Contents

Access 2
New User Registration 2
Project Access 3
Accepting Invite 3
Project Access 3
Infrastructure Cloud Fundamentals 3
App on Mobile Devices 3
Notifications 4
Administration 5
Project Management 5
Project Details 5
Copying/Updating Project Template (Reprovisioning) 7
Team Management 9
Adding Users to a BIC Project 9
Roles 12
Bulk Team Member Add 13
Document Management 23
Documents 23
Documents 23
Plan set 30
Work (Forms) 30
General 30
Importing New Forms/ Updating Existing Forms 30
Create 33
Edit 34
Workflow 36
Comment 38
My Work 39

Unique Form Workflow Notifications....40
Stormwater Inspection....42
Create BMP/Stormwater Action....42
Complete Stormwater Form....43
Managing Status....45
Comments....47
Change Order....48
Notice of Change Condition....48
Change Order Request....49
Work Order....50
Punchlist....50
iModel....50
Admin....50
Adding Design Files....50

Bentley Infrastructure Cloud

Access

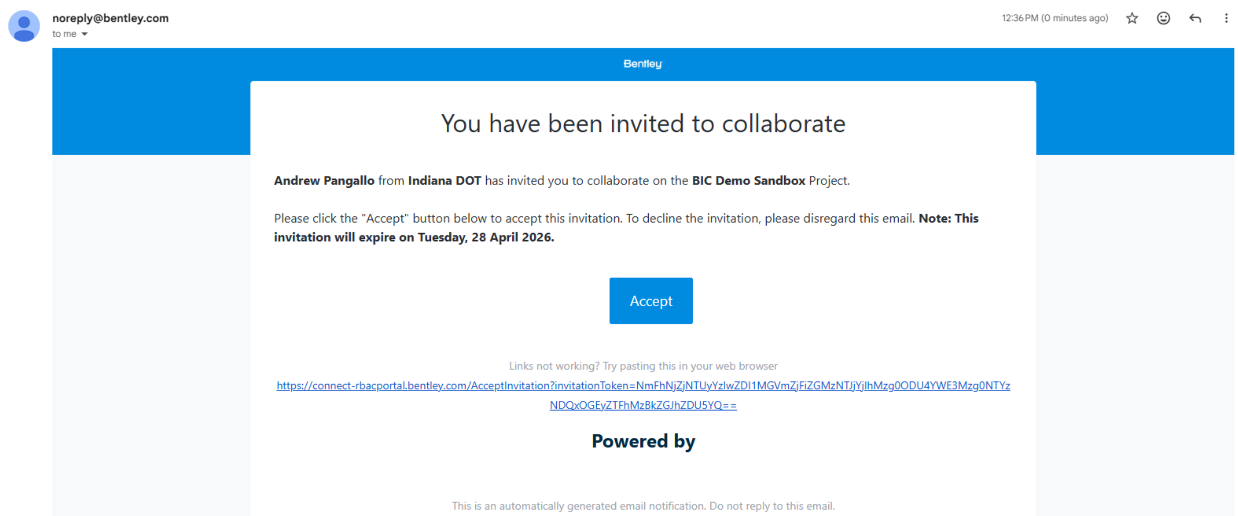
New User Registration

Users that do not already have a Bentley IMS account through their company must register using the following steps.

1. Go to: INDOT: Digital Delivery
2. Click the "Bentley Registration" Icon
3. Follow the Instruction provided by Bentley to successfully Register

Project Access

Accepting Invite



Project Access

TRAINING VIDEO

[Admin Mastery: A Comprehensive Guide to Bentley Infrastructure Cloud - How to Access Projects on Infrastructure Cloud: Step-by-Step Guide]

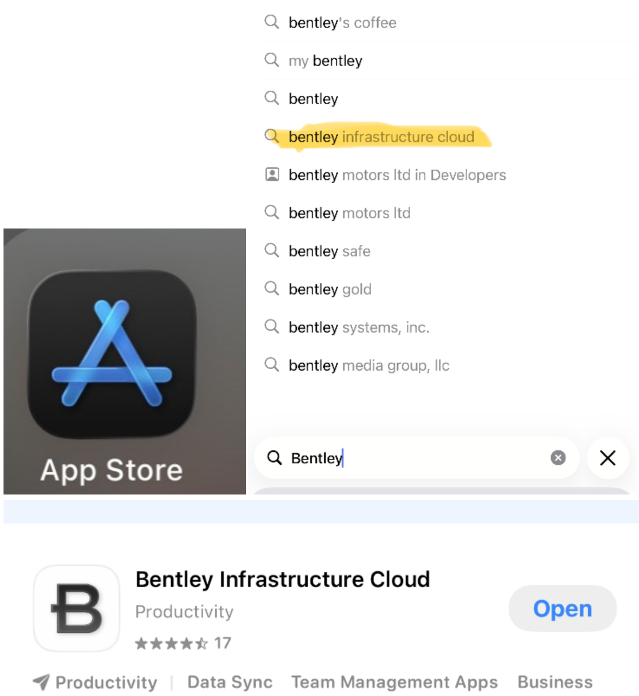
Infrastructure Cloud Fundamentals

TRAINING VIDEO – HOME PAGE

[Admin Mastery: A Comprehensive Guide to Bentley Infrastructure Cloud - Introduction to the Infrastructure Cloud Portal User Interface]

App on Mobile Devices

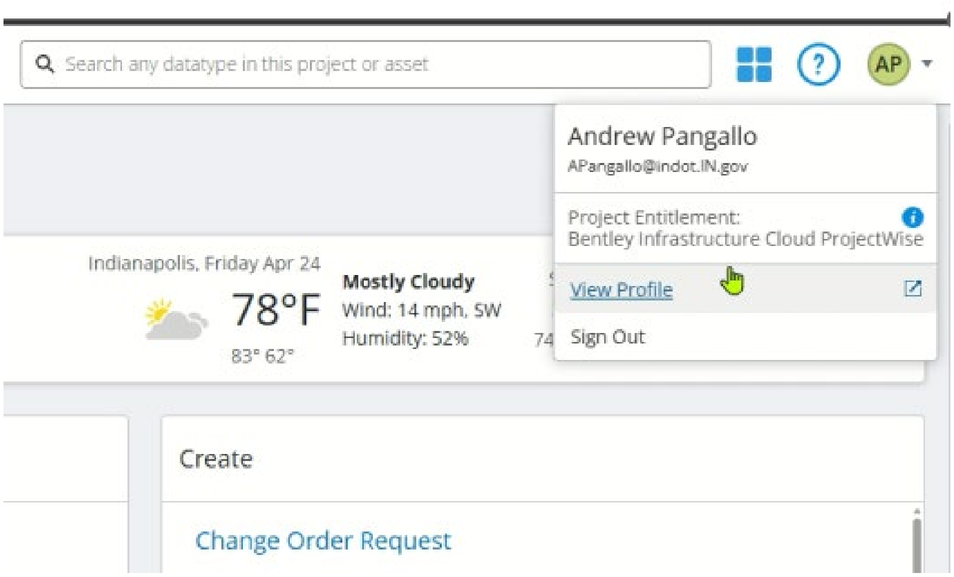
- Go to your device "App Store" or equivalent per device and search "Bentley" or the full app name "Bentley Infrastructure Cloud" to download the app on your device



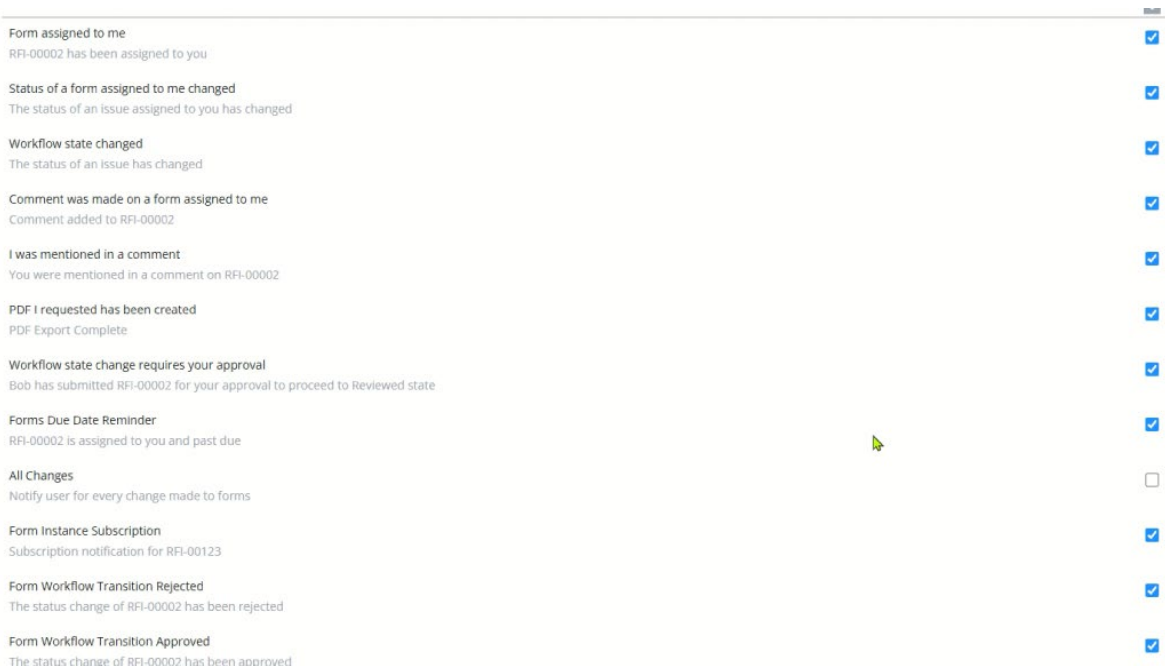
- Use the same login as you would use to sign-in on the website (Must have already registered and been invited to a project)

Notifications

To manage notifications for every contract for every change, you can go to the carrot beside your name on the upper right corner, then view profile.



At the bottom, you can select various "notification preferences". "Forms" will be your main source of notifications. You can customize the level at which you receive notifications and what triggers them. Additional customization will be available in the future.



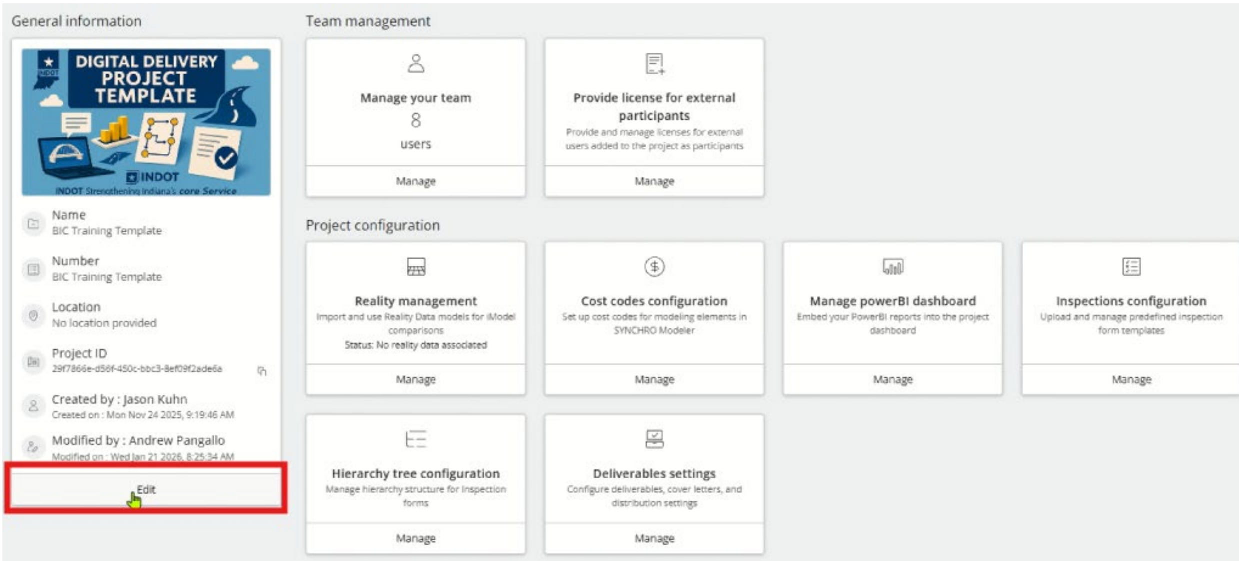
Administration

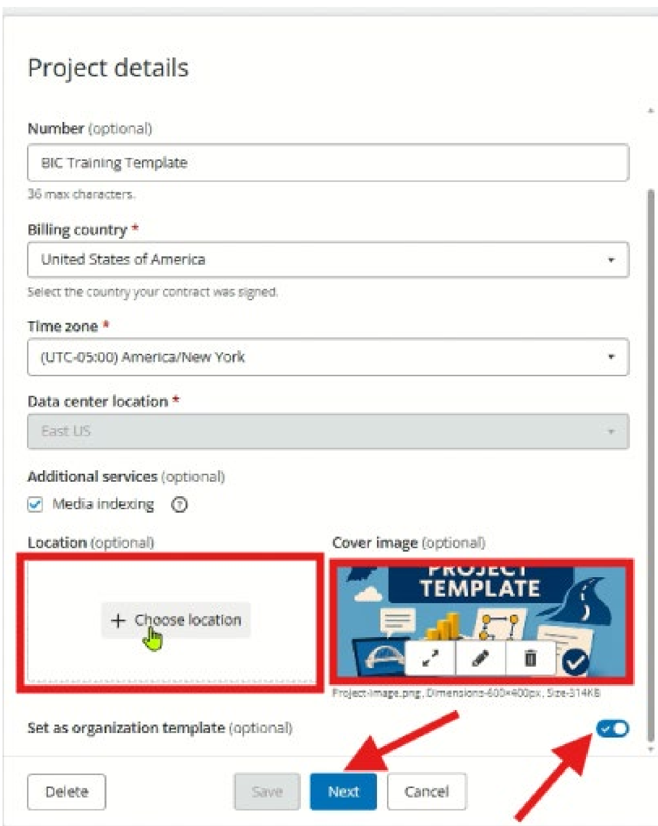
Project Management

Project Details

- Bentley on-demand training for Project Details management

[Admin Mastery: A Comprehensive Guide to Bentley Infrastructure Cloud - Editing Project Details After Creation in Infrastructure Cloud: Easy Steps]

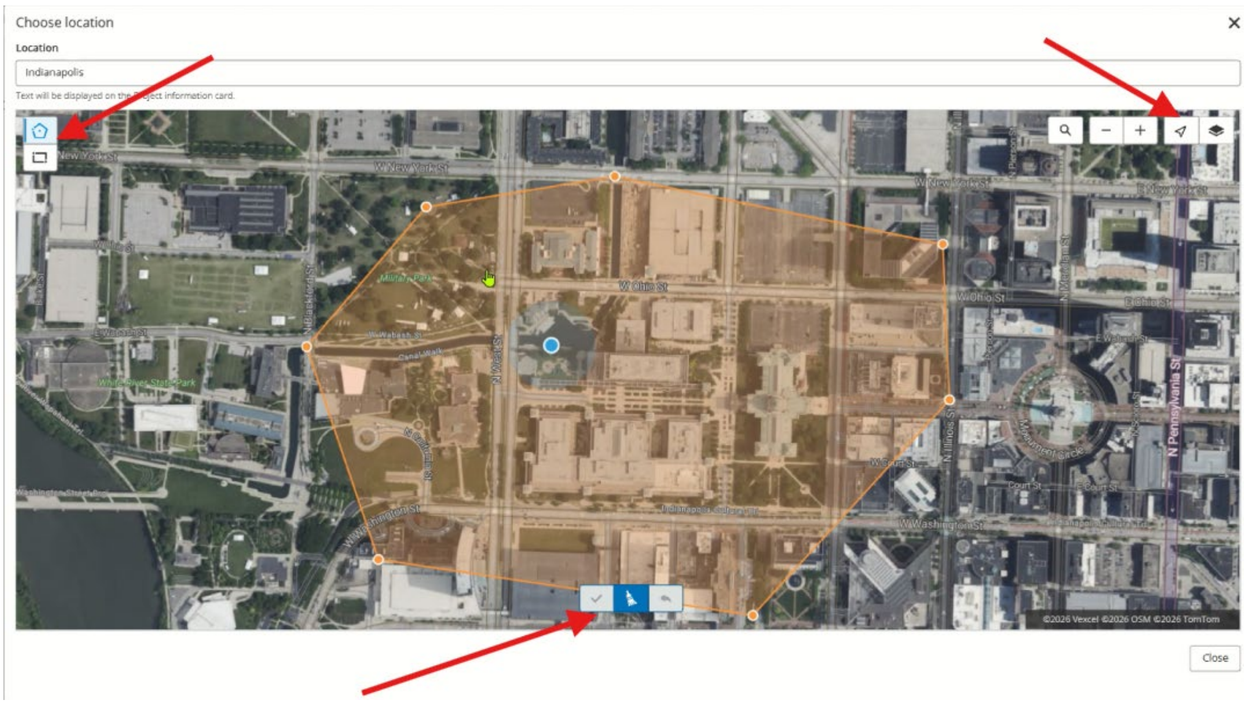




Location

Do not click the toggle for “Set as organizational template, those are established

Click the “+ Choose Location” area to draw your project boundaries



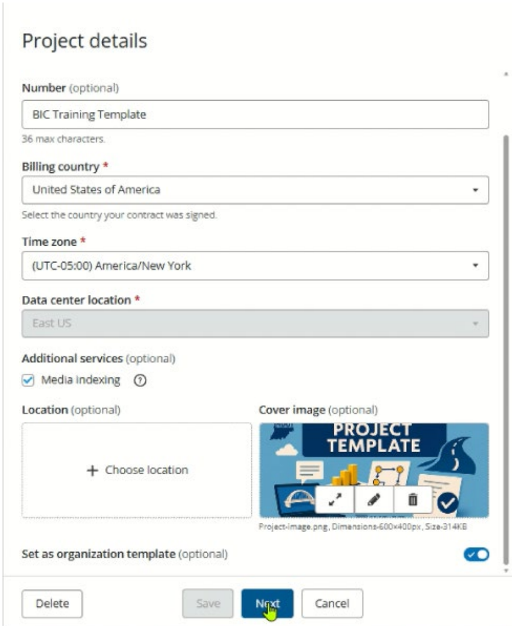
- Use the arrow in the top right to quickly zoom to your current location if near the project limits
- Use either the "polygon" or "box" to draw your project limits on the map.
- Select the checkmark to save the drawn shape of project limits
  - Paint brush will clear all selected points
  - Undo arrow will clear the last point created
- *Your Weather Widget on the project home page or in some Forms will draw from the closest weather station from where you drew your project boundaries*
- The Weather widget draws from this source: [World's Leading Weather Data & Forecast Provider | The Weather Company]

Cover Image

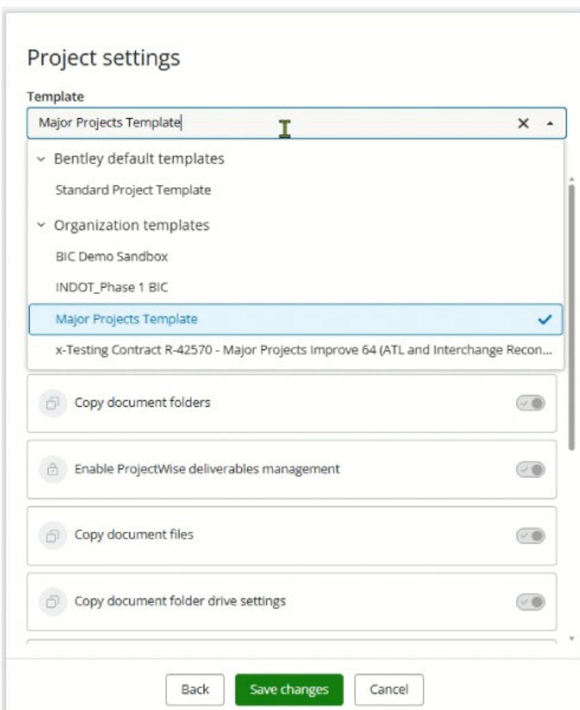
- Upload any photo at the recommended resolution listed beneath the border
- Recommend using a square shaped image as rectangular images will cut portions

Copying/Updating Project Template (Reprovisioning)

- Reprovisioning allows Active projects to download changes or updates to Forms, Folders, Permissions, Roles, and other settings that change over time. Projects are created from a template project with the latest standard project requirements. Once created, there is no process currently to push updates across all active live projects. Users will need to pull from this project template by following the steps below.



- Click Next



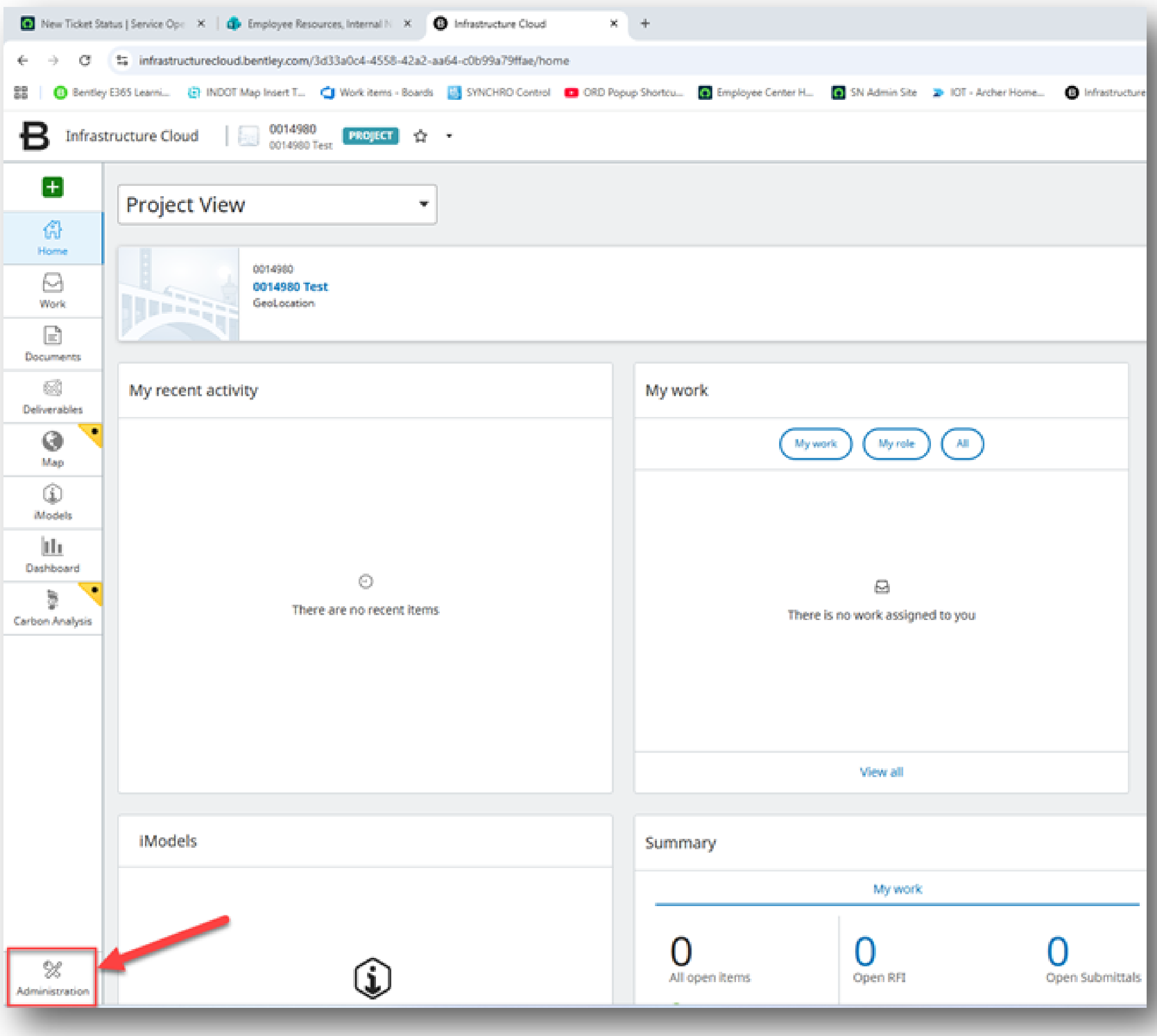
- Select **BIC Demo Sandbox** from the Template dropdown
- Next select the toggles for what you want copied from the template project
    - Typically forms, roles, and folders will update and need imported

Team Management

Adding Users to a BIC Project

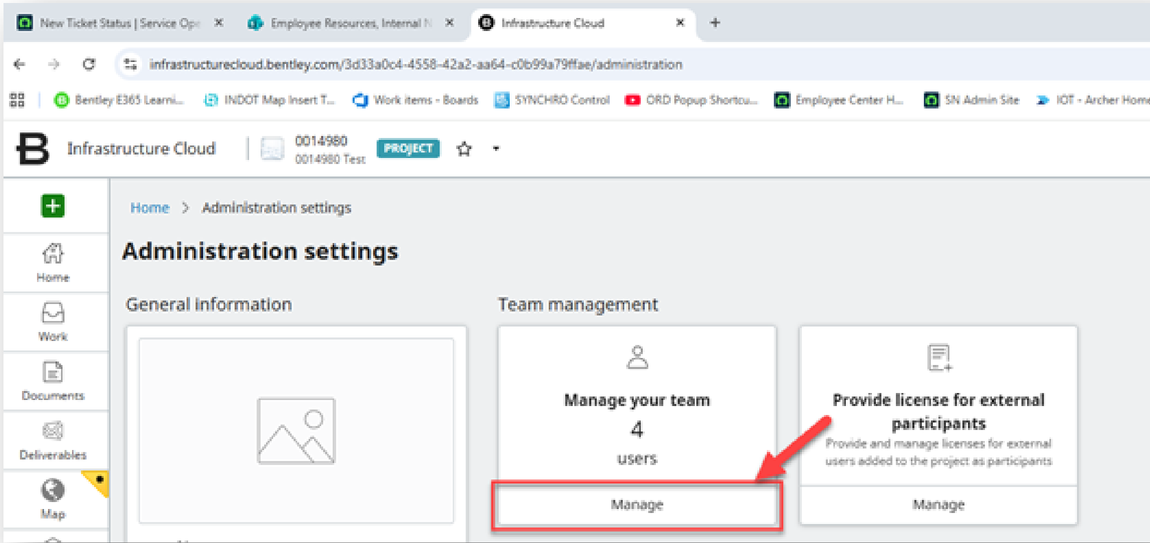
Once a project is created in BIC, users can be added to a project via the following process:

1. With the project homepage open, click on the Administration icon on the bottom left corner of the page.



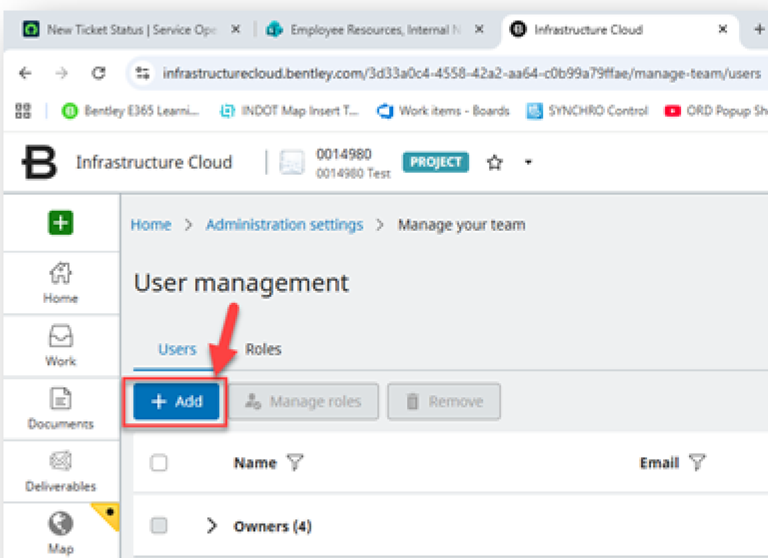
Administration Button on Project Homepage

2. On the project's Administration settings page, click on the Manage button under "Manage your team".



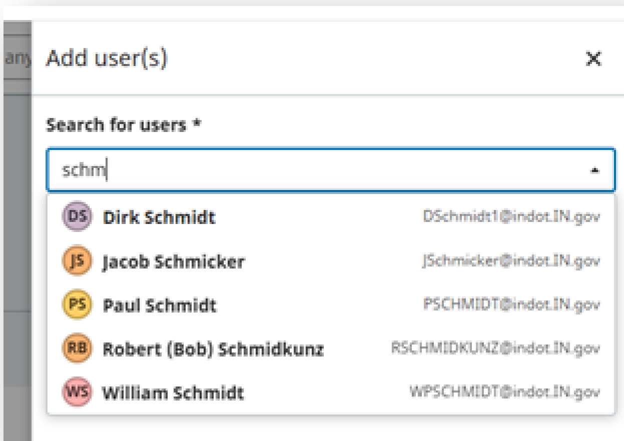
Manage Button under Manage your team

3. You should now be on the project's User management page, where you can add users to a project and manage their roles. To add users to a project, click on the blue "+ Add" button.

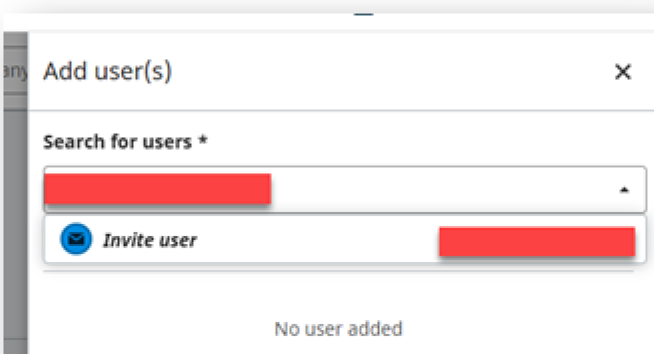


Add Users Button

4. You will then see an Add user(s) window pop up on the page. From here you can search for internal users to add to the project, as well as assign them to their necessary roles. If you are adding internal users to a project, you can enter their name in the search box and suggested selections will then start appearing in a list for you to select. If you are adding external users to a project, enter their e-mail address in the search box, and note the "Invite user" box that appears. Proceed to click on the "Invite user" box to add them to the list.



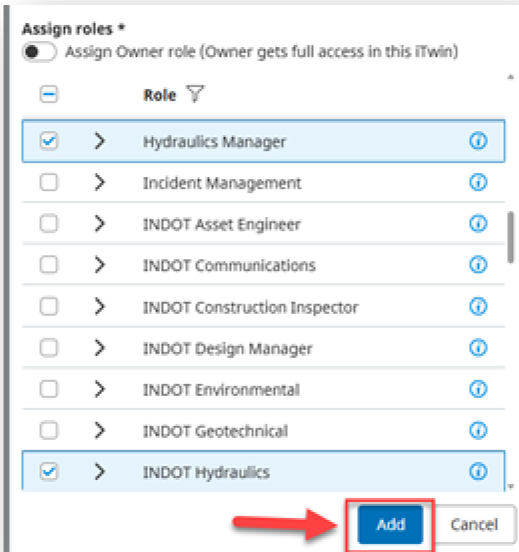
Searching for Internal Users to Add to a Project



Adding External User to Project via E-mail Address

5. Once you have selected your user(s), you can then assign them to their necessary project roles. In this example, Hydraulics Manager and INDOT Hydraulics will be the selected roles for the user to be added. Once you've selected the roles,

you can proceed to clink on the blue Add button to add them as a team member to your project.



Assigning Roles to a New Internal User

NOTE: DO NOT assign the Owner role to any user unless you would want them to be able to globally manage users for the project. For users assigned to the Owner role on this window, they will be listed as Owners in the User management list, and they will be given the iTwin Owner role on the project in addition to any other roles they are added to.

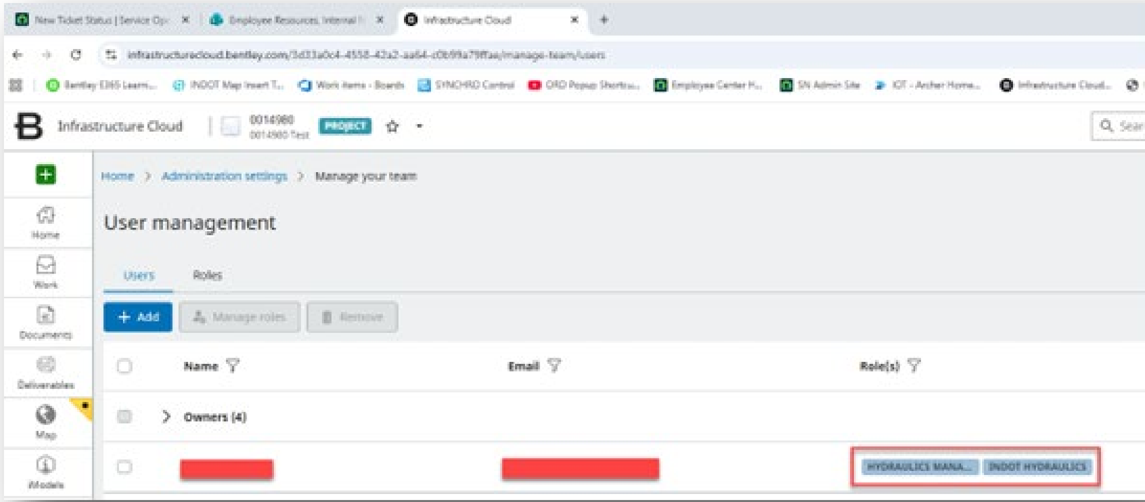
6. Upon adding the new user(s) to the project with the necessary roles, you should now see them in the User management list.

Roles

Most used Roles

1. Project Engineer
2. INDOT Project Manager
3. Area Engineer
4. Contractor Project Manager
5. Engineer of Record
6. Document Manager
7. INDOT Inspector

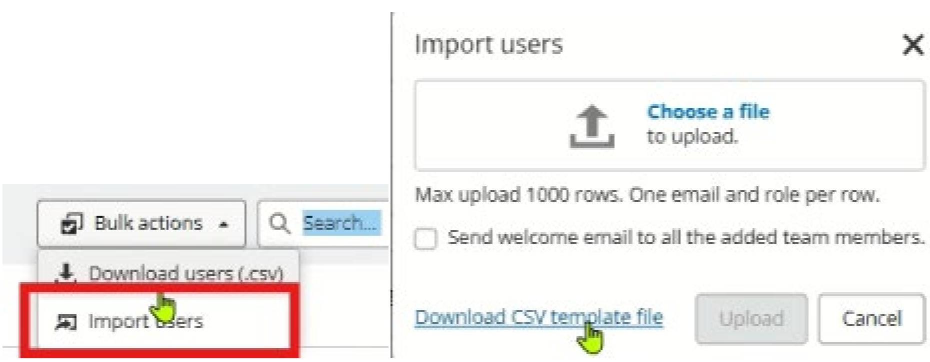
Bulk Team Member Add



Bulk Adding Team Members

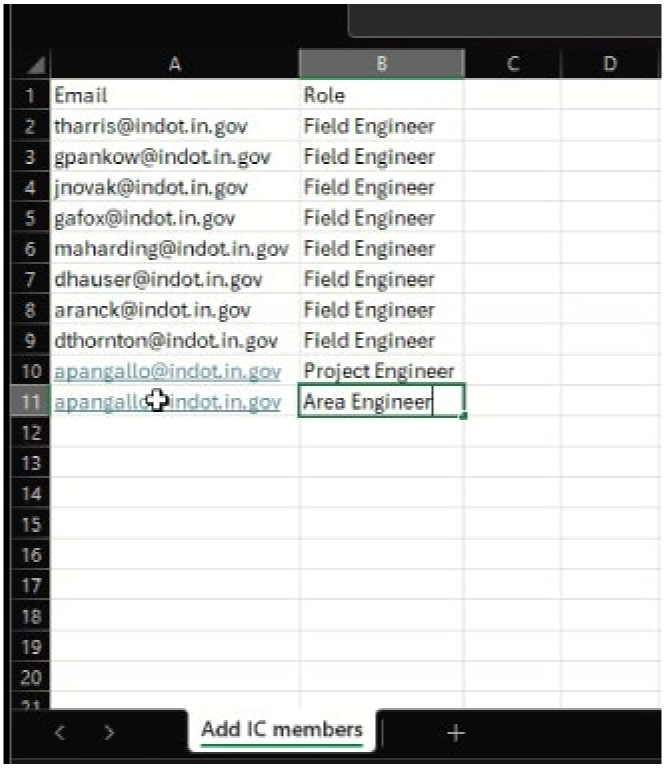
Click the Bulk actions button on the top right

Click Import users and Download CSV template file

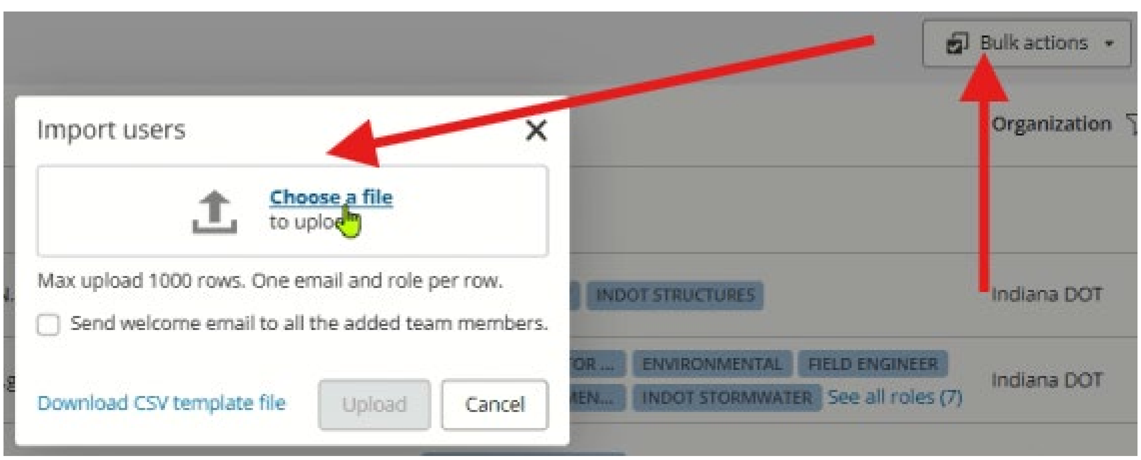


Open the file from your Downloads folder

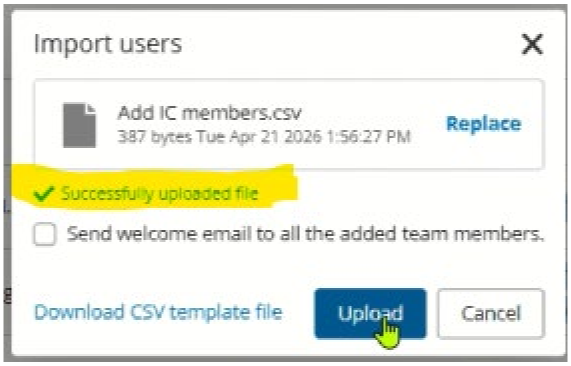
1. **Add team members by listing their email address in Column A and appropriate role in Column B**
   a. *****DO NOT DELETE OR EDIT ROW 1*****
   b. **The system needs those exact names in A1 and B1 to work properly**
2. **For users with multiple roles, add another line repeating their email address and entering in a different role in the role column (See below for example). This method also allows us to add multiple users with different roles.**



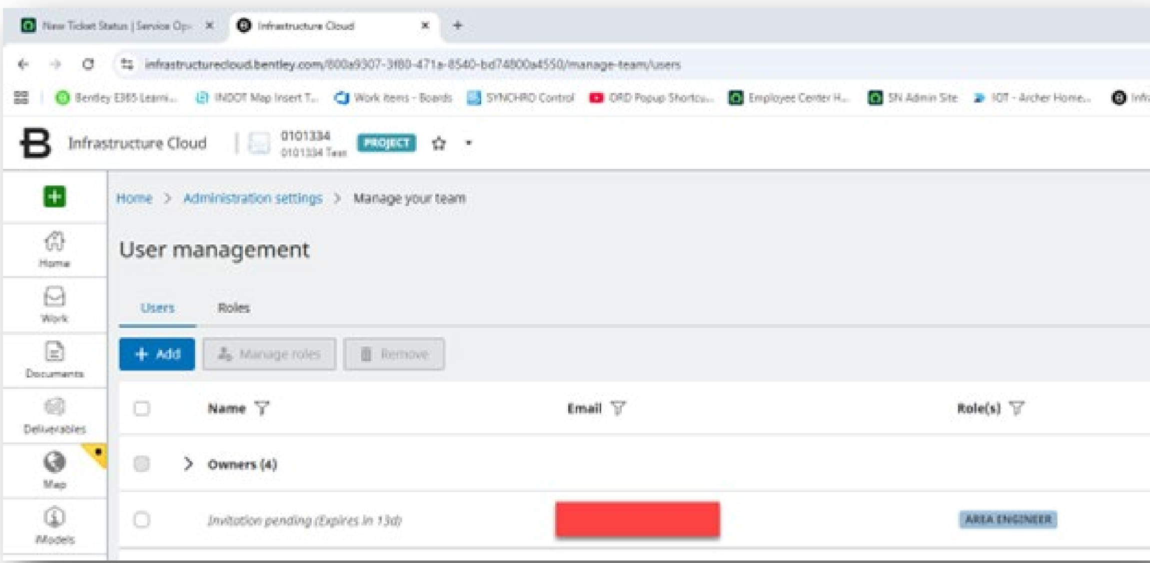
1. **Save the file to your computer**
2. **Select Import Users from Bulk Actions and select "Choose a File"**
3. **Select the File from the saved location above.**
   a. **You can rename the CSV file if desired**
   b. **Can be reused on any project**



If the file was properly completed with accurate emails and roles, you should receive the following status "Successfully uploaded file".



Added User/Team Member to a Project (Internal User)



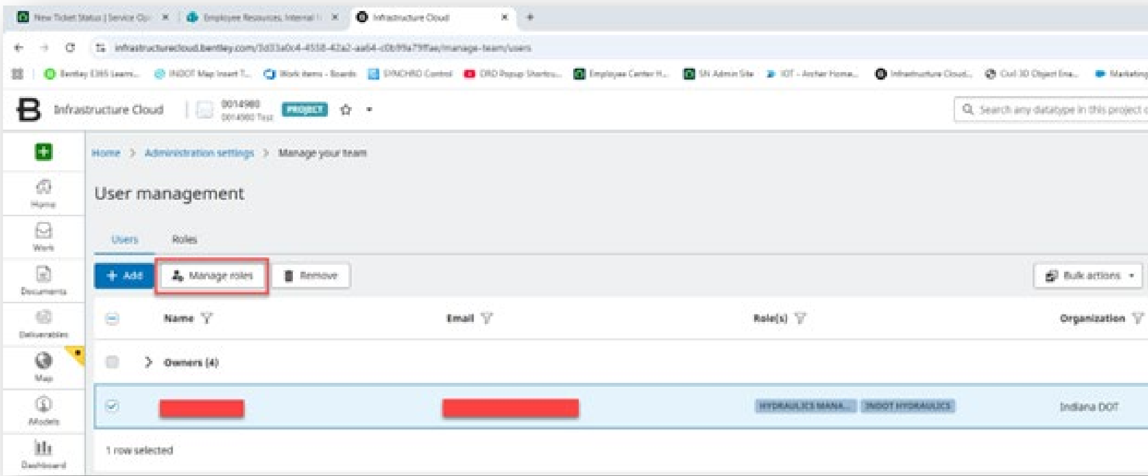
Added User/Team Member (External User)

NOTE: Pay special attention when adding external users to a project. When added to the project, the external user will receive an invitation via e-mail. At that point, the user will have 13 days to accept the invitation and become an official member of the project. Also keep in mind that you will not be able to manage the Bentley Infrastructure Cloud licensing for the user until they have accepted their invitation. See Chapter 4 for additional details on license management.

2. Managing Roles for Project Team Members

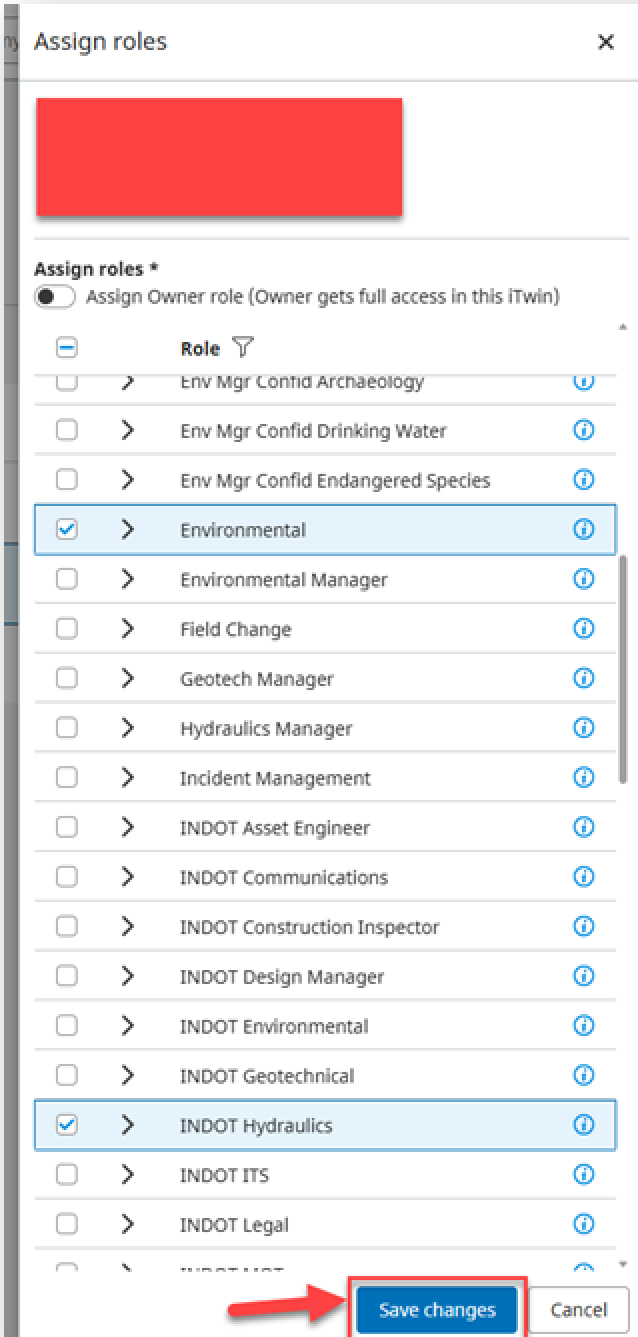
To manage roles for existing project team members, you can perform the following process. ***IMPORTANT: DO NOT assign the Owner role to any user unless you would want them to be able to globally manage users for the project.***

1. On the User management page for the project, select one or more users for whom you want to manage their roles and click on the Manage roles button.



Manage Roles Button on User Management Page

2. An Assign roles window will appear on the page. From here, you can add and/or remove roles as needed for the selected user(s). Once you have made the necessary changes, click on the blue "Save changes" button.

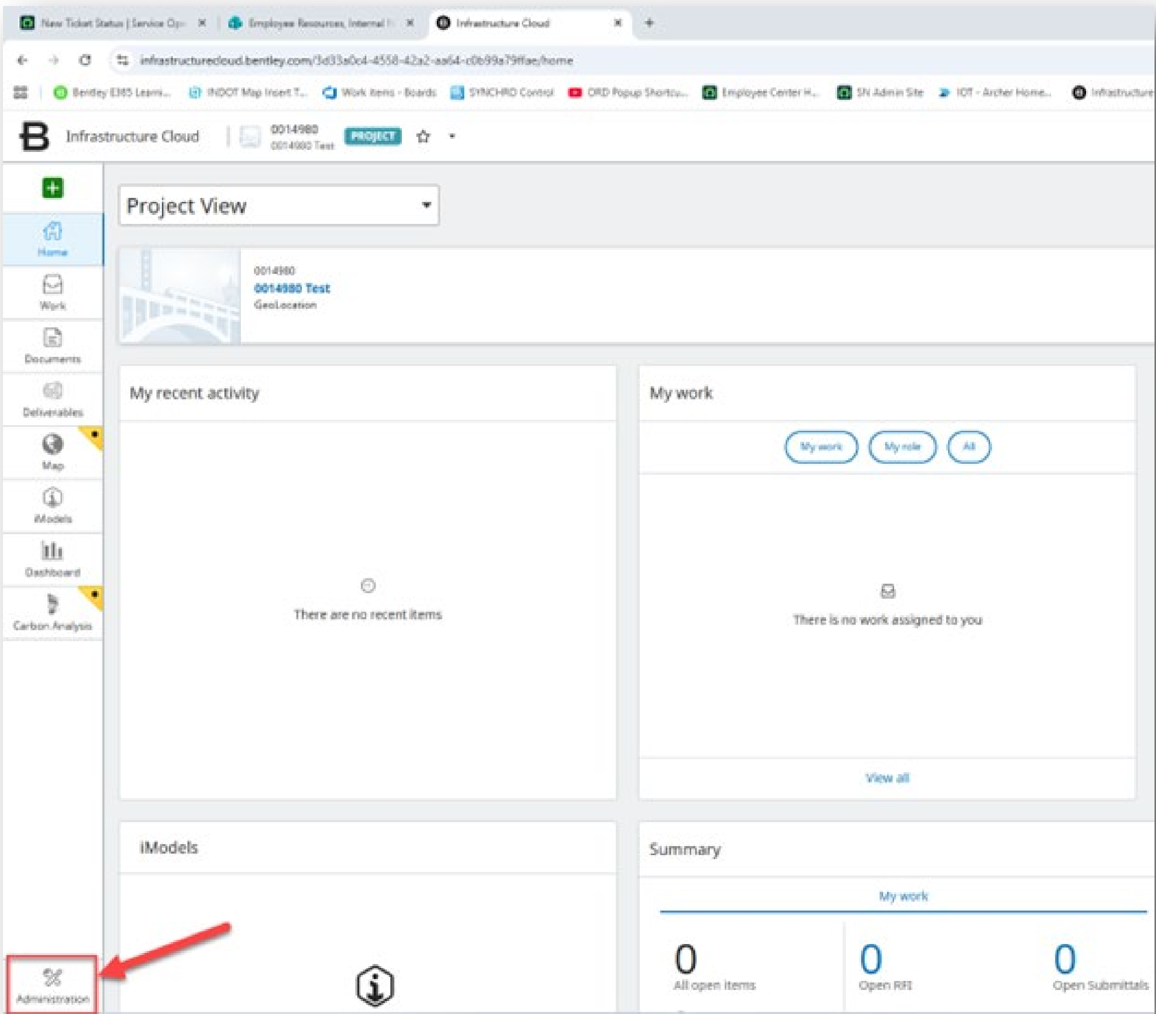


Managing Roles for Selected User

3. <u>**Managing Licensing for External Participants**</u>

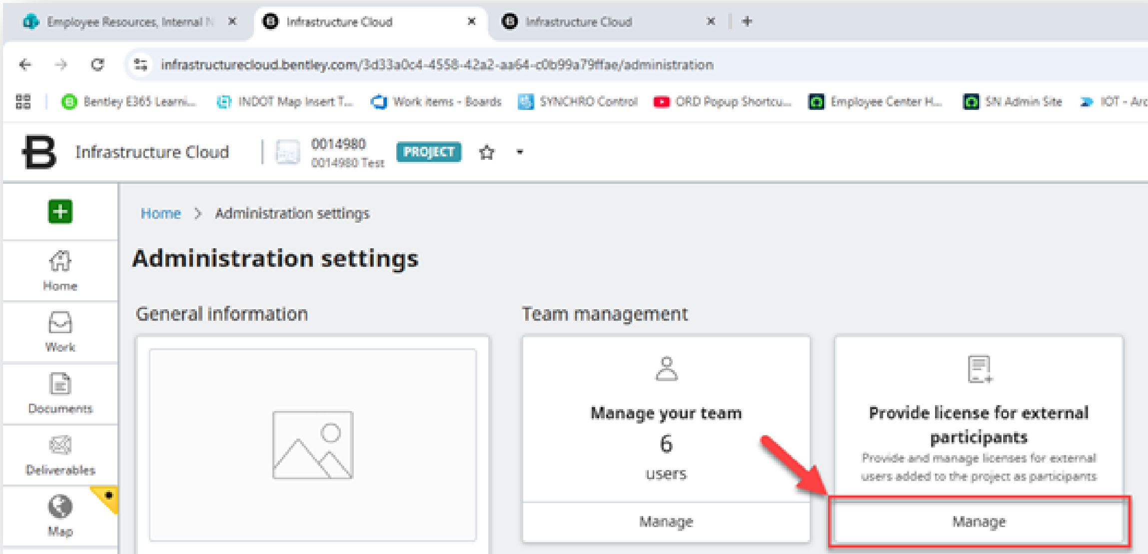
Upon adding external participants to your project, you will need to provide the appropriate Bentley Infrastructure Cloud licensing for them. The process of doing this is as follows:

1. On the project's home page, click on the Administration button in the bottom left corner.



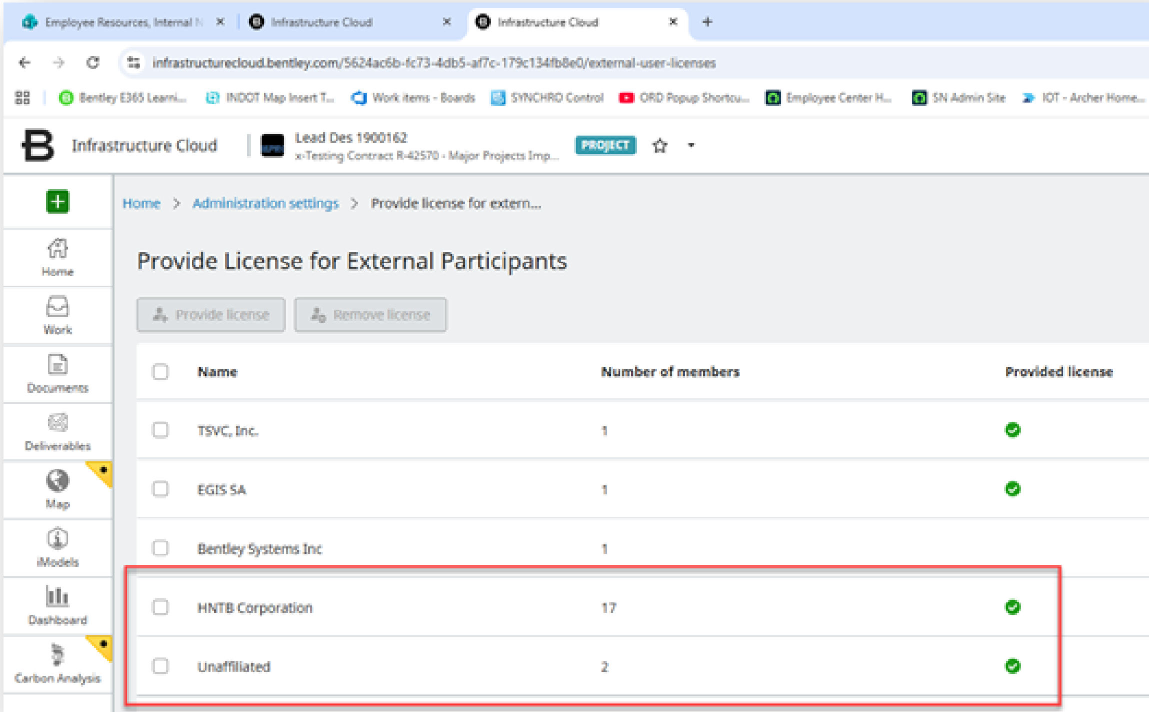
Administration Button on Project Homepage

2. Then on the Administration settings page, click on the Manage button under "Provide license for external participants".



Managing Licenses for External Participants

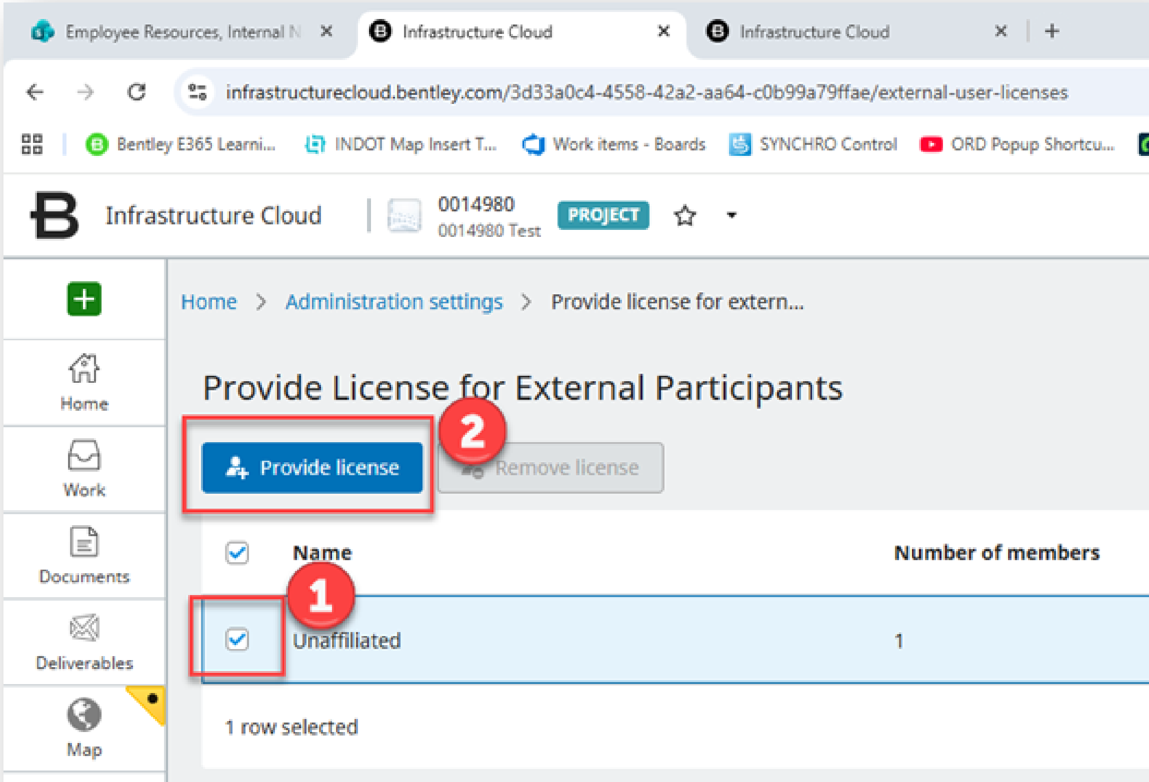
3. You will then be taken to the Provide License for External Participants page. Take specific note of the Name column on this page. The Name column shows all organizations associated with the external participants that have been added to the project AND have licensing already established with Bentley. If the external participant's account is not associated with an organization that has Bentley licensing established, the Name column will be listed as "Unaffiliated". Note the example shown below:



External Participants List

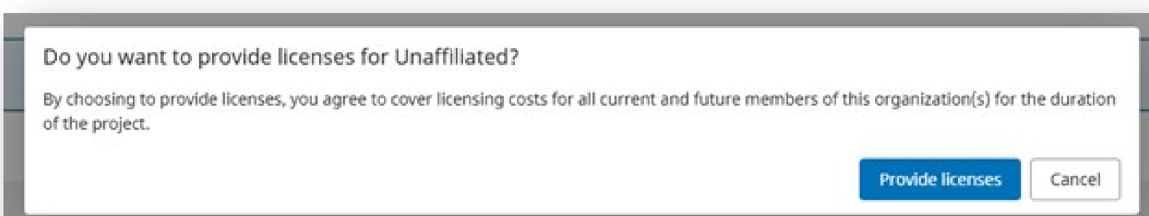
In the above example, note that Bentley will automatically detect when you have added an external participant associated with an organization that has Bentley licensing established (HNTB Corporation). If it does not detect an affiliation with an organization with established Bentley licensing, the external participants will be categorized as "Unaffiliated".

4. To provide licensing for newly added external participants, select the checkbox next to the Name of the organization in the list and click on the blue Provide License button.



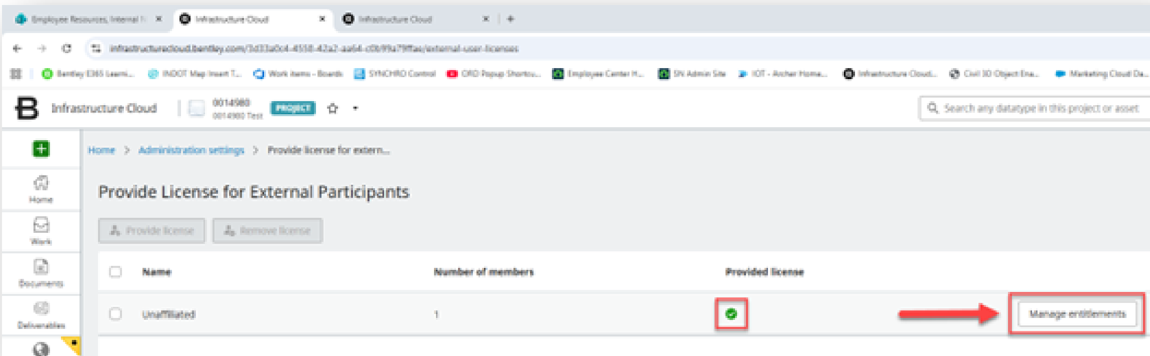
Provide License Button

5. You will then be provided with a prompt to confirm that you wish to cover the licensing costs for all current and future members of the organization for the duration of the project. If you can indeed confirm this, click on the Provide licenses button to proceed.



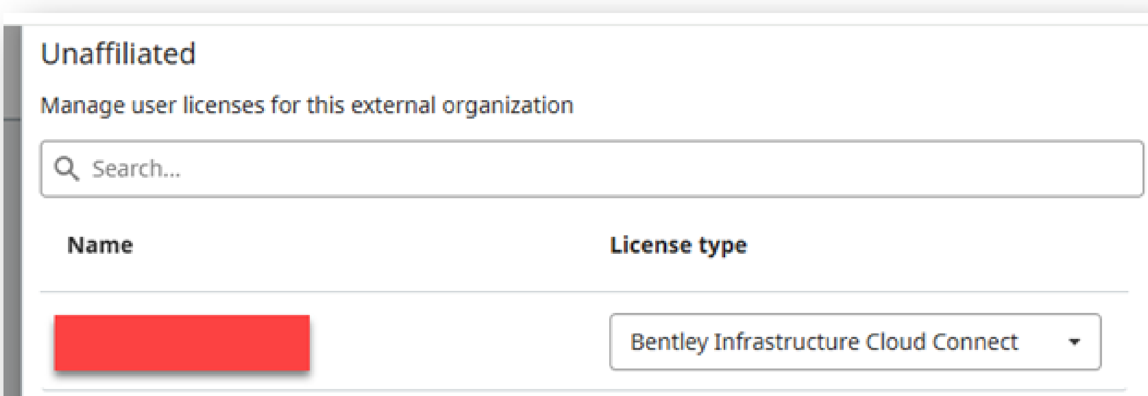
Provide License Confirmation

6. Once you have confirmed your license provision, you will see a green checkmark icon appear in the Provided license column for the selected organization. At this point, you can view the licensing entitlement in detail by hovering anywhere in the row for the organization and clicking on the Manage entitlements button.



Manage Licensing Entitlements

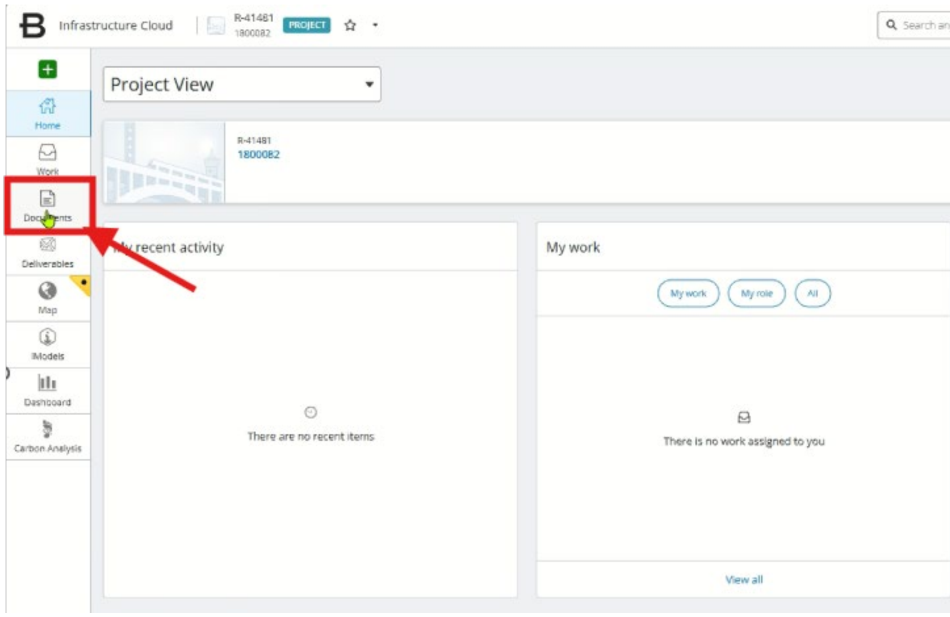
7. The window that appears will show the individual users associated with the selected organization, along with their license type. There are two license types to choose from: Bentley Infrastructure Cloud Connect and Bentley Infrastructure Cloud ProjectWise. The Connect license type is what is set by default. A detailed explanation of the difference between the two license types can be found [here](). Please work with the necessary parties to establish the correct licensing according to project needs.



Document Management

Documents

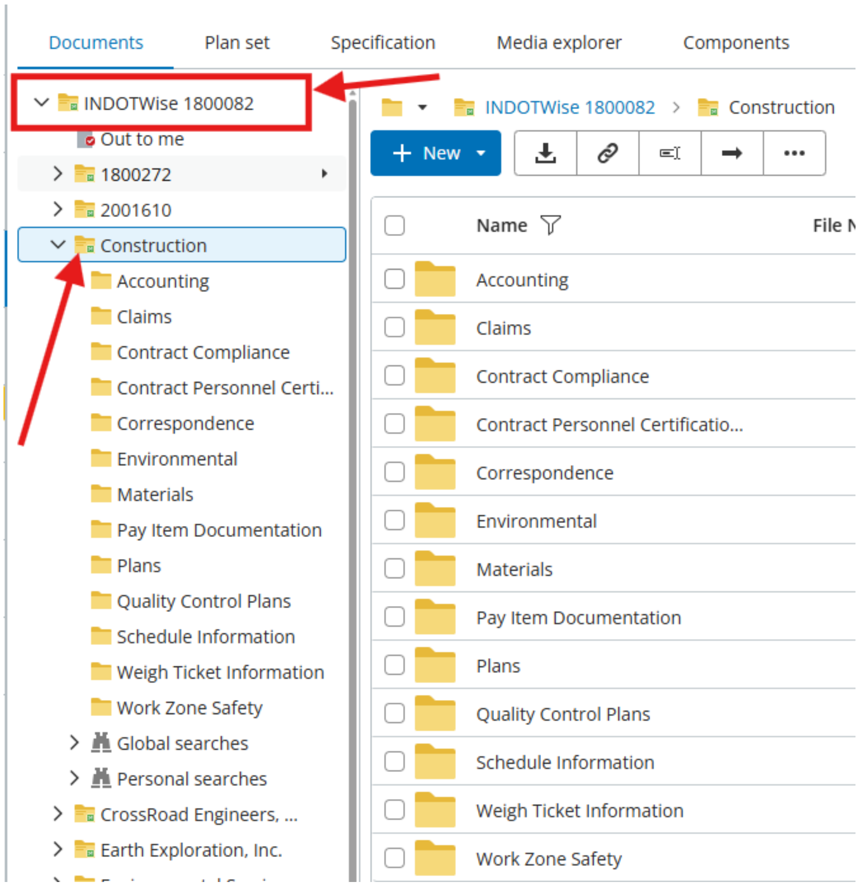
To access project documents, click the icon on the left pane



Documents

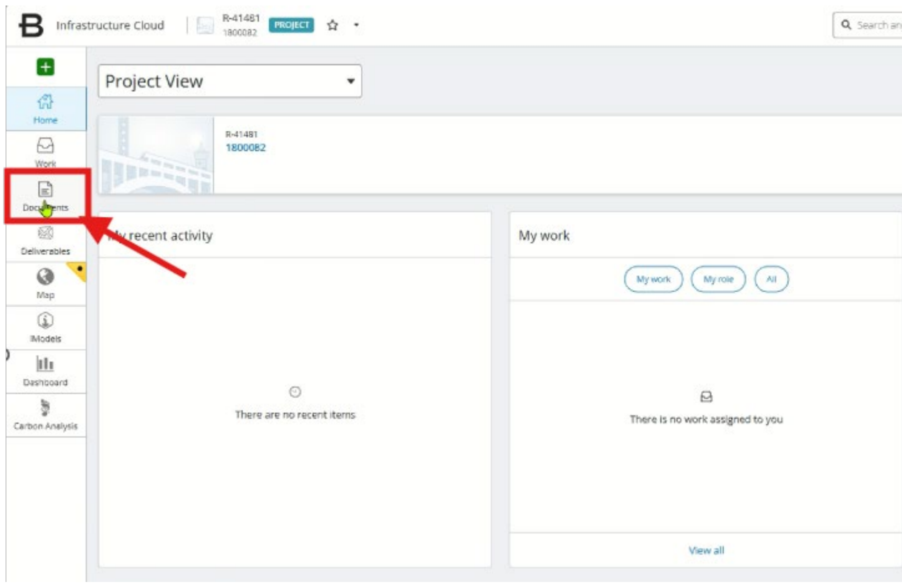
iFiling Cabinet

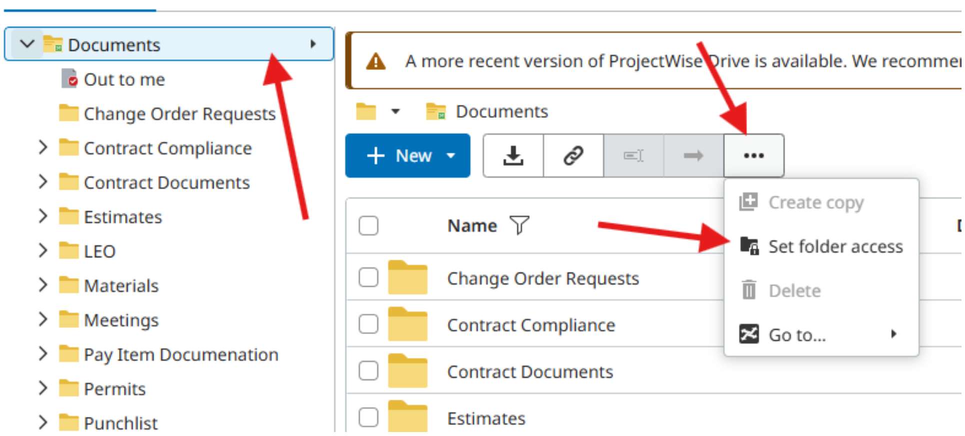
In the Documents pane, the folder with the Lead DES for your project will contain all the folders for the iFiling Cabinet directly linked to the folders in ProjectWise Explorer. Access to those folders is still granted by the Final Records Officers at each District.



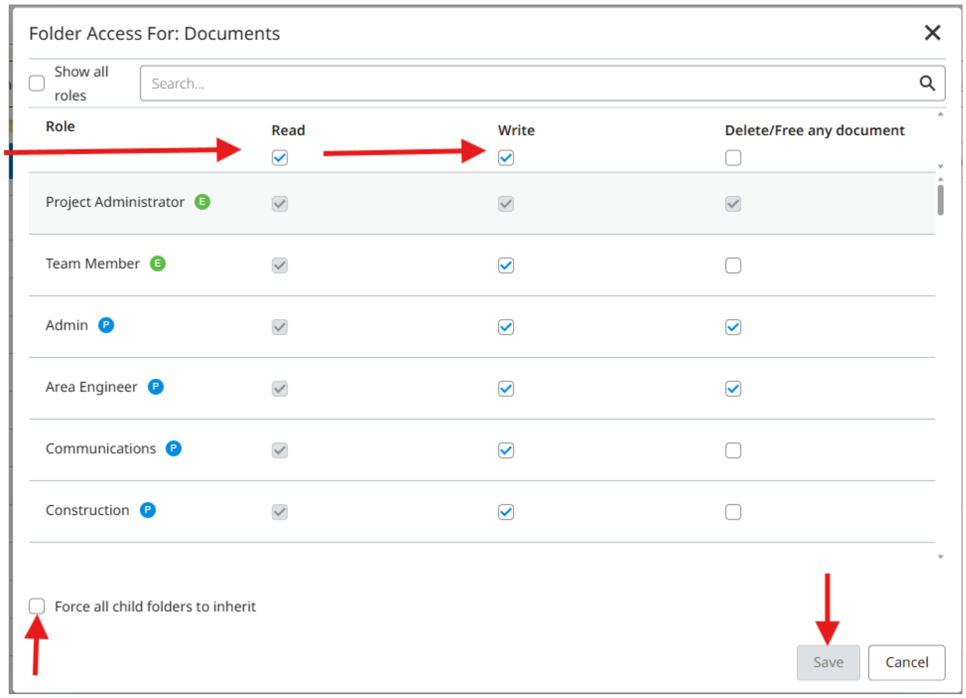
Shared Folders

- The Shared folders for all other project Correspondence will be using the parent folder named “Documents”
- Set folder access – to manage permissions to the Shared Folder “Documents” in Infrastructure Cloud, select the folder for desired permissions control and click the “…” at the top middle of screen and select “Set folder access”.

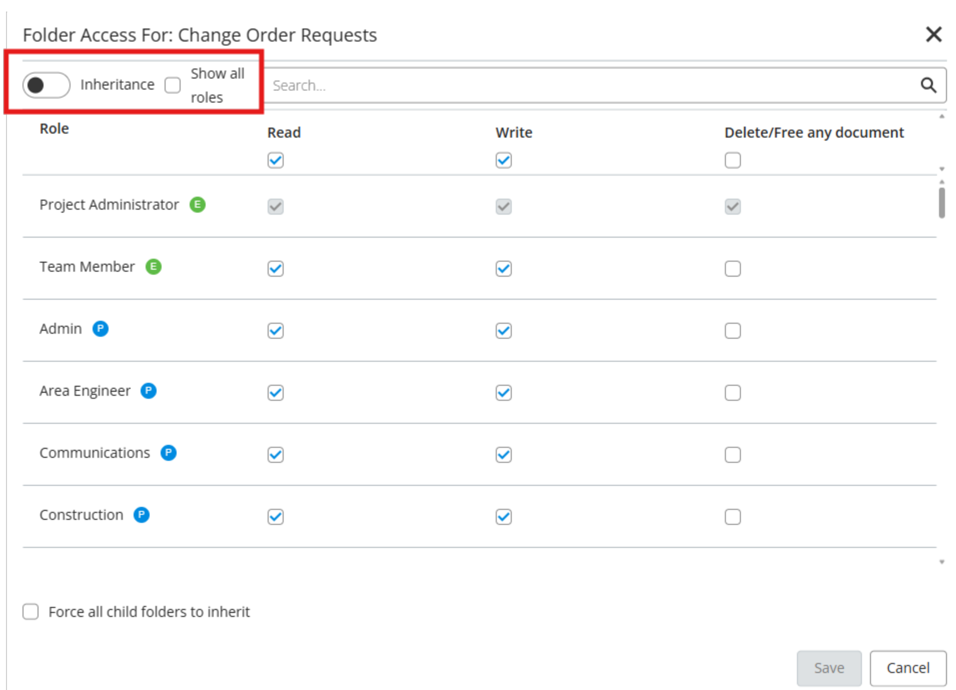




- You can globally check Read, Write, and Delete for all roles using the top row of checkboxes or individually provide specific access per folder per role.
- “Force all child folders to inherit” will copy these permissions to all other subfolders from the current folder you are setting folder access. This allows access to parent folders while maintaining potential subfolders to be private.
- “Show all roles” – by default, Folder Access shows all roles that currently have access and hides roles that do not have access. Checking this box will show all roles so check if more roles need access.



- “Set folder access” will have an additional toggle to customize if needed.
- “Inheritance” – with this toggle on, it will lock the folder access and permissions of the parent folder which be helpful if you only want to manage access at the parent level



INDOT Bentley Infrastructure Co-Authoring

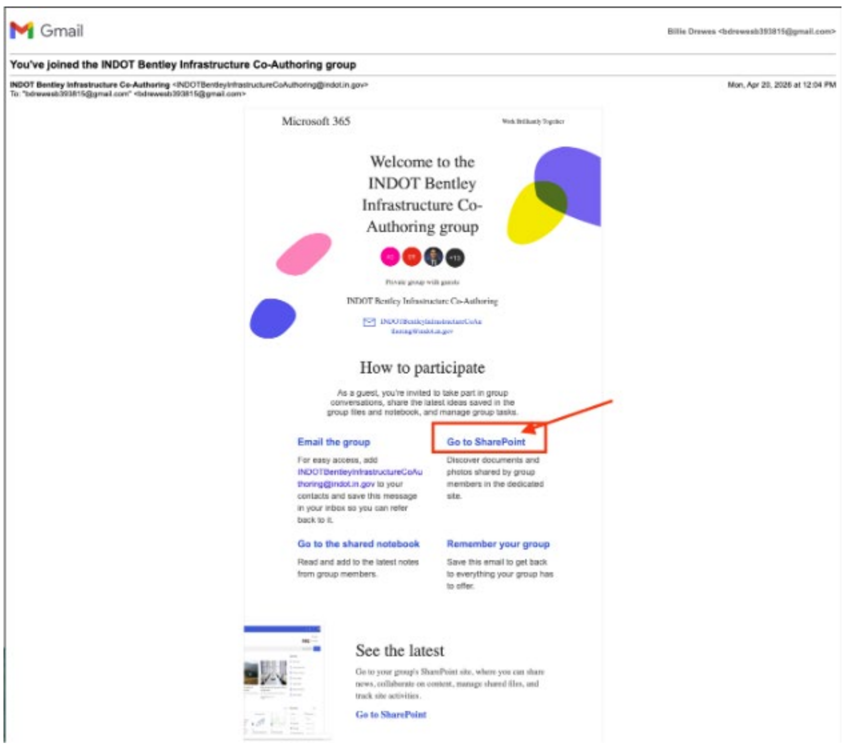
New Guest Experience

1. You will receive a “Welcome to the INDOT Bentley Infrastructure Co-Authoring group” email.

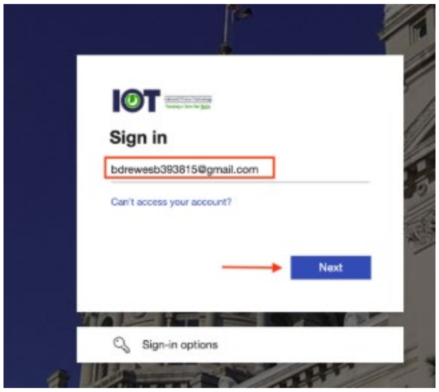
a. It will be from INDOTBentleyInfrastructureCoAuthoring@indot.in.gov

b. You may have to check your Spam or Junk folder

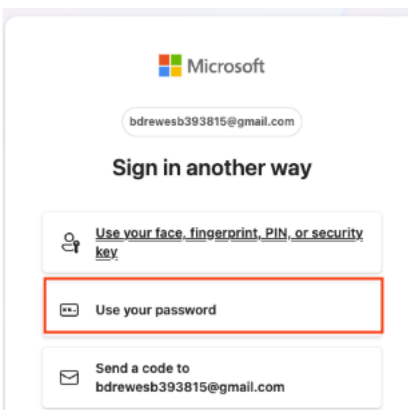
2. Open the email, it should look like the below. You will need to click the “Go to SharePoint” link in the email body to accept the terms to be a guest in the State of Indiana Microsoft Tenant. This is not the actual Co-Authoring site; it is just the group that gives permission.



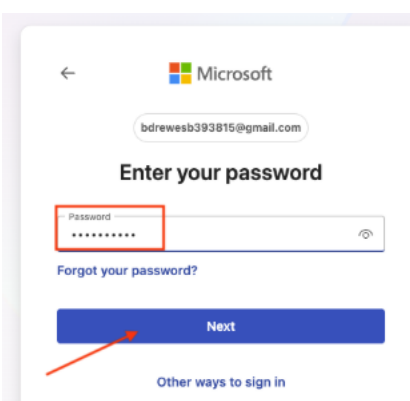
3. You will be directed to an IOT sign in screen. You will need to enter the email address that welcome message was sent to, this should be the email address you use for your organization. You will need to click “Next”.



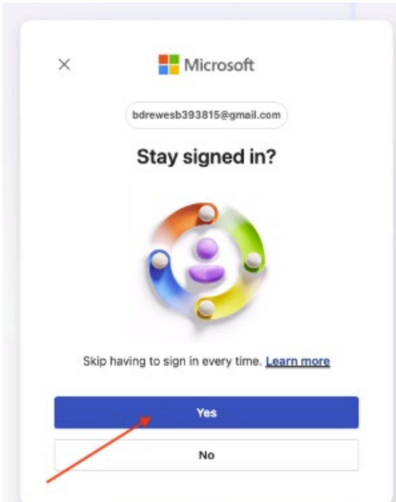
4. This step varies depending on the type of account you have. When you are signing in the information is being directed back to your organization for authentication. We do not manage your organization's sign-in requirements. In the example below, I am using a Gmail account. I was prompted with a QR Code and cancelled and chose to login another way. I chose "Use your password".



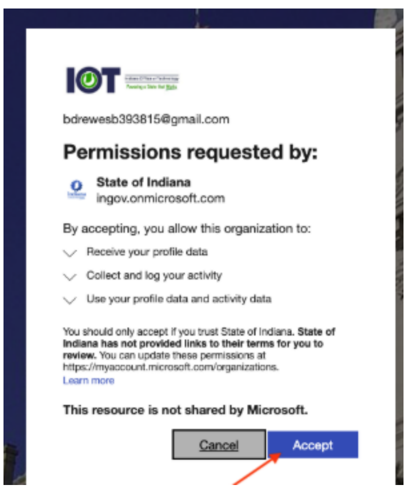
5. You will need to enter your password in the password field (this is the password you use for your organization). In this example I entered my Gmail password.



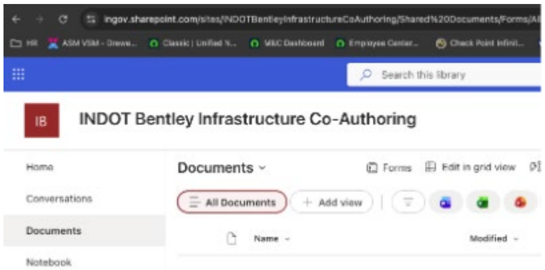
6. You will receive a message asking you if you would like to stay signed it. In this example I am choosing "Yes", you are welcome to choose "No".



7. You will not be taken to an IOT screen and ask to Accept the terms. You will need to click on "Accept".



8. You will now be taken to the INDOT Bentley Infrastructure Co-Authoring group site. This site is just for this group. You can close this tab. You do not need to bookmark it or access it again. Accepting the terms and being part of this group will allow you to be added as Co-Authors in ProjectWise.



Plan set

Upload New PDF Plan Set

[SYNCHRO Control Admin Training - Upload New PDF Plan Set]

Publish and Edit PDF Plan Set

[SYNCHRO Control Admin Training - Publish and Edit PDF Plan Set]

Add PDF to Map Layer

[Map Plan Set Stitching]

NEED VIDEO

Create a Plan Set Revision

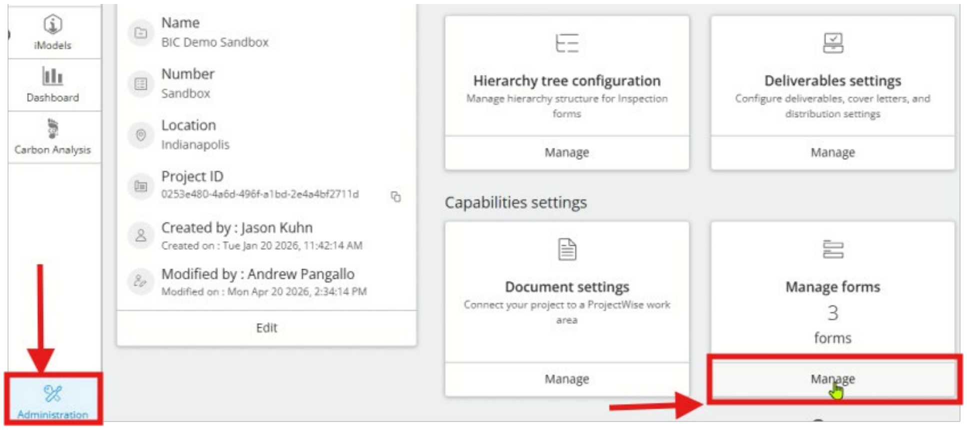
[SYNCHRO Control Admin Training - Create a PDF Plan Set Revision]

Work (Forms)

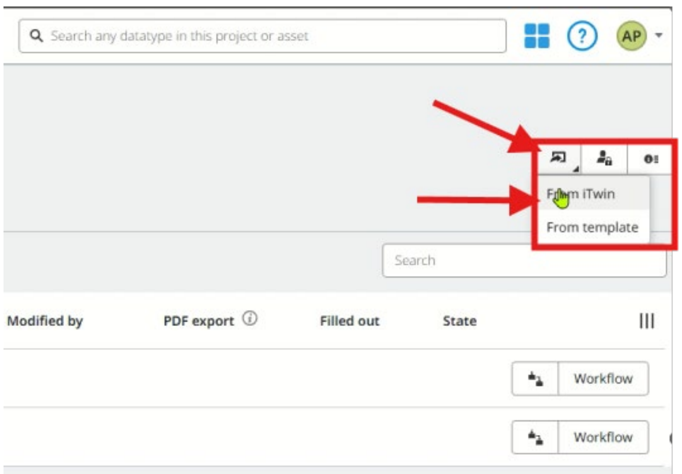
General

Importing New Forms/ Updating Existing Forms

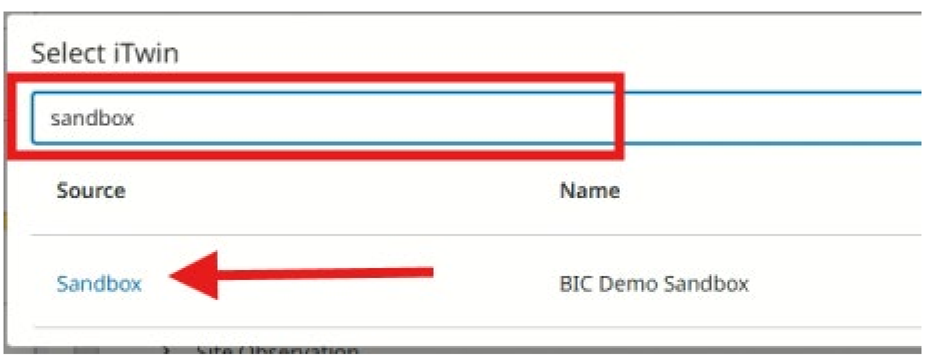
- After a project is created from the Template project, Forms will be copied as they were present at the time of project creation. Any new forms or forms that are updated cannot be pushed but need to be imported. Once imported, all future changes to that form can be made from the template without needing to import again.
- Follow steps below to import forms
- Select the “Administration” button in the bottom left then navigate to Manage forms and select “Manage”



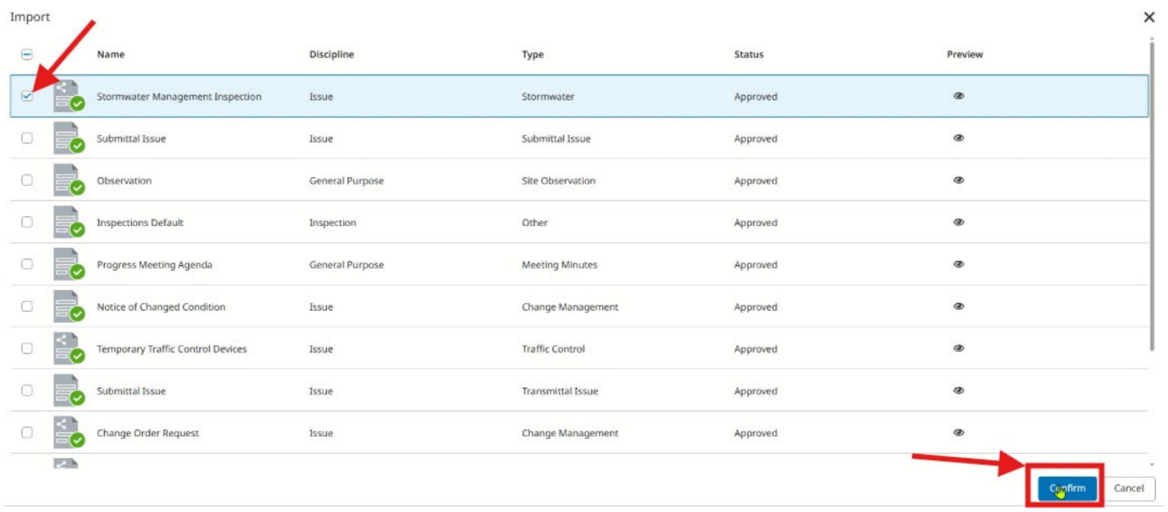
- Select Import/copy form definition in the upper right, then select “From iTwin”



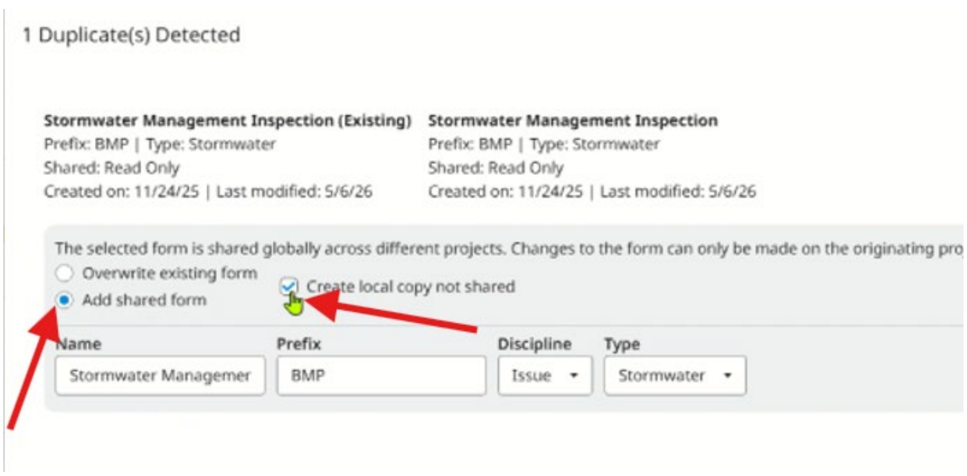
- Enter “Sandbox” in the search bar and select Sandbox from the Source column



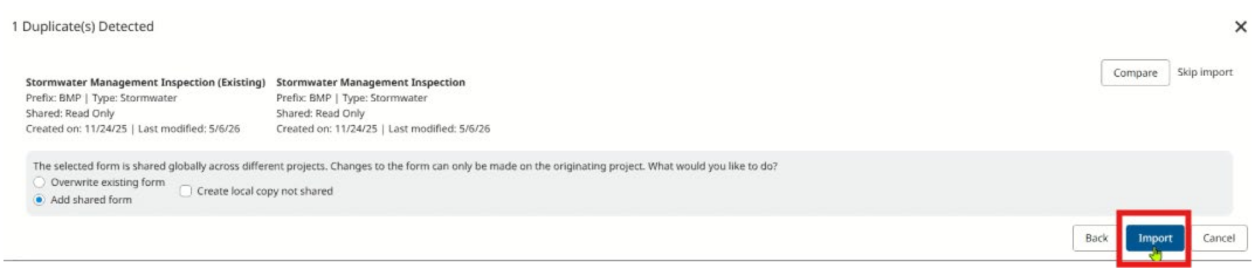
- Find the form in list and check the box and select Confirm in the bottom left
    - Each Column can be Sorted for easier navigation



- If you are updating and existing form, you will receive a window that displays 1 Duplicate(s) Detected
- Select the “Add shared form” radio button and uncheck “Create local copy not shared”

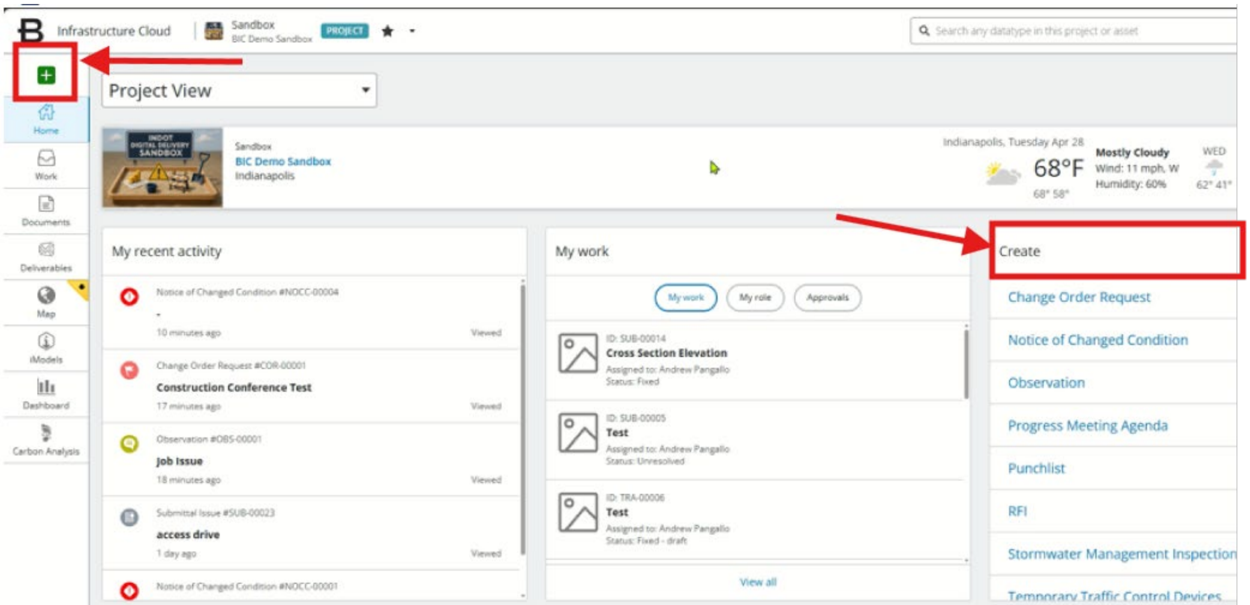


- Your screen should now look like this and read to select “Import”



Create

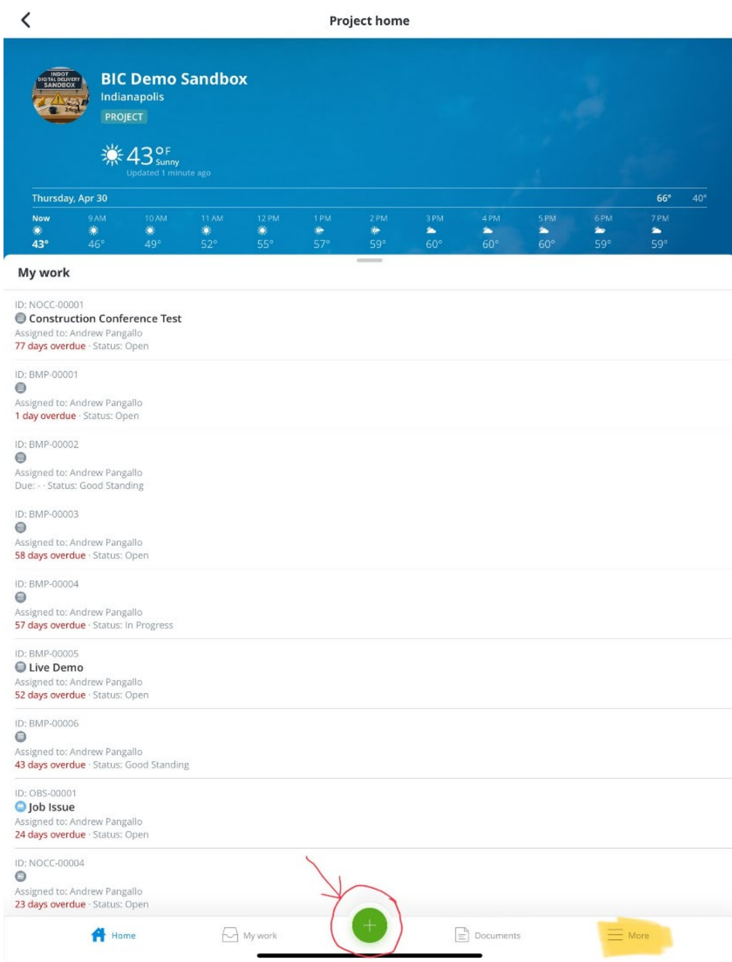
Website

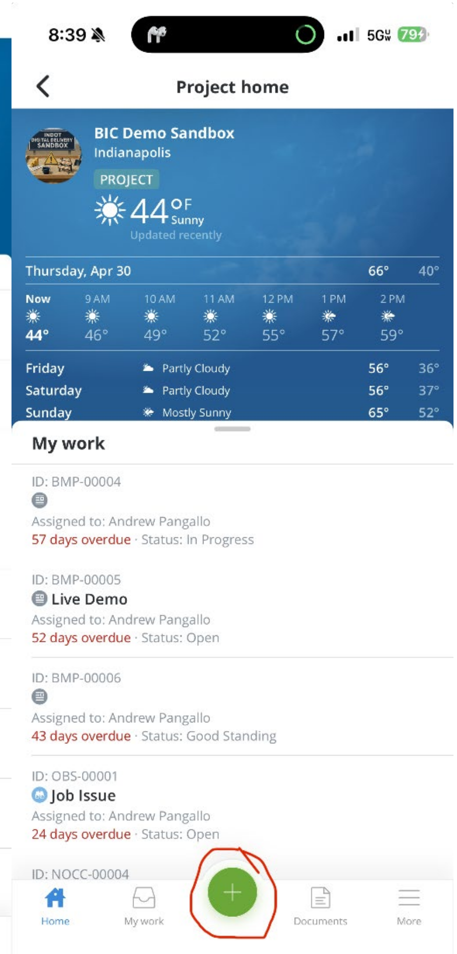


Mobile Devices

iPad/iPhone

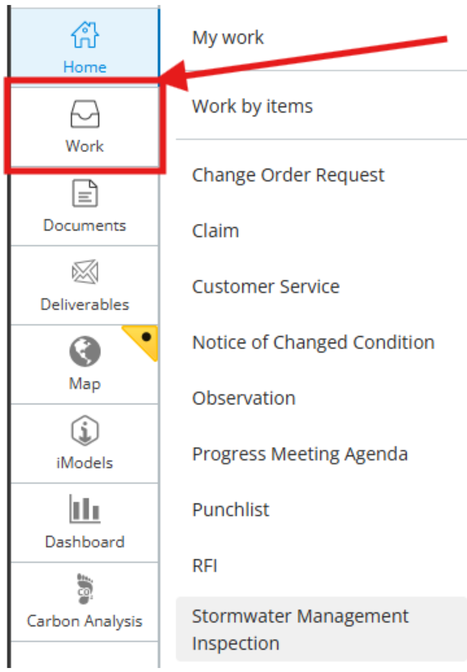
- Press the Green “+” circle at the bottom middle of the screen and choose the form you want to create



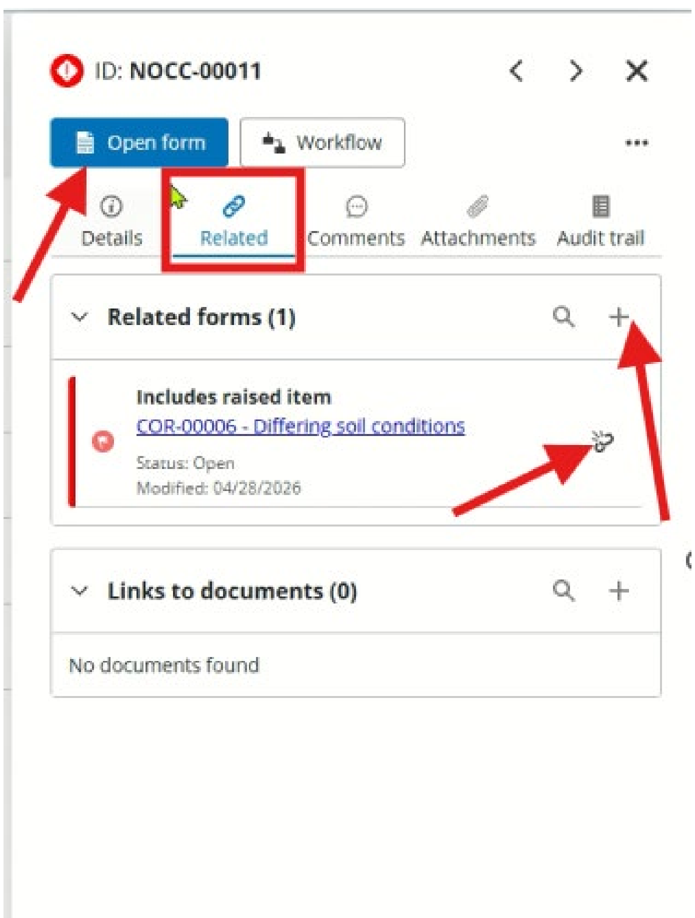


Edit

- You can navigate to you existing forms by selected “Work” from the left pane
- Select the specific form that needs viewed or edited
- My work or Work by items can view multiple existing forms in one table or map



To edit any existing form, select the “Open Form” blue button



- You can also link an existing form to another existing for or create a new form to be linked. You can escalate or add as a sub task such as escalating a Notice of Change Condition to a Change Order Request.

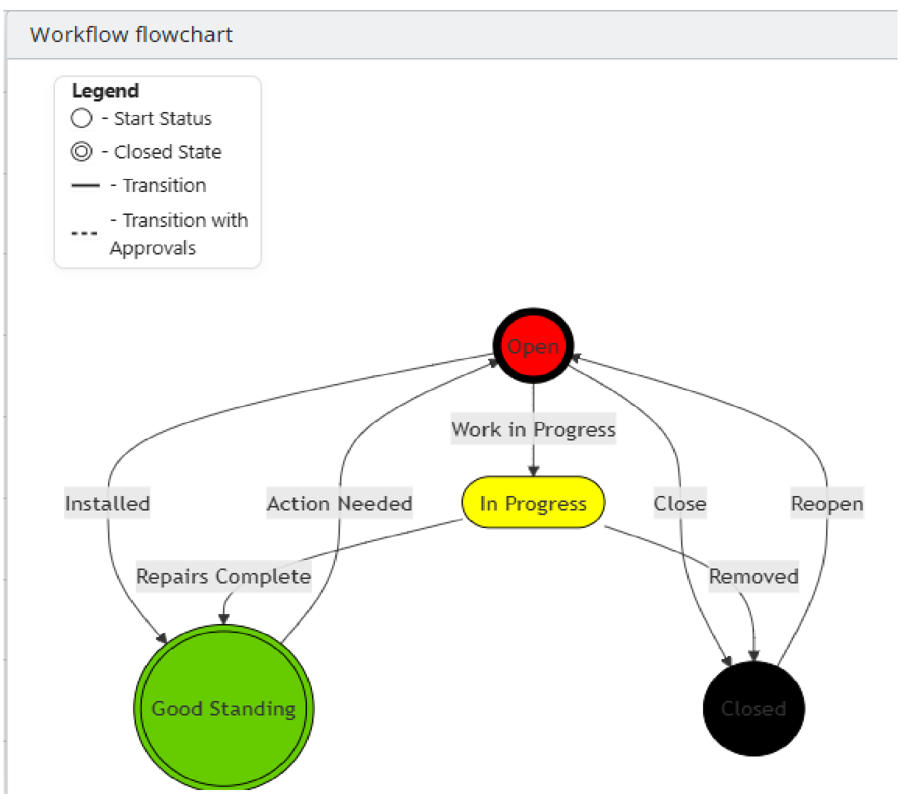
Related

Workflow

- Used to establish the Work State and Status of a specific form
- Click the "Workflow" button next to Open Form to view the State and Statuses of a given form

Form State and Status

- Pay close attention to the Legend provided to describe the Open and Closed States and Start Status
- Each line represents the possible transition steps between statuses by available transition names that will appear in the green box in the lower left area of an Open Form

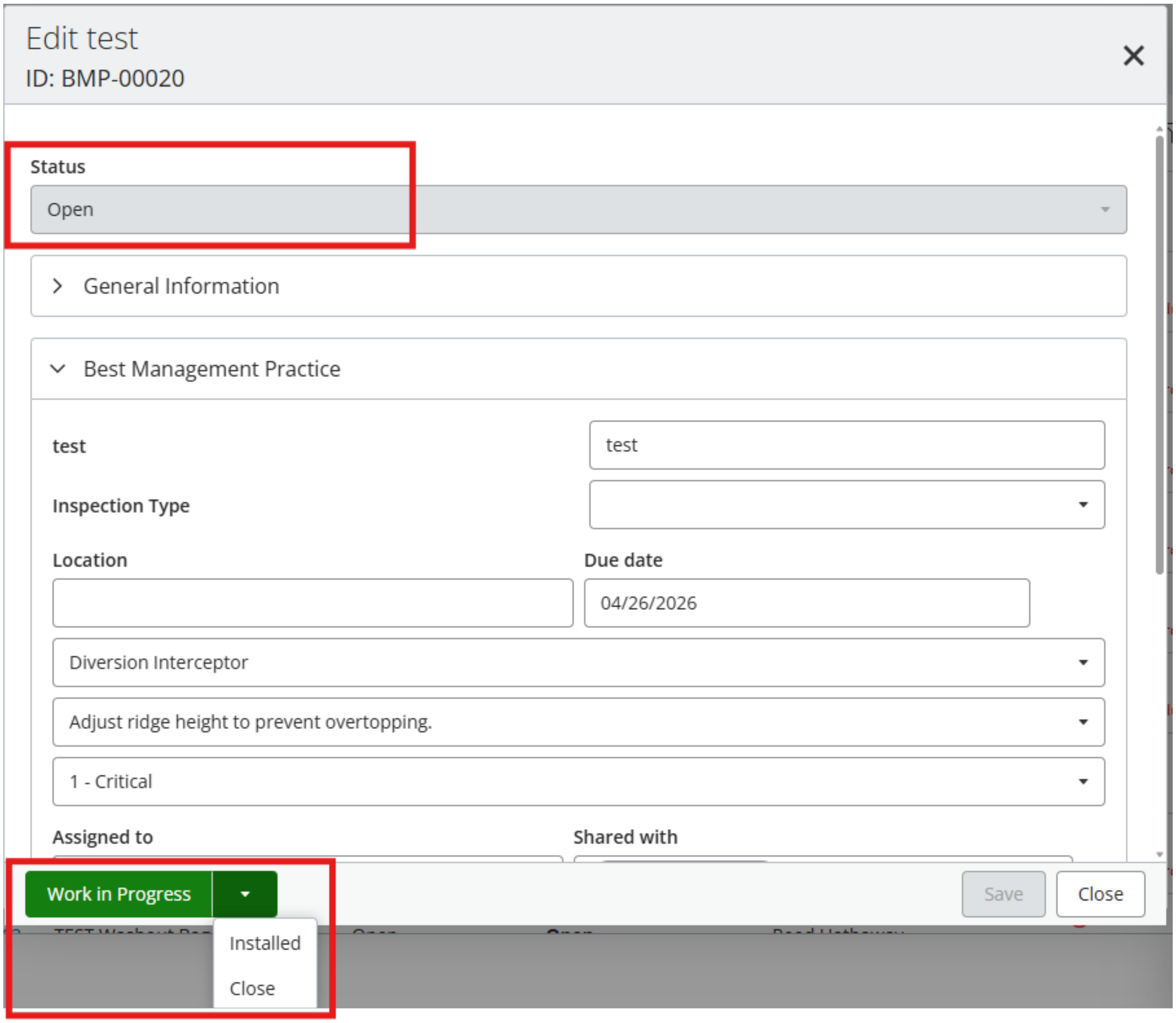


State

1. Open
   a. Allows for “Comments” use by any member with access
   b. Will display “Overdue” if current date is greater than the Due Date
2. Closed
   a. Locked for comment and edit form in this state
   b. Determines if a form is on time or overdue in relation to the Due Date
   c. Can be “Reopened” for future editing

Status

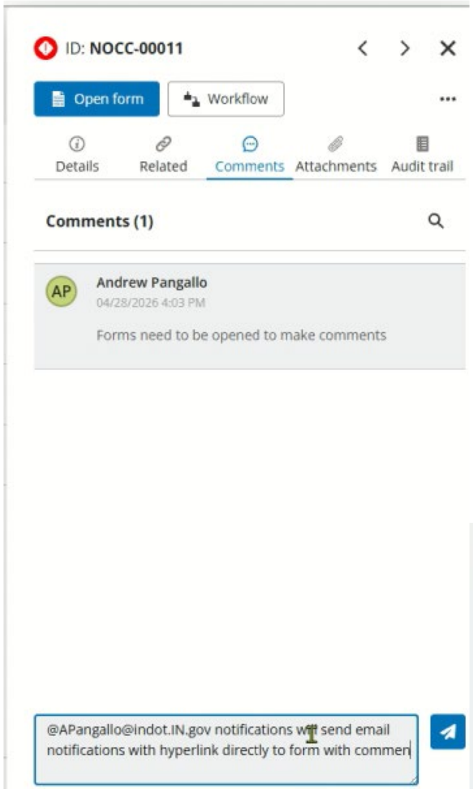
- Used to describe to the project team where a given form is in its workflow
- Status is typically unique to the form but can be similar across forms
- Intended to communicate whose ball-in-court the action item is in, i.e. “In Progress” would indicate the Contractor is actively working on a specific item.

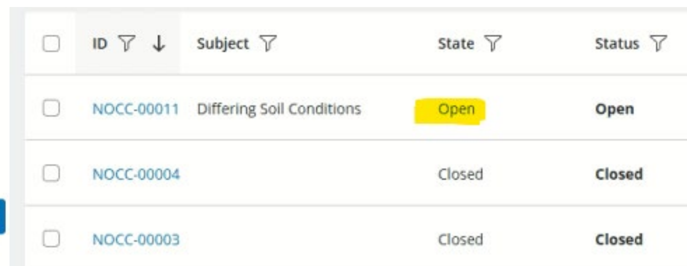


- As seen in the workflow diagram while in the Open status, the transition steps would be Work in Progress, Installed or Close
- Statuses are shown as the circle with corresponding colors. A singular outline indicates “Open” state while a double outline is a “Closed” state

Comment

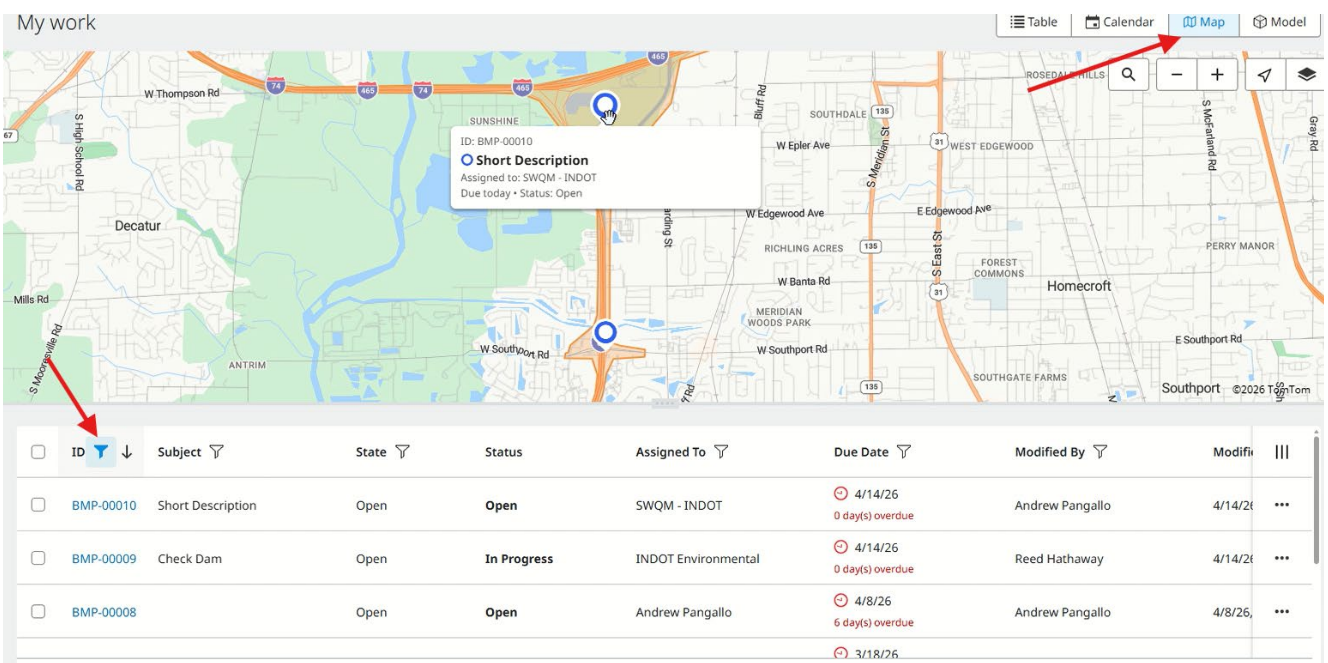
- Forms must be in the “Open” state to make comments
- Using the “@” and typing either a team member’s first name or email and selecting them from the dynamic dropdown will produce a notification to be sent via email if you want to add urgency or emphasis on a specific form. A hyperlink will be created in the email for easy access to the comment.





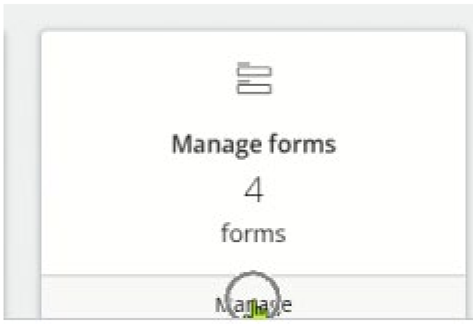
My Work

- This area on the Home page will filter all Forms that are “Open” and assigned to “Me”.

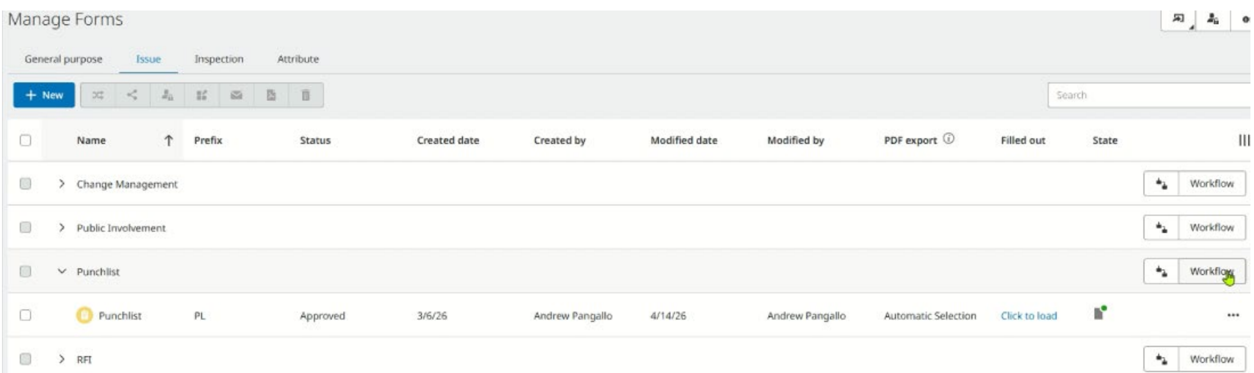


Unique Form Workflow Notifications

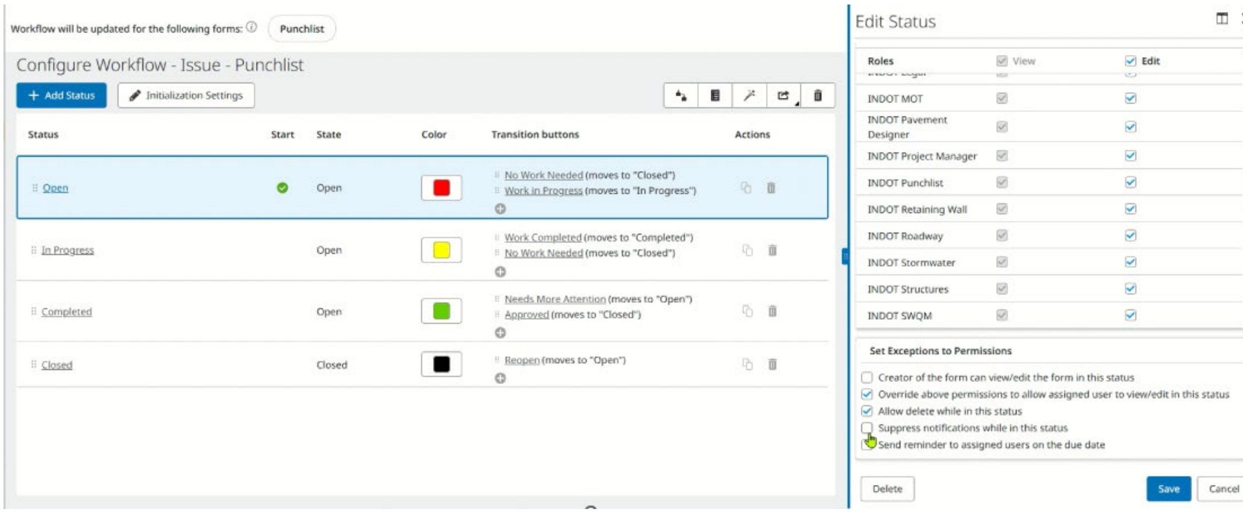
Specific form notifications (would impact the whole team on your specific contract) - go to the admin button on the bottom left, scroll down to "manage forms".



Navigate to the Form Workflow that notifications are not as urgent then select the "workflow" button.

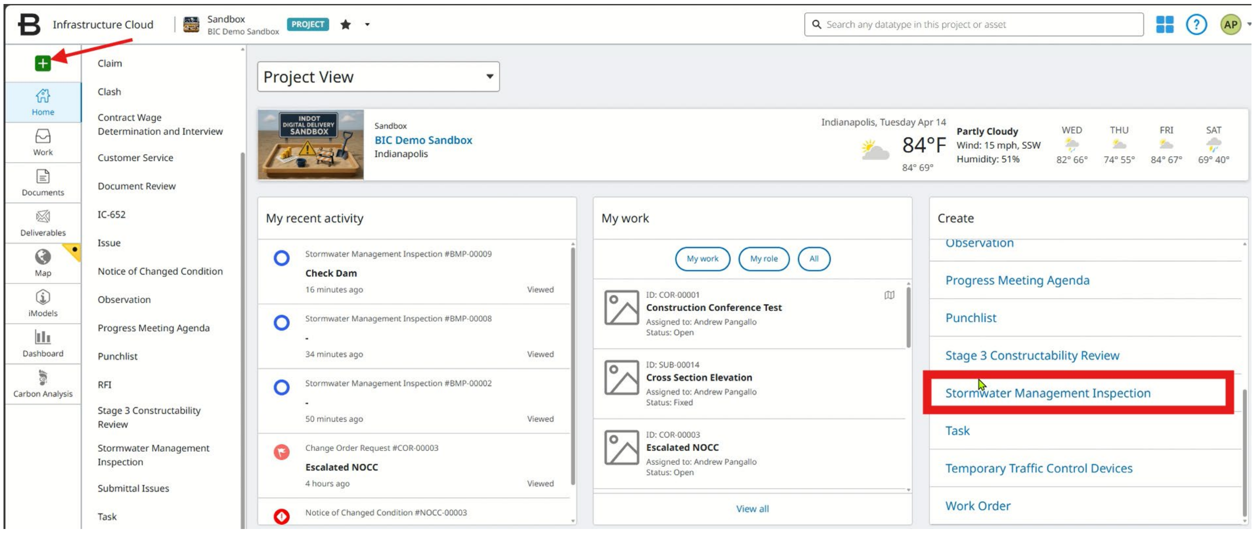


Once that is open, select the status(es) you may not need urgent notifications "i.e. open, in progress, completed, closed". Scroll down to the bottom and check "suppress notifications while in this status" checkbox.


Workflow will be updated for the following forms:
Punchlist
Configure Workflow - Issue - Punchlist
Add Status
Initialization Settings
Status
Start
State
Color
Transition buttons
Actions
Open
Open
No Work Needed (moves to "Closed")
Work in Progress (moves to "In Progress")
In Progress
Open
Work Completed (moves to "Completed")
No Work Needed (moves to "Closed")
Completed
Open
Needs More Attention (moves to "Open")
Approved (moves to "Closed")
Closed
Closed
Reopen (moves to "Open")
Edit Status
Roles
View
Edit
INDOT MOT
INDOT Pavement Designer
INDOT Project Manager
INDOT Punchlist
INDOT Retaining Wall
INDOT Roadway
INDOT Stormwater
INDOT Structures
INDOT SWQM
Set Exceptions to Permissions
Creator of the form can view/edit the form in this status
Override above permissions to allow assigned user to view/edit in this status
Allow delete while in this status
Suppress notifications while in this status
Send reminder to assigned users on the due date
Delete
Save
Cancel

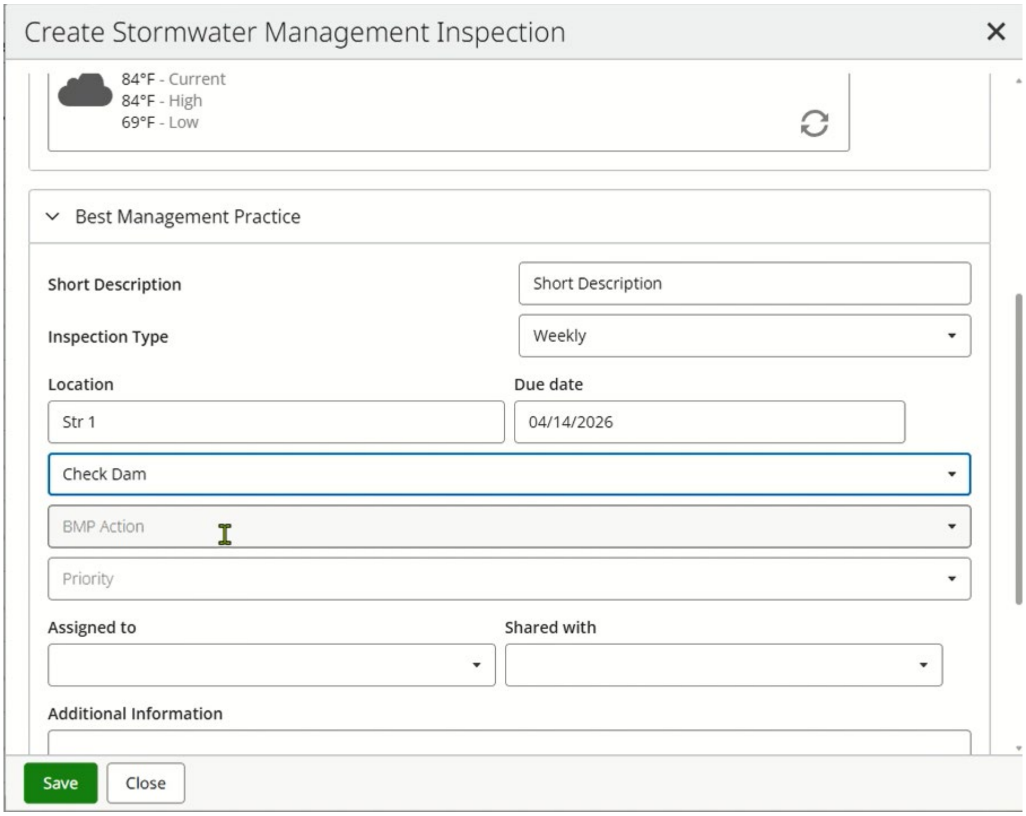
Stormwater Inspection

Create BMP/Stormwater Action



- Click either green "+" button in the upper-left or select the form name in the right "Create" pane.

Complete Stormwater Form

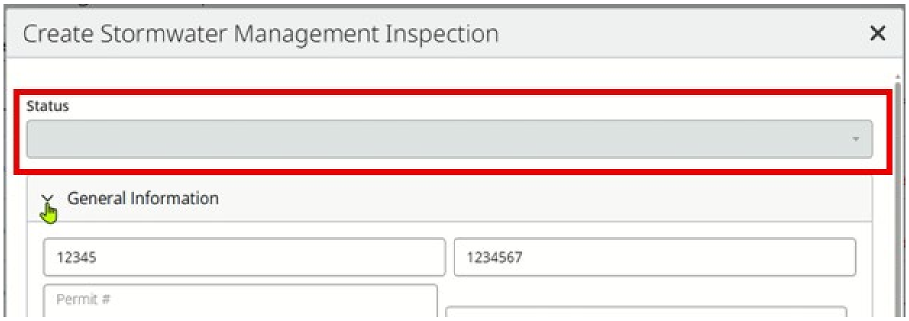


<u>Fill out all fields as necessary to communicate the action</u>

1. Contract – Default value ca be set in Manage Forms (See Admin Manage Forms)
2. Project/DES - Default value ca be set in Manage Forms (See Admin Manage Forms)
3. Permit# - Default value ca be set in Manage Forms (See Admin Manage Forms)
4. Training Cert – Type of Training Cert SWQM owns
5. Latest Precipitation Amount – inches of rain last received
6. Date of Last Precipitation – date at which the last rain occurred
7. Log Weather – will time stamp the current weather at the location project is set up
8. Title – Short Description of action item.
9. Inspection Type
    a. Weekly – performed weekly
    b. Post-Rain – used if this BMP was last changed for a rain event
    c. QA/QC – used for inspection made by someone that is not the official SWQM
10. Location – used for a general known project location by the team
11. **Due Date – Typically 48 hours after action is required. Plans for correction are required within 48 hours. Change due date for the mutually agreed construction operations to complete action**
12. Best Management Practice – List of normally accepted and planned BMPs

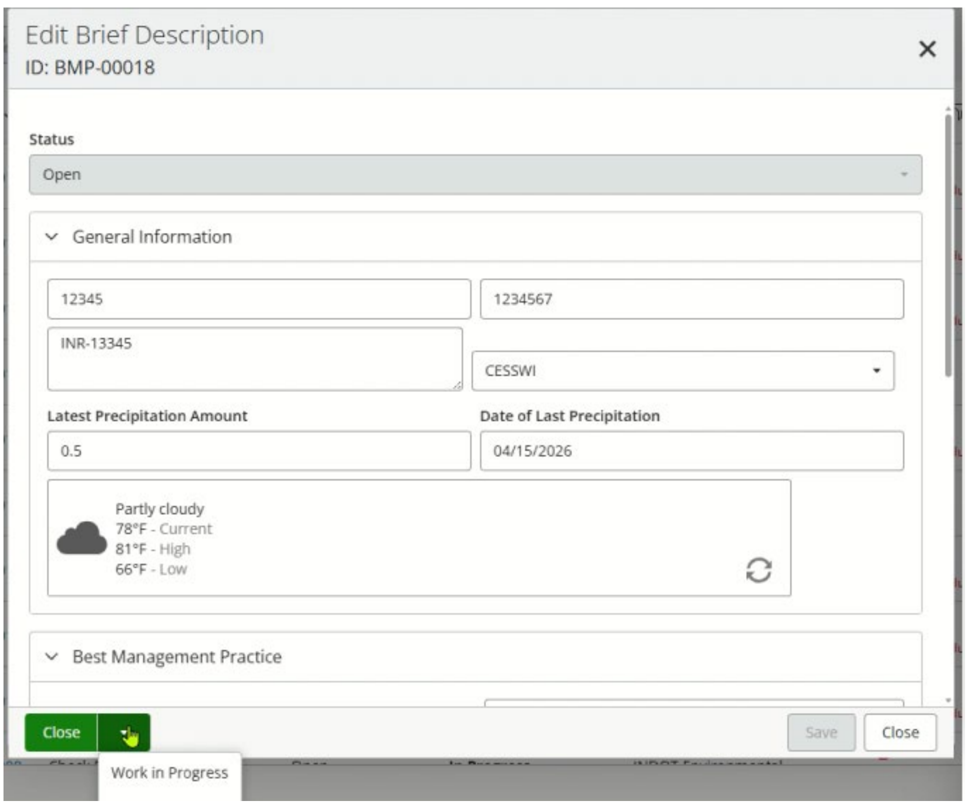
13. BMP Action – commonly used actions based off the selected BMP
14. Priority – can be used to express urgency of compliance concerns
15. Assigned to – team member responsible for the next action of the form. Typically dictated by the current state and status
16. Shared With – other team members that need or want to be notified but action not required
17. Additional Information – any other information to supplement the action dropdown

Managing Status

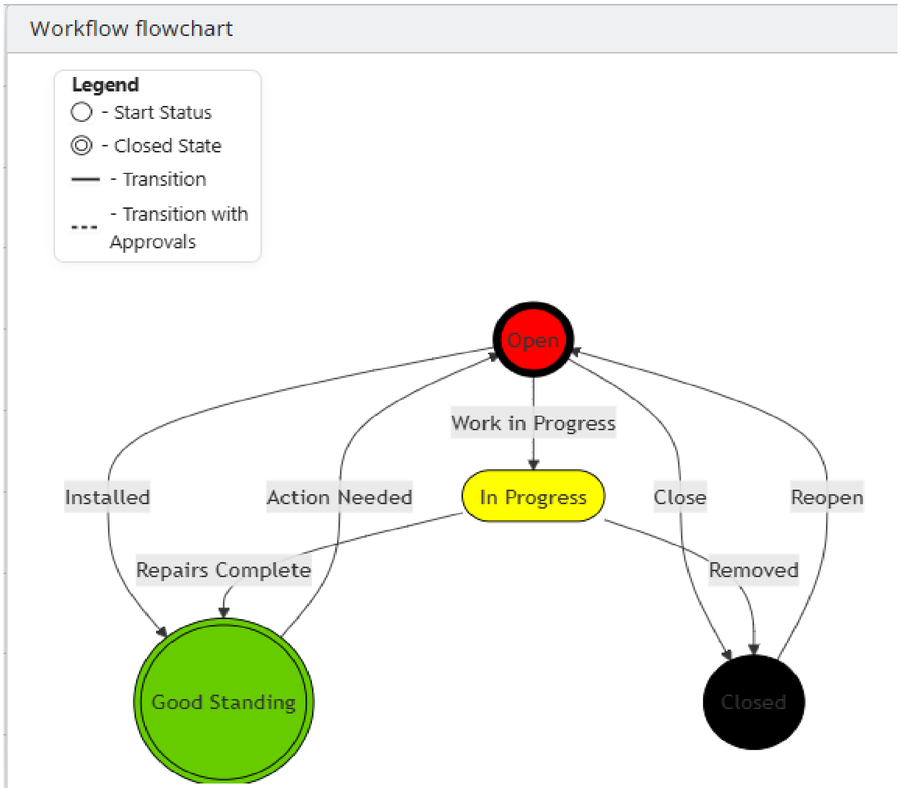


Changing Status

- The green box in the bottom left of an editable form will transition the forms to the various statuses in a form workflow. (Click down arrow for all transition options)



Form State and Status



State

3. Open
    a. Allows for "Comments" use by any member with access
    b. Will display "Overdue" if current date is greater than the Due Date
4. Closed
    a. Locked for comment and edit form in this state
    b. Determines if a form is on time or overdue in relation to the Due Date
    c. Can be "Reopened" for future editing

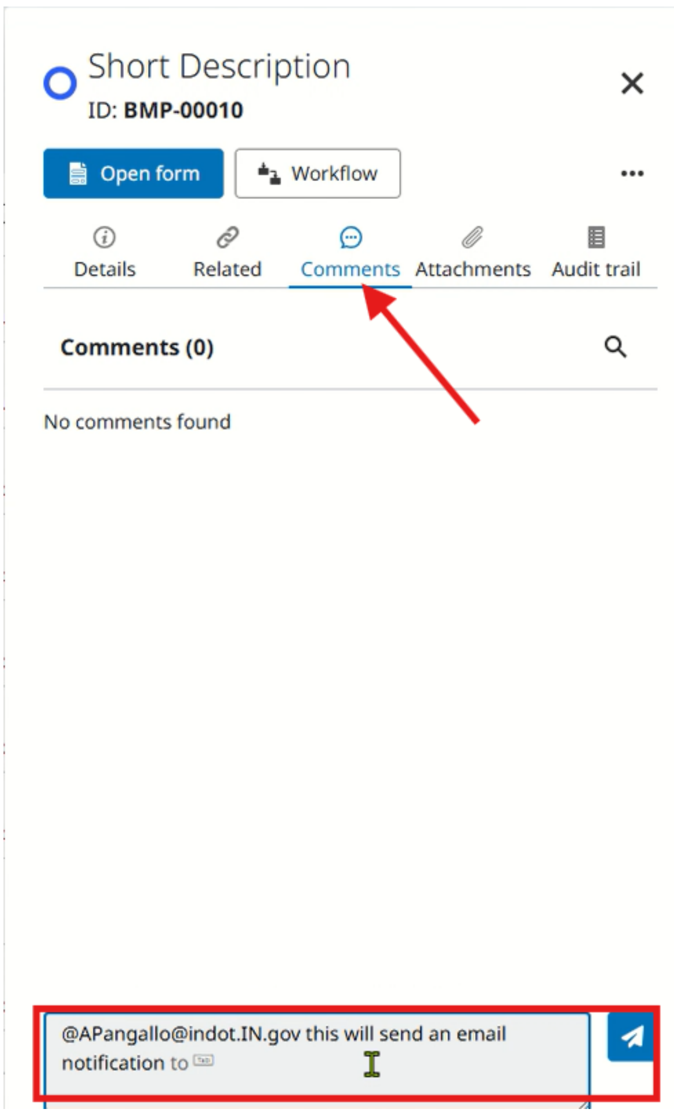
Status

1. Open (Open State)
    a. Action needed for the given BMP created by the project SWQM
    b. Assigns to Contractor member responsible to perform the corrective action
2. In Progress (Open State)
    a. Status entered via "Work in Progress" green option indicating Contractor is actively perform corrective work.
3. Good Standing (Closed State)

   a. Status entered via “Repairs Complete” green button in the “In Progress” status. Can also be entered via “Installed” Green button from “Open” status
4. Closed (Closed State)
   a. Status used to indicate when a BMP is removed from the job site
   b. Typically, not reopened from this status once in it.

Comments

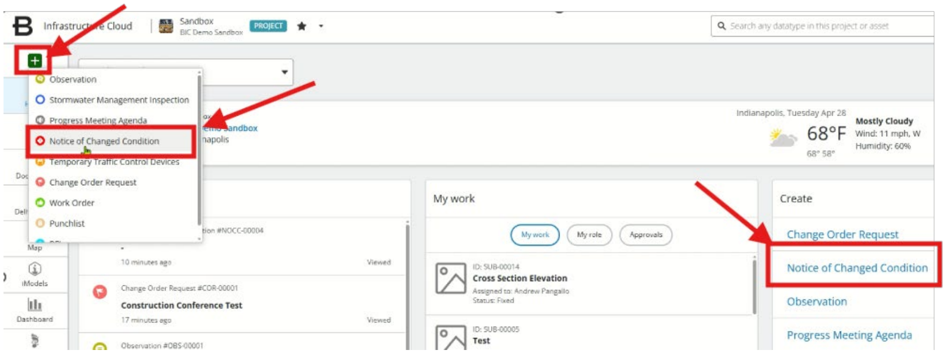
- Highly encouraged and recommended over sending an email
- Can only be made on “Open” state forms
- Use the “@” symbol to send a notification to user or role



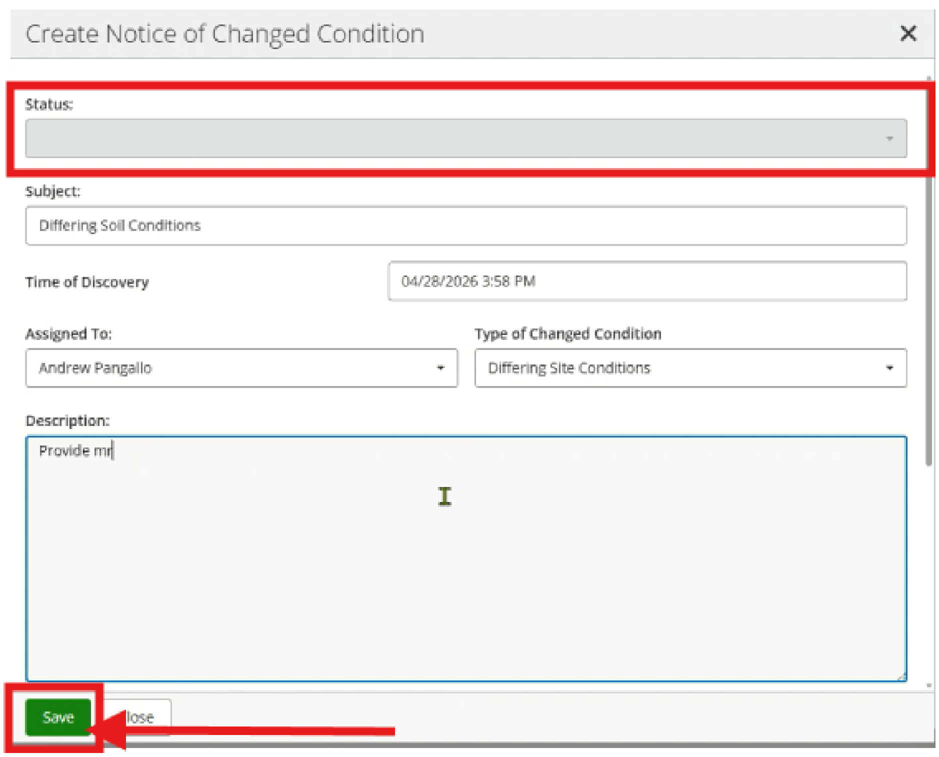
Change Order

Notice of Change Condition

To begin a Notice of Change condition, click the green "+" in upper left or find it in the right Create pane

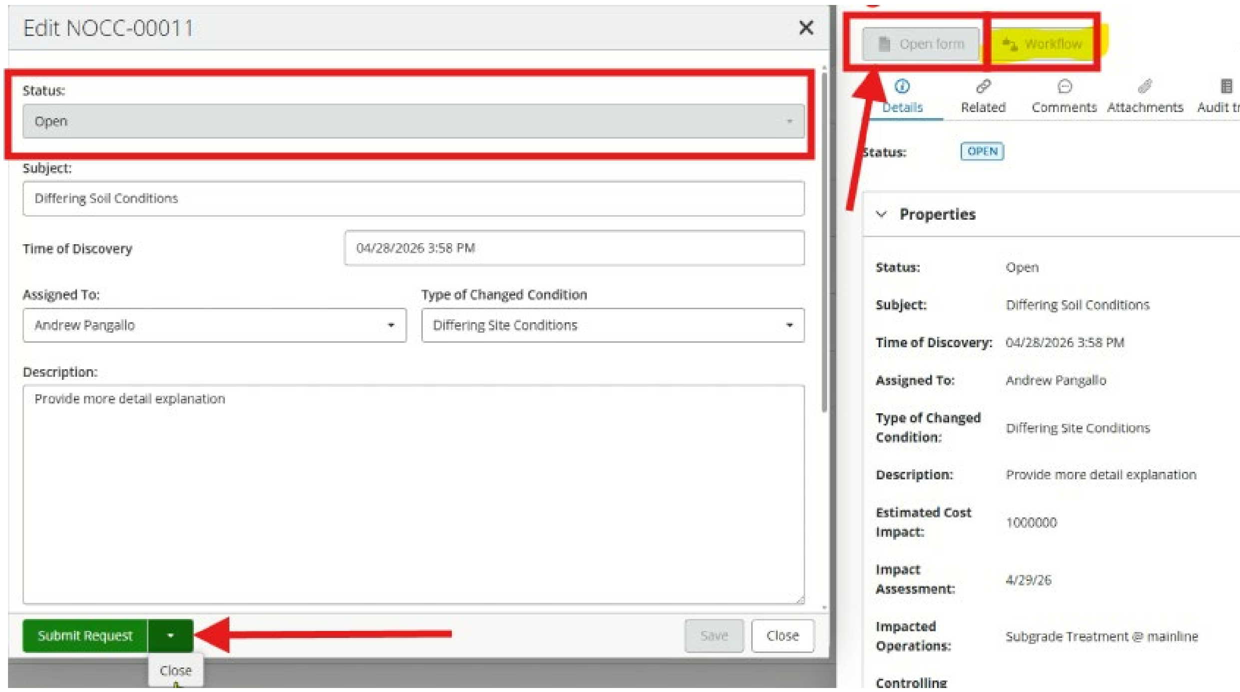


- Fill out all the fields in the form that gets displayed
- ***Notice the status bar is grayed out. The status will be auto generated by the transition steps explain in the General – Workflow section above.***
- Once all fields filled out, select "Save" in the bottom left



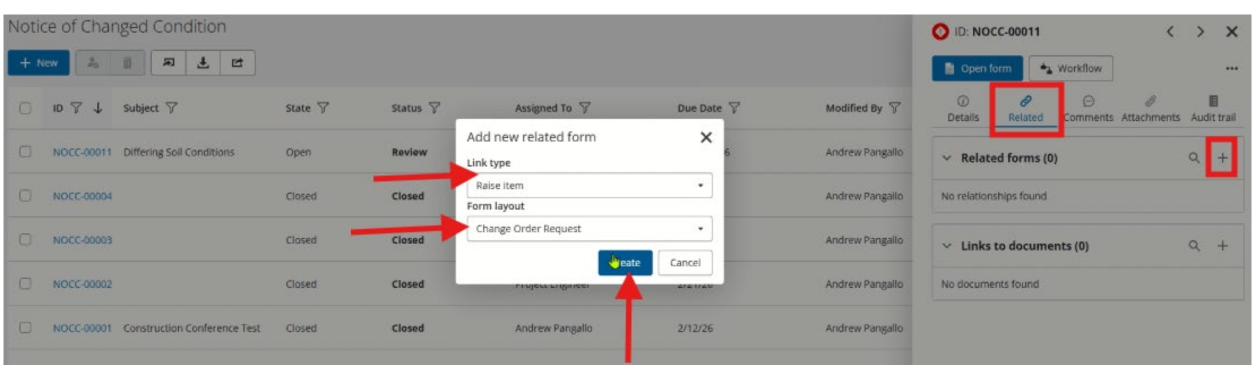
- Once created, select "Open form" to edit the form and manage the status of an item
  - Notice the Status has changed to "Open"

- To transition the status of the item, use the green button in the bottom left to manage them.
    - Select the Workflow button to review the statuses and transitions for the workflow



Change Order Request

- Create a new form using previously mentioned methods and select “Change Order Request Form” or link it to a previously “Approved” Notice of Changed Condition
- To link to a NOCC, select the specific NOCC needing linked and select the Related tab on the right pane
- Select “+” on Related forms
- Select either Escalate item or Raise item from the Link type dropdown
- Select “Change Order Request” from the Form layout dropdown



- Complete all the Fields in the form provided and click Save
- To manage statuses, Open the form and use the green buttons in the bottom left
  - Statuses and transitions will be the same as NOCC

Work Order

- Using the instructions above, either create new form or link to related forms using raise item or escalate item
  - Most work orders should be linked to an Approved Change Order Request

Punchlist

See above for General Form guidance

iModel

Admin

Adding Design Files

Admin Mastery: A Comprehensive Guide to Bentley Infrastructure Cloud - Creating an iModel with Design File Connections in Infrastructure Cloud: Step-by-Step Guide