- **AUDIENCE 1:** Wow. Amazing timing. I think, let's try to hold questions till the end, because then we can stop recording and just have a little more free flowing conversation. If there's a really important clarification question you have, that makes sense to do on the slide. So feel free to either put your hand up or your name. OK, Andreas.
- PRESENTER 1: Thanks, Abby. So yeah, I've given this presentation a few times now, but trying to make it new and add a little bit of the content each time. So before we talk about the project and all the details around, take everything, broad picture, and talk about sustainable transportation in Cambridge, which it can be conferred as many things, but we generally refer to this as ways to get around, such as walking, biking, and public transportation that don't emit or add congestion.

So that is one of the main goals of this project. But this also is not Cambridge's first such project or initiative. We've actually been a leader on this front for many decades. One strong example from the early '90s is that Cambridge introduced first of its kind in nation vehicle trip reduction ordinance, which essentially said to developers or projects, development projects coming to Cambridge, you need to find a way to make your trips not induce new vehicle trips.

This has really led the way for a lot of the development in Kendall Square, which has been neutral or negative in terms of introducing new vehicle trips. And many ways to do this, but it really ingrained it into the development review process that driving is not the default way in Cambridge. This was then in 1998. We passed the current parking and transportation demand ordinance, which added a bit more teeth to this process, made things a bit more required, and that's still in place today. We'll actually talk more about this, likely, throughout the project.

Cambridge adopted a climate protection plan first in 2002, with targets and goals for reducing emissions in the transportation sector, among others. This was very much aspirational. And now, a lot of more recent policies, which we'll get to on the right, have added a bit more regulatory and mandated. So for example, we have a complete streets ordinance in Cambridge, which many municipalities now have followed. Well, they don't necessarily follow.

Many new municipalities in the state have this now because there's certain state monies that come with it. But it's basically says that all projects we do shall accommodate all users, so not just drivers, but people walking, biking, taking transit. We've had a vision zero policy now since 2018, which I think David alluded to earlier. It originates from Sweden, but it's a policy that when we look at our transportation system, we should lead with safety first, so reducing or eliminating serious injuries and deaths on our streets.

The default really for many decades in the United States, and as for the United States, has been to lead with speed and convenience in what we call things like capacity and flow rate, more vehicle oriented metrics. This really flips the conversation around and says, we need to start with safety. And then we can think about things like congestion, delay, so forth. And then we've had the Cycling Safety Ordinance since 2019, and we'll get into the details, of course, because that's kind of the core of where this project came from.

So to understand the Cycling Safety Ordinance, we'll first talk about the bicycle network vision. It's doing that annoying thing where it jumps slides. So the bicycle network vision is updated every five years in the city, starting in 2015. There's the 2020 update on the screen. We do have a 2025 update in the works. It is a network for a safe, comfortable, connected, people centered network throughout the city, where all destinations are connected for people on bike. And that doesn't mean sharing a high traffic street with high speed traffic. That means routes that are comfortable for people of all ages and abilities. And we'll get more into what that means.

But the main thing that the bicycle network vision did is it set a vision for a network of separated bike lanes throughout the city. And this map is a little blurry from here, but those are the purple lines on the map. There's also other network layers to the network, like our yellows. So the yellow streets are what we call low volume, low speed streets. These are often just-- already many of these already exist in Cambridge. They're side streets that are comfortable bike on without needing a designated bike lane or protected bike lane. The volumes and speeds are low enough.

In other cases, there are aspirations to create a street that is more like that than it is today. So I think-- oh, go ahead.

AUDIENCE:

That the speed limit, or the actual measured speed on the actual-- OK, cool.

PRESENTER 1: So yeah, but there's many examples. So many of the side streets in Cambridge are this yellow, this low volume, low speed, or we want them to become lower volume or lower speed. And then also, we have a network in green, which is our vision for a network of multi-use paths, like the linear park path, the Paul Dudley White path, and others.

> So as we've been implementing the Cambridge bike plan and the Cambridge bicycle network vision, we've been bringing data along with it. And we have found as the years have gone by since this amendment in 2003 when a lot of this planning around promoting biking in Cambridge started, that the crash rate has gone steadily down. We measure, and we're talking here about crash rates, which is specifically, essentially, the likelihood that as you're riding a bike, you'll get into a crash.

> So it's crashes per million miles bicycle traveled, so the amount people are biking. So as more people are biking in the city, the BMT or the bicycle miles traveled increases. And then also, the number of crashes. And so that crash rate over the years has steadily gone down, which is the top right graph you see.

AUDIENCE:

Can I ask, does that include collisions between bikes and pedestrians or cars? Oh, this is only bikes specifically.

PRESENTER 1: This is any bicycle-involved crash. And those are almost essentially all involve all similar vehicles. The ones that are reported.

AUDIENCE:

That are reported.

[INTERPOSING VOICES]

**PRESENTER 1:** And this is reported data.

AUDIENCE:

Does any of this cover any of the electric scooters and things like that? Or is it just bicycles?

**PRESENTER 1:** So we have done some-- so this is taken from the Cambridge Police Department. And they have started more recently reporting differences, like if there's a bike or a scooter, or an e-scooter, e-bike. But historically, no, I wouldn't say--

**AUDIENCE:** The database data--

**PRESENTER 1:** No, it's crash reports. So when officer is at the scene, they collect information about who's involved. And before a couple of years ago, it wasn't a system of reporting e-bike versus normal bike or e-scooters.

**AUDIENCE:** I'm curious. How do you come up with the number of miles of bicycles ridden? It's kind of an educated guess. We have to ask people what their experiences are. So it's kind of a guess on that.

**PRESENTER 1:** Yeah, we have-- and, Jeff, if you want to chime in here.

**PRESENTER 2:** Yeah, it is an extrapolation. So we do count how many bicycles are observed over a short period of time and extrapolate it over to the whole day, the whole week, the whole year.

**AUDIENCE:** You do that at different locations?

**PRESENTER 2:** At different locations, right. The state and federal governments calculate vehicle miles traveled in a similar way, although they have better machines to count cars, which are easy to count, because they're larger and more metal.

**AUDIENCE:** Well, they follow cell phones, too.

PRESENTER 2: Yeah, you can do it that way, but what this attempts to show is that the crash per bicycle or per mile traveled is declining. And it's a clear-- and you're right. The extrapolation is not an exact measure, and that's something that I want to improve upon over the years to get permanent count stations for bicycles, just like we have for cars, so just like the state has for cars. But this is a pretty good facsimile that we think that--

AUDIENCE: When does the based extrapolation-- when does the base count date from? Because at one of these meetings, one of the public meetings, a couple of people came and asked about that and were told, no, they hadn't actually studied bicycle traffic on the roadway since the installation of myself and the Cambridge license.

**ABBY:** So there's definitely some curiosity about the data.

**AUDIENCE:** Yeah.

ABBY: Jeff, do you want to answer this question? And then I want to make sure. There are some other things. We can also take note that there's interest in the data questions here, but I don't want to get too distracted on it. And it's Ronda, [INAUDIBLE] Will, Jeff, Ronda, and then [INAUDIBLE].

PRESENTER 2: No, Abby, you're right. And we're behind anyway. I think maybe we can have a side conversation about it. a

Community development does a-- just to close on this question, the Community Development Department does a

city-wide bicycle count every two years. And then we do spot counts in between. And you can see there are some

data points over the years that are not there, because we didn't do a count that year. But the idea of this graph is
to show an overall trend. And the message is that what we're doing is working.

And so that's why. We've talked about it a lot. We've heard a lot from people when we did introductions about safety. And so that's where this-- that's where the impetus for this comes from. The more work like this that we do, the safer the city becomes. There's more people on bicycles, and then the number of crashes, the total number of crashes is gradually declining, but the rate is rapidly declining.

**ABBY:** Thanks, Jeff. So we'll try to connect you all if you want to ask questions.

**AUDIENCE:** So actually, my question was actually just to try to see about getting the data collection into a more permanent

part of the planned safety plan itself. As things are going down, you know that little wire that you ride over? Is

that it? OK.

**PRESENTER 2:** Yeah, there's one.

**AUDIENCE:** Just wanted to make sure that that was what it was.

PRESENTER 2: We have one station in Cambridge that's permanent for counting bicycles, and it's in Kendall Square.

AUDIENCE: Yeah so that's all I was just going to ask, if we could consider thinking about the count of bicycles and the data

collection as a part of the safety.

**AUDIENCE:** Over time.

**AUDIENCE:** Over time.

**ABBY:** Yes, and I've heard that called adaptive management. So you can see what's happening in the implementation,

and then adjust.

**PRESENTER 1:** We have this too. There's a lot on the website, too, to do a count, two counts.

**AUDIENCE:** I just added to keep us moving.

**ABBY:** Thanks, Brian. OK, do you have another point on this?

PRESENTER 1: So the second point on this was about crash severity. And so in these police reports where the officers go and

they respond to a scene, to the scene of a crash, they note or try to note the severity of the injury. It can sometimes be hard to tell, because injuries aren't always obvious at the site of a crash. But there's been a clear trend that when crashes occur, their severity is going down. And so the font is small. But in 2004 to 2012, the

dark shades on the right are injury or some severe injury crashes.

Of the crashes that occurred, about half of bicycle-involved crashes were injury crashes, and about 5% were incapacitating or very serious injuries of all the crashes that occurred involving the bike. And the more recent

years, 2015 to 2002, that injury portion has actually gone down to 5%. So we're seeing, while crashes may be

occurring, the crashes that are occurring are no longer life threatening. And that really gets back to the vision

zero aspect, which is acknowledging that we're all human, and that there may be crashes, but we really need to

focus on severe injury crashes and fatalities, and prioritize those because that's where we can make an impact.

**ABBY:** Ken, do you want to--

**AUDIENCE:** Just a brief comment. Elephant in the room. There were three fatalities this year. So that doesn't include this

year.

**AUDIENCE:** But none of them on Broadway.

**AUDIENCE:** What's that?

**AUDIENCE:** None of them on Broadway.

**ABBY:** But this is our city.

**AUDIENCE:** This is city.

**AUDIENCE:** No, I understand.

**AUDIENCE:** But one was--

**AUDIENCE:** I understand it.

[INTERPOSING VOICES]

**AUDIENCE:** No, that was my point. Just elephant in the room, three people died this year. [INAUDIBLE]

AUDIENCE: I'm just kind of curious about how-- I don't even know, but I have a question for the police. When they investigate

something, what sort of information are they getting from their investigation? So but that's further guestions.

**ABBY:** Yeah, I think Jeff knows something in your connection after. We've talked about that, too. OK.

PRESENTER 1: OK, so going back to two slides ago, we talked about the bicycle network vision. So what the Cycling Safety
Ordinance essentially does is the council, the elected body in Cambridge that everyone gets together and votes
for every two years passed a law mandating staff implement elements of the bicycle network vision or the
Cambridge bike plan. The vision is one of the many elements of the bike plan.

This started in 2019 with a mandate that says, whenever streets are rebuilt in the city-- and we're talking a full depth reconstruction, like Inman Square, Western Avenue are examples-- that if the bike vision says, OK, this street should have a separated bike lane on it, that as part of that project, we should build the separated bike lane. So you're seeing some recent projects that adhere to this ordinance, such as River Street, where we're building a separated bike lane out. That's because where the street was on the network.

Huron Ave by the golf course and Fresh Pond preservation there, too, that's another example of one of those reconstruction projects. The issue, though, with the 2019 law and what the council tried to address in 2020 was that that only applied to full reconstruction. And we don't reconstruct streets solely based on the bike lane. We have many other factors. One of the primary reasons is our sewer system, and also, other utilities, because during all those projects, we're rebuilding sewers to separate our sewer system.

So if we were to implement bike lanes only through reconstruction, it would take decades to really complete. Because we're only reconstructing. A major project like that can take four to five years to really build, because you're doing all the work on the ground. So in 2020, the council said, OK, staff, in the next six years, [INAUDIBLE] implement essentially most of the separated bike lane network using quick build materials. So this address streets that were not on the reconstruction plan.

So Broadway is one of these examples, much of Mass Ave. Actually, I'm kind of getting into the next slide. But then in 2024, they slightly modified the deadline. So the previous deadline for this was April 30th, 2026. Last year, they extended it one construction season to November 1st. So what does the Cycling Safety Ordinance include? It includes all of Mass Ave, Broadway, Cambridge Street, Hampshire Street, and Garden Street, plus 11.6 miles is separated bike lanes in other locations. And that's any location that the bike vision says should have a separated bike plane.

And then this is specifically referring to this rail network. So look on the right in orange, we have the streets that are required. And then in purple, we have 11.6 miles. And that's not to say we have to implement everything on the network, but 11.6 miles is a substantial portion of those other streets throughout the city. So examples are Main Street, Brattle Street, Huron Ave, many others.

AUDIENCE:

Can I ask? Was Harvard Street ever considered?

**PRESENTER 1:** So let can we back two slides. So the vision is broken up into different types of facilities. One is a separated bike lane, and that's in purple. And then the yellow is low volume, low speed streets. So Harvard Street in the bike plan was identified as a yellow street, meaning it doesn't have the width, or it's not really the right type of street for a separated bike lane. So Harvard Street, for example, it's much narrower. So a separated bike lane wouldn't necessarily be the right type of bike facility for our users.

AUDIENCE:

But I guess I'm just wondering is Harvard Street essentially goes to where Broadway goes. And there isn't a lot of parking on Harvard Street. So if it's largely safe for bikers and it doesn't sacrifice parking, that doesn't constitute sort of meeting our number of constituencies' goals.

**PRESENTER 1:** We have another slide in here about the specifics of Broadway, but they're both on the network. So Harvard Street is on the network as one of the yellow streets, and that doesn't necessarily mean it's perfect today. That could still mean there needs to be some improvement. And then Broadway is on the network as a purple street, meaning separated bike lane.

ABBY:

We do have a wide Broadway slide into the slide, so you could see what that means and then [INAUDIBLE].

AUDIENCE:

But she was asking about Harvard. Right, but as an alternative to Broadway is what I mean.

AUDIENCE:

Yeah, I'd be interested to see why Broadway, but I think I'm just wondering, if you can get to the same place and everybody's safer, and there's less hardship on people, just curious why that's--

[INTERPOSING VOICES]

ABBY:

There's a lot to say about Harvard Street, basically this project. But maybe now isn't the time to really dig into it. So I think let's keep going. Again, I think the why Broadway slide might answer, and I think one of the key points underneath in this whole CSR presentation I think we all talked about in the interviews is like, the CSO is along the city that exists. The goal of the working group is to try and figure out how to implement it in the best way possible. If you want other advocacies about the CSO itself, there are other political avenues.

**AUDIENCE:** 

I thought we were trying to determine Broadway safety improvements, which is not necessarily the same thing as putting in separated bike lanes. There are six other mechanical engineering solutions to the problem to ameliorate certain injuries.

ABBY:

I don't know. Jeff, do you want to respond to any of this?

AUDIENCE:

Have you considered raised table crossings?

PRESENTER 2: Of course. And that's something that we'll get into as our work progresses. We'll get into those [INAUDIBLE].

**AUDIENCE:** 

They basically have to force motorists, in particular, cyclists secondarily, and I suppose in a tertiary way, scooter users, to slow down.

PRESENTER 2: Yeah.

[INTERPOSING VOICES]

**ABBY:** 

We're going to talk about slowing streets, so hang on to that.

[INTERPOSING VOICES]

**ABBY:** 

OK, Andreas, can we continue? Thanks.

PRESENTER 1: So as I said, I think I covered most of this in the CSO side. But there's really two ways that we implement bike lanes in the city. One is quick build, and one is construction. The Broadway will be an example of a quick build project, which is the top right photo, which is typically markings, posts, basically fitting in a bike lane within the existing curb to curb between the two sidewalks. And there's no major underground reconstruction, so we're not also redoing the sewers at the same time. The gas company is not coming in. It's much quicker.

> Typically, it's a couple nights of pavement markings and a couple days of flex posts. That's not to say the impacts aren't different, aren't more, because this still involves many of the trade offs with parking. And it's also reversing this. But yeah, that's a good great point. Bike lane poles are much more reversible. Because again, that reconstruction isn't happening.

So the bottom right is an example of construction. And this is central square where the developer installed the bike lane as part of the project. But there, the bike lane is raised to sidewalk level. All the drainage was redone. There were new plantings involved. It was the full package. These often end up, I'll admit, they're a bit prettier. However, they take much more time. And again, if we were to implement everything with construction, it would take decades or years to--

[INTERPOSING VOICES]

PRESENTER 1: So then the question is often come up of why Broadway. So it all goes back to the planning process of the bike plan. But the 2020 bike plan added sections of property to the bike network vision that weren't there in 2015. Some of it was still on 2015, near the high school, and then sections down near Kendall. But this, the 2020 plan added the full length. And that was because we heard that Broadway really does serve as kind of a Main Street in Cambridge, even though we have another street called Main Street.

This is the street where you have a lot of the institutions, the schools, and it really serving as a direct connection between schools and people who live here. And other routes like Harvard Street don't necessarily get you to destinations on Broadway. I think we all know that. This building's not on Broadway. Many of the front, much of the frontage is on Broadway itself. So there. I think we will obviously going to talk more about this. But this was discussed extensively, I think, as part of the bike network vision, and then also, as part of the Cycling Safety Ordinance that the council has asked the instructor staff to do.

**AUDIENCE:** So what's the lack of available bike facilities? What's that?

**PRESENTER 1:** That's the lack of, I guess, this project not being implemented. So Broadway today, if you're riding a bike, you're just--

**AUDIENCE:** What is the cyclist comfort part?

**AUDIENCE:** Does this mean bike lanes, or does it mean something in addition to or accept bike lanes?

**ABBY:** I am going to invite us to use our fun name placard. And I just want to pause for a second. I also want to make sure that people who haven't spoken yet are getting a chance to ask questions. So again, if we do this, then it makes sure that everyone has a chance and not just the police.

**PRESENTER 1:** And I think that was the last slide.

**AUDIENCE:** That is the last slide. Yeah, so we can go. Do we want to stop recording? Thank you, Meira. I think this is Jeff.

PRESENTER 2: Yeah, Jamen and I have the next eight slides, and we have to get you to a break at 6:45, so here we go. All right.

**AUDIENCE:** You're OK. It's OK, Jeff.

PRESENTER 2: This next set of slides introduces the group to the project itself. I'm going to start with the project goals, which is why we're here, why we're doing the project at all, and what we've heard from the community about Broadway, which we talked about a little bit. Number one, speed. I'm not going to ask you if you think cars are going too fast on Broadway. I already know the answer. So that's a big goal, and you're going to hear that a lot. We're going to discuss how we're going to reduce speed with the design elements of that project.

And we also talked about the bike network and we talked about Broadway's role within, or place within the bicycle network, and also, to reduce bicycle related crashes. Aside from speed, safety is also a huge consideration for this project. And then finally, intersections. A lot of the intersections that we experience, whether it's car versus car, or car versus bike or pedestrian, occur at intersections. So we want to think very carefully about the intersections along the corridor, as well, to see if we can reduce those as we go.

And so there are design elements for intersections. There are design elements for in between the intersections, and we're going to do both of those over the course of this project. Next slide. All right, here we go. So what are we going to work on? A big chunk of Broadway. So this, to orient you, Harvard University, Harvard Square is on or just off the screen to your left, Tech Square, Kendall Square on the right. So we're going to start at between Quincy Street and Portland Street as the scope of this project.

Andreas mentioned the schools along the corridor, of course, Windsor Latin on the western end, and the Fletcher-Maynard Academy. I'm sorry, I'm on the wrong spot. I'm looking at the wrong thing. We have Center Park in the middle. You are right under the O in Broadway, at this building, which is a big draw, not only for the people who work here, but for the people that do business here every day, paying parking tickets-- thank you very much--getting parking stickers and other businesses they do in this building, and then going all the way to Portland Street on the Eastern end.

Next slide. We have broken up the project into sections. The first section B and C are-- I guess you start with A. The first section is section A, which is between Columbia and Portland, and the B and C sections are the [INAUDIBLE] as you can see. And we'll go to the next slide, which talks about timeline. The timelines are slightly different. Section A will go first, or we'll do that part. And in the winter of 25, which is what we're doing now, we're at the beginning of it.

And then when we get into spring, we'll do design and feedback on the A section. And then by the time we get to spring and summer, we'll be ready to install section-- implement the changes to section A. And then moving on to section B and C, we'll begin thinking about this one summer-fall of this year. And then once we get into the winter months, we'll get into some design work and do some feedback on that with this group and with the larger community. And then we'll, once we get to spring '26, we'll be able to implement those changes there.

So we're on a pretty fast timeline, and we're looking forward to doing that. Jamie.

PRESENTER 3: OK, great. So just a kind of summary of our engagement efforts for this project. We have put out over 7,000 postcards across Broadway and abutting neighborhoods. And hopefully, you've gotten some postcards in your mailboxes. And we've also spoken with residents, and businesses, and put out posters along Broadway. And we've also had two in-person open houses, as well as a virtual presentation in February and in January. And we've launched our design survey for section A, and we're gathering our feedback.

Yeah, and so that is our engagement effort thus far, and we'll continue to do it throughout this section, as well as signing the EOC.

**ABBY:** So there's one more slide here, which I can--

PRESENTER 2: There we go.

AUDIENCE: If it's helpful, I can just overview this. So the city has already started outreach on this project. And they will continue to do outreach for the duration of the design process. And so they would love your input on who they need to make sure they're talking to, if there are any ideas, where you want to see information posted. They are all ears for that. Rather than like spending time generating lists as a group, we thought it was a little more efficient to have you-- we made a simple survey that will send after this. You can either just put ideas there.

If that feels annoying, you can email Jackie, who's not here tonight, but she's the communications person for the department. And so you'll see her in every other meeting. Or you can even just give her a call and set up a one on one meeting, and just brain dump your ideas to her. But again, this is trying to reach as many people in this process to get input on the design. So we will send out the link to the survey and a reminder to do this.

We have a question on the line from V, which is, are sections B and C occurring at the same time in 2026? If so, why break them into two sections instead of keeping it as one?

**PRESENTER 3:** 2025 or 2026?

**ABBY:** B and C were 2026, right? Would you take us--

**PRESENTER 3:** Oh, yeah, yeah, yeah, Yeah, no, you're right. Sorry.

**PRESENTER 1:** They could in theory. I think the short answer is, these are long corridors. So we will define a different B and a different B section as we get closer. And we're just trying to find ways to reduce the impact. Often with these streets we're paving and milling the whole street over. And just splitting it up into more manageable sections helps with the implementation. So they're both scheduled for 2026.

**ABBY:** Bee, does that help?

**AUDIENCE:** Yeah. Thank you.

**ABBY:** Thanks. Any other questions on this? Oh, thanks. And then yeah.

AUDIENCE: I think I can infer it based on your answer to that. But is there a reason why can't we do A, B, and C all in '25?

**PRESENTER 1:** There's no law against doing it that way. We just have to finish it by 2026. But again, I think it's about trying to spread out the impact and--

**AUDIENCE:** The impact of the construction and the traffic to stop and access disruption during the construction?

**PRESENTER 1:** During, yeah. And also, we have done-- Hampshire, we did as one cool project, and it does help just to focus the conversation. So we're doing the same thing on Cambridge Street, too. We're splitting it up into sections. And it's really helped have those more local conversations to what's the loading need here, or the business impact there, versus trying to talk to people and what are actually completely different neighborhoods of Cambridge at the same time.

**AUDIENCE:** So thank you so much.

AUDIENCE: My question is also along that line, if you have experience having designed entire roads or bike lanes versus breaking up into sections. And if we do have parking quotas that we need to hit, if it might make more sense to put more of it in section A than B and C. If you just had experiences like that, and also why we chose to start with Section A first.

**PRESENTER 1:** So the first question is, are there certain parking quotas.

**AUDIENCE:** Well, just in your experience, it sounds like it has gone better to break up these plans into smaller sections and work on each one individually, rather than thinking about a cohesive design across a longer stretch of road.

**PRESENTER 1:** We have. I would say we have a cohesive design across the stretch of road. We generally know we can have parking on one side of the street, versus today, separated bike lanes in each direction. But the implementation is really just the kind of D grade conversation.

**AUDIENCE:** I see.

**PRESENTER 1:** Exactly, and what it should look like for the different businesses around.

**AUDIENCE:** So there is a broad design?

**PRESENTER 1:** There is, yeah.

**ABBY:** And was that shared in the community meetings?

[INTERPOSING VOICES]

PRESENTER 1: The open house. We're further along on section A, but--

**ABBY:** More details.

PRESENTER 1: Yeah, we're intending to both have a conversation about, immediately, section A. Here's what we're trying.

Here's the immediate design plan. And then also, here's what to expect for the whole corridor. Here's what it will look like.

**AUDIENCE:** Can I ask? So you said there's a plan. So what does that mean? You've already figured out where the bike lanes are going to be, where the parking is going to go away. Is that what you're saying?

**PRESENTER 1:** For section A, yeah. And we had a draft plan presented at a pair of open houses earlier this month and an online community meeting. And we'll be updating that plan, and also bring it to this group at the next meeting to create--

**AUDIENCE:** It's something we can view online?

PRESENTER 1: Yep.

Yeah. And so just to preview, I think we're going to cover this in a little bit. But at our next meeting, we're going to--- we can send it. We can send the link. Yeah. At our next meeting, we're going to try to delve deep into section A, and we're also going to--- the city has surveys open and is getting feedback right now on section A. And so they're going to think through what are the key things they're struggling with, based on the input they've heard, and bring those to working group members. And then we're going to talk about--- we might go into breakouts or something, talk about, hey, these are the multiple options for this one intersection. What is going to work best

based on your input and seeing the feedback of other people?

**AUDIENCE:** So sorry. I'm just confused. So basically, you're saying that there's a plan for this.

**ABBY:** There's a draft.

**AUDIENCE:** Oh, address.

**ABBY:** Yes.

**AUDIENCE:** 

OK, and then our responsibility is to take different channels of input to try to figure out how to modify that draft.

ABBY:

I would say, and feel free to adjust. One, working group members can totally fill out the survey and go to open houses, and have your input in that form, like everyone else can do in the city. And opportunity for working group is like, you get to go a lot deeper, because we're meeting regularly, and you can look at specific issues. And so again, the city right now is getting feedback from all residents. And we'll bring where there's differing feedback, basically, on specific issues on section A to you all next week, and we'll discuss those.

OK, let's go to Diane and then Rhonda on this process question. Thanks for bringing it up there.

**AUDIENCE:** 

In terms of input for the design, in my experience, when he's talking about improvement, 40% of the project is about good design. 60% of it is about political outreach. Or should we think in terms of what is politically feasible in recommending design changes?

**AUDIENCE:** 

What does that mean?

**AUDIENCE:** 

It means you can say, ideally, here's one way for us to maximize, for example, bike safety and minimize the number of car spaces taken. But it would really piss off this owner and this store. Should it be a part of our calculation, if that's going to be a headwind in terms of whatever design decision we make?

ABBY:

And I think I would-- and Jeff and Andreas, you can speak as the decision makers here. But the working group, I think as we covered it, it's in the charter that we're going to talk about a little bit-- is not the ultimate decision making body. It's an advisory group to the city. So I think as much as-- and also, you don't all need to come to agreement on one design. It's really like, this is a channel for you to share input with Jeff, with Shane, with Andreas, with others in the city. So I think that's a personal maybe calculation for each of you. It's not something we have to strategize on as a group necessarily. Yeah, Ron.

**AUDIENCE:** 

Is there a way that we can have an idea of where the input is coming from throughout the city? Because I'm just going to say, usually, it comes from one place. You get a whole lot of stuff from one area. They make a lot of-they're really good. I don't know if they can just write better than most people, but they're really squeaky. And they're very organized to get the three neighbors that live on the left of them and the right of them to be able to do the same thing.

So I'm looking to see where the information and the input, the data that is coming into us from the city, where it's coming from.

ABBY:

This is a city question, I think.

**AUDIENCE:** 

If we can aggregate that up so that--

**AUDIENCE:** 

Just to augment that, I think, also, just to make sure it's Cambridge residents. Right? Yeah.

**AUDIENCE:** 

So yeah, I think this is the city-- this is a city question. I just I will say one, as the working group person, again, on that feedback of the outreach survey that we had, I think the city would love all of your help getting these surveys and opportunities to give input out to your communities. And so as much as you can help them try to reach broader people, but I think, Rhoanda, I think a lot of people understand the concern of only certain people getting feedback into city processes.

**AUDIENCE:** That was my concern is to be mindful of that.

AUDIENCE: But also filtering that it's for Cambridge residents feedback. Right? So one, I'm just wondering, do you track this

for the surveys? Do you find out where the feedback is coming from?

PRESENTER 1: To the extent that we can without violating people's privacy, absolutely. And we try to be as transparent about

that as possible and post whatever we can to respect people's privacy.

**AUDIENCE:** Why don't you just ask them where they live?

**PRESENTER 1:** It's one of the questions in the survey. Yeah, so it doesn't include names, of course, but definitely.

**AUDIENCE:** No, it doesn't have to include names, whether you--

[INTERPOSING VOICES]

**AUDIENCE:** A lot of us who live along this corridor feel like we're in flyover country, where our needs are overlooked in favor

of the needs of communities.

**ABBY:** And so yeah, we're really glad that you're here. Yeah.

**PRESENTER 1:** I was just going to say, to Rhonda's point, there's obviously-- this is something that is very important to the

process that we are hearing from everyone. We acknowledge that not everyone can hear or participate in the process the same way. And so we need many different ways to try to reach people. If you have ideas that you can bring to the table of other ways, we welcome them. But there's an element of this, too, which is that there

are also the people we don't hear from.

And part of our role as the city is to proactively think about who is not present, who are we not hearing from, and

try to get to those people in the medium that makes sense for them. And often, that means being a little nimble

in our approach. But yeah, we don't want to have this come as a surprise.

**AUDIENCE:** When you present it as a fait accompli, a lot of people bail. They say there's nothing I can do.

**ABBY:** So yeah, how it's presented and talked about--

**AUDIENCE:** And that's how this particular communication was mailed to everybody presenting, as a Fait accompli.

**ABBY:** That's good. That's good feedback.

**AUDIENCE:** And I guess I'd say that because a lot of this work is being done, I guess-- so I'm with the Broadway group. Yay.

But the Cambridge group, I would love to know what the heck is going on, because I live there and I haven't heard a thing. I have no clue. I wouldn't even know that it was going on, except for the fact that I'm doing this.

**ABBY:** Yeah.

**AUDIENCE:** So and that's why I put that out there. So I am looking to try to help get the information to other areas of the city,

as well, because the efforts need more efforts. That's all. So thank you.

**ABBY:** I think that's a really great, important not

I think that's a really great, important note to end on for this conversation. And again, with the plea again, one of the reasons you all were selected as working group members is because you do have networks here, and you know people. And, again, the city is trying to get information out, and you're back. And so feedback for Jackie for the city is much welcome. OK let's take a 10 minute break. There's, again, restrooms on the other side of the hall. There's pizza and drinks. We'll reconvene here at 6:47.

**AUDIENCE:** Here?

**AUDIENCE:** We are a little late. But we're going to get it back [INAUDIBLE].

**AUDIENCE:** You guys are good.

[INTERPOSING VOICES]

PRESENTER 1: I didn't know I was on.

**AUDIENCE:** They didn't announce that.

[INTERPOSING VOICES]

**AUDIENCE:** But it is not true that they can go out and--

[INTERPOSING VOICES]

**AUDIENCE:** Is it a new build?

PRESENTER 1: My parents live in Cambridge. I grew up in Brooklyn. But when I was a teenager, I'd go to Cambridge. So I have

that background. But then professionally, I--

[INTERPOSING VOICES]

PRESENTER 1: And then COVID hit, and I was like, I need to be closer to my family.

[INTERPOSING VOICES]

PRESENTER 1: And prior to that, I was in grad school in Atlanta, and then had a company started--

[INTERPOSING VOICES]

**ABBY:** Are we [INAUDIBLE]? No? OK. Hi, Chris. Hi, Pete. OK, so this next section we're doing in a maybe what would be

called an asynchronous model, I guess, if I was in education. I'm not sure. Basically, we wanted to make sure you have this information, which is basically, what is the city thinking about when they're designing, what are the

limitations, what are the constraints that they have in mind. Because I think a lot of this process, in my mind at

least, is helping the city be clear about what their constraints are and where they really need your input, and

then helping you be able to give input that they really need, and being clear about what those boundaries are.

And so we wanted to have the city lay out what they're thinking about, and how decisions are made on quick build CSO projects. So we did print this out, too, and we sent it in advance. I think Jackie and Shaima worked on this. It's basically a one pager, just like a takeaway that people could see. And then there's also a presentation that we recorded and sent out, too. So if you wanted more of the in-depth versions of this, you could have watched that in advance.

But really, we just want to have 5 to 10 minutes to hear if there are any questions about this content. If you haven't had a chance to look at it, you can look at it after and get in touch with city staff that way. So any questions? And for folks online, I'm watching for hands, too, if you [INAUDIBLE] I know that Ronda watched it at least.

[LAUGHTER]

**AUDIENCE:** I was sitting there going, we're not watching it.

AUDIENCE: It was that good?

[LAUGHTER]

**AUDIENCE:** I just did my homework to try to--

AUDIENCE: No, good.

**AUDIENCE:** Awesome.

**AUDIENCE:** Walk in not knowing something.

**AUDIENCE:** I have [INAUDIBLE].

**ABBY:** Oh, sorry there. Missed your video.

**AUDIENCE:** One question just about we mentioned like traffic easing, or slowing down the speed on the street. I'm curious

what other tools besides the bike lanes themselves you used to make paths for people.

**AUDIENCE:** To slow traffic?

**AUDIENCE:** Yeah.

**AUDIENCE:** Oh, that thing in Somerville where they have those things that stick out, I think that's so dangerous.

**ABBY:** Yeah, yeah, let's answer questions. This is our time for questions.

**PRESENTER 1:** You want me to do them, or no?

PRESENTER 2: Well, I'll do it. So our traffic calming program is about 30 years old now. And so we use an array of tools that are

split into two basic types. There's vertical elements that are raised crosswalks, raised intersections, which we've used to great success over the years. And then there are the horizontal ones, so narrowing lanes, which is a big feature of this project. Both the actual width and what we call the effective width, or how wide the lane feels in an

urban environment is very effective in keeping speeds down.

But then there's also other built elements, like curb extensions, neck downs, crossing islands.

**ABBY:** Can you define a neck down?

PRESENTER 2: A neck down is a not so common in Cambridge, because our intersections are already rather small. But if you have a larger intersection, you can pull the curb out on each of the four corners to shrink this, to shrink the size of the intersection and make the crosswalks shorter. And it at the same time, gives the pedestrians a little bit of a six-inch advantage, which they didn't have before, because they're standing on new sidewalk at the corner, which is nice.

All of those things that we've used in combination, if you drive around the city, it can be hard to notice them because they look like they've always been there. Then we've retrofitted the way the streets were originally built and laid out with these elements, but they blend in so well with the streetscape that they're not obtrusive and they don't look out of place. And we can use almost the entire toolbox of traffic calming elements on this project.

The only things we might not be able to use frequently are the vertical elements, because Broadway is a response route for the fire department, for first responders. And so the fire department is very sensitive about response times. And so we can use them, but we want to make sure that we don't use them so often that they become an impediment to the response.

**PRESENTER 1:** That's because the fire trucks would have to also slow down going over those.

**AUDIENCE:** Depending on what kind of unit you use. If you use sweet bump, that's true. If you use a speed table that's at least four feet wide, the fire trucks negotiate that at full speed. A lot of vehicles can negotiate those at full speed. I've seen that elsewhere.

**ABBY:** Different trains have different [INAUDIBLE]. Nate, you have a question?

Two questions, one on that vertical element. I haven't experienced it personally, but I've seen images online of things that look like speed humps or tables. But it's an optical illusion, and it's really just paint on the road, and regular--

AUDIENCE: Well, it'll fool you once, but--

AUDIENCE:

[LAUGHTER]

**AUDIENCE:** That depends on what the composition of the drivers are, and how many are first time users, or what the effectiveness of that is. If you guys tried that, it'd be interesting to see. Or is there data of, oh, yeah, on this type of street, it's going to be minimally effective?

PRESENTER 2: I've never used an optical illusion. They look great on video, but yeah, it doesn't help the second time around.

But that said, we have used public art at various times. We just approved a public art project for the corner of Columbia and Bishop Allen, which will be coming on a year and a half or so. And so I'm a big believer in doing something a little bit different, not to intentionally trick drivers, but to give something a little bit different in the streetscape so that it looks like a place.

And so that is something that we can talk about in this group, is public art appropriate for this project. And if so, in what form would it take? Is it something on the street? Is it something along the street, maybe in the bumper and the bike-- between the bike and the parked cars. So those are all good elements, especially for this group to discuss because there is room for creativity.

AUDIENCE: But then my other question was, on this curb cuts, but as kind of distinct from driveways, can you say what--

PRESENTER 1: What's the difference between--

**AUDIENCE:** Yeah, what is a curb cut?

**PRESENTER 1:** And a driveway?

**AUDIENCE:** Yeah. Beyond the curb cuts.

[INTERPOSING VOICES]

**PRESENTER 1:** Well, in the main takeaway, they would want people to come—two main takeaways I think I want people to come away here with is that when they're thinking, looking at parking, someone with a driveway or a curb cut has

different parking needs than someone without, so if you have your own on site parking versus being dependent on street parking. And then also, that impacts the layout of the street itself. So when you have a curb cut, which

is any access point from the street to the driveway, you can't have parking in front of that.

So if you have a side street where there's a lot of curb cuts, you don't want to put the parking on that side of the

street, because you might get one or two spaces. If you put it on the other side, you'll get many [INAUDIBLE].

**AUDIENCE:** So it's not here of we can choose how many curb cuts there are. That's part of the environment, and that's part

of the calculus of if we choose that side of the street that has twice as many curb cuts, then we're going to get

less spaces, because there's less actual space to put this here.

**PRESENTER 1:** There's very few instances we could actually remove a curb cut, because

**AUDIENCE:** It's on the broad side.

**PRESENTER 1:** Dependent on that, we can't. That's considered part of their property.

**ABBY:** Eric, do you have another question?

**AUDIENCE:** I did. Sorry.

**ABBY:** [INAUDIBLE]

**AUDIENCE:** So referring to what you were talking about, Jeff, as public art, and in the interest of a quick build and what that

really means is, to what extent can we implement line painting or public art into the street. If we're not going to build out neck downs, can we paint neck downs? Can we implement other sorts of barriers with site furnishings, like planters that are movable? So if it does need to be a flexible space, is that something that we could think

about in the project?

Something that I've been thinking a lot about is the role of flex posts. And there's a difference between a flex post versus a precast concrete barrier. In my day to day job, I'm doing lots of really cool things with concrete, like casting and forming different types of art in the side of a concrete. Precast barrier could be a really interesting way of separating bike lanes and incorporating some kind of competition from the city to have people come in and design something really interesting, and have it not just be a boring concrete blockage, but something

interesting that creates a space.

We want the city to be beautiful and a nice place to walk, bike, drive in. So I feel like that could be a really interesting opportunity, as well, to incorporate those kinds of things into public art and really get the community involved at different intersections, where in East Cambridge, there might be certain populations who have a certain type of thing that they want there, versus maybe here on Inman street, it's something different versus further down toward Harvard. So I think it can have people take agency of their neighborhood and have those kinds of more personal touches to their community that they've helped implement.

So that's something that I've been thinking a lot about and I'm curious how we can implement it, both from the perspective of paint or something that could also help separate the bike lanes in a way that's not a flex post, or just a boring precast barrier.

So I think the question is, is there room to play with some of those features? Yeah.

ABBY:

PRESENTER 2: So you happen to touch on a very deep interest of mine to find something else that is not a flex post. They are a real pain in the neck for us as a department to maintain, and they're also not very attractive. So I think we can do better. And I'm looking for-- I'm actively looking for other things that we can do, and that's why I mentioned public art. And I've already had a short discussions with the Arts Council, which is right down the hall here. And maybe we can join these two opportunities.

> At a basic level, we do have to have pavement markings that are national standards. So four-inch white lines in the buffer, 12 inch center line, yellow, crosswalks that have white all-reflective paint that can be seen at night and so on. But in addition to that, there's no reason why we couldn't put more things that are nicer into that space, especially that buffer space, which is really-- it's useful space because it's protecting the bicycle.

> But the space itself could be something more. And so that's why I say there's room for creativity here. And if it can look nicer, we feel better about it. That's just kind of human nature. So I'm excited to talk through this. Maybe we can do this at a future meeting and see what ideas people have and build it into our design.

AUDIENCE: Awesome. Thanks.

AUDIENCE: OK, Eric. And then Ken, and then we'll wrap it.

AUDIENCE: I really like that idea. I was curious about enforcement, too, as a traffic easing, if there's budget for police to

patrol, or even radar enforced speed limits, or running of red lights and things like that within this category.

**PRESENTER 2:** Sorry about that. Running cameras?

AUDIENCE: Yeah.

Around red light running and people going too fast. Police and yeah. AUDIENCE:

AUDIENCE: A lot of tickets. Yeah.

PRESENTER 2: Yeah, well, I won't speak for the police department. But the red light running cameras are not legal in

Massachusetts yet. But there is an active effort to try to pass legislation to allow cities and towns to make use of those. And I know that there are many within Cambridge who have been waiting for that day to come. And so we

are actively watching that to see if that happens.

**AUDIENCE:** Wasn't there something recently about adding that for school bus passing?

## PRESENTER 2: School buses.

[INTERPOSING VOICES]

ABBY:

And this is also-- Eric, I think, oh, I was just going to say, there becomes a slightly challenging nuance in some of the conversations we're going to have, which is, a lot of things are extremely relevant to Broadway in the design. And there are things that are also relevant to the entire city and that are much more like other policy level that, in some cases, there is an advisory group on the CSO itself. And the enforcement police question, I think it's fine to note it, but it becomes a little hard sometimes to parse out what exactly is design relevant, versus we hear this feedback, it's helpful to hear, we will record it, record it, and try to get it to the right people. But maybe we can't dig into it in this building.

PRESENTER 1: There's, too, a connection between design and behavior that we'd like to emphasize, which is that when you design a street that works for more people, you generally see their behavior improve. And we're all human. We're all different. We all have different tolerances for risk and so forth. And there are some people who will be daredevils with their behavior and other people who are more rightfully cautious. But typically, when you have a street with a separated bike lane, especially cyclist behavior will-- actually, I wouldn't say just cyclists. You really see all behavior improve because the street more matches with how it's being used.

> So red light running is something that -- and this has not been studied, I think, closely on the city level. But nationally, it's been studied that these separated bike lane designs generally create better street user behavior, because they don't incentivize you to, say, run a red light to find a gap in traffic before you're not being passed by a driver. Or you're not as in much of a rush, because you're stressed out over your environment and so forth.

ABBY:

Let's go to Ken and then Bee on the line because they're [INAUDIBLE].

AUDIENCE:

Yeah, I had a quick question. So Jeff, you mentioned raised tables at intersections. So I'm curious. I know there's also a speed hump program that's going to be implemented in Cambridge sometime. So I'm curious. On Broadway, what is the next being considered? Are speed humps not being considered and raised intersections are? And if we are considering raised intersections, they're probably not part of the quick build is my guess on Broadway. So I'm just curious. Are both of those off the table for implementation in 2025 and 2026 for this project?

PRESENTER 2: Yeah, I would say probably yes. Yes, sorry. They're probably not on the table for this project, particularly because the raise devices do require construction. We talked about the difference between construction and quick build. Aside from the device itself, traditional raised crosswalks and raised intersections require a lot of drainage work. You have to move, catch basins around and make sure you don't have puddling and ponding. And that would have to be completed by the Department of Public Works.

> You're right about the speed hump program. That is around the corner. And I think that's going to be a very popular program when it is launched. And so we will see how many of those devices we can deploy Citywide in the first few years, and I think there's going to be quite a bit of competition. So but the nice thing about them is you don't have to do any drainage work, because the water goes around them, essentially.

ABBY:

Could you say maybe just one word about what this program is for people less familiar?

PRESENTER 2: So if you spend any time in Somerville or certain neighborhoods of Boston, both of those cities have launched, fairly recently, but they're established now as speed hump program. A speed hump is a device that is not the yellow thing that's in the Twin City Mall, that you almost lose an axle every time you go over a little bit too fast. These devices are elongated, but they're about four inches high. And they're designed in a way that you can, shall we say, comfortably traverse them between 15 to 20 miles an hour in your car, depending on what kind of car you have.

They're very effective to reduce speed, especially if your existing speeds are up around 30 miles an hour. They can bring down speeds, especially right near the device. So they're relatively cheap and easy to implement. And most cities don't have much of a public process for them. So there's nothing wrong with the public process, but it does tend to delay implementation. Plus, most people don't object to them.

So it is a program that we are working on forming. We will do it a little bit differently than the cities of Somerville and Boston. And so once we're ready to go, we'll have a larger conversation about what that program is, and what it means, and how it can help each of the neighborhoods in Cambridge.

ABBY:

OK, we're going to do online, and then [INAUDIBLE] John, and then we're going to keep moving. Are daylighting concerns regulation base or guidance based? Could we keep parking near crosswalks and curb cuts if we implemented something like a convex safety mirror? And Bee, I saw you come off mute. Did you want to add anything to that?

AUDIENCE:

No, this is just something that I thought of, because I had lost a couple of parking spots with my curb cuts. And I was just wondering if there's a safety aspect of it, but I wonder if it could be alleviated with these mirrors.

**PRESENTER 1:** So daylighting, I think, is the question, which is a fancy term for just restricting parking near a crosswalk. So Bee, to answer your question, it is not-- you're not allowed to park, I believe, 20 feet from a crosswalk. There are some places where the signage could be a bit clearer, and then there are places where we have received repeat offenses of it, where you try to add-- where we would like to add something more like a curb extension or a flex

post there, because people don't always follow the rules.

But generally, the daylighting and the idea of daylighting is to just make it more clear that you can't park where you're already not allowed to park.

ABBY: And I think the specific question was, is this a regulation or a guidance thing about it? And is there a--

**PRESENTER 1:** It's a regulation.

**ABBY:** It's a regulation. OK. So then to these plans, who is brainstorming other ideas around convex mirrors, if it's a

requirement? Yeah, Bee.

AUDIENCE: I think you totally answered the question about the corners. But does that rule still apply with curb cuts 20 feet

away from any curb cut?

PRESENTER 1: I can't fully-- is there daylighting required around curb cuts or only intersections and crosswalks?

**ABBY:** Like a driveway.

PRESENTER 1: Oh, sorry, I'm thinking curb extensions in my head and trying to say curb cut. Oh yeah, I think that was one.

Yeah, I understand. Sorry, Bee. Sorry I'm slow here. So curb cuts, that's another form of daylighting where we just try to make it visible so that someone pulling it out of a driveway can see, and traffic can see them. So I think, to these point, when you have a separated bike lane, we know we need a bit more clear space around those driveways.

Without the separated bike lane, generally, parking can be a little closer to the driveway. And when you bump it out with the separated bike lane, it has to be restricted a little further back. And but that is still a regulation. There are clear standards about the length that it needs to be.

**AUDIENCE:** Bee asked a question about the mirrors.

ABBY: Well, yeah. And I think I'm just looking at your question in the chat, so it's right in front of me of the-- I think the question is, if you did something like a convex mirror near the driveway or curb cut, could you have less daylighting space? But it sounds like there's also a regulation that would not allow that.

**PRESENTER 2:** Right. So the answer is no. We can't put convex or any kind of mirror in the public way. It's not an approved traffic device. You do see them from time to time. There's one on Prospect Street, southbound, right down the street. It has been vandalized many times. We cannot use that in place of daylighting or the regulation that Andreas talked about.

**AUDIENCE:** Thanks.

AUDIENCE: Thanks.

**ABBY:** OK, Dienne. And then everyone else has gone down, so you're the last one.

AUDIENCE: I've seen the data on parking space usage on the Cambridge website. It's really granular. It's block by block, hours of the day. Do we have a rough idea in terms of north and south of Broadway for about a block, what is the parking space usage? What percentage is being used on any given day?

**PRESENTER 1:** Including side streets?

**AUDIENCE:** Including side streets and on Broadway, so that if you tell someone that 60% of the parking will be cut, but we're only using 50% of the parking spaces, for example, it wouldn't be much. It would be a much easier sell than otherwise.

PRESENTER 2: No.

PRESENTER 1: It's not true.

**AUDIENCE:** It's not true. I know it's a hypothetical.

**AUDIENCE:** It's about, is there parking study data.

**PRESENTER 1:** Yes, the data is on the website. I honestly can't recite it.

**AUDIENCE:** But it's super granular. It gives me block by block.

PRESENTER 1: I think I added a section on the website of overall. It sounds like you're looking for an overall.

**AUDIENCE:** Yeah.

PRESENTER 1: Yeah, I think I recently added that. We're still trying to get all the data up on the city's open data portal, so it's

been a little slow with that. It's higher than 50%, I think.

**AUDIENCE:** Oh, I'm sure. I'm sure it is.

**ABBY:** Yeah.

**AUDIENCE:** Yeah, I think 80% the last we checked.

**AUDIENCE:** It was 100% [INAUDIBLE] and 75% [INAUDIBLE].

**ABBY:** And so is there a potential for a parking study presentation that you have, if people are curious about this, seeing

that? OK, so maybe there is some studies that sounds like we could try to read it. OK. Let's keep going. So the next section. OK, so thanks, everyone, for this. If you want to look through this more closely, again, you can

watch the presentation.