specify the URL value. For example: `https://server.example.com:443` You can get the target port value by accessing the Manage Configuration Set Migration Target Security Policy page on your production system (your target).

6. Save.

Managing Unified Sandboxes on the Source and Target System

Oracle Permitting and Licensing requires the Unified Sandboxes feature to be enabled on your test environment, where you are actively designing and configuring your implementation. It is recommended that you *disable* the Unified Sandboxes feature on your production system.

For migrating transaction types from your test system to your production system, especially, make sure to disable the Unified Sandboxes feature on your target, production system. Because you should be completing all configuration tasks on your source test system, sandboxes shouldn't be required on the production system. Having the Unified Sandboxes enabled on the production system can cause the Configuration Set Migration utility not to render or function properly.

To disable Unified Sandboxes:

1. Sign on to your target, production system.
2. Navigate to Functional Setup Manager.
3. Select your solution, such as Public Sector Permits, Public Sector Planning and Zoning, or Public Sector Code Enforcement.

   > **Note:** Disable Unified Sandboxes in all solutions you have licensed for Oracle Permitting and Licensing.

4. Click the **Change Feature Opt In** link.
5. Locate the Application Extensions feature, and click the pencil icon in the Features column.
6. Make sure the Unified Sandboxes feature is disabled.

   > **Note:** If there are any open sandboxes, they need to be deleted or published before you can disable this feature.

7. Click **Done.**

Migrating Transaction Type Foundational Metadata

Before you use Functional Setup Manager to export transaction type configuration data, you need to create and migrate a configuration set, which includes the underlying metadata required to be in place as a prerequisite prior to migrating other transaction type setup data.

Because the Oracle Permitting and Licensing solutions are metadata-driven, you need to migrate the metadata that is the foundation of the transaction definitions. This is the data stored in the Oracle Metadata Services (MDS) layer. You do this by creating a configuration migration set. Once that is complete, you can then begin using Functional Setup Manager export and import features to transfer the rest of required definitions between test and production systems.

> **Note:** Before you migrate transaction type metadata from your test system, ensure that the transaction type definitions and associated intake forms are complete, tested, and published.

> **CAUTION:** These steps must be completed before you use the Functional Setup Manager export and import options.

> **Note:** Prior to running the configuration set migration process, ensure that all transaction types are published and there is no development and design of intake forms underway. Creating transaction types and intake forms is not supported while the configuration set migration process is running. Once the configuration set migration process has completed successfully, you may resume development and design of intake forms.

To migrate transaction type metadata:

1. Sign on to the test system, which is the source system.
2. Click the Setup and Maintenance tile on the springboard to access Functional Setup Manager.
3. Select the appropriate offering (Permits, Planning and Zoning, or Code Enforcement).
4. Expand the Permit Types, Planning Application Types, or the Incident and Case Types functional area (depending on your offering).

   > **Note:** These steps for creating a migration set apply only to the Permit Types, the Planning Application Types, and the Incident and Case Types functional areas.

5. Click the configuration you want (depending on your offering). For example for permits, click the *Manage Permit Configuration* link.

   > **Note:** This link takes you to the Manage Configuration Set Migration Target Security Policy. You can also access this page in Fusion Application by selecting **Navigator** > **Configuration** > **Migration**.

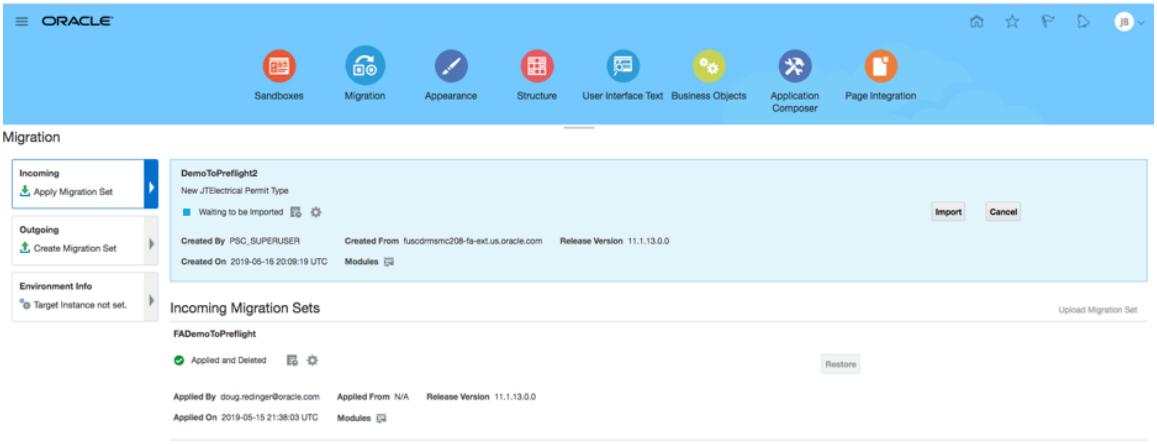
6. If you have not already specified your target instance URL, you must do that prior to the next step.

   See the previous section for more information.
7. Select the Outgoing tile and create an outgoing migration set to export to your production environment.

When creating a configuration set, the utility compares differences between source and target, and determines the metadata that needs to be exported to the target system. When the process is complete, the resulting migration set is downloaded in the form of a downloadable jar file.

8. After finishing the creation and migration of the *outgoing* migration set, sign on to the production system (the target system), and complete the steps for applying the *incoming* migration set.

This example illustrates an incoming configuration set.



For more information on these steps, refer to Oracle Applications Cloud documentation: *Overview of Migration* in *Configuring and Extending Applications*.

Exporting and Importing Remaining Transaction Type Data

After you have completed migrating the configuration set on the source system, you then export the remaining transaction type data using the Functional Setup Manager options for the functional area or the entire offering.

> **Note:** You can export and import at the functional area-level by selecting the **Actions** button for the functional area or at the entire offering level by selecting the **Actions** button at the top right.

This example illustrates using the functional area export options.

After exporting from the test system, you then sign on to the production system and import the corresponding business object data.

When you export business object data, you have the option to select only those business objects that you utilize. For example, if you are not using application groups, you could deselect *Manage Application Groups* from the Business Objects list.

The objects you export will be in the form of a downloadable jar file.

For more information on these Functional Setup Manager export and import features, see Oracle Cloud Applications documentation, *Using Functional Setup Manager*:

Export and Import of CSV File Packages

Setup Data Export and Import Using an Offering or a Functional Area

Exporting and Importing Intake Forms

This topic describes how to export and import transaction types intake forms across multiple environments for the purposes of reducing implementation costs, saving time, and sharing knowledge.

If you have an intake form that you would like to share with colleagues working on other environments or you are implementing for an agency managing multiple pods, such as a county with multiple cities, you can create a single form and share it amongst the multiple environments by exporting and importing the intake form.

You export and import the form and the associated transaction type data using solution packages. The exported solution package contains all of the data and metadata the intake form requires to function in the target environment, including (but not limited to):

- Transaction type information entered on the Transaction Type page, or the Issue and Issue Subtype page for Code Enforcement.
- Workflow process applications.
- Fee models.
- User-defined fields.

In particular, these items are not included in the export solution package because the scope of these configurations extends beyond the current intake form:

- Label changes to delivered field group fields.
- Field group field-level Groovy scripts.
- Global Function Groovy scripts.

For more information on solution packages, refer to Oracle Permitting and Licensing Solution Library on the Technical Resources from Oracle site.

> **Note:** Exporting and importing form designs is not an alternative to migration through Configuration Set Migration (CSM). The purpose of this feature is to allow an intake form to be copied from one pod to another, such as from a development to a test environment or in the case of a county from one city's environment to another to leverage existing intake forms. Importing a form into a production environment is not supported.

Identify Source and Target Release Levels

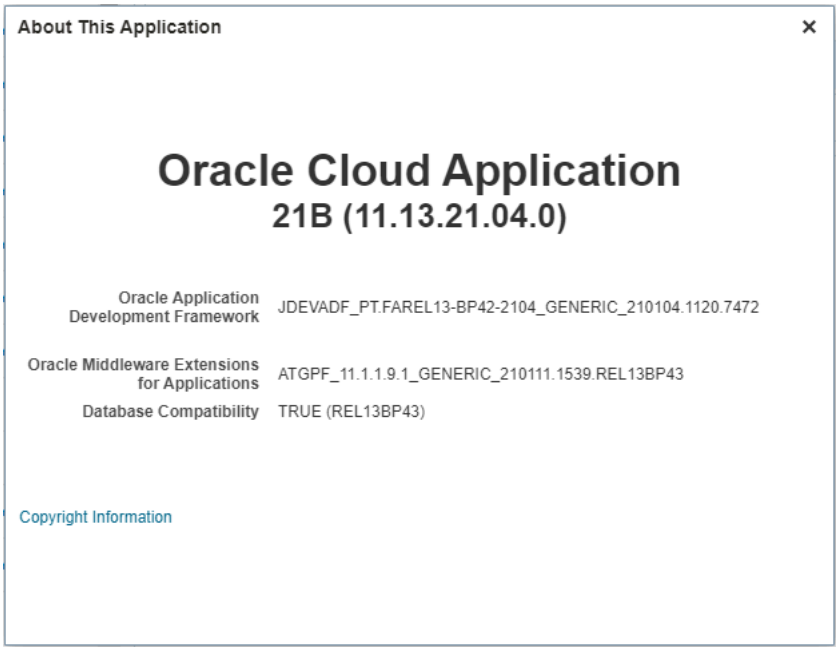
You export the solution package from the source environment, and you import it on the target environment. Both the source and the target environments must be on exactly the same release and patch level for the exported form

to function as expected on the target environment. Before you begin the process of exporting a form to a target environment, ensure that the release level of both environments match.

To identify environment release level:

1. Navigate to the Fusion Setup Manager: **Navigator** > **Setup and Maintenance**.
2. Click the profile icon to display the Settings and Actions drop-down list.
3. Click *About This Application.*

   This example illustrates how to determine the release level of an environment.



Prepare the Form Layout for Export

In this task, you verify the form layout and build the export solution package.

1. Open the form layout in the Intake Form Designer.
2. Select **Manage Design** > **Form Design Export**.

   The **Build Export Package** status window enables you to view the status and which items are being prepared for export.
3. Confirm the Build Export Package window reads "The export process has completed."

Export a Form Design Solution Package

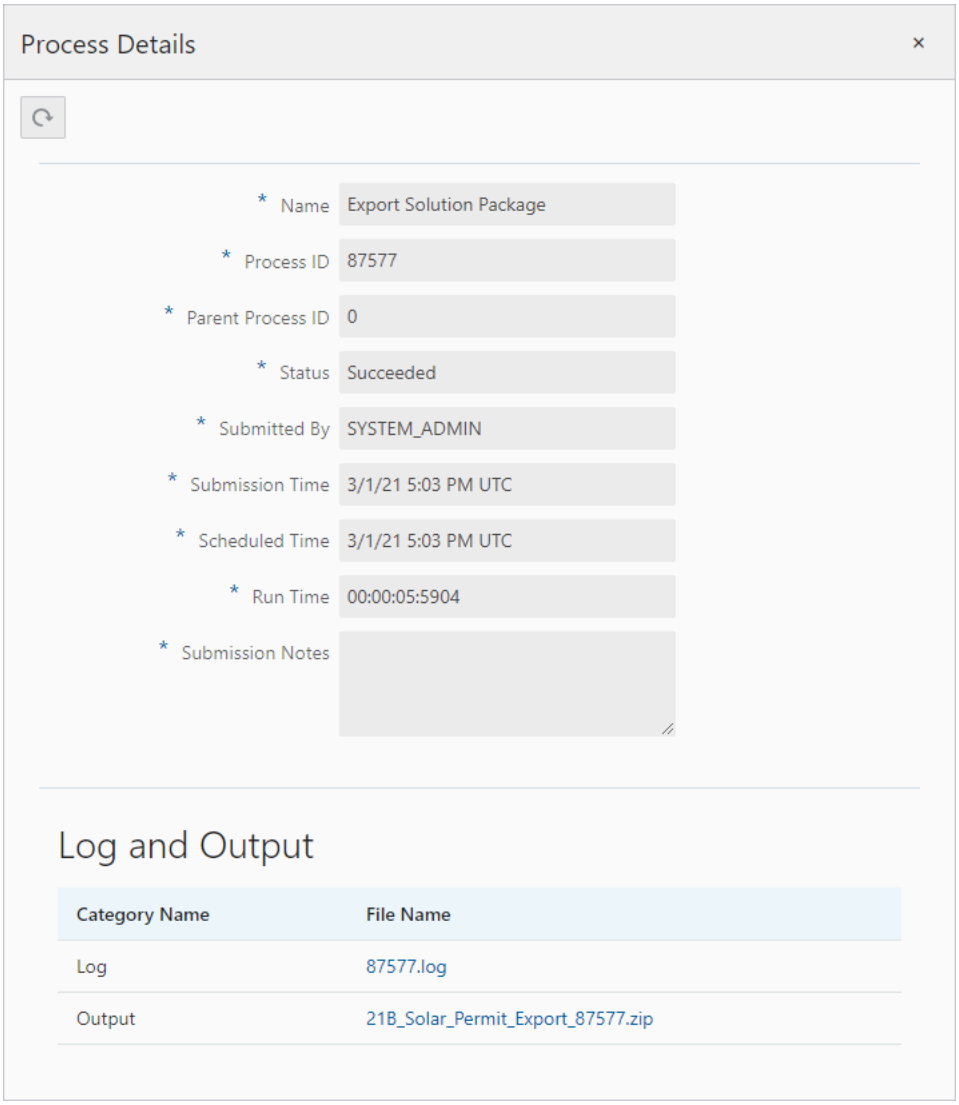
Once the layout has been verified and the solution package has been created, you can export the intake form. The export process runs as a standard Oracle Enterprise Scheduler Service (ESS) job.

1. Access the Solution Package Export.
   - Select **Navigator** > **Solution Package** > **Solution Package Export**
   - *Enter Solution Package Export* in Page Finder.
2. On the Export Solution Package page, use these fields on the Parameters tab to select the form design.

Page Element	Description
Package Type	Select the offering to which the intake form belongs, such as *Permits, Planning and Zoning, Business License* or *Issue Subtype (Code Enforcement).*
Permit Type **Planning and Zoning Application Type** **Issue Subtype** **Business License Type**	Select the intake form design. Depending on the offering, this field assumes a different label. For example, if you are exporting a form design from the Permits offering, the label is **Permit Type.**
Package Title	Enter a name for the export solution package. The name of the of the solution page will be your entered name with the process ID appended. For example, *YourPermit_87561.* If no name is provided, the process generates a name based on the transaction type ID and process ID, such as *SP_LNP1YourPermit_c_87561.*

3. Use the standard ESS job settings on the Schedule and Notification tabs if needed.
4. Click **Submit.**
5. Click the **Process Monitor** link and locate the row in the grid for your process ID, and monitor its progress.
6. When the process completes, click the **View More Details** link for the export process.
7. On the Process Details page, use the Log and Output grid to view the log for your process and to access the solution package ZIP file from the **Output** row.
8. Download the solution package ZIP file to a local folder.

Process Details page showing the generated solution package in the Output row.



Import a Form Design Solution Package

1. Access the Solution Package Import page:
   - In Fusion Setup Manager select your offering, then select the Solution Packages functional area, then click Import Solution Packages.
   - Select **Navigator** > **Solution Package** > **Solution Package Import**
   - Enter *Solution Package Import* in Page Finder.
2. On the Import Solution Package, on the Parameters tab click **Browse** for the **Solution Package** field and navigate to your downloaded solution package ZIP file.
3. Use the standard ESS job settings on the Schedule and Notification tabs if needed.
4. Click **Upload** to bring the solution package into the target system.
5. Click **Submit** to start the ESS job to unpack the solution package and apply the definitions and metadata to the target environment.
6. Use the Process Monitor to monitor the progress of the import process.
7. Navigate to the Transaction Type page (or Issue Subtype page) and open the imported object.
8. Click **Design Form.**

> **Note:** Until you click **Design Form**, the intake form import is *not* complete. This step must be completed to set up essential pieces of the form, such as the REST endpoint, the object security, the layout, and so on.

Considerations

- You can export and import forms multiple times. In the case of subsequent imports, only the changed data gets imported.
- If the import process encounters an error and stops, when you start the process again it begins where it ended in the previous import attempt.
- Intake forms in both draft and published states can be exported. If the form design is in draft status then the sandbox and the layout will be exported, and if the form design has been published, then the published version of the layout is exported as well.
- If the form is in a published state on the source environment, it will be imported into the target environment as a draft intake form in a sandbox. Test the form in the sandbox to confirm that the imported form has not affected any other intake forms in the environment. The form needs to be published, just like any other draft form, before it's available outside the sandbox.
- Upgrading your Solution Package contents will support the use of the exported packages on future releases. One way to upgrade your packages is to import them to an upgradeable environment prior to upgrade and extract them after the upgrade. Plan your exports and upgrades accordingly.
- When importing a solution package, the different components of an intake form are processed and saved separately. If one or more of the components fails to be saved, there is no rollback or cancellation of the import process. All components that were successfully processed remain, while those that weren't successfully processed will be missing after the import process completes. For example, an intake form design can be imported and processed successfully but the underlying transaction record type import may fail. In this case, if you manually create a record type with the same name as the record type that failed to import, the successfully imported form design will use that record type automatically.

Creating General Information Forms for Business Licenses

This topic describes how to create a General Information intake form for your General Information transaction type. This applies only if you are allowing applicants to select multiple business license types to be combined into a single intake form to streamline the application process.

Completing Prerequisites

Before you create the General Information intake form section, you need to have first created a General Information business license type, just as you would any other business license. There are two parts to the transaction type: the business license type and the intake form.

Setting up single intake for multiple license types involves these tasks:

Task	Documentation
1) Set up General Information for Business License types	*Setting Up General Information for Business License Types*
2) Create General Information forms for business licenses	This topic.
3) Enable selecting multiple business license types on the Apply page	*Setting Up Agency-Level Options for Business Licenses*

Creating a General Information Form Design

This documentation assumes you are familiar with the Intake Form Designer and creating intake forms. You use the same steps to create a General Information intake form design as you would any other intake form.

To create a General Information section:

1. After creating the prerequisite General Information business license type, click **Design Form** on the Business License Type page.
2. Add the field groups, group boxes, and rich text areas required.
3. Save and publish your General Information form design.
4. Return to the Business License Type page and set **Status** to *Ready*.

> **Note:** When you publish a typical intake form, you also set the **Public User Enabled** field, this setting is not available for General Information transaction types. The General Information type can be accessed **only** within the single intake form construct. It can't be accessed on its own.

General Information Section Considerations

When creating a General Information intake form, you'll notice you have a limited number of elements, options, and features you can incorporate into form designs. You are working with a subset of elements and features, with no new options added for General Information forms.

When creating General Information forms, you can't:

- Add Groovy business logic.
- Implement control display (conditional display).
- Set up versioning.
- Configure fee estimates.
- Specify form options, such as disabling the review page or setting a confirmation step.
- Set elements to be hidden from the public or confidential.
- Test single intake forms in sandbox mode.

The following table lists what you can add to a General Information form and any considerations.

Intake Form Element	Considerations
Field Groups	You can add these field groups to a General Information form design: • Applicant (required) • Business Details (required) • Business Locations (required) • Business Owners (required) • Contact Details (required) • Terms and Conditions (optional) Each individual business license type *must also* have the same field groups you include in the General Information form design. At runtime, if a license type is selected to be included in the single intake form, the field group in the General Information form takes the place of the corresponding field group in the license types, and data entered within the General Information section gets stored in each individual business license type record. **Note:** None of the child data from the General Information form gets stored in the database until the application intake form is submitted. This includes the data entered in the Business Details, Business Locations, Business Owners, and Contact Details field groups. Keep this in mind, if you have any other definitions configured to consume this data, such as communication templates or Business Rule Framework rules, and an application is in a pending status. For example, when the list of contacts is in the general information, contractor contacts that are added in the contractor section appear in the list of all contacts only after application submittal. This applies only to the origination application.
Terms and Conditions	Adding Terms and Conditions is optional. You can add a unified Terms and Conditions if it applies to all your business license types. Otherwise, don't include the Terms and Conditions field group in the General Information form design, but add it separately to all business licenses. If you include the Terms and Conditions in the General Information form: • Each license type must also contain the Terms and Conditions field group. • It's recommended to add the Terms and Conditions field group to its own page, where it is the only element on the page.
Attributes	Same as a typical intake form, you select the field group, field, or group box, and the available options appear in the Elements panel. **Note:** If you set a field group field to be required in the General Information form design, you should also set it to be required in all of the business license type forms as well so that the data collected is consistent across all of your intake forms.
View Form	You can view the origination version of the form. Single intake forms support origination only.
User-defined fields	You can add rich text area fields for informational text.
Layout	You an add group boxes to contain fields and field groups as needed.

Intake Form Element	Considerations
Publishing	In your development environment, sandbox testing is not supported for single intake forms. For single intake forms, all license type form designs and the General Information form design must be published at least once. The single intake form includes the latest published version of the intake forms.

Managing Intake Form Performance

This topic describes the options available for improving the runtime performance of your intake forms.

Updating Intake Form Cache

To improve performance of the initial loading of intake forms and confirm your intake forms are including the most recent updates, you must schedule a set of delivered Enterprise Scheduler Service (ESS) jobs to run on a regular basis. These jobs ensure that the latest metadata is available for your runtime intake forms. Intake form metadata needs to be updated for a variety of reasons including upgrades, updates, patches, as well as your own intake form updates migrated from your development and test environment.

> **Note:** If you don't maintain the metadata cache with the delivered ESS jobs, applicants accessing intake forms may experience performance degradation as new updates are added to the cache when a form is accessed, or they may observe a mismatch between elements in the case and elements in the database.

To run the intake form metadata cache management ESS jobs:

1. Navigate to *Setup and Maintenance* from the Navigator menu or by entering it in Page Finder.
2. On the Functional Setup Manager page, select **Navigator** > **Tools** > **Scheduled Processes**.
3. Click **Schedule New Process**.
4. On the Schedule New Process dialog, select *Job*, and select one of these jobs to run (*individually*):
    a. *Invalidate Intake Form Metadata Cache Job*
    b. *Build Intake Form Metadata Cache Job*

    > **Note:** To locate the jobs in ESS, click the search icon to the right of the **Name** field, click **Search** at the bottom of the drop-down list, enter *describe* in the **Name** field and click **Search**.

5. On the Process Details page, click **Advanced**, and select *Using a schedule* on the Schedule tab.

    It is recommended to run these jobs regularly during a known period of relative down-time or low system usage, such as every Sunday night.

    > **Tip:** Schedule the Invalidate Intake Form Metadata Cache job to run first, allowing enough time for it to complete prior to running the Build Intake Form Metadata Cache job.

6. Click **Submit**.

12 Setting Up Inspections

Setting Up Inspection Statuses

Oracle delivers inspection statuses for use during the inspection process. You review the statuses on the Inspection Status page.

You review inspection statuses during setup on the Inspection Status page. You can't delete the system-defined statuses or add new statuses, but you can modify the associated inspection status names and descriptions.

Modifying Inspection Statuses

1. Select **Common Setup** > **Transaction Status**.
2. Select the **Inspections** tab.
3. You can review the delivered inspection statuses in the **System Status** column:
    - *Pending*
    - *Requested*
    - *Scheduled*
    - *Completed*
    - *Canceled*
    - *Deleted*
4. Select the row for the inspection status that you want to modify.
5. On the Inspection Status Details page you can edit the inspection status name and description.

    The status name is used as the display status for the inspection in the permit or business license application.
6. Click **Save** to save any changes.

Inspection Evaluation Overview

The inspector evaluates a building site for adherence to codes and regulations required for a permit or business license application. The example here provides information about an inspection set up to use automatic score calculation with the bottom up scoring method.

A permit or business license application might require one or more inspections, each inspection might have one or more checklists, and each checklist might have checklist items or not, depending on the inspection configuration. The inspector performs an inspection by assessing the checklist items, if any, then checklists, and up to the inspection level. The evaluation results that the inspector enters are rolled up to the next level until a final inspection score is calculated if scoring is used.

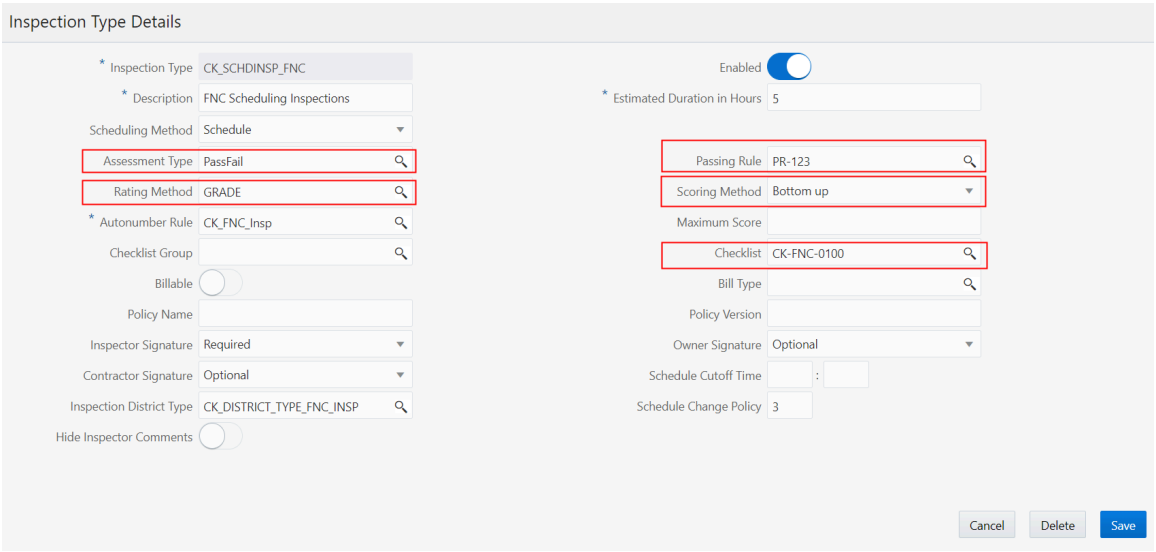
Scoring is not required. The score is the rolled up to the next level automatically only if scoring is used. Otherwise, you specify the result manually on each level.

The following example describes the setup and results of performing an inspection using the bottom up method of scoring. Scoring bottom to top indicates that the inspector starts with a zero score and adds points for each criterion that is met.

Example: Using the Bottom Up Scoring Method

Before you begin, set up the assessment type, rating method, passing rule, scoring method, and checklist, which includes the checklist items. In this case, you don't need to set up the checklist group, because checklist and checklist group are mutually exclusive of each other.

This example illustrates setup for an inspection on the Inspection Type Details page. Details are in the surrounding text.



The setup includes the following:

1. Assessment Method

   The assessment method is defined on the assessment type page and used in the inspection type definition. During the inspection, the inspector selects an available assessment which is associated with a system result. The system result determines the scoring calculation as follows:

Displayed Assessment	System Result	Scoring Calculation
Pass	Pass	Score = All Points
Corrected on Site	Corrected	Score = All Points
Fail	Fail	Score = No Points
NA (not applicable)	Other	Score = No Points

Displayed Assessment	System Result	Scoring Calculation

> **Note:** Only the displayed assessment value is configurable by the agency. The available system results are Pass, Fail, Corrected, and Other. You must have one assessment with a system result of Pass and one assessment with a system result of Fail. You can define multiple assessments with system results of Corrected and Other.

See *Setting Up Inspection Assessment Types*.

2. Inspection Scoring Method
   The scoring method is defined on the inspection type. In this example, the scoring method is *Bottom Up*.
   See *Setting Up Inspection Types*.
3. Rating Method
   When you use a scoring method, you also must set up a rating method. The rating method defines the range of scores used at the inspection type level.
   See *Setting Up Rating Methods*.
4. Checklist
   The checklist used in the inspection is defined on the inspection type. For example, the checklist could be Electrical for a residential addition. For multiple checklists, you enter a checklist group name. A checklist group can have different inspection checklists, such as both Electrical and Plumbing for a residential addition.
   See *Setting Up Inspection Checklists*.
5. Checklist Item
   The inspection score is defined in the inspection checklist details. In this example, each checklist item is set up with a possible score of 25. The inspector's assessment determines how many points are applied to the checklist. When the inspection result is Pass, the item receives the complete score.
   See checklist details in *Setting Up Inspection Checklists*.

Based on the setup, an example inspection evaluation might look like this:

Checklist Item	Possible Score	Inspector's Checklist Item Result (Assessment)	Assessment System Status	Calculated Score	Checklist Total Score
1	25	Pass	Pass	25	Item 1 = 25
2	25	Pass	Pass	25	Item 1 + Item 2 = 50
3	25	Corrected on Site	Corrected	25	Item 1 + Item 2 + Item 3 = 75
4	25	Fail	Fail	0	Item 1 + Item 2 + Item 3 + Item 4 = 75

For multiple checklists, the sum of the checklist scores determines the inspection score.

Requirements for Inspection Workflow Task Advancement

In order for the underlying transaction workflow to advance to the next task, the inspection results must match the following criteria:

1. At least one inspection must be set as the final inspection.
2. At least one of the final inspections must be set to complete.
3. For a final inspections set to complete, the result value must be set to either "pass" or "corrected" only.

   > **Note:** If there are multiple final inspections set to complete, at least one of the complete final inspections must have a result value of *pass* or *corrected*.

4. If these conditions aren't met, the transaction can still proceed if the PSC_UNRESTRICTED_ACTIONS workflow process custom property includes the action. For more information, see *Using Custom Properties*.

Setting Up Inspection Assessment Types

Assessment types identify the results available for assessing an inspection, for example, Pass and Fail. You add, modify, or delete assessment types and codes for inspections on the Assessment Type pages.

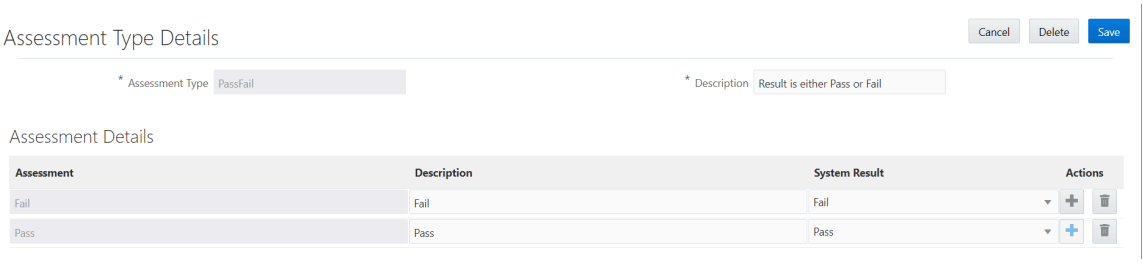
An assessment type includes one or more assessment codes, which identify the possible results for the inspection type. Assessment types are also used for inspection checklist and checklist item results.

Assessment types function independently of the scoring method, maximum score, and minimum score, for example:

- If the system result is Pass or Corrected, the full score is assigned.
- If the system result is Other or Fail, the score is 0.

Scoring for each system result is predefined in the system for inspections.

This example illustrates the Assessment Type Details page containing the field values described in the following table.



Adding Inspection Assessment Types

1. Select **Inspection Setup** > **Assessment Type**.
2. On the Assessment Type page, click **Add** to add an assessment type.
3. On the Assessment Type Details page, enter an assessment type name and description.
4. In the Assessment Details section, click **Add** in the assessment code row.

5. Enter values in the fields of the assessment code row:

Page Element	Description
Assessment	Enter a code name.
Description	Enter descriptive text for the code.
System Result	Select the system-defined result value that you want to set for this assessment code: ○ *Other* ○ *Pass* ○ *Fail* ○ *Corrected* You must map each assessment code to a system result value. Each assessment type must include a system result of *Pass* and a system result of *Fail*. The default value is *Other*. **Note:** You must assign *Fail* to only one code. Likewise, you must assign *Pass* to only one code. The system result is used in the inspection result processing. If scoring is used, the system result of *Pass* and *Corrected* receive the maximum score. The system results *Other* and *Fail* receive no score. The system result is also used to determine whether an inspection result is pass (system result *Pass*) or fail (system result *Fail*). For example, the Inspection Summary report includes violation information when a checklist or checklist item result is associated with the system result *Fail*.

6. Click the **Add** icon at the end of the row to add another assessment code row.
7. Click **Save**.

Modifying Inspection Assessment Type Details

1. Select **Inspection Setup** > **Assessment Type**.
2. Select the row for the assessment type you want to modify.
3. In the header fields on the Assessment Type Details page, you can only modify the assessment type description. You cannot change the name.
4. In the **Assessment Details** section, you can:
   - Change the description of an assessment code. You cannot change the code name.
   - Select a new value in the **System Result** column. Available values are *Pass, Fail, Corrected,* or *Other.* Each assessment code must be mapped to a system-defined result value. The default value is *Other*. You can only use *Pass* and *Fail* once.
5. If you made any changes, click **Save**.

Deleting Inspection Assessment Types

1. Select **Inspection Setup** > **Assessment Type**.
2. On the Assessment Type page, click the **Edit** icon.
3. Select one or more check boxes for the assessment type rows you would like to delete.

   Note: When you delete an assessment type, you also delete the associated details.
4. Click the **Delete** icon.

Deleting Inspection Assessment Type Details

1. Select **Inspection Setup** > **Assessment Type**.
2. On the Assessment Type page, select the row for the assessment type you are working with.
3. On the Assessment Type Details page, click the **Delete** icon at the end of the assessment code row you would like to delete. You delete details one row at a time.
4. Click the **Save** button.

Setting Up Rating Methods

An inspection rating method may have one or more rating ranges, which an inspector uses to evaluate the object of an inspection. You add, modify, or delete rating methods and rating details for inspections on the Rating Method pages.

If you are using scoring for inspections, you must also set up rating methods. Rating methods are used at the inspection type level and aren't required at the checklist or checklist item levels.

Adding Rating Methods

You add an inspection rating method by setting up the rating method code with a description and rating details. For example, an agency might use *GRADES* as the rating method code, with a description of *Standard Grades*. The rating details might include grades such as A (high) to F (low), and provide a range of scores to each rating. If the rating for an A grade is defined by 90-100 points, an inspection score of 95 would receive an A.

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering: *Public Sector Business Licenses* or *Public Sector Permits*.
3. From the **Functional Areas** list in the left panel, select *Business License Inspections* or *Permit Inspections*, respectively.

   The right panel shows the required tasks for the selected functional area.
4. Select the task **Manage Rating Methods**.
5. On the Rating Method page, click the **Add** (+) button.
6. Here's how to add a new rating method:

Page Element	Description
Rating Method	Enter a name for the rating method. For example, GRADE.
Description	Enter a description of the rating method. For example, Standard A-F Grading Method.

Page Element	Description

7. In the **Rating method values** section, click the **Add** button.
8. On the **New rating method value** drawer, enter values for the rating method:

Page Element	Description
Rating	Enter a short name for the rating.
Minimum Score and **Maximum Score**	Enter minimum and maximum numerical values to specify the range for this rating. Do not use decimals. The range for this rating cannot overlap the range for another rating.

9. Click **Save**.

   The rating appears in the **Rating method values** grid.

For example, if your rating method uses grades A through F, you specify the rating range for each grade, like this:

Rating	Minimum Score	Maximum Score
A	91	100
B	81	90
C	71	80
D	61	70
F	0	60

The range for each rating can't overlap the range for another rating.

Modifying Rating Methods

1. On the Rating Method page, select the row for the rating method you want to modify.
2. In the header fields on the Rating Method Details page, you can only modify the rating method description. You can't change the name of the rating method.
3. Click **Save**.

Modifying Rating Method Values

You can change the minimum and maximum scores for a rating on the Rating Method Details page.

1. On the Rating Method page, select the row for the rating method you want to modify.
2. On the Rating Method Details page, select the rating row in the values grid that you want to modify.
3. On the **Rating method value details** drawer, you can change the values in the **Minimum Score** or **Maximum Score** fields for this rating.

   The range for this rating can't overlap the range for another rating. You can't change the name of the rating.
4. Click **Save**.

Deleting Rating Methods

1. On the Rating Method page, select the row for the rating method you want to delete.
2. On the Rating Method Details page, click the **Delete** button.

> **Note:** When you delete a rating method, all associated rating values are also deleted.

Deleting Rating Method Values

1. On the Rating Method page, select the row for the rating method you want to modify.
2. On the Rating Method Details page, click the rating row in the **Rating method values** grid that you want to delete.
3. In the **Rating method value details** drawer for the individual rating, click the **Delete** button.

Setting Up Passing Rules

A passing rule identifies the different ways an inspection can be scored. You add, modify, and delete passing rules for inspections on the Passing Rule pages.

Passing rule definitions provide the criteria for determining whether an inspection passes or fails. If the scoring method is not used in the inspection type definition, a passing rule is not required.

Adding Passing Rules

A passing rule may have one or more scoring ranges that you specify in the passing rule details.

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering: *Public Sector Business Licenses* or *Public Sector Permits*.
3. From the **Functional Areas** list in the left panel, select *Business License Inspections* or *Permit Inspections*, respectively.

   The right panel shows the required tasks for the selected functional area.
4. Select the task **Manage Passing Rules**.
5. On the Passing Rule page, click the **Add** (+) button.

6. Here's how to add a new passing rule.

Page Element	Description
Passing Rule	Enter a name for the passing rule.
Description	Enter a description of the passing rule.

7. In the **Passing rule criteria** section, click the **Add** button.
8. On the **New passing rule criteria** drawer, enter these criteria:

Page Element	Description
Description	Enter a description for the scoring range.
Minimum Score and **Maximum Score**	Enter minimum and maximum numerical values to specify the scoring range. You can't use decimals.
Number of Major Violations	Enter a value for the maximum number of major violations allowed.
Pass	Turn on the **Pass** switch if the specified scoring range combined with the number of violations results in a passing inspection. If the specified range and violations don't result in a passing inspection, leave the switch turned off. **Note:** For passing inspections that are based on a passing rule with the **Pass** switch on, the inspection result displays the assessment name that is defined with the system status *Pass*. If the **Pass** switch is off, the inspection result displays the assessment name that is defined with the system status *Fail*. The system uses the assessment type that is associated with the inspection type.

9. Click **Save**.

   The new passing rule criteria appear in the **Passing rule criteria** grid.

Modifying Passing Rules

1. On the Passing Rule page, select the row for the passing rule you want to modify.
2. In the header fields on the Passing Rule Criteria Details page, you can only modify the passing rule description. You can't modify the passing rule code.
3. Click **Save**.

Modifying Passing Rule Details

You can change the scoring range for a passing rule on the Passing Rule Details page.

1. On the Passing Rule page, select the row for the passing rule you want to modify.
2. On the Passing Rule Criteria Details page, select the scoring row in the criteria grid that you want to modify.
3. You can change these passing rule criteria:
   a. Description of the scoring range.
   b. Minimum and maximum scores to update the scoring range.
   c. Number of major violations allowed.

   You can also indicate that the specified scoring range combined with the number of violations can result in a passing inspection, by turning on the **Pass** switch. Turn off the switch if the scoring range combined with the violations doesn't result in passing an inspection,
4. Click **Save**.

Deleting Passing Rules

When you delete a passing rule, all associated passing rule criteria are also deleted.

1. On the Passing Rule page, select the row for the passing rule you want to delete.
2. On the Passing Rule Criteria Details page, click the **Delete** button.

   Note: When you delete passing rule criteria, all associated criteria are deleted.

Deleting Passing Rule Criteria

1. On the Passing Rule page, select the row for the passing rule you want to modify.
2. On the Passing Rule Criteria Details page, click the row in the **Passing rule criteria** grid that you want to delete.
3. In the **Passing rule criteria details** drawer for the individual passing rule criteria details, click the **Delete** button.

Setting Up Inspection Checklist Categories

Use checklist categories and subcategories to organize the various types of checklists items for inspections.

You set up inspection checklist categories and subcategories on the Checklist Category pages.

Use the checklist categories and subcategories for categorizing checklist items when you set up inspection checklists on the Inspection Checklist Item Details page. See *Setting Up Inspection Checklists*.

Adding Checklist Categories

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering: *Public Sector Business Licenses* or *Public Sector Permits*.
3. From the **Functional Areas** list in the left panel, select *Business License Inspections* or *Permit Inspections*, respectively.
   The right panel shows the required tasks for the selected functional area.

4. Select the task **Manage Checklist Categories**.
5. On the Checklist Category page, click the **Add** (+) button.
6. Here's how to add a new checklist category:

Page Element	Description
Category	Enter a name for the checklist item category.
Description	Enter a description of the checklist item category.

7. In the **Checklist subcategory** section, click the **Add** button.
8. On the **New checklist subcategory** drawer, enter these criteria:

Page Element	Description
Subcategory	Enter a checklist item subcategory.
Description	Enter a description for checklist item subcategory.

9. Click **Save**.

   The subcategory appears in the **Checklist subcategory** grid.

Modifying Checklist Categories

1. On the Checklist Category page, select the row for the category that you want to modify.
2. On the Checklist Category Details page, you can only modify the category description. You can't change the category name.
3. Click **Save**.

Modifying Checklist Subcategories

1. On the Checklist Category page, select the row for the category with the subcategory that you want to modify.
2. Select the subcategory that you want to modify in the **Checklist subcategory** grid.
3. You can only change the description on the **Checklist subcategory details** drawer.
4. Click **Save**.

Deleting Checklist Categories

When you delete a checklist category, all associated subcategories are also deleted.

1. On the Checklist Category page, select the row for the category that you want to delete.
2. On the Checklist Category Details page, click **Delete**.

Deleting Checklist Subcategories

1. On the Checklist Category page, select the row for the category with the subcategory that you want to delete.

2. On the Checklist Category Details page, click the row in the **Checklist subcategory** grid that you want to delete.
3. In the **Checklist subcategory details** drawer for the individual checklist subcategory, click the **Delete** button.

Setting Up Inspection Checklists

Inspection checklists identify the items that the inspector must assess to complete an inspection. You set up inspection checklists and checklist items on the Inspection Checklist pages.

Before adding inspection checklists, you set up:

- Inspection assessment types for your agency, if you want to associate a checklist with an assessment type.

  See *Setting Up Inspection Assessment Types*.
- Inspection checklist categories and subcategories, if you want to categorize your checklist items.

  See *Setting Up Inspection Checklist Categories*.

You add, modify, and delete checklists and checklist items in the inspection setup pages. The checklist and checklist items are copied to the inspection when the inspection schedule is created, and appear on the Inspection Checklist page, the Checklist Items page, and the Checklist Item Result page.

> **Note:** When you modify an inspection checklist or checklist item, the updated checklist is applied to new inspections using the checklist. Existing inspections use the version of the checklist definition in use when the inspection was scheduled.

You identify the checklist or checklist group to use for an inspection on the Inspection Type page. To set up a checklist group after setting up checklists, see *Setting Up Inspection Checklist Groups*.

Adding Inspection Checklists

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering: *Public Sector Business Licenses* or *Public Sector Permits*.
3. From the **Functional Areas** list in the left panel, select *Business License Inspections* or *Permit Inspections*, respectively.

   The right panel shows the required tasks for the selected functional area.
4. Select the task **Manage Inspection Checklists**.
5. On the Inspection Checklist page, click **Add** (+) to add a checklist.
6. Here's how to add a new checklist:

Page Element	Description
Checklist	Enter a name for the checklist.
Description	Enter a description for the checklist.
Assessment Type	Select an assessment type from the drop-down menu.

Page Element	Description
	The system determines a passing result based on the assessment type defined for the checklist. The assessment that is defined with system status *Pass* is used for the passing result. Otherwise, the assessment that is defined with the system status *Fail* is used. Assessment types function independently of the scoring method, maximum score, and minimum score. See *Setting Up Inspection Assessment Types*.
Minimum Passing Score	Enter the minimum score for a passing grade. This value is required for the *Bottom up* scoring method. If the total score for the checklist is equal to or greater than the minimum passing score, the checklist receives a passing result.
Maximum Score	Enter the maximum score possible for the checklist. This value is required if the scoring method is *Top down,* which isn't currently available.
Scoring Method	Select the scoring method use for the checklist: - *Bottom up*: Scoring from the bottom up indicates that the scoring starts with 0 (zero) and the inspector adds points for the criteria that are met. - *Not used*: This is the default value and indicates that no scoring method is used for this checklist. You must specify the result manually for each level: checklist item, checklist, and inspection. If you don't use the scoring method, you can't use the passing rule and rating method. This also means that results aren't automatically calculated starting with the checklist items, then to the checklist and to the inspection levels. **Note:** The scoring method specified for the checklist should match the scoring method in the Inspection Type definition.
Comment	Enter any additional information.

7. Turn on the **Enabled** switch.
8. Click **Save**.

Adding Inspection Checklist Items

1. On the Inspection Checklist page, select the row for the checklist to which you want to add checklist items.
2. On the Inspection Checklist Details page, click the **Add** (+) button in the **Checklist items** section.
3. Enter values for fields on the New Checklist Item page.
   Required fields include the checklist item name and description.

Page Element	Description
Checklist Item and **Description**	Enter a name and description for the checklist item.
Required	Turn on this switch to indicate that the inspection of the item is required. The inspector can't submit the inspection result until all required checklist items and checklist results are complete. If the checklist item is not required, you can turn off the switch.
Major Violation	Turn on the switch to indicate that this checklist item is considered a major violation if it doesn't pass inspection.
Score	Enter the score the item receives if it passes the inspection.
Category and **Subcategory**	Enter a category and subcategory for the checklist item. See *Setting Up Inspection Checklist Categories*.
Instructions	Click the **Add** button in the **Instructions** section to add instructions for inspecting the checklist item. Add instructions on the **New instructions** drawer, including a name for the instructions and the instructional text.

4. Click **Save**.

Modifying or Deleting Checklists

1. On the Inspection Checklist page, select the row for the checklist you want to modify.
2. On the Inspection Checklist Details page, you can change the values for all fields except for the checklist name.
3. If you made any changes, click **Save**.
4. If you want to delete the checklist, click **Delete**.

> **Note:** When you delete a checklist, all associated checklist items are also deleted.

Modifying or Deleting Checklist Items

1. On the Inspection Checklist page, select the checklist row associated with the checklist item.
2. On the Inspection Checklist Details page, select the row for the checklist item in the **Checklist items** section.
3. On the Checklist Item Details page, you can change the values for all fields except for the checklist item name.
4. If you made any changes, click **Save**.
5. If you want to delete the checklist item, click **Delete**.
6. Click **Save**.

Modifying or Deleting Checklist Item Instructions

1. On the Inspection Checklist page, select the checklist row.
2. On the Inspection Checklist Details page, select the row for the checklist item that contains the instructions.
3. On the Checklist Item Details page, select the row for the instructions that you want to modify or delete.
4. Change the instructional text on the **Instruction details** drawer. You can't change the name of the instructions.
5. If you made any changes, click **Save**.
6. If you want to delete the instructions, click **Delete**.
7. Click **Save**.

Setting Up Inspection Checklist Groups

A checklist group comprises inspection checklists that you can associate with a permit or license application type. You define a checklist group by adding one or more inspection checklists to the group.

You set up inspection checklist groups on the Checklist Group pages.

Before creating inspection checklist groups, you must set up your checklists on the Inspection Checklist page. See *Setting Up Inspection Checklists*.

Creating Inspection Checklist Groups

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering: *Public Sector Business Licenses* or *Public Sector Permits*.
3. From the **Functional Areas** list in the left panel, select *Business License Inspections* or *Permit Inspections*, respectively.

   The right panel shows the required tasks for the selected functional area.
4. Select the task **Manage Checklist Groups**.
5. On the Checklist Group page, click **Add** (+) to create a new checklist group.
6. On the New Checklist Group page, enter a name and description for the group of inspection checklists.
7. Click **Save**.
8. To add an inspection checklist to the group, click the **Add** button in the **Checklists** section.
9. In the **New checklist** drawer, select a checklist from the **Checklist** drop-down list.

   The description for the checklist you selected appears in the **Description** field.
10. Click **Save**.

Modifying or Deleting Checklist Groups

1. Select **Inspection Setup** > **Checklist Group**.
2. On the Checklist Group page, select the row for the inspection checklist group that you want to modify.
3. On the Checklist Group Details page, you can only modify the checklist group description. You can't change the group name.
4. Click **Save** to save any changes.
5. Click **Delete** to delete the checklist group.

Removing Checklists from an Inspection Checklist Group

Note: You can't modify inspection checklists on the Checklist Group pages; you can only remove them from the group.

1. On the Checklist Group page, select the row for the checklist group from which you want to remove one or more inspection checklists.
2. On the Checklist Group Details page, select the row in the **Checklists** grid that you want to remove from the group.
3. On the **Checklist details** drawer, click **Delete**.

Setting Up Inspection Types

Define inspection types used by your agency to identify the requirements and options for different types of inspections. You set up information such as scheduling, assessments, checklists, billing, signatures required, and comments on the Inspection Type pages. You can also set up an inspection type to be hidden from public user view in applications until the inspector has submitted the results.

The inspection type is associated with the permit or business license application for the scheduled inspection and defines the different attributes for performing the inspection.

Note: When you modify an inspection type, the updated values are applied to new inspections using the inspection type. Existing inspections use the original inspection type definition. This doesn't apply to the **Schedule Cutoff Time** and **Schedule Change Policy** fields, which are referenced when the inspection is scheduled and not stored on the inspection itself.

Inspection assignments are based on inspection type, inspection district, and job attributes that are associated with job functions, such as Building Inspector. For more information, see *Setting Up Agency Staff*. Assignments are also made based on the settings for the scheduling method associated with the inspection type. For more information, see *Setting Up Inspection Assignment*.

Adding Inspection Types

You add inspection types for your agency on the Inspection Type page. You must set up the attributes for the inspection type before you begin.

1. Select **Inspection Setup** > **Inspection Type**.
2. On the Inspection Type page, click **Add New** to add a new inspection type.
3. Enter values for fields on the Inspection Type Details page. Required fields include **Inspection Type** and **Description**, **Estimated Duration in Hours**, and **Autonumber Rule**. Information about setting up scheduling business rules appears in the next step.

Page Element	Description
Inspection Type and **Description**	Enter a unique ID and description for the inspection type.

Page Element	Description
Unannounced	Turn on this switch to indicate that an inspection should be hidden from public view. When an inspection is unannounced, applicants and contacts with application access won't receive any communications so that they don't know when the inspection is scheduled to take place. Agency staff can see which inspection types are unannounced on the inspection request page, in the agency's view of inspection details, and in the application details. Once the inspector provides the results, the applicant and contacts with application access can see the inspection details and results. Only agency staff with permissions can request a reinspection for an unannounced inspection that has failed. These Permit and Business License inspection communications aren't sent to applicants or contacts when the inspection is unannounced: o Inspection Canceled o Inspection ETA Updated o Inspection Postponed o Inspection Requested o Inspection Rescheduled o Inspection Scheduled
Estimated Duration in Hours	Enter the estimated number of hours this type of inspection will take. This field is required for scheduling. For more information, see *Setting Up Inspection Scheduling*.
Scheduling Method	Select the scheduling method for this inspection type: o Schedule o Ready o Request For more information, see "Selecting Scheduling Options" in this topic.
Assessment Type	Enter an assessment type. This field is required for inspection result processing. For more information, see *Setting Up Inspection Assessment Types*.
Passing Rule	Enter a passing rule, which defines the criteria for determining whether an inspection passes or fails. For more information, see *Setting Up Passing Rules*.

Page Element	Description
Rating Method	Enter a rating method, which defines the scoring ranges used by the passing rule to determine whether an inspection passes or fails. You must set up a rating method if you are using scoring. For more information, see *Setting Up Rating Methods*.
Scoring Method	Select a scoring method from these options: o *Bottom up*: Scoring bottom to top indicates that the inspector starts with zero and adds points for each criterion that is met. You must set up a passing rule for bottom up scoring. o *Not used*: This is the default value and indicates that no scoring method is used for this inspection. You must specify the result manually for each level: checklist item, checklist, and inspection. If you don't use the scoring method you can't use the passing rule and rating method. This also means that results are not automatically calculated starting with the checklist items to the checklist to the inspection level. **Note:** The scoring method specified for the checklist should match the scoring method in the Inspection Type definition.
Autonumber Rule	Enter the ID for the automatic numbering rule to use for generating the inspection transaction key. For more information, see *Setting Up Autonumbering*.
Checklist Group	You can enter a checklist group. If you enter a checklist group, you cannot also enter a checklist ID. For more information, see *Setting Up Inspection Checklist Groups*.
Checklist	You can enter the ID for a single checklist. You cannot enter both a checklist group and a checklist ID. For more information, see *Setting Up Inspection Checklists*.
Billable	Click this slider if this inspection type is billable. When you turn on this switch, the **Bill Type** field becomes required.
Bill Type	Enter a bill type. This field is required if the **Billable** switch is turned on. For more information, see *Setting Up Bill Types*.

Page Element	Description
Policy Name and **Policy Version**	Enter the name of the template and version number the Oracle Intelligent Advisor policy. For more information, see *Overview of Oracle Intelligent Advisor Configuration*.
Inspector Signature **Owner Signature** **Contractor Signature**	Select a signature option for the inspector, owner, and contractor associated with the inspection type: o *Required*: The signature field appears on the Inspection Results page. **Note:** Inspectors can't submit a completed inspection if required signatures are missing. o *Not Required*: The signature field does not appear on the Inspection Results page. o *Optional*: A signature is optional for this inspection type. The default value for the **Inspector Signature** is *Required*. The default value for the **Owner Signature** and **Contractor Signature** is *Optional*.
Inspection District Type	Enter the inspection district type for this inspection, for example a building, electrical, or plumbing inspection district. When the inspection with this inspection type is scheduled, the system finds the inspector who is assigned to a district belonging to the inspection district type defined on the inspection type. This field is required for scheduling. For more information, see *Setting Up Inspection Scheduling*. Inspectors using the Inspector Application can add inspections that are assigned to themselves in districts not their own.
Display Inspector Comments	Turn on this switch if you want inspector comments visible to public users. The default value for this switch is on.

4. Turn on the **Display Assess Fee Option** to allow inspectors to indicate that a fee should be assessed for an inspection. The default value for this switch is on. The **Assess Fee** option appears in the Inspector Application on the Inspection Result page.

   When the inspector submits the inspection results with the **Assess Fee** switch turned on, the Business Rules Framework evaluates the criteria for a fee and applies the fee to the permit or business license application using the Add Fee action if the criteria are met. For information about setting up Business Rules Framework, see *Setting Up Add Fee Actions*.
5. Verify that the **Enabled** switch is turned on if you want to enable this inspection type when you save it. The switch is turned on by default for a new inspection type.
6. Click **Save**.

Selecting Scheduling Options

Set up scheduling for inspections with this inspection type. Select values for the scheduling method, schedule change policy, and scheduling cutoff times.

For information about setting up time the entry method, assignment method, and arrival display associated with each scheduling method, see *Setting Up Agency-Level Options for Permits* and *Setting Up Agency-Level Options for Business Licenses*.

1. Select the **Scheduling Method** for inspections associated with this inspection type.

Scheduling Method	Description
Ready	Select this scheduling method when you want applicants to enter the date and time when the site is ready to be inspected. Depending on agency configuration, you may only enter the date. Inspections with this scheduling method are assigned and scheduled by inspection supervisors using the Inspections console page for agency staff. Inspectors enter a **Ready-by Date** and **Ready-by Time** when they create inspections that have a *Ready* type, depending on agency configuration. Inspectors using the mobile app have the option of assigning the inspection to themselves, otherwise a supervisor makes the assignment.
Request	Select this scheduling method to enable applicants to select a preferred date and time range for requested inspections. Depending on agency configuration, you may only enter the date. Inspections with this scheduling method are assigned and scheduled by inspection supervisors using the Inspections console page for agency staff. Inspectors enter a **Preferred Date** and **Preferred Time** when they create inspections that have a *Ready* type, depending on agency configuration. The time ranges available for the **Preferred Time** field are configured in the **Scheduled Time Range** setup for permits or business licenses in the agency-level offering options. Inspectors using the mobile app have the option of assigning the inspection to themselves, otherwise a supervisor makes the assignment.
Schedule	Select this scheduling method to require applicants to select a date and time, time range, or date only when requesting inspections, depending on the scheduling method setup in the offering-level options. Inspectors who create an inspection in the mobile application must enter a date and time, and they are required to assign the inspection to themselves.

2. Select the **Schedule Cutoff Time** for inspections associated with this inspection type.

   Enter the time after which applicants can no longer schedule inspections for the current day using the Scheduling modal page. For example, if the cutoff is 3:00 PM and the current time is 4:30 PM, the inspection can't be scheduled until tomorrow.

   > **Note:** This field doesn't affect agency staff when they schedule inspections. It also doesn't affect automatic batch assignment or reassignment. Agency staff can also reschedule, postpone, and cancel inspections regardless of the schedule cutoff time.

   Inspectors and inspection supervisors using the Inspector Application can add and update inspections regardless of the schedule cutoff time.
3. Select the **Schedule Change Policy** for inspections associated with this inspection type.

   Enter the acceptable number of hours prior to the inspection that the user can change the schedule or cancel an inspection.

   > **Note:** Agency staff can reschedule, postpone, and cancel inspections regardless of the schedule change policy. Inspectors and inspection supervisors using the Inspector Application for mobile devices can also update inspections regardless of the schedule change policy.

For more information on inspection scheduling, see *Setting Up Inspection Scheduling* and *Managing Inspections for an Agency*.

Modifying or Deleting Inspection Types

You can modify or delete inspection types on the Inspection Type page.

1. Select **Inspection Setup** > **Inspection Type**.
2. On the Inspection Type page, select the row for the inspection type you want to modify.
3. On the Inspection Type Details page, you can change the values for all fields except for the inspection type code.
4. If you made any changes, click **Save**.
5. To delete the inspection type, click **Delete**.
6. If you want to delete multiple inspection types, you can delete them from the Inspection Type page:
   a. Click the **Edit** icon.
   b. Select the checkboxes for the inspection type rows to delete.
   c. Click the **Delete** icon.

Setting Up Inspection Dependencies

The global Inspection Dependencies setup page enables agencies to configure default inspection prerequisites that apply across all of an agency's inspection types. You select the prerequisite inspections for each inspection type available from the agency.

The default inspection prerequisites that you define here apply across permit types and are used when a primary permit and subapplications with inspections are linked.

Note: Unannounced inspection types can't have prerequisite inspections or be prerequisite inspections for other inspection types. The dependencies setup is unavailable for unannounced inspections.

Here's how to set up the inspection prerequisites for each inspection type the agency offers:

1. Select **Inspection Setup** > **Inspection Dependencies**.
2. All of the inspection types defined by the agency appear on the Inspection Dependencies page.

   Expand the row for an inspection type in the **Inspection Type** column or use the **Search** field to find an inspection type on the page.
3. Mark the checkbox for the inspection types that are prerequisites for the open inspection type.

   The inspection type name appears in the inspection type header row in the **Prerequisite Inspections** column.
4. Repeat for each inspection type in your agency that has one or more prerequisite inspections.
5. Click the **View Dependencies** link to open a graphical representation of all of the inspection dependencies.
6. Click **Save**.

For information about setting up inspection dependencies for a permit type, see *Setting Up Inspection Groups*.

Setting Up Inspection Groups

An inspection group identifies a group of inspection types that you can associate with a type of permit or business license application. You can set up inspection groups on the Inspection Group page. Agencies can also identify inspection dependences for inspections in the group on this page.

The inspection group includes one or more inspection types. After you define inspection groups, you can reference them on the permit type or business license type.

Before setting up inspection groups, you must set up inspection types for your agency on the Inspection Type page. See *Setting Up Inspection Types*.

Note: You define the default inspection dependencies for a permit or business license type in the inspection group setup. Your agency defines default inspection dependencies used across permit types on the global inspection dependencies page. See *Setting Up Inspection Dependencies*.

Adding Inspection Groups

1. Select **Inspection Setup** > **Inspection Group**.
2. On the Inspection Group page, click **Add** to add a new inspection group.
3. On the Inspection Group Details page, enter a name and a description for the inspection group.
4. Click the **Enabled** switch to enable the new inspection group.
5. To add inspection types to include in the group, click **Add** in the Inspection Types section.
6. Enter values in the columns for each inspection type:

Page Element	Description
Inspection Type	Enter an existing inspection type.

Page Element	Description
Description	The description for the inspection type you entered appears in this field.
Select Dependencies	Click the link to set up inspections to be completed in a prescribed order. On the Dependencies modal page, identify the prerequisite inspection types for each inspection type in a group. Prerequisite inspections must be completed with a system result of passed or corrected before you schedule or assign the inspection with the dependencies. The system doesn't allow two inspections to reference each other. Dependencies setup isn't available when the **Unannounced** column displays *Yes*. Only system administrators can set up inspection dependencies.
Dependencies	Displays the prerequisite inspection types for an inspection type as defined by a system administrator. The dependencies listed for an inspection type indicate that those inspections must pass or be corrected before the applicant or contractor can schedule an inspection with that type. For example, a Rough Electrical inspection must pass before the Final Inspection can be scheduled or assigned. Unannounced inspections don't have any dependencies.
Unannounced	Indicates whether an inspection type has been defined to be unannounced or hidden from public view until the inspector submits the results. Here are some considerations for implementing unannounced inspections: o *Inspection dependencies* Unannounced inspection types can't have prerequisite inspections or be prerequisite inspections for other inspection types. The dependencies setup is unavailable. o *Required inspections* An unannounced inspections can't be set to **Required** unless it's the only inspection in the inspection group. As the only inspection in the group, it will be the final inspection. The **Required** switch is also unavailable for unannounced inspections on the inspection request page. o *Inspections for linked permits* When an inspection type is associated with a permit linked to other permits, you can't update the inspection type to be unannounced, unless the permit status is *Expired* or *Withdrawn*. For more information, see *Setting Up Inspection Types*.
Required	Turn on the switch if the inspection type is required for the inspection group. The final inspection is automatically required. Agency staff can also overwrite the **Required** setting in the inspection group when creating an inspection request.

Page Element	Description
	Even if an inspection type isn't required, the required status may change based on business rules during processing.
Final Inspection	Turn on the switch if this inspection type is the final inspection. One inspection in the inspection group must be marked as the final inspection, and the final inspection is automatically required. Inspectors must complete all other required inspections with a passing or corrected result before agency staff can schedule the final inspection or assign an inspection in a pending status to an inspector.

7. On the Inspection Group Details page, click **Save**.

Modifying or Deleting Inspection Groups

You can modify or delete inspection groups on the Inspection Group page.

1. Select **Inspection Setup** > **Inspection Group**.
2. On the Inspection Group page, select the inspection group that you want to modify.
3. On the Inspection Group Details page, you can only modify the inspection group description. You can't change the group name.
4. Click the **Enabled** switch to enable or disable the inspection group.
5. If you want to delete the inspection group, click **Delete** on the Inspection Group Details page.
6. Click **Save** to save any changes.
7. If you want to delete multiple inspection groups, you can delete them from the Inspection Group page:
    a. Click **Edit**.
    b. Select the checkboxes for the inspection group rows to delete.
    c. Click **Delete**.
8. In the inspection types grid, you can:
    a. Click the **Required** switch to make the inspection required before the final inspection.
    b. Click the **Final Inspection** switch to set an inspection type as the final inspection. One and only one row must be set as the final inspection.
    c. Click **Add** to add a new inspection type row.
    d. Click the **Delete** icon at the end of the row to remove an inspection type from the group.

    > **Note:** You cannot change the inspection type ID or description, but you can remove an inspection type and add another.

9. Click **Save** to save any changes.
10. If you want to remove an inspection type from the group, click **Delete**.

Setting Up Inspection Calendars

Inspection calendars establish the days of the week and daily hours that are available for scheduling specific types of inspections.

Administrators add, modify, and delete inspection calendars on the Inspection Calendar page.

Adding an Inspection Calendar

1. Select **Inspection Setup** > **Inspection Calendar**.
2. On the Inspection Calendar page, click **Add**.
3. On the Inspection Calendar Details page, enter values for the following fields:

Page Element	Description
Calendar ID	Enter a unique ID for the calendar.
Inspection Type	Select the type of inspection to which this calendar applies. For more information on inspections types, see *Setting Up Inspection Types*.
Inspection District	Select the district to which this calendar applies. **Note:** A small municipality may have only one defined district ID that includes its entire inspection area. A large municipality may have multiple defined district ID. This enables you to create inspection calendars for different areas to optimize your distribution of resources. For more information on districts, see *Setting Up Districts*.
Description	Enter a description for the calendar. For example, you might enter *Final fence inspection calendar*.
Start Date	Enter the first day of the calendar.
End Date	Enter the last date of the calendar. You can leave this field blank to give the calendar an open end date.
Start Time and **End Time**	Enter the start and end time for the calendar. For example, you might enter a start time of *09:00* and an end time of *16:00*.

Page Element	Description
Recurrence	Select whether the calendar reoccurs weekly. If you select *Weekly recurrence*, enter the number of weeks between occurrence in the **Weeks Between Occurrences** field.
Weeks Between Occurrences	Enter how many weeks are between each occurrence. For example, if you select a recurrence of *Weekly* with *1* week between occurrences, the calendar repeats every week. **Note:** When the recurrence frequency for an inspection calendar is greater than 1, the first week of scheduling is the week that contains the start date, where Sunday is considered the first day of the week. Therefore, it is recommended that you set the start date to the Sunday of the first week in which you want to schedule inspections. For example, you create an inspection calendar for Mondays and Fridays where the recurrence frequency is 2, alternating weeks. Setting the calendar start date to January 1, 2019 causes January 4, 2018 to be available for scheduling but not December 31, because it is before the start date. Also, January 7 and 11 are in the alternate week, so the next days available for scheduling are January 14 and 18. If you set the start date to January 5, which is still part of the first week that the calendar is active, the system considers this same week as the start week, but no days are available until January 14 and 18.
Inspection Days	Select the days of the week that are available for inspection scheduling.

4. Click **Save**.

Note: For overnight inspection calendars that go past 12 a.m. (midnight), you must create two calendars: one for the time period up until midnight, and one for the time period after midnight. For example, to create a weekday overnight calendar that starts at 09:00 p.m. and ends at 05:00 a.m. the following day, the first calendar would have a start time of 09:00 p.m. and an end time of 12:00 a.m. on Monday, Wednesday, and Friday. The second calendar would have a start time of 12:00 a.m. and an end time of 05:00 a.m. on Tuesday, Thursday, and Saturday.

Modifying an Inspection Calendar

1. Select **Inspection Setup** > **Inspection Calendar**.
2. Click a row on the Inspection Calendar page.
3. On the Inspection Calendar Details page you can:
   - Update the inspection calendar field values.

     Note: You cannot edit the **Calendar ID**.
   - Delete the calendar. You will be prompted to confirm the permanent deletion.
4. Click **Save**.

Deleting Inspection Calendars

1. Select **Inspection Setup** > **Inspection Calendar**.
2. Click **Edit**.
3. Select the checkboxes next to all the inspection calendars you want to delete.
4. Click **Delete**. You will be prompted to confirm the permanent deletion.

Setting Up Inspection Scheduling

When agency users and registered public users schedule an inspection, the system determines which inspectors are available and qualified to perform the inspection. Therefore, to schedule inspections, it is necessary to define all of the appropriate employee data for inspectors.

Inspectors are considered qualified if they have been assigned the inspection type and district associated with the inspection. The availability of inspectors is based on their work schedules and whether they have been assigned to other inspections previously.

In addition, the time slots that are available for scheduling are impacted by inspection calendars and holiday calendars, which define when inspections can and can't be performed, respectively.

The system determines which inspectors can be scheduled to perform an inspection based on two sets of criteria.

1. Qualifications: To be qualified to perform an inspection, agency staff must be defined as inspectors, and assigned to inspection types, districts, and work schedules.
2. Availability: Agency holidays and inspection calendars, inspector work schedules, and existing inspector assignments determine the availability of inspectors.

The following table lists the different types of data that need to be defined so that the system can determine inspector qualifications and availability. The Frequency column lists how many instances of the data type can be defined. The Required column lists whether a data type is required for time slots to appear on the Scheduling modal page during inspection scheduling.

For more information on inspection requests see *Requesting and Scheduling Inspections*.

Criteria Type	Data Type	Frequency	Required	Impact of Missing Data
Qualification	Inspection Type	One per inspection	Yes	Only defined inspection types are available to select when requesting inspections. The **Select a Time** button is not available if the inspection type's scheduling method is not *Schedule*.
Qualification	District	One per inspection Note that the address selected for the inspection needs to be associated to a property for which there is an assigned inspection district.	Yes	No scheduling times are available on the Scheduling modal page. Note that the inspection type and a property associated with the permit must have the same district type. If they don't, the

Criteria Type	Data Type	Frequency	Required	Impact of Missing Data
				Select a Time button is unavailable for the inspection request.
Qualification	Inspectors	One per employee who performs inspections	Yes	No scheduling times are available on the Scheduling modal page.
Qualification	Assigned Inspection Type	One or more per inspector	Yes	No scheduling times are available on the Scheduling modal page.
Qualification	Assigned Inspection District	One or more per inspector	Yes	No scheduling times are available on the Scheduling modal page. Note that the assigned inspection district and the property associated with the permit must have the same district type. If they don't, the Select a Time button is unavailable for the inspection request.
Availability	Work Schedule	One or more for each period of the day inspectors work; may include one break	Yes	No scheduling times are available on the Scheduling modal page.
Availability	Assigned Work Schedule	One or more per inspector	Yes	No scheduling times are available on the Scheduling modal page.
Availability	Inspection Calendar	One or more for each combination of inspection type and district	No	The inspection can be scheduled at any time of day (or whenever inspectors are available).
Availability	Assigned Inspection	Automatically created when an inspection is assigned	No	No time slots are unavailable for scheduling due to previously assigned inspections.
Availability	Holiday Calendar	One per agency	No	No days are unavailable for scheduling due to holidays or other agency non-working days.

Inspection Types

You define inspection types using the Inspection Type page. The system uses the estimated duration to determine whether an inspector is available for the entire time required to complete an inspection. The inspection district type is a predefined district type with the category of *Inspection.*

For more information on inspection types, see *Setting Up Inspection Types*.

Inspection Districts

You must create an inspection district and assign it to inspectors to enable qualified inspectors and make time slots available when scheduling inspections. The district for the inspection is based on the district type assigned to the inspection type. The system uses this district type to determine the district ID associated with the property for which an inspection is being scheduled. A property may have more than one district type associated with it, but only one of them has a district type category of *Inspection.*

The system determines the property for the inspection based on the inspection address. The address for a new inspection defaults to the primary address associated with the permit for which you are scheduling an inspection. You may select other addresses that are associated with the permit. If no address is associated with an inspection, the system can't determine the district for the inspection so the **Select a Time** button is disabled.

For more information on district types, districts, parcels, and addresses see:

- *Setting Up District Types*
- *Setting Up Districts*
- *Assigning Districts to Parcels*
- *Assigning Districts to Addresses*
- *Setting Up Property Addresses*

Work Schedules

You must create work schedules and assign them to inspectors to make the inspectors available for inspection scheduling.

> **Note:** If the recurrence for a work schedule is *Weekly*, and the weeks between occurrences is greater than 1, the system uses the week of the valid from date as the starting point for scheduling.

For more information on work schedules, see *Setting Up Work Schedules*.

Inspectors

To make inspectors available for inspection scheduling, you must perform the following steps on the Agency Staff page:

1. Assign applicable inspection job functions to the inspector

Offering	Job Function ID	Description
Business Licenses	ORA_BL_INSPECTOR	Business License Inspector

Offering	Job Function ID	Description
Business Licenses	ORA_BL_INSPECTOR_SUPERVISOR	Business License Inspector Supervisor
Permits	ORA_BUILDING_INSPECTOR	Building Inspector
Permits	ORA_INSPECTOR_SUPERVISOR	Inspector Supervisor

2. Add these job attributes to each job function:

Job Attribute	Description	Attribute Values
ORA_INSPECTION_DISTRICTS	Inspection Districts	Leave blank to enable an inspector to be assigned to inspections from all districts.
ORA_INSPECTION_TYPES	Inspection Types	Leave blank to enable an inspector to be assigned to all inspection types.
ORA_WORK_SCHEDULE	Work Schedule	Enter one or more attribute values for multiple work schedules.

Permit types are not used for inspector assignment.

For more information on assigning job functions and job attributes to agency staff, see *Setting Up Agency Staff*.

Inspection Calendars

Setting up inspection calendars is optional for scheduling inspections. Without inspection calendars, however, the system can potentially allow inspections to be scheduled for any time during a 24 hour period, if there are work schedules that comprise all 24 hours.

You define inspection calendars for a specific combination of inspection type and district. You can define more than one calendar for the same inspection type and district.

For more information on inspection calendars, see *Setting Up Inspection Calendars*.

Holiday Calendar

Setting up holiday calendars is optional for scheduling inspections. Holiday calendars establish the days that agency offices are closed and no field service operations are offered. The dates established as events on the holiday calendar are not available for inspection scheduling regardless of how the inspection calendars or work schedules are defined.

For more information on holiday calendars, see *Setting Up Holiday Calendars*.

Assignment Method

Agencies may also limit the number of inspections assigned to an inspector in a day. If an inspector has reached the daily maximum number of a certain inspection type, they won't be available for scheduling on that day. For information about setting up inspection assignment based on a count of inspections, see *Setting Up Inspection Assignment*. Inspections can also be assigned based on duration.

Setting Up Inspection Assignment

In addition to defining the appropriate employee data for inspectors and calendars to determine assignments, your agency may also limit the number of daily inspections based on inspection duration or an inspection count. The assignment method determines whether the daily inspection limit for inspectors will be based on the duration of inspections or the total number of inspections assigned to an inspector for the day.

For more information about the setup required for determining inspection assignments and scheduling, see *Setting Up Inspection Scheduling*

Count Assignment Method

To use the count assignment method, you set up the maximum daily inspection count in the agency's inspection settings and configure the scheduling method options for permit and business license inspections to use the *Count* assignment method.

The **Inspection Count Limit** field is the agency setting used to alert inspection supervisors when an inspector's total permit and business license inspections for the day exceeds the maximum defined. Only inspections set up with the *Count* assignment method are tallied. Inspectors below the limit can be assigned using automatic assignment, however, inspector supervisors can override the maximum number when manually assigning inspections. You must have an inspection supervisor job role to see inspector names and counts when scheduling inspections; an alert icon appears next to the count on the schedule page when an inspector has reached the daily limit.

Here's how to set up the count assignment method:

1. Select **Common Setup** > **Agency**.
2. Click the agency row.
3. On the Agency Information tab, go to the **Inspections** section, which applies to both the Permits and Business Licenses offerings.
4. Enter the maximum number of daily inspections for an inspector in the **Inspection Count Limit** field. The default value is 20.
   See the inspection setup options in *Setting Up Agencies*.
5. On the Features tab, set up the permit and business license options. Click the **Options** link for the Permits and Business Licenses offering, respectively.
6. On the Permit Options or Business License Options page, expand the **Inspections** section.
7. Configure the inspection scheduling method to use the *Date only* option in the **Time Entry Method** field and the *Count* option in the **Assignment Method** field. Each scheduling method can use a different assignment method.

Scheduling Method	Time Entry Method	Assignment Method
Request	Date only	Count

Scheduling Method	Time Entry Method	Assignment Method
Ready	Date only	Count
Schedule	Date only	Count

The inspector arrival is displayed as a date only when you're using the count assignment method. An inspector can have inspections by both count and duration on the same day.

For more information about setup, see *Setting Up Agency-Level Options for Permits* and *Setting Up Agency-Level Options for Business Licenses*.

Duration Assignment Method

When you configure the scheduling methods to use the duration assignment method, assignments are based on the scheduled inspection times and not by count. An inspector can have inspections by both count and duration on the same day.

1. On the Permit Options or Business License Options page, expand the **Inspections** section.
2. Configure the inspection scheduling method to use the *Duration* option in the **Assignment Method** field. Each scheduling method can use different entry methods and inspector arrival information, including a specific time, time range, or date only.

For more information about setup, see *Setting Up Agency-Level Options for Permits* and *Setting Up Agency-Level Options for Business Licenses*.

Setting Up Business Rules for Inspections

Use the Business Rules Framework to configure the Stop Process action to prevent the final inspection from being scheduled based on your business rule.

For example, you might want to prevent an applicant from creating a final inspection for a permit that has an unpaid fee balance.

For more information on configuring a Stop Process action, see *Setting Up Stop Process Actions*.

13 Setting Up Plan Reviews

Setting Up Electronic Plan Review

You can implement electronic plan review for permits and planning applications using a third-party integration with Bluebeam. This topic provides basic guidance for getting started with electronic plan reviews displayed in the Redwood Experience.

> **Note:** Oracle Permitting and Licensing is a technology integrator using Bluebeam Studio™ API. Implementation of electronic plan review requires your agency to subscribe to Bluebeam Revu. Contact Bluebeam Technical Support for more information.

For more information about using Bluebeam Studio™ Sessions for plan reviews in permit and planning applications, see *Plan Review Overview* and *Working with Electronic Plan Reviews*.

Here's information about setting up electronic plan reviews in Oracle Permitting and Licensing:

- Enable the Bluebeam Studio™ API in the Functional Setup Manager.

  In the Functional Setup Manager, go to setup for Permits. Click the **Change Feature Opt In** link. In the Permit Types row, click the **Features** pencil icon button. Select the option to enable the **Updated Bluebeam Studio API** for both Permits and Planning and Zoning. You must enable this option when using the Redwood Experience for plan reviews. No other configuration is needed.
- Enable electronic plan reviews in the agency-level options for permits and planning applications. See *Setting Up Agency-Level Options for Permits* and *Setting Up Agency-Level Options for Planning Applications*.
- For the integration to work, add the email addresses for reviewers found in their agency staff profiles to the Bluebeam Studio™ portal. For further information about setting up a Bluebeam Studio™ integration, contact Oracle Support.

Setting Up Plan Review Statuses

Use delivered plan review statuses to identify the progression through a plan review cycle. You can review the statuses on the status definition pages.

You review the plan review statuses on the Plan Review Status and Decision Status pages. You can't delete the system-defined statuses or add new statuses, but you can modify the descriptions. The descriptions allow you to enter a different status name to be displayed to agency staff.

The system derives the overall plan review status from the individual plan reviewer decisions, and updates the overall plan review with the most severe decision status. The system-defined decision statuses are listed here from most to least severe: *Rejected, Revision Required, Approved with Comments, Approved,* and *Not Required*. If plans have one or more rejections, or revisions are required, the applicant must correct the plans and resubmit them for another review cycle.

Modifying Plan Review Cycle Statuses

You can edit only the **Description** field on the Plan Review Status Details page. The agency-defined description is exposed to agency staff and public users on the plan review pages in the application details.

1. Select **Common Setup** > **Transaction Status**.
2. Select the **Plan Review** tab.
3. You can review the delivered review cycle statuses in the **Review Status** column:
    - *In Progress*
    - *Canceled*
    - *Completed*
4. Select the row for the review status that you want to modify.
5. On the Plan Review Status Details page you can edit only the description.
6. Click **Save** to save any changes.

Modifying Plan Review Decision Statuses

You can configure plan review decision status details separately for permits and planning and zoning on the Transaction Status - Plan Review Decision page. For each system-delivered plan review status, different descriptions can be displayed for permits and planning and zoning. They can also be enabled separately.

The configured plan review decision statuses appear on the plan review decision pages when performing plan reviews and on the Plan Reviews console page. The text that you enter in the **Permit Decision Description** field is displayed for permit transactions and the text in the **Planning Decision Description** field is displayed for planning application and preapplication transactions.

1. Select **Common Setup** > **Transaction Status**.
2. Select the **Plan Review Decision** tab.
3. Select the row for the decision status that you want to modify.
4. On the Decision Status Details page, you can review or update the status information:

Page Element	Description
System Status and **Decision Status**	Review the system status and the plan review decision status. These fields are display-only.
Permit Decision Description	Enter a description for plan review decisions on permits. The permit decision descriptions are delivered as enabled. The only decision status description that you can disable is *Approved with Comments* using the **Permit Decision Enabled** switch.
Planning Decision Description	Enter a description for plan review decisions on planning applications and preapplications. The planning decision descriptions are delivered as enabled. The only decision status description that you can disable is *Approved with Comments* using the **Planning Decision Enabled** switch.

5. Click **Save** to save any changes.

Setting Up Plan Reviewer Departments

A plan review department represents an area of expertise for reviewers of plan documents.

For example, a plan review department of Building is associated with experts in building-related codes and regulations whereas a plan reviewer department of Fire is associated with experts in fire-related codes and regulations.

You select a plan review department for a plan reviewer when you add a department job attribute for your plan reviewer job function during agency staff setup. For more information on adding job functions and job attributes, see *Managing Agency Staff Profiles*.

System administrators add, modify, and delete plan reviewer departments on the Plan Reviewer Department page.

Adding Plan Reviewer Departments

1. Select the **Setup and Maintenance** tile on the Agency Springboard to access Functional Setup Manager.
2. From the **Setup** drop-down list, select your offering.
3. From the **Functional Areas** list in the left panel, select *Plan Review*.
4. The right panel shows the required tasks for the selected functional area. Select *All Tasks* from the **Show** drop-down list and then select **Manage Plan Reviewer Departments** from the tasks list.
5. On the Plan Reviewer Department page, click the **Add** (+) button.
6. On the **New plan reviewer department** drawer, enter values for the following fields:

Page Element	Description
Department ID	Enter an ID for the department.
Department	Enter a name for the department.
Description	Enter a description for the department.
Department Lead	Before you can select a plan reviewer as the department lead, you must save the new plan reviewer department and assign it as a plan reviewer job attribute. Then the system administrator can return to the plan reviewer department definition and add a department lead. For more information, see "Modifying Plan Reviewer Departments" in this topic.
Applicable Classification	Select the types of transactions that the department applies to. You must select at least one classification from these options: ○ *Permits* ○ *Planning and Zoning* **Note:** These options are available to select only if you have more than one offering installed.

Page Element	Description

7. Turn on the **Enabled** switch to make the plan reviewer department available as a value on other pages.
8. Click **Save**.

Modifying Plan Reviewer Departments

Before you can select a plan reviewer as the department lead, you must save the new plan reviewer department and assign it as a plan reviewer job attribute. Then the system administrator can return to the plan reviewer department definition and add a department lead. For information about assigning job attributes, see *Setting Up Agency Staff*.

The automatic plan reviewer assignment process adds the department lead as the default plan reviewer for the department. You enable automatic plan review assignment and select the default plan reviewer departments on the Permit Type and Planning Application Type pages. See *Setting Up Permit Types* and *Setting Up Planning Application Types*.

1. Navigate to the Plan Reviewer Department page and select the plan reviewer department that you want to modify.
2. On the **Plan reviewer department details** drawer, you can:
    - Edit the description. You can't change the values of the **Department ID** and **Department** fields.
    - Add a plan reviewer to the **Department Lead** field or update the department lead.
    - Update the applicable classifications.
    - Enable or disable the plan reviewer department using the **Enabled** switch.

      > **Note:** When you disable a plan reviewer department that is already associated with a plan review, the department remains associated with that plan review.

    - Delete the plan reviewer department. You will be prompted to confirm the permanent deletion.
3. Click **Save**.

Deleting Plan Reviewer Departments

1. Navigate to the Plan Reviewer Department page and select the checkbox for the plan reviewer departments that you want to delete. If you want to delete multiple plan reviewer departments, select the checkboxes for the plan reviewer departments to delete.
2. Click **Delete**. You will be prompted to confirm the permanent deletion.

> **Note:** You can’t delete a plan reviewer department that is already in use as part of a plan reviewer’s job attribute, or selected for a permit type or planning application type. In this case, to prevent the plan reviewer department from being used in the future, turn off the **Enabled** switch to disable it.

Setting Up Plan Review Due Dates

Agencies can configure agency settings, time rules, and application types to automatically calculate plan review due dates in permit and planning applications.

Your agency can define turnaround times for plan reviews based on the permit or planning application type and whether it's a first or subsequent review for the application. The plan review due dates for individual departments can be different, and there can be a due date for completing the entire review cycle.

Here are the steps for setting up your agency to automatically calculate plan review due dates:

1. Set up time rules and time policies to use for calculations.

    a. Select a time rule classification: Permits or Planning and Zoning.
    b. Select the **Due Date Type**: Plan review.
    c. You can add 2 time policies for each time rule: One for the first review due date and the other for subsequent review dates. If the first review cycle is canceled, the first time policy applies to the next added cycle.

    For more information, see *Setting Up Time Rules*.
2. Turn on the **Exclude Saturday and Sunday** switch in the **Plan Reviews** section of the agency options for Permits and Planning and Zoning to calculate plan review due dates without counting Saturday and Sunday. The holiday calendar is always taken into account to exclude holidays.

    For more information, see *Setting Up Agencies*.
3. Add the time rules to the **Plan Reviews** section of the application type definition.

    - The **Cycle Time Rule** is the time rule used to calculate and automatically populate the cycle due date when you add a plan review cycle for the application.
    - The time rules entered in the plan reviewer department grid are used to calculate and automatically populate the plan reviewer due dates for each department with a time rule. You can assign reviewers from each department after the due dates have been added.

    See "Setting Up Plan Reviews for a Permit Type" in *Setting Up Permit Types* or "Setting Up Plan Reviews for a Planning Application Type" in *Setting Up Planning Application Types*.

14 Setting Up Activity Tracking

Setting Up Activity Tracking

This topic gives you an overview of the steps involved in setting up activity tracking for the administrative actions that are required during the application process.

1. Set up activity statuses, if desired, and review system statuses.

   See *Setting Up Activity Statuses*.
2. Set up activities.

   See *Setting Up Activities*.
3. Define activity groups.

   See *Setting Up Activity Groups*.
4. Add activities to the groups, and configure the activity rules that are used to calculate due dates of tasks.

   See *Defining Planning Application Activity Rules*.
5. Assign the activity group to the planning application type.

   See *Setting Up Planning Application Types*.

Setting Up Activity Statuses

Use delivered activity statuses to identify the progression of an activity using activity due dates tracking.

You can review the delivered activity statuses on the Activity Status page:

- *Canceled*
- *Completed*
- *In progress*
- *Incomplete*
- *Not required*
- *Pending*

You can't delete the system-delivered statuses, but you can modify the descriptions. You can also define additional activity statuses that are associated with either the *In progress* or *Not required* system status.

When an activity is inserted into the activity tracking list for the planning application, agency staff with update access to the planning application can update the activity when the work is completed. By doing so, the completed activity is removed from the planner's worklist. Planning activities can be updated after the application is completed.

An agency can define their own activity statuses and map them to the productized system statuses.

Adding Activity Statuses

Define any additional statuses that your agency will use for activity tracking on the Activity Status page.

1. Select **Common Setup** > **Transaction Status**.
2. Select the **Activity Status** tab.
3. Click **Add** to define a new status.
4. On the Activity Status Details page, enter values for these fields:

Page Element	Description
Status	Enter a status name.
Description	Enter a description for the status. The description is exposed to agency staff for an activity using activity due dates tracking.
System Status	Select the system status that you want to use. **Note:** You must associate the new status with a system status to ensure correct processing. - *In process* - *Not required*

5. Verify that the **Enabled** switch is turned on. The switch is turned off by default for a new status.
6. Click **Save**.

Modifying Activity Statuses

You can modify the activity statuses that you have defined on the Activity Status Details page, but you can only edit the **Description** field of system-defined statuses. The description is exposed to agency staff for an activity on the activity due dates tracking page.

1. Select **Common Setup** > **Transaction Status**.
2. Select the **Activity Status** tab.
3. Select the row for the status that you want to modify.
4. For user-defined statuses, you can:
    - Edit the description.
    - Select the system status that you want to use for processing: *In progress* or *Not required*.
    - Turn on the **Enabled** switch to enable a user-defined record status.
5. For system-delivered statuses, you can only edit the description. You can't edit the **Status** field or disable the status.
6. Click **Save** to save any changes.

Setting Up Activities

When configuring activity tracking for your agency, you set up the activities that take place during the application process.

Activities are time-sensitive tasks that help you track due dates related to the progression of a planning application. You set up activities on the Activities Details page for reuse in the activity groups associated with the planning application type. When a planning application is submitted, you manage the activities to complete the application. For example, you might set up an activity called Administrative Close for completing the hearing decision report.

You can modify or delete an activity, but when an activity is assigned to an activity group, you can't delete the activity.

Let's take a look at how to set up application activities:

1. Select **Common Setup** > **Activity**.
2. On the Activity page, click **Add** to add a new activity.
3. On the Activity Details page, you'll find these fields:

Page Element	Description
Activity ID	Enter a unique identifier for the activity. You can't modify this field after saving the activity.
Activity	Enter a name for the activity.
Description	Enter a description of the activity.
Classification	Displays *Planning and Zoning* to indicate the offering this activity will be used for.

4. Turn on the **Enabled** switch when the activity is ready for use.
5. Click **Save**.

Setting Up Activity Groups

When configuring activity tracking for your agency and after defining reusable activities, you define the grouping of activities that apply to a planning application type.

First, define the activity group that will be mapped to one or more planning application types. You can reuse activity groups for different application types. Then assign the activities that have already been set up to activity groups and set up the rules for calculating due dates. The groups identify the list of tasks involved in processing a planning application.

You can modify or delete an activity group, but you can't delete the activity group when it's associated with a planning application type.

Here's how to define the activity group:

1. Select **Common Setup** > **Activity Group**.
2. On the Activity Group page, click **Add** to add a new group.
3. On the Activity Group Details page, enter a values for the group.

Page Element	Description
Activity Group ID	Enter a unique identifier for the activity group.
Activity Group	Enter a name for the activity group.
Description	Enter a description of the activity group.
Classification	Displays *Planning and Zoning* to indicate the offering this activity group will be used for.

4. Add activities to the group in the **Activity** section.

   You can click the **Activity** link to see the list of activities available for use in the group.
5. Turn on the **Enabled** switch when the activity group is ready for use.
6. Click **Save**.

The next step is to define the rules for each activity that are used to calculate due dates and manage the activity.

Defining Planning Application Activity Rules

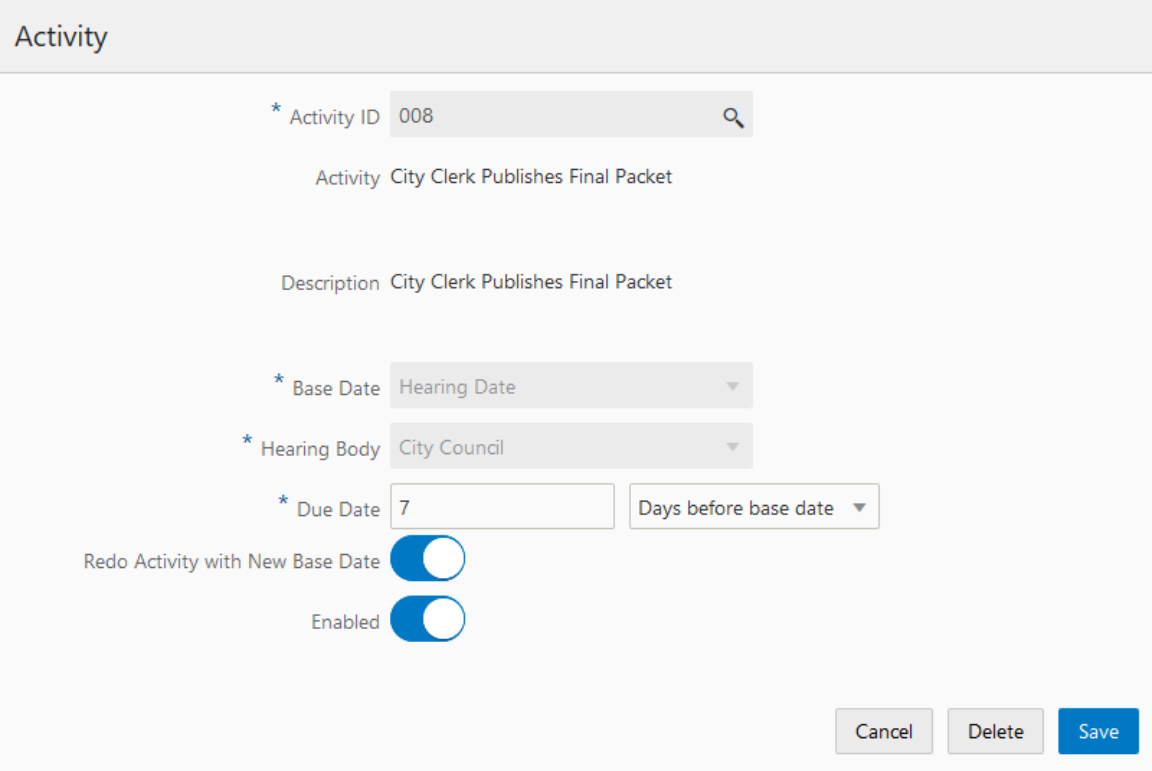
You define planning application activity rules for each activity in an activity group to track and manage tasks based on important due dates.

The rules are based on events that occur during the planning application lifecycle—which include when the application is received, application acceptance, the hearing schedule, and the hearing decision—and determine how the activity due dates are calculated.

Activity Rule Example

Let's take a look at an example. First, the agency sets up a reusable activity *City Clerk Publishes Final Packet,* which can be part of multiple agency groups. This activity reminds the planning application staff to publish the final packet before the public hearing. After the activity is assigned to an activity group, the agency defines the rules for tracking the activity. In this example, the activity is related to the hearing, based on the City Council hearing date. That is, the City Council hearing date is the base date and activities may be due before or after. Here the task is due 7 days before the hearing date, and if the hearing is canceled or rescheduled, agency staff can repeat the activity with a new base date.

The example Activity Group – Activity setup page shown here is described in the surrounding text.



When the hearing with the City Council is scheduled, the activity based on the rule is inserted into the activity tracking list for the planning application as shown here.

The due date for the activity is calculated to be 7 days before the hearing date. The hearing date in this example is 10/21/20 and the activity is due 10/14/20.

Notice how the activity or activities with same base date in the group are activated on the application's activity tracking page. In this example, all of the activities associated with the hearing base date appear in the list when the hearing date is scheduled.

Defining Activity Rules

Here's how to define activity rules that are used to determine due dates of tasks:

1. Select **Common Setup** > **Activity Group**.
2. On the Activity Group page, select the row with the activity group that you want to add activities to.
3. Click the **Add** button in the **Activity** section on the Activity Group Details page.
4. On the Activity page, select an activity from the reusable activities you set up in the first step of due date tracking setup. For more information, see *Setting Up Activities*.

   The activity name and description are displayed once you select an activity.
5. Next select the base date for calculating due dates, when the event in the application timeline occurs. Choose one of the following from the **Base Date** list:

Activity Base Date	Event Description
Submission Date	The date when the application was submitted in the agency system.

Activity Base Date	Event Description
Acceptance Date	The date when the agency accepts the application after submission. The workflow process populates the acceptance date in the application
Hearing Date	The scheduled hearing date for the planning application. The calculated activity due date is updated when the hearing date changes.
Hearing Decision Date	The date when the hearing body makes a decision about the planning application, such Approved or Denied.

6. For each base date, enter the due date rule in days in the **Due Date** field. For example, if an activity deadline is 30 days after the application acceptance date, enter *30* in the **Due Date** field and select *Days after base date*. You can also indicate whether the due date is prior to the base date by selecting *Days before base date*.
7. Then set up the unique rules for each activity based on the event date.
    - If you select the *Submission Date* base date, you provide a due date and also indicate whether the application can be resubmitted. For example, when an application is submitted, state law provides up to 30 days to review the application and determine its completeness. When an application is resubmitted, the 30-day allowance begins again. It can only be resubmitted if it's incomplete.
    - The *Acceptance Date* base date selection only requires due date values.
    - For the *Hearing Date* and *Hearing Decision Date* base dates, enter the due date and values for the following fields:

Page Element	Description
Hearing Body	This field applies only to the Hearing Date Hearing Decision Date base dates. Select from the available hearing bodies that evaluate the application. Your agency sets up the hearing bodies you can choose from. For more information, see *Setting Up Hearing and Decision Making Bodies*.
Hearing Decision	This field applies only to the Hearing Decision Date base date. Select one or more agency-defined decisions about the planning application like *Approved with Conditions*, *Hearing Continued*, and *Not Approved*. The calculated activity due date is based on the date the hearing decision is made with one of the specified outcomes.
Redo Activity with New Base Date	Indicate whether the activity needs to be redone whenever the base date changes. For example, the activity based on the current due date is complete, but you want to redo the activity based on a new date. A new row automatically appears on the activity tracking page with the new base date and calculated due date.

Page Element	Description

If enabled by your agency, you can exclude weekends and/or holidays in the activity due date calculation. If a calculated due date for an activity falls on a weekend or holiday, you can specify whether that date can be moved to the prior or the next working day.

Page Element	Description
Exclude in Due Date Calculation	Select from *Holidays only*, *Weekends only*, *Weekends and holidays*, or *no days excluded*.
Due Date Adjustment	Select from *No adjustment*, *To the prior working day*, or *To the next working day*.

8. Turn on the **Enabled** switch when the activity rule is ready for use. You can turn off the switch to disable the activity rule but you can't delete it if the activity group is in use.
9. Click **Save**.

Setting Up Actions Based on Activities

You can set up business rules in the Business Rules Framework to automatically update a workflow step and send communications based on an entitlement activity status change in the activity tracking.

The Business Rules Framework is an event-driven, action framework that enables you to execute various actions based on conditions in the business rules you define. Here the business rules can automate workflow and communications actions based on the progression of planning application activities. For more information about the Business Rules Framework, see *Business Rules Framework Overview*.

Before you begin, set up activity tracking, define the workflow process in Oracle Integration Cloud (OIC), and set up communication templates. For information about workflow, see *Setting Up Process Definitions for Workflow*. For information about setting up communication templates, see *Setting Up Communication Templates*.

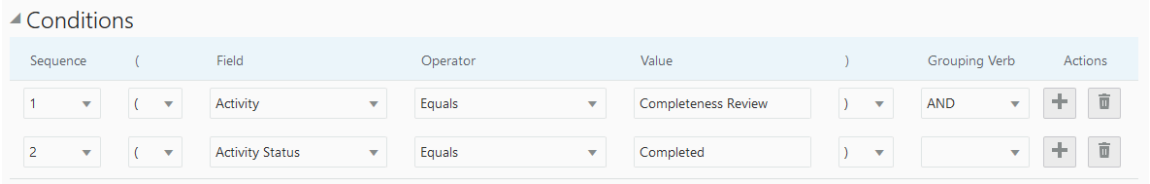
The workflow advances and communications are sent when the activity conditions are met. In this example, the workflow status for the human task Review Application Completeness is automatically set to *Complete* when the Completeness Review activity in activity tracking is set to *Completed.* Also, when the status of the Completeness Review activity is changed to *Completed,* the selected communication templates from the Planning Activity Updated communication event are sent.

Let's look at setting up the business rule with the conditions to trigger workflow advancement and communication actions:

1. Select **Common Setup** > **Business Rules Framework**.
2. Select the **Planning and Zoning** tile.
3. In the list of planning and zoning events, select the Planning Activity Updated event.
4. Click **Add** to create a business rule.
5. Define the conditions for the action in the **Conditions** section.
    - 1. *Activity* Equals *Completeness Review* AND

- 2. *Activity Status* Equals *Completed*

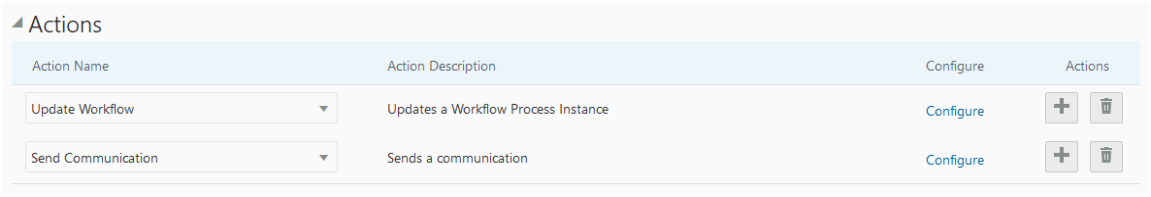
Example of entitlement activity conditions described in the surrounding text



6. Select actions:

   - The *Update Workflow* action that updates a workflow process instance.
   - The *Send Communication* action that sends emails and notifications based on communication templates.

   Workflow advancement and communications actions described in the surrounding text



7. Click the **Configure** link for the *Update Workflow* action to configure the workflow action values in the Update Workflow table.

   Identify the workflow step and the action that should be used when updating a task. In this example, the values are *Review Application Completeness* for the PSC_ACTIVITY_TYPE workflow property and *Completed* for the action.

8. Click the **Configure** link for the *Send Communication* action to select communication templates from the Planning Activity Updated communication event in the Activity Tracking resource. .

   You can select templates by template code or channel type. You can also process all Planning Activity Updated templates. Click the **Edit Templates** link to access and update the templates.

When the activity conditions are satisfied, the business rule triggers the workflow and communications actions.

15 Implementing the Business Rules Framework

Business Rules Framework Overview

This topic describes how your agency can use the Business Rules Framework to define and maintain business rules that drive system actions.

The Business Rules Framework is an event-driven framework that enables you to trigger various actions based on the criteria in the business rules you define. A business rule is a collection of logical expressions you construct by evaluating and comparing business object (resource) attributes with common operators, such as *equals*, *not equals, greater than,* and so on.

For example, a business rule can be applied to activate a variety of outcomes, including (but not limited to):

- Trigger automatic system communications.
- Update the underlying workflow process.
- Add fees.
- Apply conditions.

There are two types of business rules: *application-triggered rules* and *scheduled rules*.

Most rules are triggered during normal online system processing when a user invokes an event. For example, a rule can be triggered when an agency schedules a permit inspection (the event), which involves a user scheduling an inspection, and clicking **Save.** These are *application-triggered rules.*

You can also schedule rules to run at specific times or on a recurring basis. In this case, you define a schedule through the Oracle Enterprise Scheduler (ESS) to run the scheduled rules you have configured. These are *scheduled rules.* Scheduled rules run only according to the defend schedule.

Note: Only a small subset of events and resources (business objects) support schedule rules.

Oracle Permitting and Licensing delivers a registry of resources, or business objects, for each offering, that define the events applicable to that business object. Given the events and data contained by a resource, your agency can define the rule criteria to drive the desired actions. While the resources and events are system-defined, your agency defines the rules and selects the triggered actions.

Note: The term *resource* refers to a *business object.*

The following table describes the main elements in the framework.

Element	Defined By	Description
Offering	System	Offerings are the set of applications your agency has licensed. They contain the resources with the data for business operations.

Element	Defined By	Description
		For example, *Permits* and *Planing and Zoning* are offerings.
Resource	System	Resources are the business objects in the application. For example, the *Inspection* resource represents the data and activity related to an inspection..
Event	System	Events are categorized by offering and by business object. They represent specific, predefined occurrences for a business object in a particular offering. For example, with Permits, the Inspection business object contains these events: • *Inspection Canceled* • *Inspection Rescheduled* • *Inspection Requested* • *Inspection Scheduled* *Common* events apply to all offerings. For more information on events, their triggers, and their supported actions, see *Business Rules Framework Event Details*.
Rule	Agency	Rules are based on business requirements and constrain the actions associated with events. A rule contains one or more logical statements as the criteria that drives one or more actions. See *Setting Up Business Rules*.
Criteria	Agency	Criteria are logical statements that, if satisfied or evaluate to be true on the whole, cause an action to be carried out or stopped. See *Setting Up Business Rule Criteria*.
Actions	Agency	Actions get triggered as a result of the criteria in your business rule. Examples of action types include Send Communication, Update Workflow, Add Fee, and so on. **Note:** The selection of actions available depends on the selected resource (business object). In general, the list of actions to trigger contains the actions that are both applicable and supported for a particular resource. The list varies by resource and event. For more information on the different action types, see the topic in this chapter specific to the action type you want to trigger, such as "Setting Up Add Fee Actions."

Element	Defined By	Description

Setting Up Business Rules

This topic describes how to configure business rules in the Business Rules Framework.

Accessing Business Rules

To access business rules:

1. Navigate to the Business Rules Framework in the Navigator: **Common Setup** > **Business Rules Framework**.
2. On the Business Rules Framework landing page, select the offering you are implementing, such as *Permits.*.
   Select *Common* to access events that apply to more than one offering.
   Select *Scheduled Rules* to create a rule that you can run at a specific time or on a recurring basis.
   > **Note:** With scheduled rules, you first create the rule, similar to how you create other rules, then you define the schedule by which it will run. For more information on configuring scheduled rules, see *Setting Up Scheduled Rules*.
3. On the offering's events page, select the event for which you want to manage business rules, such as *Inspection Canceled* for the *Inspection* resource.
4. Use the Event Details page to view, add, or manage the business rules associated with the event.

Working with Default Business Rules

Most events have a predefined default rule, which you can use as is or use as a template to create your user-defined business rules. Default business rules have no criteria and the only action is Send Communication for All Templates.

> **Note:** The only modifications you can make on a default rule is to either enable or disable the rule. To make other changes you need to add a new rule or copy an existing default rule.

Copying a Default Rule

Except for enabling or disabling a default rule, you can't modify an existing default rule directly; you need to copy it first, and then make your changes.

To copy a default rule:

1. Access the default business rule.
2. On the Event Details page, click **Copy** in the Actions column in the Business Rules grid.
3. On the Copy page, enter a new **Rule Name** and **Rule Description**.
4. Click **Save.**
   > **Note:** After you copy a default rule, it becomes disabled automatically, and the new rule you just created is enabled.

Adding User-Defined Business Rules

If you don't want to use the existing default rule, or copy it, you can add user-defined business rules.

1. On the Event Details page, click **Add** to create a new business rule for the event.
2. On the Business Rules Details page, enter these values:

Page Element	Description
Rule Name	The name of the rule. **Note:** The rule name must be unique and can't be changed after you save.
Rule Description	Enter a description to further identify the rule.
Enabled	Turn on to enable the rule to be run in the system. Turn off the switch to disable the rule.

3. Add your business rule criteria.

   For more information on business rule criteria, see *Setting Up Business Rule Criteria*.
4. Add one or more actions.

   For more information on the different action types, see the topic in this chapter specific to the action type you want to trigger.

Setting Up Scheduled Rules

This topic describes how to configure business rules for selected business objects to be activated on a scheduled or recurring basis though the Oracle Enterprise Scheduler Service (ESS).

Scheduled Rules enable you to apply business rules:

- At specified times.
- On a recurring basis.

When creating a scheduled rule you select the event, define the criteria, and select the action the rule will trigger, just like you do with application-triggered rules. With scheduled rules you have the additional step of defining the schedule by which the rule will run. Scheduling and running a scheduled rule is handled by Oracle Enterprise Scheduler Service (ESS).

Note: Only a selected number of events support scheduled rules.

Creating a Scheduled Rule

To create a scheduled rule:

1. On the Business Rules Framework landing page, select the Scheduled Rules tile.
2. On the Scheduled Rules page, select the event for which you want to create a scheduled rule.
3. On the Event Details page, click **Add** on the Business Rules grid.
4. At the top of the Business Rule Details page, enter the required information.

Page Control	Description
Resource	Displays the resource (business object) that contains the attributes you intend to evaluate and compare in your criteria.
Event	Displayed the selected event name.
Rule Name	Enter the name for your rule.
Rule Description	Enter a description to help other implementation team members understand the purpose of the rule.
Enabled	Turn on to enable the rule. Turn off to disable it. Rules that are disabled don't run.

5. Enter the criteria for your rule.

   For more information on defining rule criteria, see *Setting Up Business Rule Criteria*.
6. Select the action for your rule.

   Depending on the event and resource, the selection of actions varies. The list displays the actions applicable and supported for the selected event and resource.
7. Click **Save.**
8. Click the Schedule Rules link at the top of the page to set up a schedule to run the rule through ESS.

   See the following section for more information.

Defining a Schedule for the Scheduled Rule

You can schedule the rule to run:

- As soon as possible.
- At one specific date and time.
- As a recurring schedule at regular intervals.

Note: You schedule rules to run through Enterprise Scheduler Service using the standard scheduling page. For details on this interface, refer to the Oracle Enterprise Scheduler Service documentation.

To define a schedule for a scheduled business rule:

1. Access the Schedule Rules page using one of the following methods:
    - Click the *Schedule Rules* link on the Business Rule Details page after you have setup criteria and configured the scheduled rule action.
    - Select **Navigator** > **Common** > **Schedule Rules**.
2. On the Schedule Rules page select the scheduled rule(s) you want to run from the **Select Rules** multi-select list.

    > **Note:** You can run multiple scheduled rules using the same schedule.

3. Select the Schedule tab, and specify when you want the rule to run.

    If you want to run the rule now, not according to a schedule, select **As soon as possible** and click **Submit.**

    To set up a schedule, select **Using a schedule,** and define the schedule as desired. Use the **Frequency** drop-down list to determine the interval at which the rule will run, such as hourly, daily, weekly and so on. Use the **Start Date** field to set the date when the schedule becomes active.
4. To set up additional notifications related to the process, select the Notification tab and provide the necessary details.
5. Click **Submit**.

Working with Process Monitor

Use the Process Monitor to determine the status of the scheduled rule process run and to troubleshoot if needed.

To access the Process Monitor:

- Click the Process Monitor link in the Scheduled Rule Details page.
- Select **Navigator** > **Common** > **Process Monitor.**

Use the rule name and the process ID to locate your scheduled job.

Click View More Details to view runtime and submission notes, logs, or output files (if any).

Setting Up Business Rule Criteria

This topic describes how to create logical expressions as the criteria for rules in the Business Rules Framework.

Understanding Criteria

Criteria are logical statements comprised of these elements:

- A criteria field to evaluate, selected from the underlying resource.
- An operator, such as *equals, not equal to, greater than,* and so on.
- A comparison field value.
- Grouping verb, such as *AND* or *OR* to link criteria statements and criteria groups.

You can add criteria using these modes:

- *Simple*: The criteria and criteria groups exist on a single level (no nesting) within a drag-and-drop user interface.
- *Advanced*: The criteria and criteria groups can contain multiple, nested levels where you can create more complex logic using a more free-form text approach.

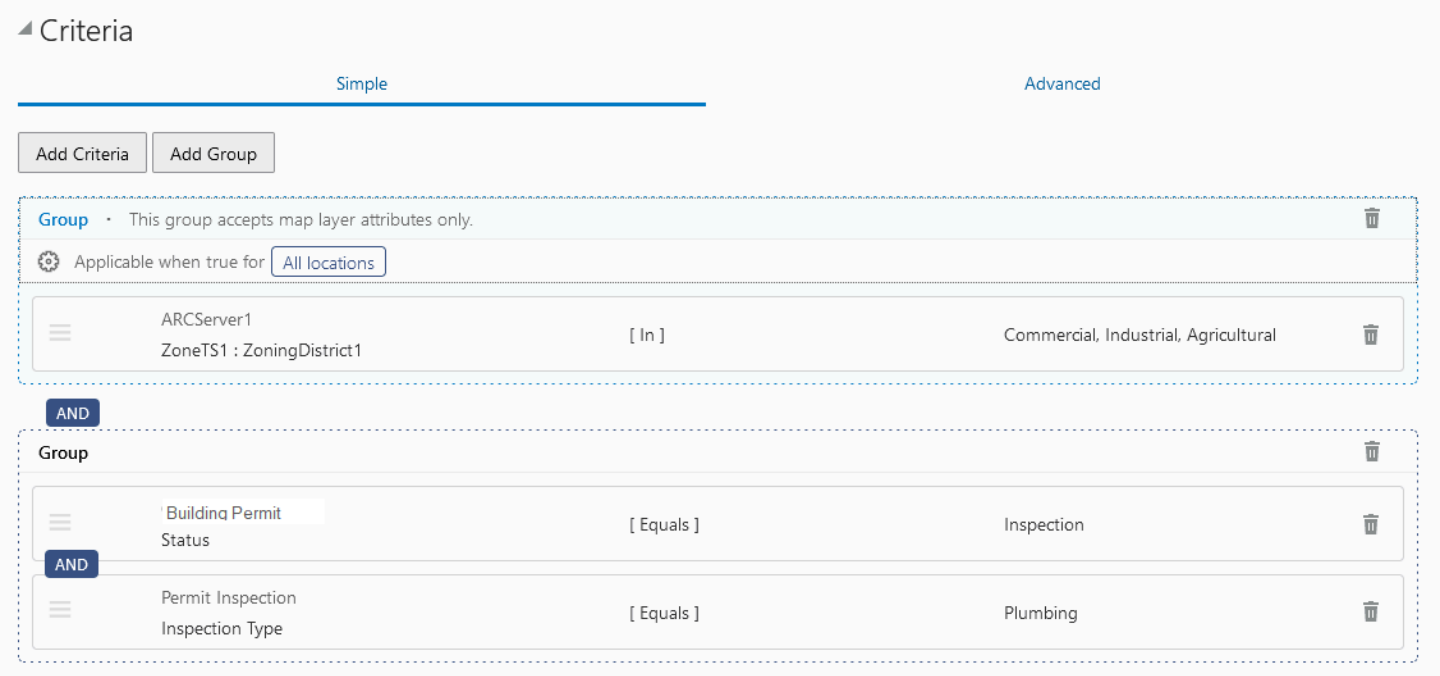
The attributes you can include in your criteria can come from a variety of sources.

Criteria Source	Description
Event resource	Each event is associated with a specific resource, or business object, containing numerous attributes.
Transaction type	You can include the fields from permit types, planning and zoning applications, business license types, and code enforcement sub issue types. The attributes you can select include user-defined fields and field group fields.
Reusable fields	Fields you've set to be reusable across multiple intake forms in the Intake Form Designer.
Predefined fields	Fields delivered by Oracle Permitting and Licensing, like Job Cost. **Note:** Predefined fields is supported for Permits only.
Map Layer Content	Attributes from a GIS map layer. **Note:** Map Layer Content isn't supported for Code Enforcement.

Note: Depending on the current event or scheduled rule, other criteria sources may appear that are relevant to that resource. For example, for the scheduled event Business License Credential Expiration, you can select the Business License Credentials resource for including criteria.

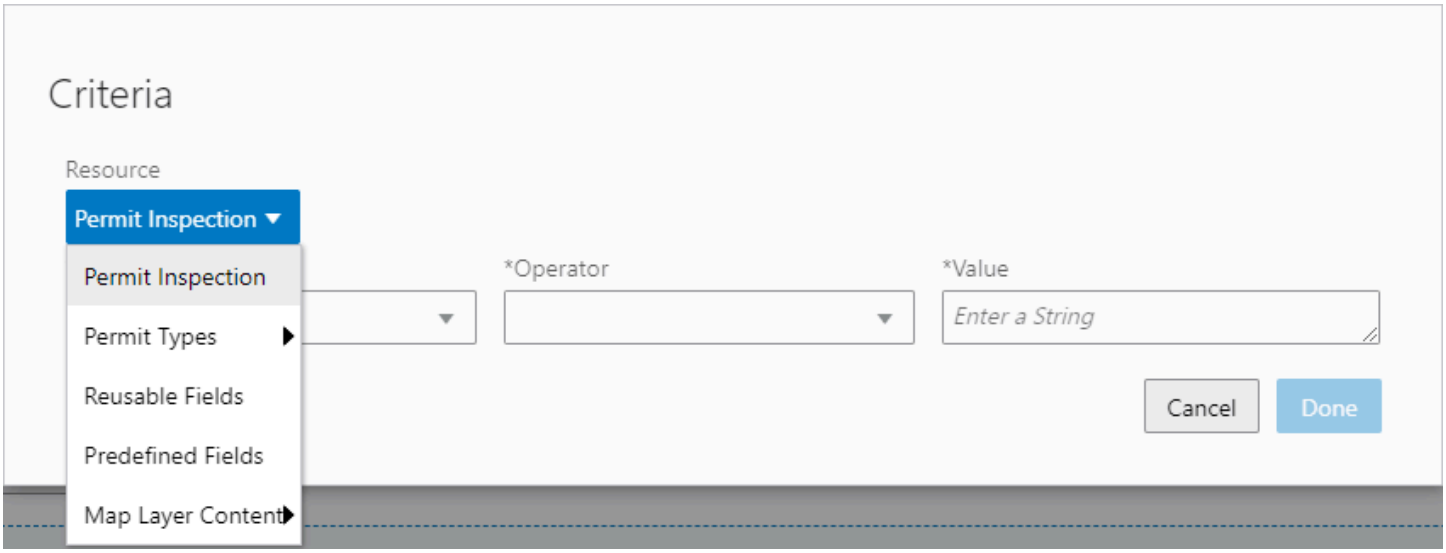
Adding Criteria in Simple Mode

Select the Simple tab to add criteria in simple mode.

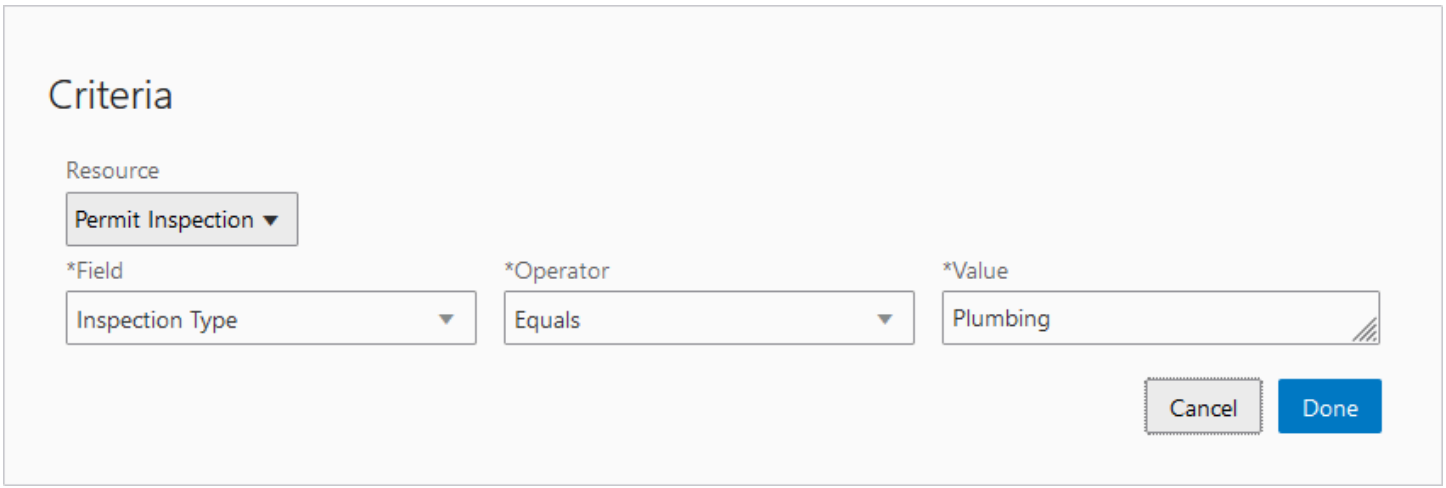


When you click **Add Criteria,** the Criteria dialog box appears. The controls on the Simple tab and the Criteria dialog box are described in the following table.

Use the Resource drop-down list to select the source of your criteria attributes.



With the resource selected you can select attributes from the **Field** drop-down list from that resource for your criteria.



Page Element	Description
Add Criteria	Click to add a criteria statement within a criteria group. A row of criteria must be contained within a criteria group. If there isn't already a criteria group, the system adds a criteria group automatically. Until you add an additional criteria group, you continue to add criteria statements to the current criteria group. To modify a criteria statement, click on it to display the Criteria dialog box.
Add Group	Click to add additional groups of criteria. When you add a criteria group, it appears at the top of the criteria groups (the first criteria group).

Page Element	Description
Resource	Use the **Resource** drop-down list to select the source of your criteria attributes, which can be: • Event resource • Transaction type (permit type, business license type, planning and zoning application, issue subtype) • Reusable fields • Predefined fields • Map Layer Content (GIS) **Note:** The resources available to select depend on the features you've setup and the offering. For example, if you haven't set up reusable fields in the Intake Form Designer, the *Reusable Fields* option won't appear in the **Resource** list.
Field	Select the criteria field from the resource.
Operator	Select from the available comparison operators to specify how the entered value must relate to the criteria field. **Note:** Depending on the field's data type, the list of operators changes to show only those that apply. Operators include: • *Equals* • *Not equal to* • *Greater than* • *Less than* • *Greater than or equal to* • *Less than or equal to* • *Starts with* • *Doesn't start with* • *Ends with* • *Doesn't end with* • *In* • *Not in* • *Contains* • *Does not contain* • *Before (time)* • *After (time)* The *Before (time)* and *After (time)* operators enable you to set a specific time in the day, such as 1:30 PM and to check before and after that time. You can also define multiple periods throughout a day. For

Page Element	Description
	example: *(After (time) 8:00 AM AND Before (time) 10:00 AM) OR (After (time) 1:00 PM and Before (time) 3:00 PM).* **Note:** The time used by the business rule is determined by the agency's default timezone.
Value	Enter the comparison value for the selected criteria field.
AND OR	Select **AND** or **OR** as a grouping verb. The default is **AND**. Click the icon to toggle between **AND** and **OR**.
	Click and hold the drag and drop icon to select a criteria statement to move within the current group or to move to a different group.
	Use to remove entire criteria groups or single criteria statements.

Working with GIS Map Layer Criteria

When working with map layer criteria, keep these items in mind:

- Map layer attributes must be in their own criteria group, with only other map layer attributes. You can't add map layer criteria to other types of criteria groups nor can you add non-map layer criteria attributes to a map layer criteria group.
- Use the **Applicable when true for** option to toggle between *All locations* or *At least one location* or to add flexibility to your logic if needed.
- Any changes that you make GIS mapping attributes or the map layer content, such as disabling or removing attributes will affect your business rules at runtime. If you intend to make changes to your GIS configuration outside of the Business Rules Framework, you should review any business rules that include any changed GIS attributes as criteria and remove the criteria from the affected rules *before* changing the GIS mapping attributes or Map Layer Content field group in the Intake Form Designer.

For more information on mapping GIS attributes, see *Setting Up GIS Attribute Mapping*.

For more information on the Map Layer Content field group, see *Using Predefined Field Groups*.

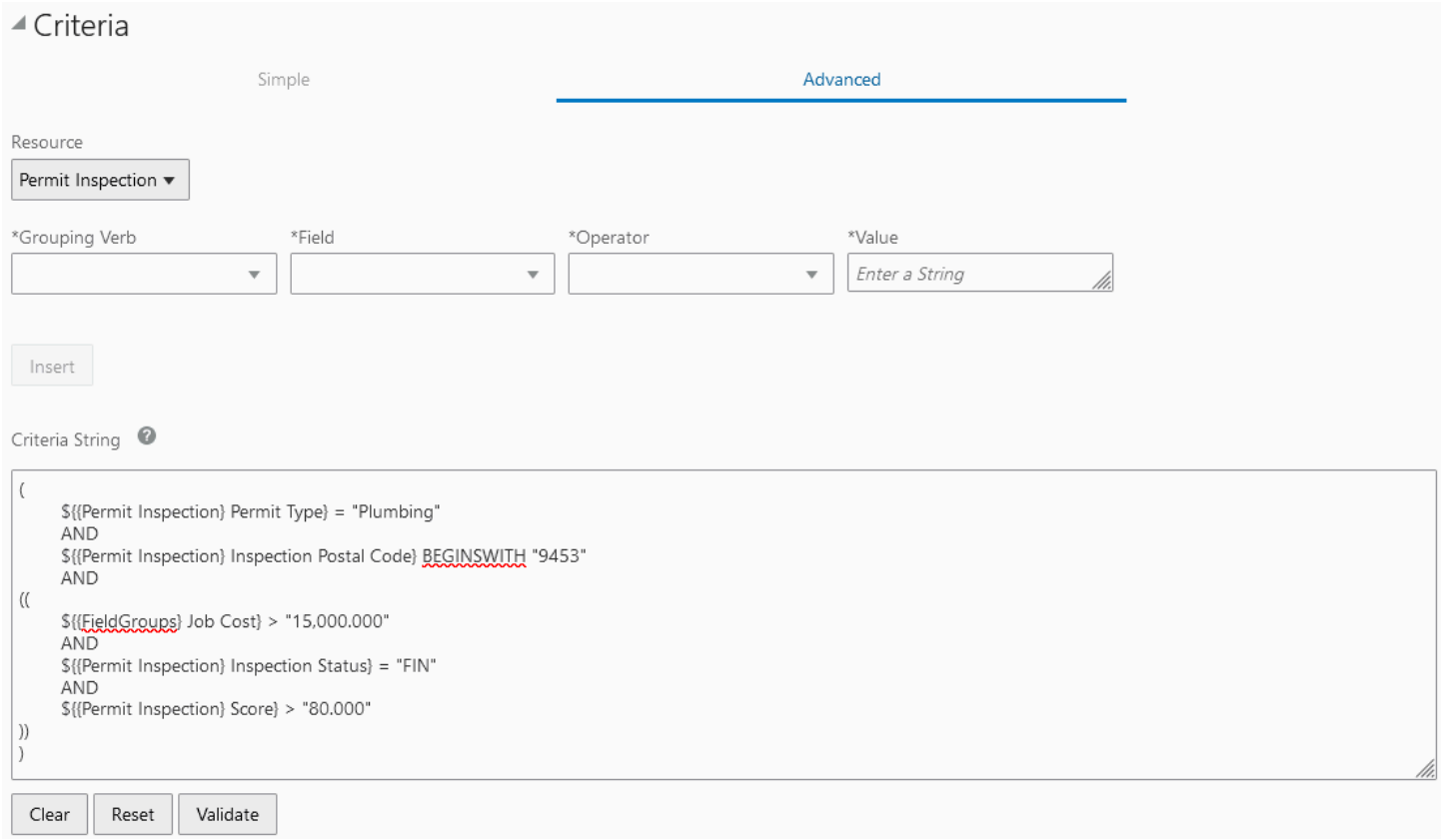
Adding Criteria in Advanced Mode

Select the Advanced tab to add criteria in advanced mode. Use advanced mode to construct criteria that requires multiple levels of nested criteria statements.

On the Advanced tab you can take a more free-form approach to creating criteria. To add criteria, you can:

- Use the "Criteria Builder" fields at the top to select the parts of a criteria statement, and click **Insert**.

  This approach is recommended to help you adhere to valid formatting.
- Write your criteria manually in the **Criteria String** edit box.
- Use a combination of both approaches.



Page Element	Description
Resource	Use the **Resource** drop-down list to select the source of your criteria attributes, which can be: • Event resource • Transaction type (permit type, business license type, planning and zoning application, issue subtype) • Reusable fields • Predefined fields • Map Layer Content (GIS)

Page Element	Description
Grouping Verb	Select *AND* or *OR* or to include a logical grouping operator. Except for the first criteria statement, you must add a grouping verb for all criteria statements.
Field	Select the criteria field from the resource.
Operator	Select from the available comparison operators to specify how the entered value must relate to the criteria field from the resource. **Note:** Depending on the field's data type, the list of operators changes to show only those that apply. • *Equals* • *Not equal to* • *Greater than* • *Less than* • *Greater than or equal to* • *Less than or equal to* • *Starts with* • *Doesn't start with* • *Ends with* • *Doesn't end with* • *In* • *Not in* • *Contains* • *Does not contain* • *Before (time)* • *After (time)* The *Before (time)* and *After (time)* operators enable you to set a specific time in the day, such as 1:30 PM and to check before and after that time. You can also define multiple periods throughout a day. For example: *(After (time) 8:00 AM AND Before (time) 10:00 AM) OR (After (time) 1:00 PM and Before (time) 3:00 PM).* **Note:** The time used by the business rule is determined by the agency's default timezone.
Value	Enter the comparison value to the criteria field from the resource.
Criteria String work area	The work area where you add, edit, and structure your advanced criteria string.
Clear	Click to remove all criteria from the work area.

Page Element	Description
Reset	If you've just switched to the advanced mode from simple mode, click to reset the criteria to the initial state in simple mode, prior to selecting the Advanced tab. If you've been working and saving in advanced mode, **Reset** returns your criteria to the state of the last save. Once you edit the criteria string directly, the Simple tab is disabled. To enable it, click **Reset.**
Validate	Click to validate the criteria. You can't save the criteria until the validation result is *Success.* When there are validation errors, a message box displays to indicate the formatting issue.

Formatting Advanced Mode Criteria

To save your advanced mode criteria, it must pass validation, which requires proper formatting. This table lists the formatting guidelines for advanced criteria.

Criteria Element	Formatting Guidelines
Part/Statement	Each criteria statement requires: • Grouping verb (AND/OR), except for the first statement. • Field • Operator • Value
Opening/Closing parentheses for grouping and nesting	Use the opening/closing parentheses to establish the beginning and end of a grouping of one or more statements in the business rule expression. You can nest groupings up to three levels using ( ), (( )), and ((( ))). Make sure to balance (pair) the opening and closing groupings. You need the same amount of opening (left) parentheses as you do closing (right) parentheses.

Fields	In advanced mode, fields are enclosed in curly brackets with their resource also within curly brackets, preceded with a dollar sign, like this:
	
	`${{Resource}Field}`
	
	Here is an example of the event resource Permit Inspections with the Score field.
	
	`${{Permit Inspection} Score} < "70.000"`
	
	The resource value displays as follows depending on the resource type.
	
	• *Event resource:* event resource name.
	• *Transaction type:* permit type ID, business license ID, planning and zoning type ID, code enforcement sub issue type ID.
	• *Reusable fields:* LnpGlobalCustom
	• *Predefined fields:* FieldGroups
	• *Map Layer Content:* GIS map

Criteria Element	Formatting Guidelines
	Note: *LnpGlobalCustom* and *FieldGroups* are the names of the child objects containing the fields added to an intake form in the Intake Form Designer.
Operators	The supported operators are expressed in advanced mode as follows: `=, !=, >, <, >=,<=, BEGINSWITH, ENDSWITH, CONTAINS, NOTCONTAINS, IN, NOTIN, ISBEFORE, ISAFTER.` Where operators expressed with words, such as `BEGINSWITH`, aren't case sensitive. Operators are specific to the field type, such as string, number, date, and so on. Not all operators apply to all fields types. If needed, use the **Operator** drop-down list in the "Criteria Builder" fields to confirm the operators that apply to the selected field.
Values	All field values, regardless of data type, must be enclosed in double quotes, such as "123.22" or "Plumbing".
Expressing `IN` and `NOTIN` sets	To express an `IN` or `NOTIN` set: • Enclose the set in square brackets. • Enclose set values within double quotes. • Comma-separate set values. For example: `AND ${{Permit Inspection}Permit Type} NOTIN ["Plumbing", "Mechanical", "Electrical"]`

Using Tokens

When adding criteria, you can use these tokens in the **Value** field to help define your expressions.

Token	Description
${Current Date}	Allows for comparison of an attribute date value, such as Scheduled Due Date, to the current system date. This comparison is done on the date portion only, with the time stamp being removed before comparison.
${Current Date Time}	Similar to **$(Current Date)**, except the time stamp is included in the comparison.
${Weekend}	Converts the attribute date to a number (1-7) then checks if the returned value is in ('1','7').
${Weekday}	Converts the attribute date to a number (1-7) then checks if the returned value is in ('2','3','4','5','6').
${<Attribute Name>}	Enables you to compare between two attributes on the same object. Use the name of the attribute as it appears in the **Field** drop-down list, and place it within curly brackets {}. For example: *${Plan Reviewer Due Date} + 2*

Token	Description
	Note: In scheduled rules, you can't perform math operations on attribute tokens, such as *${Plan Reviewer Due Date} + 2*.
${Blank}	Use to evaluate null, empty, or blank values. For example, the following expression checks if the Federal Tax ID is null, empty (""), blank (""<space>""), or doesn't exist in the payload. *${{Mechanical} Federal Tax ID} = "${Blank}"*

Triggering Multiple Actions with Different Criteria

If you need to trigger different actions based on different criteria, you'll need to add multiple rules to trigger the separate actions. For example, assume you want to trigger one communication based on Job Cost being less than 10,000 and a different communication based on the Job Cost being 10,000 or greater. In this case, create two rules to define your criteria, and select separate communication templates in the action for each rule.

Setting Up Send Communication Actions

This topic describes how to automate the sending of communications, such as emails and notifications, based on defined events.

To trigger send communication actions you must have first set up the applicable communication templates for a communication event. The Business Rules Framework sends the communication defined by the communication template, such as a notification or an email.

For more information on the communications framework, including communication events and templates, see *Delivered Communication Events* and *Setting Up Communication Templates*.

To configure a Send Communication action:

1. Expand the Actions section of Business Rules Details page.
2. Click **Add**.
3. From the **Action Name** drop-down list, select *Send Communication.*
4. Click **Configure**.
5. (Optional) On the Configure Action page, click **Edit Templates** to navigate to the Communications Framework to review or define any additional communication templates for the communication event.

   If you have not already defined communication templates for this communication event, the grid is empty. Note the communication event name listed for your rule under the Send Communication heading on the Configure Action dialog box. You can select it, and paste it into the search box on the Communication Event page in the Communications Framework.
6. On the Configure Action page select the scope of communication for the action from the **Select One** options.

   Note: You can select only one scope option.

Page Element	Description
Template codes	Sends a communication only to selected communication templates defined for the communication event.
Channel types	Sends a communication to specific channel types defined for the communication event, such as email, notification and so on.
Process all templates	Sends a communication to *all* communication templates for *all* channel types defined for the communication event.

7. Click **Done**.

Note: To enable the workflow communication resources to be triggered, you need to modify your workflow process definition to integrate through a Business Rules Framework REST resource. For more information on setting up the OIC integration for Business Rules Framework, see "Step 11: Add the POST Operation for the Business Rules Request" in this topic: *Setting Up the Transactions Connector*. You can also refer to the delivered process definitions provided in solution packages for examples of the Business Rules Framework integration.

Note: If an inspection has the **Unannounced** switch turned on for its inspection group, communications for that event will be suppressed for non-agency users. In the logs for those send communications actions you will see text similar to "Action COMM_SERVE skipped due to HideFromUserFlag = True." For more information on the Unannounced setting for inspection groups, see *Setting Up Inspection Groups*.

Example: Sending Emails to Contacts Added to Transactions

Agencies may want to send email notifications to contacts that have been added to a permit or planning application when an application is submitted or afterwards. When an application is submitted successfully, the system uses the Business Rules Framework to send an email addressed to contacts that were added during application intake. The same is true when a new contact is added to the Contacts page in the permit or planning application details. Contacts added to the contractor contacts also receive email notifications.

1. Click the **Permits** or the **Planning and Zoning** tile.
2. Select a Business Rules Framework event to create a rule. Available events are:

Send Email Notifications to Contacts	Permits	Planning Applications
When an application is submitted	*Permit Contact Added to Application*	*Planning and Zoning Contact Added to Application*
When contacts are added after submittal	*Permit Additional Contact Added*	*Planning and Zoning Additional Contact Added*

3. (Optional) Add conditions in the **Criteria** section.

4. Configure the Send Communication action as described above.
5. Click **Save**.

You must also set up the email templates for the corresponding communication events. In this case, the communication events correspond to the Business Rules Framework events with the same name. Use the Contact and Contact Type attributes to address the email.

For more information on the Communication Framework, see *Delivered Communication Events* and *Setting Up Communication Templates*.

Calling Send Communication Actions from Workflow

By default, delivered workflow process definitions make requests directly to the communication framework to send workflow communications, such as sending an email when an application has been accepted.

You can continue to use the direct calls to the communication framework to send the notifications for all situations, or you can configure a workflow process to call the Business Rules Framework REST API to send a communication only if the requested business rule criteria are met.

See *REST API for Oracle Public Sector Permitting and Licensing*, "Tasks," Business Rules Framework Requests REST Endpoints and *Setting Up Process Definitions for Workflow*.

Setting Up Update Workflow Actions

This topic describes how to configure an action to update the status of the underlying workflow process definition.

Before you begin configuring an update workflow action in the Business Rules Framework, you need to have configured the following definitions:

Definition	Description
Activity Group	For planning applications, an activity group contains a set of activities that represent human tasks within a given workflow for processing a planning application. Agency staff track and manage the progress of the planning application using the activities within the activity group. When creating a planning application type, you select an activity group. You need to know the activities in the activity group assigned to the current planning application type. For more information on activities and activity groups, see *Setting Up Activity Tracking*.
Workflow Process Application	The workflow process application is defined in OCI Process Automation. It defines and automates the system-level order of the tasks to complete through the life cycle of the transaction type, such as a planning application. When creating a planning application type, you select the workflow process. You need to be familiar with the workflow process application assigned to the current planning application type. Specifically, when configuring the Update Workflow action type, you need to know the following information for the workflow task you want to update: • Workflow task name (PSC_ACTIVITY_TYPE value). • Actions defined for the workflow task.

Definition	Description
	Note: If a task is calling the Business Rules Framework and a business rule includes an action to update workflow, then the swimlane the task resides in *must* be assigned the *PSCR Submitter Group* or an individual user associated with this group. For more information on workflow process applications, see *Setting Up Process Definitions for Workflow*. For more information on working with swimlanes, see *Mapping Workflow Swimlanes to Roles*.

For more information on setting up planning application types, see *Setting Up Planning Application Types*.

To add an Update Workflow action:

1. Expand the Criteria section of the Business Rules Details page.
2. Make sure your criteria statement reference the Activity and the Activity Status as fields required to drive the update workflow action.

   For example:

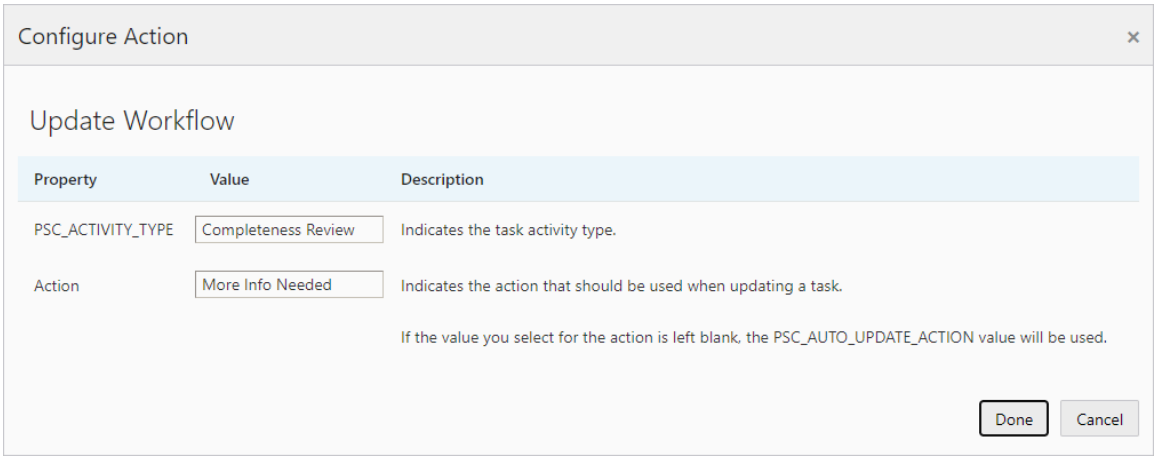
   ```
   ${Activity} = "Your Activity Name"

   AND ${Activity Status} = "Incomplete"
   ```

   When the status is updated for activity on the Activity Tracking page (and all other criteria are met) the update workflow action will be triggered.

   For more information on setting up criteria, see *Setting Up Business Rule Criteria*.
3. Expand the Actions section of Business Rules Details page.
4. Click **Add**.
5. From the **Action Name** drop-down list, select *Update Workflow*.
6. Click **Configure**.

7. Specify the activity type and action to update in the underlying workflow process application.

   This example illustrates how to reference the workflow activity type and action to update. Details are in the surrounding text.

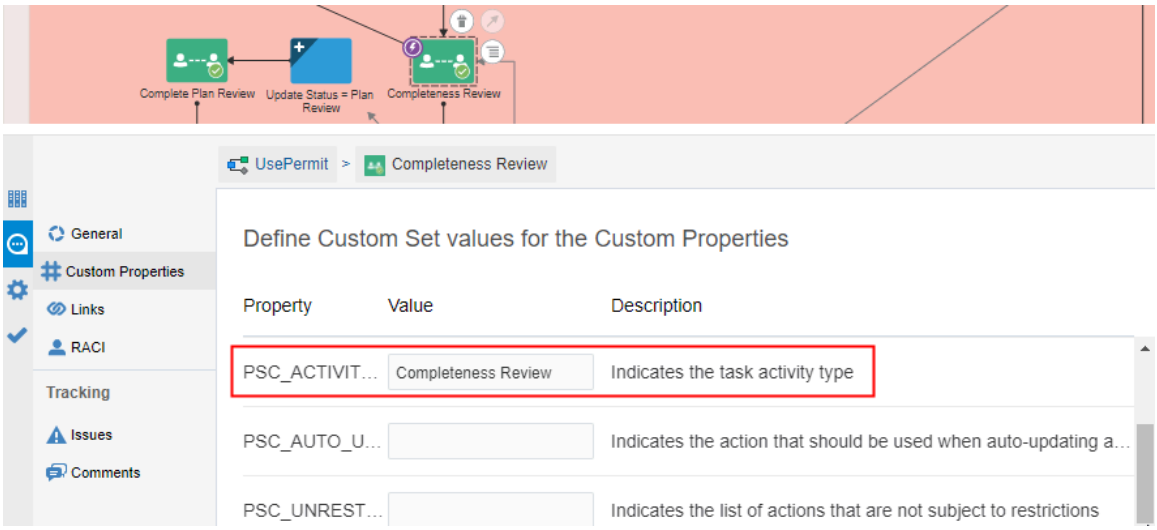


Page Element	Description
PSC_ACTIVITY_TYPE	The name used to identity the specific human task in the workflow process definition to update. For example, *Completeness Review, Complete Plan Review,* and so on. This value is a custom property defined in the business properties for the activity type. The value entered for the task should match what's entered here.
Action	The value to set as the Action in the workflow task properties. For example, *Completed - Plan Review Not Required, Completed - No Plan Review Required, More Info Needed,* and so on. These values are stored in the Action field in the General properties of the activity type.

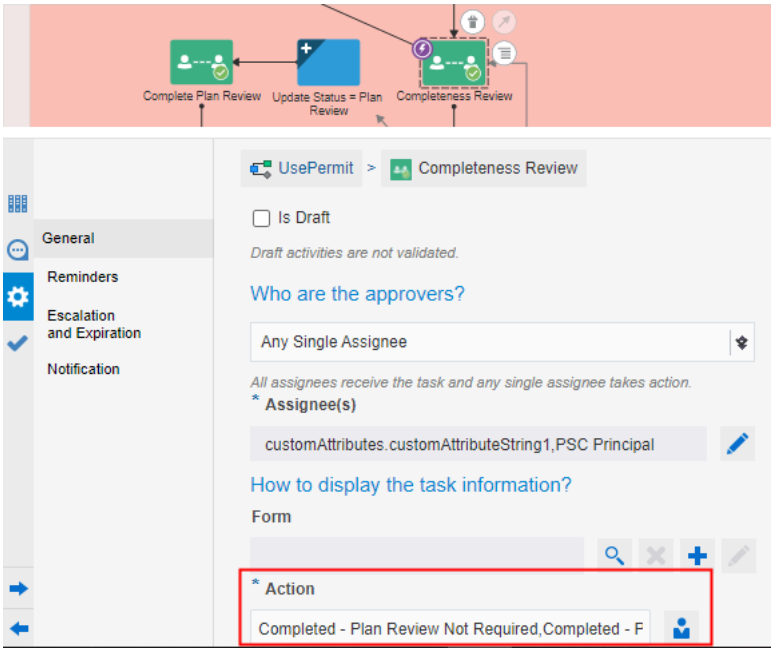
Page Element	Description

If needed, refer to the workflow process application for the activity type and action values.

This example illustrates the PSC_ACTIVITY_TYPE property. Details are in the surrounding text.



This example illustrates the Actions property. Details are in the surrounding text.



8. Click **Done**.
9. Repeat these steps for all the activities in the activity group you want to automate with the Update Workflow action type.

Setting Up Add Fee Actions

This topic describes how to add fees automatically based on attribute values in a resource (business object).

To configure an Add Fee action:

1. Expand the Criteria section of the Business Rules Details page.

   For more information on setting up criteria, see *Setting Up Business Rule Criteria*.
2. Make sure your criteria reference the applicable attributes in the resource, as well as the Assess Fee attribute value.

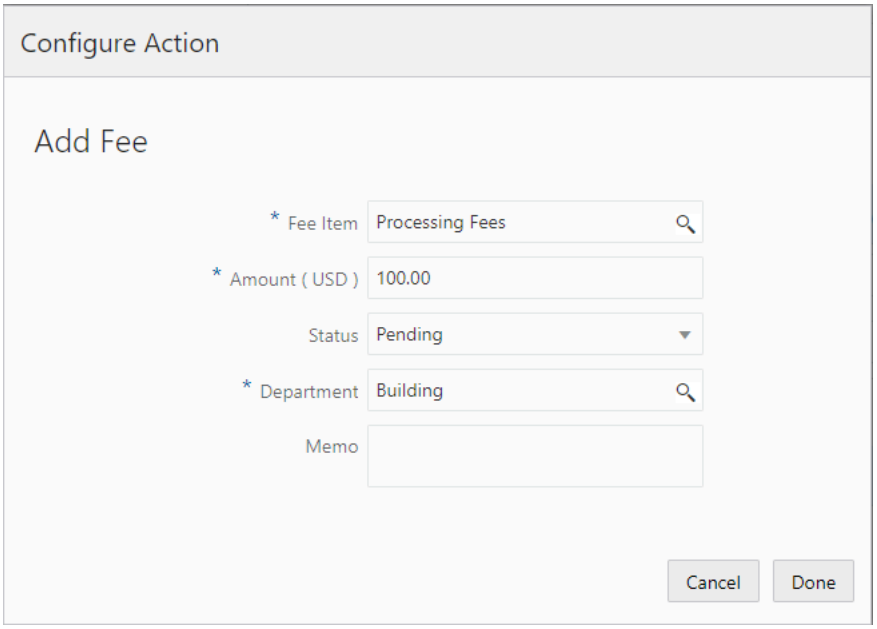
   Examples of resource attributes to evaluate include Inspection Status, Result, Major Violation Count, and so on. The Assess Fee attribute resolving to Yes (true) determines if additional fees can be applied for the inspection.

   For example:

   ```
   ${Inspection Status} = "Failed - Add Fee"
   AND ${Assess Fee} = "Yes"
   ```
3. Expand the Actions section of the Business Rules Details page.
4. Click **Add.**
5. From the **Action Name** drop-down list, select *Add Fee*.
6. Click **Configure.**

7. On the Configure Action page, enter the information for the Add Fee action.

   This example illustrates the information that can be set for an Add Fee action. Details are in the surrounding text.



Page Element	Description
Fee Item	Select the Fee Item for which this added fee applies.
Amount	Enter the amount of added fee.
Status	Select the fee status.
Department	Select the agency department to receive the revenue from the added fee.
Memo	Enter any additional information to include with the added fee.

8. Click **Done.**

Example: Assessing Fees for Permit or Business License Inspections

An agency can enable inspectors to assess a fee based on the inspection results for a specific inspection type in the Oracle Inspector web application for mobile devices. For example, if the inspector fails a plumbing inspection for a permit and a reinspection is required, the inspector may want a fee to be assessed for that inspection. When the inspector submits the inspection results, the Business Rules Framework evaluates the criteria for a fee and applies the fee to the permit using the Add Fee action if the criteria are met.

1. Click the **Permits** or **Business Licenses** tile.

2. Select the *Inspection Complete* event to create a rule.
3. Enter a rule name and description.
4. Enter these values in the **Criteria** section:

Field	Operator	Value	Grouping Verb
System Status	*Equals*	*Fail*	AND
Assess Fee	*Equals*	*Yes*	

5. Configure the Add Fee action.

Your agency must also set up the inspection type to enable the **Assess Fee** option on the Inspection Result page in the web application on a mobile device. For more information, see *Setting Up Inspection Types*.

To set up communications for added or updated fees, see *Setting Up Fee Notices*.

Setting Up Stop Process Actions

This topic describes how to stop workflow processes from advancing to the next task based on your business rule.

Using the Business Rules Framework, you can prevent a workflow process from advancing to the next task until your business criteria is met. For example, you could prevent:

- A final permit or business license inspection from being created, scheduled, or assigned if fees are due for a transaction.
- The issuance of a permit or subapplication until the primary application has been issued.
- The issuance of a business license until all fees are paid.

The Stop Process action is supported for Permits and Business Licenses for these Business Rules Framework events:

Event	Resource
Before Inspection Saved	*Inspection*
Before Permit Issuance	*Permits Workflow Communications*
Before Business License Inspection Saved	*Business License Inspection*
Before Business License Issuance	*Business License Activity*

Note: For inspections, the Stop Process action gets triggered only during a request for a final inspection, or when a final inspection is being scheduled or assigned. It is not triggered during import, migration, or when an inspection is canceled or updated. Also, keep in mind that the Stop Process action isn't triggered by requests sent from the Inspector Application for mobile devices, however, requests sent from a browser running on a mobile device *will* trigger the Stop Process action.

Note: It is recommended to limit the number of rules performing Stop process actions within an event. When the application calls Business Rules Framework to check for a Stop process action, all the rules in the event get processed. If there are multiple Stop process actions across multiple rules the results will all get sent back to the calling application, and this may cause some confusion if there are multiple messages received.

Configuring Stop Process Actions

To configure a Stop Process action:

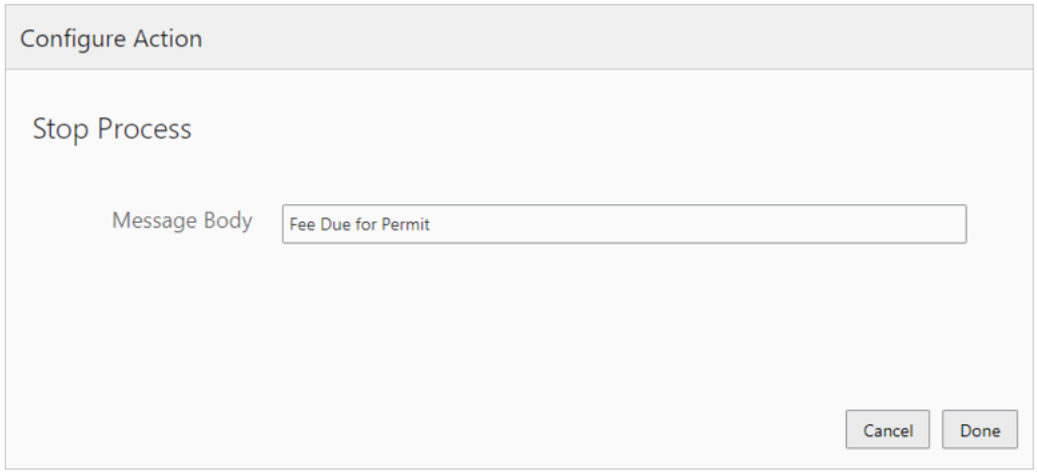
1. Expand the Criteria section of the Business Rules Details page.

   For more information on setting up criteria, see *Setting Up Business Rule Criteria*.
2. Make sure your statements reference the applicable attributes in the business object.

   For example, this example illustrates how you can set up your criteria sequence to confirm the inspection being scheduled is the final inspection and that there is no outstanding fee balance:

   ```
   ${Fee Balance Due} != "0"
   AND ${Final Inspection} = "Y"
   ```
3. Expand the Actions section of the Business Rules Details page.
4. Click **Add.**
5. From the **Action Name** drop-down list, select *Stop Process*.
6. Click **Configure.**
7. Enter the text to include in the message that displays to the user if the action is triggered.

   This example illustrates including custom message text.

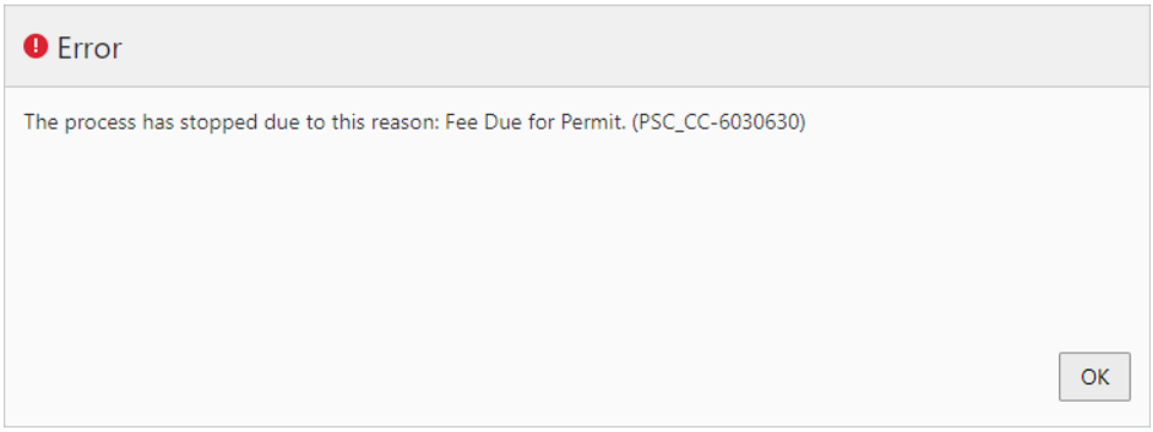


In this example, the Stop Process action prevents the final inspection from being created, scheduled, or assigned, and it displays a message to alert the user in the following format:

The process has stopped due to this reason: {CUSTOM_MESSAGE_TEXT}.

Where *{CUSTOM_MESSAGE_TEXT}* is the text you enter in the **Message Body** field.

This example illustrates the error message displayed when you attempt to schedule a final inspection for a permit. The configured business rule stipulates that the entire fee balance must be paid, and in this case there is a remaining balance.



8. *(For issuance events only)* If applicable, enable agency users to override the stop process action, when notified.

   Turn on the **Allow override** switch to display an **Override** button on the message displayed to the agency user on the workflow tab of the transaction details.

   > **Note:** The option to allow agency users to override the stop process action applies only to the issuance events.

   - *Before Permit Issuance* (LNP-BEFORE-ISSUANCE)
   - *Before Business License Issuance* (BL-BEFORE-ISSUANCE)

   > **Tip:** To find event codes, you can navigate to the communication event of the same name and view the **Code** field on the Communication Event Details page.

9. *(For issuance events only)* Modify the custom properties of the appropriate human task as needed.

   Modify the associated workflow process definition so the appropriate task references the event. Use the workflow custom property, PSC_BRF_EVENT_CODE, in the appropriate workflow task, such as *Issue Permit* or *Issue Business License*, to specify the business rule event code. The workflow process will call the specified event to evaluate the business rule prior to advancing the workflow to the next task. The event codes for the issuance events are:

   Also review the PSC_BRF_ALL_WF_ACTIONS custom property and set as needed.

   For more information on workflow process definition custom properties, see *Using Custom Properties*.

Example: Prevent Permit Issuance

> **Note:** The default rule for the *Before Permit Issuance* event contains the criteria used below, which you can use as is, or clone and modify as needed.

For a permit, assume you want to prevent a subapplication from being issued if the primary application hasn't been issued or the primary application status is no longer active.

Specify the following criteria:

```
(
 ${{Permits Workflow Communications} Primary Application System Status} NOTIN ["Void", "Withdrawn",
 "Denied"]
 AND
 ${{Permits Workflow Communications} Primary Application Issue Date} = "${Blank}"
 AND
 ${{Permits Workflow Communications} Subapplication Relationship Type} = "Yes"
)
```

For the action, select *Stop Process.*

In the Issue Permit task in the workflow process, enter the event code for *Before Permit Issuance* in the PSC_BRF_EVENT_CODE custom property.

Setting Up Apply Condition Actions

This topic describes how to apply conditions to transactions and other business objects automatically based on your business rule.

A condition indicates a dependency or contingency for completing the application process. You can apply conditions automatically with the Business Rules Framework using these actions:

- Apply Transaction Condition: applies to the overall application transaction, such as permit or planning and zoning application.
- Apply Parcel Condition: applies to the parcel associated with a transaction.
- Apply Address Condition: applies to the address associated with a transaction.

Note: Applying person or contractor license conditions aren't yet available to be triggered by the Business Rules Framework.

For more information on conditions, see *Setting Up Conditions* and *Applying Conditions to Applications*.

To configure an Apply Condition action:

1. Expand the Criteria section of the Business Rules Details page.

   For more information on setting up criteria, see *Setting Up Business Rule Criteria*.
2. Make sure your criteria statements reference the applicable attributes in the business object resource.

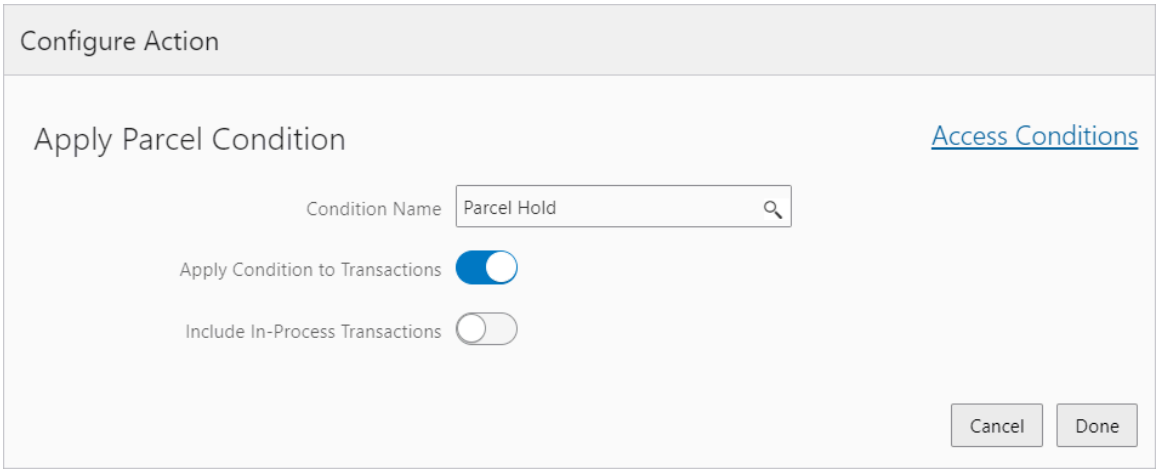
   For example, this example illustrates sample criteria for the Apply Condition action. Details are in the surrounding text.

   ```
   ${Permit Type} = "SM-PLUMBING-02
   AND ${Permit Status} = "Submitted"
   ```
3. Expand the Actions section of the Business Rules Details page.
4. Click **Add.**
5. From the **Action Name** drop-down list, select the condition action.

6. Click **Configure.**
7. Select the condition you want to apply from the **Condition Name** search field.

   To view or manage conditions, click the Access Conditions link, which takes you to the Conditions page.
8. For parcel and address conditions, you can also select these transaction options.

   This example illustrates the additional transaction options available for non-transaction related conditions.



   - **Apply Conditions to Transactions:** Turn on to apply the condition also to new associated transactions (such as a permit application).
   - **Include In-Process Transactions:** Turn on to apply the condition also to new and already submitted transactions.

Setting Up Resolve Condition Actions

This topic describes how to resolve conditions applied to transactions and other business objects automatically based on your business rule.

A condition indicates a dependency or contingency for completing the application process. Using the Resolve conditions action, you can resolve these condition types:

- Parcel conditions
- Transaction conditions
- Address conditions

The conditions resolved by the Business Rules Framework don't need to have been applied by the Business Rules Framework Apply Conditions action. Conditions applied manually, by the system, or by the Business Rules Framework can be resolved with the Resolve conditions action.

For more information on conditions, see *Setting Up Conditions Setting Up Conditions* and *Applying Conditions to Applications*.

To configure a Resolve Condition action:

1. Expand the Criteria section of the Business Rules Details page.

   For more information on setting up criteria, see *Setting Up Business Rule Criteria*.

2. Make sure your criteria statements reference the applicable attributes in the business object resource.
3. Expand the Actions section of the Business Rules Details page.
4. Click **Add.**
5. From the **Action Name** drop-down list, select Resolve conditions.
6. Click **Configure.**
7. Use the Configure Action dialog to select the conditions(s) to resolve.

Page Element	Description
Condition Type	Select the condition type(s) to resolve. Options are: o All Types. (Includes parcel, address, and transaction conditions.) o Parcel conditions. o Transaction conditions.
Conditions - All	Select to resolve all conditions of the selected condition type.
Condition Name	If you want to resolve a specific condition, search for the condition name and select it.
Resolve Condition Applied to Transactions	Select if you want the conditions resolved for transactions associated with the object, such as a parcel or address. For more information, see the **Apply Conditions to Transactions** switch on the Condition Details page here: *Setting Up Conditions*.
Resolution Action	Enter the description of the action to be added to the **Resolution Action** field on the Condition Details page. Default text is provided including populated variables for the event and the rule running the action. For example: *Resolved by BRF event 'Final Permit Inspection Passed' and rule 'Your Rule'* You can use the default resolution description, add to it, or add your own. The resolution description has a 500-character limit.

Setting Up Calculate Overdue Case Fee Actions

This topic describes how to configure the Calculate Overdue Fee action to apply fees for past due payments.

For Code Enforcement, you can have the Business Rules Framework trigger the calculation and application of case fees using the Calculate Overdue Case Fee action. When the rule triggers this action, the Business Rules Framework sends a request to the decision model defined in Oracle Integration Cloud. The Calculate Overdue Case Fee action is available only for scheduled rules.

The prerequisites for this action are:

- Decision model in Oracle Integration Cloud with late fees defined.

  For more information on setting up decision models, see *Creating Decision Models for Fees*.
- Fee Schedule with a fee item added having the Mapping Source value set to *Code Enforcement Overdue Fees* with the appropriate fee mappings set.

  For more information on configuring Fee Schedules, see *Setting Up Fee Schedules*.
- Associate the Fee Schedule with the issue subtype definition for appropriate case(s).

  For more information on setting up issue subtypes, see *Setting Up Issue Subtypes*.

To set up a Calculate Overdue Case Fee action:

1. From the Business Rules Framework landing page, select Scheduled Rules.
2. On the Scheduled Rules page, click **Add.**
3. Select *Code Enforcement Overdue Case Fees* from the **Business Object** drop-down list.
4. Add a **Rule Name** and **Rule Description.**
5. Turn on the **Enabled** switch so the rule is available to be run.
6. Expand the Criteria section and add the criteria you want to evaluate and compare for your rule.

   This example illustrates a scheduled rule that will run the Calculate Overdue Case Fee action.

   ```
   ${Fee Amount Due} > "0"
   AND ${Due Date} => ${Current Date}
   ```
7. Expand the Action section and select *Calculate Overdue Case Fee* from the **Action Name** drop-down list.

Setting Up Relay to OIC Actions

This topic describes how to configure an action to send a JSON payload to Oracle Integration Cloud (OIC) for an existing integration with a third-party application.

You can use the Relay to OIC action to configure a business rule to send a JSON payload to an existing integration defined in OIC, which can then be passed to the target system. This action extends integration capabilities by using existing Business Rule Framework events to trigger outbound integrations. Prior to using the Relay to OIC action, you need to:

- Configure your integration in OIC.
- Make sure the target system can consume the JSON payload.
- Make note of the integration endpoint URL in OIC.

The event payload looks similar to the following example:


```
{ "LastUpdatedBy": "FUSION_APPS_PSC_APPID",
"ResourceCode": "LNP_INS_COMMUNICATION",
"CreationDate": "2022-01-28 18:10:58.0",
"CreatedBy": "FUSION_APPS_PSC_APPID",
"ResourceName": "Inspection",
"RecordSecondKeyValue": "CKELE-2022-00001",
"EventName": "Inspection Rescheduled",
"EventCode": "LNP-INSPRESCH-001",
"RecordFirstKeyValue": "300000001726045",
```

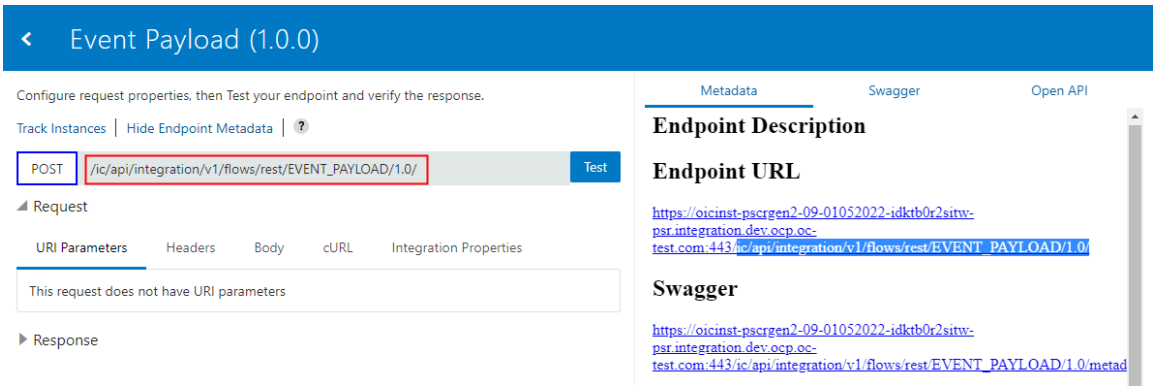
```
"ResourcePath": "publicSectorInspectionCommunications",
"ResourceId": 300000000348113,
"ResourceDescription": "Identifies an inspection resource.",
"RecordFirstKeyName": "LnpRecordKey",
"EventId": 300000000447375,
"RecordSecondKeyName": "InspectionId",
"EventDescription": "Indicates that an inspection is rescheduled.",
"ExecutionId": "015a7122-52fd-4c48-b382-7f81b85163da",
"LastUpdateDate": "2022-01-28 18:10:58.001",
"RecordIdentifier": null,
"RecordSubIdentifier": null,
"RecordThirdKeyName": null,
"RecordThirdKeyValue":null,
"RecordFourthKeyName":null,
"RecordFourthKeyValue":null,
"RecordFifthKeyName":null,
"RecordFifthKeyValue":null,
"JsonData":null }
```


To set up the Relay to OIC action:

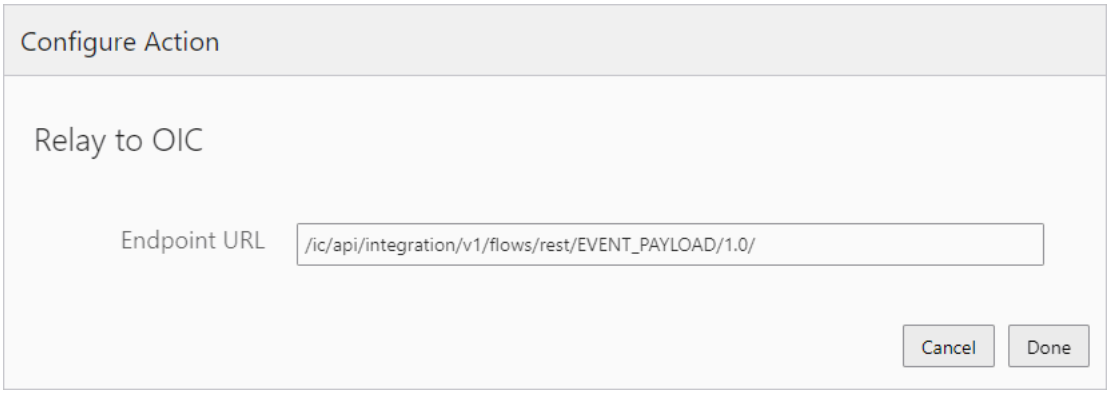
1. Configure your integration in OIC.

   For more information on setting up integrations in OIC, see *Oracle Integration Generation 2.*
2. Copy the endpoint URL from your integration.

   In the test mode, you can grab the portion of the URL beginning with */ic/api/integration/v1/flows/rest/...* for OIC Generation 2 and *integration/v1/flows/rest/...* for Oracle Process Automation Generation 3. For example:



3. Create your rule in Business Rules Framework, and select *Relay to OIC* as the action type.
4. Click the **Configure** link.
5. On the Configure Action dialog box, add the endpoint URL form your OIC integration.



> **Note:** If you have migrated from OIC Generation 2 to OIC Generation 3, you must update the format of the endpoint URL to reflect OIC Generation 3.

6. Click **Done.**

Setting Up Generate Report Actions

This topic describes how to generate reports using the Business Rules Framework.

Setting up Prerequisites for the Generate Report Action

Typically, the Generate Report action would be selected along with a Send Communication action, where the selected report will be generated, stored in the selected repository, and attached to the associated communication, such as an email, triggered by the business rule.

When defining your report, turn on the **Available for Rules Framework Action** switch on the Report Configuration Details page. If this option isn't turned on for your report, you won't be able to select it when configuring the Generate Report action.

For more information on setting up reports, see *Setting Up Reports* and *Permitting and Licensing Analytics*.

For the communication event for the email notification, in the **Attachments** field, select the attachment repository for the report, such as *Rules Framework Attachments.*

For more information on setting up communications, see *Setting Up Communication Templates*.

> **Note:** If you want some information in a report to go to internal recipients, such as agency users only, and some information to go to external recipients, such as public users, it is recommended to create two reports and have two rules - one for generating and sending the internal report and one for generating and sending the external version.

Configuring the Generate Report Action

To configure a Generate Report action:

1. Expand the Criteria section of the Business Rules Details page.

   For more information on setting up criteria, see *Setting Up Business Rule Criteria*.
2. Make sure your criteria reference the applicable attributes in the resource.

   For example:

```
(
 ${{Hearing Notification} Decision Code} = "Approved"
 AND
 ${{Hearing Notification} Decision Making Body} = "Planning Commission"
 OR
 ${{Hearing Notification} Decision Making Body} = "City Council"
)
```

3. Expand the Actions section of the Business Rules Details page.
4. Click **Add**.
5. From the **Action Name** drop-down list, select *Generate report*.

6. Click **Configure**.
7. On the Configure Action page, select the details for the report.

   This example illustrates the information that can be set for an Add Fee action. Details are in the surrounding text.

Page Element	Description
Report ID	Select the report that you want the rule to generate. The lookup list displays reports with the **Available for Rules Framework Action** option turned on. Click the Edit Report Configuration link to open the Report Configuration page if you need to confirm any report details.
Report Output	Select the repository for storing the report output. The general report repository is *Rules Framework Attachments.* The repository is determined by the selected resource (business object). Offering-specific and resource-specific repositories can be selected where available.

8. In the Parameters grid, map the report parameters (Parameter Name) to the corresponding resource values (Resource Attributes).

   Note: You define report parameters on the Report Configuration Details page.

9. Click **Done.**

Setting Up Generate Calendar Actions

This topic describes how to generate calendar entries using the Business Rules Framework.

Setting up Prerequisites for the Generate Calendar Action

Typically, the Generate Calendar action would be selected along with a Send Communication action, where the calendar entry will be generated, stored in the selected repository, and attached to the associated communication, such as an email, also triggered by the business rule.

Identify the corresponding communication event for the email notification, in the **Attachments** field for the appropriate communication template, select the following attachment repository to store the generated calendar entry: *Rules Framework Attachments.*

For more information on setting up communications, see *Setting Up Communication Templates*.

Configuring the Generate Calendar Action

To configure a Generate Calendar action:

1. Expand the Criteria section of the Business Rules Details page.

   For more information on setting up criteria, see *Setting Up Business Rule Criteria*.
2. Make sure your criteria reference the applicable attributes in the resource.
3. Expand the Actions section of the Business Rules Details page.
4. Click **Add**.
5. From the **Action Name** drop-down list, select *Generate calendar*.

   > **Note:** Also select the *Send communication* action to contain the generated calendar entry for sending to interested parties.

6. Click **Configure** for the *Generate calendar* action.
7. On the Configure Action page, select attributes from the available resources to populate the calendar entry details to provide context.

Page Element	Description
Calendar Title	Select a resource attribute for the calender entry title, such as Application Type, the Decision Making Body, and so on.
Calendar Location	Select a resource attribute for the calender location , such as Agency ID, Address Line 1, and so on.
Calendar Description	Select a resource attribute for the calender description , such as Application Type, the Decision Making Body, and so on.

8. Click **Done.**

Working with Event Processing Details

This topic describes how to use the options on the Event Processing Details dialog box in the Business Rules Framework.

To access the Event Processing Details dialog box:

1. Open an event in the Business Rules Framework.
2. Click the Event Processing Details link.

Selecting the Run Type

Application-triggered business rules can run either synchronously or asynchronously. How a business rule runs is determined by the **Run Type** value set for an event on the Event Processing Details dialog box.

You can improve the performance of data-intensive and longer-running event processes by offloading them to be run through Enterprise Scheduler Service (ESS) to run asynchronously. With ESS handling the Business Rules Framework processing, the application transaction sending the request to the Business Rules Framework can continue with its typical process flow without waiting for the processing to be completed by the Business Rules Framework. This can reduce the lag time for agency users and end users as they aren't waiting for the system response.

The following table describes the behavior of the event run types.

Run Type	Behavior
Synchronous **Note:** Synchronous is the default run type.	1. Application calls Business Rules Framework. 2. Business Rules Framework assumes control of the processing thread. 3. Business Rules Framework: a. Evaluates the criteria. b. Performs actions. c. Returns a response to the calling application. 4. Business Rules Framework returns processing thread control to the calling application.
ESS Immediate (asynchronous)	1. Application calls Business Rules Framework. 2. Business Rules Framework schedules an ad hoc job through ESS. 3. Business Rules Framework returns a response indicating the request was received. 4. Calling application continues its typical flow without waiting for the event rule to finish processing. 5. ESS processes the event and associated rules. **Note:** Any elements that are a result of the rule processed through ESS, such as fees, conditions, and so on, may be delayed in appearing in the system until the ESS process has finished.

These event types don't support ESS immediate (asynchronous) processing:

- Pre-save and pre-submit events, such as Before Permit Inspection Saved, Before Permit Application Submitted, Before Business License Inspection Saved, and so on. Typically, these events are configured to trigger a Stop Process action.
- Scheduled rule events.

Note: For the events where ESS immediate isn't supported, the **Run Type** drop-down list is disabled, showing only *Synchronous* as the run type.

While an ESS immediate (asynchronous) event is processing, the log file will display a status of "unprocessed" and indicate that ESS will run the job soon. When the job completes the log file will display the typical results of success, fail, and so on.

Identifying Events for Asynchronous Processing

While every agency processes different data and has unique processing requirements, some events can be identified as candidates for asynchronous processing.

Depending on your processing requirements, you can review the timing information in the logs and identify the longer-running events, such as those taking more than 5 seconds to complete, for example. Then you can test those events with *ESS immediate* selected to see if it improves the user experience.

For example, in a sample environment, these events were identified as candidates for offloading to asynchronous processing.

- Permit Contact Added to Application (LNP-CONTACT-ADD-TO-APP)
- Permit Application Updated (LNP-PERMIT-UPDATE)
- After Permit Application Submitted (LNP-AFTER-SUBMIT)
- Permit Inspection Scheduled (LNP-INSPSCH-001)
- After Business License Application Submitted (LIC-AFTER-SUBMIT)

Enabling an Event

Whether you have a business rule defined for a business rule event or not, if the event is enabled, when the conditions arise for that business rule event to run, it will run. By default, all business rule events are enabled. You can choose to disable an event if you know you aren't using it and you want to reduce any possible overhead associated with that event running.

> **Note:** In general, it's not recommended to disable an event. It's recommended to disable any *rules* associated with an event that you don't want to run, rather than disable the event itself. In some situations, however, implementation teams may need to use this option in during development, testing, or when troubleshooting.

> **Note:** Before disabling, confirm the event isn't needed to generate rule-based communications. If an event has a default rule associated with a communication event, disabling the Business Rule Framework event will prevent the communication from being generated by that event.

Scheduling Automated Retry

This topic describes how to set up the Business Rules Framework to retry events and actions that don't complete successfully.

You can set up the Business Rules Framework to retry events and actions when an event fires but does not begin processing rules or when the initial action run doesn't complete successfully.

In some situation with an event, such as a momentary network outage, an event won't finish the processing required to invoke the business rules configured for that event. You can retry application-triggered and scheduled business rule events that:

- Display a state of *Error* or *Not Available*.
- Haven't yet run any rules.

Configuring automated retry involves configuring the:

- Retry scheduled process.
- Agency-level retry options.

Setting the Retry Schedule

Set up the Action Retry scheduled process to run in the Enterprise Scheduler Service (ESS) that retries actions and events.

Note: The Action Retry job:

- Retries both actions *and* events.
- Retries actions and events that were invoked only within the previous two weeks (14 days). Actions and events invoked before the two-week limit are ignored by the ESS job. For actions and events invoked before the two-week limit, you can still retry them manually from the Log Detail page.

1. Select **Common** > **Process Monitor**.
2. Click **Schedule New Process**.
3. On the Schedule New Process dialog, select *Action Retry* from the **Name** drop-down list.
4. Click **Yes**.
5. Skip the Parameters tab.

   There are no parameters for this process.
6. Select the Schedule tab, and select *Using a schedule* as the **Run** option.

   Select a **Frequency**, such as *Daily* and a start date and end date.
7. (Optional) You can specify the desired notification if needed.
8. Click **Submit**.

Setting the Automated Retry Limit

You set the retry limit for the automated retry feature at the agency level.

1. Select **Common Setup** > **Agency**.
2. Select your agency.
3. Locate the Business Rules Framework section on the Agency Information tab, and set the desired retry limit.

Page Element	Description
Automated Retry Limit	Set the number of times a failed action or event will be retried automatically. When this limit is reached, manual intervention is required. You can determine the number of times an action has been retried automatically using the Retry Count column on the Log Detail page. For more information on the logging, see *Viewing Business Rule Logs*.

4. Click **Save**.

For more information on configuring agency settings, see *Setting Up Agencies*.

Viewing Business Rule Logs

This topic describes how to access the logs generated when a business rule runs and explains the information contained in the logs.

Use business rule logs to gather insight into the status and results when your business rules run. Each time a rule runs, triggered by either an event or a scheduled rule, that information is captured and stored. The information can help you confirm that a rule has run, what its status is, and it can also help you to identify, troubleshoot, and resolve any errors or discrepancies. Typically, the logs would be used to assist development and testing efforts, however, log information can also be useful for communicating production environment issues with Oracle support teams.

You access the high-level business rule run information on the Logs page. You can then drill into a specific log to access:

- Log details
- Rule logs
- Action logs

Accessing Business Rule Logs

To access the business rule logs:

1. In the Navigator, select **Common Setup** > **Business Rules Framework.**
2. Click **View Logs** on the Business Rules Framework landing page.
3. On the Logs page, use the search controls to filter the logs and isolate the log(s) you need to review.

   You can select to view logs for the last 24 hours, 7, 14, or 30 days. Or, you can select *Date Range* from the drop-down list to specify a custom range.
4. Turn on **Show All Statuses** to display all rule logs.

   By default, only *Error* and *Warning* statuses are displayed.
5. Click anywhere in the row for a particular log to open the Log Detail page for that business rule run.

Setting Up Email Notifications for Errors

You can set up an email notification to alert system administrators to log entries with a status of *Error*. You enable this feature in the agency options.

1. Select **Common Setup** > **Agency**.
2. Select your agency.
3. Locate the Business Rules Framework section on the Agency Information tab, and modify these settings.

Page Element	Description
Error Notification Email	Enter the email address to send notifications of any business rule processing errors.

Page Element	Description
	Note: Because of the 250-character limit, it is recommended to use email distribution lists, rather than multiple individual email addresses.
Notify on Error	Turn on to enable email communication to be sent related to any business rule processing errors.

4. Click **Save**.

Working with Log Details

The Log Detail enables you to drill into specific information regarding a business rule run and its actions.

Page Element	Description
Reference Name	Indicates the object the rule is running against, such as permit, an incident, a user profile, and so on.
Reference ID	The system identification for the object the rule is running against. For example, in the case of a user profile it may display the user name, while in the case of a permit, it displays the transaction ID, which can be clicked to navigate directly to the transaction associated with the rule.
Resource Code	The system name for the business object of the event that triggered the rule. For example, *CE_INCIDENT.*
Resource	The name of the resource (business object) of the event that triggered the rule. For example, *Code Enforcement Incident.*
Event Code	The system name of the event that triggered the rule. For example, *CE_INCIDENT_STATUS_UPDATED.*
Event	The name of the event that triggered the rule. For example, *Incident Status Updated.*
Log ID	The unique identifier of a particular log entry.
Execution ID	The unique identifier of the internal system instance associated with a particular Business Rules Framework request.
Created Date	The date and time at which the Business Rules Framework request was created.
Created By	The user ID of the individual user, system component, or application that created the Business Rules Framework request. For example, it could be the Oracle Integration Cloud user, an individual user, or the Oracle Permitting and Licensing application (*FUSION_APPS_PSC_APPID*).
Retry Count	Indicates the number of times an event has been retried, automatically or manually.

Page Element	Description
Status	The status of a business rule run, such as *Success, Error,* or *Warning.* The overall status is comprised of the results of the underlying rule run and the action(s) run. These are the statuses: • *Success* indicates all rules within an execution ID, display a status of *Success.* • *Warning* indicates there are both *Success* and *Warning* statuses within an execution ID. • *Error* indicates there are both *Error* and *Warning* statuses within an execution ID. • *No Rules,* indicates the rule found nothing to be completed, there are no rules associated with an event, or the rules associated with an event aren't enabled. • *Not Available,* indicates that Business Rules Framework is aware a request was made but did not receive enough information to begin processing the request. This can indicate momentary network down-time, outages, or brown-outs.
Retry	The **Retry** button appears for events in the *Not Available* or *Error* status. In this case, you can click **Retry** to rerun the event. When retrying an event, the system generates a new execution ID, so in the logs you will see the original request execution ID with the original status *and* the new event execution ID displaying its status. Retrying events isn't supported for: • Stop process events. • Requests where rule processing had begun.
Log Message	A high-level message indicating more details related to when the Business Rules Framework received the request. The detailed log information resides in the rule and actions grid below. **Note:** The message display is limited to 1,000 characters. In the case of a longer log message, some critical information may not be visible.
Retry Status	Appears only for the requests that you retry using the **Retry** button. This field displays information about the original request and other details depending on the request type.

Beneath the main rule information, you can access additional information related to the rule and actions.

Working with Rule Logs

The rules and actions grid displays the following details for the rules associated with the event.

Page Element	Description
Rule Name	The names of all rules associated with that event appear in the **Rule Name** column.
Status	Indicates the status of an individual rule.

Page Element	Description
Log Type	Indicates the type of log, in this case a rule log, and provides a link to display the log text for that rule.
Key-value pairs	Displays the key information that applies to the transaction of the business rule's focus, such as the record key for a permit, inspection, and so on. There can be up to five key-value pairs.

Working with Action Logs

When actions have been triggered, you can expand the rule log row to reveal the action logs for that rule. The action log provides this information.

Page Element	Description
Action Name	The names of all actions associated with that rule appear in the **Action Name** column.
Log Type	Indicates the type of log, in this case an action log, and provides a link to display the log text for that action.
Status	Indicates the status of an individual action.
Retry Count	Indicates the number of times an action in the status of *Error* has been retried, automatically or manually.
Sent	Click to view the JSON payload sent by the Business Rules Framework. If needed, an administrator can edit the payload manually to correct data. Click **Save** to store the changes.
Response Code	Displays the REST/HTTP response code received by the Business Rules Framework after sending the rule payload. For example, 200, 400, 403, and so on.
Received	Click to view the JSON payload received by the Business Rules Framework.
Actions	In the case of actions in the *Error* status, the **Actions** column displays the **Retry** button, which administrators can click to retry the action. If you've modified the sent payload (to resolve any issues detected), the Business Rules Framework sends the modified payload.

Related Topics

- Scheduling Automated Retry

Business Rules Framework Event Details

This topic provides additional details for business rule events to help you make decisions regarding your implementation of the Business Rules Framework.

The following sections provides additional details for Business Rule Framework events, enabling you to view delivered events, their triggers, what actions can be run, and the associated Communication Event ID. In almost all cases, the Communication Event ID and the Business Rules Framework Event ID are the same. Knowing the event ID will be required if calling events from workflow.

Permits

The following table provides additional details for events related to permits. The events are sorted by Resource.

Event	Details
Resource: Fee Communications *Event:* New Fees Due	*Description:* New fees have been assessed and are due. *Trigger:* Click **Add Fees** on the Fees and Payments tab in the permit details. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* New Fees Due (LNP-FEES-001)
Resource: Permit Application Contact *Event:* Permit Additional Contact Added	*Description:* Additional contact is added to the permit. *Trigger:* Click **Add New Contact** in the Additional Contacts grid on the Contacts page in permit details, and either select an existing contact or create a new one. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Additional Contact Added (LNP-CONTACT-ADD)
Resource: Permit Document *Event:* Permit Document Attached	*Description:* Applicant attaches a permit document. *Trigger:* Click **Add** on Attachments page in permit details, select a document to upload, and click Upload on the **Add Attachments** dialog box.

Event	Details
	Actions: • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Document Attached (LNP_ATTACHMENT_UPLOADED)
Resource: Permit Expiration Communication *Event:* About to Expire Permit	*Description:* A permit is about to expire. *Trigger:* A permit is about to reach its set expiration date. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* About to Expire Permit (PER-ATE-EXPIRY-001)
Resource: Permit Expiration Communication *Event:* Expired Permit	*Description:* A permit has expired. *Trigger:* A permit is about has exceeded its set expiration date. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Expired Permit (PER-EXPIRED-001)
Resource: Permit Expiration Communication *Event:* Permit About to Expire Based on Inspection Commencement	*Description:* A permit is about to expire based on the inspection beginning. *Trigger:* A permit is about to expire based on the inspection commencement rule setup. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition

Event	Details
	• Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit About to Expire Based on Inspection Commencement (PER-INS-ATE-EXPIRY-001)
Resource: Permit Expiration Communication *Event:* Permit Expired Based on Inspection Commencement	*Description:* A permit has expired based on the inspection beginning. *Trigger:* A permit has expired based on the inspection commencement rule setup. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit About to Expire Based on Inspection Commencement (PER-INS-EXPIRED-001)
Resource: Permit Inspection Document *Event:* Permit Document Attached for Inspection Supervisor	*Description:* Applicant attaches a permit document for the inspection supervisor. *Trigger:* Click **Add** on Attachments page in permit details, select a document to upload, and click **Upload** on the Add Attachments dialog box. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Document Attached for Inspection Supervisor (LNP_ATTACHMENT_SUP_UPLOADED)
Resource: Permit Inspection Document *Event:* Permit Document Attached for Inspector	*Description:* Applicant attaches a permit document for the inspection supervisor. *Trigger:* Click **Add** on Attachments page in permit details, select a document to upload, and click Upload on the **Add Attachments** dialog box. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Document Attached for Inspector (LNP_ATTACHMENT_INS_UPLOADED)

Event	Details
Resource: Permit Inspection *Event:* Before Permit Inspection Saved	*Description:* Before an inspection is saved. *Trigger:* • Click **Submit** after adding or updating any inspection and the rule runs during the submit request, prior to the save. • Click **Select** to select a time when requesting an inspection. • Select **Assign** from the inspection list on the Inspections console page and Inspections page in the transaction details. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Stop process *Communication Event:* Before Inspection Saved (LNP-INSPRSAVE-001)
Resource: Permit Inspection *Event:* Final Permit Inspection Passed	*Description:* Indicates that the final inspection is complete with a passing result. *Trigger:* For a final inspection, click **Submit** on the Inspection Result page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Final Inspection Passed (LNP-FINALINSP-001)
Resource: Permit Inspection *Event:* Permit Inspection Canceled	*Description:* Indicates that an inspection is canceled. *Trigger:* Select **Cancel Inspection** for the inspection. An inspection can be canceled from the inspections console, the Inspections tab in the transaction details, or from the inspection request. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions

Event	Details
	• Send communication *Communication Event:* Inspection Canceled (LNP-INSPCANC-001)
Resource: Permit Inspection *Event:* Permit Inspection Complete	*Description:* Notification sent to applicants when final inspection results have been determined. *Trigger:* Click **Submit** on the Inspection Result page or from Inspection Details page within the Mobile Inspector app. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Inspection Complete (LNP-INSPCOMP-001)
Resource: Permit Inspection *Event:* Permit Inspection ETA Updated	*Description:* Indicates that the estimated time of arrival for a scheduled inspection is updated. *Trigger:* From the Actions menu in the Mobile Inspector app, select *Update ETA.* On the Estimated Time of Arrival page, select a new time, and click **Save.** *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Inspection ETA Updated (LNP-INSPETAUPDATE-001)
Resource: Permit Inspection *Event:* Permit Inspection Postponed	*Description:* Indicates that an inspection is postponed. *Trigger:* Select **Postpone** for the inspection. An inspection can be postponed from the Inspections console page for agency staff, the Inspections tab in the transaction details, or from the inspection request. Registered public users can only postpone inspections if allowed at the agency-level in the permit and business license options. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Inspection Postponed (LNP-INSPPOSTPONE-001)

Event	Details
Resource: Permit Inspection *Event:* Permit Inspection Requested	*Description:* An inspection is created. *Trigger:* Select **Add Inspection** from the permit or the Inspections page, provide the required information, and click **Submit** on the Inspections page. This can occur also from the mobile application and IVR. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Inspection Requested (LNP-INSPREQ-001)
Resource: Permit Inspection *Event:* Permit Inspection Rescheduled	*Description:* Indicates that an inspection is rescheduled. *Trigger:* Click **Reschedule** for a currently scheduled inspection determine a new time, click **Select**, and click **Submit.** An inspection can be rescheduled from the inspections console for agency staff, the Inspections list page for registered public users, the Inspections tab in the transaction details, or from the inspection request. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Inspection Rescheduled (LNP-INSPRESCH-001)
Resource: Permit Inspection *Event:* Permit Inspection Scheduled	*Description:* Indicates that an inspection is scheduled. *Trigger:* For a newly added inspection, click **Select a Time**, determine a time slot, click **Select,** and click **Submit.** An inspection can be scheduled from the inspections console, the Inspections tab in the transaction details, or from the inspection request. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Inspection Scheduled (LNP-INSPSCH-001)

Event	Details
Resource: Permit Missing Document *Event:* Permit Missing Document	*Description:* Indicates that a permit application step is missing a required document. *Trigger:* Application steps or workflow events including Application Submittal, Application Issuance, Application Acceptance, Final Inspection, and Application Complete, depending on agency configuration. For more information, see *Setting Up Required Documents*. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Missing Document (LNP_REQUIRED_DOCUMENT)
Resource: Permit Plan Review Document Plan Coordinators *Event:* Permit Document Attached for Plan Coordinator	*Description:* Applicant attaches a permit document for the plan coordinator. *Trigger:* Click **Add** on Attachments page in permit details, select a document to upload, and click **Upload** on the Add Attachments dialog box. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Document Attached for Plan Coordinator (LNP_ATTACHMENT_PCC_UPLOADED)
Resource: Permit Plan Review Document Plan Reviewers *Event:* Permit Document Attached for Plan Reviewers	*Description:* Applicant attaches a permit document for plan reviewers. *Trigger:* Click **Add** on Attachments page in permit details, select a document to upload, and click **Upload** on the Add Attachments dialog box. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Document Attached for Plan Reviewers (LNP_ATTACHMENT_PR_UPLOADED)
Resource: Permit Plan Review *Event:* Permit Plan Review Completed or Canceled	*Description:* Indicates that the permit plan review is completed or canceled. *Trigger:*

Event	Details
	• Select a value from the **Decision** drop-down list on the Plan Review Decision Details page and click **Save** after the last reviewer provides a decision or the review is marked N/A, and it is an electronic review. • On the Plan Reviews page, click **Cancel Review Cycle** to cancel a plan review cycle that is active. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Inspection Scheduled (LNP-INSPSCH-001)
Resource: Permit Plan Review *Event:* Permit Plan Review Finalized	*Description:* Indicates that the permit plan review is finalized. *Trigger:* Click **Finalize Session** for the plan review session in Bluebeam Studio™. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Plan Review Finalized (LNP_PR_FINALIZED)
Resource: Permit Plan Review *Event:* Permit Plan Review Ready To Finalize	*Description:* Indicates that the permit plan review is ready to finalize. *Trigger:* Click **Save** after the last reviewer provides a decision or the review is marked N/A (not applicable), and it is an electronic review. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Plan Review Ready To Finalize (LNP_PR_READY_TO_FINALIZE)
Resource: Permits Workflow Communications *Event:* After Permit Application Submitted	*Description:* After a permit application is submitted. *Trigger:* Applicant fills out an intake form and clicks **Submit** and all payments are processed so that they application is in a state of *Submitted* (not *Pending*). *Actions:* • Add fee • Apply parcel condition

Event	Details
	• Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Before Permit Application Submitted (LNP-AFTER-SUBMIT)
Resource: Permits Workflow Communications *Event:* Before Permit Application Submitted	*Description:* Before a permit application is submitted. *Trigger:* Applicant fills out an intake form and prior to the user clicking **Submit.** *Actions:* • Relay to OIC • Stop process *Communication Event:* Before Permit Application Submitted (LNP-AFTER-SUBMIT)
Resource: Permits Workflow Communications *Event:* Before Permit Issuance	*Description:* Runs before a permit is issued based on the Issue Permit task in the workflow process. For example, you can prevent a permit from being issued based on the criteria defined in the associated event. *Trigger:* This event is triggered by a workflow process task if the PSC_BRF_EVENT_CODE has been specified. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Stop process *Communication Event:* Before Permit Issuance (LNP-BEFORE-ISSUANCE)
Resource: Permits Workflow Communications *Event:* Permit Application Updated	*Description:* Initiates actions when a permit application is updated. *Trigger:* This event must be triggered from the workflow model. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Application Updated (LNP-PERMIT-UPDATE)

Event	Details
Resource: Permits Workflow Communications *Event:* Permit Canceled	*Description:* Applicant receives email or alert notification when a permit is canceled. *Trigger:* Select **Cancel Application** for a permit in the state of *Pending,* enter the cancellation reason, and click **Yes** on the Cancel Application page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Canceled (LNP-CANCEL-COMMUNICATION)
Resource: Permits Workflow Communications *Event:* Permit Contact Added to Application	*Description:* Contacts are added to permit application. *Trigger:* Occurs when a new application has been submitted. All contacts added during the application intake are notified. It is recommended to include all contacts in the communication template. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Contact Added to Application (LNP-CONTACT-ADD-TO-APP)
Resource: Permits Workflow Communications *Event:* Permit Withdrawn	*Description:* Applicant receives email or alert notification when a permit is withdrawn. *Trigger:* Click **Withdraw Application** on the Overview tab of the permit details, enter the reason, and click **OK.** *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Permit Withdrawn (LNP-WITHDRAW-COMMUNICATION)

Code Enforcement

The following table provides additional details for events related to code enforcement. The events are sorted by Resource.

Event	Details
Resource: Code Enforcement Case *Event:* Case Created	*Description:* The case is created. *Trigger:* • An incident inspection results in a code violation or citation. • An agency staff member creates a case and submits. *Actions:* • Apply address condition • Apply parcel condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Case Created (CE_CASE_CREATED)
Resource: Code Enforcement Case *Event:* Case Location Updated	*Description:* The location of the case is updated. *Trigger:* • On the Property Information tab for the case,select Edit for **Case Address** field, update the address on the Property Information page and save. • Click the Edit button on the Property Information tab, update the address on the Update Property Information dialog and click **Done.** *Actions:* • Apply address condition • Apply parcel condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Case Location Updated (CE_CASE_LOCATION_UPDATED)
Resource: Code Enforcement Case *Event:* Case Status Updated	*Description:* The status of the case is updated. *Trigger:* Whenever there is a case status update. The case status can be updated through inspections, from the case Overview tab, when issuing a citation, the result of a hearing, and so on. For example,on the case Overview tab click Edit for **Case Status** field. On the Update Status page, select a new status and reason and click **Done.** *Actions:* • Apply address condition • Apply parcel condition

Event	Details
	• Relay to OIC • Resolve conditions • Send communication *Communication Event:* Case Status Updated(CE_CASE_STATUS_UPDATED)
Resource: Code Enforcement Case Document *Event:* Code Enforcement Case Document Attached	*Description:* A responsible party attaches a document to a case. *Trigger:* In the case information on the attachments tab, a responsible party uploads a document. *Actions:* • Relay to OIC • Send communication *Communication Event:* Code Enforcement Case Document Attached (CE_CASE_ATTACHMENT_UPLOADED)
Resource: Code Enforcement Incident *Event:* Incident Assigned to Officer	*Description:* The incident is assigned to an officer. *Trigger:* On the Assign Code Officer page, select a code officer from the list, and click **Save.** *Actions:* • Relay to OIC • Send communication *Communication Event:* Incident Assigned to Officer (CE_INCIDENT_OFFICER_ASSIGNED)
Resource: Code Enforcement Incident *Event:* Incident Assigned to Technician	*Description:* The incident is assigned to a technician. *Trigger:* On the Assign Code Technician page, select a technician from the list and click **Save.** *Actions:* • Relay to OIC • Send communication *Communication Event:* Incident Assigned to Technician (CE_INCIDENT_TECHNICIAN_ASSIGNED)
Resource: Code Enforcement Incident *Event:* Incident Location Updated	*Description:* The location of the incident is updated. *Trigger:* On the Property Information tab for the Incident, select Edit for **Incident Address** field, update the address on the Property Information page and save. *Actions:* • Relay to OIC • Send communication *Communication Event:* Incident Location Updated (CE_INCIDENT_LOCATION_UPDATED)
Resource: Code Enforcement Incident *Event:* Incident Priority Updated	*Description:* The priority of the incident is updated. *Trigger:* On the incident Overview page, update the priority field value and save. *Actions:*

Event	Details
	• Relay to OIC • Send communication *Communication Event:* Incident Priority Updated (CE_INCIDENT_PRIORITY_UPDATED)
Resource: Code Enforcement Incident *Event:* Incident Status Updated	*Description:* The status of the incident is updated. *Trigger:* Numerous triggers, including when there is an update on the incident status by scheduling an inspection, an inspection resulting in a case, an incident is closed, and so on. *Actions:* • Relay to OIC • Send communication *Communication Event:* Incident Status Updated (CE_INCIDENT_STATUS_UPDATED)
Resource: Responsible Party for Case *Event:* Responsible Party's Case Access Updated	*Description:* Responsible party's online access to case is approved or denied. *Trigger:* When a public user requests access and the agency approves that request using the Responsible Party tab for the case or through workflow. *Actions:* • Relay to OIC • Send communication *Communication Event:* Responsible Party's Case Access Updated (CE-RP-REQ-UPDATE)

Planning and Zoning

The following table provides additional details for events related to planning and zoning. The events are sorted by Resource.

Event	Details
Resource: Activity Tracking *Event:* Planning Activity Updated	*Description:* Indicates that an activity is updated. *Trigger:* Updating the **Activity Status** or **Due Date** field on the Activity Tracking list page, and click **Save.** *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Update workflow

Event	Details
	Communication Event: Planning Activity Updated (COM-ACT-UPDATE)
Resource: Hearing Notification *Event:* Hearing Appealed	*Description:* Notifies that an appeal is submitted for the public hearing. *Trigger:* On the Request Appeal page, provide the required information and click the **Confirm and Pay** button. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Hearing Appealed (PZ-HRGS-APPEAL-NOTIFY)
Resource: Hearing Notification *Event:* Hearing Canceled	*Description:* Notifies that the public hearing is canceled. *Trigger:* An application previously inserted into the calendar on the Hearing Scheduler has the hearing date changed using the *Cancel* action. *Actions:* • Add fee • Apply transaction condition • Generate calendar • Generate report • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Hearing Canceled (PZ-HRGS-SCHD-CANCEL)
Resource: Hearing Notification *Event:* Hearing Decision Changed	*Description:* Notifies that the public hearing decision is updated. *Trigger:* On the Update Decision page, select a value from the **Decision** drop-down list, and click **Save.** *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Hearing Decision Changed (PZ-HRGS-DECISION-CHANGED)
Resource: Hearing Notification *Event:* Hearing Rescheduled	*Description:* Notifies that there is a change in the date of the public hearing. *Trigger:* An application previously inserted into the calendar on the Hearing Scheduler has the hearing date changed using the *Reschedule* action.

Event	Details
	Actions: • Add fee • Apply transaction condition • Generate calendar • Generate report • Relay to OIC • Resolve conditions • Send communication • Update workflow *Communication Event:* Hearing Re-scheduled (PZ-HRGS-SCHD-RESCHEDULE)
Resource: Hearing Notification *Event:* Hearing Scheduled Tentatively	*Description:* Notifies that the public hearing is scheduled on a tentative date. *Trigger:* An application has been added to the calendar on the Hearing Scheduler page with a **Schedule Status** of *Tentative.* *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Hearing Scheduled Tentatively (PZ-HRGS-SCHD-TENTATIVE)
Resource: Hearing Notification *Event:* Hearing Schedule Finalized	*Description:* Notifies that the public hearing is scheduled on a finalized date. *Trigger:* An application has been added to the calendar on the Hearing Scheduler page with a **Schedule Status** of *Final,* a previously added application has the **Schedule Status** updated to Final, or the status is changed using the *Finalize* action. *Actions:* • Add fee • Apply transaction condition • Generate calendar • Generate report • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Hearing Schedule Finalized (PZ-HRGS-SCHD-FINAL)
Resource: Planning and Zoning Application Contacts	*Description:* Additional contact added to a planning application or preapplication. *Trigger:* Click **Add New Contact** in the Additional Contacts grid on the Contacts page in planning application details, and either select an existing contact or create a new one.

Event	Details
Event: Planning and Zoning Additional Contact Added	*Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planner Assigned (PNZ-ASSIGN-PLANNER)
Resource: Planning and Zoning Application *Event:* Planner Assigned	*Description:* A planner is assigned for the application. *Trigger:* When a planner is assigned from the Overview page of the planning application details page, or on the planner worklist Unassigned Planners tab. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Update workflow *Communication Event:* Planner Assigned (PNZ-ASSIGN-PLANNER)
Resource: Planning and Zoning Application *Event:* Planner Reassigned	*Description:* A planner is reassigned for the application. *Trigger:* When a planner is reassigned from the Overview page of the Planning Application Details page, or on the Planner Worklist Unassigned Planners tab. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Update workflow *Communication Event:* Planner Reassigned (PNZ-REASSIGN-PLANNER)
Resource: Planning and Zoning Expiration Communication *Event:* About to Expire Planning and Zoning Application	*Description:* A planning and zoning application is about to expire. *Trigger:* The planning and zoning application is about to exceed the set expiration duration. *Actions:*

Event	Details
	• Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* About to Expire Planning and Zoning Application (PNZ-APP-ATE-EXPIRY-001)
Resource: Planning and Zoning Expiration Communication *Event:* About to Expire Pre-application	*Description:* A planning and zoning pre-application is about to expire. *Trigger:* The planning and zoning pre-application is about to exceed the set expiration duration. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* About to Expire Pre-application (PNZ-PREAPP-ATE-EXPIRY-001)
Resource: Planning and Zoning Expiration Communication *Event:* Expired Planning and Zoning Application	*Description:* A planning and zoning application has expired. *Trigger:* The planning and zoning application has exceeded the set expiration duration. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Expired Planning and Zoning Application (PNZ-APP-EXPIRED-001)
Resource: Planning and Zoning Expiration Communication *Event:* Expired Pre-application	*Description:* A planning and zoning pre-application has expired. *Trigger:* The planning and zoning pre-application has exceeded the set expiration duration. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition

Event	Details
	• Relay to OIC • Resolve conditions • Send communication *Communication Event:* Expired Pre-application (PNZ-PREAPP-EXPIRED-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Planning Application Meeting Canceled	*Description:* Notifies that the planning application meeting is canceled. *Trigger:* On the Planning Application details page, select the Meetings tab for the planning application. Click **Cancel** for a meeting in the list. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Meeting Canceled (PZ-NA-MEETCAN-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Planning Application Meeting Invitee Added	*Description:* Notifies that the invitee has been added to the planning meeting. *Trigger:* An invitee has been added to the invitee list for the planning application meeting and saved. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Meeting Invitee Added (PZ-NA-MEETSCH-INV-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Planning Application Meeting Remove Invitees	*Description:* Notifies that the invitee has been removed from the meeting. *Trigger:* Invitees previously on the invite list are removed, and the update has been saved. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Meeting Remove Invitees (PZ-NA-MEETREM-001)
Resource: Planning and Zoning Meeting Request Notification	*Description:* Notifies that the planning application meeting is rescheduled on a tentative date.

Event	Details
Event: Planning Application Meeting Rescheduled	*Trigger:* The meeting for the planning application has been moved to a different date on the calendar and saved. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Meeting Rescheduled (PZ-NA-MEETRESCH-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Planning Application Meeting Scheduled	*Description:* Notifies that the planning application meeting is scheduled on a tentative date. *Trigger:* A meeting has been scheduled on the calendar. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Meeting Scheduled (PZ-NA-MEETSCH-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Pre-Application Meeting Canceled	*Description:* Notifies that the preapplication meeting is canceled. *Trigger:* On the Planning Application details page, select the Meetings tab for the planning preapplication. Click **Cancel** for a meeting in the list. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Pre-Application Meeting Canceled (PZ-PREAPP-MEETCAN-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Pre-Application Meeting Invitee Added	*Description:* Notifies that the invitee has been added to the planning meeting. *Trigger:* Invitee has been added to the invitees list for the preapplication meeting. *Actions:* • Add fee • Apply transaction condition • Relay to OIC

Event	Details
	• Resolve conditions • Send communication *Communication Event:* Planning Application Meeting Invitee Added (PZ-NA-MEETSCH-INV-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Pre-Application Meeting Remove Invitees	*Description:* Notifies that the invitee has been removed from the meeting. *Trigger:* Remove a row in the invitees list for a meeting. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Pre-Application Meeting Remove Invitees (PZ-PREAPP-MEETREM-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Pre-Application Meeting Rescheduled	*Description:* A pre-application meeting is rescheduled on a tentative date. *Trigger:* A previously scheduled pre-application meeting's scheduled date or time has been changed and saved. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Pre-Application Meeting Rescheduled (PZ-PREAPP-MEETREM-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Pre-Application Meeting Scheduled	*Description:* Notifies that the pre-application meeting is scheduled on a tentative date. *Trigger:* Click the **Schedule** button on the meeting request page. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Pre-Application Meeting Scheduled (PZ-PREAPP-MEETSCH-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Pre-Application Meeting Updated	*Description:* Notifies that there is a change in the planning application meeting date. *Trigger:* An update has been made to the meeting and saved. *Actions:*

Event	Details
	• Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Meeting Updated (PZ-NA-MEETUPD-001)
Resource: Planning and Zoning Meeting Request Notification *Event:* Pre-Application Meeting Updated	*Description:* Notifies that there is a change in the preapplication meeting date. *Trigger:* Update a scheduled meeting and save your changes. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Pre-Application Meeting Updated (PZ-PREAPP-MEETUPD-001)
Resource: Planning and Zoning Workflow Communications *Event:* After Planning and Zoning Application Submitted	*Description:* After a planning and zoning application is submitted. *Trigger:* Applicant fills out an intake form and clicks **Submit.** *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* After Planning and Zoning Application Submitted (PNZ-AFTER-SUBMIT)
Resource: Planning and Zoning Workflow Communications *Event:* Before Planning and Zoning Application Submitted	*Description:* This event runs before the application is submitted, but before any further processing occurs this event runs. *Trigger:* The applicant clicks **Submit** on the intake form. *Actions:* • Relay to OIC • Stop process
Resource: Planning and Zoning Workflow Communications	*Description:* Contacts are added to preapplication or planning application during the application intake form. When submitted.

Event	Details
Event: Planning and Zoning Contact Added to Application	*Trigger:* Occurs when a new application has been submitted. All contacts added during the application intake are notified. It is recommended to include all contacts in the communication template. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning and Zoning Contact Added to Application (PZ-CONTACT-ADD-TO-APP)
Resource: Planning and Zoning Workflow Communications *Event:* Planning Application and Pre-Application Updated	*Description:* Initiates actions when a planning application or a preapplication is updated. *Trigger:* This event is triggered by the workflow model. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application and Pre-Application Updated (PZ-PLANNING-UPDATE)
Resource: Planning and Zoning Workflow Communications *Event:* Planning Application Canceled	*Description:* Initiates action when a planning application is canceled. *Trigger:* This event is triggered when the planning application is canceled from the Planning application list or Planning Details Overview page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Canceled (PNZ-CANCEL)
Resource: Planning and Zoning Workflow Communications *Event:* Planning Application Withdrawn	*Description:* Applicant receives email or alert notification when a planning application is withdrawn. *Trigger:* This event is triggered when the planning application is withdrawn from the Planning application list or Planning Details Overview page. *Actions:*

Event	Details
	• Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Withdrawn (PNZ-WITHDRAW)
Resource: Planning and Zoning Workflow Communications *Event:* Planning Pre-Application Canceled	*Description:* Initiates action when a planning preapplication is canceled. *Trigger:* This event is triggered when the planning preapplication is canceled from the Planning list or Overview page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Pre-Application Canceled (PNZ-PREAPP-CANCEL)
Resource: Planning and Zoning Workflow Communications *Event:* Planning Pre-Application Withdrawn	*Description:* Applicant receives email or alert notification when a planning preapplication is withdrawn. *Trigger:* This event is triggered when the planning application is withdrawn from the list or overview page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Pre-Application Withdrawn (PNZ-PREAPP-WITHDRAW)
Resource: Planning Application Document *Event:* Planning Application Document Attached	*Description:* Notifies agency staff when the applicant uploads a planning application document. *Trigger:* An applicant has uploaded an attachment to a planning application or a preapplication. *Actions:* • Add fee • Apply transaction condition

Event	Details
	• Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Document Attached (PNZ_ATTACHMENT_UPLOADED)
Resource: Planning Application Plan Review Document *Event:* Planning Application Document Attached for Plan Reviewers	*Description:* Notifies agency staff when the applicant uploads a planning application document for plan review. *Trigger:* An applicant has uploaded an attachment to a planning application or a preapplication. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Application Document Attached for Plan Reviewers (PNZ_ATTACHMENT_PR_UPLOADED)
Resource: Planning Missing Document *Event:* Planning Missing Document	*Description:* Indicates that a planning application step is missing a required document. *Trigger:* Application steps or workflow events including Application Submittal, Application Acceptance, and Application Complete, depending on agency configuration. For more information, see *Setting Up Required Documents*. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Missing Document (PZ_REQUIRED_DOCUMENT)
Resource: Planning Plan Review *Event:* Planning Plan Review Completed or Canceled	*Description:* Indicates that the planning plan review is completed or canceled. *Trigger:* When the last reviewer provides a decision status for a plan review cycle, it is automatically closed. Upon closing, the overall review status changes to Complete. Or, on the Plan Reviews page, click the **Cancel Review Cycle** button to cancel a plan review cycle that is active. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication

Event	Details
	Communication Event: Planning Plan Review Completed or Canceled (PNZ_MPR_REVIEW_COMPLETED)
Resource: Planning Plan Review *Event:* Planning Plan Review Finalized	*Description:* Indicates that the planning plan review is finalized. *Trigger:* Click **Finalize Session** for the plan review session in Bluebeam Studio™. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Plan Review Finalized (PZ-HRGS-SCHD-FINAL)
Resource: Planning Plan Review *Event:* Planning Plan Review Ready To Finalize	*Description:* Indicates that the planning plan review is ready to finalize. *Trigger:* Click **Save** after the last reviewer provides a decision or the review is marked N/A (not applicable), and it is an electronic review. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Plan Review Ready To Finalize (PNZ_PR_READY_TO_FINALIZE)

Business Licenses

The following table provides additional details for events related to business licenses. The events are sorted by Resource.

Event	Details
Resource: Business Consultation Meeting *Event:* Business Consultation Meeting Canceled	*Description:* A consultation meeting is canceled. *Trigger:* Click **Cancel** on the meetings page for a business consultation meeting. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions

Event	Details
	• Send communication *Communication Event:* Business Consultation Meeting Canceled (BL-CON-MEETCAN-001)
Resource: Business Consultation Meeting *Event:* Business Consultation Meeting Invitee Added	*Description:* An invitee has been added to a business consultation meeting. *Trigger:* An invitee has been added to the meeting in the **Invitees** field on the meetings page. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business Consultation Meeting Invitee Added (BL-CON-MEETSCH-INV-001)
Resource: Business Consultation Meeting *Event:* Business Consultation Meeting Remove Invitees	*Description:* An invitee has been removed from the meeting. *Trigger:* A previous invitee has been removed from the meeting using the **Invitees** field on the meetings page. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business Consultation Meeting Remove Invitees (BL-CON-MEETREM-001)
Resource: Business Consultation Meeting *Event:* Business Consultation Meeting Rescheduled	*Description:* A consultation meeting is rescheduled on a tentative date. *Trigger:* From the meetings page, click **Reschedule** for the selected meeting, select a new date, and click **Schedule**. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business Consultation Meeting Rescheduled (BL-CON-MEETRESCH-001)
Resource: Business Consultation Meeting *Event:* Business Consultation Meeting Scheduled	*Description:* A consultation meeting is scheduled on a tentative date. *Trigger:* From the meetings page, click **Schedule Meetings,** provide the necessary information, and click **Schedule.**

Event	Details
	Actions: • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business Consultation Meeting Scheduled (BL-CON-MEETSCH-001)
Resource: Business Consultation Meeting *Event:* Business Consultation Meeting Updated	*Description:* The information for a consultation meeting has been changed. *Trigger:* From the meetings page, update previously saved information, and click **Schedule.** *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business Consultation Meeting Updated (BL-CON-MEETUPD-001
Resource: Business License Activity *Event:* After Business License Application Submitted	*Description:* After a business license application is submitted. *Trigger:* An applicant fills out an intake form and clicks **Submit**, and all additional requirements, such as payment are complete. The application must be in the status of *Submitted*, not *Pending*. *Actions:* • Add fee • Apply address condition • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Update workflow *Communication Event:* After Business License Application Submitted (LIC-AFTER-SUBMIT)
Resource: Business License Activity *Event:* A specialist is assigned for the application.	*Description:* A specialist has been assigned the application to review and process. *Trigger:* On the Assign Specialist page, select a specialist, and click **Save.** *Actions:* • Add fee • Apply address condition

Event	Details
	• Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Update workflow *Communication Event:* A specialist is assigned for the application. (BL-ASSIGN-SPECIALIST)
Resource: Business License Activity *Event:* A specialist is reassigned for the application.	*Description:* A specialist has been reassigned the application to review and process. *Trigger:* Click Reassign for the **Specialist** field on the Activity Summary or License Information page, and on the Assign Specialist page, select a new specialist, and click **Save.** *Actions:* • Add fee • Apply address condition • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Update workflow *Communication Event:* A specialist is reassigned for the application. (BL-REASSIGN-SPECIALIST)
Resource: Business License Activity *Event:* Before Business License Application Submitted	*Description:* Before a business license application is submitted. *Trigger:* An applicant fills out an intake form and clicks **Submit**, and before any submission processing occurs, this event runs. *Action:* Stop Process
Resource: Business License Activity *Event:* Before Business License Issuance	*Description:* Runs before the Issue Business License human task in the workflow process. *Trigger:* Runs if the PSC_BRF_EVENT_CODE custom property is specified for the Issue Business License workflow process task. *Actions:* • Add fee • Apply address condition • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions

Event	Details
	• Send communication • Stop process • Update Workflow *Communication Event:* Before Business License Issuance (BL-BEFORE-ISSUANCE)
Resource: Business License Activity *Event:* Business License Application and Consultation Updated	*Description:* Initiates actions when a business license or consultation application is updated. Must be used within a workflow model. *Trigger:* Updates made to a license or consultation and Business Rules Framework is called within the workflow process definition. *Actions:* • Add fee • Apply address condition • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Update workflow *Communication Event:* Business License Application and Consultation Updated (LIC-LICENSE-UPDATE)
Resource: Business License Activity *Event:* Business License Application Canceled	*Description:* Indicates that a business license application is canceled. *Trigger:* This event is triggered when a business license application is canceled. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Inspection Application Canceled (BL-CANCEL)
Resource: Business License Activity *Event:* Business License Application Withdrawn	*Description:* Applicant receives an email or alert notification when a business license application is withdrawn. *Trigger:* This event is triggered when the business license application is withdrawn from the list or overview page. *Actions:* • Add fee • Apply parcel condition

Event	Details
	• Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Inspection Application Withdrawn (BL-WITHDRAW)
Resource: Business License Activity *Event:* Business License Consultation Application Canceled	*Description:* Indicates that a consultation application is canceled. *Trigger:* This event is triggered when a business license consultation application is canceled from the list or overview page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Consultation Application Canceled (BL-CON-CANCEL)
Resource: Business License Inspection Document *Event:* Business License Document Attached for Inspection Supervisor	*Description:* Applicant attaches a document for the inspection supervisor. *Trigger:* Click **Add** on Attachments page in the transaction details, select a document to upload, and click **Upload** on the Add Attachments dialog box. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Document Attached for Inspection Supervisor (LIC_ATTACHMENT_SUP_UPLOADED)
Resource: Business License Inspection Document *Event:* Business License Document Attached for Inspector	*Description:* Applicant attaches a document for the inspector. *Trigger:* Click **Add** on Attachments page in the transaction details, select a document to upload, and click **Upload** on the Add Attachments dialog box. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication

Event	Details
	Communication Event: Business License Document Attached for Inspector (LIC_ATTACHMENT_INS_UPLOADED)
Resource: Business License Inspection *Event:* Before Business License Inspection Saved	*Description:* Before an inspection is saved. *Trigger:* • Click **Submit** after adding or updating any inspection and the rule runs during the submit request, prior to the save. • Click **Select** to select a time when requesting an inspection. • Select **Assign** from the inspection list on the Inspections console page and Inspections page in the transaction details. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication • Stop process *Communication Event:* Before Business License Inspection Saved (LIC-INSPRSAVE-001)
Resource: Business License Inspection *Event:* Business License Final Inspection Passed	*Description:* Indicates that the final inspection is complete with a passing result. *Trigger:* For a final inspection, click **Submit** on the Inspection Result page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Final Inspection Passed (LIC-FINALINSP-001)
Resource: Business License Inspection *Event:* Business License Inspection Canceled	*Description:* Indicates that an inspection is canceled. *Trigger:* Select **Cancel Inspection** for the inspection. An inspection can be canceled from the inspections console, the Inspections tab in the transaction details, or from the inspection request. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC

Event	Details
	• Resolve conditions • Send communication *Communication Event:* Business License Inspection Canceled (LIC-INSPCANC-001)
Resource: Business License Inspection *Event:* Business License Inspection Complete	*Description:* Notification sent to applicants when final inspection results have been determined. *Trigger:* Click **Submit** on the Inspection Result page or from Inspection Details page within the Mobile Inspector app. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Inspection Complete (LIC-INSPCOMP-001)
Resource: Business License Inspection *Event:* Business License Inspection ETA Updated	*Description:* Indicates that the estimated time of arrival for a scheduled inspection is updated. *Trigger:* From the Actions menu in the Inspector Application for mobile devices, select *Update ETA*. On the Estimated Time of Arrival page, select a new time, and click **Save**. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Inspection ETA Updated (LIC-INSPETAUPDATE-001)
Resource: Business License Inspection *Event:* Business License Inspection Postponed	*Description:* Indicates that an inspection is postponed. *Trigger:* Select **Postpone** for the inspection. An inspection can be postponed from the Inspections console page for agency staff, the Inspections tab in the transaction details, or from the inspection request. Registered public users can only postpone inspections if allowed at the agency-level in the permit and business license options. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions

Event	Details
	• Send communication *Communication Event:* Business License Inspection Postponed (LIC-INSPPOSTPONE-001)
Resource: Business License Inspection *Event:* Business License Inspection Requested	*Description:* An inspection is created. *Trigger:* Select **Add Inspection** from the business license activity pages or the Inspections console page, provide the required information, and click **Submit** on the Inspection request page. This can occur also from the mobile application and IVR. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Inspection Requested (LIC-INSPREQ-001)
Resource: Business License Inspection *Event:* Business License Inspection Rescheduled	*Description:* Indicates that an inspection is rescheduled. *Trigger:* Click **Reschedule** for a currently scheduled inspection, determine a new time, click **Select**, and click **Submit**. An inspection can be rescheduled from the inspections console for agency staff, the Inspections list page for registered public users, the Inspections tab in the transaction details, or from the inspection request. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Inspection Rescheduled (LIC-INSPRESCH-001)
Resource: Business License Inspection *Event:* Business License Inspection Scheduled	*Description:* Indicates that an inspection is scheduled. *Trigger:* For a newly added inspection, click **Select a Time**, determine a time slot, click **Select,** and click **Submit.** An inspection can be scheduled from the inspections console, the Inspections tab in the transaction details, or from the inspection request. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions

Event	Details
	• Send communication *Communication Event:* Business License Inspection Scheduled (LIC-INSPSCH-001)
Resource: Business License Missing Document *Event:* Business License Missing Document	*Description:* Indicates that a business license application step is missing a required document. *Trigger:* Application steps or workflow events including Application Submittal, Application Issuance, Application Acceptance, Final Inspection, and Application Complete, depending on agency configuration. For more information, see *Setting Up Required Documents*. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Missing Document (LIC_REQUIRED_DOCUMENT)
Resource: Business License Workflow Communications *Event:* Business License Consultation Application Withdrawn	*Description:* Applicant receives an email or alert notification when a business license consultation application is withdrawn. *Trigger:* This event is triggered when the business license consultation application is withdrawn from the list or overview page. *Actions:* • Add fee • Apply parcel condition • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Planning Pre-Application Withdrawn (BL-CON-WITHDRAW)
Resource: Business License Document *Event:* Business License Document Attached	*Description:* Applicant attaches a business license document. *Trigger:* A document is attached to a business license. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Document Attached (LIC-ATTACHMENT-UPLOADED)
Resource: Business License Expiration	*Description:* Indicates when a business license is about to expire.

Event	Details
Event: About to expire business license	*Trigger:* A business license expiry date is approaching. *Actions:* • Add fee • Apply business license condition • Relay to OIC • Send communication *Communication Event:* About to expire business license (BL-ATE-EXPIRY-001)
Resource: Business License Expiration *Event:* About to expire business license consultation	*Description:* Indicates when a business license consultation is about to expire. *Trigger:* A business license consultation expiry date is approaching. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* About to expire business license consultation (BL-CON-ATE-EXPIRY-001)
Resource: Business License Expiration *Event:* Expired business license	*Description:* Indicates when a business license is expired. *Trigger:* A business license expiry date has been reached. *Actions:* • Add fee • Apply business license condition • Relay to OIC • Send communication *Communication Event:* Expired business license (BL-EXPIRED-001)
Resource: Business License Expiration *Event:* Expired business license consultation	*Description:* Indicates when a business license consultation is expired. *Trigger:* A business license consultation expiry date has been reached. *Actions:* • Add fee • Apply transaction condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Expired business license consultation (BL-CON-EXPIRED-001)

Event	Details
Resource: Business Licenses *Event:* Business License Inactivated	*Description:* Indicates when a business license has been inactivated. *Trigger:* Select *Inactivate* from the **Actions** menu on the Business Licenses page, the business license overview page, or the License Information page. Provide the required information on the Inactivate Business License page and click **Continue**. *Actions:* • Add fee • Apply address condition • Apply business license condition • Apply parcel condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Inactivated (BL-INACTIVE)
Resource: Business Licenses *Event:* Business License Reactivated	*Description:* Indicates when a business license has been reactivated. *Trigger:* A business license is reactivated through the amendment process. *Actions:* • Add fee • Apply address condition • Apply business license condition • Apply parcel condition • Relay to OIC • Resolve conditions • Send communication *Communication Event:* Business License Reactivated (BL-REACTIVE)

Common

The following table provides additional details for the common events. The events are sorted by Resource.

Event	Details
Resource: Ad Hoc Business Location Communication *Event:* Expiring business licenses by location	*Description:* One or more business licenses are about to expire or have expired at a location. *Trigger:* The license expiry date is about to be or has been reached. *Actions:* • Relay to OIC • Send communication *Communication Event:* Expiring business licenses by location (BL-EXPIRATION-BY-LOC)

Event	Details
Resource: Application Summary *Event:* Ad Hoc Application Event	**Note:** Reserved for future use. *Description:* General application event. *Trigger:* Varies. *Actions:* • Add fee • Relay to OIC • Send communication • Update workflow *Communication Event:* Ad Hoc Application Event (ADHOC-WORKFLOW-EVENT-001)
Resource: Delegation Notifications *Event:* Delegate Ends Delegation	**Note:** Reserved for future use. *Description:* A delegate ends delegation privileges. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegate Ends Delegation (COM-DLG-END-DELEGATE)
Resource: Delegation Notifications *Event:* Delegation Invitation Accepted	**Note:** Reserved for future use. *Description:* A prospective delegate accepts an invitation. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Invitation Accepted (COM-DLG-INVITATION-ACCEPT)
Resource: Delegation Notifications *Event:* Delegation Invitation Declined	**Note:** Reserved for future use. *Description:* A prospective delegate declines an invitation. *Actions:* • Relay to OIC

Event	Details
	• Send communication *Communication Event:* Delegation Invitation Declined (COM-DLG-INVITATION-DECLINE)
Resource: Delegation Notifications *Event:* Delegation Invitation Expired	**Note:** Reserved for future use. *Description:* The set time for the delegation invitation duration has expired. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Invitation Expired (COM-DLG-INVITATION-EXPIRE)
Resource: Delegation Notifications *Event:* Delegation Invitation Updated for Privilege Decrease	**Note:** Reserved for future use. *Description:* A profile or transaction owner modifies a delegation invitation to decrease privileges. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Invitation Updated for Privilege Decrease (COM-DLG-INVITATION-MODIFY-PVGDEC)
Resource: Delegation Notifications *Event:* Delegation Request Accepted	**Note:** Reserved for future use. *Description:* A profile or transaction owner accepts a request to delegate. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Request Accepted (COM-DLG-REQUEST-ACCEPT)
Resource: Delegation Notifications *Event:* Delegation Request Declined	**Note:** Reserved for future use. *Description:* A profile or transaction owner declines a request to delegate. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Request Declined (COM-DLG-REQUEST-DECLINE)

Event	Details
Resource: Delegation Notifications *Event:* Delegation Request Expired	**Note:** Reserved for future use. *Description:* A delegation request expired. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Request Expired (COM-DLG-REQUEST-EXPIRE)
Resource: Delegation Notifications *Event:* Delegation Request Updated	**Note:** Reserved for future use. *Description:* A prospective delegate modifies a delegation request. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Request Updated (COM-DLG-REQUEST-MODIFY)
Resource: Delegation Notifications *Event:* Profile or Transaction Owner Ends Delegation	**Note:** Reserved for future use. *Description:* A profile or transaction owner ends delegation privileges. *Actions:* • Relay to OIC • Send communication *Communication Event:* Profile or Transaction Owner Ends Delegation (COM-DLG-END-PTO)
Resource: Deposit Account *Event:* Account Established	*Description:* Enables the agency to trigger a notification after establishing a deposit account. *Trigger:* A deposit account has been created and saved. *Actions:* • Relay to OIC • Send communication *Communication Event:* Account Established (BNP-DEPOSIT-ACCOUNT)
Resource: Deposit Fund *Event:* Additional Funds	*Description:* Enables the agency to trigger a notification when funds have to be deposited into deposit account. *Trigger:* Funds have been added to an existing deposit account.

Event	Details
	Actions: • Relay to OIC • Send communication *Communication Event:* Additional Funds (BNP-DEPOSIT-FUND)
Resource: Deposit Received *Event:* Deposit Received	*Description:* Enables the agency to trigger a notification after receiving a deposit. *Trigger:* Initial funds have been added to a deposit account. *Actions:* • Relay to OIC • Send communication • Update workflow *Communication Event:* Deposit Received (BNP-DEPOSIT-RECEIVED)
Resource: Invite Delegation Notifications *Event:* Delegation Invitation	**Note:** Reserved for future use. *Description:* Profile or Transaction owner sends invitation to prospective delegate. *Trigger:* Varies. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Invitation (COM-DLG-INVITATION)
Resource: Invite Delegation Notifications *Event:* Delegation Invitation Updated for Privilege Increase	**Note:** Reserved for future use. *Description:* A profile or transaction owner modifies a delegation invitation to increase privileges. *Trigger:* Varies. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Invitation Updated for Privilege Increase (COM-DLG-INVITATION-MODIFY-PVGINC)
Resource: Invite Delegation Notifications *Event:* Delegation Request	**Note:** Reserved for future use.

Event	Details
	Description: A prospective delegate requests delegation. *Trigger:* Varies. *Actions:* • Relay to OIC • Send communication *Communication Event:* Delegation Request (COM-DLG-REQUEST)
Resource: Payments by Transactions *Event:* Payment Received by Transactions	*Description:* Enables the agency to trigger various actions upon the successful payment of fees for a transaction. *Trigger:* One or more fee payments have been received successfully. *Actions:* • Add fee • Relay to OIC • Send communication • Update workflow *Communication Event:* Payment Received by Transactions (COM-PAYMENT-TRANSACTIONS) **Note:** Update Workflow actions triggered by the *Payment Received by Transactions* event can send multiple fees at once for a transaction (if there are multiple fees), which you can see in rule logs.
Resource: Payment History *Event:* Payment Received	*Description:* Enables the agency to trigger a template that generates a successful payment notification. *Trigger:* A fee payment has been received successfully. *Actions:* • Relay to OIC • Send communication *Communication Event:* Payment Received (BNP-PAYMENT-RECEIPT)
Resource: Refund Record *Event:* Refund Notice	*Description:* Enables the agency to trigger a template that generates a successful payment notification. *Trigger:* A refund has been completed successfully by the agency. *Actions:* • Relay to OIC • Send communication *Communication Event:* Refund Notice (BNP_REFUND_NOTICE)
Resource: User Access Changes *Event:* User Access Changed	*Description:* A user or administrator has changed access to deposit account details. *Trigger:* Deposit account access is changed and saved.

Event	Details
	Actions: • Relay to OIC • Send communication *Communication Event:* User Access Changed (BNP-DEPOSIT-ACCESS)
Resource: User Invite *Event:* User Invite	*Description:* A user is invited to be an authorized user on a deposit account. *Trigger:* A user invite to access the deposit account is created and saved. *Actions:* • Relay to OIC • Send communication *Communication Event:* User Invite (BNP-DEPOSIT-INVITE)
Resource: User Profile Notifications *Event:* User Account Information Changed	*Description:* Notifies a public user when the user's account is updated by agency personnel. *Trigger:* The agency updates a public user's account and saves. *Actions:* • Relay to OIC • Send communication *Communication Event:* User Account Information Changed (PBL-ACCOUNT-INFO-CHANGED)
Resource: User Profile Notifications *Event:* User Profile Information Changed	*Description:* Notifies a public user when the user's profile is updated by agency personnel. *Trigger:* The public user's profile was updated and saved. *Actions:* • Relay to OIC • Send communication *Communication Event:* User Profile Information Changed (PBL-PROFILE-INFO-CHANGED)

16 Managing Audit Policies

Implementation Concepts for Audit Policies

This topic discusses audit configuration for business object attributes.

Audit enables tracking the change history of particular attributes of a business object. However, those objects and their attributes must be selected for audit and auditing must be enabled for that application. Your configuration settings determine which attributes to audit for a given object, and when the audit starts and ends. Auditing takes into account all the operations performed on an object and its attributes, such as create, update, and delete. To configure audit business object attributes, use the Manage Audit Policies task in the Setup and Maintenance work area.

Selecting an Application

To set up auditing, you must select a web application that contains the required business objects that can be audited. From the list of business objects, select those business objects that you want to audit. Selecting a business object also displays its attributes that are enabled for auditing.

Selecting Attributes

For each selected business object to be audited, select the corresponding attributes to include in the audit. All attributes that belong to that object are by default selected for audit and appear on the user interface. However, you can add or remove attributes from the list. When you remove an attribute from the list, you stop auditing it even when the parent object is selected for audit. So, if you want an attribute to be audited, you must add it to the list. If the object selected in an audit hierarchy is also a part of several other audit hierarchies, the attribute configuration for that object is applicable to all the hierarchies in that application.

> **Tip:** For business objects based on flexfields, select the Flexfields (Additional Attributes) checkbox to view and add or remove flexfield attributes, to include or exclude them from the audit.

Starting and Stopping Audit

The business object is ready for audit after you select its attributes and save the configuration changes. However, to start auditing, the audit level for Oracle Applications Cloud must be set to **Auditing** on the Manage Audit Policies page.

To stop auditing an object, you can deselect the entire object and save the configuration. As a result, all its selected attributes are automatically deselected and are not audited. To continue to audit the business object with select attributes, deselect those attributes that are not to be audited. When users view the audit history for an application, they can specify the period for which they want the results. Therefore, make a note of when you start and stop auditing an application.

For example, users intend to view the audit history of an object for the previous week, but auditing for that object was stopped last month. They wouldn't get any audit results for that week, because during the entire month that object wasn't audited. Even if you enable audit for that object today, users can't get the wanted results because audit data until today isn't available.

Audit Configuration for Oracle Fusion Middleware Products

To set up auditing for Oracle Applications Cloud, select the Manage Audit Policies task from the **Setup and Maintenance** work area within your offering. To set up auditing for Oracle Fusion Middleware products, select the level of auditing mapped to a predefined set of metadata and the events that have to be audited. Information about configuring audit for Oracle Fusion Middleware products is provided in Oracle Fusion Middleware guides.

You can also create a configuration file and deploy it to audit a specific Oracle Fusion Middleware product. The configuration details for Oracle Fusion Middleware products are available as audit-specific assets that you can use to create the config.xml configuration file. To get a list of audit-specific assets, see Audit Events for Oracle Applications Cloud Middleware (Doc ID 2114143.1) on My Oracle Support at https://support.oracle.com.

- Oracle Fusion Middleware Products

  Configure business objects to enable auditing in Oracle Fusion Middleware products. Refer to the Oracle Fusion Middleware Security and Administrator's Guide for Web Services.
- Oracle Fusion Security Products

  Configure business objects to enable auditing in Oracle Fusion security products. Refer to Oracle Fusion Middleware Application Security Guide.

Using Auditing to Monitor Changes

You can enable business objects to allow auditing, recording, and retrieving information about when the objects were created, modified, and removed.

Audit Policies Overview

Auditing is used to monitor user activity and all configuration, security, and data changes that have been made to an application. Auditing involves recording and retrieving information pertaining to the creation, modification, and removal of business objects. All actions performed on the business objects and the modified values are also recorded. The audit information is stored without any intervention of the user or any explicit user action.

Use audit policies to select specific business objects and attributes to be audited. The decision to create policies usually depends on the type of information to be audited and to the level of detail required for reporting.

Enabling Audit Functionality

For Oracle Applications Cloud, you must configure the business objects and select the attributes before enabling audit. If you enable audit without configuring the business objects, auditing remains inactive. By default, auditing is disabled for all applications. To enable and manage audit, ensure that you have a role with the assigned privilege Manage Audit Policies (FND_MANAGE_AUDIT_POLICIES_PRIV). For appropriate assignment of roles and privileges, check with your security administrator.

If you don't want an object to be audited, you can stop the audit process by setting the Audit Level option to *None*.

Auditing Oracle Permitting and Licensing Data

You use auditing to monitor data changes that have been made to data within the Public Sector offerings.

To enable auditing for Oracle Permitting and Licensing data:

1. Sign in as a setup user.
2. Select **Setup and Maintenance** and go to the following:
    - Offering: Select any Public Sector offering.
    - Functional Area: Application Extensions
    - Task: Manage Audit Policies
3. In the Manage Audit Policies page, click Oracle Fusion Applications, to configure the required audits.
4. Click **Configure Business Object Attributes**.
5. On the Configure Business Object Attributes page, select *Public Sector Common Components* from the drop-down list of products.

    Select *Public Sector Tech Stack* for configuring user-defined business object attributes generated by your intake forms. See *Auditing Custom Object Data*.
6. Select from the list of objects in the **Audit Name** column:

Objects Category	Parent Object	Child Object
Fees	Fee Transactions	(None)
Fee Schedule	Fee Schedule	Fee Items
Permits, Planning and Zoning, and Business Licenses	Common Transaction Data	- Business Licenses Data - Business Tax Related Data - Permits and Planning and Zoning Data
Businesses	Business	- Locations - Owners

7. In the **Audited Attributes** area, click the Add icon.

    The Select and Add Audit Attributes dialog box opens.
8. Select the desired attributes.
9. Click **OK**.

    The selected attributes are displayed in the **Audited Attributes** area.
10. Click **Save**.

Auditing Custom Object Data

You can use Oracle Fusion Applications auditing features to configure auditing for user-defined business object attributes generated by your intake forms.

This topic describes how to:

- Configure business object attribute auditing for specific transaction types.
- Run an audit report for specific transaction types.

You use the Oracle Fusion Applications auditing features to set up auditing for Oracle Permitting and Licensing business objects.

Transaction-Specific Auditing Scope

A specific transaction type, such as a permit or a planning application are the business objects you can audit. Each transaction type, such as a permit, contains a limited set of fields that you can audit, which include:

- User-defined fields. These are the fields you added manually to your intake form.
- Fields from the base view object for that transaction type. These fields are the same for all transaction types, and they appear in the attributes list regardless if they appear in the intake form or not.

The transaction types included for custom object auditing are:

- Permits
- Planning and Zoning
- Business Licenses

> **Note:** You will see Code Enforcement business objects in the list, but these objects are not supported for auditing at this time. You can select them but the attributes list will be empty.

You can audit other aspects of transaction data, such as changes to fee schedules and fee items, which is discussed in another topic. For more information, see *Auditing Oracle Permitting and Licensing Data*.

> **Note:** The fields added to your intake forms by the field groups you've added *are not* currently available to be audited. Fields added to the intake form by field groups reside in a child table to the base view object for the transaction type. Auditing fields in child tables is not currently supported.

To determine what fields in a specific transaction are able to be audited, you can use any REST client to submit a describe for that transaction type. For example, you can send a GET request using the following URL:

```
https://servername.fa.us2.oraclecloud.com/fscmRestApi/resources/11.13.18.05/LNPFENCEPERMIT_c/describe
```

Where *FENCEPERMT* is the name of the transaction type. *LNP* is prepended and *_c* is appended automatically by the Intake Form Designer.

The attributes appearing in the returned payload of the describe that *can't be audited* appear within the FieldGroups section. For example:

```
"FieldGroups" : {
         "discrColumnType" : false,
 "title" : "Permit Details",
 "attributes" : [ {
 ...
```

Configuring Business Object Attribute Auditing for a Specific Transaction Type

Note: Before you can begin setting up auditing for a specific transaction type, the intake form needs to be published.

To configure auditing for a specific transaction type:

1. Access Functional Setup Manager.
2. Open your licensed offering from the Setup list, such as *Public Sector Permits* or *Public Sector Planning and Zoning.*
3. Select the Application Extensions functional area, and click the Manage Audit Policies task.

   Note: You can use the Search Tasks feature as well to navigate to the Manage Audit Policies task.
4. On the Manage Audit Policies page, locate the Oracle Fusion Applications group box.
5. To enable auditing, set **Audit Level** to *Auditing.*
6. Click **Configure Business Object Attributes.**
7. On the Configure Business Object Attributes page, select *Supply Chain Management Common Components* from the **Product** drop-down list, and expand the *FscmCustomReferenceAuditAM* node.

   Note: The Oracle Permitting and Licensing offering resides in the Oracle Fusion Applications Financials and Supply Chain (FSCM) database. When searching for Oracle Permitting and Licensing custom business objects, you will find them within the Supply Chain Management Common Components section. If you are also an Oracle FSCM customer, you will see FSCM business objects mixed with your Oracle Permitting and Licensing products within the FscmCustomReferenceAuditAM node.
8. Click the business object for which you want to configure auditing.

   The business object name is the same as your transaction type code, such as the **Permit Type** value on the Permit Type page.
9. With the business object selected, select Actions > Create in the Attribute column on the right.
10. In the Select and Add Audit Attributes dialog box, select the attributes you want to audit.

    Note: The attributes available are limited to the base view object values and the custom fields you have added to your form.
11. Click **OK.**
12. Save your changes.

Running an Audit Report

To run an audit report:

1. Select **Navigator** > **Tools** > **Audit Reports.**
2. For **Date,** specify a date or date range for your audit report.
3. Select *Supply Chain Management Common Components* from the **Product** drop-down list.
4. From the **Business Object Type** drop-down list, select the permit type name for which you enabled auditing.

5. Use the **Date, User,** and **Event Type** criteria to refine your search, as needed.
6. Click **Search.**

For more information on Fusion Applications auditing, see Oracle Applications Cloud documentation for *Implementing Applications, Audit Policies*.

Viewing Audit History

You use audit history to view changes to the application data such as the business objects that were created, updated, and deleted.

Before you begin, you must have a role with the assigned privilege View Audit History (FND_VIEW_AUDIT_HISTORY_PRIV). For appropriate assignment of roles and privileges, check with your security administrator.

To view the Fee Schedule audit history or to create a report:

1. To open the Audit History work area, select **Setup and Maintenance** > **Navigator** > **Tools** > **Audit Reports**.
2. Enter the following search values:

Audit Reports Search Field	Value
Date	Enter the date for the audit results you want to see.
Product	Select *Public Sector Common Components*.
Business Object Type	○ *Fee Transactions* ○ *Fee Schedule* ○ *Common Transaction Data*

3. Select the option to **Include child objects**.

The default search displays a summary of the audit history in the search results table. It includes key data such as date, user, product, event type, business object type, and description. For a detailed report, search again with modified search criteria. You can export the report summary to Microsoft Excel.

Search Parameter	Result of Selection
Business Object Type **Note:** This parameter is applicable only for the business objects that belong to Oracle Applications Cloud.	• Narrows the search results to that specific business object within the selected product. • Enables the **Show Attribute Details** checkbox.
Include Child Objects	Displays all the child objects that were listed for that business object when audit was set up. For example, a sales order object that contains several items as child objects.

Search Parameter	Result of Selection
	Note: Displays the objects at the immediate parent-child level only. To view the children at subsequent levels, select the child object as the business object type and search again.
Show Impersonator	Displays the details of the impersonator who modified the objects during an impersonation session.
Show Attribute Details	Enables the attribute list so that users can select either all attributes or a specific attribute to view the changes. Based on the selection, the search results indicate whether the attribute is created, updated, or deleted, and the corresponding old and replaced values.
Show Additional Object Identifier Columns	Displays the instances (contexts) in which the business object was used. The context values identify the objects and the transactions in which they were used. Each context is unique and assigns a unique description to the business object.

Note: The default report displays a standard set of columns that contain prominent details of the audit history. To view additional details, you can change the display of columns.

17 Modifying Existing Application Pages

Overview of Existing Page Modification

This topic provides an overview of how you can modify an existing page delivered by Oracle in a Oracle Permitting and Licensing offering.

You can use the Configure Page feature to modify specific attributes of an existing page delivered by Oracle in a Oracle Permitting and Licensing offering. You can make these modifications:

- Change field labels.
- Hide fields.

Note: In the current release, you can modify *only* the Parcel Details page.

Examples of page modifications include:

- Suppose the existing page has a field label that doesn't correspond to the terminology used in your agency. Suppose the delivered field label is *Flood Zone,* but your agency uses *Flood Zone Code.* You can use the Configure Page option to modify the label.
- Suppose the existing page contains a field tracking information your agency does not track, such as the Patio field. You can use the Configure Page feature to hide that field.

Access Page Edit Mode

This topic describes how to access edit mode for existing application pages that you can modify.

Before accessing edit mode, make sure you are signed on with a user who is assigned one of the following job roles:

- PSC Business Analyst
- PSC System Administrator

Also, make sure the existing page supports configuration. Not all existing pages can be modified. Pages that can be modified display the Configure Page icon in the global header.

Note: In the current release, you can modify only the Parcel Details page.

This example illustrates the **Configure Page** icon, which is described in the surrounding text.

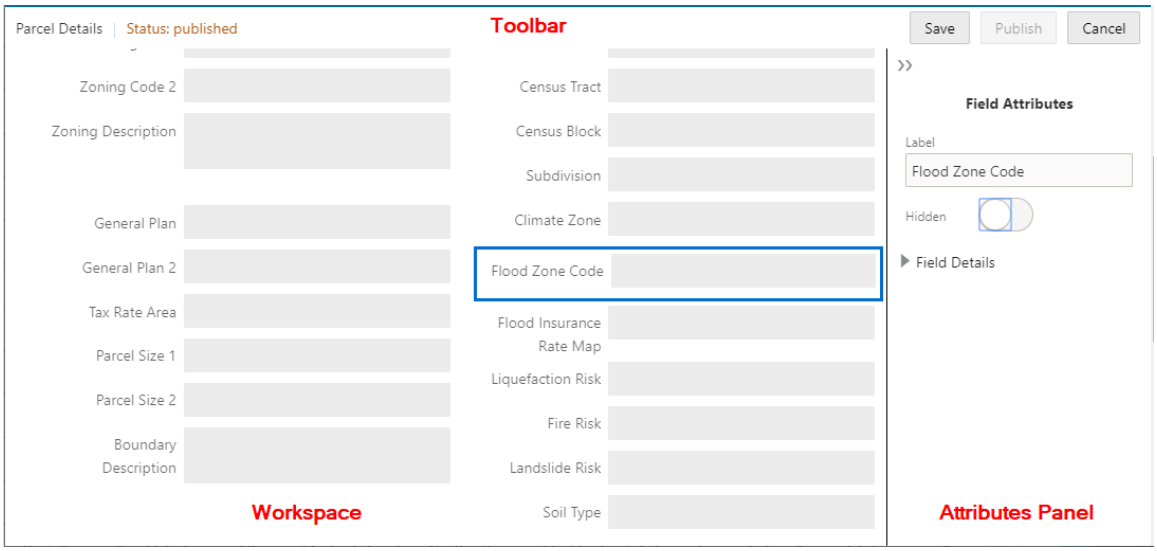
Click the **Configure Page** icon to launch page edit mode.

Use the Page Edit Mode Interface

This topic describes the features and controls you can use to modify an existing application page.

To access the page edit mode, click the Configure Page icon in the global header. For more information see *Access Page Edit Mode*.

This example illustrates the user interface of the page edit mode. Details are in the surrounding text.



When in page edit mode, the interface consists of these items:

- Toolbar
- Workspace
- Attributes Panel

Using the Toolbar

The toolbar spans the top of the interface below the global header and displays the following information and controls.

Page Element	Description
Page Name	Displays the name of the page as it appears in the application, such as *Parcel Details.*
Status	Indicates the status of the current page. • *Draft:* indicates the page is currently being edited, but the current changes are not available for general use. Draft mode becomes enabled when you click **Save** when editing a page. • *Published:* the page is available for general use with the most current modifications included. In the development or testing environment, a published page is available for developers and testers to access and test. In the production environment, a published form is available for end users to access.

Page Element	Description
	Note: The status is displayed only if you are modifying the page or you have previously modified and published the page.
Save	Saves the current changes to the page to store them, without publishing them. Clicking **Save** puts the page in draft mode.
Publish	Click to create a sandbox and publish the current changes in the sandbox so that the page reflects the changes for runtime access and use. **Note:** The Publish button is available only after your have clicked **Save.**
Cancel	Click to exit the edit mode without saving or publishing any changes.
Close	Click to exit edit mode. The **Close** button appears when there is no change on the page to be saved or published, such as after you have just published page modifications.
Manage Sandbox	Click to access the Oracle Fusion Applications Sandboxes page where you can view the status of your sandbox and refresh your sandbox if needed. When modifying an existing page, the sandbox exists only during the publishing process request. While you modify a page and save any changes, the system tracks your changes in an internal metadata storage object. When you click **Publish,** the changes are added to the sandbox, and the sandbox is published. **Note:** The Manage Sandbox button appears only if the sandbox associated with your form layout becomes out of sync during a publish request, requiring a refresh. Identify the sandbox for your page modifications according to this naming scheme: *PSCSC_<page name>__sb_<number of publish requests>* For example: *PSCSC_ParcelDetailsInformation__sb_2* For more information on sandboxes, see *Working with Sandboxes*.

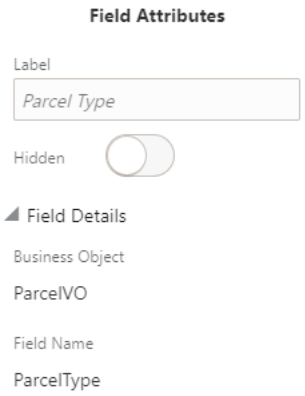
Using the Workspace

The workspace displays the content of the page that you can modify. Select a field on the page to display its attributes in the Attributes panel.

Using the Attributes Panel

The Attributes Panel contains the attributes you can modify for a selected page element, such as a field.

This example illustrates the Field Attributes panel when modifying existing pages. Details are in the surrounding text.



Note: In the current release, only fields can be modified on an existing page.

You can view and set these field attributes:

Page Element	Description
Label	Use to modify the existing label for the page. **Note:** The length limit for modified field labels on existing pages is 100 characters. **Note:** Do not change the meaning of a field label in an attempt to use it to reflect a value different from its intended purpose. For example, don't change "Flood Zone" to "School Zone." Each field may have logic behind it, dependencies in workflow, dependencies related to fees, and so on. The ability to change field labels is intended to support minor changes in terminology.
Hidden	Use to hide a field on the existing page. When the switch is on, the associated field is hidden. **Note:** Fields that are set to be required can't be hidden.
Business Object	The name of the database view object associated with the page.
Field Name	The name of the field as it appears in the REST payload, which you can view using a describe command for the associated REST resource.

The **Business Object** and **Field Name** values are read-only values provided for informational purposes to help implementation teams assess any areas affected by a page modification, which affects:

- Subpages using the same view object field
- Reporting
- Auditing

Note: Changes made to a field on an existing page may affect fields appearing within field groups added to intake forms if they share the same view object.

Modify Existing Pages

This topic describes the steps in the procedure for modifying an existing page delivered in an Oracle Permitting and Licensing offering.

Change Labels

To change a a label:

1. Navigate to the page you want to modify.
2. Click the Configure Page button in the global header.
3. In the workspace, select the field you want to modify.
4. In the Field Attributes panel, enter your modified label in the **Label** field.
5. Click **Save.**
6. Click **Publish.**

Hide Fields

To hide a field:

1. Navigate to the page you want to modify.
2. Click the Configure Page button in the global header.
3. In the workspace, select the field you want to hide.
4. In the Field Attributes panel, turn on the **Hidden** switch.
5. Click **Save.**
6. Click **Publish.**

   After you have hidden a field, the layout in page edit mode displays the field within a box with a hidden icon next to the hidden field to indicate its hidden runtime status.

   This example illustrates a field on an existing page that has been hidden.

Managing Existing Page Modifications

This topic describes concepts necessary to keep in mind when migrating existing page modifications between environments, such as from the test environment to the production environment.

Similar to migrating transaction types from one environment to another, the data related to page modifications gets migrated in multiple parts using these features:

- Functional Setup Manager's export and import feature.
- Configuration Set Migration feature, which you access using the Functional Setup Manager step "Manage Existing Page Modifications" in the System Administration functional area.

Note: The Configuration Set Migration feature migrates all published sandbox changes, not just the modifications to existing pages. For example, current intake form changes and branding image changes will also be migrated in the configuration set.

18 Using Oracle Visual Builder Studio

Visual Builder Overview

This topic describes how you can use Oracle Visual Builder Studio to create and modify applications used in Oracle Permitting and Licensing.

Oracle Visual Builder Studio (VB Studio) is an application development platform that is included at no charge with every oracle Fusion application. VB Studio enables you to customize and extend functionality of your Oracle Fusion application, including selected Oracle Permitting and Licensing objects.

VB Studio is available in every Fusion Application test pod. It's connected through IDCS but will need to be set up and configured before use.

> **Note:** This extensibility doesn't apply to the use of Oracle Visual Builder Cloud Service, which is a licensed product that allows you to build applications separate functionality that is unrelated to and not integrated with your Fusion products.

You can find the bulk of the information related to using VB Studio to extend Oracle Permitting and Licensing in *My Oracle Support* Document 2954386.1 (Oracle Permitting and Licensing Visual Builder Studio).

Visual Builder Use Cases

This topic provides some sample use cases of how you can use Visual Builder to enhance Oracle Permitting and Licensing.

Examples of use cases for extending Permitting and Licensing include:

- Add new functionality with new pages with an Oracle source.
- Add new functionality with new pages with an external source.
- Extend functionality with new pages.
- Extend functionality with delivered pages.

You can find the bulk of the information related to using VB Studio to extend Oracle Permitting and Licensing in *My Oracle Support* Document 2954386.1 (Oracle Permitting and Licensing Visual Builder Studio).