

U-5301 Hydraulic Review - Agency Coordination Meeting-20260715_100054-Meeting Recording

July 15, 2026, 2:00PM

3h 29m 40s

● **Perlin, Joel P** started transcription

PP **Perlin, Joel P** 0:57

Sounds great. All right, everybody. Thanks for your patience. We'll go ahead and get started. We're here for the U5301 hydraulic review. So as a reminder, everyone, this project is the improvements to US 64 west of Laura Duncan Road and the CSX rail bridge all the way to US 1.

out in Apex and Cary. Purpose of this meeting is to do a hydraulic review. As a reminder, this project is not in merger. However, we're still going to do a merger style meeting just to make sure we're keeping our agency partners in the loop with our plan and to resolve any friction points early on in the process.

So with that, let's go ahead and start with introductions. We'll start with ourselves here in the Century Center. I'm Joel Perlin. I'm the NCDOT project manager for this project. Sarah? I'm Sarah Sherman. I'm a senior project manager in the project management unit.

Rob Roddings, Division of Water Resources. Wernerly, Division Five, Environmental. Jack Lee Simon, Internet Division Five, Environmental. Map is Internet Division Five, Environmental.

Deanna Riffey, Environmental Coordination and Permitting. Eric Alsmar, Coord of Engineers. Brianna Freeman, Sandy. Ryan Elam, Sandy Design Group. Sarah Lou Keeley, SCB Roadway and Katrina Hazel with Stantec.

All right, in the back.

Katie Harville, Environmental Policy. Morgan Wells for Environmental Policy.

Right now, we'll open up to the virtual room. I'll go down the list on Teams. Jason, do they?

DL **Dilday, Jason L** 2:44

Jason Dilde, Environmental Coordination and Permitting.

PP **Perlin, Joel P** 2:52

And Jason, we're having a hard time hearing you. I don't know. We'll try Jason Elliott and see if it's on our end or yours.

EC Elliott, Jason C 2:59
Jason Elliott, Environmental Analysis Unit.

DL Dilday, Jason L 3:04
Can you hear me now?

PP Perlin, Joel P 3:04
Might be on our end. Let me see if I can fix the speakers here real quick.
Christine Farrell.

FE Farrell, Christine E 3:24
Hey, Christine Farrell, dot Environmental Policy Unit.

PP Perlin, Joel P 3:26
Hearing the audio here. Apologize everybody, let's see if we can.
Exceptions.
Test, test, test. So it looks like my mic is working.
Having trouble with our speakers here.

FE Farrell, Christine E 4:23
Can you hear me now?

PP Perlin, Joel P 4:24
Okay, there we go. Got it. Nice, thank you. All right, let's start over. Sorry, Jason, if you could start again for us.

FE Farrell, Christine E 4:26
Okay.
You're welcome.

DL Dilday, Jason L 4:34

I guess you mean this, Jason, but yeah, Jason build a environmental coordination and permitting.

PP **Perlin, Joel P** 4:36

Yes, sir.

Got you this time. Thank you, Jason. Robert Bullet.

Robert Bullock, can you hear us?

Come back to Robert Jason Elliot. Oh, there he is.

BW **Bullock, Robert W** 5:01

Sorry, I was Robert Bullock, Division Five Construction.

PP **Perlin, Joel P** 5:06

Jason Elliott.

EC **Elliott, Jason C** 5:08

Jason Elliott, Environmental Analysis Unit.

PP **Perlin, Joel P** 5:11

Christine Farrell.

FE **Farrell, Christine E** 5:12

Christine Farrell Environmental Policy Unit.

PP **Perlin, Joel P** 5:16

Jared Gray.

GS **Gray, Jared S** 5:18

Biological Surveys Group.

PP **Perlin, Joel P** 5:21

800.

HF **Hardin, Faith** 5:23

Faith Harden, Division of Water Resources.

PP **Perlin, Joel P** 5:30

Randy Hinger.

RH **Randy Henegar** 5:33

Yes, Randy Heniger, TGS Engineers. We are supporting the hydraulics unit with review.

PP **Perlin, Joel P** 5:42

Melissa Ruiz.

Melissa, can you hear us?

SP **Sarzaeim, Parisa** 5:54

You said Panister?

PP **Perlin, Joel P** 5:56

Sure, go ahead, Teresa.

SP **Sarzaeim, Parisa** 5:57

Yeah, Paris has the Division of Water Resources.

PP **Perlin, Joel P** 6:01

Great, and Melissa Ruiz, can you hear us, Melissa?

Well, Melissa, if you're having some audio, let us know. We'll try to troubleshoot that. Otherwise, we'll go ahead and get started. Is there anybody else on the call or in the room that I did not call on or didn't get to introduce themselves?

Nothing hurt. Great. We'll get right into it. Then I'll turn it over to Brian and Katrina to go ahead and give us an overview of the hydraulic review.

Sure. Katrina, did you want to open up with the purpose of the project? So a basic overview of what it is. Sure. Good morning, everyone.

The purpose for this project is we're doing some improvements from west of Laura Duncan Road in Apex to US1 in Carrot.

Currently, we have several at grade intersections that will be converted to an interchange. There will be an interchange, a new interchange proposed at Laura Duncan Road, at Lake Pine Road, and at Edinburgh Drive.

We're doing some Rd. improvements along Pine Plaza Drive, in addition to US 64. We have on this project, we also have a rail crossing, and we'll be proposing, we're proposing a new bridge for that rail crossing. And that rail crossing is located west of Lord of the Road. And that'll be covered in today's session as well.

Thank you. That's it. Thank you, Katrina. We're going to go through, like Katrina said, there's two parts of this project. There's A roadway improvement part and there's a rail part. Rail parts required for the roadway improvements. There'll be a bridge replacement over US 64 on planning sheet 5.

RM Ruiz, Melissa 8:02
You.

PP Perlin, Joel P 8:17
It'll be a new location, so it'll be offset from the existing. And that part is to happen before the roadway improvements. The rail plans are a little further along than the roadway plans. We're reviewing them at the same time because the permitting is going to happen at the same time. We did get some input.

Oh.

from Heather Montague on some of the rail drainage that was reviewed. So we're going to talk about some of that as it relates to the roadway crossing as well. So our plan is to go through the roadway section first. We have all the typical sections in this plan set. I don't know that we need to go through those typical sections, so we're going to jump right into the plan sheets. So we can knock this out in two hours. Type of sheet.

We do have a jurisdictional crossing on plan sheet 4. This is the beginning of the project, just west of Laura Duncan, where Apex High School crossing is. This is jurisdictional stream SA on the upstream end and SE on the downstream end. It is Just.

So then.

It's shown as an existing 48. This is actually an existing 54 inch pipe and it is undersized. There is quite a bit of development in the drainage area. Drainage area is about 60 acres for this crossing, 74 acres. They developed the, it's I think,

RM Ruiz, Melissa 9:50
Yes.

PP **Perlin, Joel P** 9:58

crossroads, Ford is in the drainage area, a lot of pavement, which results in the need for an additional cross pipe. Plan is a jacket bore a floodplain pipe to maintain the existing width of the stream and extend the existing 54 to serve as the low flow barrel.

We're showing bank stabilization, log stream side.

A common.

theme for almost every jurisdiction crossing this project is none of the none of the pipes missing pipes are buried. They're all they're all at that elevation. So these extensions, we have noted in the plans will also not be buried. Heavy vegetation, this was a summer photo.

The downstream side is a little easier to see. So when we're putting in these supplemental pipes, there's a couple areas that are very similar to this. We're going to jack the board a foot above the invert of the existing pipe.

So, it serves as a as a high flow barrel, but they step up in the bed to that pipe, similar to what you see in the box corner.

There's the internal upstream by.

See, it's not very, there's some stones, but it was not. They have our space in the bed elevation.

Hard to see here, but this is an image of the looking upstream standing at the base of the pipe.

Okay.

I'll mention we did get some comments to show rip rack in the bed from some of the rail crossings.

Our general approach on the roadway is to not show rip rapping the bed for the upstream side, but to show rip rapping the bed.

RM **Ruiz, Melissa** 11:47

Yes.

PP **Perlin, Joel P** 11:52

on the downstream side, especially where we don't have pipes that are buried, try to eliminate potential cutting.

I did want to get also using the bed on the upstream sides.

Yeah, I know from our standpoint, we see this in the field, having it on the upstream side as well is useful, especially when they're not buried. And some of these are extensions with new head walls. So just the

RM **Ruiz, Melissa** 12:11
The.

PP **Perlin, Joel P** 12:26

construction room to just from the head wall and its footer and everything, you end up...

with disturbance to the stream bed that's just outside of that head wall. So a lot of times counter sunk in the flow line is useful. Okay. I think in a way, especially in these types of situations, getting it permitted ahead of time is better and finding out later that you don't need it is better than

coming back saying we need it when you don't have it approved. Because when you when you're extending an existing pipe that's never been buried and you have to match the extension, you know, with the slope of the pipe, you have it's a gamble of how much is it going to hang or, you know, on each side. So

The rip wrap has to be massaged in in such a way to allow the water to try to try to act as if the pipe was dirty. Right, yeah, I'm with you.

In the past, we have not used filter fabric under the stone in the bed. Is there, is that still the direction where we got no filter fabric in the bed? In the bed. Filter fabric on the banks. Okay. And there are updated details that show the filter fabric keyed in.

In that top edge, but you have no fabric in the foot line. OK. Do you want to show embedding with native bed material between the riprap, add some note to do that, or just show, just let it slip up? Yeah. OK. In this part of the state, it will fill up. Yeah, yeah.

Okay.

All right, good. That's great input. This is going to be...

An approach we're going to follow for a lot of crossings on this project. I'll say one of our comments and it may depend on.

each individual stream crossing, both where warranted taking the riprap on the banks, land route about 3 feet. There's some details for that as opposed to just the end pointed stopping. Okay.

Good point, especially with these flashy urban systems. You never know what it's

mean.

Go up like that.

All right, let's go look at the downstream side. Just audited.

I'll string now, I say, and it's, ohh, OK. Several different names. I mean, what else? Ask all of it.

I was about to say, I do like the whole thing has the same name, so you know, yeah, I think we have, I think there are other.

RM **Ruiz, Melissa** 15:04
No.

PP **Perlin, Joel P** 15:10

There's another crossing that has a different name upstream than the fourth.

That one is we get through it, OK?

Yeah, this that then reviewing them TR. Oh, OK, then corrected all those things, OK.

There's another question in the real part.

I'm trying to build your back up for OK.

Alright, so the downstream side of our approach is to show same thing with the with the flow plan pipe, we're gonna set it a foot above the bed.

And you can see there's. I don't know if that's placed for a prop, but there's stone in the bed already at the outlet side of this, this cross pipe.

Not buried. We will be extending it a few feet.

Not as far as the uptrend side, this is looking downstream.

Standing at the face of the pipe.

No big scour hole.

This this upsize this adding this floodplain pipe is strictly related to the increase in the pervious area flood line or the in the drainage area.

New developments typically have pawns, but we're sizing these structures to assume that those ponds aren't always going to be there. And that was that was a little further downstream.

So no real bait degradation that we could we could tell.

So everything looked pretty good on this one.

Same approach, no rip rap, no filter fabric of the bed for the downstream side.

Photographical banks.

This one I guess.

The outlet of this wood plain pipe that's going in is.

Outletting outside of the current channel bed, so there'll be excavation of that bank and placement of rock that probably warrants having built fabric under it just on the what we call the float plain bin.

Yeah, yeah, yeah.

So from the at the bank stabilization, which will go up a foot basically next to the low flow pipe that will have filtered fabric under it.

Do you prefer to have rip wrap on that flow plane bench or would it?

Should we maybe try to use Core 5 or?

Typically, when it's excavated through new material like that, it's best just to plate it with rock filter fabric and rock as opposed to trying to get any sort of vegetation on it, OK?

Again, it's been smooth like a rural area.

It might be.

5th third thought it'd be different.

So urban and flashing, even even a floodplain type, sometimes you know a high pressure hose, yeah.

So this is this is gonna go to stream SA on both sides right?

OK.

Alright, alright.

Any other comments or questions about this first crossing?

Our general comments about the jurisdictional process most of these are gonna be the tension of existing pipes and extensions with sub supplemental structures.

I guess, Ed, once we get further along in design and sequencing and things like that, understanding where Ford fits are gonna be located.

Yeah. What water management looks like.

And if we have 4 pits.

That close to the stream, I guess making sure that when the board fit is removed, you need disturbed areas are properly stabilized.

With that, be slight lengthening of proposed regret, thanks to just depending on where that portfolio is.

Yeah, but keeping that in mind, yeah. And we've been getting getting pretty detailed and trying and showing at least in the road control plans where we anticipate more and receiving pit to be. So that we know how big those four pits bigger than the receiving pad, my assum.

The board's the board's gonna be.

On the on the South side here. But it'll be something we go through.

I'll just be a part of Mom's side.

Alright, we'll move along.

Plan sheet five has wetlands.

I guess I'll mention I should have mentioned this before.

We are in the blue shirt watershed.

Everything is buffered. All streams on this project are buffered except one that one stream that's not subject is not being impacted by project.

It's it's between two wildlings at the at the.

So there's a widely shared on this on this side.

Our primary means of treatment are grass wells.

Down the project, there's a big cut on the left side of this particular section of the project does have a media ditch.

There's a wall on the right side.

Typically what we like to do is is get treatment with the typical sections and try to get as much treatment as we can before it gets to the channel. This particular system was tough because we had.

The end of the system and then we get really close to the next screen crossing and you have nothing but a wetland on the side.

We didn't want to cut and do this through the wetlands, so we're showing a direct connection to the cross pipe.

Here, unfortunately this is right on the match line, but we're showing that direct connection to a junction box.

And this is the supplemental Flip link pipe that will that will accompany 2 existing 60 inch pipes that are going to be extended.

Similar situation, except we have two existing pipes.

We're gonna retain the two existing pipes and extend and supplement with a flood plain pipe that we set up above the existing bed.

This is just downstream from Apex High School.

This is the inlet head wall and two existing pipes. The pipes are being conditioned and wall was raised at some point.

As you can see it, this is kind of typical of what we see when the pipes aren't buried.

These are portions of varying 'cause you have a channel that comes in that's starting with and winds out right when you get to the base of the pipe.

And then showing you the inland condition.

OK. But you want me to call you the premature on this department?

No, we don't have department volunteer or the drawings that you're showing.

Did you e-mail Melissa's asking for me?

I do not know I can.

This is looking upstream, standing on the head wall.

There's a this this is a a pool. One of these bands here. What you're looking at is cleared as a as the sewer easement. Our extension's gonna roughly be all the way to that.

Pool feature appears to be.

Not related to A to a pipe or it may be related to increased velocity.

As water comes through this this area where the OR the easement is.

This is this is broccoli, the area where.

That for the roadway, it's not going to get to the sewers.

It'll be.

It'll be close to fill.

You can see the sewer line.

I don't see the easement lines here.

So.

Do you say something?

You made the resignation.

Oh yeah, yeah. The E OK, so that cleared there. You can see the the break in the woodline here.

That's that's roughly what we're looking at in the image.

So this is this is where the inlet of of the new pipes will be.

Same approach we were going to use.

We were showing rip rap on the banks, but I think we want to use rip rap in the bed only like there was some stone in the bed already out there, potentially in the easement.

I don't know if they drive across there.

Probably that that to me is what I suspect.

May be the the reason for this pool.

He is the sign of easement closest to ease.

Yeah, this the the dark E is the proposed construction, isn't it?

OK.

Are you anticipating when you meet them to do occasional work sooner?

Yeah, yeah, that's true, we.

'Re not.

Unless it goes under.

That's something that has not been.

Those design.

I was gonna suggest if if it if it happens since this side of the road is all the river pavilion disturb when you board your new floodplain by you think about music beside.

That it would like that you already have like a, since it's already accessed through the easement for that kind of work.

Partially. The other reason was for the alignment on the downstream side.

It worked out better to to do it on the left of the existing.

I lost connection here.

Give me just one second.

So this this may give a better image.

The geometry of the channel, I guess upstream of the pipe.

How to make that easy decision to show the supplemental on the left side of the existing so that we didn't have something way overdue for planning.

Trying to Oh no, I meant doing the the the board under the road from from the oh, oh oh. Since there's already access there with the easement.

Yeah, it makes that way.

The outlet side is less disturbed, right?

A suggestion is OK yeah.

Thank you, Stephen.

I want you to drive it over the street like the utility people do, but you still need to.

I guess last thing I'll show is is we do have a, a, a ditch shown picking up a lot of this area as you get towards Laura Duncan is is impervious with falls. So we're we're chosen open channel.

Going through the buffer to the stream similar similar to the feature that's out there to, there's a pipe out there to the A so.

I'm not sure what the reason that PIC is.

Probably sewer access. Sewer reserves access.

I'm not sure if that's going to be needed in the future.

Right now we're showing a a base stitch that will act as a swim.

Any questions on the upstream man? Additional comments?

Let's layout.

Moves to the downstream side.

Showing rip rap in the bed, it's.

This is an image of the existing.

Existing pipes that are not buried here to be some stone in the in the bed already fairly shallow flow.

The stream is roughly matches the existing width of these two pipes at the downstream side, which is a little different than what is at the outstream.

This is looking downstream.

And you'll pop up the on top of the pipes. This is a cleared area.

This is also another easement.

I believe it's a power easement.

And then this is a.

This is an image right? Once you get out of the easement where you get into the into the woods looking upstream roughly where the location where the where the new allot pipes will tie back in.

So you can see some Steve Banks what looks like erosion I imagine through the easement may have been cut down at some point, so that the out of these five will be land those makes back with a rip wrap.

Of course, we'll have the floodplain pipe set a foot above the bed.

Oh, I was gonna ask.

Have you seen that?

I guess there's a possible.

May change easement on the this outlet side as well. So change your thoughts about side of the.

I guess keeping it on the outlet side with the bullet potentially a large excavation it in the woodland area, well that's a good point.

OK.

Especially when I said earlier I forgot about the weather.

There. Yeah, I probably won't avoid getting them out of the wetland.

Since you do have the power easement, that might make it.

Yeah, it's.

I didn't realize she had a power easement on that side.

The good thing about the power easement, since it's already cleared.

OK.

So we're recording.

We are OK, right?

Thank you so much. Good question.

Also on this one as Jay is now William's friend, OK.

Thank you, Dan. Real time updates.

Shreve SJ is not is going to be Williams Creek in the in the new NRTR.

Or someone toe protection for this area area in lieu of cutting new dishes through the buffer. We don't have any conveyance concentrated flow that we're taking to the downstream side of this layout.

So in lieu of cutting new dishes, we're showing toe protection, which is rip rap at the toe of the fuel slinky found.

Buffer if possible.

Concentrate it to load.

Any additional comments on stream SJ Williams Creek crossing?

Any general comments about this is through the buffer.

OK. We'll course have some water management plan with with Cals and velocity and all that.

This one does just Cliff the wetland.

We're not planning on daylighting it into the wetland.

It'll basically go all the way to the to the stream.

I know you may look at denoting that portion of Bank Stadium.

Is that the rip rap benefit bank?

To accept that ditch, OK?

Yeah, where it shows extending into the ditch 10 feet.

Yep, OK.

Alright, we'll move on.

Assuming all of everything that's gonna be considered.

Treatment by some product will be listed in its own sheet on some water management plan.

Bye. OK.

Everything to the east of this crossing until we get.

Down towards Shepherd's vineyard, tazew.

Ell the bypass pawns.

This is.

This is the area where the Academy Sports there's a Costco, there's car dealerships. We do have some some GIS on water information. Some of this is a little different. But so we're tying to these systems the the eventually discharge of the stream senior. But we are not directly impacting senior.

With drainage.

Through all the sheet 7.

No, there are.

So, do you know jurisdiction features on your sheet 7?

She ate.

Umm.

This is this is the library.

The Shepherd's vineyard crossing.

There is an existing cross pipe, a 36 inch cross pipe.

It is adequate sized.

We plan to retain and extend.

This channel with jurisdiction between the outlet of the 36 under US 64 and the inlet that goes to a closed system that runs ultimately down to Swift Creek, along with Shepherd's Vineyard.

Our thought here was not to not to take this down to Steve, Steve Abangment to send us in the system as similar to what it does today and try to get treatment on the Northside of 64 before he gets into this pipe ultimately goes into the indust.

We are retaining a drainage system here.

That does discharge into the buffer.

I I wanted to get thoughts on that.

If I don't, I haven't used a frequent scout hole in a while, but that's.

We've been using them and they've been in, in construction, all the projects for some time.

I'm curious on thoughts on potentially.

Leaving this way it is useful scour hole possibly.

Possibly rerouting the drainage system so that we're not dumping it out in the buffer.

This is the outlet of the pipe under US 64.

There's existing pipe that comes out right beside it.

It's hard to see, but it's right beside the tree.

This is turned around looking towards Eva.

Library. I forgot the other night.

Eva. Eva Perry. Yeah, library.

There's a big wall so that the pipe that goes to Shepherd's Vineyard starts just past the wall.

This is part of the downstream walking downstream closer to the the downstream pipe and and this is the receiving pipe. The channel really gets paraded.

There's really not much of.

A defined section once, once you get out down to the next pipe.

So this one.

We've been down there twice and and it's usually wet, but it's not.

We've never noted live flow in this feature stream.

Currently.

Yes, you might hear a question off scowl, a hole or not, or what to do with this pad, I guess from.

A.

Construction, maintenance standpoint.

I think small rip rap pad. If hydraulically handle it without causing erosion. I would change before we go with a scalable. Would there be an option to adjust the SKU of this pipe and tie it into the stabilizations at the end of the 36 inch?

Yep.

Yeah, we could.

We could potentially add a box or shoot a pipe and dump it out.

That's, that's what's that's what happens today out here.

This pipe is skewed from the other side, from the median of 64 it dumps out right beside the existing 36.

I mean, that's one possibility, but as it is here, since you said there's not a lot of flow in this stream, it's I guess.

Yeah, I guess.

You know.

Having.

Just sizing the rip rap out with the pad.

The handle, whatever my water.

Those three boxes go to. It is is enough for me.

I mean having it.

Hide into the banks is probably easier, but yeah, from a from a bumper.

Nutrient removal.

Point of view again having some area.

I mean, granted, it's in the buffer, but there's still most in zone one. You know, out there, you know, vegetate and allow it get some infiltration beforehand, OK.

I would need to topography of the House for it.

Yeah, this is something I just noticed.

There is a JS line show here.

I don't think that is jurisdictional.

The the side channel.

That may have been something we missed when we used.

RM **Ruiz, Melissa** 38:32

There. Yeah, I agree.

There shouldn't be any side channel there.

PP **Perlin, Joel P** 38:39

Thanks, Melissa.

So we need we need a.

That'll be something we need to get corrected, right? Between those two roads on the other side of the I could tell that was speak up or not. It's up there. But not coming out of that.

Yeah, this this doesn't.

This doesn't.

There's nothing serving this JS.

But crossing.

Does it show up as a lawn in the NRPR there? Yeah, OK. OK.

Alright. Any additional comments or questions here? I guess in general this is probably one of the only ones where we're dumping out a new system in the buffer.

It it was just a tight area.

You have the library here.

It was gonna be hard to cut a new swell and take this over to it.

It's steep.

So our approach was.

To to put it out there and hopefully get some infiltration before we get started to to the channel and about maybe you said on the inlet it's not a spring, correct, OK.

We talked about the 42 inch.

Yeah, yeah. Let's talk about Portuguese now. Yep.

Right now we're showing just bank signals they shouldn't.

Similar approach should we show rip wrapping the bed? It's.

I don't, I I I'm not really sure why this channel did what it did. As you got closer to the to the existing inlet.

Our tie in's gonna be more like in this area where you do have.

A.

A really shallow 2 foot wide.

Stream.

I guess the concern here is.

You have.

If you even class the rip rap, you're probably gonna.

You don't have a whole lot of width to work with. Putting rip rap in the band.

On set section that's screen for next slide again.

Let's see.

Shoot. Yeah, it's probably 75 feet.

At the second scale here.

55 feet.

Any thoughts on stabilizing all the way through between these two pipes?

How to keep the channel from braiding out?

Kinda like it did before.

I think something very problem.

Yeah, but I mean this is, I mean, rated streams.

Enough stuff on a bad thing. It's just.

Yeah, it means, yeah, the water gets sent to the ground at certain spots. But.

You know, as long as the inlet is stable and the outlet is stable.

Too much?

What happens in between I mean.

55 feet is long enough for a spring to be asleep.

How about the ecosystem?

As far as the you know.

Inlet. That inlet tapping stabilization in inside.

I mean, again, this is another place where, OK, you're not worrying if you're just extending.

It's really going to depend on the topography. As long as the water does make it into the pipe.

I'm not happy. I was going up early too much because that's a new.

Oh, is it?

I agree.

It's a new pipe.

It's gonna go into a existing system that is not buried.

The existing inlet.

Providence the other chief. Oh yeah, yeah.

So this is what I 42 counsel to assist on.

This this follows there's an existing system that basically does the same thing.

We're just moving it and and upsizing it.

We're gonna tie to an existing pipe that doesn't exactly show up here.

And eventually it dumps out into a 54.

Oh, there's a pipe.

I'm sorry it it shows a direction.

And eventually we'll tie into it.

It's hard to see here.

There's a piece that's well. No, it's just hard to see.

There's existing 42 that eventually runs out to stream SB.

It goes to SWIP Creek.

So you probably have a couple 100 feet of.

Of closed pipe system and and a outlet pipe that's not buried that dumps out in the street.

SP so the elevation of every two inches are dedicated by that for China.

Yeah.

So I guess if I.

Is is that this is SV and the other one was, it is SV. OK OK alright.

Alright.

Not this one.

Bill, any other additional comments or questions about this, this section of SV?

Aye, we'll move on no other.

Sheet that are being impacted by the project.

There is a stream SK.

Not currently impacting this area.

There was some talk early on about relocating a pump station, but I don't think we're gonna.

I don't think we're gonna impact this area with that new pump station.

That hasn't been completely decided right.

Not completely, but yeah, OK.

Apps.

Move on to plan sheets.

And sheet 9.

Now, there are some jurisdictional features on this sheet.

Either we're going down the hill on 64 going towards.

The.

Carry par.

Auto part.

Yeah, everyone knows where that is, right?

As you get down towards the sag, you have a Williams St. crossing so.

Williams Creek goes through the 360's that we looked at the second side.

It goes through Apex Lake kinda behind all the development Costco and everything comes out of Apex Lake and and crosses back under 64 through a 2 and 8 by 8 reforest concrete box forward.

We have extensions on both ends.

This one, like all other fish, our other ranges on this project is not there.

Umm.

The color extensions is really hard to to go back and variants of our plan is not to bear it.

It will have a beveled head wall to improve in the conditions.

This is a FEMA study area and there are structures in the floodplain, just like street, sensitive to hydraulics.

There's quite a bit of erosion on this on this. Looking downstream right bank.

This is there's also a easement you can see there a line that runs through here.

That would be relocated by the sewer.

This this bank was in pretty rough shape. It looks like there were past efforts to stabilize.

So our approach for us is to show bank stabilization on both sides roughly 50 feet upstream of the new extension.

This one doesn't show.

Up at the outlet or the right, yeah.

If not buried, how much of the difference between the elevation of the?

Butterfly having plunge or?

Perch right now it's it's pretty close to to being right at the bed elevation.

It's it's not first or plunged.

This is the outlet side.

It's hard to tell here.

I I don't know if I can zoom in on this photo.

But you can see the the concrete to the bottom of Culver.

Yeah, there is material.

There's rip rap.

This outside looks a lot better than the inlet side as far as the the channel goes.

But like you mentioned, one thing that we see in the field when they build these towers is you gotta bypass it.

You're gonna have equipment.

At the new face and the channel.

So it it could be something where we show rip wrap in the bed for maybe not the whole length of the bank stabilization, but for the length that's gonna be impacted by construction, yeah.

Again, this goes back to what I said earlier.

It's better to get it approved and not need it.

Yeah, they find out.

Oh crap. I gotta we got this big.

Plunge right here. We need a fence.

So.

Also on using Ripwrap in the bed for the whole week.

Let's let's look at the downstream.

This is this is basically downstream at the outside. It might not be necessary.

I mean, you could probably put it right at the outlet and then just like slope, it just so that it matches the natural spring.

OK, it's already got rocketed.

Yeah. Yeah, it's kind of doesn't matter the way.

Yeah, as long as it's not higher than the Rockets there, right? Right.

Again, it's all about stability and actually.

Here at the top, where there haven't been rain, you know.

But she's saying you reasonable sent it for the full length of it bank, Harvard.

I mean.

We're talking 50 feet of bank, so they're on both sides.

That's a lot, you know, for a lot.

So I think as long as we have enough to.

Deal any stars from the head wall installation of it's apron. OK and transition out into the existing. I think we'll be OK. So maybe half belief or so.

Should we talk about putting stuff out front? Stabilization.

Yeah, that wrap in the flow line.

Yeah.

OK.

Perfect. Perfect, perfect.

Yeah. And then and then bank statements beyond that, yeah.

And these are both open.

There's no blood playing bench on this box or open barrels.

That makes sense to me.

Roughly 20 feet of of bed stabilization. I think these are more like 40 feet. I think of of bank civilization through here.

So we'll show it flush with the existing bed.

No filter fabric.

What? What it'll.

Ultimately, it'll probably look like what they used to backfill the cover.

For a lot of times I know if they don't have a lot of native material, they'll supplement with Class B and make a flat surface where put the native.

Sorry, will you repeat that where we come out when we come well back so well they will backlit.

I'm sorry. That's I was going to say don't don't do that. This part of the state.

Sorry about that.

Any other additional comments or questions? We do have a slight bend to match the.

The center line of the string without string pin to touch string is string straight extension.

You want.

RH **Randy Henegar** 53:02

Brian, I got a comment, it's Randy.

PP **Perlin, Joel P** 53:04

Yeah, hi Randy.

RH **Randy Henegar** 53:06

You know, we don't generally put rip rap.

I mean fabric under Rip wrap along the string.

PP **Perlin, Joel P** 53:11

Right. So we were going to not show the filter fabric if we're perhaps in the bed.

RH **Randy Henegar** 53:17

What about on the bank? We don't on the banks either.

PP **Perlin, Joel P** 53:21

Independent five, it sounds like.

RH **Randy Henegar** 53:23

We've seen it.

We've seen it move, we've seen it move and end up in trees downstream and that's why they got rid of that.

Generally, we do not do that.

And it also creates a slit plane on the steep slope that lets the rock move.

PP **Perlin, Joel P** 53:42

The general condition requirement are kind of fundamental so.

Requirement to use the filter fabric. Yes, OK.

Particular circumstances could be, as you'd have to get away or not see.

What those circumstances could do as opposed to I can't remember.

Seeing a request for a waiver.

So are you referring to this area?

Or somewhere else about 50?

Randy was that general for any jurisdictional area.

RH **Randy Henegar** 54:37

Yes.

PP **Perlin, Joel P** 54:43

So let let's follow up and make sure we're we're at a consensus on whether.

So for this particular site, I guess we would lay back this bank. So it's not that a 1 1/2 to one like it is today.

But I I do see what you're saying, because I think on this bank they, you know, if you go put rip rap on a bank this morning, half the one it's gonna fall.

It's gonna slow down like like this is showing.

RH **Randy Henegar** 55:14

Well, you're you're going to have to lay that back something, yes.

PP **Perlin, Joel P** 55:16

Yeah.

RH **Randy Henegar** 55:19

But I don't.

A long time, several years back that decisions made not put fabric under that rip rap.
CR.

PP **Perlin, Joel P** 55:26

And and was that.

RH **Randy Henegar** 55:29

That was that was agreement with the agencies also.

PP **Perlin, Joel P** 55:31

Yeah.

RH **Randy Henegar** 55:35

Because they're they're in really heavy floods and that rip rap moves sometimes. You know, that frag just comes out of there and ends up in trees downstream.

They don't like that at all.

So we decided not to use it in that situation.

Well, you know, it's kind of up to what you guys want to do, but if I'm reviewing it, I'm going to tell you not to put it in there.

PP

Perlin, Joel P 56:02

OK.

Well, we have the course in here saying that it's a general condition, so.

Yeah, so so we need to look into that, I guess.

I'll say.

This in division five every project I've ever seen, we've always had builder fabric under the rock on the banks, not in the flow line, but on the banks.

RH

Randy Henegar 56:27

You know inherently with rip ramp period.

It's a flexible line and it's designed to. If you do have some erosion out and under it, it's designed to fall into that, that erosion and seal it back up.

I seem to rip rat like the stream bed gets eroded and the rip rap just falls into the hole and fills it up.

And if you got fabric there, it would leave the fabric exposed.

PP

Perlin, Joel P 57:09

All right, maybe we follow up on a with a separate discussion about filter fabric.

In these jurisdiction areas.

Thanks. Thanks for the input, Randy I.

Know regionally we go back and forth. So that's why we ask the questions.

What what is required and what is preferred for division so?

Now the requirement from the core is related to rip rap migrating in soil.

Go ahead and not being effective.

I hope I know the answer to that.

I'll talk to my dad, OK?

All right, let's move on to the next site.

We'll send a follow up question.

With everybody to to get a consensus on the filter fabric question.
It's ultimately it's, it's just changing the detail, so it's it's not a big deal.
It's not gonna change our.
How we show the Rippin plan?
View it'll be something along the detail.
All right, moving on to.

RH **Randy Henegar** 58:21
Hey. Hey, Brian. Doing our review, did we comment on that?

PP **Perlin, Joel P** 58:24
Well, we didn't have any details.
Randy, this is this 30%.
So there were no details showing anything.

RH **Randy Henegar** 58:29
OK.

PP **Perlin, Joel P** 58:30
We didn't call out go to private.

RH **Randy Henegar** 58:33
I got you, but if you had to call out fabric, we would have recommended not doing that.

PP **Perlin, Joel P** 58:38
OK.

RH **Randy Henegar** 58:40
Mm-hmm.

PP **Perlin, Joel P** 58:43
This is a sorry for the text overlap stream.
SFF a challenge drive.
This is one of the entrance to MacGregor, the other side of 64 is the entrance of the

auto park.

There are two existing pipes here.

Currently we're not touching these. We're tying to them with with proposed drainage.

Kind of an interesting situation.

You have an existing 30 inch existing 42.

Looking upstream.

Randy, these are the two we we discussed potentially upsizing the the leg of the 30 inch to a 42 since it's a 42164.

We're not currently showing that.

We do need.

RH **Randy Henegar** 59:42

What do you calculate?

What are your calculations show?

PP **Perlin, Joel P** 59:45

This one.

See.

There's a 77 acres coming to the site, 20% impervious so.

With 240 twos, your HWD is 1.2.

But that's that's just with the 42 under the road.

So that's not the only condition we have not done a pipe data sheet for it yet. So that kind of.

Leads me to think we may wanna potentially up size that 30 to a 42.

Between its connection and the inlet.

RH **Randy Henegar** 1:00:34

One with HWOD be with AD upsizing.

PP **Perlin, Joel P** 1:00:38

I don't know.

RH **Randy Henegar** 1:00:40

And and and like 1.3 or something like that, we would say, well, is that 1.3 something

we can live with for now?

'Cause going from 30 to 42 that that's two pipe sizes. You know, lots of times. We'll we'll increase the size based on two pipe sizes.

PP **Perlin, Joel P** 1:00:50

Aye.

So there is a potential, yeah, that we upsize this 30 inch to a 42 if if we do get over topping where you gonna get impacts to the road in the 50 year.

RH **Randy Henegar** 1:01:00

So.

That would make a big difference right there.

PP **Perlin, Joel P** 1:01:14

Yeah.

RH **Randy Henegar** 1:01:15

So I I would look at that and then we'll see what it does.

PP **Perlin, Joel P** 1:01:19

My assumption is they use a 30 year because of some utility impact that I don't know.

I don't why they would have a 30 and a 42.

RH **Randy Henegar** 1:01:31

Yep, they're right beside each other.

PP **Perlin, Joel P** 1:01:33

Yeah, I I guess it.

They split though one of them. One of them goes this way.

And the 30 goes towards challenge.

RH **Randy Henegar** 1:01:41

Right, right.

Well, you might be able to get rid of 30 and upsize 42 to something else. I don't

know.

Do you need the 30?

PP **Perlin, Joel P** 1:02:00

Yeah, you need the 30.

You need two pipes here.

RH **Randy Henegar** 1:02:03

OK.

PP **Perlin, Joel P** 1:02:05

So our approach right now is to leave these as as they are. If once we get into a more detailed hydraulic analysis of this crossing, we may we may we may upsize this this leg of the 30 inch to a 42.

But it wouldn't.

RH **Randy Henegar** 1:02:22

2nd.

PP **Perlin, Joel P** 1:02:22

It wouldn't change the length of the pipe.

RH **Randy Henegar** 1:02:24

Yeah, you may not have a choice when you get to that, you get to that.

PP **Perlin, Joel P** 1:02:26

Yeah.

In that case.

Umm.

This channel is dry.

We want to show it look like there was some snow out here already.

We want to show bank stabilization.

I guess our preference is not to not to impact bad and reduce the impacts to the maximum extent we can.

I mean that that, that.

The way they split, you don't know where the water's going.

It's a little almost incredibly wild, yeah.

Eventually these these two, and they're not there.

They tied the systems that go.

This is the GM dealership and they continue on to slipkree's in a closed system again.

But this this is a deadline.

Yeah, this is a deadline, you know.

I just like it it most you can minimize that to just the areas where you were disturbing.

OK.

But stack it's.

On the low quality.

Yeah.

All right. So if we do upsize that, we'll probably show some bank stabilization on that upstream side for to start with.

And and that would rip rap in the following it was dry, but we've been out there a couple of times and it's been dry both times.

All right. We'll move on and close to the end of the roadway portion.

We're we're down the hill.

We're going towards McGregor.

No jurisdiction features on this at this site.

These pipes are existing systems coming out of out of the neighborhood we do have.

A new Jack and bore. This is not a jurisdiction crossing.

Moving down to Edinburg, this is the this is the crossing.

It comes from a dragger. Their main entrance.

This is the shopping center. There's a hotel.

Stream SX is on the upstream of US 64 in the area.

We're impacting it stays in a closed system that we're tying food and there's gonna be no supplemental pipes until it until it discharges into Swim Creek directly.

Umm.

This is the the inlet.

It's it's not buried.

Should be download.

And then this is this is looking downstream.

Roughly, the location of the extension.

So the channel's fairly size, it's got it.

It has gravel in the bed.

It's typically wet.

I would think this would be a site where we may wanna show reprising the ball wag in the area that we currently have shown as bank stabilization.

There is a relatively short distance between this pipe and the and the 24 that comes out of the neighborhood.

How long is the drive on the bikes?

I think I have their shin as 15.

Let me I'm not sure.

Sure.

Absolutely. That's about 12 feet.

I I would.

I would agree with doing that because you also got two storm water rayances going in on each side of it.

So it's gonna be so between that neighborhood pipe coming out and those two pipes coming out, maybe a little.

Slow would be a good idea.

OK, would be bombarded quite a bit.

Stabilization in NAV.

I didn't want to get some.

Some thoughts on how we're tying in.

I just mentioned with with the ditch.

Right now, there's Steve.

This is the to come down to the channel.

You're not getting any treatment from from this point down to the to the Jazz.

It's just to Steve, we do get some treatment.

Upland of that.

Also some here, but I imagine this ditch may end up needing a rip rap.

As deep as it is.

You mean for the whole thing, or just like as it gets closer as it gets closer? Yeah, that makes sense.

But these are these areas are tough with velocities.

It wouldn't.

It is it preferred to pipe down to the channel if if we have a buffer and A and the

***** coming in I I I showed two scenarios here.

That it's crossing.

Kind of for the purpose of discussion.

Because because we could, we could pipe down or we could or we could leave it as open advanced dish with rip rap.

A lot of that will determine on your velocity calculations.

Or the I mean.

Environmentally wise, as long as it's getting that treatment.

Up the ditch, you know, before it comes into the property, you know? Then we we counted this treated but at the same time.

Yeah, if if.

The philosophy doesn't meet if the philosophy can be accomplished by rip.

Wrapping the last few feet as it enters the stream. I prefer that.

Still, you know better system, but if you're like, Oh no, it's gonna just fly, then you know good. Punch it that way.

Yeah. Our our, I guess.

Where I what I've run into in the past is it's just the impacts of the buffer with the ditch. The pipes can be varied, but your velocity's gonna be higher than that pipe.

Yeah. Than if you had a rip rapid edge.

I I tend to prefer this and other channel.

Yeah you can.

You can widen the base and you know where we're designing pipe or designing pipelatter flow.

For maintenance, that's what I was gonna ask.

I was gonna see if Robert Bullock on the call had any thoughts, but I I would imagine that we would want to.

In terms of maintenance?

Accessing it, maintaining it, not having joint separations in the future.

OK, there there might be some scenarios since we have to have this box, we'll probably leave. Leave this pipe in.

We could dump this out into a ditch and rip wrap it down as well, but.



Bullock, Robert W 1:10:27

I always prefer ***** when possible, but.

PP **Perlin, Joel P** 1:10:29

OK.

BW **Bullock, Robert W** 1:10:31

I know there's been some other parameters too, or sometimes somebody throws in having.

To cross the ditch with.

Wildlife or other parameters, but I'd say that the ditch is preferred, but not a huge difference if we.

Need the pipe instead.

PP **Perlin, Joel P** 1:10:54

Thanks Robert.

All right.

Any other comments or questions?

At this particular crossing.

Public general comment, could you?

Place those labels with a stranger weapons.

Not over any other writing, so you don't.

Yeah, yeah, absolutely.

These, Randy, do you want to see these screen labels in the Red Line drainage plans?

RH **Randy Henegar** 1:11:27

What do you mean stream labs?

PP **Perlin, Joel P** 1:11:29

They stream like stream SX or Williams Creek.

RH **Randy Henegar** 1:11:32

No, no, no. We don't need to see that.

PP **Perlin, Joel P** 1:11:36

What's on the permit drawings?

Yeah, they can be helpful.

RH **Randy Henegar** 1:11:38

They they need to be on the permit joint, but we don't need to see them on this.

PP **Perlin, Joel P** 1:11:40

Yeah, yeah, it's just, you know, big projects are easier to identify.

I don't know so much about redline, but the other ones, if they're just copied ones the other then just you know that they they could be a way for other labeling. So you could see the whole label, yeah.

That was that was a.

Yeah, there's a couple like that and it took me a minute to see that they were like, let's go.

All right, we'll move on.

RH **Randy Henegar** 1:12:11

You know, if you deal, we show those labels on the 4B plans.

PP **Perlin, Joel P** 1:12:15

Yes.

All right.

Going to plan C to stay clean.

So much.

He's 40.

This is the last Jericho crossing on the main line.

This is a a card extension.

This is the ramp coming off of A1 on the 64. If you've driven through here, you've probably been stopped on the shrank before there's there's a call right under the ramp that won't be extending upstream.

Their existing culvert that goes under 64 that will be retained and is not being impacted. It goes under the bridge.

They're both both to a 10 by 9.

And and are not buried the downstream side.

We're gonna raise the head wall to catch the proposed feel slope and eliminate the need to extend that side.

This is the only in you can walk through this on the on the.

On the contrary, tolerance.

So it's it's not buried at all.

This is getting a little closer.

There's some silt along the face of it, but the the most part of the bed was was flush with the with the invert of the culvert.

There wasn't a a perch or.

Drop.

This is looking up stream. There's a.

The the open area is a a sewer easement that will be relocated.

This this is at the easement looking.

The culverts to the right.

Start again.

This is a fairly long extension of the box.

So how? How do they figure out that they converted to call to the bottom?

So they try to put a string bed level or yeah, this caller was was on a dead flat.

I think it was less than half a percent.

So we don't have a whole lot of variation with these bots and you can change the slope slightly, but we'll follow the existing slope.

And it landed pretty close to where the survey bed elevation was.

With Avar I'm just close.

Yeah, making a barrier if it's not closed, we can change the slope of the extension so it will match the bed, but great.

Not the end point.

It is so thing would be a place again for line 3 possible adjustments that would be needed OK.

And then the bank stabilization probably helpful right now, I guess may just be may be two weeks later, but the wing walls, if I need to take that bank civilization at least to the extent of your.

Likelihood, if that makes sense.

What has? It looks like a flap that you want to go like in there.

Since we're talking about a baseball, I'm looking at the the core condition for filter cloth fabric. If if you're reshaping the base, you have to use filter ball. If you're just pushing it into the existing band. So it's both are are right.

Guess it depends on the circumstances.

It's usually shaved.

I make some used to be haven't broken forever.

That makes sense.

In this case, I don't.

I don't know if you're going to reshape the bank or not, but if you're not then you wouldn't have to be by our condo.

SP

Sarzaeim, Parisa 1:16:18

Hey, this is Parisa.

I have a question about a Reprap.

If you could please zoom in to the center of the plan sheet.

Yeah. So it seems to me that.

Reprap Class 2 is proposed for one side of the channel, and the opposite in the opposite side.

Reprap already exists.

So I was just wondering if the opposite side needs any Reprap improvement.

Especially.

PP

Perlin, Joel P 1:16:55

Possibly, yeah.

That's a good question.

This is looking at the outlet of this this box.

So looking at the outlet face and there is rip rack on the banks between the outlet of this folder and the and the folder goes under 64.

This is looking downstream.

We we can certainly show new stone, but the only reason I showed it on the on the right bank was because we were.

We have a new pipe that we're discharging.

To that side, yeah, some of it's gonna be sturdy.

Not necessarily.

Right.

That would be something feel that obviously if they only disturb a certain portion if like they only supplement what's needed for the undisturbed areas, maybe bears just is there any benefit to showing?

The the group wrap that you have shown on the right bank, fearing that all the way to that existing, there is a little gap there.

Yeah, I know there's there's likely rock already there, that gap.
There's a head wall missing.
There's a wing, OK?
I'm in a wing.
There's a wing here, OK?
I don't know if it's off. I need to take a look at that.
That's that's something we can we can correct in that we'll turn on.

RH **Randy Henegar** 1:18:24

Are we gonna order the plate? We're gonna replace that wing.

PP **Perlin, Joel P** 1:18:28

We're gonna raise this head already.

RH **Randy Henegar** 1:18:30

Yeah. OK.

So you will replace it.

PP **Perlin, Joel P** 1:18:32

Yeah. So that's a good question.

RH **Randy Henegar** 1:18:34

It's probably probably the wing fell off because of some Eddy formed in there and it eat out behind it.

PP **Perlin, Joel P** 1:18:40

Yeah. Which one are we talking about?

RH **Randy Henegar** 1:18:42

So a little rip wrapping our problem would be warranted.

PP **Perlin, Joel P** 1:18:47

I think I think it's weird.

RH **Randy Henegar** 1:18:47

But overall?

Overall, it looks pretty stable.

It looks pretty stable to me.

PP

Perlin, Joel P 1:18:50

But well, this this is the wing is there for that culvert.

There's a wing there that I know it's to see here, but it just it just doesn't show up in the in this sheet.

RH

Randy Henegar 1:19:03

Gotcha.

PP

Perlin, Joel P 1:19:03

Is it not in the survey?

Yeah, it's not OK.

Add it to the list.

And they call it.

I'll mention.

This this.

Cross pipe the existing condition.

There's a there's an 18 inch pipe that ties directly into this box folder.

There's there's other systems attached into it.

Dayton's flag was undersized, so we did not want to retain that to to continue that connection.

It it needed to be upsized so that is the purpose of the new cross pipe that that ties into the the the gap between the culverts in lieu of tying back directly into the box.

Let's completely stolen part of yeah, yeah.

I.

I guess if they are replacing this head wall, does the wing completely come out?

And I know we're gonna show raising it if if the wing has to come out, we we might be able to send someone bank stabilization, I guess at the at the wing. I was gonna ask for clarity on that. I guess when we say raise the dead wall.

The.

The entire head wall being razor's like a dowel on top and just extend up dowel top.

Yeah, that other.

RH **Randy Henegar** 1:20:44

How many?

How many feet do you intend to raise the head wall?

PP **Perlin, Joel P** 1:20:47

I think it was 2 feet Randy.

There there was a maximum that we were trying to to be under.

RH **Randy Henegar** 1:20:55

Yeah, well, usually it's not.

Usually not over three.

PP **Perlin, Joel P** 1:20:58

Yeah, I I think this was about two.

It was under three because that that led to our decision to raise rather than extend this one.

RH **Randy Henegar** 1:21:05

I understand.

Well, the wing would have to be extended. Also I would think.

PP **Perlin, Joel P** 1:21:14

Yeah.

That because the way he's going to catch the pill soap in the same way, so they're going to have to raise the head and the wing.

I just I I guess my thought on not showing ripra apple on that whole left side was was to reduce the amount of clearing they had to do over there.

BW **Bullock, Robert W** 1:21:43

Hey, this is Robert again for clarification.

You're saying extend, but we're just going up with the wind wing wall in the head.

OK, so we're not going out with the wing wall.

PP **Perlin, Joel P** 1:21:50

Right. Yeah, yeah.

Correct.

BW **Bullock, Robert W** 1:21:58

OK.

PP **Perlin, Joel P** 1:22:04

I'll mention structures has not done their example yet.

So I guess there's a potential of the wing walls could get slightly longer.

But the the box will not extend any further into the stream than it does today.

I think if wing walls end up getting longer, it'd probably beneficial to show the change stabilization so that it can be.

Replaced. But if it's just going up, I don't think there's.

Should be any impact to the actual existing stream bank as part of the Dow and raising the lead.

BW **Bullock, Robert W** 1:22:47

Right. So that that was just what I was, why I wanted to confirm or when we get a chance, because if you are extending out now we're talking about footings possibly being.

Having to be modified if you're extending outwards.

So that can create a whole another scenario.

PP **Perlin, Joel P** 1:23:06

OK.

Yeah, there's a service to the bank because the because the wing wall is gonna be modified.

Anything other than just Ray dialed and raised? Then we'll show bank stabilization on that left side.

We wanna show the whole length or just a portion. Maybe maybe 15 feet.

Oops, I'll just.

OK.

Everything's look what was stable when we were out there and that's that's why I said that.

Yeah. So basically replacing what was there if it's.

And just to clarify same approach on the upstream side with bed and the channel. Not necessarily. The whole length of the bank civilization, but to to facilitate a transition where construction will be happening.

And I I guess looking at velocities for would you want to extend it out at least the limits of where the drainage comes in?

I know it ties into.

That point it's almost.

Yeah. Oh, the inlet, OK.

Let's see, that was a possible.

So that would almost extend all the way to this.

Almost, yeah.

I guess I'll mention that there is a stream St.

That will be a relocation.

That ties in.

So this this there'll be a ditch on the left side in this plan view on the right side is gonna be a stream location.

So.

So I would think for crap in the.

In the line at this end of the official two. Also, except this year channel coming in that that changes things. This is not just a storm water. Why? Why is it being relocated to?

These the two flow arrows that are just to the to the east of the inlet will be a relocated channel.

Hello.

It comes in just, just outside the head wall.

That has a lot that hasn't been resolved yet, so.

I guess I'll leave it to my next question.

Can we for channel relocations?

If Rip Wrap is required, is it preferred to show at the dead with OK typically in the in the bed with a relocated channel OK.



Ruiz, Melissa 1:26:44

I could just add that stream.

It's really storm water driven.

Storm water probably created it.

It's really incised, so it does have a groundwater interface.

And it scored OK on Sam because it's wooded right there, but it's it's not a not a very nice looking stream.

PP **Perlin, Joel P** 1:27:09

Alpha car.

If it doesn't need rip rap.

Is the prefer still just have stoned in the bed?

If if hydraulic calculations don't drive the need for rip rap, it's it's not real steep in this particular area.

I was eight in the division. Every time that we relocated a channel, we've added filter fabric because otherwise you're putting extreme flow or all of this drainage.

That was what's essentially raw ground and you've just created the.

It's not like you're doing natural channel. Besides the medication for it, it's.

Treating it with a total impact of it, so as well make it stable.

Any additional comments or questions on the MacGregor Downs Lake Creek crossing?

OK, move on to the wild animals. This is the end of the Eline.

This is where.

You have 64 crosses under highway one and and turns of try on road.

This is the last leg, so this is.

This is actually being the bail line, I apologize.

So this is just a tie back in.

No gear or sectional features here.

We have two two patrols sectional patrol one is being impacted.

This is just behind the Academy Sports.

And this is Lake Pond drive.

I apologize.

Like most of these wild animals that are developed, there are a lot of stormwater ponds.

That we're having to navigate.

This particular pond is.

Is one that appeared to be constructed that takes water from the road.

We're bypassing what we can as increased discharge to the pond.

The pipe sizes are are adequate to handle what we're doing here with the roundabout.

And improvements to the carbon gutter. This is in the new location Rd.

This is.

These are improvements, but you are gaining impervious area with with the roundabout.

One thing I wanted to mention is stream SQ is is not shown in the FS file.

We're not impacting it.

When we get to permitting is are, are there any?

Concerns with that not showing up as FS.

Do we need to have that shown?

Yeah, I'll just make sure they know. OK. OK, that is.

Now maybe recording you're not recording the impacts on the summary, but it is showing on the drawing.

So that people just really, really don't drop over to the side, OK.

We have.

We have a permit, but just since it's bad for us.

Orange for all jurisdictional features in the vicinity. If you're not interested.

They don't really close to it, but.

You never know what's going to work, but I guess the market.

And depending on where the buffers fall, it might be that we put a large fence.

Yeah, along the buffer to keep out of the buffer does get up to the edge.

And I guess that's another question. We don't currently show buffers for stream skew because I didn't have location.

So.

We probably want to show buffer as close as it is, I guess to the end of construction OK.

But sometimes you have St. outside and you can have bumpers inside, so you have to watch.

Health problems are quite.

Right. For real, Brian, do we need to add that to the final request? I think so.

The other.

The other stream, will she use a stream SP? This is a. This is a closed drainage system that that comes out of the development.

Is it SP SB? I thought you said Sep oh SP.

Take care the last.

Is not married. Has a flared in section the extension.

Will also not be buried.

This is looking down stream.

This is a little further downstream close to where we're going to be tying in.

This one's not showing up for a lot.

Yeah, they're hard to see.

They're out here.

Oh yeah, we probably need to smooth those out.

Thank you.

We're showing rip rap in the bed we.

We are separating the nude system with a slow drain.

An alternate way to do this would be to tie in.

Right now, we're gonna call her and send that 36 the road.

Is about 1012 feet above the existing pipe.

But we we could potentially tie into the 36 with the catch basin and only have one pipe out in lieu of of two.

If that will be preferred.

Otherwise, we'll have to wrap in the bed as channel stabilization in all the banks.
3172.

So instead of having this this 2nd 15 inch slow pipe we could we could set a box above the existing 30.

And just have one pipe.

But you also have a direct connection.

I don't know that it's. You're not like you're getting treatment.

That made that punch. Don't. I don't think it makes any difference to be bad.

The way wrap you have shown pals leave you. Go ahead, OK?

It's still a lot of work to go do it.

Yeah, something else we could do is we could.

We could discharge the system.

Outside of the stream.

To to try to get some some treatment.

With with just a rip rap pad.

Rather than dump it out right next to the existing 36.

I don't think you have that much room, but it also this is the side Rd. so it's it.

It's not going to get as much.

So I think constructibility is.

Your stability or your main goals here, OK?

All right.

Like we have one more sheet with a with Java section feature. G17 does have a pond.

This this is the Costco. This is the pond they use most of their site.

They have.

They have sand filters. They have all kinds of of different devices.

I think they have some underground detention and they also have a this retention pond.

Throughout the project, we're using walls to reduce or completely eliminate impacts to the stormwater ponds that these development shoes we we have gap.

This is the hair cedar development.

Their pond will not be impacted.

Sheet 18 doesn't say that there's no quantile project complete.

We're minimizing impacts to advise.

I don't.

Yeah, I don't think we're going to be taking any ponds.

Thanks. We're doing our best to talk about burning each other.

Yeah, these are all stormwater ponds.

Again, we're using a wall here.

This is the hair stater.

No impact to that pond.

No other jurisdictional features here.

You you may have said this, I guess this might be a vision that in our TR, but if these are all stormwater ponds related to current be on tension.

Have a good time.

Melissa, you made a comment.

On this topic.

At one point.

RM **Ruiz, Melissa** 1:37:18

I think we have discussed in the past pursuing an ajd, but nobody has done it to date because we weren't sure which ponds would be impacted.

So in order to there's, I don't know.

I think we have 30 stormwater ponds.

We didn't want to do an ajd on every single one if they weren't going to be impacted.

PP **Perlin, Joel P** 1:37:40
Still coming.

RM **Ruiz, Melissa** 1:37:42
Hopefully not now would be the time for us to have that ajd for the.
For the select ones that that will, I don't know I guess.
Are you impacting them?
But I if they're in the corridor, then we should.
Pursue that.

PP **Perlin, Joel P** 1:37:58
Can you tell me what the what was the acronym you used?
What is the HAHIDA?

RM **Ruiz, Melissa** 1:38:03
Hav.

PP **Perlin, Joel P** 1:38:05
R test OK.

RM **Ruiz, Melissa** 1:38:06
Essentially, yeah.

PP **Perlin, Joel P** 1:38:06
Now we're on impacting the unit.
OK.
Show up on the plans that you're not impacted.
And we can do it quickly if you change something that we need to take care of that.
I guess the only thing that caught my eye was to have a JS line style around.
So just make a question.
Labeled assertion 1.
I'm labeled as retention pond but shown as Tier 6 online, so I just curious.

So we should we tell you that?

Well, I think to truly be accurate in changing it, you would have to have the.

To verify that it, you could say jurisdictional is is the.

Preliminary evidence.

Right. Sorry. Right, let me see.

Like one of those prompted.

OK, so I think he leave it out as a yeah, just from an impact be able to change the. So,

OK, are we changing it to secure? Never. It's never used, JP. So yeah, that's how we're gonna show it to things. Yes. OK. We all have a very.

Few, OK.

For limited fire, that's right.

All that's fine.

You ever change it?

Seriously, thank you.

Yeah. OK.

We'll move on.

We get close to the end here.

19.

No impacts. This is Apex high school in Laredo, I can.

Actually 20 this is this is we reviewed this one early on.

This is where the 42 the the.

Except that small section of of channel.

Runs down Shepard's vineyard and and discharges into stream SV SV again.

This bike is not buried is it is going to be retained.

There's a scour hole.

It looks like at some point that it was stabilized with.

Pretty quickly goes back to a.

Two or three foot wide feature until a snowflake. We are not impacting the upstream side of Swift Creek, but we do have a new storm drainage system.

That we need to tie in somehow.

Our approach will just show a new 30 inch outlet pipe with stabilization on the downstream side.

Of the 272's, that conveys what Creek.

Under the law 5.

This this is what the two pipes look like now.

They're slightly perceived above the bed.

So this is a not a new conveyance, it's a replacement of a current, right, OK.

This is looking down stream.

This is like being in the existing FIBES 272's.

There there is an existing pipe that does the same thing.

You can't see it here. You can see the label for RCP.

It stubs out of the bank right beside the existing 7 twos.

So our our approach was to show the Ripper app on the bank or this or this new 30 inch.

Discharges.

I would love the outlet to be outside, but straight, but it looks like looks like some very close topography. There might be is that.

Yeah, maybe not.

We we may be able to get get it out.

We may be able to dump it out and and tie a tail ditch through the bank.

That would that probably wouldn't add any treatments.

No, it would be very little.

Yeah, I think.

She remember looking at this with her. It's a Friday.

We we just double checked that that rip wrap pad that handle all the drainage because it does look like a small panel.

SP

Sarzaeim, Parisa 1:42:46

Hey, yes, I also wanted to mention that it seems this Reprap is a little bit small.

PP

Perlin, Joel P 1:42:54

It's class one.

Class one. Yeah. Should we?

Class 2 be preferred.

Like a lot of drains going in it, yeah.

Yeah. Typically we would use last two of this.

Which bank stabilization for the 70 twos so.

No problem upgrading this to Class 2, especially with the velocities the Swift Creek can push through here.

Oh yeah.

I was gonna have me this rip wrap is higher detail that we would ask for later, but just making sure that that edge of proposed rack is shown down into the JS line. See it properly but.

I guess everything would.

Point they talked about like Project free, but you mentioned that there's already scattered on. These 278 are purged. If we're gonna be down there doing that bank solution, is there any benefit or need to add add those existing outlets to go ahead and repair what per?

And possible performing global.

Agreements that everybody, yeah.

Yeah, it, I'll say it. The channel seemed to be overwhelmed, but it didn't seem to be scoured vertically.

OK. So it's like purchasing, but it wasn't like it was actively getting getting worse.

Like just? Yeah. I mean, you can see how there's a. Each pipe has its own.

Slight depression, but we we could walk across the channel here.

It wasn't like it was a big 5 foot scour hole, OK, I imagine.

372.

Yeah, yeah, you can see how it gets watered, but you can you can.

It's hard to tell with the light, but you can see the bed.

So OK.

Yeah, I got you, I I said.

Skyward Hole it is more of a over widen channel, probably because of the whip of the pipes. Gotcha.

It's Wilson.

And they're spot. This is this may be helpful.

As well.

There was quite upstream.

It was like nothing but rip rap in the channel. I I guess that was placed, I don't know.

But it it was.

It was a bit messy.

These vibes obviously are not very.

Similar.

Yeah, yeah there is.

Actually, a blood streams seems to be.

A common thing.

So I guess what I'm hearing is is ultimately we're OK with.

With replacing this pipe and showing stabilization.

Probably want to upgrade that pipe to Class 2.

At first I was out of comment.

Make sure I got my name.

SP Sarzaeim, Parisa 1:46:00

Yes.

PP Perlin, Joel P 1:46:02

OK.

SP Sarzaeim, Parisa 1:46:03

Thank you.

PP Perlin, Joel P 1:46:04

Yep.

Bringing the same up until the end of sheet 20. I mean, I'm sorry, the beginning of the play on. Oh oh.

There is.

There is a stream on sheet 21.

For the Smash Line machine a, that's the continuing SUV.

Then on the other side.

Oh, another channel, the Sgt.

That's, I don't know. That's in there.

Sparkers are in there in between the SUV was the the only streamless project that wasn't subject to buffers.

And this this is it. So I know it's not horrible.

Well, I I have.

I I got this is one that is probably the worst overlapping text on project.

So I that was my fault.

But this is this is SGG.

We're not touching it. It's it's at the car wash.

It takes water from a retention pond, some from offsite, and ultimately it it goes into a drainage system.

Here.

And it's kinda like that other one.

I'll be back in it, but.

Official details about the area.

Yeah, but we don't need to have offers for it as well.

I understand.

Yeah. OK.

Yeah, I gotcha.

I read that offers on that.

I don't think unless something changes in the NRTR, this is the only stream of the project that was not subject.

Yeah, that's something.

What? What? Is there a review?

I mean, I don't remember some of the following responses. I would even remember what kicked it out.

If it's just because it was not found on the server map, I don't think it was found. I'm sure that was OK there.

Spent no kind of review, yeah.

If it had buffers, would they be encrypt?

Ed, no.

So this this was it I guess.

Yeah, eventually they take that because it was an on the document that you know.

It's on a similar thought that in fact my memory of it. I'm gonna head on 1st plan for there is I think interact in our trail. We looked at Street Street top edge of that wetlands wetland outside of the impact limits, but it's buffered as well I'm not.

That.

Very top OK.

Should I send that? Yeah.

OK. And then there was like the maintenance PR stuff for me, brand new one for office previously done. Gotcha.

Oh.

Must have been one of these. Is it is.

Spi don't. This was upstream of that first process.

Yeah, we'll keep moving.

We'll keep moving.

We'll get in about 10 minutes.

We still need to look at the rail project, so this was the last jurisdictional crossing on the roadway roadway portion where it's it's not a revision to the crossing is replacing a drainage structure that doesn't will impact.

Swift Creek. So it'll be a buffer impact as well as a stream impact.

Hank stabilization.

All right.

Any other questions?

Or comments on the roadway portion?

General comments. Can you go to sheet 22?

Yeah, I think we're missing a buffer on that one for stream St.

Add it on there 14.

Oh, you know what this they're here.

We were looking at one it looked like it was right because that's one of those numbers.

I just wanted to see.

That's fine.

So the yeah, these are this is the end of stream St.

It just pops through the match line, so it's a line style thing.

These are the two buffer lines we can we can move that.

So they should.

They should wrap around.

Oh, yeah, yeah, yeah.

I'll go get it straight out in that interview.

So should the Bucker should continue on around? Thank you that.

Yeah. OK.

That's what we're trying to there were different sheets.

Trying to figure out which way to win it, OK.

OK.

Thank you. I've missed that one.

So the stream does in for the the green lines in there.

Yes.

All right. We have about 8 minutes left.

We're going to run through the rail project.

There's two really discussion points on the rail.

This is.

Looking.

These are playing profile sheets.

This is the Toyota dealership.

So Apex High School is in this quadrant.

We do have wetlands on this project.

On most plan sheets we have a couple jurisdictional crossings that we are not impacting, the first one being stream.

Si.

We tie back in these plans.

Look a little different because they're track plans then, but I'm seriously looking at we have some buffers for this one, even though we're not impacting it.

So we're following a retaining a suggested byte.

The next crossing?

Is an existing 36 inch RCP under the rail. Any pipe replaces under the rail or Jack and bores.

This is a large drainage area heavily developed, so this 36 is being outsized to 290 inch welded steel pipes.

Take a look at the side. This is the existing 36.

It is in rough condition.

This is back several feet looking at the inlet.

So the channel takes a hard 90 into the inlet of the existing 36.

And and this is about 50 to 75 feet upstream, looking downstream toward the rail embankment.

This is roughly where we're going to tie in with our with.

Our channel relocation to ultimately tie.

Sorry about that.

Ultimately.

Tie to our new processing.

So it it was a good place to to pick off that JS.

We can't Jack and pipe in the existing location. We had to offset this location was chosen because it lines up well with the outside.

The the only section of the pipe that would be jacked board will be the section that's under the existing rail embankment, which which lends helpful for for board pits. So. Hopefully that will limit impacts to the existing channel in your construction.

The remaining leg of the pipe can be welded steel or welded.

Without jacket forming it, so the more bit can be essentially in the location where the pipe will be in its final location.

Now we got some comments that were not incorporated in this plan set up from Heather Montague with Division five to show real rap in the bed, both upstream and downstream.

So.

Which which just sounds like is is consistent with blood.

Yeah, DWR.

Four are OK with the existing channel that Asterman has a huge scout on this 36 is is way undersized in his pursuit, which is 2 big reasons that the scour hole exists. Since this is the replacement, not an extension you are planning to.

Yes, yes, the the low flow pipe will be buried on foot.

OK, the the flow plate bench pipe will be set at the same.

Inver elevation with a 2 foot burial.

Where you're tying into that string through this one for the downstream side closer, yeah.

It's this.

This is roughly location where we're gonna tie in.

So low flow pipe will be set.

Almost center with the stream.

The floodplain management bike will be offset in the bank.

What was the channel where?

I was wondering if if there's a way to.

I hear good.

Yeah, and and the the comments from Heather indicated it's hard to have her app on the left lane been in a chain of events. But we're now the bank statement section. So we'll follow that.

That that guidance for this crossing.

All right. We'll go to the last.

Teraxxually impacted policy. Less project there's a wetland.

This is another area this is.

This is stream SJ and these are the buffers for stream SJ with the top bank plotted.

We're currently working to get the ECTm to show correctly in this area.

There was a a break between Lidar contoured and project contours that that.

That do not show up correctly.

These buffers are plotted based on a on a top of a.

That was drawn using Lidar, so there will be some impacts to the buffer line.

Also to a a small welding area.

Flash Crossing is stream SI.

Upstream side, so this is an existing 18 inch, five degree replace with a 60.

There's a gap between the 18 inch pipe and an open throat catch phasing that receives flow from the 18 inch pipe through a channel.

Si does not show up as a as a jurisdictional stream, and the latest NRTR that we have there was a question that Heather had as to whether this should be shown as JS, which is why I put.

Confirm buffer.

He said Sisi.

Thank you.

So in the in the NRTR, I think it shows a it only shows wet little downstream side of the pipe right?

5/8.

What is the problem? Dorf is.

Let's see. Rail plans N is to the left.

2.

So this is the existing outlet.

It's free.

The best odd and it goes.

And there's a welcome it disappears into the.

So this the image that we're looking at here is that segment that does not show extreme.

So this is between the outlet of the existing rail 18 inch and the inlet.

This was what kind of lead questions is it?

There is a there is a channel through this area.

It only shows up as well in in in our PR that I have where is the third.

Pipe.



Ruiz, Melissa 2:00:15

So I can add to that.

I don't know when we were probably just out at different times, but that Channel

through the wetlands is really dry and it didn't have a lot of bed and bank. I'm not sure exactly where your photo is that you showed, but we did not find a channel that that we could say was defined. Where we have it starting down on the downstream side. That's kind of on the sewer line where it's it's going downhill and it starts picking up velocity and it forms the channel again. So we kind of show it as a not having sufficient bed and banks through the wetland area. Is it your downstream of the pipe picture or your upstream?

PP **Perlin, Joel P** 2:01:07

You're talking about. Talking to her this morning, as soon as my phone. This is downstream. So this is the the existing pipe under the rail was in this hole. It is. It is underwater. The 18 it. This hole fills up and it spills out into this channel. The channel goes to an open throat catch basin and and spills into the otcb so.

RM **Ruiz, Melissa** 2:01:19

Yeah.

PP **Perlin, Joel P** 2:01:30

It's it's pretty odd, so. Our our proposed condition we're we're filling over this whole channel. No, we'll be tying in to the existing 30 that goes to a system at Apex High School with a new OTCB and a 60 inch Jack Moore pipe under the rail.

RM **Ruiz, Melissa** 2:01:42

Right, right.

PP **Perlin, Joel P** 2:01:51

Similar situation where we're realigning Cam, Jack and board in the same spot. I think we probably want to look at using rip wrap in the bed. That was another one of Heather's comments. This is the endless side of the pipe where it takes the only channel or it takes a hard

right.

Into the existing 18 inch this.

Is 50 feet back looking towards the the rail embankment?

And this is looking upstream, so fairly shallow.

2-3 foot wide channel that we're going to be realigning to live to the new life.

The Times doing this upgrade, yes. Yeah. Yeah, so.

So the flow that goes across the rigid track is not going to go into that well.

It continues to go up the left.

Not unless it comes out of the otcb and the in the proposed condition, right?

RM **Ruiz, Melissa** 2:02:57

That wetland seemed to be more overland, flow driven and maybe stormwater coming from around the high school.

PP **Perlin, Joel P** 2:03:08

But it's but the flow that it's got is coming from.

The.

Wind stream wetland.

From the railroad track, right?

Yes, the the what is what is showing right now is JS.

The FS file.

So we have some discrepancies here.

There's a JS shown right in the FS. The NRTR shows a gap.

Yeah, we need to figure that out.

But whether it's JS or not, I'm just questioning whether we want to direct that flow into thirtyinch pipe or into the.

30 inch pipe it's flowing.

RM **Ruiz, Melissa** 2:03:47

The wetland is flowing down a sewer line easement and starting to cause a channel to form in the sewer line easement.

PP **Perlin, Joel P** 2:03:56

Is that following toward the neuro track or wait for neurotransmit?

RM Ruiz, Melissa 2:03:58

That.

Right, right.

Yeah, so it.

PP Perlin, Joel P 2:04:02

So where where does 30 inch probably go?

RM Ruiz, Melissa 2:04:04

And then it.

PP Perlin, Joel P 2:04:06

30 inch 5 ultimately goes to a closed system under the football field and and discharges in Williams Creek.

RM Ruiz, Melissa 2:04:11

Mm-hmm.

It's an odd little area and there's a lot of sewer and I think the storm water is going to cause issues and the stream issues with that sewer. As time goes on. If you have even more flow going to it.

You'd essentially be like directing a stream onto sewer line, whereas right now it's like.

Really weak wetland.

PP Perlin, Joel P 2:04:41

Listening I'm concerned about is cutting off the technology source for that finger, right when it goes down to single.

RM Ruiz, Melissa 2:04:50

Should be the wet that wetland is.

PP Perlin, Joel P 2:04:50

But.

RM Ruiz, Melissa 2:04:52

So we showed a connection throughout because we do feel like there's possibly some water that.

Is connected from the upstream stream coming through there, but it is not a clear cut.

Oh, here's a stream that goes under the railroad and continues down to Williams Creek.

It it goes away.

PP Perlin, Joel P 2:05:14

Right.

RM Ruiz, Melissa 2:05:14

You and from what we thought it went away.

And the the wetland was.

It's kind of almost even a a wetland on a slope.

It is odd, but it has hydric soils.

It's got all.

It's got all the indicators, but it's just it's it's maybe groundwater.

PP Perlin, Joel P 2:05:31

So.

RM Ruiz, Melissa 2:05:34

I don't know.

PP Perlin, Joel P 2:05:35

So the flow was one of the railroad tracks splits.

To either wetland or the third inch pipe, but probably most of it goes to the third inch pipe, yeah.

RM Ruiz, Melissa 2:05:47

I think so, because then that drainage pipe that comes under from under the football field and drains directly into Williams Creek, it's big.

It has a lot of flow, so you're almost like, wait, how did how did the stream get down in under the football field?

Now Brian's telling me that there's a pipe, so I feel like the majority goes not through the wetland and is very limited in the wetland.

And part of that wetland is also because the sewer line is a compacted.

Surface, so it's almost like it's ponding on the sewer line.

So I yeah.

I don't know about the the viability of that little wetland finger. It feels almost.

Like it in the past, way before the high school was there maybe that that was its actual flow, but it's been severely altered by other developments.

pp **Perlin, Joel P** 2:06:47

The flow through that tone protection is not gonna get into the into the 30 inch.

It's gonna go across that to the.

That the the structure will be open for so it can get into that same as it does today 'cause it's it's the same structure.

It it's obviously not gonna be the same location.

So that OTCB the existing is here.

Typically you don't see a open channel going to an OTCB like this.

It's it's rather unique.

So we're closing this all up.

You know that open channel is no longer going to exist like like it does today.

But square solid goods where top what?

It's what?

It's not starting, it's an open thread cash base. And so it'll have a concrete lid with four right 6 inches on each side.

And and that serves 2 purposes. It it serves the the rail pipe the size for the 100 year.

It serves the purpose of collecting water and also serves as a overflow if you have more water than the thirtieths can handle, it'll come out of that otcv and and flow out to the wetlands.

Yeah, that's an old backup.

That's.

So I guess the question is, do we do we buffer do we show this as a buffered stream?

Right now it is not a stream in NRPR.

Is that something that you're following up on?

But this needs to be a yeah, I need to see this on top of compliant.

The request to file one because I you know if we have two different things in our TRS drawing on stream where it's located, something signed file and nothing happen.

Ed decided they're on, but according to what's in their TR August range in their order book.

Yeah, so just don't.

You know what's happening between those segments?

Second, yeah, OK, that's just because.

OK.

Currently it looks like the connect.

Submission package from April.

Does not show streamline through there.

All right. So as in our TR is right now we need to get rid of the the buffers in JS line. I think it needs the determination. OK.

If it exists or not OK, I mean I shown not, but we're watching it in a TR. That's not true.

OK.

I haven't looked at this recently about this.

I haven't looked at the TGN policy.

That's all I.

OK.

Well, we'll leave what we have and and and follow up.

Is this gonna be something that needs to be looked at in the field?

Again, or is it under this?

OK, OK.

I mean, before this meeting, I haven't heard about this project in six years.

Y'all just gotta yeah. Introduce me to this. And I was like, oh, we got a project. Yeah.

That's the way it's labeled. Thank. Yeah it was.

It was posted, but it's all drafted.

All right, one quick question before we leave this area.

So we have this special 3 foot base stitch.

Coming into this area.

Yep, typically.

I mean, it looks like it's running directly to to protection.

Typically we don't like to protection, almost like channelizing the water.

Is that something that?

Yeah, we were trying to match existing condition here where this the only area is a acre or so.

3-4 days is something real.

I actually use.

Which is, it's not dictated by a flow, it just so we it's too far.

We're trying not to code it in this through the buffer in the well and right.

We we can take it all the way down to the otcv.

The other was we were getting really close to Apex high schools parcel and existing utilities are football field fans. So we were trying to limit.

I guess if it's.

Looked at hydraulics standpoint, I guess my only concern is seeing a ditch tie to protection and hoping that the toe protection can handle the drainage kit where it needs to go.

It it's mostly daylighting that's similar to what it does today. We can take a closer look.

It's it's flat out there.

So you have flat ground coming into into this new rather high railroad bank?

So our approach was to try to reduce the impacts a little while and not cut into this.

Probably might need to call it.

Here is there anything else that you wanted to focus on before we adjourned?

No, great, any additional comments?

We're good.

There's one more seat.

We'll look at it just so we have a no streams that were impacting.

There's a stream and then our TR some existing pipe.

For a while and.

So there's maybe one we need to show buffers on.

You know, I don't think we're gonna be anywhere close to it.

OK, we'll set up offers.

Well, thanks again for hanging on a little bit later than we expected, but I think this is a great discussion.

So again, thanks for having coordination.

Just to wrap real quick, I think we got our rip rap coordination and clarification on jurisdictional features that we had going on earlier.

Also, some just jurisdictional labeling and and buffer considerations that we'll look at more pit stabilization guidance.

We got a little bit of that as well.

And some storm water ponds. We gotta figure out if we need a a GD on any of those.

We discussed challenges challenging areas I'd say of note. The biggest one was kind of near the auto park with the filter fabric and permit requirements.

But I didn't hear any of those areas that we discussed were like show stoppers. Any major concern?

Sounds like we can work through just about everything.

Does everybody agree though?

This is kind of our chance to you're holding back.

Great.

Yeah. With that, I had a few other notes and I know that there were some other note takers.

Here, but anything Brian and your team to the agencies and subject matter experts will be all have them still in the room.

I think so.

We'll be putting minutes together to send out a revised review.

And give us comments on and ultimately finalize.

Or great last call agency subject matter experts both in the room and in the chat.

One closeout question, Sarah, go since this is not a true merger meeting, but it was an environmental document commitment. Is there any documentation beyond the meeting minutes?

That this project needs to make sure they complete to fulfill that commitment.

OK.

Thank you.

We don't.

We don't do signatures for before before.

Anything else, either in the room or in the chat.

Going once.

Going twice everyone.

Thank you again for taking the time to discuss this with us today.

Have a great afternoon. Thank you.

Who's now?

● **Perlin, Joel P** stopped transcription