LARIMER COUNTY ENGINEERING ASSET MANAGEMENT PROCESSES

LARIMER COUNTY

COMMITTED TO EXCELLENCE

Larimer County Service Request Portal Infrastructure Asset Management Process Guide

Note On The Admin Process for Service Requests:

The Citizen Portal is where the request will be made from a citizen or a staff member.

If a request comes in from a citizen the options available within the portal will direct said request to the correct department.

However, staff may need to reassign after further review of the request in VueWorks itself.

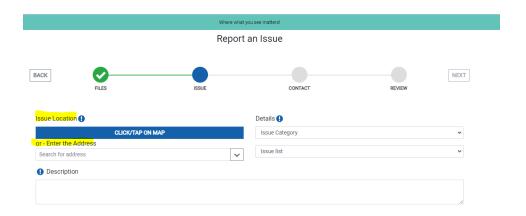
If you have images, please upload them to start the request process.



Click next when ready to proceed.

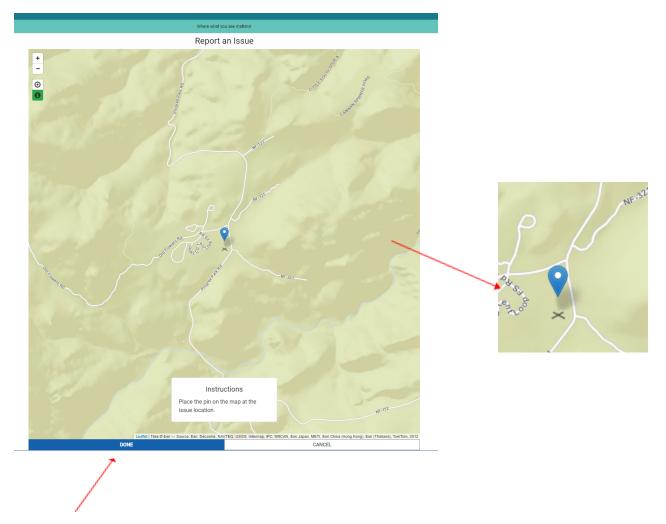
Staff or the Citizen will need to add a location

This can be done by either using the Click/Tap or on Map or by adding the address.



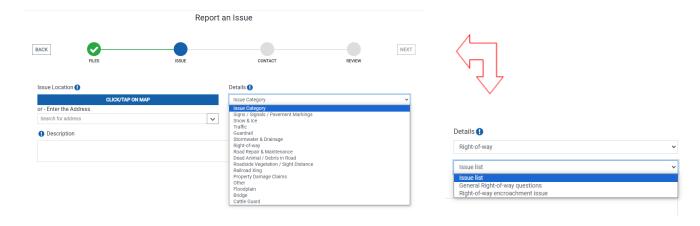
If you use the Click/Tap on Map option a Map will appear.

Staff or the Citizen will need to to find the location by clicking their mouse, and dragging around the mouse until you find the location. You will notice the location marker (looks like an upside down teardrop) has an 'X' that needs to be put on the location.



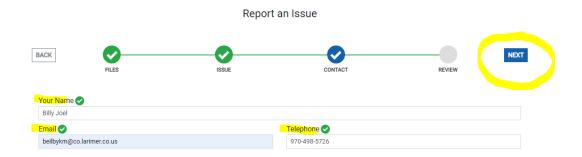
Click done when the 'X' is on the correct spot.

You will then first select the Issues Category and then select from the Issues List.



Staff or the Citizen will need to enter the requesters personal information.

When finished click next.



This will end an email to the Citizen letting them know the request has been made on their behalf. It is up to the staff member responding on how or if the citizen will

This will also send an email to the Staff who should be taking care of the request.

Larimer County Service Request VueWorks Infrastructure Asset Management Process Guide

Note On The Admin Process for Service Requests:

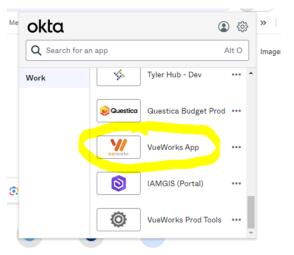
The Citizen Portal is where the request will be made from a citizen or a staff member if assisting the citizen.

Process a Service Requests Through the Portal:

If a request comes in from a citizen the options available within the portal tries to direct said request to the correct department. However, staff may need to reassign after further review of the request.

The 'Role' that the service requests get assigned to will trigger email notifications to the staff members that would handle the request.

To view the request open Okta then select VueWorks



In the menu on the left of your screen, open 'Service Requests' then select 'Find / Manage / Report' and search for the Service Request



A box will pop up and you can search for your service request using the Filter tab or you can use the Table View tab. To open the Service Request, click the box with the pencil to the left that is associated with the email you received.

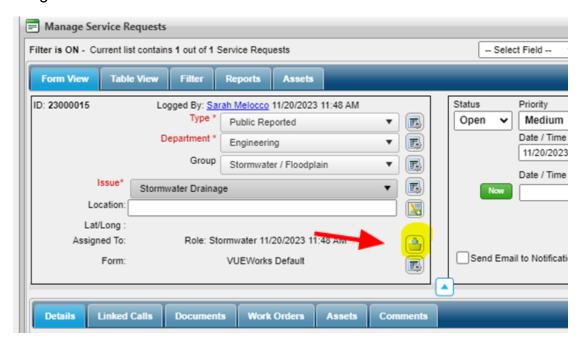


The Manage Service Requests box will open.

THE AUTO SEND BOX WILL BE AUTOMATICALLY CHECKED. IF YOU DO NOT WANT TO USE VUEWORKS TO SEND THE RESPONSE, UNCHECK THIS.



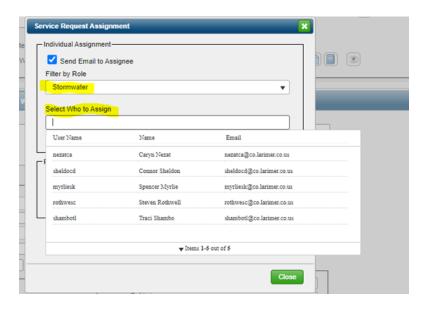
When the Service request opens click on the keyboard with a down green arrow to update the assigned to.



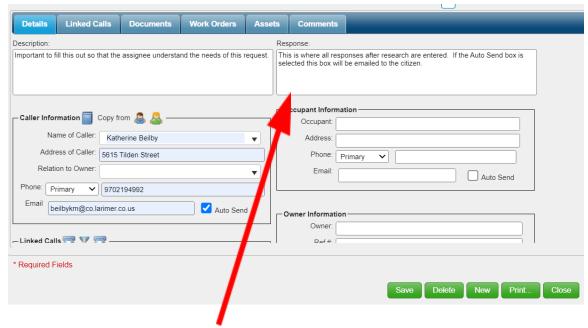
A Service Request Assignment box will pop up.

Select who to assign the service request to by typing in the 'Select Who to Assign'

You can also narrow down the list of names by first selecting the role, then the name.

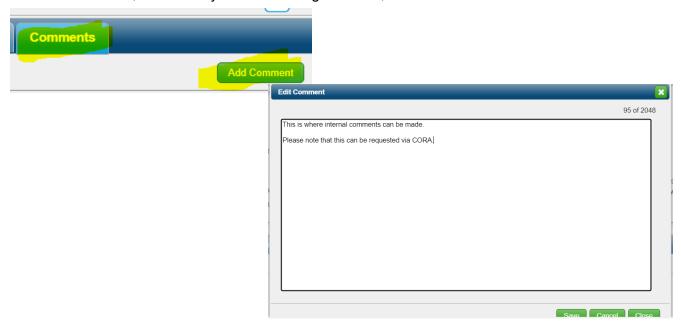


Fill out the important information to help the assignee understand the citizens request.



The Response box is where all responses after research are entered. If the Auto Send box is selected your response in this box will be emailed to the citizen.

To add a comment that will not be seen BUT IS STILL PART OF PUBLIC RECORD the staff member will complete the research and add any notes to the Comments tab. Click Add Comment, write what you found during research, and click Save.



There will be a timestamp added to the comment.



If it is an Engineering Department request or issue to resolve, the assignee will respond in one of two ways:

- 1) through VUEWorks (using above mentioned Response Box and Auto Send checkbox) **or**
- 2) outside of VUEWorks using a County GMAIL account. Please make sure to note this in the Service Request by Copying the email response into the Response Box

To add an asset to the Service Request, click the Asset Tab



Add the asset using one of the following green button options. From Map may be the easiest.

When you select from the Map, the screen will change to a map view. From here you can add an asset.

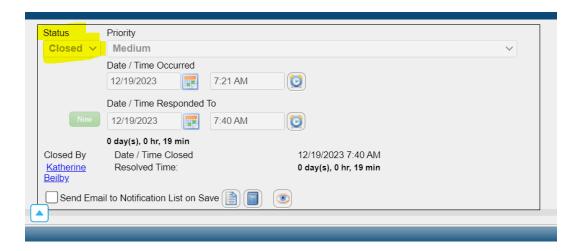
If a Work Order is needed, click the Work Order tab, then add Work Order.

Note: If you add a work order from the Service Request, when the Work is completed, and the Work Order closed, it will automatically close the Service Request too.



If staff does not need to create a work order, staff will need to close the Service Request.

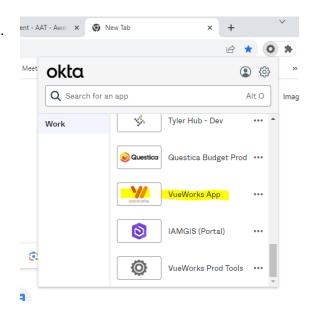
When the Service Request is completed, staff will need to close the service request. **DO NOT MISS THIS STEP** as this will help with reporting.



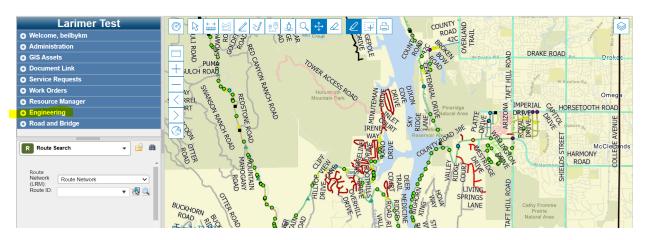
Larimer County Projects VueWorks Infrastructure Asset Management Process Guide

Note On The Admin Process for Service Requests:

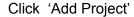
Open Okta and select VueWorks.



When VueWorks opens, click Engineering in the menu on the left



Click Projects



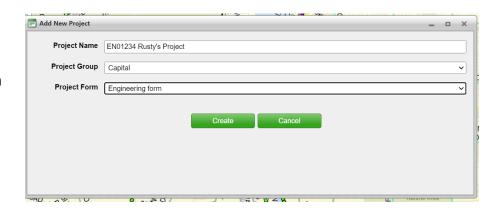


A new pop up to add the project will appear. Enter the project information that was received from the Leadership.

Enter Project Name

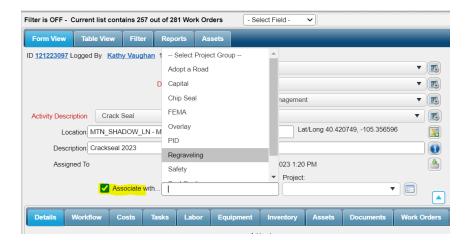
Enter Group Associated with

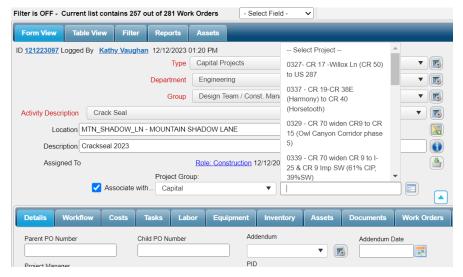
Project Form



Click Create

The new project will now appear in the Associate Projects on the work order screen





Larimer County Engineering Project and Construction Manager Infrastructure Asset Management Process Guide

AS-BUILT PROCESS DEFINITIONS

Discovered Asset - asset which is not in GIS and was not added with the project.

End Date - the date the asset is taken out of service, typically will use the current date unless better information is available.

Event - an asset in GIS, can be a physical asset (i.e. culvert) or a non-physical asset (i.e. snow route, road ownership). This term is used in Event Editor and Field Maps.

Measure - the location, in miles, measured from the beginning of the route. Point assets (i.e. cattle guard) are defined with a single measure while a linear asset (i.e. guardrail) has both a begin and end measure.

Modified Asset - update attribute(s) of an existing asset without replacing the existing asset. Typically done if making a correction or historic condition assessment data needs to be maintained (only applicable for cattle guards, culverts, guardrails, and sign mounts). Modifying an asset will maintain historic condition assessment data but not retain the old attribute values. To keep a record of the old attribute values enter a note in the remarks attribute detailing what attribute(s) changed, the old value(s), and the date of the change.

Move Asset - change the location (route, measure) of an existing asset. There are two cases which must be considered:

- 1. Correct an incorrect location or move the asset to a new location while maintaining the historic condition assessment data (cattle guards, culverts, guardrails, and sign mounts) this must be done using Event Editor.
- Relocate or correct an existing asset location and there is no historic condition assessment data that needs to be maintained: Event Editor may be used to change the location as above or Field Maps may be used to retire/replace the asset.

New Asset - an asset which was constructed/installed as part of the project which did not exist before the project.

Replace Asset - an existing asset is removed and replaced with a new asset. This involves retiring the old asset and creating a new asset. The old asset is added to the Retired Asset activity work order and the new asset is added to the New Asset activity work order.

Retire Asset - an existing asset is removed. The asset is attached to the Retired Asset activity work order and an end date for the asset is entered in the GIS.

Route - the road number (mainline, county maintained subdivision, or PID roads) along which the asset exists.

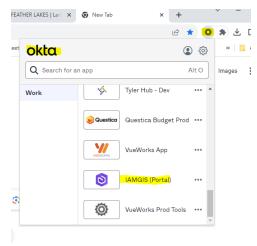
Start Date - the date the asset is put into service - please note that if a future date is entered, the asset will not be available to attach to work orders until that date.

Work Order - a request to collect or update asset data. The work order will have one or more assets associated with it. The work order's activity may be Discovered Asset, Modified Asset, New Asset, or Retired Asset.

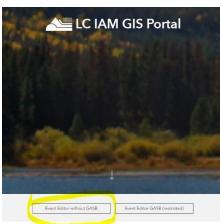
Capital Assets Specific Process

Project Manager (PMs):

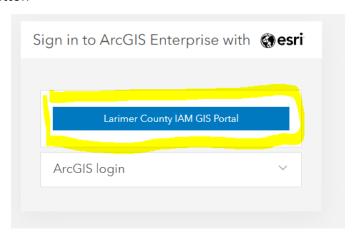
Open Okta, then select IAMGIS Portal:



Select Event Editor without GASB
(You may need to scroll down)



Then click the blue Larimer County IAM GIS Portal button



New Point Asset Project Process

map.

Once you are in the location you are editing, Open the Edit tab.



Click the **Point Events** icon to open the **Add Point Events** widget in the side bar. Attribute Set: Default Point Line Event Note the Route Network is selected in the Events Replacement Events Edit Events Network dropdown by default Add Point Events × Event Layer: Bridge Network: Route Network LIZ. Route ID: Layers Change the Event Layer if needed. Add Point Events New Edit Next Edit Event Layer: Bridge Bridge Cattle Guard ⊕ ▼ Route ID: Count Station Location _ Culvert Method: Ro Curb Ramp Driveway Culvert **₽ ⊕** Minor Structure Paved Road Sample Pavement Marking Spot Start Date: 1 Sian Mount End Date: Use route end date Prevent measures not on route Next > Click the Select a Route on the Map button next to the Route ID box, and then use the mouse Route ID: pointer to select a route on the Click to select by

Your selected Route ID does not need to match the example.

COYOTE_RUN

Route ID:

Click the **Select a Location on the Map** button and click on the map to select a location to place the new event.

- Location		
Method:	Route Network	
Measure:	: ✓ Miles ✓	⊕
	.2] ==	
	× = = =	
	— Location —	
	Method: Route Network	-
	Measure: 0.0657211	liles 🔻

You will need to adjust the Start date DO NOT ENTER THE END DATE on a new asset. Click the down arrow to open the date selector.



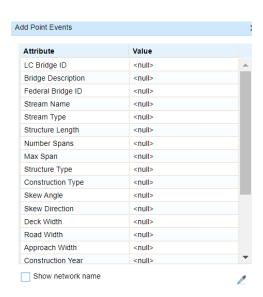
Click the **Prevent Measures** not on route (only if it is not currently selected).

Checking the box means an error will be returned if a measure value outside of the route measure range is entered.



Click Next

A list of all event attributes will populate. (The value is currently null that will change)



You will need to populate the new event record attributes. Use all CAPS when filling these attributes in.

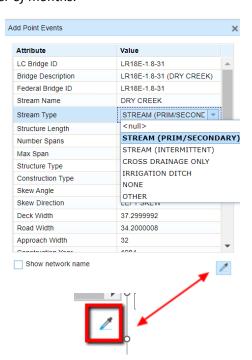
Choose domain values from a dropdown, select dates from a date-picker, and/or type in values.

<u>Do not enter the end date.</u> (Only enter an end when retiring an asset. When retiring an asset the PM will create a work order first, then do the step in Event Editor when the WO gets re-assign after field work is done)

Alternatively, use the **Copy Attributes (eye dropper)** tool to select the same attribute values from an existing point event feature (Bridge in this example) from the map, and further edit the values as applicable. The event layer will need to be turned on in the map to do this (Map tab > Layers list).

** Frequency of inspections for bridges is entered in the number of months.

Your populated attributes do not need to match the example.



Click Save

To Verify that new attribute data was successfully added. To do this, choose the event that was edited from the Layer dropdown. Then, use the **Rectangle** selection tool to select in the location of the newly added event data from the map (the map should still be zoomed to this extent). This will cause the edited record to load in an attribute grid at the bottom of the page. The **Identify** tool can also be used to review the new event data that was added (the layer needs to be turned on in the map).







You are now done in Event Editor and ready to begin the work order for the construction manager.

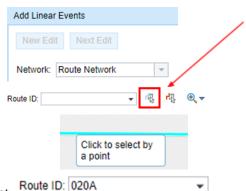
New Linear Asset Project Process

Once you are in the location you are editing, Open the Edit tab.

Click the Line Events icon in the Edit ribbon to open the Add Linear Events widget in the side bar.



Click the **Select a Route on the Map** button next to Route ID in the From section of the Add Linear Events widget. Use the mouse pointer to click on the map to select a route.

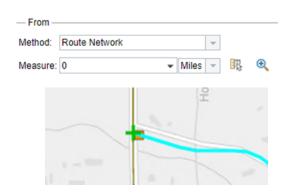


Your selected Route ID does not need to match the screenshot.

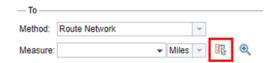
Click the **down arrow** in the **From Measure** box and select **Use the Route Start**.

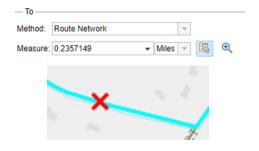


Alternatively, click a location on the route or type in a measure value.



Click the **Select a Location on the Map** next to Measure in the To section, and then use the mouse point to select a location on the route.





Click the **down arrow** next to the **Start Date** field to open the date selector.

Select a date from the calendar widget or check the box next to Use route start date.

By default, today's date is selected.



<u>Do not enter the end date.</u> (Only enter an end when retiring an asset. When retiring an asset the PM will create a work order first, then do the step in Event Editor when the WO gets re-assign after field work is done)

Check the boxes for Retire overlaps, Merge coincident events, and Prevent measures not on route.

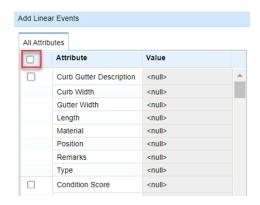
Retire overlaps

Merge coincident events

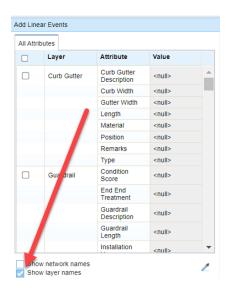
Prevent measures not on route

Click Next

Uncheck the box in the header of the All Attributes area.



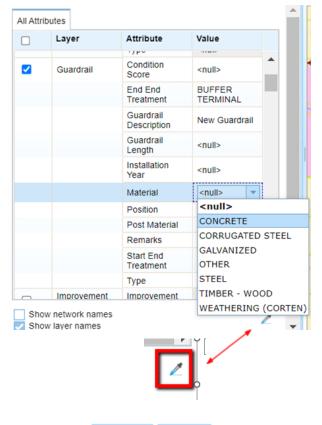
Check the box for **Show layer names** at the bottom of the All Attributes area. This will add a Layer column to the table.



Scroll through the list of layers and check the box next to an event layer you wish to add data to for the selected Route and Measure range.

For the selected event, specify event attribute values by choosing domain values from a dropdown, selecting dates from a date-picker, and/or typing in values.

Alternatively, use the eye dropper tool to select the same attribute values from other event(s) on the map.



Click Apply

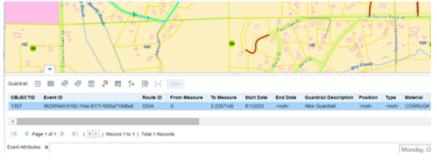
< Back Apply

Verify that new attribute data was successfully added. To do this, choose the event that was edited from the Layer dropdown. Then, use the **Rectangle** selection tool to select in the location of the newly added event data from the map (the map should still be zoomed to this extent). This will cause the edited record to load in an attribute grid at the bottom of the page.

The **Identify** tool can also be used to review the new event data that was added (the layer needs to be turned on in the map).





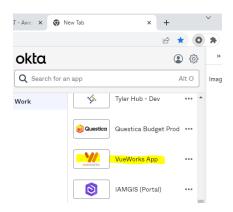


Click Save - You are now done in Event Editor and ready to begin the work order for the construction manager.

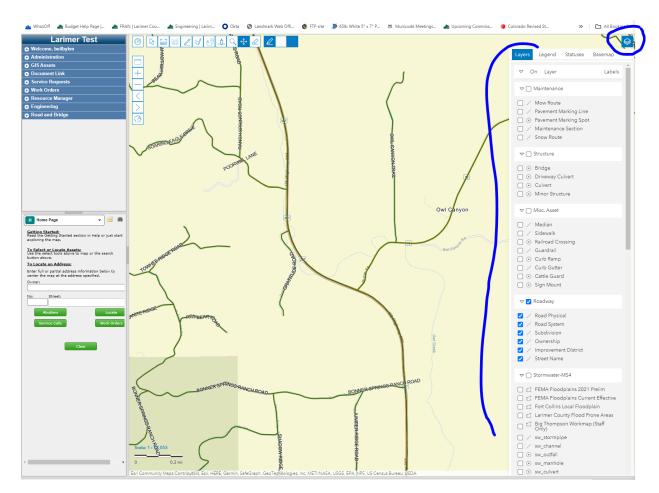
Work Order As-Built Process

Project Manager will then open VUEWorks

Open Okta and select VueWorks.



When VUEworks opens, turn on the layer in which the asset fits (or asset type that was created above) in layers on the map.

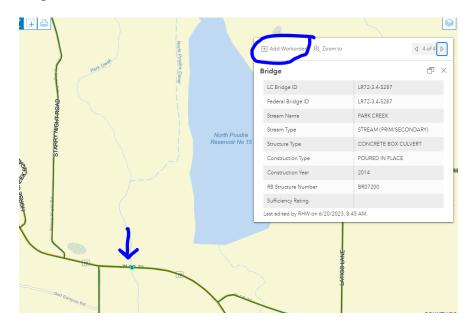


Find the asset that was just created by the Project Manager in Event Editor.

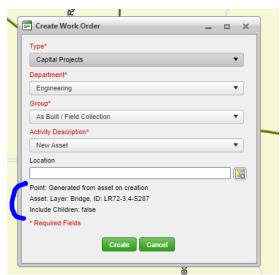
Click on the asset and a box will open up on the top right.

You will click the option 'Add Work Order'

**Please note that if the project is replacing an old asset you will need two (2) Work Orders. One to retire the original asset and one for the new asset.



The Create Work Order box will appear. Fill out the dropdowns based on the work order needed. For field collection (no money needing to be allocated) use the Group 'As Built/Field Collections'. The location will be listed below the location box.

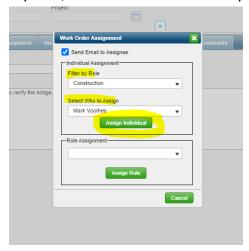


This will need to be assigned to the Construction Manager that is assigned to this project.

To assign, click the keyboard with the green arrow next to the Assigned To.

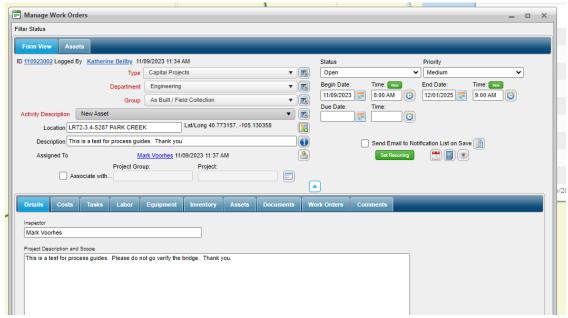


Filter by Role, then select the individual you are assigning to.



Fill out all the important information to make the Construction Managers scope of work easy

to identify.



Click Save along the bottom

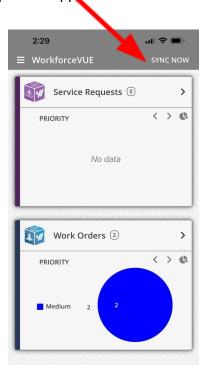
to send the Work Order via email to the assigned staff member.



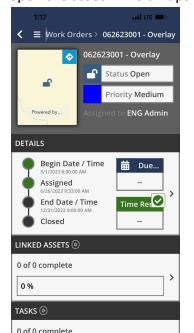
Construction Manager

The Construction Manager will receive an email with the work order information in it. They will go to VUEWorks or WorkforceVue and retrieve the work order.

If using WorkforceVue please sync when you open the app



If you retrieve it in WorkforceVue you can click the option Linked Asset and then Map. This will open the asset in Fieldmaps.



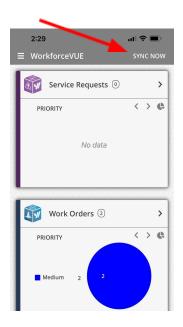
This is a work order in WorkforceVue

Click Linked Assets here to go to Field Maps

<u>Or</u> in the office you can use Event Editor. This will be if anything needs updating from what the PM had originally entered.

Open VUEWorks or WorkforceVue and assign back to Project Manager.

Must sync after you assign a work order.



You are done.

Project Manager

The Project manager will receive an email that they have been assigned a work order.

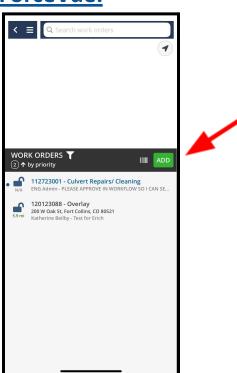
Open VueWorks and search the 'Open My Work Order' and click on the asset to verify the attributes that were changed.

If everything looks good, close work order out. If you find a typo or error, please correct it in Event Editor, then close the work order in VueWorks.

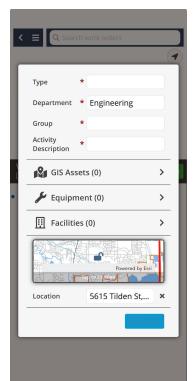
Work Order Creation in WorkForceVue.

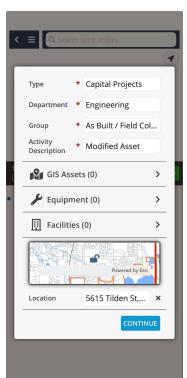
Open the WorkForce App on your device.





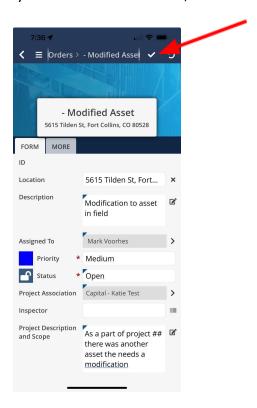
The screen will pull to enter new information into the new work order. Please fill this out according to the work required in the field.





When done, hit Continue

When you hit continue, your work order will present itself differently on your screen indicating you are ready to accept it. Please click the checkmark on the top right. You are now able to sync when attached to wifi, or work within this work order to complete the field work.



You will assign this Work Order to the Project Manager when the field work is done. Remember to Sync so the work order will be sent to the proper Project Manager.

SCENARIOS:

• <u>Unexpected modification</u> - Construction Manager would have to create a modified asset work order in the field using the WorkForce app (unless one already exists for the project, in which case they would just add the asset to the existing work order), link to project, attach asset, make changes in Event Editor or Field Maps. When field work is done, reassign the work order to the Project Manager to verify and close.

Use the above instructions for Work Order Creation in WorkForce Vue Process.

• <u>Unexpected replacement</u> - An existing asset is unexpectedly removed/destroyed/etc. during construction and needs to be replaced. The Construction Manager will work with the Project Manager to create the new replacement asset or they will create the asset themselves in Event Editor (or Field Maps). This will be two (2) work orders, one creating the new asset to replace the one that was damaged, then one retiring the damaged asset once the work is finished.

Once the Asset is created, the Construction Manager or Project Manager will create a new work order (unless one exists, in which case they would just add the asset to existing work order), link the work order to the project (unless using an original WO, in which case it is already linked to the project).

The Construction Manager or Project Manager will also create a new work order for the current asset that is to be retired. Again this work order will need to be linked to the project.

Once all field work is done, the old asset will need to have an end date put in using Event Editor and the work order will need to be closed out by the Project Manager so please remember to assign it to the Project Manager.

- <u>Discovered asset</u> The Construction Manager will create a work order using the the WorkForce app (unless one exists, in which case they would just add the asset to existing work order), links work order to project, creates asset in Event Editor or Field Maps, attach the discovered asset to the work order. Once field work is completed, reassign the work order to the Project Manager to review and close.
- <u>Expected work didn't end up happening</u> The Construction Manager will put a comment on the work order and reassign it to the Project Manager to review and close. The Project Manager will have to make corrections in Event Editor if the new/updated asset was documented in the system before creating and attaching it to the work order.

• <u>Moves</u>: If an existing asset moves to a new physical location <u>OR</u> an asset isn't in the right location in the system and needs to be corrected - location adjustment <u>REQUIRES</u> the use of Event Editor (field maps does not work ...yet). The Construction Manager will work with the Project Manager on who should update Event Editor to make sure that the asset presents itself in the correct location moving forward.

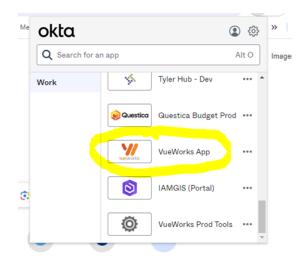
Larimer County Engineering Stormwater Infrastructure Asset Management Process Guide

Stormwater

When a request comes in, the role 'Stormwater' will receive an email alert from the Customer Request Portal Service Request regarding a stormwater issue.

The staff member who decides to complete the task will re-assign it to themselves to remove it from the role. This will alleviate duplicate work.

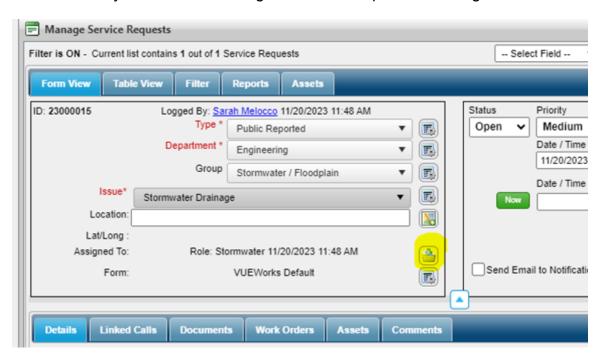
To do this, open Okta then select VueWorks



In the menu on the left of your screen, open 'Service Requests' then select 'Find / Manage / Report' and search for the Service Request



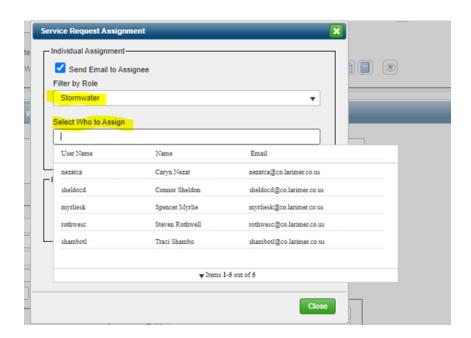
Select the Service Request ID you are wanting to work on. When the Service request opens click on the keyboard with a down green arrow to update the assigned to.



When you click that keyboard with a down green arrow a Service Request Assignment box will pop up.

Select who to assign the service request to by typing in the 'Select Who to Assign'

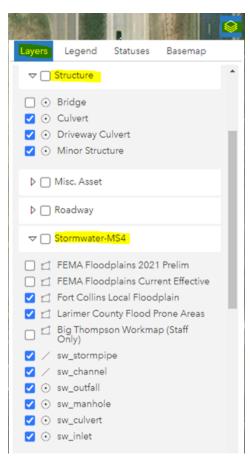
You can also narrow down the list of names by first selecting the role, then the name.



The staff member will complete the research and add any notes to the Comments tab. Click Add Comment, write what you found during research, and click Save



If there are any assets associated with the Service Request, click on the Assets tab. Make sure the applicable layers under Stormwater-MS4 and Structures are turned on.



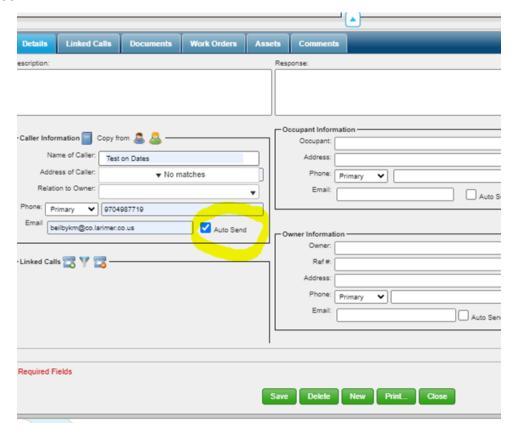
Click 'Add Assets' from Map and select the applicable assets. They will show up as a list under the Assets tab once they have been added.



If it is an Engineering Department request or issue to resolve, the assignee will respond in one of two ways:

- 1) through VUEWorks or
- 2) outside of VUEWorks using a County GMAIL account.

If responding through VUEWorks, you must check the Auto Send box next to the caller information to send an email response. Please note that this will be automatically checked when it comes in.



If responding using County GMAIL uncheck the 'Auto Send' box. The responder must still make a note in the service request Response box.

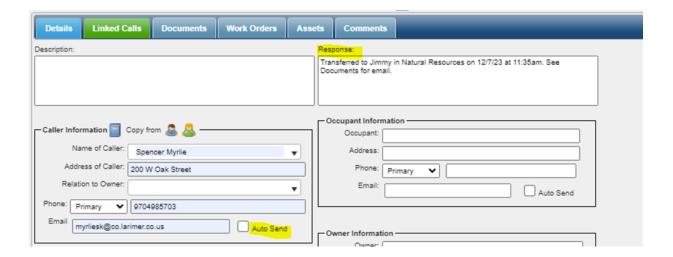


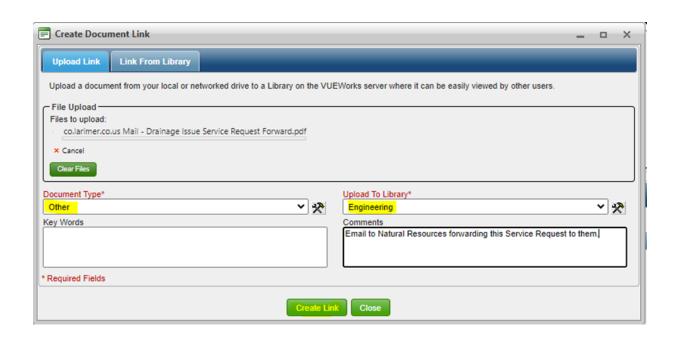
If the request is a RAB issue, the Engineering Department staff member will change the department in the Service Request to RAB. The VUEWorks system will then send the request to the RAB Department where it will be assigned to the appropriate Group.

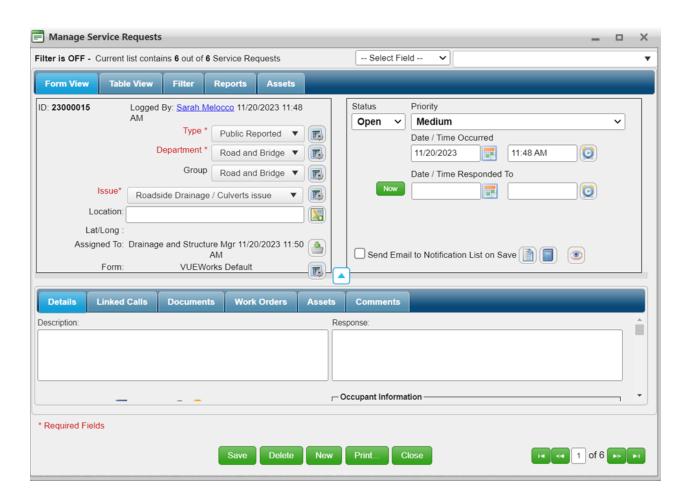
If the request is not an Engineering issue, the Engineering staff member will transfer the request to the appropriate Department using either VUEWorks if the Department has a VUEWorks account or by County GMAIL if the County Department does not have a VUEWorks account. (Currently ONLY Road & Bridge (RAB) uses VUEWorks.)

If the request is transferred to a department that does not have a VUEWorks account, the Engineering staff member will need to send the request using their County GMAIL account. It is important to add notes in the response box stating who and when the request was transferred to. Make sure the Auto Send checkbox is unchecked during this step!

** An optional step is to attach the sent email for the record.





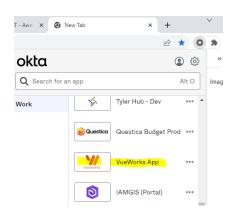


Larimer County Engineering As-Built Work Order Infrastructure Asset Management Process Guide

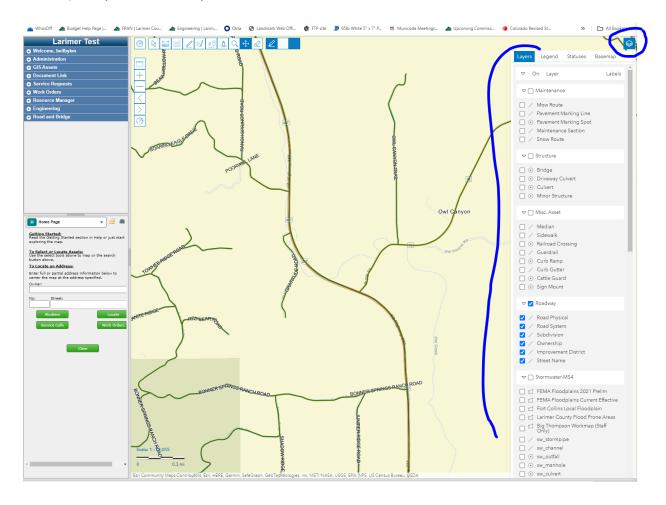
Work Order As-Built Process

Project Manager will then open VUEWorks

Open Okta and select VueWorks.



When VUEworks opens, turn on the layer in which the asset fits (or asset type that was created above) in layers on the map.

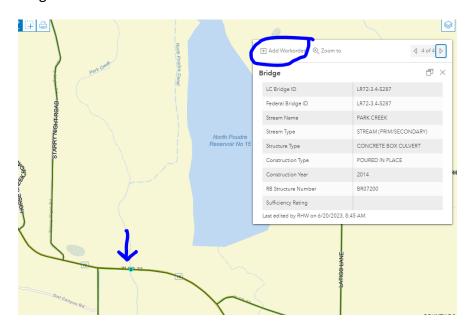


Find the asset that was just created by the Project Manager in Event Editor.

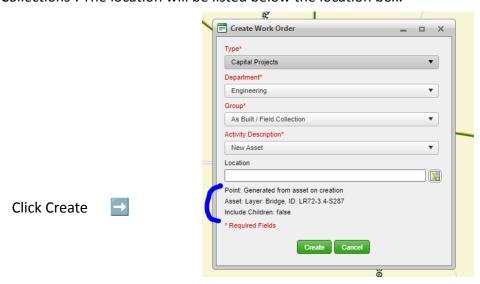
Click on the asset and a box will open up on the top right.

You will click the option 'Add Work Order'

**Please note that if the project is replacing an old asset you will need two (2) Work Orders. One to retire the original asset and one for the new asset.



The Create Work Order box will appear. Fill out the dropdowns based on the work order needed. For field collection (no money needing to be allocated) use the Group 'As Built/Field Collections'. The location will be listed below the location box.

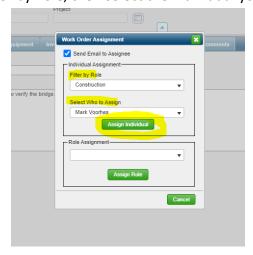


This will need to be assigned to the Construction Manager that is assigned to this project.

To assign, click the keyboard with the green arrow next to the Assigned To.

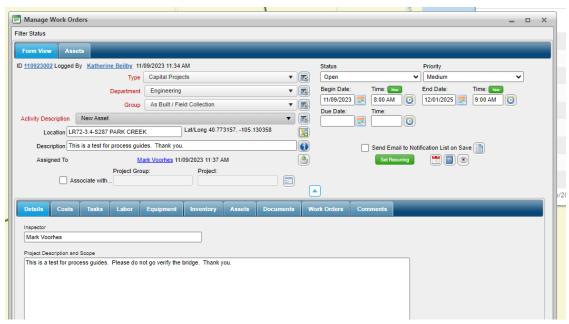


Filter by Role, then select the individual you are assigning to.



Fill out all the important information to make the Construction Managers scope of work easy

to identify.



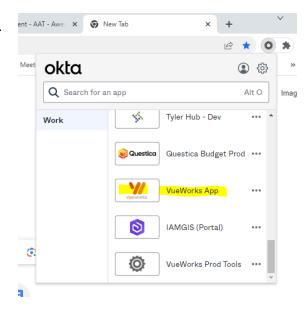
Click Save along the bottom

to send the Work Order via email to the assigned staff member.



Larimer County Work Order Standard Infrastructure Asset Management Process Guide

Open Okta and select VueWorks.

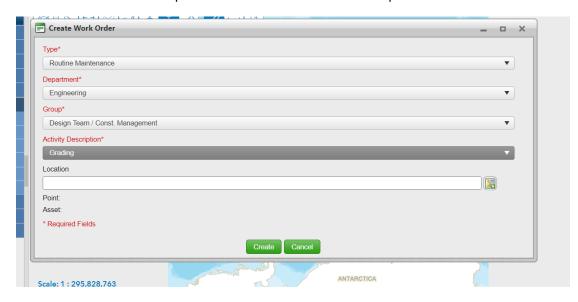


To create a work order please select Work Orders on the left side of the page.



Select Add New Work Order – Fill out the drop-down fields to match the work required then click

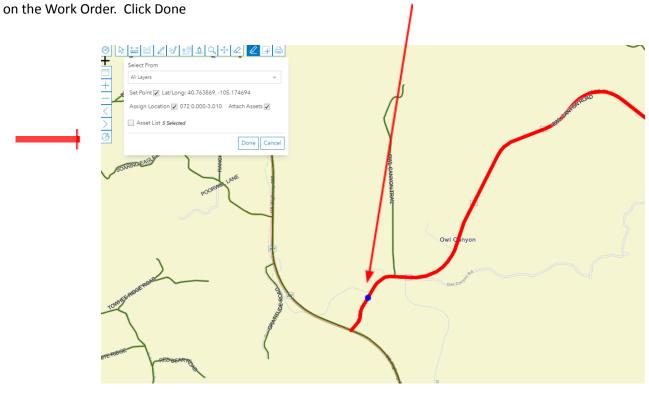
'Create'



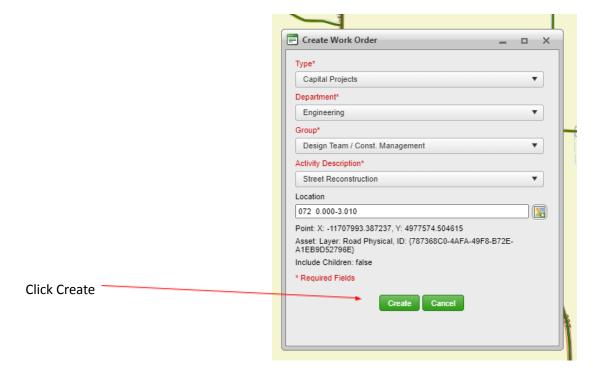


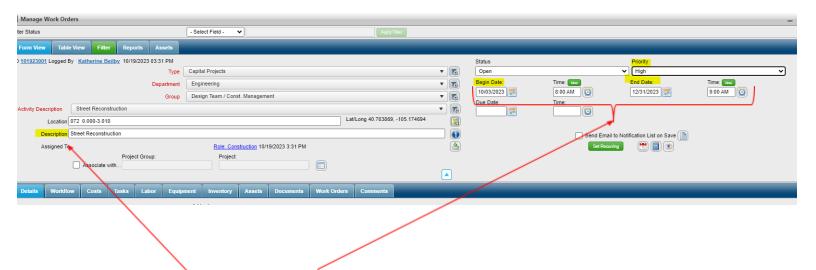
Make sure the layer that you are wanting to view has been selected and the asset has been created.

You will have to zoom in far to be able to select an asset. Click on the asset you want. This will populate



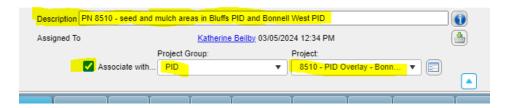
You will notice that the location field is now populated.





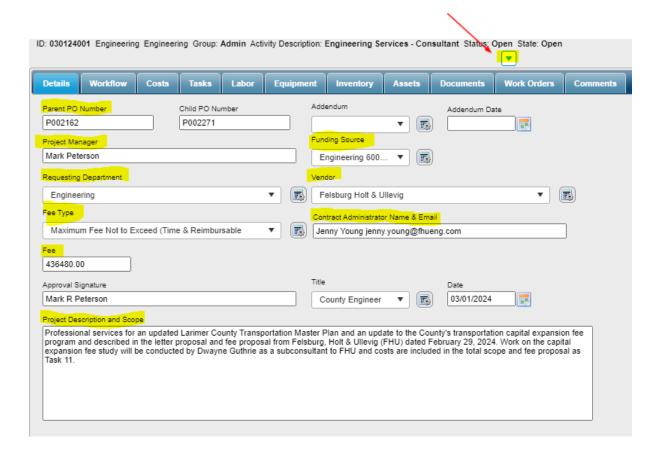
Fill out the Description, Priority and Term Dates. The due date can be left blank. The Description must start with Project number if applicable.

Once that is complete, you can move on to finish the Work Order details. If this is a part of a project, you will associate it with that project.



Fill out highlighted areas. (addendum only if it is a change order, see addendum instructions)

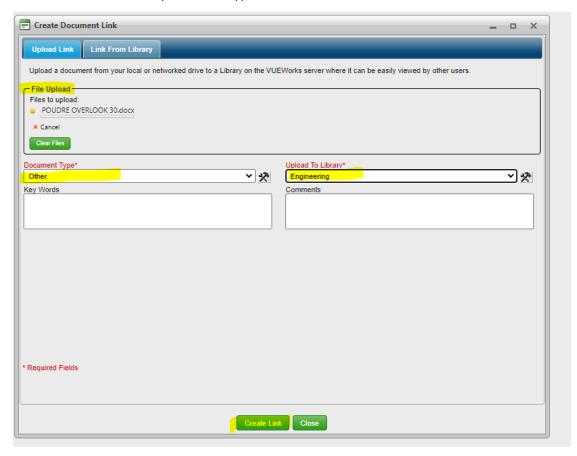
Quick Tip is to click the arrow pointing up to make the bottom screen larger.



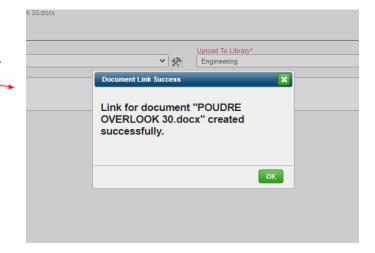
Under the Documents tab, you will upload the Scope of Work from the Contractor.



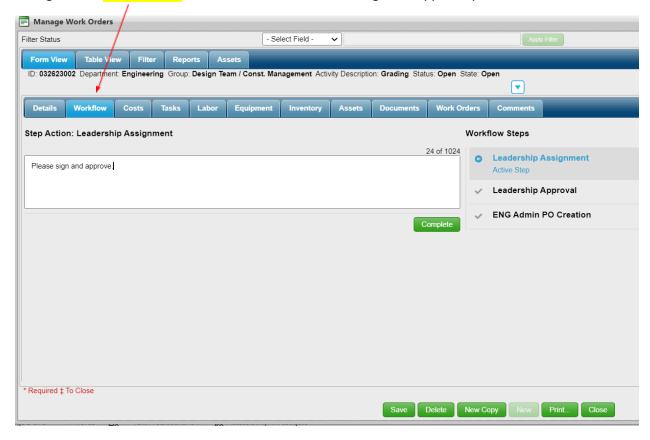
Click browse to find and select file to upload. File type must be a PDF.



This will pop up if the document is attached..

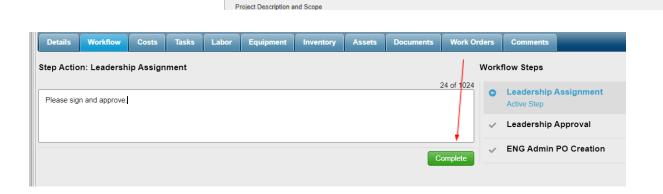


Then go to the workflow tab to submit the Work Order to begin the approval process.



This step will trigger the flow to the Director or Assistant Director for approval. They will receive an email then login to sign the Approval Signature on the details tab, then hit complete on the Workflow tab.

▼



The Work Order will then go to the Admin Team for creation of the Purchase Order.

Approval Signature

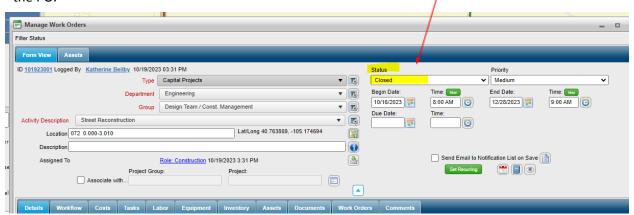
Purchase Order is created in FRAN. This may take 1-2 business days to complete.

Once that step has been completed by Admin in FRAN, A will go into the Work Order in VueWorks and add the Child PO Number into the Work Order.

Parent PO Number	Addendum Project Number EN1234		Addendum Date PID No Tilde No
Requesting Department		J	
Fee Type Maximum Fee Not to Exceed (Time & Reimbursable ▼			
Fee 50000 Approval Signature	Title		Date
Da Boss	County Engineer ▼		03/26/2023
	County Engineer ▼		

The Work Order will then be routed back to the Project Manager to print and send to the contractor for their records.

When the work is complete, the Project Manager will update the status. This is important as it will send an email to everyone on the notification list. Admin will be added to this list, so admin will know to close the PO.



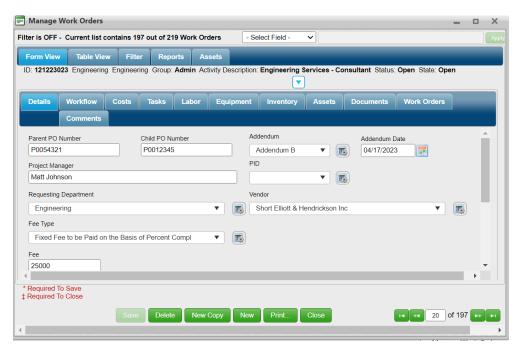
- **As a reminder contractors/vendors do not need to sign the Work Order as the Scope of Work submitted to the Project Manager is sufficient.
- **The PO will be attached to Documents

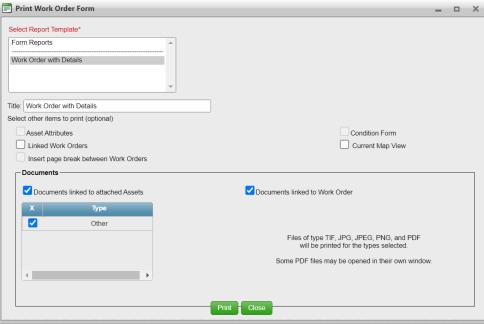
Print the PO to PDF to send to the vendor. Select the attachments you would like to send as well.

PO

Scope of work

Work Order

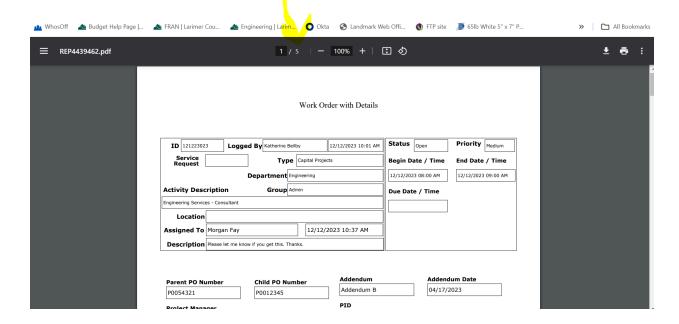




The PDF will pop up and you can download then send it to the vendor.

If you select the documents to attach, you will notice it auto merges the documents.

You see how it savs 1 of 5 names? That means that attachments are all there



This will be sent out to the vendor via the PM in an email.

Addendum Guide

Open your original work order.

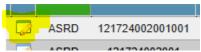
Go to the workflow tab and click 'Create Amendment' then close that work order.



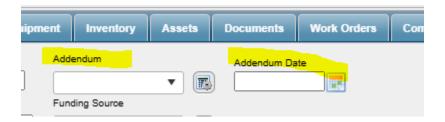
To open the Addendum, go to 'Find/Manage/Report' then click the tab 'Table View'. It should be along the top and will have a '001' at the end of the original Work Order number. (may be 002 or 003 depending on how many amendments there are'



Click the calendar button to the left to open.



The only difference is you will fill out the addendum portion, any empty fields (including \$ amount) and attach a new scope of work.



To forward for approval, please click the tab Workflow, and complete the step here.

