Middle-Mile Advisory Committee
January 21, 2022
Meeting Recap and Transcript

The Middle-Mile Advisory Committee met on Friday, January 21, 2022 at 10:00am PST via virtual conference.

Agenda Item 1: Welcome and Overview

Chair Nichols welcomed everyone to the meeting, including new California Public Utilities Commission (CPUC) President Alice Reynolds, and noted that Director of the Office of Digital Innovation Amy Tong will be serving as Senior Advisor to the Middle Mile Advisory Committee

A quorum for the meeting was established.

Member		Designee	Present	Absent
California Department of Technology	Russ Nichols		X	
California Public Utilities Commission	Alice Reynolds		X	
Department of Finance	Gayle Miller		X	
Government Operations Agency	Yolanda Richardson		X*	
Department of Transportation	Toks Omishakin		X	
State Senate	Lena Gonzalez	(Ex-Officio Member)		X
State Senate	Mike McGuire	(Ex-Officio Member)		X
State Assembly	Sharon Quirk-Silva	(Ex-Officio Member)	X	
State Assembly	Jim Wood	(Ex-Officio Member)	X	

*Secretary Richardson had to leave at approximately 11:00am PST.

Agenda Item 2: Executive Report Out

Mark Monroe provided updates focused around:

Progress since 12-18-21 Middle-Mile Advisory Committee meeting

- The California Public Utilities Commission (CPUC) provided updated information regarding the anchor build map on December 31st. This updated information includes 2020 data on

unserved communities, the public comments received during PUC's proceeding, and a comprehensive layer of Caltrans projects. This data is now available on CDT's Middle-Mile Broadband Initiative website (State of California Middle-Mile Broadband Initiative).
- Golden State Net has developed a draft of its proposed project sequencing approach as part of a broader program plan that it is developing.

Assembly Member-Wood requested clarification of timelines, emphasizing the urgency of coordination and importance of meeting funding deadlines, and Mr. Monroe and Ms. Tong responded.

Golden State Net has begun work on a System Level Design (SLD) that will identify:
- Physical network reference design, electronic network reference design.
- List of maps, diagrams, and tables.
- Detail of outside plant, hub site, and electronics materials needed.
- Plan for how SLD will present cost estimates for several types for outside plant construction and assignment of all segments of network to their respective types and associated costs.
- Detail of equipment, material, and construction specifications.
- Explanation of design parameters.
- Segments recommended for construction.
- Segments with available and recommended IRUs.
- Sequenced list of projects to be constructed.

Agenda Item 3: Project Updates

Mark Monroe provided an update on supply risk and mitigation.
- Given the increased attention being paid to construction of broadband across the nation, CDT has been exploring steps to mitigate supply chain risks by getting to the front of the anticipated increase in demand by securing future supplies of fiber and other materials that are at risk of being in high demand and short supply.
- CDT is developing an RFP for a Master Purchase Agreement (MPA) that is intended to address the following items that are at risk:
    - Fiber cable
    - Conduit
    - Handholes
- CDT anticipates the following:
    - The MPA will include the securing of at least half of the materials that will be needed, with the option to expand the order once the final materials and quantities are identified in the System Level Design.
    - The MPA will also include most of the other materials that will be needed for construction and development of the system.
    - The MPA will minimize the need for storage by ordering future supplies consistent with the anticipated construction schedule, rather than taking delivery sooner.

Rob Osborn of the California Public Utilities Commission provided an update and overview of data and mapping efforts.

Assembly Member Wood requested that map color schemes be updated for more contrast to make it easier for people to understand the maps. Mr. Osborn noted he'll work with staff to update the map colors.

Assembly Member Quirk-Silva inquired about how and when maps would be released and the role

of the CPUC in future after maps have been published. Mr. Osborn and Mr. Monroe responded noting mapping noted in SB 156 (Chapter 112, Statutes of 2021) and explained the process moving forward, including project updates, and highlighted some of the intricacies involved.

Ms. Miller clarified information regarding the number of projects and timelines.

Tony Naughtin of the Third Party Administrator provided updates on project selection criteria and the status of the initial projects:

- Progress on 18 Initial Projects:
    - Recommended routes have been developed and refined for these 18 projects
    - Continued coordination with Caltrans on new-build locations among these
    - Substantial progress on Dark Fiber IRU negotiations for locations where a Dark Fiber solution is recommended
- Determining locations of Regional Exchange Points for 18 Initial Projects and beyond: using existing ISP facilities and broadband consortia recs where possible
- Program Plan for Middle Mile development:
    - Determination-Selection process for all future middle mile locations (to be developed) is being discussed and refined with CDT along with the Work Plan for this
    - Drafting work for the remaining portions of Program Plan continues
    - Determination-Selection process for all remaining middle-mile locations is already underway so that timely recommendations can be made to CDT for final selections and sequencing of middle mile development work

Mr. Monroe provided more detail about changes to mapping.

Assembly Member Quirk-Silva asked questions about middle mile security issues, last mile project providers, and the upcoming MMAC report to the Legislature.

Mr. Naughtin, Ms. Reynolds, and Mr. Osborn responded to the last mile questions; Mr. Nichols responded to the security questions; and Mr. Monroe responded to the legislative report question.

A future meeting agenda will address middle mile security.

Assembly Member Wood noted that the lack of a middle mile in some locations makes it impossible for some regions to have a last mile and asked about negotiations with leasing components of middle mile.

Mr. Naughtin noted that some information is proprietary.

Assembly Member Wood asked about how unserved and underserved were identified so things are right, equitable, and get the job done. Ms. Reynolds and Mr. Osborn responded.

Assembly Member Wood inquired what the March deliverable will be and Mr. Naughtin responded. Assembly Member Wood asked what progress on the initial 18 projects meant and Mr. Naughtin responded that progress means completing analysis of where routes should be and awareness of alternatives. Assembly Member Wood asked when fiber will be in ground. Mr. Monore responded explaining how construction works and expected timeframes.

Ms. Tong and Ms. Miller commented on how preconstruction work informs and impacts projects.

A future meeting agenda will address proprietary information – existing middle mile, middle mile being built, IRUs.

Assembly Member Quirk-Silva inquired about having CPUC CASD projects reviewed sooner.

A future meeting agenda will address the possibility of moving up CPUC CASF timelines to get projects moving forward and let people know who might want to apply that they can have an opportunity to have these projects reviewed sooner than the end of the next cycle.

Elizabeth Dooher of the California Department of Technology provided an update about transportation projects that overlap with broadband middle mile networks.

Ms. Tong noted Caltrans is working to streamline things to make sure timelines are met.

A future meeting agenda will address how Caltrans, CDT, and partners are streamlining and expedited path to ensure the three and five year timeline commitments are met.

Assembly Member Wood asked about CPUS CASF grant timelines. Mr. Osborn and Ms. Reynolds responded.

Agenda Item 4: Public Comment

Staff noted written public comments were submitted by (attached):

- Frontier.
- Michael Kleeman.
- Mono County Board of Supervisors.
- Stan Santos, Communications Workers of America. Mr. Santos addressed the Committee.

Public comments were made by:

- Ted Williams.
- Martha Van Rooijen.

Closing Remarks

Mr. Nichols thanked Committee members, staff, and attendees and noted the next meeting is Friday, February 25.

The meetings finished at 11:48am PST.

(meeting transcript attached; video and presentation slides from meeting posted to Committee web site)

Transcript

We're recording. Thank you, Katherine. Alright. Good morning, everyone. I'm Russ Nichols, I am the interim Director of the California Department of Technology. Welcome to our January 2022 Middle Mile Advisory Committee Meeting. We have a fairly full agenda today. But, before we do that, a couple of housecleaning items and then we will go through roll call. First, I would like to announce a couple of new members - one of whom I don't believe has been able to join us yet, but we expect her shortly. Alice Reynolds is the new President of the California Public Utilities Commission and taking a seat on the committee. She's been very closely involved with the Middle Mile activities to date and now will fulfil the role as CPUC President. The second is a name that's very familiar to you – Amy Tong has transitioned from the Department of Technology to be the new director at the Office of Digital Innovation, she has been one of the founding members of the band for lack of a better way to say it, the middle mile efforts and will continue to act as a senior adviser on this effort and will in fact continue to facilitate much of the conversation during our middle mile advisory committee meetings. So, thank you, Amy, for stepping into that role with that, Jules if you would go through roll call this morning for us.

Certainly, good morning and happy New Year. Mr. Nichols?

Here.

Miss Reynolds? She may be a little late.

Miss Miller?

Mr. Omishakin? Did I pronounce that correctly?

Mike Keever for Director Omishakin. Okay.

I saw him come in.

Oh, I apologize. I defer.

I did. No, no, no I'm not gonna be able to stay the entire time but yes, present as well with Mike. Thank you.

Hi, happy New Year. Miss Richardson.

Here.

Senator Gonzalez had a last minute issue she had to deal with. Senator McGuire has a scheduling conflict. Assembly member Quirk-Silva and assembly member Wood.

Here.

Hi how are you?

Good.

We do have a quorum.

And Jules, Gail Miller is here as well.

Thank you. There is quorum and then two friendly reminders. There's time allotted for public comment at the end of the meeting. And presenters, please queue Laura in advance to advance your slides while presenting.

And sorry to interrupt. This is Alice Reynolds. I just joined as well.

Hi, welcome.

Thank you.

Good morning, Alice. And Alice, we introduced you at the very beginning as moving into your new role. Congratulations on taking over the president seat, Alice.

Great thank you very much. I'm really excited to work with all of you on this very important body so very much looking forward to it. Thank you.

All right, Amy. We will toss the baton to you and run through the agenda for the middle mile Advisory Committee.

Thank you Chair Nichols and I believe I also saw assembly member Quirk-Silva popped up as well. So, I want to make sure you take the roll.

Yes, good morning.

Good morning.

All right. Thank you, Jules. All right. Good morning, everyone happy to be continued to be part of this wonderful initiatives and exciting progress to be heard from the all the staff briefing today. So, without further ado, Mark Monroe.

All right, good morning members. Hope everybody had got to relax a little during the holidays. And we want to welcome the committee to a new year, during which we expect to see your project development and construction move really into full gear. I wanted to start by reminding the committee that the process we're following on this project, as most of us I hope understand where we're heavily dependent on the state's partners and industry experts to design a network that will meet the needs of all Californians. To this end the Public Utilities Commission has been assembling data regarding where the unserved and underserved communities are, and is working with Caltrans data to map how best to link these communities using the right or the right of way for the roughly 15,000 miles of state-owned highway system. With this data, the Golden State that our third-party administrator is designing and engineering the entire system so that we are able to use the resources provided to develop the best network possible. Since we last met, we've continued to make progress on the middle mile, middle mile project. Two things I'll point out. As we discussed in the past, the Public Utilities Commission provided the updated mapping data that we had been anticipating on December 31. This data has been used to provide updated maps that can, can be found on CDTs middle mile website and in a few minutes Rob Osborne from the Public Utilities Commission will walk the committee through the mapping data. Similarly, Golden State net our third-party administrator has provided an initial draft of its project sequencing methodology to CDT, this combined with the data that PUC has developed on unserved and underserved communities and the system design that Golden State net is, is doing right now will be used to sequence the remaining construction components of the broad of the broader statewide project. And in a few minutes, the Golden State NET team will, will be presenting the sequencing approach to the committee. In terms

of kind of next steps and what we're looking forward to in the months to come here. Golden State net has begun on a system level design that will be vital to helping CDT determine where to build and where to lease. Among other things, the system level design will identify a network reference design reference design for the physical and electronic components of the system. It'll provide our maps diagrams tables, the detail of the outside plant, the hub site and the electronics materials that will be needed. And just to remind everybody I you know, there's I know the industry has their own language here. So as a reference, outside plant is industry it's an industry speak for the physical cabling. It's most of what I think of us most of us think about in terms of the fiber infrastructure, but the cabling is supporting infrastructure such as conduit cables, or cabinets, towers, poles, and any other associated hardware such as the repeaters really anything that connects the one switching facility to another. So that's, you know, kind of the what I would qualify as mostly the hard material that we all think of when we think of the system. The plan for the system level design, it'll present cost estimates for several types of outside plant construction and, and assign the various types to the various segments of the network. It'll include the detailed materials constructions, specific specifications, and explanation of design parameters. And then an identification of segments that are to be conserved, you know, that they would recommend for construction segments that are available for IRUs, and, and then using that the, the PUC data and this the system expertise, they'll be able to include a sequenced list of projects to be constructed. So, we expect this later this spring and on and as the design is completed, we plan to do you know, engagement with members, locals and stakeholder groups to to help explain you know, the path forward. Associated with this spring timeframe, we would anticipate announcing the remaining project--lists of projects statewide as well. And with that, I'll turn it back to, to, to director Tong.

Thank you, Mark. I want to take a moment to want to make sure that if there's any questions or comments or being asked for this particular overview, especially, I think hearing from some of the earlier feedback, that perhaps there was a bit of a lack of clarity in terms of what was made available at the end of the year and what is to come based on the information. So, I want to make sure we take a minute to pick a moment to address that and, and I see a hands up. Assembly member Wood.

Yes, thank you for that update. And so, my question would be spring, so what does that mean? Spring goes all the way until June, middle of June. So, some of my colleagues and I were under the impression when we heard saw the first 18 projects that that that more projects would be coming the announcement of more projects would be coming at the end of the year. So, if that was our misunderstanding it wasn't just my misunderstanding. It was several of us had that that that understanding. So spring is a three-month period. So can you give, can you narrow that down a little bit? Because that's uh that ends up being quite a few months after the announcement of the of the first projects.

Sure. So, in terms of the in terms of when in spring, I understand the question and certainly didn't, didn't mean to, we didn't mean to create an expectation that there was going to be other lists coming and you know, starting this last December, that the team was really, you know, there was in the broader system of where we have opportunities for, for leasing versus where we're going to build and taking into account the public comments that was being provided to the public utilities commission. There was kind of there was some specific areas where we, we were able to kind of start the process that we're learning a lot from right now in terms of designing so that was that was really unique it wasn't intended to be you know, the, the the, the first of the, you know, first stage followed by the second vote by the third. Really the approach that we want to take is to have a full system designed so that we could come out with so that we know where we want to build and where we want to lease. And we kind of think of it from the standpoint that the amount that we build and where, how much it costs to build in those areas right, we still have a finite amount of funding. And so, so, so part of part of the lens that we have to look through, look at this through is in terms of those...the leases, where are they possible, right and it's not just you know, if we generally think of

the, the dark fiber iron use, I think that's kind of a big category, but there might be some other alternatives to that but I think we've got to be able to look at what it's going to cost to build. And that's and where, where alternatives are possible. And then that's going to determine not where we provide the service, but how we provide the service. And so, coming out with that next list of projects in terms of constructing it needs to we need to kind of have those other pieces and understand what we're dealing with and to be able to select them. I mean, I would like to say that over the you know, April, May and June we would be able to come out with the remaining projects and have some level that's going to depend on the on the design the system level design work that the, the Golden State net is working on right now. So, I mean that that would be my intent but until we have that and we understand the moving parts and, and the choices we have to make that's my, my, my reticence in committing to hey, you're gonna have so many miles by, by this month, that makes sense.

Well and I thank you for that. So, so we are looking at a three-month window I guess in that as Spring so, so and I appreciate the complexity of that. You mentioned we have a finite amount of resources. And I will continue to push on timelines because we have a finite amount of time to dedicate and commit those resources as well. So as if we don't have those projects by by June ish. This what this this whole initiative was actually approved back, you know, in in August or July or August I guess we'll be getting close to a year mark. And, and the clock is ticking. And so, so I…you know, I don't want to be a broken record here. But I do want to emphasize the urgency of coordination. And, and, and, and a way to expedite this because my biggest fear from the beginning is that we might get to a point where we have to send some money backs up to somebody because we weren't able to commit it and that would be a huge disservice to the people who need this service. So anyway, so I'll keep pushing on that. And that's, you know, I represent one of the districts that has the lowest adoption of broadband in the state. And so, I just don't want to see this golden opportunity, you know, turn to bronze.

Absolutely. And yeah, absolutely. We couldn't agree more. And that's, that's the thing that drives us every day. What you know, we've got it, we've got to meet that deadline.

So, so when can we so then I don't and I'll stop at this point. I may not say anything else today. So, when at what point can we get a better idea of what you mean by spring so that we have a better idea of what that what that means? Because like I said three months, so you know.

Yeah, and so I would I would like to say that by April, we would we would be able to come out with a full plan. Now that's, you know, backing up from there. That's a lot you know, in terms of the system level design that that has been developed in the broader system. And we that's what we're pushing for, in terms of timeframes.

Let’s hope. Thank you.

And you know, I offer you that for now.

Appreciate that.

Mark, if I could jump in and Assemblymember Wood, if I could also add a little bit I completely share and agree with the time consideration for all of this. And not to mention, you know that each day goes by without further clarity on what's the next batch of projects, if you would, aside from the fact that they're the map, I believe CPUC is going to go through a demonstration of what the map reflects right now, as a deliverable that was received on December 31. But I, we I think, you know, your point is well taken the fact that great you have a statewide map showing what the potential areas are. The next piece of concrete information is when and how, you know what method that those area will be receiving, you know, either the build or you are a hybrid of both. And I think what I'm

hearing from Mark is the fact that because of that complexity of defining the sequence requires good engineering design, and it's really, really at the core of the TPA. And so, I think that let's, let's continue to ask this question from the TPA, if I may suggest that when they, you know, present their information to see what is the likelihood to keep this committee appraised of the progress towards April timeframe. And therefore, the, the, the possibility or the likelihood of having the next batch of projects being made available by April, you know, we can see some type of ongoing progress at the subsequent MMAC meetings.

Thank you. Appreciate it.

Let's see if there's any other questions or comments from committee members all right. And Assemblymember Wood please don't be your last question on this, I love the fact that there's a good dialogue going on.

It's hard. It's hard to keep me quiet.

Okay, all right. Mark, back to you.

All right. Well, I think if we're moving on in the agenda here the next is we're going to hear from the public utilities commission on their mapping effort.

Thank you, Mark. I'm Rob Osborn, director of the Communications Division at the Public Utilities Commission. At the end of 2021, the CPUC staff. Sorry. Sorry, I'll continue here. At the end of 2021, CPUC staff worked with Department of Technology and ESRI to create a public website that provides a background for the middle mile initiative describes California's Digital Divide, explains the middle mile network, serves as a repository for the various datasets and analyses required by legislation, as well as providing resources and links to an FAQ. The middle mile advisory committee meetings and a way to provide public comment. So, you'll see up above, there's an about, there's data analysis, there's resources, and then MMAC meetings and public comments. So, let's go to the next slide. This is the data and analysis tab and the default map. The starting point here is the entire 15,000-mile state highway network. There are four maps below that, that are overlays that are provided. I'll just mention them briefly and then go through them. So first is a preliminary middle mile network map, after that is an unserved locations map, then we have the Caltrans scheduled projects map, and then finally, the public comment map. So, the preliminary middle mile network which we can go to the next slide, please. So, what you see here is you'll notice maybe you hopefully can see this, each of the maps has a detailed button on, on them. And so, when you click that you can see the detail for each of the maps. It provides an overview of what's being shown. And what you see here for the unserved locations is unserved locations using the 25/3/25 megabits per second down and three megabits per second up speed standard, and this excludes Legacy, DSL and DOCSIS 2 technologies. There's two colors, there's blue indicating residential, and brown indicating nonresidential so that would be businesses or anchor institutions or other locations. The size of the bubbles varies depending on the number of locations that are unserved and these are not just the Census Designated Places these are all the locations in the state and this analysis is relying on all 15,000 miles on the state highway network. And just as a recap, the proposed middle mile network that we used as the basis back in the May revise is the 8100-mile network. So, if we go on to the next slide. Okay, so this is a zoom in on the locations and what we see here, we zoomed in near Inglewood, there is Census Block Groups. So, each of these in a sense represents a census block group that shows that there are a total of 1406 units in this block group of locations and within that set, there are 217 unserved residential units and two unserved nonresidential units. You can see on overlaid with these bubbles is the purple proposed middle mile network. So, you can see in some cases, the dots will touch the middle mile network or be very close. In other cases, they're not. So, in cases where they're not we would need the last mile provider to provide connectivity to that middle

mile. Let's see. Let's go on to the next slide please. The next map available here is the Caltrans scheduled projects. This is public data from the Caltrans broadband partnership opportunity map this map layer shows the Caltrans State Highway Operation and Protection Program (SHOPP) projects, some of which require project initiation documents called PID. These projects belong to the fix it first program that funds the repair and preservation of the state highway system. So the middle mile network locations are being considered for building with the Caltrans scheduled projects. If we go to the next slide, I'll show an example here. So here we can see in Alpine County, you'll see that there's a blue line running south west from the purple line through Alpine County. So that is a Caltrans project. And then the purple line is the proposed middle mile. You'll see in some cases, well in this case here up above your highway 89 there is an overlap so we have both Caltrans and proposed overlapping. Okay, let's go on to the next slide. Finally, we have the public comments map. And again, this shows the details section which explains what is included in this map. And so, the PUC received public comments on the statewide Open Access middle mile. That was the comments well, middle mile authorized under SB 156. The comments responded to two rulings in the broadband for all rulemaking which is r2009001 and those comments were filed on August 6, are based on rulings of August 6 and based on another ruling of September 9. So, the comments are both formal which were provided in response to that proceeding as well as informal so people did not have to be parties to file comments and those comments are reflected in the map. And we also have links to those comments on the PUC website. So, if we go to the next slide. So here's an example and this is in Santa Cruz, where we have a proposed middle mile which is in the purple down at the bottom. And we have green, which is a public comment. And in this case, the proposed build was on highway 17, which had sort of north east from the base of this map and then the public comment showing highway nine we can see who recommended this. This was Emily Ham from Santa Cruz County Business Council saying please add Highway 9 and then the Highway 17 the public comments that we don't need to build on 17 because there's fiber there. So, this is an example of where public comment comes into play. These are the proposed middle mile network. The public comments. Incidentally, Emily Ham was not the only one commenting on Highway 9. We also had comments from Assemblymember Stone and congressional representative Anna Eshoo regarding that location. And so, the public comment map will show for the entire state where we received comments and comments could still be filed. PUC is accepting public comments in the middle mile locations. And I can put that email address up after this so that people have something to direct their comments to and or they can file them through the broadband or, sorry, the MMAC which we have up here the public comment link. Let's see. So, I think that's the end of my presentation. Thank you.

Thank you, Rob. And I wanted to make sure that we also take a moment to for the MMAC council members to ask any questions or comment because this is a lot of information very good information very robust, but it does take a bit of time to make sure that this is explained. So let's open it up for questions or comments.

Yes, Assembly Member Wood.

Sorry, just a question, more of a comment on one of the maps you have like a light blue and a dark purple, you know, I would just say that sometimes it's a little hard to follow the maps when you're using similar colors like that. Is there a way to change the color schemes a little bit so there's more of a contrast so it's easier to see where the overlap is when you've got similar colors. Like on the map. It's up there. Now you've got you've got like a purple and a red, the greens easy, but the purple and red are like okay, you know, it's a little harder to follow. Is there a way to change the color schemes a little bit? I'm not colorblind or anything but it's just it's more helpful. I think just a suggestion. Just a question.

That's a very good comment. Thank you Assemblymember Wood and we can we can change the colors. Yes. And so, we'll take that back.

Thanks.

I have two questions. Good morning. Assemblymember Sharon Quirk-Silva. The CPUC has indicated that there are more maps coming. What I'm interested in is why is the CPUC releasing the maps in batches and what future maps are being planned. So that's number one. And what will be the role of the CUP, CPUC in the future as the maps have been published, and that was one of their requirements or duties if you want to say that.

Sure, I can start off and maybe Mark you can supplement if I miss anything. So, this map collection here, we provided this data to the Department of Technology so we jointly released this and we have additional analysis and prioritization specified in 156 that will be published in consultation with Department of Technology and the other middle mile initiative partners.

On the batches coming out as far as what will be the process there?

Yeah, I can I'm sorry, I can jump in here a bit. But you know, I think largely the mapping that that has been done so far is, you know, I feel like that is that is going to be kind of a lion's share of kind of that original mapping. So, as we continue to look at, look at the maps, you know, I'll try to kind of illustrate something here. We have. We have, you know, two points and it's, it's, they're connected by two freeways, right. So right now, we have a map that you know, that PUC has gone through that this is the most direct route of a comment and you know, okay, well, this seems to be the best route but if we look at Caltrans has a project that's going down here, it may make sense to do that a bit differently. So I think, you know, I use that as an illustration of a scenario where, you know, again, we look at the mapping the here that the PUC has done, I think this is the majority of what the mapping is going to look like, but as we, as we understand the project better similarly, let's say we're saying, we're going to connect these two freeways yet connect these two points in the freeway, turns out there is a lease opportunity for an IRU that will, you know, save us money and it's just an important. It's another tool we're going to have that might be done here. So, so I just say that because I think you know, most of the mapping, I think, is pretty much contained here. In terms of what can be, you know, you know, what we'll be providing but understanding that there will be updates as we understand each individual segment and projects and how the whole system level design really plugs in that those are going to be what I would say are the primary changes we would expect.

Alright, so I think what has been confusing and we have spoken about this, which is initially you had the 18 projects that were released, and then next at the end of December, the 34 areas. And so that was some of the confusion by some of the broadband Working Group, which was first there was 18 projects, and next there was 35 areas. So when we go back, in essence, we're not going to be seeing more projects released. What you're saying is that the areas that you've outlined would be that where the work is going to be determined is pretty much what you said.

So, in terms of the maps that we have right here and really the data on the unserved and underserved. You know, as more information comes in, I think some of those numbers will be might be updated. I'll kind of defer the PUC on that. But I think we have a general understanding we're not going to have massive communities come in that we didn't know about that were unserved or underserved, right, I think the vast majority of the material is actionable in terms of that. So when, now that we have, we have a highway you know, we have a highway map, we have a map of potential Caltrans projects that could be leveraged and we have, we know where we want to go with that map, which is obviously the you know, going to those communities at the highest, that is our purpose here. We, we have kind of that that analytical tool to then move forward. And so, the one piece that the components that we are still evaluating are you know, is, is one route connecting the

those these two communities are getting from where we have service to where we don't, is there one route that's preferable to another? And it might be because it cost more to build it might be because it costs less to build because we've got a Caltrans project, and it might be that we can do that given that we have money for you know, to construct three quarters of the system that might be one of the places where it makes the most sense to instead initially lead off with a long-term lease to connect those areas. So I think that's, you know, when we think of that we think of the map I really think in terms of the substance of it is where are the, the communities and where's the need? That's what we're trying to connect and in terms of the map along the freeways, I think that's where I think most of it is pretty accurate. But there might be some places where we have to make some decisions along the way.

All right, thank you.

Madam Chair.

Yes, please.

Just a couple things. One, I don't know what the 35 areas folks are talking about are I'm sorry, did I, have I misunderstood something?

Yeah, I was gonna ask, Assemblymember Quirk-Silva. I think the 35-area reference I'm not sure if that was through this conversation, but I think it was always the initial 18. And then by December 31, is the statewide map, which is what we're looking at right now.

I don't think there are any additional areas. So that's one point. And then the second point, just to be sort of really clear on Dr. Woods questions around when the third-party administrator speaks today, I think you'll hear kind of what their timeline they're working on. They got the maps from PUC, they're getting it. They need to get their initial deliverable to us by, by the middle of March. So, I do want to be really specific Dr. Wood in terms of timing, so that you start to see that the timelines actually working. I don't want to be kind of deliberately vague because I think it's really important that you see the steps. But we're at a point we have the, the work from PUC we now need the work from the TPA. And it was those two pieces of, of information that came together that in order for CDT to kind of to make the next set of announcements. So, it's not it's definitely not kind of a loose springtime. I mean, I know that's a euphemism for a lot in our world. But I think because of how important this project is, it's really good to be specific. So, I, when the TPA comes, I know one of the things we're talking about is the, the deadlines that they're driving towards. So, we'll just make sure that they can be really clear on that. So, you can start to actually see the trajectory that really that you'll actually start to see projects announced and starting so I hope that's helpful in terms of, of actual like an actual timeline.

Very. Thank you.

All right. Are there any other questions or comments?

I have some questions on, on the CDT but you can do the presentation I'll ask them after or if you want me to ask them before, whichever you prefer.

Why don't we if it's okay with you Assemblymember Quirk-Silva, let's have the briefing brought up by TPA and CalTrans. And now we'll open it up for additional question.

Okay.

All right. Okay, with that. It, uh Rob, are you're done with the CPUC portion of the presentation. Okay. All right.

Yes, thank you. All right. Let's move to the next presenter please.

All right. I want to thank Rob and his team again, just acknowledge the time and effort that they put into, to really, you know, to putting this together and gathering this mapping data. That's been, you know, it's gonna be very helpful, very useful to the project. You know, it has been discussed in recent MMAC meetings, you know, the COVID pandemic made it clear that much more broadly across the other states where maybe broadband wasn't a priority in the past just how vital access to high-speed internet is for everyone for you know, basic things like work education and access to medical services. So, you know, the we can understand that there are other states that maybe for whom this was not a priority in the past and understanding it's going to it's now one, and that they're not perhaps as far along in their plans as we are in terms of funding and development, but, but they are, you know, that that's going to create a pressure and so it says is likely to create, you know, an increase in demand for materials like fiber and conduit, you know, from other states. And some states are already pursuing the purchase of futures supplies for these materials, just to get ahead of the line, in line. So, we we're also developing an RFP for a master purchase agreement with which to we plan to procure at least half of the anticipated materials that we would need for construction and development of the of our with California's middle mile network. This will include a high, high-risk materials such as fiber cable and conduits and handholds but they'll also include the other materials that we're going to be needing for you know, such as electronics and whatnot that kind of pull the whole system together and actually make it function. So, the, the RFP will also include the option to expand the order in the future as the system level design is completed and we have a clearer understanding of what will be needed. Doing the doing the RFP in this manner should give us a clearer understanding of current and future materials costs will also be a factor in determining how much we can afford to build versus lease. It will also make future procurement go faster and prevent the need to do multiple RFPs later once the additional materials are identified in the system plan. And then the last key component of this procurement is that we will be purchasing basically future supplies of materials future production and this will be pursuing options for, for manufacturers and for the manufacturers and suppliers to also provide some of the storage they should minimize the state storage needs and the associated costs and logistics. We are working with and working with Caltrans to model out construction as we as we work on, you know what is going to be built we're working out on a model for general construction timeframes and the associated materials we need to better target production and delivery of materials in the timeframes that are consistent with construction. And the master purchase agreement is intended to secure future supply of the materials will be it will be meeting in California head of the line and you know other states and help us meet the federal timeframes. And so, with that, I can answer questions or turn it over to Golden State Net. They're following up with their update.

Thank you, Mark. And good morning, everyone. Again, I'm Tony Naughtin with Golden State Net, the third-party administrator and I think our slide needs to be up here on the screen if possible. I'm sorry, I'm not seeing the slide, is it? Is it there?

Yes. It says TPA update, are you…

There it is, got it. Sorry. Sorry. There it is. Thank you. So yes, the TPA is making good progress on the 18 initial projects. We're getting close to finalizing route locations for these projects. And as mentioned last month. Most of these projects will involve newly built fiber routes on Caltrans right of way. We've continued to work closely with Caltrans so that the right of away construction processes can continue on for these in a timely way. As the locations that will be initially developed. With existing dark fiber we've made quite, quite a bit of progress in the last month on negotiations for

dark fiber IRUs on these and they will be procured for several of the 18 initial projects. We expect those agreements to be completed very soon. So, development engineering for these can move forward as quickly as possible. The objective of the initial projects of course, just to remind everyone has been for all the parties involved in developing this middle mile network to learn and refine the processes and approaches we use. And we have already learned quite a bit and continue to do that. So, it's now about timely execution. Of course. An important aspect of this is determining the locations or regional exchange points. Again, just revisit what a regional exchange point is. These are extensions of the middle mile network in order to bring it closer to the last mile providers to be served. Regional exchange points provide what we call a meet me interconnect capability for last mile providers so that they can connect into the middle mile network and through that to the global core of the internet. Regional exchange points keep local traffic local where source and destination in a internet interaction for example, may be in the same locale. That interaction shouldn't have to transit through a distant exchange peering location in the bay area or in Southern California. If source and destination are local that traffic should be kept local and regional exchange points will fulfill that function. We also intend to put content caching and distribution into as many of these regional exchange points as we can and this enables enhanced download speeds for popular content. We expect that some of the regional exchange points will be in fact developed from scratch by Golden State and that from the ground up, however, it's important to know that from the standpoint of turning up these regional exchanges faster to enable service the last mile faster and also reducing costs. It makes great sense to use existing ISP and carrier facilities, when possible, to co-locate these regional exchange points. They already, these existing facilities for co-location of regional exchanges already meet the electrical power requirements for an exchange point. And quite importantly, they have existing facilities and network across connect capabilities so that last mile providers to be served can more easily and quickly connect into a regional exchange point and the middle mile. We continue to work on the program plan for middle mile development that I mentioned last month. Once again, this is really a playbook of all the processes that Golden State and as the TPA developer and operator of the middle mile network will use. The process will be used for recommending middle mile locations for development that's included in as part of the program plan. It will also be used for recommending the sequencing of development and we have an initial version of this recommendation selection process in within the current draft of the program plan, and that's what we will be using as we continue to refine that with CDT. The remaining program plan itself is a work in progress and beyond the determination selection process for middle mile development recommendations that I just mentioned. The program plan also includes middle mile network design and services development, community engagement and external communication processes, middle mile network development, implementation and oversight, testing and acceptance protocols for newly developed network, activation of network, into production services, the live network, and then ongoing network operations which of course is a 724 365 function for a carrier grade network such as the one we're developing here with CDT. In addition, it's important to note well, the program plan will also lay out business development and revenue generation approaches for the middle mile network to ensure that it is sustainable in the long term, and can support the ongoing operational and maintenance costs for that long term. So the determination and selection process for all remaining locations is already underway beyond the initial 18 projects. It's a large undertaking, under which we will do complex analysis and make recommendations to CDT for all remaining minimal modifications to be developed. And we're doing that of course from the CPUC map. And it will also recommend sequencing and timing for locations to be developed. We're using the existing draft process for selection and determination and recommendations to CDT even though it continues to be refined in our discussions with CDT and this process for selection and termination. It includes the standpoint of a network operator and developer which was what the TPA at Golden State is this process of determination selection recommendation. It includes other factors from the standpoint of an operator, first of all, starting out by grouping middle mile locations into middle mile development regions in many cases, these may be coincident with Caltrans' districts within the state, although they're for practicality, there may be some exceptions to that. The selection

process also, of course requires weighted preference to unserved areas which is required by the statute, but also takes into account underserved areas that can be served along the way as well, which of course is also one of the objectives of, of the statute. The selection process and recommendation process takes into account the relationship of the middle mile to the last mile in the geographic and physical sense. There's a general goal to try to extend the middle mile as practically and closely to last mile operators as possible. And that makes it more convenient, less expensive for last mile operators to connect into this middle mile and that goes right along of course with determining regional exchange point locations themselves. Another important factor is the protected service requirement. By protected service I mean that just as the middle mile backbone itself has built in redundancies, we want to have ring architectures connecting to each regional exchange location and that's what we intend to do. And in that way, if you have past diverse redundant connections into regional exchanges, if one of those connections experiences a fiber cut or some other type of network events that halt support diminishes service, service to end users in the last mile and other users of the middle mile network will not be interrupted because of the protected surface service path redundancy of course this process has been mentioned already takes into account the availability of dark fiber IRUs with existing carrier facilities, when possible. There will be variations on the theme but in general, we may see many regional exchange points we expect to see many regional exchange points that are served on one path by perhaps dark fiber, on another path by newly constructed routes on Caltrans right of away. Path diversity will be in place. That's a general characterization, there could be variations, where both paths are newly constructed or where both paths are dark fiber. That is a function of the location analysis that we'll be doing. It's very important that in development of the middle mile, we take advantage and leverage existing third-party development projects and construction projects on Caltrans right of way. Those may include some of the existing and they will include most of the existing open access networks that are already in the state. And there will be additional open access networks that are separate from this middle mile that will still be coming. It could also include other forms of construction projects on Caltrans right away that may not even involve communications infrastructure, but nonetheless, are creating a dig situation. And of course, the real objective here in leveraging third party projects is to stay within the requirements of dig smart and dig once. The other the other important aspect of sort of wrap up the characterization of the selection to determination process. It results in a creation of multiple lists of middle mile locations to be developed to be developed. As well as the sequencing of those projects. This work this work is to produce this effort I should say is to produce timely recommendations to the from the TPA from Golden State to CDT by mid-March as was mentioned. So that final decisions can be made by CDT for the remaining locations to be developed and then announced publicly thereafter, as Mark mentioned, and we're trying to do that as quickly as possible. There are a lot of complexities in doing this analysis and making these recommendations. We're very focused on this right now as our primary activity while at the same time the 18 initial projects continue to make progress towards development. And that concludes my presentation from Golden State net as the third-party administrator.

Thank you, Tony, for that. Mark, I wanted to see if you want to make any comment here before we go to CalTrans to wrap up the presentation part of it and then we open up for members for questions.

Absolutely. And just wanted to follow up with Assemblymember Quirk-Silva’s question in terms of changes to maps. I want to clarify that there are two aspects of mapping the system both you know both which may generate some changes and so I think you know, we talked about the Public Utilities Commission and their work is really focused on unserved and underserved areas and focuses on you know the, the locations of these communities and the maps of the state highway system that connect them and then really provides a lens of the interactions between those highway projects and, and the overall state route, the route map and how the, there could be efficiencies there. So, so certainly, you know, I think in terms of what PUC has provided, there's, you know, there's in terms of any changes, there might be some there based on highway projects, like we said, but I think

primarily most of what you'll see there has been you know is, is kind of been decided subject to you know, comparison with Caltrans projects and the appropriate changes there. But the other lens and this is kind of like what Tony was talking a bit about here is that, you know, the TPA is going to provide this lens that is it's unique to building a complete network and making sure that the whole system connects and provides the appropriate opportunities for those last mile connections to those unserved and underserved communities and function as functions as an operable network. And so, I think this is where you know, as, as the TPA moves towards its towards that March timeframe. That is the other aspect of this that I think that might generate some changes to the map. And, and we'll have to see as they, as they really develop the nuts and bolts of the system, and what it actually you know, looks like how it connects and how it provides service to all you know, to the whole state. I think that's, that's just another potential component of change to those maps. So, hope that helps.

All right, Mark, and actually with that explanation because this again, the TPA and Tony thank you for that very thorough description of what is the work that is taking place now between now and March in order to have a sequencing of additional projects coming up to be announced, say spring starting April. I do want to take a moment to see if the committee members wanted to ask a question now to the TPA because I know this is very, very complex.

If I have a few questions, and it kind of goes over not just this agenda item, but others that would relate to this, which is on the state auditor, did a report recently related to the CDT and how we might be looking at security related to now middle mile but any of our security issues and how we would be prepared for any kind of threat related to middle mile or so. And again, that could be a separate agenda item for a future meeting. But I just want to make sure we got that in. I also wanted to make sure that we as we're talking about and thank you for the clarification, Mark on the projects. I think that that has been confusing, but thank you for that. On the last mile providers, are we going to be looking at that the middle mile and the last mile and how we're going to be identifying those projects because obviously the middle miles essential, but we have to get to that last mile. So that's one and again on the security part of this is what kind of plans will we have for some major outages as we continue to see so again, I don't mind that being held for another meeting kind of security, power outages, these types of things, but just what kind of plan and then finally we have with the SB this legislation, there is expected report to the legislative body in March. And how will that look? Will this be a written report? Will it be something that that we can take back to our colleagues?

Yeah, I'm gonna…

Just a thought.

Got it. Those are good. I think the three major, if I could maybe parse out and asked to staff to respond to Tony if you could speak to more of the Last Mile consideration in engineering design of maybe sequencing work right now because I know that it's something that TPA have a lot experience and in doing so, on the auditor's report by security assembly member I think, perhaps Russ on this could speak to a little bit, you know, just identifying or differentiate the difference between state operation security versus the middle mile last mile as a critical infrastructure, security and then the last question in terms of there is a march due date of, you know, briefings to the to the legislature in what form? I wonder if Mark could address that in your response and maybe if you guys can do that before we go to Assemblymember Wood, that’s okay? All right, Tony.

So, the CPUC map does a great job of pointing out where the underserved and unserved locations are. When you peel into that you'll see that certainly there are some unserved locations that have no existing last mile provider and hopefully, we will see more and more of those Regional Broadband consortium groups or other MPOs apply for funding such as CASF grants to support the creation of last mile capabilities for the unserved there are unserved areas within portions of last mile

infrastructure that already exist. And so, you know, with a view towards expediency of development and interconnectivity is the middle mile. If there's an existing last mile provider to connect to, that will be taken into account, both in terms of timing and location of regional exchange points, as well as certainly taking into account unserved areas where there is no last mile provider where I'm not at all suggesting that those will be ignored. In some cases, we'll be developing middle mile out to last mile areas that have pending grant applications. For instance, in some cases, we'll even be developing middle mile locations and regional exchange points in the vicinity of areas that have no last mile provider and no pending grant or other resource from which a last mile provider can be developed. It doesn't mean we ignore those good examples might be tribal lands, for instance. And we're keeping that very much in mind as well as similar kinds of areas. So coordination, I mean, the map is really terrific in terms of the data that it shows but we also need to have coordination with CPUC on pending grant applicants. So, we include those within the recommendations and sequencing for middle mile development. May I say a word also about security?

Yes, before you go there, I just want to be sure if CPUC wants to chime in on the last mile because I know this is really a CPUC like either President Reynolds or Rob.

Yeah, thank you, Madam Chair, and I'm going to turn it over to Rob and I will just say that we've been working really hard on the CASF grants, and my understanding is that we have no pending grant applications at the moment all of the awards have been made. So those projects are well underway. And we will of course, continue to coordinate with CDT and the TPA and all of the players here. We look forward to doing that. We think that that will provide the most benefits to the state and so we'll be taking an active role in coordination of our last mile grant program with this middle mile effort. Turn it over to Rob to see if he has anything to add.

Thank you, President Reynolds. So, we have three major programs that were enabled with SB 156. And I'll just provide a brief status on all three. So the federal funding account, which is $2 billion dollars of that the opening comments for the allocation proposal were solicited on November 30, reply comments on allocation proposals. And just as a reminder, the allocation proposal had to do with urban versus rural. So the reply comments were due on December 15. And we estimate to have a proposed decision published for 30 Day comments in the first quarter so you know, between now and March. The second one I want to address is the technical assistance and this provides seed funding or actually funding to local agencies so that they can do broadband planning. So, it's really a starting point. And the estimated final decision to be published, will be we're hoping to have that out this month in January, that will be put out for 30-day public comment. And we estimate 30 days after the decision that we'll be able to start accepting grant applications and then finally the loan loss reserve program. So, this provides seed capital to local agencies that want to raise bond financing. And so, we estimate to have a staff proposal for comment in the first quarter this year.

Thank you, President Reynolds and Rob from CPUC for that. Is again Assemblymember Wood, thank you for your patience. I want to want to make sure we quickly addressed the security and then the March report. So can director Nichols, if you want to go in and talk about the security and sounds like Tony wants to make a comment as well. And then we'll move to Mark to talk about the March update.

Assemblymember Quirk-Silva, that's a great question. The broadband infrastructure that we're talking about middle mile is identified as critical infrastructure for the state and obviously will have high level of security requirements. Tony can speak a little bit to that can also speak to some of the redundancy and potential outage mitigation. He did address that briefly in his presentation, but I do think it's, it's worthy of adding to a future agenda item to do that in a little more detail and address security in more detail at that point as well. So, we carry that forward to an agenda item for a future meeting related to the CSA audit that was just published. That audit was really focused on a different

aspect of CDT, essentially an audit of our audit program. And, and in that sense, unrelated to the physical infrastructure that we're implementing with the middle mile network. But your point is well taken. We do need to make sure that we cover that security of the middle mile infrastructure in another meeting. And with that, Tony, do you want to speak real quickly? The time is a little bit unless.

Yeah, so I'll make it very quick. Just a couple of points. I think number one is I think it's an excellent idea to actually have a separate agenda item and a future meeting talking about what I was referring to as protected service and path diversity. So that everybody understands the importance of that to avoid service interruptions or network events that interrupt the network. With regard to security, I just wanted to briefly say, first of all, I am not the security engineering expert, but I've been around these types of infrastructures for over 30 years. Every organization I've ever worked with, and this is simply this is absolutely true. I should say a Golden State Net and the TPA has at the network layer, always employed best practices of the day for network security. And in that regard, we draw upon the expertise of our partners CENIC, which has operated as you all know, a production grade…carrier grade network throughout California for many years. CENIC is exemplary in its following and insistence on best security practices, again at the network layer, as I'm sure many of you are all in the understand above the network layer, operating environments, applications. That's beyond our security capability. Our focus is on network, but it's a best practices standard. I think it would be appropriate for us to have an expanded discussion at a future meeting on that point, to directly address and explain in more detail. And of course, we would bring along some of our engineering folks who have expertise on this to that discussion.

Thank you, Mark, quickly if you can address the March report and I want to make sure we get to Assemblymember Wood.

Quick answer, yes. We will be doing the report it will be a written report. And we will come out with that is I think most people are familiar with what's in the report a lot of great metrics in terms of you know, the how long is the system, how much has been built, how many providers are connected to it, how many households, but I think that you know, key to remember is you know, this is this is something that will take, you know, three to five years to build. So, you know, so we're gonna, we'll come out with that we'll talk about kind of how we plan on approaching that. But, but we'll definitely come out with a written report. Just understand that you know, a lot of the metrics we're not at that point yet.

Assemblymember Quirk-Silva, I hope that addresses your three questions.

Yes. Excellent. Thank you so much.

Thank you Assemblymember Wood, thank you for your patience.

No problem. Thank you. This is helpful and some of my, couple of my questions did get answered. But a couple of questions for Tony. You know, I appreciate your comments. We talked about that, that you will be looking at middle mile projects where there may not be pending last mile projects. I would just say that one of the biggest challenges in some areas is the lack of a middle mile makes it financially impossible for last mile projects to happen. Unless you are a large incumbent carrier who also has the middle mile and the last mile piece of this who has already mapped out that it would, that's going to work financially for them. So, I guess my one of my questions is, you know, in general, how would you characterize the working relationship with incumbent carriers and how, how that is going negotiations on assuming I don't know if you're the part of the negotiating party on, on, on the leasing pieces of this. I and then I have a follow up question regarding kind of just how some of the Last Mile ties into this.

Sure. So, the relationships with existing providers/carriers throughout the state is, is generally good. And you know, it's also a leveraging and a reflection of a similar relationship that CENIC our partner in this endeavor already has had with those various providers for many years to come. I don't want to overstate it or make it sound like happy talk. But I would say it's, it's really been very positive and cooperative. We haven't spoken with every carrier in the state in this regard. Many of them are not in a position to really help us as much as we may need but those who are in that position, we've had very positive encouraging discussions with both with regard to dark fiber as well as with regard to potential co-location of regional exchange points into some of their facilities. I would characterize their attitude and position towards this as very cooperative. And, you know, there are a number of reasons for that if I'm on their side of the table, but I think they view this as a very positive program as well. And the particular carriers we've been spoke been speaking with more closely, I don't think it's an overstatement to call that a partnership in the making.

Okay, and at first before I forget, and I do not want to forget this, I want kudos to the CPUC on, on the fact that you have no pending CASF applications and those projects are funded, thank you. We have a number of them in our district, and I'm very, very appreciative of that. I'm going to go I'm going to go back to something related to the last mile and, and, and try to understand, you know, one of our my, my frustrations as a member is that we're often told that areas are served by, by carriers, and that may mean that one person at the end of the road got service where there's a whole bunch of people in the middle that weren't even offered service. So, what do you do? What's and I recognize that that is last mile. But that is also if for the middle mile to be turned to a success. We're going to need to be sure that you know that that's, that's there so that the last mile can be appropriately accessed. So are you getting the, are the granular details of what that service looks like be available to or becoming available to you because they certainly haven't been available to us as legislators. So, we don't really know, it’s always been guarded as a as you know, trade secrets and things like that. But what kind of are you getting the granular data? I don't need it. I just need to know somebody's got it so that we actually know who is served and who is not served, because I believe that that level of understanding will be critical to where and how the middle mile is deployed.

That's right. Yeah. Oh, sorry, Tony

Before, I just want to make sure if, this sounds like this is really a CPUC address, I want to see if CPUC you want to take a first stop at this?

Yes, absolutely. And I believe that this would be a good question for Rob as the Communications Division has done a lot of thinking on this and he can explain the inputs to the determinations of the mapping tool and in our, the way that we evaluate underserved. Rob?

Thank you, President Reynolds and thank you Assemblymember Wood. Your concern is spot on and I share your concern and we're in the process of implementing a location-based map and this is an issue that is affecting not just California but the entire nation. So, the FCC is doing a similar effort right now at the national level. Thanks to Senate Bill 156. It really enables the expansion of what defines a carrier up until now it's been in almost entirely incumbents or you know, companies that are familiar with the territory. But essentially where we are today is incumbents aren't building out anymore. So, we're trying to find new models and SB 156 really enables that through the local agency technical assistance and true loan loss reserve to be able to empower localities, municipalities, JPAs, new models of deploying last mile broadband. On with regard to the location, sort of, sort of, to loop back on that, the census block-based mapping clearly has a flaw in terms of determining what is eligible. And certainly, the map is the starting point for determining eligibility, but it's also not the final word. So, in every case where we have a map, we use that as a starting point and then we have to dig into where service is actually available, who has it and what speeds.

Location based mapping will let us drill down to a very specific, you know, end user locations to make that determination. So yes, we're working on that and that will be part of the Last Mile initiatives that we're in the process in the various rulemakings that I mentioned.

Well, I know in other states there's a, their efforts, their crowdsourcing data, they've come together that have created some information. I recognize that that you know, California is a much bigger state, but that that's a critical piece from, from my perspective, so we really need to know who is, what is truly served and what is truly unserved and that that information has been elusive, to say the least in the past, certainly in some of the areas that I represent. And just a final question, and I do appreciate people indulging me here. This is a really big issue for us. Something I've been working on my entire time in the legislature. And so that's part of why I am so dogged in my determination to see this be successful. We've been waiting for years for, for, for, for some of this and we just want to make sure it's right. It's, it's, it's equitable, and that that it gets the job done. So Tony, just in general, you know, you talked about timelines, recognizing the complexity of what's going on here. And you've heard my comments here. Are, you know, do you have we've got, we've got March looming out there now, which I which I now understand. What is that deliverable in March? What are you going, what do you, what are you going to have for us in March? And, and, and I'm so I'm just I'm just curious as to what, what do we expect from you in March?

I would characterize it as someone which is, we will be presenting and recommending the CDT lists that will contain where middle mile locations need to be developed to service unserved and underserved last mile locations. The lists will also be based on sequencing, but I don't want to make it sound like you know, we're only going to work on one list at a time. This project this program will see a lot of concurrent activity throughout the state in each what I'm calling the middle mile development regions at the same time, whether it's activation of dark fiber routes, whether it's working with Caltrans and their contractors on new build, and Caltrans right of way. It's a large undertaking, there are a lot of complexities. Another challenge that is typically seen in any of these kinds of efforts, whether they are, you know, government sector or private sector, commercial or otherwise. It's an interesting process. They're, they're, it's obviously complex, the construction and development or activation of network routes. The development process itself is highly dependent on third parties. We, you know, if you're leasing dark fiber, there's a carrier involved if there's new build activity, there are contractors involved in addition to suppliers involved, and suppliers are involved in every respect. So, there are a lot of third-party elements to this that that neither we nor the state of California have direct control over in every instance. And what we're doing in any of those situations and what many on my team have been doing for their careers is to push those third parties as much as we can. So that you know there's, there's not any more time delay than needed. So, I'm not sure if that fully answers the question or…

Not really, no, it didn't really…it didn't really, um actually not at all, but, but I'm going to ask you a final question. And that is, you said you're seeing progress on the 18 initial projects. Does that mean we're getting fiber in the ground? What is, in your in your mind, what is progress on those 18 initial projects.

Sure, progress is completing the analysis of where the routes should be, as well as having awareness of what alternatives to those routes. May be, so that we can develop as I was talking about protected service, ring topologies, that sort of regional exchange points that extend off of the middle mile. And, you know, it's no excuses. There's just a lot of detail and complexity that has to be analyzed before we can make what we think are our, you know, best recommendations. And in the 18, most of these are newly built, there are a handful that are dark fiber. We actually, I can't disclose details about the dark fiber negotiations for reasons I'm sure you understand because those, those, those arrangements are not yet finalized and completed agreements were very close to that however, and more, more visibility to that will be possible to the extent allowed by agreements

with carriers and others in those dark fiber arrangements. It will be somewhere you know, NDAs don't allow us to share all the details.

So, so since these 18 projects were, were chosen because of their ability to be supposed, I believe expedited because, because of in addition, existing Caltrans projects and things you know, I'm sorry. I'm gonna be dogged here and ask you but and push you a little bit. When can we start to expect to see fiber in these projects that are that are, you know, the first 18 and once I go back to my concern, is that are we going to get to the end of the line and not be done because we haven't been able to move these things. So, I'm going to keep pushing and I just, give, give us a rough idea. When these 18 projects that were chosen for a reason, when are we going to see boots on the ground, movement towards fiber in those projects, roughly.

Sure so…

Can I, can I jump in here? Assemblymember Wood and Tony. So, in terms of fiber in the ground, so you're right, we came up with these projects, these 18 projects and, and what we have asked Caltrans to do is go out and start that preconstruction process. I say if kind of mentioned in the past, I think historically Caltrans' preconstruction process has been, you know, in the I want to say a three-year range, they're doing it they're trying to go much faster, but that is the that is the work that they need to do to get all of the permits to do the survey to design the project. So, so in terms of moving from where we are right now to construction, I you know, Caltrans can I think has talked a bit through their processes. I know they're trying to go faster and I know we're trying to look for ways to streamline their process. I don't expect in most cases, for fiber to be in the ground during 2022 that they have that is the normal amount of work that that Caltrans has to do in an accelerated manner just to, to be able to start, we're hoping in 2023, I can get...have Caltrans on the line, they can speak a little more to you know, their, their timeframes, but, but I think that's, that's when you would expect to see fiber in the ground is hopefully starting at some point in 2023. And so, when we talk about what the work that the Golden State Net is doing, you know, they're looking at those same projects and saying, okay, well if you know, this is right now Caltrans is beginning its process, doing its process for this accelerated process for preconstruction to be able to, you know, move as quickly as possible to construction, but how many components of this are there. There are 200 alternatives where maybe we don't build part of it because we can do there's an iron new opportunity or for the sake of you know, I think Tony has talked about loops, you know, when you don't just go out to one place but you want to have kind of you want to have kind of these, these rings, so to make sure that if something happens to one section of cable, you still have the, the resiliency of something else, temporarily. So, you know, communities don't it's not a one and done or they get knocked out until it's fixed. So, there are some aspects of that and I think that's really the lens that we are that the TPA is working on when they talk about working on this. So, we're now, one could argue we're headed in both directions as fast as possible at the same time, because, you know, until because we want to make sure that that we get fiber, you know, for putting fiber in the ground, we can get that in the ground as quickly as possible.

Let me just add to what if I may add to what Mark is saying. To answer the question about boots on the ground, the first boots on the ground, you will see are those that belong to engineers that will be working on, on lighting up and activating dark fiber routes that are part of the 18 there are I believe there are four of the 18 that are serviceable with dark fiber. I expect that to be happening within three to six months from now on any of those dark fiber routes that we have secured where those routes, the facilities are already there. They need to be terminated between the middle mile backbone network and the destination of of that fiber to original exchange points. So those will be the first boots on the ground that you see.

I hope that this is like a snowball that builds momentum. Because I still go back to my original fears

that we've got a lot more projects beyond these 18 initial projects. And if we don't get a process that it helps to expedite this all along the way and start seeing that, that we might get to the end of the line and not have been able to commit the resources that we've been granted. So, I hope we're seeing this I hope this is the beginning of a big snowball. So, but I personally was, based on my understanding, I thought these projects, some of these projects were far enough along that we'd start to see fibers sooner rather than later. So, 2023 is a little, a little surprising. That gets us a year and a half passed the passage of SB 156. And with a limp with looming deadlines out there, so uh...

Thank you, I want to be mindful of the time and I know Miss Miller, you have a question also raised up, I'll make sure I get to you but I just want to quickly say that the 18 project was designed exactly for the fact that we get all of the preconstruction and all the learning done now so that the velocity is going to pick up for the rest of it so that not every single one of them is going to spend the time but you learn from here and then you can code like, I know your analogy is the snowball, I call it the velocity is going to pick up from here. So, with that, Miss Miller.

Yeah, I was gonna emphasize the point Miss Tong that you're making, just in terms of, of what the preconstruction work means for the lifecycle of the projects. And so, we're this is about three times as fast as a normal Caltrans project at least just to give you an idea, Dr. Wood of how much faster we're moving. That's one and then two, I don't know that we answered your question. And this is an important one on where the rest of the middle mile is, so I think that was your question. Mr. Osborn, I don't know if you could sort of answer that specifically in terms of the information you have from the carriers? So, as we know, the reason all of the current middle mile is, is, is the carriers' middle miles so we don't actually have all of that information. But I just think to be a little bit more specific about what information we do have and what's proprietary and what's not. I think that was the question. I don't we can also agendize this for later. I don't know how you want to answer that. But I do want to answer that specific question. Because when we were talking about SB 156, that was a lot of the conversation and that Mr. Naughtin is what you're referring to when you talk about an IRU you and what negotiations you're having that that sort of undergirds all of this, what middle mile is available that can be lit up that can then be used to execute a last mile. So, I think the that middle mile question is an important one. But I also don't necessarily know the answer and I don't know Miss Tong if it's something we want to potentially think about for the next meeting just because it's a longer conversation but it is a good question just like existing middle mile, building middle mile, IRUs…like a little bit of a how we're going to handle each of those.

Yeah, I just want to from a time check aspect. Rob, if you have a very brief response, and then probably this would be a good conversation to agendize. I do want to be mindful we still have a Caltrans presentation as well as public comment unless the MMAC members is willing to stay longer. I want to make sure we're all mindful everybody's time. But Rob, do you have a quick response before I move this forward?

Yeah. And just to add to what Gail was saying, on the existing middle mile, so we did solicit middle mile as well as location information from the providers. That data was submitted to us under confidentiality. So that's, that's something we can't put on the public map, but we're working with CDT on figuring out how that would be shared and in what format.

Okay, Assemblymember Quirk-Silva.

Yeah, related to moving these projects forward, as should we want to say as quickly as possible. I think there's a huge agreement there that we want to be able to move these projects as quickly as possible. And so, if we can, you know, maybe like you say, agendize this for another meeting, but with that same agenda item related to the PUC and, and thank you because I know it was mentioned in this presentation today that the CASF projects are now moved out, there does not remain any

that are left in the queue. If you want to say but again, not trying to be negative. It does it, for my, it's been brought to my attention that some of those projects were in a queue for more than a year and a half. They've now been moved out, but future casts of projects for another round, wouldn't be till late 2022. So, I guess one of my questions and we could add it to a future agenda. Is there a possibility to move up these timelines from the PUC to get these projects move forward and to let people know who might want to want to apply that they can have an opportunity to have these projects reviewed much sooner than the end of the next, I think that's the end of 2022 but that could be spoken about in a future agenda item. Thank you.

Thank you. Again, I understand some of the members have a hard stop at 11:30 and I want to make sure CalTrans has time to present and then also we got to make sure we have public comment period. So, if it's okay with all the council member, will make sure the staff taking all of these items to be covered in the future. And also, a reminder that there's also a quarterly California broadband council meeting that also CPUC participates in, and it covers the last mile initiatives as well. So, there's multiple places to address but if it's okay with everyone, I like to go ahead and move forward on the next final presentation. All right, CalTrans.

Thank you. Good morning. This update today is on the status of Caltrans' efforts to leverage our highway projects that overlap the middle mile network in the delivery of these broadband projects. So of the transportation projects that overlap the broadband middle mile network, Caltrans has identified over 100 potentially viable projects for inclusion of the network, under 10% of the middle mile network, or approximately 700 miles can be constructed by adding the broadband middle mile network to our highway projects. The majority though of the broadband middle mile network will be constructed through standalone projects. The criteria that we use to identify these projects include as has been previously mentioned today, the funding requirements to allocate by December 2024, and expend the funds by December 2026. So, any projects that cannot be awarded by the end of calendar year 2024, or constructed by the end of calendar year 2026. Those projects won't meet the funding requirements and those have been eliminated from the map. The potentially viable highway projects are ones that also in terms of the scope can add these broadband elements by trenching to include the elements of conduit fiber optic cable junction boxes and all the supporting elements within our state highway right of way. For projects that already have an approved environmental document, the addition of the broadband elements can be accommodated within the existing environmental clearance or with the relative ease of revalidation, then those projects have also been included. We looked at projects that could accommodate the broadband elements without the need to have to acquire permanent right of way and then also projects that are a single point location aren't viable or feasible for, for this effort. And examples of that may be like a culvert cleaning, which the scope of work doesn't allow for, for this kind of work. So, these are potentially viable projects and they are not yet confirmed to move forward though with adding the broadband middle mile network. I just wanted to share today with you the order of magnitude so you can see the, the number of miles out of the approximately 8100 miles the middle mile network that can be done via a highway transportation project versus those that are standalone. So next slide. I've got one more slide and then certainly take questions. The other thing I wanted to share with you today is that as you can see here, there are many federal and state agencies that Caltrans works with in the delivery of projects, and so we work with the appropriate agencies, not all of these at any one time on any given project, but those that we need to and so there's been discussion about streamlining the delivery of the broadband projects and towards that effort, Caltrans and each of our 12 districts will be engaging with the local and regional resource agencies to brief them on the upcoming broadband middle mile network efforts and to identify strategies on how we can expedite some of the reviews and the permitting needs for these projects in order to get them built timely. So those are a few of the things that Caltrans has been working on. And that's it for me today. Thank you, Director Tong, I'll turn it back to you.

Thank you, Elizabeth for that and I think this is the point I also wanted to echo the fact that Caltrans is working with the Department of Technology and other partners to look at whether there are ways to further streamline on already expedited path and this is to ensure that the three-year commitment and five-year build timeline is to be met. So, if this could be a subsequent update as well, Elizabeth, I believe this is a great interest to the MMAC members as well. All right any other questions for CalTrans? All right, I see no hands. I'm going to go ahead and open it up to the public comments. I understand there are folks already waiting in the queue. So, you can go ahead and unshare the screen so we can see everybody. There you go. Before we do this, Assemblymember Wood has his hand up?

Oh, I'm sorry. I missed that. Sorry. Assemblymember Wood, go for it.

Thanks. Real quick question. And this is more of a question probably for the PUC. My understanding is that the CASF grants once they're awarded have, have a window of time for, for completion a couple of two years. Is that Is that correct?

Yes, that's correct.

So, we've so we've got all these projects approved in my district and in other people's districts, we have no pending applications. So, at what point does the clock start ticking on that for those projects? Is it, is it from the approval? So I worry, worry that there's you know, that we're gonna have to go through this again, for these process for these projects.

Thank you for your question. So, the clock starts ticking when they, we receive the acceptance of the award from the recipient.

So, but they they're not going to know when the middle mile might be available to them. So they're, they may take a chance at some point and have to go through the process again. I guess my concern is we've awarded these grants or we were awarded these projects, but we don't have certainty about when the middle mile. So what advice are you going to give to people that as to when to pull the trigger to ask for the money? Because or do they are they just going to wait? Are these going to be three years five years out before they even get a chance to, to, you see where I'm going with this?

Yes, and I think that's a valid concern. And just to clarify the CASF awards that were awarded in this past calendar year, were under the what I'm going to call the legacy CASF program. We are updating the rules based on the addition of the federal funding account, local Agency technical assistance, as well as the loan loss reserve. So, I think that there, that's still something that we can take into consideration was my first point. The second is we do have projects that have gone beyond two years and I think you know the applicant; we work with applicants if they're making progress on the projects. So to the extent that there's a pending middle mile build, that's something that we would take into account.

So, you're looking at grandfathering in some of these approved projects to a new set of rules so that they don't get caught. I mean, we're, you know, these projects take a long time to get to the point where you get an award, it would be a shame, because we're not able to, on our end, complete the middle mile pieces of this, that they would have to go back to the drawing board and resubmit applications.

I think is it correct to find that the commission has the ability to extend the two-year period and could consider the length of time it's taking to for the middle mile projects to the extent that that last mile project is dependent on the middle mile so that the project wouldn't get lost or it's not that it's going

to get dropped if it doesn't isn't completed, we can do an extension of that two-year period. Okay. Still a process though. They're going to have to go through right. Okay, alright thank you.

We'll keep that in mind though. It's a very good point that you're raising. Ok, thank you.

All right, I want to do a last opportunity for the MMAC committee members, any other questions or comment before we go to public comment period? Seeing none. Jules, why don't we go ahead and move towards public comment period?

Certainly. And just a reminder in order to allow everyone who wants comment time to do so, we respectfully request that you please limit each public comment to two minutes per presenter and one presenter per entity. We'll go ahead and start with the online comments received. The first one was from Frontier about two CASF grant resolutions. Is there somebody from Frontier who'd like to speak to this? If not, we'll go ahead and just attach it to the meeting recap. The second was from Michael Kleeman from UC San Diego. Is he here? It doesn't appear that he's here. So, I'll go ahead and add those to the recap as well. Additionally, from Mono County Board of Supervisors, is somebody here representing them. I think that is a no. And from Stan Santos we received this morning I see that he has his hand up. Go ahead, Mr. Santos.

Yeah, I'll save those because I know you're running out of time it's really precious but maybe what I'd rather ask is if there's a staff person that I can direct those questions to because it’s quite a few questions and I only put them in yesterday so that's kind of unfair. If you could, maybe somebody could email me or put in the chat, who I might direct those to in terms of staff that we have a regional consultant for the West Fresno middle mile project that we designed. And I really just have to thank again for your consideration of that and we did write it in with two connection points, two distinct locations so that traffic can travel in two directions. You know, and so we're really favorable. And thank you for also the consideration for redundancy or some kind of rings. But again, there's a little bit of a disconnect with the middle mile regional, I guess, consultant or whatever. It's just been through the holidays that we missed each other and so there's somebody that I can direct these questions to a staff that would be really great. The only other thing I'd say is that I think Mr. Wood respectfully is asked, I don't want to answer for staff. But I think maybe part of my question is similar, which is, I understand the windows closed for the February submittals for CASF applications is what I think you're saying, which would be the ones that would be the first in the queue. However, we're talking about applications many of which are some of which are in areas which nobody's disclosed that have middle mile capacity, and where the, the service providers, the incumbent, are not always disclosing that and so that's always been a bit of an issue. And I'd like to also communicate with somebody or correspond with somebody regarding the CASF of applications and whether we're talking about CASF applications where there's no middle mile because it puts them in a kind of awkward position. So, but I'll save it for that. And again, I just really heartfully thankful for your efforts in what you're doing. I see it's so complex, I hope it's gonna move okay. And none of you have heart attacks or else it’s over with, but it will all be worth it in the end, thank you. Thank you.

Thank you. We will go ahead and follow up with you because we have your email address. I'm going to go to see if there's anybody on the phone next who would like to make public comment. We do have a couple of phone members. We'll loop back again afterwards. Mr. Williams, please go ahead.

Thanks. This is Ted Williams, supervisor, Mendocino County. I appreciate the presentation. What, when, and where can we learn more of the technical details so that our county can begin planning a holistic approach to the last mile. We're concerned that the last mile funding may be inadequate for us to provide ubiquitous coverage on a fiber to the home model. It's foreseeable we may need to look at wireless for large, the more sparse areas of our county. Frankly, that's most of our landmass, but we need to understand will open access, will IP transporter transit be provided, what

is the, what is, what are the junction points at a more technical level? How are we going to provide a last mile that interoperates with the state's middle mile and I don't need the answers here but I'm wondering when and where is there a point person we could talk to?

Oh, just gonna ask, is this something that between Mark and Rob, you guys can probably start with CPUC and then any unanswered questions regarding the middle mile can come back to Mark that'd be the point to go?

I think Mark volunteered but he's on mute.

Got it. Okay.

Sure, in terms of the, the tech…can you hear me okay?

Yeah, I just say we don't necessarily need to address it. This could be a follow up item if we have contact information. I want to make sure if that's okay with Mr. Williams.

Yeah, absolutely. That's really what we're after. We're trying to do planning and we don't… We've met with the CPUC. We're not getting answers to the technical questions. And it may be the answers aren't available yet. But we want to make sure that we're at least tracking and I imagine other counties are in this predicament of wanting to plan out the how to use the funds for last mile and not knowing how we're going to connect at a more technical level. Maps are one thing it's different to think about getting out there in the field and where the fiber terminates and how we're going to route traffic.

If I might just quickly respond to that, Amy. What our intention is, and this is was what we will do. The middle mile network of course, it's open access. It will primarily provide what, what we would refer to as layer two switch transport services, as well as layer three public internet transit services. There will be potentially some other services as well, which we would identify as spectrum services, more advanced service offerings, but we would be looking for conventional interconnects with last mile providers typically in you know, ethernet interfaces with gigabit service, multiple gigabit service or fractional gigabit service.

Tony, I will highly suggest that this is a follow up item, sounds like it's not only going to be for, you know, Mr. Williams, will be beneficial to others. So let's make sure that this gets closed out as a followup item and then that we can because we have other public comments and we're way over time right now. Thank you.

Mr. Williams, if you go ahead and send your email to either through the public comment or the email address in the website, we'll make sure it gets to the right person and followed up.

Thank you.

Miss Van, and I don't know how to pronounce your last name. Could you please pronounce it? You're still muted.

Thank you for that, I'm Martha Van Rooijen. I just had a housekeeping question. Would it be possible to start for the Department of Technology or the middle mile advisory committee to start a Listserv for email updates on the project and project meetings so that the word can be spread more about this project within the community? A lot of the state departments do, do that. And it's very helpful to send out and say would you like to sign up for email updates for the middle mile project? So, thank you so much.

So, we do have a stakeholder list for the meetings. And, Mark, did you want to speak about specifics about the projects? Or Tony?

Well, yeah, I mean, I think the question is in terms of having, having totally get your question, I think that's a good point. We'll circle back on that in terms of being able to send stuff out so I don't know that we're gonna, you know, it's much broader than any given project. So I totally get your point. And we'll, we'll talk about how we want to how we can meet that need.

I appreciate that. I'm the Executive Director of the Inland Empire Regional Broadband Consortium, and that makes it very easy to send out the information to say, hey, yes, this is at once a month on this date. But if you guys want to sign up for your own updates, and keep track of the project, it would be great. So, thank you so much, and then get the word out to all our stakeholders. Thank you.

We're not seeing any more hands. I'd like to loop back to the people who are on the phone. No…is it, does anybody else on Zoom likes to make a comment? It appears that's all our public comments for today.

All right. Thank you, Jules. And thank you everyone for staying, you know, longer than originally planned, but I think this has been a really, really good conversation as to taking place and thank you for all of the MMAC committee member for participating asking good questions and staff for addressing them. And for the public, for the question that you have raised that that warrants follow up, those will be addressed. And I think that's an excellent suggestion, in terms of the additional Listserv in terms of more stakeholders would be able to join along of all of this progress. So, with that said, last round coming back, I'm going to close the public comment period. Last round coming back to the MMAC members to see if there's any last-minute comments or questions. Seeing none, definitely there were takeaway agenda items for the following meeting. And I think, again, I'd really, really appreciate everybody staying longer and I'm going to go ahead and wrap this meeting and hand it over to Russ to adjourn.

Thank you, Director Tong. We did capture a number of items that will be agendize for upcoming board meetings. Our next meeting is Friday, February 18th, 10 - 11:30. We'll be sending out the same type of information and a link for everyone to join. Thank you for joining today and we look forward to speaking with you next month. And our meeting is adjourned, thank you.

[redacted]

[redacted]

--- I have a comment regarding: ---

Middle-Mile Initiative

--- Name ---

Charlie Born

--- Email ---

[redacted]

--- Organization ---

Frontier

--- Comment/Question ---

Frontier has two CASF FTTH grant applications on CPUC agenda for approval but have held off on the necessary MM portion until CDOT has provided approval adding several months to be able to start the work. These MM routes have been vetted and CPUC agrees are necessary but encourage CDOT to review quickly. These are not part of initial 18 projects.

The two CASF grant resolutions (T-17749 and T-17754) are for several critical last mile projects which included MM that would be funded by CASF.
The CPUC denied our comments so would encourage the committee (DOT) to approve the routes.

[redacted]

[redacted]

Sent by: Michael Kleeman
Email: [redacted]
Organization: UCSD

Comment:

What actions have been taken to leverage this infrastructure for a higher quality seismic monitoring network for the state?

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John Peters ~ District Four Stacy Corless ~ District Five

BOARD OF SUPERVISORS
COUNTY OF MONO

P.O. BOX 715, BRIDGEPORT, CALIFORNIA 93517
[redacted]
Scheereen Dedman, Clerk of the Board

January 11, 2022

Louis Fox
President & CEO
CENIC
[redacted]

Dear Mr. Fox –

As Chair of the Mono County Supervisors and District Three Supervisor, I am writing to you in your capacity as Third-Party Administrator for the California Middle-Mile Broadband Initiative ("MMBI"). As you may know, Mono County is one of three Class A members of the California Broadband Cooperative ("CBC") which operates a non-discriminatory middle-mile broadband network throughout the Eastern Sierra Nevada, commonly known as Digital 395.

This vital network operates in the form of a public/private partnership in our region. Without doubt, it has dramatically changed the landscape of opportunity for the residents, businesses, and visitors of this rural part of California. Furthermore, it has substantially changed the way that we operate as a government entity and how we deliver services effectively to our constituents. It is no exaggeration to say that the broadband network offered by CBC makes it possible for our constituents to have access to some of the highest quality online services found anywhere in the country. As you know, broadband plays an important role in sustaining the needs of the local communities, as well as supporting economic development–a fact which is no different in our region.

Mono County has made broadband a strategic priority since 2009 when it committed resources to support the construction of Digital 395, and then focused on Last Mile initiatives throughout the County. As a result of these commitments and efforts, today Mono County can boast that more than 90% of our households have access to Gigabit internet speeds at a price point which is competitive on the national landscape. All of our schools leverage Gig speeds that support their 1:1 programs, and our hospitals leverage Gigabit internet in order to provide sophisticated remote and robotic medicine in a rural setting.

In an area where broadband deployment is not economical, CBC has enabled broadband competition and distribution in a landscape which has historically lacked even reliable Plain Old Telephone Service.

It is important to note, however, that the Digital 395 network does not extend to every corner of our county, and as a result some communities still lack meaningful access to reliable and affordable broadband.

Consistent with the comments we have filed at the California Public Utilities Commission on the implementation of SB 156, we want to ensure that the MMBI understands the needs of our county. We anticipate that the State and MMBI will take full advantage of the potential for Digital 395 and CBC by first keeping our network operational in the fashion that it is today, and then helping extend broadband in a fashion that satisfies both the State's and County's objective to further close the digital divide in our area.

In Mono County, there remain just a handful of middle-mile network development needs which we hope MMBI will consider supporting. Those include:

- Benton Crossing Road from Highway 395 to Whitmore County Facilities (approx. 1mi.)
- Highway 203 from Mono/Madera County line into Reds Meadow (approx. 8.5mi.)
- Highway 158 from proposed segment end to Silver Lake (approx. 1mi.)
- Twin Lakes Road from Highway 395 in Bridgeport to Fire Station #2 (approx. 13.5mi.)
- Lake Mary Road from The Village at Mammoth to Mammoth Community Water District Facility (approx. 3mi.)
- Highway 120 west from Highway 395 junction to Yosemite National Park entrance (approx. 12mi.)
- Bodie Road from Highway 395 to Bodie State Park (approx. 13mi.)

It is well recognized that "overbuilding" Digital 395 in the Eastern Sierra is both unnecessary and inefficient. However, establishing a clear strategy which coordinates with CBC and leverage the network is paramount for both the State and local objectives to be fulfilled in this area. It is also important to note that disrupting the economic or service model currently realized by CBC would not only impact the solvency of the organization, but likely have deleterious downstream impacts on organizations such as ours.

We recognize the complexity of this topic and welcome further discussion with our organization on the matter. Please feel free to contact Nate Greenberg, Mono County's Director of Information technology with any questions or comments.

On behalf of the Mono County Board of Supervisors,

Bob Gardner
Bob Gardner (Jan 18, 2022 14:24 PST)

Bob Gardner
Chair, District Three Supervisor

cc:

Russ Nichols, California Department of Technology
Scott Adams, California Department of Technology
Amy Tong, California Department of Technology
Sunne McPek, California Enhanced Technology Fund
Robert Osborn, California Public Utilities Commission

[redacted]

[redacted]

Sent by: Stan Santos
Email: [redacted]
Organization: Communications Workers of America

Comment:

What is the function of the consultants and Broadband Consortiums in relation to the Middle Mile Projects? What is the current projected timeline for the build? Do the cities have any input into the process; is there a requirement for public notices? Is there an estimate for the total number of man-hours or years, job titles, desired skills? Are there and associated PLA's or Community Benefits Agreements? Is there any consideration for "local hire" or training opportunities for residents of disadvantaged communities? Thank you for your invaluable efforts for our unserved communities.

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