

Middle-Mile Advisory Committee  
 September 16, 2022  
 Meeting Recap and Transcript

The Middle-Mile Advisory Committee met on Friday, September 16, 2022 at 10:00am PST via virtual conference.

**Agenda Item 1: Welcome and Overview**

Chair Bailey-Crimmins welcomed everyone to the meeting.

A quorum for the meeting was established.

Member		Designee	Present	Absent
California Department of Technology	Director Bailey-Crimmins		X	
California Public Utilities Commission	President Reynolds	Commissioner Houck	X	
Department of Finance	Chief Deputy Director Miller		X	
Government Operations Agency	Secretary Tong		X	
Department of Transportation	Director Tavares	Chief Deputy Director Keever	X	
State Senate	Senator Gonzalez	(Ex-Officio Member)	X	
State Senate	Senator McGuire	(Ex-Officio Member)		X
State Assembly	Assembly Member Quirk-Silva	(Ex-Officio Member)	X	
State Assembly	Assembly Member Wood	(Ex-Officio Member)	X	

**Agenda Item 2: Executive Report Out**

Mark Monroe provided the executive report out, focused on permitting summits and contracting forums.

### **Agenda Item 3: Project Updates**

Mark Monroe provided the California Department of Technology's (CDT's) update focusing on the project timeline and stakeholder outreach.

Janice Benton provided a California Department of Transportation update focused on project delivery, dig smart, preconstruction, preliminary projects, and efforts to streamline projects.

Tony Naughtin provided the Third-Party Administrator update focusing on core network backbone operation and future operational issues.

Jonathan Lakritz provided a California Public Utilities Commission (CPUC) update focused on local agency technical assistance, California Advanced Services Fund grants received, and last mile funds.

### **Agenda Item 4: Public Comment**

Public comments were made by:

Philip Neufeld

Patrick Messac

Frank Gornick

### **Closing Remarks**

Committee members had no closing remarks.

Ms. Bailey-Crimmins thanked Committee members, staff, and attendees and noted the next meeting is scheduled for September 16.

The meetings adjourned at 11:10am PST.

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

# Transcript

## MMAC Meeting – Friday, August 19, 2022

Good morning, everyone, and welcome to the September Middle Mile Advisory Committee meeting. Today we look forward to receiving project updates from the California Department of Technology. The California Department of Transportation, also known as Caltrans, the Golden State Network, which is our third party administrator and the California Public Utilities Commission. First order of business is housekeeping and roll call. Mr. Przybyla. Will you please call roll?

I'm going to start with housekeeping rules. Attendees, please note, there is time allocated at the end of the meeting for public comment. Presenters, please que Sam to advance your slides. And committee members, please use the raise your hand feature on Zoom to que the chair to call you when to speak.

Now committee members, roll call.

Chair Bailey-Crimmins? Present.

Commissioner Houck? Present.

Chief Deputy Director Miller?

Director Kever? Chief Deputy Director Kever, Caltrans. Thank you. Thank you.

Secretary Tong? Here.

Senator McGuire?

Assembly member Quirk-Silva?

Assembly member Wood? Here.

And Senator Gonzales.

Chair, we do have a quorum.

Alright. I think we still have people coming in, so why don't we just give it just a minute if everyone could just be patient. I want to make sure that we have all attendees and numbers are starting to go up just a little bit. Okay, it looks like we have eighty-five. See if it...uh. Alright, it looks like we are at a good spot. So, the first order of business is to see if any of the committee members have any comments before we start with our presentation...is open for comment. Alright, I see Assembly Member Quirk-Silva.

Good morning, everybody. Hope you are all doing well. Finally cooled down in Southern California. I do have a few comments, and I hope you'll give me a personal privilege just to read a few of them. They're not really long, but I did miss the last meeting, and but I was really happy to hear about the positive updates on the progress of permitting for the construction bids, and also on the focus on finding efficiencies in the process. Um, but just as a wrap up from the legislative session. As you know, we have completed the session. We're back home, some of us, and we had several bills on the topic of broadband, two of which I authored, and are at the Governor's desk. One, which was AB 2256 would add two seats to the Middle Mile Advisory Committee for local government representation and I think that this, if sign would make a big difference, particularly as we focus on the last mile permitting...over and over under every umbrella in California from infrastructure to housing, to water, to broadband, is a very serious, serious issue that we don't have enough urgency as far as moving processes forward, and we often see projects or efforts stalled. I'll just give you an example. There was a water on it that came out that said we had funding to clean up some of the most disadvantaged areas in California. The funding there, and it's taken almost three years to get a permit so different topic, but similar, so that's one of the things that you'll hear me continue to say. Second, we also believe that AB 2749 which is a piece of legislation that would put some timelines on the CPUC to review applications with a hundred and...within 180 days for last mile applications. This is extremely important as we know that much of the funds related to the middle mile and last mile have an expiration on them. So, we are really hoping that the Governor will sign this piece of legislation. I know that we did get some of the opposition on neutral, and there were some that were still opposed, feeling that timelines or a strict timeline could possibly limit some advocates' role or input but for me, I've seen too often from local

government to state government, where, if we don't have an urgency, sometimes, things will just languish. What I will just give you as a real quick story we had from Southern California dish providers come to my office say that they had timelines and again funding, and they needed the historical maps for Southern California. As we know when we're starting to put infrastructure in, we have to be conscious of any preservation areas. Those maps were actually housed at Cal State Fullerton, which is in my area. Sounds fine, except for they were housed in Anthropology department, which was closed for months and months because of COVID. So, this has added

months and months into play. So that's kind of the story I'm trying to get at...the *why* permitting and moving forward on an urgency is really important on these projects. Thank you so much.

Thank you, Assembly member. Any other comments from many of the other committee members? Alright. Oh, I do see from Commissioner Houck.

I just wanted to note that recently there was an event out at the San Jerardo Cooperative in the Salinas area, where a project of the Commission helped fund for last line um, extension project through CASF went live for that community who did not have broadband during most of the shelter in place, and now they do, and it was a great turnout with support from, local, state, federal elected officials, and it was approved last year, and now it's up and running, and that community has broadband. So, I want to note that that we're making progress, and we want to see a lot more of these projects so that we can

get people online.

Thank you, Commissioner. Alright. I see no additional hand, so we'll go ahead and start with the first agenda item. It's the executive report out from Mr. Mark Monroe.

Yes, good morning chair/members. We're glad to have another opportunity to update you on the progress of the MMBI project, and we'll start out with our executive report here. We're going to move on to the next slide here. As noted previously, we have moved from what was more of a planning phase to the execution phase. This morning, I will be reporting on the broader statewide efforts for the MMBI project. Caltrans will be reporting on its efforts as it relates to pre-construction and construction of the network. This will include the status of the accelerated permitting process that...processes that were outlined at the last MMAC meeting, and an update on the district's progress on moving forward with broadband reconstruction work as well as the environmental and design work. This will also include a status of the dig smart projects and other early district-driven efforts to move forward with construction in 2023. GSN will be reporting on its work relative to a repeater hut in engineering and electronics, which will be vital to transmitting the broadband signal along the network that we're building and the PUC will be providing an update on its last mile programs, including its \$50 million dollar Technical Assistance program; its \$750 million dollars Loan Loss Reserve program; and then both the last mile grant funding programs funded with the one-time ARPA funding and its ongoing CASF programs. If we can go to the next slide. CDT has continued to work with his business partners to optimize the MMBI network coverage. As noted previously, we are finalizing contracts to secure cost estimates for the primary three-ways we expect to develop this network. These include a standalone construction secured through CalTrans construction projects, but they can also include joint build construction in which the private sector has more limited projects that it has planned and funded. These may have the potential for sharing construction costs between the two projects, reducing the state's share, even though that...what it might cost as a standalone project, and making the available MMBI funding go further. And then the through route, of course, is, our lease agreements with providers who are in existing infrastructure.

These leases are anticipated to come in the form of 20-year IRUs, and we'll provide a secure twenty 20-year uninterrupted access to enough infrastructure to support the broader network and close any gap between what we can afford to build either as standalone projects or joint build projects to make sure that we reach all of the communities we're targeting. You want to go to Slide 6. Right here is the project timeline we presented last time. You can see that the two orange sections reflecting the two contracting efforts that we will be...that will be used to get a full picture of what industry can provide and how much it will cost by December of this year. This is for both the construction and IRUs. It's important to note that we will be getting these cost estimates while Caltrans is working on the pre-construction efforts that are currently ongoing, and the contracting efforts will give us the information to better inform where in the network Caltrans will need to focus its efforts. And that is the end of my executive report out.

Thank you, Mr. Monroe. I'd also like to welcome Ms. Gayle Miller to the committee. I just want to recognize that for roll call, and I'd like to open it up to the committee members to see if they have any questions of the executive report before we transition to the overall updates. Alright, Mr. Keever. Thank you, Director.

Um, Mr. Monroe the question I had on the joint builds, do we have any agreements for those at this point, or those something that we're still negotiating? Those are something we're still negotiating. We, we've...we've had some early interactions with some...on some possible joint builds, but consistent with the idea of going out to contract for the you know, for most of the network and trying to identify, you know that...obviously building is our...is our first priority and we want to build as much as possible. But um, but to the extent that we're going out to bid, that's going to be really key. And so, I'm one of the you know...let's say we go out there, we go out to industry through this. The process we're going to be talking through here, and we come back, and we're able to identify, say, a couple of thousand miles statewide that we can look at that and see, well if that ends up being more cost-effective and faster and beneficial to the project than just doing a standalone project. So, we're...we want to make sure we get that information. So, we yeah, we have had some conversations, no grievance have been reached yet, and we want to make sure that as we look at those, we're taking that holistic view of statewide of our network to see what all those opportunities are. Great, thank you.

Thank you, Mr. Keever. Any other questions? Alright. We'll go ahead and go to the second agenda item. Mr. Monroe, please provide the Department of Technology update.

Sure, alright so um...the two efforts we are moving forward with include two contract solicitations as I kind of indicated before. The first is intended to identify what opportunities there are statewide for the joint builds. We just discussed as well as leases. In terms of joint builds, you know...the policy, direction, and preference for the administration and the legislature, and putting together SB 156 is really to develop a network that is owned by the state to avoid dependency on the private sector, and you know any future pricing risks if we, you know to the extent that we have to renew leases in twenty years. The majority of the cost of the project is

construction as opposed to materials, so um...as such, we want to explore any opportunities to partner with other project sponsors to build some segments where shared construction costs may be lower for each partner than they otherwise would be for a standalone project and uh, where pre-construction is already further along, facilitating a project schedule that is consistent with the federal deadlines that the MMBI project is subject to. So, before we decide to move forward in constructing standalone segments, we want to make sure we don't miss these opportunities to share these costs if possible, and you know, I think the example I would give is that if we have...if it cost four hundred thousand per mile, say to build and the majority of that cost is really the digging in the ground and natural of that construction, then um...perhaps we can, you know...share that cost and maybe it ends up being two hundred thousand for the partner and two hundred thousand for us. So as long as we can meet the system requirements, it's something we want to make sure we consider um, and but obviously we, you know there will be challenges with that, as it relates to the schedule and whole permitting work that we are doing but, um...but we just want to make sure that we're making the money go as far as possible and we're not missing any opportunities. The other component of that...uh, of that um...or, that we're going out for us relative to the IRU leases based on information gathered by PUC and Golden State Net, we estimate that of the ten thousand miles, we will need to build at least six thousand miles based on the lack of any other existing infrastructure. So, that...that's kind of one more or less certainty that we have in terms of construction. But that means that depending on the cost of building these six thousand miles, we may need to consider leasing some portion of the four remaining four-thousand miles of the existing infrastructure that we understand may be available. So, our goal in going out is really to work with this RFI 2 is that to go out to industry, and get a better understanding of how many fibers industry might make available to the state and at what cost. And um, make sure that, that...that we...it's not just four thousand miles that exists, but there's some subset of that the industry will be willing to make...uh, make available to us and to make sure that we understand...that it makes sure that it really meets our needs. We're using an RfI squared approach for this, which is in both cases will allow for us to present the project as a whole, and solicit solutions from industry that will equip us with the knowledge to make decisions quickly regarding how best to optimize the network in December and...uh, this upcoming December and January. And so, then we're finalizing a job order contract solicitation with Caltrans for construction. And that's the other piece there. So, any yeah, we'll go ahead and go on to the next slide here in terms of yeah, the construction. So, the CDT worked with...has been working with Caltrans. Our approach to construction contracts has included looking at the complexity of the potential work. Right? So, um, we need to get bids in for...we estimate at least sixty percent of the network to update our cost model to really get an understanding of how much it's going to cost to build. For construction, we are evaluating where to use job order contracting, and construction manager and general uh...general contractor approaches the you'll hear us reference to a JOC or job order contracting and CM/GC job order contracting, uh...it allows us to get cost estimates without committing to the associated miles ahead of time. And you know, when you go out for a contract normally, you're going from Point A to Point B, and this allows us to be able to look at the cost of going from point A to Point B and understand that we might, you know, we might not be able to afford all of that, or may not need all of it. And so, um...so, we want to take that approach. Getting job order contracting bids will be faster and it's going to allow us to tailor the amount of construction based on the bid cost received. The CM/GC contracts that involve bringing the contractor on early to help design the project segments, so we want to focus the use of this methodology on the more challenging components that may include a lot of bridge

crossings or waterway crossings, more interactions with extensive utility infrastructure. We've also worked with Caltrans to identify at least half of the network that doesn't fall into the...what we'll call the challenging category for more job order contracting. We'll be...it'll be a good fit and um...and we're continuing to evaluate the remainder of the network and plan to go out for job order contract...construction contracts, um...to get, to get bids on again, sixty percent of the network or about six thousand miles. This amount the state would commit to building at least half and further construction decisions will then depend on the cost of the...on the big cost we receive. The benefits include getting a larger sample of cost size, you know, as we're all aware the larger your sample size, the more...that the better the number is...better the estimate is um, and it'll give us the flexibility to right-size construction based on costs. By the October MMAC meeting, we anticipate having both of these RFPs out to industry with responses scheduled for December and looking forward, we can start making decisions regarding where to do standalone construction, where to do joint builds, and where to lease in that timeframe by the start of next year. We also anticipate going out for a separate RFP for the CM/GC contracts on these more complex network components. Later in October of this year with the final, um...a final RFP going on in February to kind of close out the remaining ten thousand miles of the more complex areas. So, with that, I'm happy to answer any questions.

Thank you, Mr. Monroe. I do see one question, Secretary Tong.

Yes, thank you Chair and Mr. Monroe. Just probably two questions. One is, understand you know, there's a lot of complexity involved in terms of looking at you know, what makes sense to build, what makes sense to lease, what makes sense to joint build. It sound like a lot of it...it's depending on the cost factor. And then the cost factor might be depending on you know, whether that area has lines available, or how difficult the area is in terms of geographic, you know various settings, and all that. Is that...are those, you know, questions being proposed to the public in this case, you know the various experts through these RFP process, so when they submit their proposal, they should take into consideration of these complexities involved so that you know, the response will be, you know, comprehensive. Right...right. And so, uh...exactly. And so, that...that's a key component of this is to be able to go out to industry and see what those complexities, what their take of what these complexities are as opposed to kind of trying to identify all of them ourselves first. We obviously don't have time, this...you know, with this project to go through kind of a more standard laid out process over, you know...many, many years. And so yeah, that...that very much leaves room for that level of expertise. We're also breaking them up by region, too. So, we're kind of making room for that regional expertise to really address the concerns that you know, exactly the concerns you're talking about. Ok. And the region reference is actually, that was my second question knowing that you know, California's so big...north and south and central, they all have different characteristics. So...this, even though it's a statewide procurement, but it is a regional geographic basis, so that there is a more local specialty if you would, can be focused on the response. Yes, exactly. And you know what we had, as we mentioned previously that we had done the vendor forums or the contractor forums in July and August, and that was one of the takeaways from that is that you know there were contractors there that they're good at building along the coast, and you know, and that...that's its own, that got its own challenges. It's going to be different than the Sierras. It's going to be different than going through, you know, the largely urban areas or suburban areas.

And so, one of the takeaways from that was to try to break up the state into some of those areas...in those geographic areas to kind of allow some of the...a lot for regional expertise to be...to factor in. So um, you know, if we're going to go out for, say, six thousand miles of job order contracting, and that doesn't mean that we couldn't have a bidder that...or a company that bid on more than one of those geographic locations. But there's going to be a lot of sub-contracting involved, and so we wanted to make sure we left room for that sort of regional expertise to be able to address some of those concerns and bring that to provide a more quality bid than cost. Okay, thank you.

Thank you, Secretary. Are there any other committee members that have questions on Mr. Monroe? Alright. We'll go ahead and go to the third agenda item, which is Caltrans's update given by Ms. Janice Benton.

Alright. Good morning, Chair Baily-Crimmins, committee members and others from the public. Thank you for having me. My name is Janice Benton. I am a division chief with Caltrans, and we'll be providing an update on the progress being made to build the ten thousand miles of the middle mile member. Next slide. So, Caltrans update reflects a pivotal point we've reached with broadband middle mile initiative. By early next year, we anticipate beginning construction on approximately one-third of the ten thousand miles. We have reached this point through partnerships and collaboration with the Department of Technology (or CDT), California Public Utilities Commission and the broadband team leveraging Caltrans' resourcefulness and expertise. We are also leveraging the benefits from SB 156, which allows the use of alternative delivery methods, such as job order contracting, and construction manager-general contractor (or CM/GC). Learning from the initial eighteen projects to gain better understanding of the dynamics to deliver the overall program projects, and then also partnering with our State and Federal resource and lab management agencies to streamline the process for obtaining the environmental permits and approvals, as well as formal access agreements when working in the right-of-way over the Federal lands. So, as mentioned, Caltrans has a long history of successfully partnering with regulatory agencies to deliver projects. We are building on earlier permitting improvement efforts such as the State transportation permitting task force that was established through Assembly Bill 1282, which provided an organizational framework to strengthen our interagency coordination. The efforts underway are aimed at proactively addressing potential delays and challenges. While we cannot avoid the challenges completely, we are taking numerous steps to minimize and as much as possible avoid these issues. Over the past several months Caltrans in collaboration with CDT has been meeting with the State and Federal resource agencies to leverage these partnerships to benefit the Middle Mile initiative. Weekly status meetings with regulatory partners are being held to follow progress on the interagency agreements and programmatic permitting and approval efforts. Significant progress has been made to date with the permitting agencies to develop programmatic permits that would reduce the timeline for approvals and identify resource needs within each department. In addition to these programmatic approaches, Caltrans has historically funded positions at resource agencies to ensure that sufficient staffing is in place to minimize the permit processing delays. And also, Caltrans in partnership with CDT and our federal highways administration and building on earlier efforts is also coordinating regional broadband, middle mile outreach sessions with tribal governments. Next slide. As shown at prior MMAC meetings, the efforts to

get programmatic approvals has reduced months from the project timeline. This includes coordinating with the permitting agencies on resources and staffing needs. Work continues on the interagency agreements with the Water Board, the California Department of Fish and Wildlife and the State Historic Preservation Office. Updated agreements have been provided to these agencies for their final review. Caltrans is coordinating and working with the U. S. Fish and Wildlife Service on the development of a biological assessment to get the programmatic biological opinion approved within the next six months. Fish & Wildlife have already has a staff person dedicated to broadband on-board. Caltrans submitted permit applications to the U.S. Army Corp of Engineers, and the Water Board, which are being reviewed for completeness. Regular meetings are underway with both agencies, so that once they deem the applications complete, they will start their formal approval process that we anticipate to be completed within six months. And we are coordinating with the California Coastal Commission to identify the best practices and opportunities for avoidance for each project component to ensure streamline permit approvals. Additionally, as a result of the outreach and engagement, the California Coastal Commission shared with us that they have hired environmental consultants to help assess the impact broadband may have on coastal areas. Next slide. So, Caltrans continues to make substantial progress to build the ten thousand miles. These charts reflect the progress made on pre-construction activities since the August MMAC meeting. In fact, while the chart shows a jumped to 86 percent in early September from 52 percent in August, the progress is even greater. As of today, work is underway on 93 percent of the miles. The chart shows the percentage of completed tasks in green, the percentage of in-progress tasks in blue, and the percentage of miles where preliminary project decisions are to be made in gray. Next slide. This slide shows the breakdown of the previous slide by Caltrans district and the miles assigned to projects and the advancement that has happened in each Caltrans district since last month. As with the previous slide, substantial progress has been made over the last month as you can see with the March chart. Please note that while the chart show the progress happening by district, it does not reflect that the number of broadband miles does vary from district to district. Next slide. So, we also want to provide the progress being made on the initial eighteen locations, and this provides a sampling of the tasks being accomplished for these projects. With Location 14, which is 33.2 miles in the high desert of San Bernardino, over the last month the majority of design layout has been completed, which contributes to about 50 percent of the pre-construction work being done. With Location 16, which is 39 miles in Central and Northern Orange County over the last month, the shelter hub...network hub locations have been validated and approximately two-thirds of the design layout is complete which contributes to about 45 percent of the pre-construction work being done. And with Location 10, which is 32.6 miles in West Fresno, over the last month the electrical estimates and specifications have been prepared, which contributes to about 30 percent of the pre-construction work being done. The eighteen locations have provided valuable insights that we've been able to leverage as we navigate the Middle Mile build. With the knowledge and the insights from these locations we have identified opportunities to streamline and engage a strategy of avoidance. We have implemented many internal time saving procedures that include simplified checklists and standards tailored for broadband projects and removal of requirements not relevant to these projects. And, as I mentioned earlier, we are working with our partners at the State and Federal resource agencies to get programmatic permits and approvals to meet the environmental and federal land access requirements, all of this, with the objective of further reducing pre-construction efforts to get the project work packages out to construction more quickly. Next slide. And as shared at previous MMAC meetings, Caltrans continually assesses opportunities to leverage existing projects and

implement dig smart opportunities. We have identified dig smart opportunities that cover approximately 667 miles of the Middle Mile network. This slide shows that over the past month, the number of miles that will be...that will actually add broadband infrastructure has increased by nearly one hundred miles. At last month's MMAC meeting, we shared that we are targeting 90 miles to begin construction this year, and I'm happy to share that we now have 114 miles, some of which that are already underway with more expected to begin construction this year. We also now have up to 300 miles that are expected to go to construction in the coming year. So, in closing, Caltrans continues to take the necessary steps to move projects forward, and have contracts out with the commitment to have bid data to CDT in mid-December. Pre-construction is underway on more than nine-two hundred miles of the network. Extensive engagement is happening with State and Federal partners on permitting and providing support resources. Since July, Caltrans has advertised three CM/GC projects covering more than 500 miles and one more contract going out next week for an additional 400 miles. And building on that, we are also evaluating the network miles based on complexity to bundle the less complex miles into regional job order contracts. So, given the strategy Mr. Monroe outlined earlier, Caltrans is putting the pieces in place to advertise approximately 60 percent of the network in October. Caltrans remains committed to this broadband initiative and will collaborate with the Department of Technology to address challenges and continue to find opportunities to accelerate the deployment of the middle-mile network. This concludes the Caltrans update. Thank you.

Thank you, Miss Benton. Okay, I will open it up for any questions of Miss Benton's presentation for Caltrans. Yes, Assembly member Quirk-Silva.

Not a question. Just a compliment. This is really impressive, and I'm pleased to hear the updates and the progress we made. Thank you.

Thank you, Assembly member. Any other questions or comments from the committee members. Oh, yes, I see Secretary Tong.

Uh, just really quick, I do want to echo, I know it's uh...a long time coming, and every meeting that we're seeing that the Caltrans effort, it's not just incremental improvement every month. It sounds like that in...that, that progress it's a lot more accelerated month to month. So really appreciate that. And, and...um just to call out to probably the CDT team that did the holistic deck that have a comparison of month-to-month now showing the difference, and I think that's also really helpful in presenting the information.

Thank you, Secretary. I see no other questions. So, thank you Ms. Benton. We'll go ahead and go to the next agenda item, which is from Golden State Net our third-party administrator, and we have Tony Naughtin here today.

Thank you, Director Bailey-Crimmins. I'll start out by saying, I'm giving this report this morning from a remote location, and if I experience any broadband problems during this presentation, I apologize in advance for those. We'll keep our fingers crossed. It's ironic that that's the very type of problem we're solving with this program, but I am not in California today, so I'll say that at least. If we can go to the next slide, please. Golden State Net continues to advance our work in developing the network with much current focus on the service architecture, the service architecture are the operating components of the physical network, as well as the architectural fabric of the network switches and routers that will actually enable the services that the network will provide. As you know, Golden State Net is a subsidiary of CENIC, the Corporation for Education Network Initiatives in California, and I want to just take a moment acknowledged that CENIC is making significant key engineering contributions to this service architecture, leveraging its experience over the years and operating its own research and education network in California and enabling the statewide K-20 California Research and Education Network known as CalREN. That's an important contributing engineering know-how that's making this possible. Regarding the electronic devices that will enable the network, Golden State Net with CENIC engineering has been working to finalize standard equipment configurations that will enable the network to operate and provide and support a variety of network services when it's operational. This includes working closely with CDT to ensure that the MMBI program receives the optimal value possible regarding pricing and technical support of the electronics that enable the network services to last mile customers. If we can go to the next slide, please. With our key agency partner the California Department of Technology, Golden State Net has been actively involved in assisting with the development of a variety of bidding and procurement processes as Mark Monroe was discussing a few minutes ago, covering the resources, services, and equipment needed to develop and manage a high-quality middle mile network, including those for potential joint builds and cost sharing with telecom carriers interested in developing or expanding network routes that are coincident with our middle mile network routes. Dark fiber leases or IRUs as you've heard us refer to them before, and quite importantly, software and technical support applications that are critically important to the proper development and operation of the network, and I'll speak more of those in a few minutes. With our partner Caltrans, we've been assisting with the development of bidding processes for the construction of the optical network on Caltrans right-of-way, as well as bidding processes for the provision of ILA or Inline Amplifier retransmission huts that are of critical importance to the operation of the network. We, of course, have spoken of these huts in previous and MMAC meetings and recall that these huts, for which there will be approximately 180 to 190 throughout this 10,000 mile network. The huts provide reamplification of the optical signals on the network. They enable network access and aggregate network access circuits through which the last mile service providers and other customers of the network are actually connected to it. And the huts also house the architecture of distributed switches and routers that are actually providing services to these customers so, the huts in many respects are really at the core of the lifeblood of the network. We can go to the next slide, please. As I've reported in previous meetings, Golden State Net continues its network development work regarding potential joint build opportunities. And Mark was also speaking of those as well as potential leases of existing dark fiber and conduit facilities that already exist. Those are an alternative to new build network construction. Golden State Net continues to make substantial progress on these fronts though it's clear that newly built network, either constructed by Caltrans or in the joint build opportunities mentioned, those will make up the significant majority of this middle mile network. We are also continuing to work closely with CDT to develop a business model for this network which will forecast

operating costs and projected revenue for the view towards the network being as self-sustaining as possible, especially in terms of long-term operating maintenance costs of the network. And if we can please go to the next slide. Golden State Net has really been increasing its focus in the last month to two-months on key software and application systems that are essential to developing and operating this network. I've mentioned a few of these in the last meeting, including a fiber management system, as well as systems for inventory, customer relationship management, and billing. But it's important to note that other systems will certainly become key as we move into the operational phase of the network, and these include certainly a system for network management which monitors and controls the network from a network operations center. Trouble ticketing, network event tracking and history, reporting, and the like....these are all critically important application systems to operate a high-quality middle mile network. The architecture and interoperating plan for these systems will ensure their integrity and in turn support the integrity and the service quality and reliability of the Middle Mile network itself. Quite a bit of activity in this software assessment and procurement area, and that work will be ongoing for quite some time as we move toward the operational phase. That concludes my presentation for Golden State Net, and if there are any questions, I'll be happy to address those.

Thank you, Mr. Naughtin. Alright, Secretary Tong.

Um...I feel like I'm the one asking all the questions in this meeting. What's up with that? What happened to us? Assembly member Wood is so quiet today. I do have...uh, thank you, Tony or Mr. Naughtin for that update. Very good to see a lot of progress being made, especially on joining with CDT on the whole open contracting and evaluation on the lease and joint build opportunity. A question on whether the similar approach is taken for all of the operation-related support systems such as you mentioned, I saw the last slide you had, had a bunch of software, and just you know, just various, you know...it sounds like also very, very much involved in operating the network after it's built. Just wanted to make sure or hear your thoughts about what is the opportunity for the industry to participate in an open manner in evaluating those solutions? Well, um...thanks for the question, Secretary Tong. Discussions up to this point with CDT envisions request for proposal type processes for all of these systems in order to make sure that we receive the best qualified application systems as well as the best economics and pricing for those systems. And um...you know, beyond that, operational components of the network....if I can just ask for clarification, are you referring to just software or services? The software specifically just things that are supporting. I just know that...you know, I know there's a lot of focus on getting the network up, but maintaining the network and making networks constantly monitor also require as much work, if not more, in order to sustain that well, and your listing is mostly software and all that, I just want to make sure those evaluation or selection also has an open bidding process.

Oh, yes, indeed, that...that is certainly our intention, and I know I wouldn't presume to speak for Mr. Monroe, but I know that is CDT's intentions to make that an open bidding process to ensure the best quality software and support based on the best pricing we can obtain for those systems. And uh, it's an interesting marketplace. There are some very commercially over headed types of systems like that. There are also...we would also have access to similar kinds

of systems that CENIC for example, has developed for itself. But we're not necessarily going to just use those systems. We want to make sure that these are best value and most sustainable for the long run. Also, with a vision towards the fact that you know someday Golden State Net and CENIC will not be involved as a third-party administrator. We have a...as you know, we have a five-year contract, so we have a view towards making sure that all of these systems are sustainable and state of the art well beyond just the next five years...well into the future of the existence of this network. Okay, thank you so much for that.

Thank you, Secretary. Thank you.

Assembly member Wood. Yes, I am here Secretary Tong. But um...uh, question...question regarding that last topic there as you talk about getting the...essentially getting the...you know, the best quality, and so on, are we...is this process require us to go with the lowest qualified bidder, or does quality and level of service and that sort of thing weigh into that as well? I know it just...lowest qualified bidder doesn't always do it on my end. And because this is, you know, reliability, track record...all of these things are critically important to keep this up. So, when these are, are we required in any way to go with those qualified bidder?

Not that I am aware of Assembly member Wood. And I think that's a great question. We the Golden State Net team, we are...we are bringing to this opportunity, our experience. We're leveraging that experience, and that experience quite honestly is probably more about quality of service than it is about just the lowest price. And um...it's been well established in the network operating field that very oftentimes, cheapest is certainly not the best. This is a very, very much data-driven and response type of activity in terms of supporting the production network. And very often, it's uh...um, the higher integrity systems and more fully capable systems, I would say, are not necessarily the lowest priced. That said, we're trying to strike a balance between those two things of course, in order to make this as cost-effective for the taxpayers of California as we can while keeping in mind the importance of the network integrity. And really the critical reliance the network integrity has on these software support systems starting with the network operations center. But even before you get to operations, and you know, we're very focused right now on the development of the network. So, for example, quite a bit of time over the last two and a half months has been spent on evaluating fiber management systems, which are systems that enable you to map and track and actually address problems that come up in the field as the networks being built, as you might imagine, it's a very dynamic process. Every location where fiber is being developed underground has unique attributes. And so, you have typical design drawings and that type of thing. But you encounter situations that were oftentimes not expected. So, you have to be dynamic. You have to be opportunistic. You have to have a good fiber management system that's accessible, not just from a special control point, but also from actual engineering supervisors in the field to enable the So, it's both a development function as far as good quality software support. And of course, once you get into network operations and production for the network...having the high integrity of that network is...those software systems are really in the production/operations sense...the lifeblood. So, we're not just focused on inexpensive, cheapest software. We want to get the best value we can, but the key attributes and capabilities of this system are really foremost in our approach to evaluating.

Assembly member Wood...I also have Mr. Monroe who can explain that...of the, that yeah...cost is important, but low-cost is not in the...always the ideal state for the State. So, Mark....maybe you can give, also an update to Mr. Woods on that particular question.

Yes, and it's a really good question. And I think one of the things I would want to just underline is the idea that...that's one of the, one of the benefits of having the Golden State Net team on and their industry expertise as well as some of our other partners, and in this project is to be able to make sure that when we go out to bid, we go out to competitive bids, we need to really make sure that we're not just saying, you know, getting to point A to point B, you know...we need to make sure we have the right specs in there, and really build the quality and the right metrics into what we're going on to bid for, so that we're making sure that um...you know, to everybody's point...we're putting together a quality system that's reliable for the entire state. I appreciate that. Thank you. I just. I've seen many times in projects where the lowest qualified bidder suddenly doesn't become the lowest qualified bidder because of change orders and all sorts of other things that happen along the way, so that emphasis on high quality contracting and is really, really, important, I think, in the long run, and ends up, oftentimes being more economical and a better stewards of taxpayer money. Well, and I just want to add, Assembly Member Wood, the Golden State Net team, our backgrounds respectively our DNA if you will, is very much around network quality of service. And quite honestly if I looked back in my career, I'm probably guilty of never buying the cheapest system I'm always focused on the best system in cooperation and in the collaboration with CDT we're trying to balance that objective, of course, with getting the best value. But your points are well made, because, we, as I've said before fully intend to make this a carrier-class network with high quality of services.

Thank you.

Thank you for the questions assembly member. Are there any other questions for Mr. Naughtin before we go to the next agenda item? I see none. Thank you, Mr. Naughtin. Thank you. We will go ahead and go to the California Public Utilities Commission update. And today we are lucky enough to have Jonathan Lakritz.

Thank you Chair Bailey-Crimmins. Good morning committee members I'm Jonathan Lakritz and I'm a manager in the California Public Utilities Commissions Communication division. I'll be providing a snapshot of commission's last mile broadband initiatives. Next slide please. This slide will look familiar to many of you as it provides a summary of the local agency technical assistance grant program. The CPUC is implementing the 50 million dollar grant program to provide local agencies and tribal entities with grants to up to 1 million dollars to help them plan for broadband infrastructure projects to serve their communities. A broad range of local agencies are eligible and grant funds can be used to form joint power authorities and co-ops. A wide range of activities are eligible for funding including environmental feasibility and engineering design studies, leads assessments and broadband plans. On our website we have

posted a grantee manual, a recorded webinar, and grant rules and the application process as well as the application. The map on the right is a snapshot of the applications received in August. Each county in which we have received a grant application from a county agency or a local agency has been highlighted. To summarize we have received 46 applications in August totaling 22.2 million dollars in request 29 counties, 13 cities, 3 joint power authorities and one local school district applied for technical assistance grants in August. As of Wednesday, we received an additional five applications totaling 1.5 million dollars in grant requests. The September window remains open until the end of the month. Applicants may apply any time during the process. We anticipate approving applications in October to local agencies and their partners, who may be attending this meeting. Please apply and don't hesitate to reach out with questions. Next slide, please. This slides provides a further update and a grant opportunities available to a number of the California Advanced Services Fund accounts. These grants fund activities to support the last mile broadband initiative. We had three grant opportunities open in July. Broadband adoption grants fund projects by public entities and community-based organization to promote digital literacy and broadband access. Grants to consortia help regional organizations develop broadband projects and complete the grant application projects. The third opportunity was for grants to build broadband networks offering free broadband service for residents of low-income communities. In total we've received 118 applications requesting nearly 30 million dollars. Since the time we've received the applications some of the adoption applications has since been revised or withdrawn. We received applications for 19 projects in the public housing facilities for a total of 1.4 million dollars. We received 99 applications for adoption activities for a total of 28.5 million dollars. These 99 applications could be summarized into the following. 88 applications for digital literacy projects which represent 22.8 million dollars. Six applications to fund call-center projects seeking a total of 5.2 million dollars and 5 applications to fund public broadband access seeking a total of half a million dollars. The adoption account applications include one statewide proposal and individual projects in 23 counties. The smallest request was for \$1,700 and largest for \$3.7 million to give you a little sense of the types of applications. Urban and regional consortia account grant window closed on July 15, and we are reviewing those requests. Fifteen applications were received proposing to serve fifty counties. Next slide, please. This slide is familiar to you all this slide provides a snapshot of the commission's activities to implement the last mile broadband initiative programs. In addition to the two key activities, I just discussed the Technical Assistance grants and the California Advanced Services Fund grants. There are two other key activities that will support deployment of last mile broadband. The Loan Loss Reserve Fund will enable public entities and nonprofits to secure financing for broadband infrastructure. We anticipate issuing a staff proposal for public comment shortly. In the Federal Funding Account, we'll award grants to fund last mile broadband infrastructure projects in every county. We are developing priority areas, and we'll be publicly releasing those areas prior to accepting applications. More information on these grant programs are available on the public web pages. There's links in the presentation. And we can provide contacts for each of the grant programs to those who email [statewidebroadband@cpuc.ca.gov](mailto:statewidebroadband@cpuc.ca.gov). This concludes my remarks thank you.

Thank you, Mr. Lakritz. Are there any questions for Mr. Lakritz about the grant programs? All right I see none, so we'll go ahead and move to public comment. Mr. Przybyla, if you please, provide public comment and provide us some guidelines for the public comment.

Yes, in order to ensure everyone who wishes to make public comment has the opportunity to do so, we respectfully request one person per entity and two minutes per person. The order of public comment will be online public comment submissions prior to the meeting zoom hands raised and phone hands raised via star nine. We have not received any comment submissions prior to our meeting, so we will start with public comments via Zoom. And we will unmute you, starting with Mr. Neufeld.

Hello, Philip Neufeld with the Fresno coalition for digital inclusion. Thank you for your ongoing work to deliver broadband to all California residents. The Middle Mile routes are now reaching more areas of need which is great. Mr. Neufeld, I think your mic might be having some issues if you can hear us. Why don't we go to the next public comment and then we can make sure if we can get a hold of Mr. Neufeld again we can bring it back. Yeah, we will absolutely follow up with Mr. Neufeld and as of now. Mr. Neufeld was the only oh here we go. We have a Patrick. Mr. Neufeld is back. Okay can you hear me. Yes, we can hear you now. Okay excellent and I appreciate that. Philip Neufeld with the Fresno coalition for a digital inclusion. Thank you all for your work. I was just saying the middle mile routes are now reaching more areas which is great, but we strongly support stretching middle mile routes to reach more areas with unserved populations in the central valley by leveraging existing fiber from carriers like CVIN. Following the announcement of a regional exchange in Fresno in the I think it was the July meeting. The Fresno coalition for digital inclusion mobilized the city of Fresno, Fresno County, and the regional EDC to engage in conversations with CENIC and Gold State. We continue to do so. We want the regional exchange to be built as soon as possible so our region can realize the economic benefits of a regional exchange so thank you. Regarding last mile we asked for continued focus on equity and impactful innovation by approving the accuracy of data tuning investment criteria to ensure improvements for those populations most in need. And supporting innovations and last mile technologies that fit specific context. The data maps currently underrepresent the underserved in urban areas of high poverty. Low income multi-dwelling complexes, and yes, rural areas of low density. We appreciate the improvements in the maps that CPUC has made. But I know that many of the broadband for all leadership also acknowledged the inaccuracy of the CPUC data when it comes to representing underserved populations. So, we ask the maps better reflect the actual speeds and adoption based upon on the ground data. For example, school districts in Fresno County have gathered over five million measurements of internet performance on student laptops. And the data shows over fifty percent of students are underserved, and over twenty percent are unserved. The data better represents students' actual lived experience. However, the CPUC data would suggest very few students are actually underserved in our market which isn't accurate. Such modern data gathering methods can better represent actual broadband availability, performance and adoption. Right now, the process to challenge the data doesn't yet allow for submission of such large data sets that we have, and ironically only allows for challenge by individuals who are often digitally disconnected. The grant rules also often require areas of service to be designated as underserved, thereby precluding these same areas that are currently underrepresented in terms of their populations. So better to require investment in areas of legal are required data improvements and investment criteria to reflect all underserved areas. We should also allow for innovations and last mile technologies that fit context like fiber to a multi-dwelling complex with

mesh wi-fi on the campus, and RF solutions, like what Fresno unified is doing with their build out of LTE network almost across two-thirds of the Fresno school district itself. Also, I want to acknowledge AB 2752 legislation that would require the CPUC to map last mile connections. It's a way to ensure California's historic investments better include all residents, including those currently underrepresented in areas of high poverty low-income dwelling complexes and in rural areas. Thank you again for your so important work to include all residents in California with broadband.

Thank you, Mr. Neufeld . We will now have you on mute, and Patrick Messac you're now allowed to...you can now unmute.

Hi! Good morning, everyone. My name is Patrick Messac. I'm the project director for Oakland Undivided, and Philip, I want to just echo your comments. I think they were...they were spot on. First, I just want to express my deep gratitude to the state, both the CDT and Caltrans for their ongoing engagement with the community of Oakland. As I've shared previously, this effort should serve as a national example of what it means not just to give BIPOC communities a seat at the table, but a voice, and for that we are deeply grateful. I want to make two brief comments. First on IRUs and the second on deployment timelines. The first pertains to IRUs. While we recognize the role of IRUs to leverage existing infrastructure. I hope that the state is mindful that IRUs don't provide an inferior resource to a build. With 37,000 unconnected households in Oakland, a 288-count fiber build is a future-proof resource with the potential to transform connectivity for our tens of thousands of unconnected residents. However, a four-strand IRU will do little to change the status quo. The second is on the deployment timeline. I appreciate the complexity of deploying ten thousand miles of infrastructure across the State as complex and diverse as California. As one of three urban areas selected for initial projects. Oakland wants to reiterate our commitment to working alongside the State to solve the unique challenges of deploying infrastructure in communities with a historic and living legacy of government and corporate divestment. We recognize joint build segments timelines are more fixed however for our standalone projects we hope to work together to leverage the power of our coalition to expedite deployment. Just last week we met with an innovative last-mile wireless company that has long expressed interest in coming to Oakland. They can offer two gig symmetrical speeds that would be free with ACP and their business model is deploying first in the most heavily unconnected communities. However, they could only offer this service if they can tap into affordable open access infrastructure a resource Oaklands flatlands do not have. When we inform them that our middle mile infrastructure could be ready potentially at the end of 2026 they informed us that they would likely be moving on to other cities. So again, we stand here to work alongside you. We recognize this is a complex challenge where you're bringing in so many stakeholders and we're so grateful for your ongoing involvement. Just know you have a partner here in Oakland. Thank you for your commitment to equity, authentic community engagement, and for your work to make broadband connections not just access the twenty first century civil right. Thank you.

Thank you, Patrick. You are now muted. And now, Frank Gornick, you have access to unmute.

Good morning. Thank you for these updates. They're very helpful. I'm with the San Joaquin Valley Regional Broadband Consortium, and I want to first to give you an update. We just completed our RFQPP process, and we were...uh, ecstatic about having nineteen responses to this process to serve the San Joaquin Valley. Of those eighteen, excuse me...of those eighteen submissions, twelve of them were ISPs or risks, then six of them were community-based organizations stretching from San Marquis and all the way down to Kern County. I also want to echo my colleague's comments, Phil with respect to middle mile. As I recall, when we kicked off this project, one of the things that was paramount in talking about the legislation was that on the first eighteen projects you wanted these projects to allow you to learn things about deploying the rest of the broadband throughout the State of California. So, I would encourage you, as our colleagues have already expressed...the middle mile is crucial. We're learning more and more about how to...how to begin to bring high-speed broadband by working with existing networks to expand that middle mile, and by allowing the maximum flexibility and innovation in these first 18 projects, so that we can learn from them with the new technologies that are being presented to us on a weekly basis, that we might be able to expedite this process throughout the State, and we have a unique opportunity to do that. These are...these first eighteen projects are kind of the skunk quirks, if you will, for the...for the State, and this would be a great opportunity for us and for certain regions if they're ready to...to...for you to allow maximum flexibility and innovation to make this occur. So, thank you again for your great work and appreciate these updates.

Thank you, Frank Gornick. Chair Bailey-Crimmins, we do not have any more hands raised at this time.

Alright, thank you. Thank you for the public comment. Excuse me. I'd like to open it up to the committee members that would like to make a final closing statement before we close today's session. Alright. I see none. So go ahead...um, thank you. Thank you committee members, presenters, and attendees. This was a very informative presentation today, and we appreciate everyone taking their time to participate and make continual progress to making broadband for all the priority for State of California. Our next meeting is Friday, October 21<sup>st</sup> of 2022 from 10 – 11:30, and with that we'll adjourn this meeting. Thank you and have a wonderful weekend. Thank you.