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Good afternoon, everyone. thank you so much for, for joining today.

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Good afternoon, everyone. Thank you very much for joining today, we're going to wait a few more minutes before starting the webinar.

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So let's just wait another minute or two for people to trickle in.

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Thanks for your patience.

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Thanks again everyone for for joining in and for being patient we're just getting loaded up here and going to give it another minute or so for people to join in and I will get going.

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Alright, so I think we'll we'll get started. Good afternoon everyone and thank you again for for all joining this webinar. My name is Jacob vocab each and I'm a senior advisor at the barrier or Quality Management District.

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Today's webinar is titled addressing public needs by rethinking buildings, and this is part of the air districts building decarbonisation webinar series The first of the series.

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And so we're really excited about that. And we're going to be hosting this series over the coming months.

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We go to the next slide please.

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So just a couple of slides about the barrier Quality Management District before getting to today's agenda and introduction of our speakers for folks that don't know the barrier Quality Management District is the air quality regulator for the nine counties

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San Francisco Bay Area. Our goal has traditionally been to achieve and maintain state and national air quality standards. The school continues, and is complemented by newer objectives and priorities to help address the climate crisis, and to help address

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adverse public health impacts in our communities. And so specifically we strive to eliminate the public health disparities among various communities as a result of poor air quality.

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And likewise, we're committed to reducing the barriers greenhouse gas emissions. To 80% below 1990 levels by 2015.

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So this brings us to buildings and naturally a segue into today's discussion and presentation. And so it's quite a fascinating intersection of climate, your quality and public health.

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And so, we recognize that buildings make up about 10% of the various greenhouse gas emissions. In addition, from a quality perspective, nitrogen dioxide emissions from buildings in the Bay Area, or actually slightly higher than all passenger vehicles

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the Bay Area. And we know that there are detrimental public health impacts associated with breathing air with high concentration of Knox, but the point here is that we can attribute these emissions to combustion of natural gas in our buildings and specifically,

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natural gas combustion for space eating water heating, cooking, and close drying.

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And we know that we can reduce these emissions by improving the energy efficiency of our buildings by relying more on renewable energy and electrifying our appliances in our buildings.

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And so the air district has partnered with various organizations to further building decarbonisation work throughout the region. We worked with the building decarbonisation coalition to build a clean building compass with tools for local governments and

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other organizations, and we have a link at the end of this presentation and we'll also send that around via chat and follow up emails.

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And we've also funded or partially funded the work of organizations working on building decarbonisation efforts with a focus on reducing climate pollutants air pollution and improving public health.

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And so our presenters today are from to such organizations, we're thankful for them taking the time to be with us today. And I'll turn it over to my colleague, Lizzie, to go through the agenda and to provide introductions.

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Yeah Hello everybody, thank you for being here. My name is Lizzie IC they pronounce, and I'm currently a summer intern with their district.

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So I'm very excited to be here and I'm excited to go through today's agenda will have Damien Hartman go first to talk about the Contra Costa County asthma initiative project.

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Then we're going to have Boris and Douglas, talk about hearts, a two year initiative, followed by a question and answer at the end. So, we ask that you.

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You're free to use the chat to chat either me or Jacob, Any questions that may come up during the presentations or during the question and answer session.

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Please remember to stay muted throughout both presentations. This meeting is being recorded. And if you need closed captioning that option should be available at the bottom of your screens.

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So with that I think I'll just introduce him.

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So David Hartman is a senior planner with the Contra Costa County Department of Conservation and development. He earned his BS degree in community and regional development from UC Davis, in 2006, and shortly thereafter began his career and land use planning

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with the county in 2009 he turned his key transition into the counties conservation section design and implement energy efficiency programs, and was instrumental in obtaining funding to develop the country's the county's first Climate Action Plan.

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Since September, 2013, Damien has been the county representative for the Bay Area Regional energy network and local government partnership, East Bay energy watch

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great day thanks for the thanks for the intro, again, like everyone said my name is David Hartman excited to be here. Happy Friday afternoon, it's always nice to get people on a Friday afternoon for a presentation I'll be talking about the Contra Costa

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County.

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As the initiative project. Alright, next slide.

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Alright, so a little bit of an overview for today's agenda so you may not be super familiar with Contra Costa County so I'm just going to have a few quick slides on the overview of kind of our demographics what things look like for us how that relates

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to this particular project, and then I'll talk about how we started working with connecting health and energy efficiency resources, and then how we got started with our contract constant as an initiative project.

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And, and then how we started getting technical assistance funding, and then how that actually turned into grants for us to actually implement our program.

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Alright, so some just basic demographics these demographics are probably a couple of years old but it's a rough, rough estimate of what if you're not familiar with Contra Costa County.

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This is kind of what's going on, we do have quite a few oil refineries so we have a lot of point source emissions from our county that are in particular, create issues with asthma and high asthma rates in our county, particularly toward as well to our

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disadvantaged communities. Next slide.

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All right, and then this is a really great map that just kind of tells you where some of those list of polluters are in our, in our county and it's there's quite a few These are our top ones and then I'll show you the next slide, which is our asthma rates

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that you'll see a correlation there. Next slide. And so, so you'll see that.

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We do have a high prevalence of asthma in our county, particularly in our disadvantaged communities and as you can see along our northern waterfront area, and in the Richmond, and the North Richmond area.

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So, asthma is, is a concern for the health department has been, we have very high emergency rates for people going to you know with with asthma conditions of asthma.

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So, I started working with the county health department to try to see how we can address asthma within the existing built environment and that's kind of what got this project started, and next slide.

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So yeah, and here's my segue connecting health and energy efficiency. You know, one of the unique things about our county is that we actually have a county health, with not only do we have a county health department, but we actually have its own health

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plan, and that's unique not a lot of counties have their actual own health plan that they operate that's a government health plan.

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This resource has been really helpful for for myself, in terms of working on our projects because it's, it's helped us get data that we normally wouldn't have like, we actually know what clients have I asthma rates we know where they live and how that's

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all connected.

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So we have, like, like this slide says we have 45 public health nurses.

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They do home visits for people generally who are low income or are really needing, you know, assistance where they're where they have to nurses go out to the home.

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And, you know, so we see that as an opportunity on the energy efficiency side well what are things that we can do in the home. And our first connection to that was our lowing state and federal weatherization program so, like, we have people who are low

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income who are on a fixed income, that, you know, could easily get improvements done to their home for those that are also, you know, that have high asthma rates that are tied to that.

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And can we show better health outcomes as a result of making energy or Home Improvements inside the building, or other energy efficiency programs which is what my primary role is is managing the regional energy network funding the county receives to implement

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their range of programs that they offer as well.

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So, leveraging that the resources and knowledge I have with that and seeing how that can connect with this program has been very helpful and then we also connect directly with our Community Choice aggregator and CCE as they did something similar a similar

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program on health in Marin County, but it was more related to elderly people on spill and fall, and not not related to ask my like this project it's, it's exciting.

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So connecting medically vulnerable residents with energy efficiency. So before I got started with this actual project, my, my colleague, my colleagues or glass from the weatherization program runs the low income weatherization program.

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And Michael Kent from the health department got together to connect weatherization services with nurses so we actually integrated questions and referral questions for the public health nurses specific energy home related questions that would then allow

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us to refer clients to answer the questions a certain way, they would get referrals to get weatherization weatherization services so that was our first thing that we did.

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And that, and then a study was conducted on that, through their regional asthma management and prevention program which is called ramp funded by the state.

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So they wrote a report with some findings on that so that was our first assessment of it and we found that there are some, there are health benefits to doing energy efficiency improvements in the home and it was showing improvement in an asthma rates.

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So this is just a quick diagram that kind of shows how it worked with between the public health nurse medically vulnerable client, and how we coordinate with getting information to, you know, refer them to the low income weatherization program or the

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or our state, low income weatherization program so this just is a diagram explains kind of how it's done our health department actually helped them fill out the application, often, so there was a lot of health care which is different and new.

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And that carries over into the actual Contra Costa admonition which we'll talk more about. Next slide.

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All right so green and healthy homes initiative. So, we were awarded funding. Well, actually technical assistance I shouldn't say funding, so it was free technical assistance to develop a business plan to expand services, so that that business plan basically

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said, you know, here's what we see in terms of like an asthma program, linking weatherization programs and health together to provide comprehensive services to people who can get asthma services in their home like cleaning up their home and then also

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building energy efficiency services. So we do have a business plan that that we have completed for that. And then we also got a phase two technical assistance grant that we applied for which was primarily to research the feasibility of integrating the

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project into this state health care billing system but what ended up being them helping us get more money to get actual money to implement this program.

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And that actually that's that's that last bullet there where we actually received money from their Quality Management District in the state.

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Approximately around \$600,000 right now is what we've got. We've received 500 from the state and around 100,000 from Backman on that. Next slide.

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Alright, so here's this hotspot analysis of the Contra Costa health plan. This is where the health and can be helpful can tell us exactly where there's high asthma rates.

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So this is, this is the by zip code, and then we can actually target our residents, specifically related to high asthma. Next slide.

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And then this is a kind of an outline of this of kind of all the partners involved in getting this project up off the ground and how it all works. So we actually hired a health care provider person to actually go in to the home or at that point of contact

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directly with somebody who has a high asthma rate. So our referrals come directly from, from the health system to and to get asthma assessments and environmental assessment, so we'll, we'll dress their asthma issue in the home so an assessment with a

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care provider and an energy efficiency specialist goes in, and we partnered with the Association of energy affordability, for that part on the energy assessment side, and then we have the county weatherization program when they qualify for that so we

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kind of bring all those resources together. When we're figuring out what needs needs to happen and we do trigger remediation.

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And then we're also we've got some funding to monitor indoor air quality through that, and the air district as well as part of this program. Next slide.

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And this is a very complex ship, like, you know, we have how we do the patient referral take intake and how it's all moves around and, and this is all behind the scenes so people don't see you know how complicated this is and how he thought it through.

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But this is this is a general idea of how we've mapped out how we're providing services.

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And that is the end of my, my presentation but one thing I like to add is this program is really interesting so like you have, you know, a doctor say hey you have high asthma you've been going to the emergency room a lot right.

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Hey, there's this program, you know, call the contract cost as an initiative, then they can call this person, they can get an appointment or they get referred directly to our, our, our health services worker who actually will call them directly and say

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hey we heard you you know you have high asthma.

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Would you be interested in this program and to look at your home can we provide you some education materials about an improved indoor air quality or home how to improve the health inside your home, so that your asthma is better and then we have energy

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efficiency services where they'll come in and they do at no cost, all these improvements to the, to the home that are needed to that would

improve indoor air quality and hopefully improve their asthma, so will be.

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So we're just, we have clients, now we're getting about

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around 10 clients a week right now. Last I checked so we're in full implementation. But there are a lot of partners involved and how the money flows with the, with the state funding and with it the air district funding, and how all the contracts are managed

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but yeah that's kind of my role is to provide managed to contract with the Association for energy affordability, to provide the In Home Energy Efficiency retrofits that are made, that would be needed to improve the home, so I'll leave it at that.

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And that, Thank you for your time and appreciate everyone coming out on a Friday afternoon to hear, hear my spiel.

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Yay, thank you Damian for that presentation.

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If you have any questions, feel free to jot them down save them will have a question and answer session at the end, or send them my way in the chat.

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And with that will be moving on to the second presentation of this afternoon.

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And I'll introduce our two speakers, Boris, back in, he joined her in 2017 as a management and Program Analyst to help manage and grow hearts housing programs, and is currently the program manager.

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Worse overseas hearts homebuyer Assistance Program, as well as the ladder at you program. He also works in the management, and disbursement of hearts development funds and in the development of long range programs is a background in real estate law Program

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management has worked in residential and commercial real estate, including for a fortune 500 company. He holds a BS from the University of California Berkeley, in a JD from Brooklyn law school and Douglas colors Barry is a principal consultant on hearts

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at your project. Doug has spent the better part of his career on transportation and environmental issues, including ways that individuals and groups can effectuate positive change to reduce greenhouse gases.

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He received his PhD in Urban and Regional Planning from the University of Michigan, and also holds a master's in urban planning from UCLA, his master's thesis examines innovative parking policies and old Pasadena his doctoral dissertation look closely

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at the attributes and actions that can make civil society organizations successful in Sub Saharan Africa is transport sector. He has worked as a transportation environmental planner for regional county and local agencies in the Bay Area.

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He is currently a principal at solutions 2015, which provides consulting services in the areas of air quality, climate change, and parking to clients in the US, Europe and Sub Saharan Africa.

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Thank you, Lizzie, I guess, be another BIOS all shorter safe people some time.

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That's for next time was a sunrise.

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So thank you, everyone. Thanks to their districts for having us here. My name is force vacuum I am with heart.

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And I have done here, who aren't used as an environmental and sustainability consultant for the bladder product program.

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So for those that might not be aware of who heart is we. It's an acronym stands for the housing endowment, and regional trust that San Mateo County. We were found in thousand three.

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We are a nonprofit within San Mateo County, that was created as a partnership between the all 20 cities of the county the county itself, and the nonprofit and business communities to address the critical housing needs in San Mateo County.

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So we're kind of a variety of things where JPA of the cities in the county where Housing Trust and we also know the nonprofit.

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So quickly What does hard do well main thing we do is we provide loans for multifamily development, or we have for affordable workforce housing. We also have a first time homebuyer program as a downpayment assistance program within San Mateo County, all

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of these programs are. But we also have gladder Is there a new program, which can be used statewide. So that's kind of unique about one of our programs.

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And we also provide assistance to cities school districts faith based institutions to help them develop affordable, or workforce housing.

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So what is bladder for everyone who is here to hear about that. awesome acronym stands for the green and livable accessory dwelling human resource. And it was created with funding from the air district.

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That's how we created it, in order to make it easier and more affordable to build green at us.

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We worked with a local Architect Firm through an RFP process we had a specialized ad hoc committee and thorough public participation process in order to get to where we are.

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and there's gonna be a lot kind of a lot so I'm going to kind of go roughly a little fast but obviously if anyone has any questions will answer them here and afterwards.

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So overall, the tools that we're providing through gladder is free at designs there in the form of construction documents and the designs themselves are green, all electric detached at us.

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And I'll get into a little bit more but there in the public domain that can be downloaded by anyone to use anywhere for free, through our website.

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In order to give them more incentive for people to use for now within San Mateo County, we are working with the local jurisdictions to streamline it by having reviewed and that will then incentivize the residents to use the cloud or units over maybe non

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electric or not a sustainable designs.

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We also created a very thorough. edu Handbook, and unlike other handbooks This one is a green at you Handbook, and it describes a lot of sustainable sustainable features building materials and other ways people can build or even adapt to their current

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at you, to be more sustainable. I'll get into more of that as well later.

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Next, a quick overview of the designs, we created for templates. Each is going to have to architectural styles, the silo you're showcasing here as the modern style.

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They are customizable, obviously because a lot of variety areas are different we wanted them to be used in a variety of ways. So we try to make them as more of a template as possible for people to be able to utilize to their scenario.

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You can use any architect or contractor you want. Once again we have the public domain and we put these out on the architecture firm retains ownership but we have a system created where we have a professional license to put it out there.

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So, but anyone can download them, you don't have to go to the architecture firm that created these you can use anybody you want anywhere you want.

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And as I mentioned, we met all current California building codes including title 24 so they can be used anywhere in the state.

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But our firm which is open scope studio which has worked with Sam Cisco and Oakland and add new policy.

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They are looking at the future codes as well. So then these don't become obsolete and a couple of years.

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Next, I'm going to do a quick. This is a preview. This is the schematic plans for each of this designs.

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Once again that for construction documents are available on our website in PDF or CAD format. This is the link to go through that. If you're curious to view them, you, you can.

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There's a liability waiver so if you are serious about maybe using them.

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You can fill out your information, but if you're just kind of wanting to just preview for yourself, you can just put test so we can differentiate between the real submissions and not as we keep track of our usage rates.

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This is a quick overview of the results so far, we only announced the program. A couple of months ago.

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And this is as of last week without 91 downloads.

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73 are within San Mateo County obviously we use a lot of more San Mateo County, organizations to help publicize it. So for those that want to publicize it in your own areas we can definitely provide a materials and feel free to do so.

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As you can see it spread out road city has a lot of inquiries. Of those, but if you look at other. We have had inquiries from others, all the way to San Diego and Florida Missouri and Tennessee have them.

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So definitely word moves fast.

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And next, and then the handbook itself.

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We created. Once again it was to partner with the gladder designs themselves but they can be utilized, even if the people use their own designs.

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It can be used to inspire them to make a sustainable on the screen as they'd like obviously cost goes into that we provide a lot of information and resources as well as for other organizations that have a lot of add or green resources.

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We made this entirely digital originally was going to be the 10th but obviously with the pandemic we were not going to have in person meetings, so it actually want to be kind of a nice little surprise to have entirely digital because we can cross reference

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and connect them directly to other resources for people. Plus, updating as we go along the future, once there's new information. And it is also a downloadable company for free from our website, you don't have to fill out any liability waiver for that.

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You can just view it and go, and I'm going to hand it off to Doug I know there's a very quick overview of the program but has some very good sustainability information in there and then I'll wrap up afterwards, about some of the interconnect and benefits

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Thanks. First, and thank you to Jacob and Lizzie at their district for opening up this discussion. So as an overview to the environmental benefits gliders focus has been on green building, green building and decarbonised homes that and that sets it apart

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from earlier previewed at you programs, those earlier programs, such as in Santa Cruz or in Fort Bragg were also outside the barrier had relatively inflexible designs aesthetically speaking, and we're old there by not consistent with today's building

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codes entitled 24 gladder units are consistent and intended to be relatively long Linda's porous mentioned gladder also emphasizes livability principles, such as universal design to make these green or units useful and desirable to the broader public.

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So building at us in these built back communities throughout the Bay Area can not only improve housing choices, it can cut down on these long commutes, and fuel use.

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So if people are walking, biking or taking transit to the preferred destinations, it can improve livability and have environmental benefits, the design process for gladder was happening concurrently with wildfires heat waves and drought so gladder units

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and the handbook, provide ideas and solutions that improve living in a interviews during these climate related events. Next slide please.

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Gladly and it's really stand out by eliminating, natural gas, and designing an all electric AB you had naysayers.

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But there were significant benefits we saw in doing so, including reducing greenhouse gases and criteria pollutants and improving indoor air quality by reducing combustion inside the home gladder incorporates or encourages high efficiency and appliances

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and design features that exceed title 24 standards.

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design features that exceed title 24 standards. Green materials are also important for gladder units. For example, the design specify low carbon concrete, which has basically the same cost and standard standard concrete per cubic yard.

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That reduces one time emissions.

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Other building supplies are discussed in the handbook so employers homeowners Excuse me, can get the basic information and do their own research on how green materials are both useful in English, how green material emissions are reduced in the initial

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production maintenance and end of life, and whether they off guess. Next slide please.

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So how do gladder units compared to the standard all electric unit.

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Well, the green features that improved gladder designs beyond title 24 include enhanced insulation, high performance windows, higher performance when does heat pump water heaters air source heat pumps.

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And these key features cut emissions by about half on average relative to the standard design used entitled 24 modeling.

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An average reduction of 0.21 metric tons per unit is achieved, which is comparable to about 24 gallons of gasoline saved or the carbon sequester by planting for Tracy links which, you know, given California is relatively clean energy mix makes it seem

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like less impressive, but that doesn't capture what is likely to be happening on the ground.

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So the comparing all electric gladder designs to 80s with natural gas is probably a fair comparison, because many people just offer gas by

default, and the literature state switching out natural gas or electricity can directly reduce households carbon

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footprint by about two tons of co2 annually. It also reduces fugitive emissions from the methane leaking into the air either behind or in front of the meter.

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Next slide please.

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Optional design features, high efficiency appliances are also encouraged and can further reduce greenhouse gases, building more at us instead of apartments or even single family homes, which have been grown over the years, can significantly reduce the

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energy use and associated greenhouse gases of smaller households who can find at used to live in.

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So in summary relative to a mixed fuel a few gladder units can reduce greenhouse gases by 2.3 metric tons per year.

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This goes up even more relative to larger unit alternatives. And assuming that 20 jurisdictions in San Mateo County can between them find 30 homeowners per year who will build a gladder unit, you know one to two units jurisdiction.

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We could be reducing emissions by roughly 1000 tons per year for 300 units.

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That is the equivalent of 112,000 gallons and gallons of gas per year or 16,500 tree Zealand seedlings planted. So hopefully, other jurisdictions in the Bay Area California beyond will see homeowners pull permits for gladder units

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as well.

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So while greenhouse gases were not the primary target, eliminating natural gas also reduces criteria pollutants. Next slide please.

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And talk to Commission's that pollute the indoor air environment. So formaldehyde is one of those that pollute the indoor air environment when you burn natural gas.

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Next slide please.

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And we are seeing your rapid changes in our local climate, designing bladder to exceed title 24 to handle these climate related events and warmer weather is key to occupants comfort and it keeps their electricity use down and energy bills low.

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So due to cost and context, not all measures are included in the current gladder designs. However, the handbook does discuss the enhancements, such as fire hardening water saving measures, although they do little to reduce greenhouse gases are important

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to the barriers future, and anybody who invest in a garden as well.

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Many measures are discussed in the handbook so that droughts have less of an impact on gladder occupants. And I'm going to hand it back to Boris to conclude.

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Thanks, Doug.

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Yeah, as a summary.

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The main reason we created this was because we have seen that a lot of people who want to build at us, they're not able to because of the high upfront cost of creating the designs, let alone, you know, once we get later on to the construction part with

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equity in the home. And so we need that for people that can't afford it.

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You know, that's not what this program is for those build customizable ad units.

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So we were looking at people that we want to remove that early obstacle, and we ran the numbers it was about 10 to \$30,000 of savings and creating a few designs and then plus, obviously months of time for people who desperately need housing, either for

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themselves, or for their family members or renting out for income. So, in creating these these aren't just allowing people who normally would not be able to build a to us but we, you know, they're going to be green in the US as well.

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Additionally, you know, once you build at us, it creates a lot of more housing options which makes other levels of housing more affordable at all income levels, and obviously we talked about it it's very cost effective way to add housing.

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It's about half the price of building within multifamily units.

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In addition to obviously single family zoning is the only way to add housing iterating us. And then you know for people that are looking to make things more affordable have the ability sustainability ways, the cost and this would save up front, we encourage

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The cost of this would save up front, we encourage and allow people to learn information about how they can then put that towards more sustainable features which normally would be too cost prohibitive to afford with the 10 to \$30,000 designs.

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And so, not only will people have the savings but then they can put that towards a lot of features that they normally would not be able to afford. And then, obviously, if you as Doug mentioned also goes to traffic with allowing people to live closer to

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where they work instead of moving accounting or two counties away and community and constantly.

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You know, and obviously a lot of environmental benefits and Doug talked about as well, reducing greenhouse gases, they'll be cost effective long term for residents.

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And then obviously conserving natural resources, with the building materials as well. So we definitely are very excited about this program it's kind of a one of a kind, in that sense, and we hope that others either, you know, utilize similarly programs

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or combined with bladder units, because of the funding from their district which was amazing, we were able to build this but we didn't have as much funding to make them wear them for designs, at the moment and with more funding available or if others

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to add their own designs to gladder. We would welcome that as well. That way we can provide the public even more. I know in the future we're looking at modular can make it any more affordable garage conversions and things like that, that I know a lot

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of people are looking for, for their scenarios.

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And I think that is it. Thank you. If you have any questions, obviously we're going to answer them now but you can always email me and I can always direct to Doug for more specific questions on the environmental numbers.

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Thank you.

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Great. So thanks for those those presentations really, really fascinating and there's a lot lot there.

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I think for the the question and discussion portion, if folks want to either raise their hand and then we'll we'll call on on folks just so it's a little bit more manageable.

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Or if you want to send via chat we can we can read those out loud to the, to the presenters

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and not seeing any hands go up I think all perhaps the privilege of maybe asking that the first questions and releasing the floodwaters for lack of a better term, but going back to Damien and your presentation I think earlier up front, you mentioned health

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plans and how that's quite unique to the Contra Costa County and that you actually have one. And I was just that caught me a little off guard and you know why it is that other jurisdictions.

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Haven't adopted one or what the reason is for Contra Costa County. adopting a health plan in the first place.

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That's a great question actually

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mean the audio, the audio is a bit choppy. Um Can you can you hear us. Okay. Yeah. Can you hear me okay. It's pretty choppy.

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Let's see. Can you can you try again.

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Okay. Is that better. Yeah. Alright cool sorry about that everyone.

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So yeah your question related to the county health plan so yeah county county is one of the unique, I think it may be the only County, and I don't know for sure, but it's probably one of the few, and the entire state that has its own accounting county

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Plan, which means you know most people go to Kaiser, or they go to health, at least in the Bay Area here, you know there's different, different.

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Our Blue Shield those kinds of things it's private right Well, in contrast, you can actually sign up.

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You know they have their own County Health plants have medical patients can actually are actually covered by Contra Costa health plan which is unique.

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They may not be covered by Kaiser some other in private entity so that is unique in in our county and we were the first ones to establish it in the, in the 1970s I believe in the late 1970s so that does make our county a little bit more unique, I actually

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think if if we're off topic here I actually think that's why we were able to get more covert vaccines out roll out in a unique manner for our for our Bay Area and our county was because of that.

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So it's, it's an interesting scenario there but it has benefited our program substantially because I can, we've mapped out our high asthma rates from that health plan, and then work correlating that with with with Point Source admissions.

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And where are multifamily buildings are.

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And my plan is to like leverage that information for marketing, a lot of my energy efficiency programs in a unique way to kind of get more program, get, get building owners take responsibility for the situation those particular buildings and figure out

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how we can get them resources is kind of my long term plan separate from even this project. So, what that what this project has landed is more opportunities to figure out how to improve the building.

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The buildings that that we're realizing are causing asthma for whatever reason.

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Great, thank you for that Damien. And so again if folks have questions, please send them via chat to me or Lizzie, or raise your hand and and will call on you.

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We did receive a question. This one is for.

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Boris, or, or Doug.

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The question is, is there an estimate for the total cost to build an Edu in San Mateo County.

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I'll take that one obviously depends on the type of ad unit size modular versus regular.

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But what we've been seeing is two to \$300,000 is the average cost.

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If you can get it for less than 200, you know, that's that's amazing.

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And then, obviously, if you, I don't know, you know, building materials have increased since then, by comparison to building a multifamily unit that some around 787 or 50,000, a unit, and that's, you know, obviously, not even counting the increases in

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building materials now.

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It's a huge difference. But if you go modular, you know I know people promise, anywhere from 80 to 150,000, but generally on a regular at you. It's about 200.

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Great and just a follow up on that I mean I think during your presentation you mentioned cost savings right and that's relative, I'm assuming the cost savings are as a result of the energy consumption, and the natural gas savings is that right or was

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there a different reason for the cost savings. That is a cost savings you get from just being handed a designs up front, which is anywhere about 10 to \$30,000.

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And then obviously that's cost savings long term, you can take that those savings and apply them to for the green features that you can put in or

more sustainable building materials, and then obviously long term you save and they pay those off as everyone

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here probably knows, based on either the appliances or the types of infrastructure that you have.

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So, kind of a front end back end.

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Great, thank you.

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I mean I can keep going, unless folks want to.

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Don't Don't be shy by by any stretch of the imagination please just raise your hand and we'll call on you.

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So another question, I guess for Boris and dog is just in terms of the tracking of this you had a slide that showed I think it was close to 100 have already been downloaded and I understand correctly, it's only been available for a few months.

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I'm curious if you can speak a little bit about um you know tracking the next step. So, are you able to track how many of these units are actually being permitted or some embedded feature and tracking the default for many agencies throughout the region

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or even beyond.

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And then, you know, naturally construction how many are actually constructed Is there a tracking feature.

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So, obviously, once you put something in the public domain. It's very hard to keep track of all the uses based on, I know a lot of cities that we worked with, and talk to had a lot of main question was, you know, who has liability to make sure that they're

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protected, especially when a peer review them.

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So the way that we kind of played around with a lot of different options we initially were going to have people go directly to the cities that way they don't have to get involved with hearts they can just go there the city goes hey great, you know, here's

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some options here's some broader units.

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But that would have been much harder to keep track, especially if people go to a city that has never heard of, you know, you got it and they will suddenly show up at the units.

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So everything wants to do us, and just to download them just so we have them and when you do the liability waiver.

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You have an address that you put in. So the best way that we're keeping track is we're going to do sporadic six months a year.

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Questions to those cities, to see if any units have been built because obviously some take these December disco sevens go might not be aware, all of a sudden you see gladder units, you're not going to separately keep track of them from a regular ad unit

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especially for like San Jose, we've talked about joining their one stop shop there at ally programs Well, they have a lot, you know. So the way that we're doing is through that.

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And once again yeah there's a lot of interest and a lot of people have gone, we don't even I didn't put up there Matthew log on to the website to, you know, just to learn about this but maybe aren't ready to download the designs themselves yet, because

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obviously we know it's kind of a process for people based on the public interest from the open houses that we helped before the pandemic we got to open up for open houses.

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And we have, you know, 6200 people per open house, asking Hey Are there times where your designs ready. So there's a lot of interesting people who have been waiting for and heard about this and obviously we know there's going to be long term build of

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that as well but the best way is is is by keeping track, and then just asking directly themselves obviously certain cities want to keep track of themselves that saves us some some time, but we know how busy everyone is.

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And then obviously Yeah, the 91 or 2000 majority San Mateo County, once we kind of help get the word out and other counties. I imagine that blowing up a lot more.

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Don't worry for the cities, those are listening, a lot of them were worried that especially with the new laws and a lot of the kind of ministry or review they're worried that they would get flooded with applications and we said don't worry.

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It takes time for people build you're not going to get 100 applications in the first month and feel overwhelmed, so there's no worry about making the word, and then you'll get you know too much work at once, but we do kind of envision once someone builds

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it, then they spread by word of mouth to somebody else or things like that that's usually how more we'll find out.

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Hopefully that answers all the questions. Yeah, no, no thank you and I think it's, um, you know again having those resources, pretty much available for free for people to use whether it's the, the designs or the, the handbook.

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I think it's fantastic the links were included in the presentation. I'll try to multitask and hopefully navigate zoom without crashing it and paste it into the chat for everyone to access.

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And as I mentioned earlier on will send a follow up email with all the links and relevant information because there's quite a lot here.

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Um, so let me see if I can do this, I can do that, I can, I can pass it.

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Great.

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Just kind of surveying the chats, the

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alley I was able to send to you I was able to send everybody so I'll just do it to everyone.

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Okay.

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So I just sent that to everyone, hopefully, folks received it.

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Let's see, there was one other question actually for that I had for the dominating mode before here but I guess I am for Douglas and Boris, in terms of the, the compliance with Title 24.

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So, I mean that's that's fantastic it's applicable everywhere throughout the state. Can you speak a little about reach codes and, and how, how to navigate those with these designs, you have to do a little bit more due diligence if your jurisdiction has

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reached code that goes above and beyond title 24 or is that just not applicable in this case,

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I'm not sure you want to take that one.

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But I think from, we always recommend and and our handbook throughout throughout our website we always say talk to it. You can use it yourself but talk to talk to your city, because when you look at, for instance, our peer review process.

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Every city that we talked to has slightly different, obviously guidelines and regulations, and we kind of, you know, working with the city, we have a list of major ones that we want the residents to be aware of, but we always say throughout, talk to your

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city first find out because it's not even just the reach codes it's. Oh, you have a tree in your backyard and you can't remove that or you know you have other lot of wildlife and and other sort of regulations that certain cities have flood zones is Palo

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Alto.

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So there's. We always say please first step, talk to your city because there's obviously going to be something that you might even need to buy on top of that, as rich codes now these are all electric green.

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So, we haven't heard of any issue on that end, it's mostly city specific based on other factors.

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We've been kind of very upfront with cities, early on.

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And that has not been one of the

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kind of possible issues that the cities have brought up.

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Don't feel free to add on anything like yeah no I mean I just, I concur with what you're saying and the architects did hire their own energy modeler to run various options and.

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And so the gladder units are trying to maintain a balance between upfront costs.

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And these additional features, and if one jurisdiction requires a feature that yet. Other in San Mateo County 19 don't.

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It was, it'd be kind of difficult to model, all these different options and different designs, but because the designs can be modified relatively easily and affordably.

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It shouldn't pose a significant barrier to people who want to take these designs and run with them in whichever jurisdiction, they may have a couple more visits to the planning department or building department, but they'll still in general be farther

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along, I'd say, then they would be, you know, and at least financially in terms of hiring their own architect and again, this isn't going to these designs won't apply to everybody this is really focused on a market where people are looking to save money

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and advance their ad projects.

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Quickly.

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So, yeah, I mean reach codes are great and we encourage people to include how the green features and options that they can all deliverable design options whether they plan on aging in that house or having somebody else.

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We really do feel like there's a lot of benefits to looking at the handbook and including some of these optional features, then do in case of energy savings meet these reach codes by many are already in there.

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And, yeah, the Doug thanks for mentioning that yeah we knew that people could take these designs and they might have to modify them. And it's the more affordable to do that than to start from scratch and try to buy it by all the rules.

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And so, you know, obviously, once again, we always try to take the savings that you take, and if you use those savings to modify the units based on the city's guidelines are based on the sustainability features you want to put in or anything else you

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do, you know, they might not look exactly like they started, but I still think it's more affordable or incentivizes people to already say okay I have this let me take that to an architect or contractor and and normally be such a big process and kind of

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a little bit overwhelming for people because obviously.

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Most people have not built at before. And so it would they would already have been kind of several steps ahead, and could go forward instead of just saying, too much.

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Thanks, thanks for that thanks for sharing that. And I know we're coming up on on the end of the hour here in a few minutes.

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Any other questions from from folks joining in today, I'll maybe take one last bite of the apple then if not, and this goes back to, Damien just in terms of.

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This is quite a quite a fascinating project and program rather that you're running in Costa Contra Costa County. I'm curious if there are other jurisdictions other counties other parts of the state or maybe even the country that have been been looking

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to your model or knocking on your door saying hey we want to kind of replicate this in our jurisdiction. You speak about without maybe divulging, you know.

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Secret of information if that's the case, but any interest from other jurisdictions that you're aware of.

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Yeah, so, so it is being, we, when we were designing it, we were looking at where it was being done in other parts of the country.

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There's an example in Oregon. That's an example in in New York as well, that is doing something very similar. New York seems to be more aligned to what kind of what we're doing on the health and asthma, particularly, but yeah it is it's very unique there's

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just about a handful across the country that that have been able to do this.

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And it's really the hardest part is the partnership. So part of getting the health department coordinated with like energy efficiency programs. Team tends to be the challenge with other counties or jurisdictions that are trying to do this.

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You just have to figure out how to make those partnerships, align and work, we're just we're fortunate to have a health department that is very involved in climate action work Climate Action Plan stuff so they're always at the table and our energy efficiency

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stuff aligns with our Climate Action Plan work so it's just it's just kind of worked for us and just establishing those relationships I think the biggest thing that comes out when I presented this before is really how do we establish those relationships

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to be unique about how we're in designing programs that are different, whether it's as an energy efficiency or other things it's really connecting with other entities that you wouldn't normally and getting outside your silo that you can get stuck in if

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your ears specific be.

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Be. The advice I would give others if you're looking, trying to look outside the box.

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But yeah, it is it is it's a learning project I I'm interested in expanding it beyond Contra Costa.

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And a few years after we've kind of looked at this and three years after our projects over and see what the actual outcomes will be.

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And I see an interest in partnering with large, you know, private sector.

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Like Kaiser, or, you know, or large health, health, health plans that are private, where they see the benefit and how this could actually reduce emergency visits to reduce, actually, The cost of health so that's that's what we're, we're I think we're

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aiming for eventually

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they thank you for that and you know we're at time so I just wanted to take a minute for for our last slide and the wrap up, and again just thank you again to Damien Doug and Boris for the presentation to Lizzie for helping organizing this and to everyone

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that was able to join today for this webinar.

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We have a few plugs here for the work that we're doing so first our newsletter.

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We have a link here will again send this around afterwards we publish a monthly newsletter, about, you know, local government events.

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Local Government events throughout the region. We also have the second webinar of this webinar series equity an existing building decarbonisation and should be a fascinating discussion about, you know, the equity challenge but also existing buildings

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we talked about new buildings a lot, and building electrification building decarbonisation, but you know existing buildings that's a much tougher nut to crack, so that'll be coming up on August 24 at 1230, and we'll send around that information.

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And lastly the clean building compass I mentioned that, at the, the onset of the webinar. So there's the link as well, and we'll send that around.