

WEBVTT

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00:00:13.640 --> 00:00:16.920

Jessica Peyton / SPUR Public Programs: Good morning, everybody. We'll get ready in just a second.

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00:00:36.010 --> 00:00:36.910

Okay,

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00:00:36.920 --> 00:01:03.360

Jessica Peyton / SPUR Public Programs: we have a lot to cover. So i'm going to go ahead and get started. Um, hello! Good morning, everyone. My name is Jessica Peyton, and I am one of Spurs public programming associates. Thank you so much for joining us today for this digital discourse. Many of you here are for members to thank you for your support. If you're not a member, I encourage you to join support for is ongoing work and using education, policy, analysis, and advocacy to make our cities and region more prosperous, sustainable, and equitable places to live.

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00:01:03.370 --> 00:01:12.540

Jessica Peyton / SPUR Public Programs: Your financial support enables us to continue our work, including the hosting of programs like today's you'll find more information about membership online at Spur Org. Join

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00:01:13.100 --> 00:01:21.499

Jessica Peyton / SPUR Public Programs: our next digital discourse is scheduled for tomorrow, November second at twelve thirty. It's called bold new rules to deliver transit oriented communities.

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00:01:21.510 --> 00:01:34.979

Jessica Peyton / SPUR Public Programs: In January the Mtc. Introduced a proposal for a new regional transit oriented community policy aiming to support new housing across income levels, add new jobs and support, sustainable transit access and protection from displacement,

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00:01:35.060 --> 00:01:39.480

Jessica Peyton / SPUR Public Programs: join us to discuss where this effort landed and what it will take for jurisdictions to comply.

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00:01:39.620 --> 00:01:54.499

Jessica Peyton / SPUR Public Programs: Today's digital discourse is called Tigers Transit and trees. Oh, my Barts living roofs. Project Margaret Street and Montgomery Street, parallel to the Salesforce Transit Center and Park service to San Francisco's most significant transit arteries

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00:01:54.510 --> 00:02:13.409

Jessica Peyton / SPUR Public Programs: every day cars buses cyclists and pedestrians travel these streets, likely unaware of a neighbor that's been present since the seventies. The western tiger swallowtail, butterfly to the butterfly the city landscape resembles its natural habitat. A tree lined river of vehicles nearby parks, rooftop gardens, and plaza make up an urban canyon,

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00:02:13.420 --> 00:02:20.420

Jessica Peyton / SPUR Public Programs: but a lack of nectar sources and larval food as well as pending tree removal call for a revamped place for our winged friends to call home

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00:02:20.970 --> 00:02:35.730

Jessica Peyton / SPUR Public Programs: this year. Nature, in the city, in partnership with Bart is launching two living roof pilots atop the new Montgomery and Powell Street Park stations, where one thousand eight hundred square feet of elevated habitat will bring each station to life with insects, birds, and our beloved small details.

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00:02:35.740 --> 00:02:46.890

Jessica Peyton / SPUR Public Programs: Today we'll gather in Bart's fiftieth anniversary year to learn about the potential opportunities and challenges for this exciting project. Thank you to Nature in the city for your partnership on this event, and to everyone who helped spread the word.

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00:02:47.040 --> 00:03:03.249

Jessica Peyton / SPUR Public Programs: So now to introduce our speakers. Uh, first up we have Kirsten Weeks. Kirsten is a leader in regenerative design and urban ecology, and is the founder of bio studio Kirsten works with interdisciplinary teams to create sustainable, resilient, built environments where people in nature thrive together.

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00:03:03.790 --> 00:03:14.640

Jessica Peyton / SPUR Public Programs: Next up we have Steve Lyme Steve is an architect and urban designer that has been engaged in bringing the bark canopy project, incorporating art and green roofs to fruition for the past five years.

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00:03:14.670 --> 00:03:21.109

Jessica Peyton / SPUR Public Programs: He is principal with Via A. Perkins, Eastman studio, and co-leader of the transit Urban infrastructure practice.

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00:03:21.130 --> 00:03:32.030

Jessica Peyton / SPUR Public Programs: Except we have Cameron Bower or Cam Cam is a principal civil engineer at art. He supports the Market Street entry, Canopy project and the Escalator Retrofit project.

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00:03:32.660 --> 00:03:39.910

Jessica Peyton / SPUR Public Programs: And next, we have K. Chang K. Is a senior manager. Micro Mobility and transit public policy strategy at Lift,

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00:03:39.920 --> 00:03:56.589

Jessica Peyton / SPUR Public Programs: where she works on policies and partnership for the company's micro Mobility Division, combining previous experience, working at San Francisco and New York city, planning, landscape, design, architecture, and transportation planning firms. She is an act for encouraging the cities to try new things. Finally, we have Amber hasslebrain.

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00:03:56.600 --> 00:04:14.509

Jessica Peyton / SPUR Public Programs: Amber is an advocate, artist, naturalist, educator, and gardener, featured in two thousand and seventeen in Sierra Club. The people's powerless. She has served nature in the city since two thousand and six, and a shepherded, innovative nature based projects such as the Green Hair Street Corridor, the Green Connections plan and tigers on Market Street.

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00:04:15.170 --> 00:04:35.109

Jessica Peyton / SPUR Public Programs: Arnold, you want this to be in interactive counter sheet a conversation, and we plan on plan on spending as much time as possible, engaging with you all. So I encourage you to use the chat box to share your thoughts with each other and the speakers. Um. But if you have any questions, I encourage you to submit those um into the Q. A function at the bottom of your screen or top. If you're on your mobile app

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00:04:35.120 --> 00:04:41.399

Jessica Peyton / SPUR Public Programs: uh, and when the next, within the next few days we'll be sharing a copy of the Recording Transcript and chat with everyone who registered,

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00:04:41.440 --> 00:04:44.580

Jessica Peyton / SPUR Public Programs: and with I I will turn it over to you, Kirsten.

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00:04:45.180 --> 00:04:54.559

Kirstin Weeks - Bio Studio: Thank you very much, Jessica, and thank you all for joining us this morning. I'm very excited to get to share about this exciting project with you.

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00:04:54.570 --> 00:05:16.880

Kirstin Weeks - Bio Studio: So uh we Here's how we're planning to use our hour this morning. Uh You've already heard the introduction uh after that uh Kay is going to speak a bit about the broad context of Uh streets, equity, transit, and urban Nature and San Francisco. That kind of lead up to this uh canopy, living roofs. Project

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00:05:16.890 --> 00:05:33.999

Kirstin Weeks - Bio Studio: Um Kam is going to speak to you from Bart uh Bart's perspective about uh the purpose, and of the canopies and the status um, after which you'll get to hear from Steve about all the design drivers around the canopies themselves. Excuse me

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00:05:34.320 --> 00:05:48.019

Kirstin Weeks - Bio Studio: uh Amber will then give you some history about uh the Tigers on Market Project, which probably sounds uh really uh fascinating if you haven't heard about it before uh anyone seen any tigers recently.

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00:05:48.610 --> 00:06:09.309

Kirstin Weeks - Bio Studio: Lastly, I will uh speak about the new living roof uh design and and the concept for the actual pilot living room design. And then hopefully, we'll have uh at least twenty minutes or so for um. Q. A. And panel discussion, but do feel free to submit questions in the meantime, and we can try to keep it eye on them and answer them as we go.

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00:06:11.010 --> 00:06:12.520

Kirstin Weeks - Bio Studio: So

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00:06:12.850 --> 00:06:17.309

Kirstin Weeks - Bio Studio: uh, without further ado I will hand it over to K.

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00:06:18.240 --> 00:06:36.409

Kay Cheng: Thanks, um thanks for having me, and really excited to be here today um as San Francisco and orchestra. And all this is very near and dear to my heart. Um, even though I've um Haven't been there for a few years. I did work for a city planning for about seven years. I was in the Urban Design group

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00:06:36.420 --> 00:06:45.609

Kay Cheng: and focused on streetscape design. I ran our, you know, Po Park Lip plaza program worked on the Earth and poorest plan all sorts of fun stuff.

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00:06:45.720 --> 00:07:03.480

Kay Cheng: And by way of working on the urban forest plan. Got to know uh the field of uh better roofs and green roofs. Um! And that um some of our panelists before then so um for those that you might not know there is a better roost program. I started

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00:07:03.590 --> 00:07:17.289

Kay Cheng: about the probably six, seven, eight years ago. Um, as I said, planning, and it was really to just gain a better understanding of Where are the green roofs in our city? Created a map, Did some case studies.

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00:07:17.300 --> 00:07:33.220

Kay Cheng: Um had the pleasure of working on the spur, white paper, greener and better roofs, a roadmap for San Francisco, which, of course, learned so many great things to interest in. And so um other folks in this field, and um really looked at the very benefits and

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00:07:33.230 --> 00:07:40.019

Kay Cheng: that you can get from green roofs that Kristen Kirsten knows much more about um than I do, but that all led to

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00:07:40.030 --> 00:07:55.109

Kay Cheng: um a culmination of the in January of two thousand and seventeen San Francisco, becoming the first Us. City to mandate solar and living roofs on most new construction. And as part of that legislation, about fifteen to thirty percent of the roost space

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00:07:55.120 --> 00:08:00.440

Kay Cheng: had to incorporate um solar, and then to um,

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00:08:00.500 --> 00:08:06.970

Kay Cheng: to our delight, you could also do a combination of living roof depending on um the situation. So

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00:08:07.050 --> 00:08:12.339

Kay Cheng: all of these things kind of culminated together that um

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00:08:12.890 --> 00:08:19.079

Kay Cheng: built the movement and kind of build awareness around that. So if you go to the next slide.

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00:08:19.520 --> 00:08:35.340

Kay Cheng: Um, there's Amber and one of the tours that we did um along with Danny's case studies. We did a bunch of tours um so kind of just building the awareness of these great roofs. Um! And then then, physically seeing the benefits of them,

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00:08:35.460 --> 00:08:56.149

Kay Cheng: was something that really um resonated with me. And uh, if we more people could see them if they were perhaps better connected at the street level. Um! Wouldn't that even be even better? Um so from, you know, just the visual beautification. But then also providing the habitat that we're,

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00:08:56.170 --> 00:09:04.959

Kay Cheng: and you know we rain water um retention that we all um want, that we all can see from the benefits of green rooms. So

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00:09:10.010 --> 00:09:24.569

Kay Cheng: my current work Um! I work for a lift, and uh, we are provide bike and scooter share for cities across the country across the world and um for parking day. This year we um

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00:09:24.730 --> 00:09:27.589

Kay Cheng: partnered with uh a

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00:09:27.790 --> 00:09:46.220

Kay Cheng: infrastructure company, so that provided bike lane separators and planters. And then for those that you don't know per uh parking day is a moment where you reclaim the street and see uh sort of pilot. What could be there? Um, uh, besides just a part car. So

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00:09:46.230 --> 00:09:56.359

Kay Cheng: um in the vein of this project. I thought it'd be interesting to show that you know repurposing or kind of reimagining what a street could be, and what um

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00:09:56.610 --> 00:10:16.179

Kay Cheng: uh, just a plain uh can it keep? P. Could be? Is also uh relevant. So next up i'm sorry next slide. Yeah, um. During my time at Sf. Planning uh worked on the Market Street over and prototyping festival. Um that was really focusing on Market Street. And

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00:10:16.190 --> 00:10:28.169

Kay Cheng: what might we introduce along the sidewalks there as um educational um and greenery? So again, targeting back to that concept of.

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00:10:28.390 --> 00:10:39.489

Kay Cheng: If there's wonderful green roofs and all these wonderful benefits, if we're able to bring them at kind of look to the um to the ground level for pedestrians that are, you know, um

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00:10:39.630 --> 00:10:52.750

Kay Cheng: connecting to transit, to be able to see that would be even more beneficial. Um! And you can see from the top the image on the top right? It's not a new concept of testing and piloting new ideas in two thousand and eight. That's a

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00:10:52.840 --> 00:11:05.290

Kay Cheng: um, you know, putting some green roof over on as a pilot for um community bus shelter. So these concepts have been around for a really long time, and you know, being able to

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00:11:05.300 --> 00:11:17.270

Kay Cheng: um be a part of this panel, and learn about all the great work that you all have done to bring the this part to the next level is just really exciting, and I can't wait to learn more about it. Um,

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00:11:17.510 --> 00:11:32.130

Kay Cheng: Um, yeah, Just being able to see that living roofs fit into your urban nature, and the enhancing the livability of cities as well as enhancing our transportation. Um,

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00:11:32.140 --> 00:11:37.819

Kay Cheng: you know, transit public transit stations is just really encouraging to see. So

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00:11:38.060 --> 00:11:39.800

Kay Cheng: i'll wrap it up there

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00:11:39.880 --> 00:11:41.810

Kay Cheng: and it back to you.

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00:11:42.330 --> 00:11:43.770

Kirstin Weeks - Bio Studio: Thank you. Okay.

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00:11:43.790 --> 00:12:01.899

Kirstin Weeks - Bio Studio: Uh. So next we're gonna jump into the the actual project. And um start with cam uh speaking from Bart's perspective about uh, Why, why these canopies and uh the stats of the project right now?

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00:12:07.060 --> 00:12:15.400

Cameron Bauer: Uh Bart is celebrating his fiftieth anniversary this year, and he has many projects underway under its measure. Our program to upgrade the system.

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00:12:15.680 --> 00:12:20.739

Cameron Bauer: One of those projects is to replace all the escalators and stations on market stream.

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00:12:21.240 --> 00:12:23.750

Cameron Bauer: New code requirement, mandate, simple

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00:12:24.330 --> 00:12:26.980

Cameron Bauer: escalators be protected from the weather

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00:12:27.260 --> 00:12:33.119

Cameron Bauer: To meet that requirement. Bart is installing canopies at all. Station and interest is

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00:12:34.410 --> 00:12:36.519

Cameron Bauer: to protect the escalators.

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00:12:36.680 --> 00:12:54.710

Cameron Bauer: This figure shows the canopies are enclosed in glass to maximize transparency. Each canopy includes three security cameras. Each canopy will also have a real time display indicating part in many schedules. Unique artwork is incorporated into the seating of each candidate.

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00:12:56.850 --> 00:13:03.450

Cameron Bauer: The roof overhangs are designed to maximize weather protection, and prevent parade watchers from climbing on the roof,

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00:13:04.320 --> 00:13:13.529

Cameron Bauer: while the overhangs are designed to prevent parade watchers from climbing on the roof. The key design criterion was actually to accommodate their load. If they do get on.

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00:13:13.850 --> 00:13:16.539

Cameron Bauer: That's why the sex structure is so sturdy

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00:13:17.510 --> 00:13:25.149

Cameron Bauer: During the construction work Bart pays close to stays and goes contact with city staff and adjacent poverty.

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00:13:25.340 --> 00:13:36.289

Cameron Bauer: Since the since the installation of the canopies or escalators requires closure of the entrance. The construction of a maximum of one entrance per station is allowed at a time.

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00:13:37.650 --> 00:13:50.949

Cameron Bauer: Construction of the canopies began in two thousand and seventeen, with the construction of two pilot candidates. The next nineteen canopies in the base contract are expected to be completed in June of two thousand and twenty-six.

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00:13:52.420 --> 00:13:53.500

Cameron Bauer: Thank you.

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00:13:55.480 --> 00:13:57.069

Kirstin Weeks - Bio Studio: Great Thank you.

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00:13:59.710 --> 00:14:01.109

Kirstin Weeks - Bio Studio: So uh

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00:14:01.210 --> 00:14:16.339

Kirstin Weeks - Bio Studio: continuing on that thread. Now we get to hear from Steve Uh, who is going to tell us more about the design of the canopy structure itself, and kind of what those drivers are. So I'm going to flip over to his slide deck here.

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00:14:17.210 --> 00:14:32.620

Steve Line - VIA - Perkins Eastman: Thank you, Kirsten. And while you're doing that so, as Kam mentioned um, the code required that as they replaced all the escalators of Market Street, that canopies were introduced to protect the escalators from the weather, and so

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00:14:32.760 --> 00:14:47.070

Steve Line - VIA - Perkins Eastman: two thousand and fourteen. The city, together with Bart. City, San Francisco, together with Bart. Headed by the City's Public Works Department, put out a competition um to envision what these cannabiss could be and what they could look like, and

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00:14:47.080 --> 00:15:04.469

Steve Line - VIA - Perkins Eastman: so via um as by a studio, we were the selected firm um from that competition to design these canopy. So i'm just going to talk at a high level of about the process. And um how we got to where we are today. So the next slide,

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00:15:04.670 --> 00:15:07.830

Steve Line - VIA - Perkins Eastman: so as part of the aspirations of the city,

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00:15:08.820 --> 00:15:27.189

Steve Line - VIA - Perkins Eastman: the um, The first thing that we they wanted us to recognize was to make these canopies unique, and address the significance of each of the neighborhoods along Market Street. And so one of the things that you'll see as I progress through. This is how we have what we call elements of continuity,

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00:15:27.200 --> 00:15:37.520

Steve Line - VIA - Perkins Eastman: so having the canopies be instantly recognizable as both Muni and Bart station entrances, but at the same time have the ability to reflect each of the neighborhoods,

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00:15:37.590 --> 00:15:39.889

Steve Line - VIA - Perkins Eastman: as you can see here, so next slide,

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00:15:40.720 --> 00:15:54.479

Steve Line - VIA - Perkins Eastman: and so um! There's four distinct uh neighborhoods that we're addressing along Market Street in the four stations that the green roofs were looking to be incorporated in our embarkadero, Montgomery Powell and civic center

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00:15:54.510 --> 00:15:55.770

Steve Line - VIA - Perkins Eastman: next slide.

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00:15:56.380 --> 00:16:09.629

Steve Line - VIA - Perkins Eastman: And so one of the things that we really wanted to do is how can we, you know, address a unique iconic identity of Market Street, and and fit this in. And so if the next slide I just want to bring up is

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00:16:09.640 --> 00:16:22.870

Steve Line - VIA - Perkins Eastman: These are large canopies, and there's twenty three of them that we're in building along Market Street, and we're competing with a lot of other what we'll call elements along the street. So there's quite a bit of

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00:16:22.880 --> 00:16:36.019

Steve Line - VIA - Perkins Eastman: uh things going on on Market Street. So how do you take these large structures, incorporate them, and still not add to the visual noise, if you will, with the coffee along the street. So that was kind of our our mission.

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00:16:36.030 --> 00:16:53.700

Steve Line - VIA - Perkins Eastman: So our design approach. Obviously we wanted to have our elements of continuity introduce our elements of distinction, and I'm. Going to walk through a little bit about the kid of parts in our approach. But at the very beginning the idea was to incorporate art and to create living roofs on these canopies

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00:16:54.850 --> 00:16:56.110

Steve Line - VIA - Perkins Eastman: next slide.

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00:16:56.300 --> 00:17:10.280

Steve Line - VIA - Perkins Eastman: So the first, our first generative approach is just to look at a functional um really rethink how vertical circulation we've talked about eliminating, climbing, making sure that we are have open ventilation,

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00:17:10.290 --> 00:17:24.260

Steve Line - VIA - Perkins Eastman: and then really create an opening on these street volumes for transparency, for security, for crime, prevention. So these were some of the new formal elements that we wanted to consider as we went through next slide,

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00:17:24.640 --> 00:17:41.490

Steve Line - VIA - Perkins Eastman: and we wanted to make sure that the site lines um had a distinctive um form, and if we got it too thin, it might just disappear into the into the buildings. If we got it too thick they they appear massive and heavy. So we look for for a solution that defined

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00:17:41.500 --> 00:17:58.919

Steve Line - VIA - Perkins Eastman: um both, uh, you know, had a there There they became recognizable as the entrances into Bart, but still allow it not to compete and not to be too heavy. So um! So we introduce transparent materials for visibility and safety. Um!

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00:17:58.930 --> 00:18:08.510

Steve Line - VIA - Perkins Eastman: We really tried to consider the massing and the presence to him, you know, to reduce the impacts, the adjacent businesses and storefronts and their signage. Um!

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00:18:08.660 --> 00:18:11.949

Steve Line - VIA - Perkins Eastman: We have to protect the escalators from the weather

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00:18:12.110 --> 00:18:13.730

Steve Line - VIA - Perkins Eastman: and the next slide,

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00:18:14.430 --> 00:18:21.649

Steve Line - VIA - Perkins Eastman: and, as a cam said a hundred percent non-climable. And I think the next slide illustrates that. Um

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00:18:22.090 --> 00:18:23.240

Steve Line - VIA - Perkins Eastman: um.

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00:18:23.390 --> 00:18:37.220

Steve Line - VIA - Perkins Eastman: You know the the outcome So with all of the other things, the street elements. How do we produce a canopy that is thin? Um not competing, but still recognizable. And so as the image that we showed on the on the uh.

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00:18:37.360 --> 00:18:38.719

Steve Line - VIA - Perkins Eastman: You know the pilot,

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00:18:38.770 --> 00:18:52.420

Steve Line - VIA - Perkins Eastman: we think that we come up with a solution that the city has something to. Bart has something that will work, but to really make it distinct. As I mentioned earlier, we wanted to incorporate art in the Green Room. So the next slide

103

00:18:53.320 --> 00:19:13.039

Steve Line - VIA - Perkins Eastman: this oh, this slide just before you go that that yeah, San Francisco loves a parade. And um, all of this climbing is is a thing right? So this is what we're trying to avoid. But, as Kem said, they were designed to um take um loads of this, many people getting up there which allows us to also um

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00:19:13.050 --> 00:19:16.280

Steve Line - VIA - Perkins Eastman: have the weight that a green roof would um introduce.

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00:19:17.280 --> 00:19:20.679

Steve Line - VIA - Perkins Eastman: So we've seen this slide, so we'll go to the next one,

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00:19:20.860 --> 00:19:22.010

Steve Line - VIA - Perkins Eastman: so

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00:19:22.200 --> 00:19:37.929

Steve Line - VIA - Perkins Eastman: um from the beginning art on the underside, which gives each um passenger primarily as they leave the station, a recognizable identity of Where am I? So the idea is at the street level. There's a There's some indication

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00:19:37.940 --> 00:19:54.419

Steve Line - VIA - Perkins Eastman: of the art, but it's really not meant to stand out as boldly as when you come up. The escalators. But equally We wanted to have the green roofs, both for the habitat and also all the benefits of the green roof that we've heard about. But it's also acknowledging that there's many, many people that

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00:19:54.430 --> 00:20:05.920

Steve Line - VIA - Perkins Eastman: that um reside and work um at a higher elevation, and look down on these roofs and try to make that experience for them. Also. Um address that. So the next slide.

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00:20:07.370 --> 00:20:12.530

Steve Line - VIA - Perkins Eastman: So um we put out for for the art um

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00:20:12.860 --> 00:20:33.210

Steve Line - VIA - Perkins Eastman: the city of San Francisco, the Art Department Bart's art team. We've got a lot of in fire um involvement from the Urba way in Arts centers, Sf moma, and went out for a um competition for a solicitation of of of artists, and in the reach was um nationwide,

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00:20:33.220 --> 00:20:44.699

Steve Line - VIA - Perkins Eastman: and four artists were selected through that process, and each of the artists where it's um assigned a station, so all of the canopies at each station will have the same art,

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00:20:44.710 --> 00:21:02.530

Steve Line - VIA - Perkins Eastman: and that's a whole nother um presentation on how the art got made and built. But um, we're excited. It's there. And so the next slide just gives a an example of some of the art elements. So this is actually kind of a pilot program that we used. Um,

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00:21:02.540 --> 00:21:07.859

Steve Line - VIA - Perkins Eastman: that this will be represented the art that's going to happen at Civic Center and the next slide.

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00:21:07.990 --> 00:21:26.029

Steve Line - VIA - Perkins Eastman: This is already. This is the art panels that are going up at Powell Street, and you can see them this now installed on the pilot canopy. But today's call is really about the green roofs. And so, you know, Opposite the on the other side of the of the art are the green roofs.

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00:21:26.040 --> 00:21:39.800

Steve Line - VIA - Perkins Eastman: Um! And we're excited so excited that this um this aspect, at least at the pilot level is proceeding, and here's some rendering of, but they might look like. So with that Kirsten, i'll turn it back to you.

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00:21:40.840 --> 00:21:48.050

Kirstin Weeks - Bio Studio: Alright, Fantastic. Thank you very much, Steve and i'm gonna go back to our Google slide deck,

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00:21:50.090 --> 00:22:06.209

Kirstin Weeks - Bio Studio: and i'm gonna hand it to Amber, who's gonna speak a bit. So we've kind of heard the Bart background and drivers. And now we're going to hear some background uh related to urban nature and butterflies on Market Street. So amber,

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00:22:07.730 --> 00:22:13.110

Amber Hasselbring: great. Uh thank you. Everyone for being here. Thank you for for hosting us today.

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00:22:13.120 --> 00:22:29.200

Amber Hasselbring: It's It's A. It really makes me realize how important it is to have different experts in the different areas come together and make something happen to this project would be impossible without all the advocacy, creativity, and hard work that we've all put in. So

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00:22:29.210 --> 00:22:34.720

Amber Hasselbring: i'm excited to be here and getting closer to getting these living rooms put on top of the

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00:22:34.910 --> 00:22:36.330

Amber Hasselbring: uh. So

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00:22:36.560 --> 00:22:57.189

Amber Hasselbring: the Western tiger swallowtail is the biggest butterfly we have in San Francisco. So it makes a big impact, but it also gets lost in all of the infrastructure of Market Street. So we started a project in two thousand and thirteen to help make it more visible. So we did walks. We did Public artworks like this mock up, you see,

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00:22:57.200 --> 00:23:05.010

Amber Hasselbring: and we got a lot of city involvement. We did. We participated in the Uh Market Street prototyping festival.

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00:23:05.210 --> 00:23:15.749

Amber Hasselbring: We did bio-blixes We did habitat surveys, So we've been involved in just kind of like staying active and staying committed for the years, and it's really exciting. So

126

00:23:15.760 --> 00:23:26.539

Amber Hasselbring: um one thing that's really uh the London plane trees are one of the most important factors of why the Western tiger swell of tail is using Market Street.

127

00:23:26.570 --> 00:23:46.100

Amber Hasselbring: London plane trees are one of the most common street trees that have planted in in cities around the world. They're here in Paris. They can see a similar tree line street that you see as of Market streets when the plane trees are are uh it's it's sort of like a lock and key mechanism for the butterfly. So butterfly

128

00:23:46.150 --> 00:23:58.519

Amber Hasselbring: uh is. There's a stimulant inside the tree that causes the butterfly to lay her egg on it. So they don't take nectar from this tree, but they lay their eggs on it, and the caterpillars eat the leaves

129

00:23:58.730 --> 00:24:18.359

Amber Hasselbring: uh. So another. You know the trees are one really important aspect of the habitat on Marcus Street. Also the canyon of tall buildings reminds them of a river canyon ecosystem that is their their original habitat. The other thing is glad sort of. If you are walking through a forest and you saw openings in the canopy or sun filled

130

00:24:18.370 --> 00:24:24.510

Amber Hasselbring: meadows that would be glades. And so on Market Street. That sort of is our intersections and our clauses.

131

00:24:25.110 --> 00:24:26.870

Amber Hasselbring: So uh

132

00:24:27.100 --> 00:24:36.300

Amber Hasselbring: some, the the um Butterfly sees Market Street and sees a river canyon, so it's kind of cool to see that earlier slide.

133

00:24:36.490 --> 00:24:44.510

Amber Hasselbring: So the reason why uh the living rooms are coming to you today is because of the trees. Uh, there was a really

134

00:24:44.520 --> 00:24:57.859

Amber Hasselbring: interesting thing that happened. The to build these canopies fifty trees for needing removal. Um, because the canopies have a certain stature to them. So there there were trees in the way,

135

00:24:57.870 --> 00:25:16.749

Amber Hasselbring: so it was about fifty trees that were um slated to be removed to build these canopies. And what happened was a powerful group of advocates got together and said: You know, Bart, you can't remove all these trees without doing some mitigation efforts to replace them. So

136

00:25:16.760 --> 00:25:25.500

Amber Hasselbring: the living rooms are part of that mitigation plan, along with replanting of trees on on Market street and streets nearby,

137

00:25:25.590 --> 00:25:34.419

Amber Hasselbring: along with, uh, all of the great work that all of us have done together to build community with the community, benefit districts and all of that. So

138

00:25:34.440 --> 00:25:45.889

Amber Hasselbring: we're really excited to be part of it that another interesting part is uh these pop out tree basins that we're exploring. So there's a lot of creativity and desire to uh get better habitat.

139

00:25:46.130 --> 00:25:49.449

Amber Hasselbring: So the living rooms are

140

00:25:49.930 --> 00:25:54.370

Amber Hasselbring: what's really exciting for us about them is that they will be

141

00:25:54.380 --> 00:26:11.749

Amber Hasselbring: elevated habitat Islands. If if we get all twenty- of them built the the impact to wildlife uh is really substantial, and it's right up there at that canopy level. So if you can imagine a butterfly moving from place to place and finding, uh,

142

00:26:11.760 --> 00:26:18.789

Amber Hasselbring: oh, great habitat, and others for other uh pollinators, we're really excited about that. So

143

00:26:19.070 --> 00:26:24.249

Amber Hasselbring: uh, thank you for all for being here and helping to bring that about. And excellent.

144

00:26:24.720 --> 00:26:41.380

Amber Hasselbring: Uh, there is. Really, this is a big project for nature in the city. We're really growing in our efforts. So we're we're working closely with Bart. We're working closely with corporate sponsors, other city agencies. And so it's all like, you know, a really

145

00:26:41.390 --> 00:26:51.679

Amber Hasselbring: uh involved and requires a lot of partnership and a lot of agreement. So we we know that nothing great happens without that, so really excited to be part of it,

146

00:26:52.000 --> 00:26:53.950

Amber Hasselbring: and i'll pass with that

147

00:26:55.160 --> 00:27:06.369

Kirstin Weeks - Bio Studio: fantastic Thank you so much, Emperor. Uh. So now i'm going to tell you a little bit more. Dig in a little bit to the actual design of these two pilot living roofs

148

00:27:06.380 --> 00:27:22.940

Kirstin Weeks - Bio Studio: uh, and kind of also just the design criteria. What are we trying to achieve? We've heard about what we're trying to achieve with the canopies themselves. But what are we trying to achieve with the living root element. So uh, we have had some um community engagement. We had a a workshop recently with Um.

149

00:27:22.950 --> 00:27:42.579

Kirstin Weeks - Bio Studio: Some of the the neighborhood groups along Market Street, and some of, and as well as some living roof experts. Um, including some international experts in Switzerland. Um! And one of the questions we asked was, what what would, what would represent success for these living roof uh

150

00:27:42.590 --> 00:27:57.259

Kirstin Weeks - Bio Studio: pilots on the Bart campus. And you can see this word cloud of lots of ideas that people had about um the range of different uh benefits that that the living roofs can and should provide.

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00:27:57.790 --> 00:28:05.669

Kirstin Weeks - Bio Studio: We kind of distill those down to some key goals. Um, the top of which is uh

152

00:28:05.680 --> 00:28:18.540

Kirstin Weeks - Bio Studio: is that we we deliver habitat for the tigers wall to butterflies, as well as other urban um species pollinators that may be present on market or able to go there if if the habitat is present.

153

00:28:18.550 --> 00:28:39.880

Kirstin Weeks - Bio Studio: Um, we really want it to be beneficial to the community broadly. Uh. So the kind of most basic thing that means is we make sure that these roofs look good, so that everyone who's in the neighboring buildings looking down at them. Um gets a really nice amenity. But um! As Kay started to talk about uh living rooms provide so many,

154

00:28:39.890 --> 00:28:41.500

Kirstin Weeks - Bio Studio: so many benefits.

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00:28:41.510 --> 00:29:02.360

Kirstin Weeks - Bio Studio: Uh in an urban context. They, you know. Each each square foot gives a little bit of benefit toward storm, water, retention, um, and cleansing, so that those roofs are, you know, draining less water into the storm water network in the bay, and the water that they are draining has had some filtration already.

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00:29:02.370 --> 00:29:16.550

Kirstin Weeks - Bio Studio: Uh, they're cooling uh they're It's a kind of heat island mitigation strategy. Uh they take a little, you know. Each of those leaves up there takes a little bit of particulate matter out of the air, so it helps with with with local air quality.

157

00:29:16.560 --> 00:29:29.880

Kirstin Weeks - Bio Studio: Um, and uh, you know, in addition to just kind of a pleasant amenity. Nature views in the city. Um, for for folks who are in the Market Street buildings actually really help with

158

00:29:29.890 --> 00:29:46.390

Kirstin Weeks - Bio Studio: um stress, reduction and uh health benefits. So um all those good things we hope to achieve. Uh, at the same time, you know, these do. These briefs do take some inputs, and we want the we want them to be as sustainably designed and water smart as possible. So

159

00:29:46.400 --> 00:29:59.470

Kirstin Weeks - Bio Studio: the plants we're looking at are all um drought tolerant native plants. Um! So this will this. This groups will be irrigated. But we're gonna try to minimize the code of water needed, and we don't want to be using any

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00:29:59.760 --> 00:30:07.449

Kirstin Weeks - Bio Studio: uh chemicals up there that are going to compromise the the water quality of the run off uh that's coming off the roofs.

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00:30:07.480 --> 00:30:20.779

Kirstin Weeks - Bio Studio: Uh, really fundamental logistical stuff. We want to make sure we're compatible with the canopy structure. These canopies do have a thirty-five pound per square foot capacity for the living roof structure itself. So we're being careful to stay within that.

162

00:30:20.790 --> 00:30:39.940

Kirstin Weeks - Bio Studio: Uh, we want to make sure that we that these are compatible with part operations. We don't inhibit any um functioning of the of the canopy itself. Uh and importantly, so that we retain all of these benefits in perpetuity, that we have maintenance uh and uh, nature in the city is working hard on finding sponsorship

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00:30:39.950 --> 00:30:45.380

Kirstin Weeks - Bio Studio: um to to help make sure that the maintenance uh goes on.

164

00:30:45.470 --> 00:31:01.710

Kirstin Weeks - Bio Studio: So uh, these are the first two we're doing these pilots. We're They're in design right now, and i'm going to show you that design uh, and if that's successful, then hopefully, we'll, we'll be able to roll out many more uh living groups up and down Market Street.

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00:31:01.720 --> 00:31:06.480

Kirstin Weeks - Bio Studio: Here's an image of the of the roof as as it. Uh

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00:31:06.690 --> 00:31:20.150

Kirstin Weeks - Bio Studio: as it stands prior to living roof install, so you can see that there are some. There are some features up there uh you. The plan is here on the right. You've got some access hatches that need to be able to continue to operate,

167

00:31:20.160 --> 00:31:38.990

Kirstin Weeks - Bio Studio: to reach the gates that could that can open and close on the canopies. You've got um a safety line for tie off for anyone who's up there working um some other equipment that's capped off here. So we have to think about those things when we design this living room so that we don't um compromise any of that,

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00:31:39.400 --> 00:31:43.539

Kirstin Weeks - Bio Studio: uh, So that basically leaves us this green zone

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00:31:43.680 --> 00:31:48.700

Kirstin Weeks - Bio Studio: as a as an area where we can potentially install the living roof, and

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00:31:48.810 --> 00:32:08.229

Kirstin Weeks - Bio Studio: we need to make sure that um we've got edging that keeps soil and plants out of the of the zone where those access hatches are. Um! So you'll see on a on a more developed architectural drawing here how that looks! And in this center zone. Um! We'll have

171

00:32:08.240 --> 00:32:14.970

Kirstin Weeks - Bio Studio: kind of a lightweight aggregate underneath that safety line, so that we don't have plants scrag up and kind of getting into it.

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00:32:15.600 --> 00:32:29.999

Kirstin Weeks - Bio Studio: In Section uh you can see what the living roof profile uh will look like. There's about four inches of soil or light lightweight growing medium in there and then these um flowering plants which i'll show you

173

00:32:30.210 --> 00:32:48.170

Kirstin Weeks - Bio Studio: uh, here's a detail for anyone interested in in the details we need to fix. Uh, we want to fix the edging that is, uh, underneath these roofs to the roof structure itself to secure it. So the concept is to run these l brackets down into the drainage

174

00:32:48.180 --> 00:33:01.450

Kirstin Weeks - Bio Studio: um zone and secure them in around the perimeter, and then tie them across together as well to make sure that all the different parts of the living room are are solidly on there.

175

00:33:01.940 --> 00:33:15.290

Kirstin Weeks - Bio Studio: Uh, here are some images to help you envision that a little bit better. So here's a product that we're considering for the actual edging that will run around all the way around the perimeter of the canopy and around those access patches

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00:33:15.600 --> 00:33:34.909

Kirstin Weeks - Bio Studio: the the section would look something like this. Uh with the um. It's not just soil and plants There's also some infrastructure below. So from the bottom up. You need a drainage layer to make sure that the water that comes in there can make it out to the edges where the um where the drainage to the storm storm drain is.

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00:33:34.920 --> 00:33:41.500

Kirstin Weeks - Bio Studio: Uh, then this also acts as a re barrier. To make sure the roots don't get through and damage the waterproof membrane of the roof.

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00:33:41.700 --> 00:33:55.400

Kirstin Weeks - Bio Studio: Um! We also are then going to have, and I should. This is actually a good time to make sure that I acknowledge Rona uh ron a co- habitat. They are um a partner along with bio studio and uh in the city. In

179

00:33:55.410 --> 00:34:13.020

Kirstin Weeks - Bio Studio: doing the design of these living roofs, and they've um done. They've done these drawings. So uh, next is this water retention layer that really helps in the in the dry season and kind of in weathering uh the gaps between rainstorms to help um.

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00:34:13.030 --> 00:34:18.240

Kirstin Weeks - Bio Studio: The plants tolerate that shallow soil. They've got a reservoir and water they can reach down for

181

00:34:18.310 --> 00:34:23.919

Kirstin Weeks - Bio Studio: uh, then the soil itself is engineered to be lightweight, uh, and well drained,

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00:34:24.120 --> 00:34:43.800

Kirstin Weeks - Bio Studio: and finally the fun part of the plants. So uh, we are looking at lots of beautiful flowering plants flowering in different seasons uh specific plants that support the the the tiger, as well as a range of other natives that might help with other pollinators and burn habitat.

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00:34:44.030 --> 00:34:49.649

Kirstin Weeks - Bio Studio: So if all this is successful, then uh, we'll see we'll see uh

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00:34:49.690 --> 00:35:01.909

Kirstin Weeks - Bio Studio: butterflies like this uh flying more and more on Market Street. Uh and uh, that would be good for for nature and for the people in the city who are, of course,

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00:35:02.440 --> 00:35:11.529

Kirstin Weeks - Bio Studio: and that with that i'm gonna um open it up. Uh I see that there's a couple of questions in the Q. A.

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00:35:12.110 --> 00:35:21.400

Kirstin Weeks - Bio Studio: So I will read those first, and everybody feel free to drop your questions in the Q. A. Um,

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00:35:21.410 --> 00:35:37.249

Kirstin Weeks - Bio Studio: and we answer them. So, Judy Grunstra rights. Can you give an estimate of what a typical roof like this costs for square foot, with the understanding that choice of plantings will vary. Um, Yes, so we actually did um

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00:35:37.480 --> 00:35:55.270

Kirstin Weeks - Bio Studio: back when when the city was looking at passing the better roofs policy. We did a cost benefit study for living roofs in in San Francisco, and we kind of surveyed what the costs had been of of a lot of different roofs that had been installed and also installed in other places. And

189

00:35:55.280 --> 00:36:14.510

Kirstin Weeks - Bio Studio: um! We came up with an average around thirty dollars per square foot, including all those layers that support the plans and the plans themselves. Um, it can vary quite a bit. It could be a lot more or a lot less depending on things like um. You know the the access and labor um

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00:36:14.520 --> 00:36:32.640

Kirstin Weeks - Bio Studio: That was also already what? Six seven years ago now. So um! Certainly. There's been a lot of escalation and construction costs since then. Uh, so we are in the middle of getting a cost Estimate done for for these Um, these pilot living roofs right now.

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00:36:32.650 --> 00:36:38.809

Steve Line - VIA - Perkins Eastman: And, Christian, I would just add that that that's in addition to the core structural cost of

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00:36:38.900 --> 00:36:50.589

Kirstin Weeks - Bio Studio: right. Yeah, we're talking about just what sits on top of the just just the the drainage and soil and um plants that sit on top of the roof.

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00:36:52.400 --> 00:37:17.879

Kirstin Weeks - Bio Studio: Uh, okay, Next question. Uh, from Eva showing halt, she uh asks: I am supporting the development of an urban forest plan in the city of Alameda. I imagine there is some overlap between this project and ours. What from the living roof project do you suggest? We consider while planning to enhance the urban forest here in Alabama, so i'd actually like to refer that to Kay first. And she worked on the Urban Forest plan in San Francisco. If you have any thoughts.

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00:37:17.890 --> 00:37:24.509

Kirstin Weeks - Bio Studio: Um! And then and then the rest of us. If we have some thoughts from this particular project, we could add, add to that,

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00:37:25.780 --> 00:37:29.039

Kay Cheng: Yeah, um! How Can you take that? I think,

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00:37:29.370 --> 00:37:44.699

Kay Cheng: when I started on the Urban forest plan we are really focused just on street trees. Um, so that they're valid. They're very important, and we love them. Um. But being able to add a few sections to the other types of

197

00:37:44.820 --> 00:37:51.020

Kay Cheng: um urban greening what's felt like appropriate Um, we have

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00:37:51.150 --> 00:37:54.400

Kay Cheng: our urban forest plan. Um,

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00:37:54.750 --> 00:38:06.280

Kay Cheng: So it's on our website, so you can take a look through it. We have our living roofs, manual um lots of resources that we can share out after. Um.

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00:38:06.500 --> 00:38:25.899

Kay Cheng: But I think for us it was also just kind of getting a gauge of what was the impetus, and how might we encourage more of the those things to happen? And for the successful roofs that were there, Why were they there? And how do they be like. Continue to be successful. Um

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00:38:25.910 --> 00:38:26.889

Kay Cheng: and

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00:38:27.090 --> 00:38:44.980

Kay Cheng: um the maintenance part is. It is a big key thing that I was learning about so hopefully. Um, the urban forest plan. Um, just like three tree maintenance. Um that you can share out lessons learned for um. Having successful long.

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00:38:51.160 --> 00:39:05.679

Amber Hasselbring: I like that was great. Okay, I'd like to add also about a diversity of the tree canopy, you know, out all of Market Street or all of many cities like the Paris example is all one tree, and when you

204

00:39:05.690 --> 00:39:24.900

Amber Hasselbring: introduce biodiversity to to a urban landscape, it's really so important for a lot of different reasons. So for the wildlife, most certainly, but also pests that can come and attack trees. You might lose all of them at once, instead of if you had a diverse candy, you would lose just a couple

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00:39:24.910 --> 00:39:37.669

Amber Hasselbring: in that set so insulting with an ecologist, and really getting getting people who are for climate, smart thinking into the future to develop an urban canopy plan is is such a good idea?

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00:39:38.200 --> 00:39:56.320

Kirstin Weeks - Bio Studio: Yeah, And I I wanna also echo what Kay mentioned about kind of Is it just trees? Or is it more like, I think a a forest is not just the trees right? And and especially in our bay area, ecosystems a lot of a lot of the native, you know. Ecosystems are more shrub

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00:39:56.330 --> 00:40:02.140

Kirstin Weeks - Bio Studio: dominated um, And And so I think, if we can really integrate

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00:40:02.210 --> 00:40:11.540

Kirstin Weeks - Bio Studio: all sorts of plants and and be goal oriented in terms of the kind of habitat we're trying to achieve. It's a great thing. Um! There's a resource uh

209

00:40:11.620 --> 00:40:22.749

Kirstin Weeks - Bio Studio: uh the Sfbi prepared along with Google. It's about um. It's It's a pretty oak focused. I think we're yoking. I think there's reeking Silicon Valley. But um,

210

00:40:22.930 --> 00:40:38.029

Kirstin Weeks - Bio Studio: they've prepared some urban habitat guidelines that I think are quite useful to that kind of focus on patch size and connectivity of different um different urban habitats and urban forest. So I think that that's another point. That's that's useful

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00:40:38.350 --> 00:40:40.130

Kirstin Weeks - Bio Studio: to think about, too.

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00:40:41.340 --> 00:40:45.000

Kirstin Weeks - Bio Studio: All right. Uh

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00:40:45.090 --> 00:40:48.790

Kirstin Weeks - Bio Studio: Next, we have a question about uh

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00:40:48.810 --> 00:41:02.770

Kirstin Weeks - Bio Studio: irrigation technical question, irrigation on living roof. So, um! I'll just comment that in in this case uh the the intent there, there is a a water line um running up to the roof,

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00:41:02.820 --> 00:41:17.039

Kirstin Weeks - Bio Studio: and um. The plan is to install drip irrigation. Um have it? Uh? I think that it's It's ideal. It's ideal If we can have um

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00:41:17.420 --> 00:41:24.110

Kirstin Weeks - Bio Studio: smart controls with with irrigation on green roofs. You've kind of alluded to trickiness uh

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00:41:24.170 --> 00:41:43.769

Kirstin Weeks - Bio Studio: It's great if we can have, you know, control based on whether or soil, moisture um and have good coverage right? Because in the we also just need to do really regular maintenance in the early in the early days of the roof, because um, sometimes one plant is,

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00:41:43.780 --> 00:41:52.319

Kirstin Weeks - Bio Studio: It's just not quite in the right place relative to where those drip, you know emitters are, and needs a little bit of extra help. So

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00:41:53.020 --> 00:41:58.750

Kirstin Weeks - Bio Studio: so we're. But we're optimistic uh that it should. It should work out fine um if you had any

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00:41:58.920 --> 00:42:03.110

Kirstin Weeks - Bio Studio: additional. I don't know if anybody else wanted to make comments about the irrigation plan.

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00:42:03.740 --> 00:42:23.150

Steve Line - VIA - Perkins Eastman: I'll just have that, as you mentioned, you know, and to Bart's credit in the cities before the green roofs were fully signed off on. We did make sure that water was available to the roof, and and so that's obviously if we were to have to retrofit getting um irrigation water to these roofs,

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00:42:23.160 --> 00:42:26.729

Steve Line - VIA - Perkins Eastman: and not part of the initial design. It probably wouldn't have happened.

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00:42:28.430 --> 00:42:29.629

Kirstin Weeks - Bio Studio: Yes,

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00:42:29.790 --> 00:42:42.369

Kirstin Weeks - Bio Studio: so I think there's a couple more kind of design technical questions. I might take those now and then we can go back to the the ones that are more about um kind of public engagement. So

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00:42:42.380 --> 00:42:55.540

Kirstin Weeks - Bio Studio: how frequent do you need to maintain this roof to get it established after the planting gets established? What is the anticipated maintenance requirement? So um

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00:42:55.620 --> 00:42:57.800

Kirstin Weeks - Bio Studio: there uh

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00:42:57.860 --> 00:43:03.799

Kirstin Weeks - Bio Studio: the intention I did. We didn't actually put in the and any example images here. But

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00:43:03.810 --> 00:43:23.739

Kirstin Weeks - Bio Studio: the intention of how to put these plants in is actually as part of a seed of mat, so that we have full coverage of the of the soil, layer right from the beginning, so that kind of takes the place of molten away because it's um fully fully covering the the soil. Um,

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00:43:23.870 --> 00:43:28.659

Kirstin Weeks - Bio Studio: and for you know, reducing evaporation from the roof.

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00:43:28.680 --> 00:43:42.090

Kirstin Weeks - Bio Studio: Uh, we are expecting that the maintenance will need to uh in the long term, is kind of a quarterly meetings every three months or so. But in the at the beginning.

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00:43:42.100 --> 00:43:49.309

Kirstin Weeks - Bio Studio: Um, Rona is, you know, if it, or or assuming that Rona are the ones maintaining this, they're interested in coming out,

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00:43:49.660 --> 00:44:02.730

Kirstin Weeks - Bio Studio: you know, every couple of weeks for the first two months, and then maybe monthly. Uh, until everybody is happy that everything seems stable and and um then then proceeding, maybe

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00:44:03.090 --> 00:44:06.739

Kirstin Weeks - Bio Studio: after the first six months to a year to more of a quarterly.

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00:44:08.360 --> 00:44:09.740

Kirstin Weeks - Bio Studio: Um,

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00:44:10.160 --> 00:44:12.369

All right, let's see.

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00:44:12.540 --> 00:44:27.010

Kirstin Weeks - Bio Studio: And then how long does it take to install? Uh, we think that the install for one of these canopies will probably take about two days. They're um. They're not too big. So uh yeah, probably just about two days.

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00:44:27.890 --> 00:44:40.169

Kirstin Weeks - Bio Studio: Let's see. So let's now go to. I think there was one other schedule related. When will the Mon Montgomery Market Canopy project done, and the station entrance reopened.

238

00:44:40.300 --> 00:44:55.179

Cameron Bauer: Tam. Do you know that? Yeah, we're the our first two canopies have involved fair amount of learning curve on them if they take a longer than we would have like, but for the first two we're hoping to by the end of the year. But they will be done.

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00:44:56.870 --> 00:45:08.700

Kirstin Weeks - Bio Studio: Okay, and then um. We have a question about what are some arguments from the public who are against the living roofs? Project? Have we got opposition? And if so, what's it about.

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00:45:09.320 --> 00:45:37.650

Amber Hasselbring: Uh, I I could take that one if you want. I I know that we will probably get more commentary from the public. Once the pilots are installed. But right now the project is still in design phase. So we're getting some comments from Bart that we really want this project to be successful. So we're not rolling out all twenty-one canopies at once. We're doing these two pilots and we're we're giving it six months to a year to see really how things go,

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00:45:37.840 --> 00:45:50.920

Amber Hasselbring: and we're trying to be cautiously optimistic about that other feedback we're getting is really make sure to use native plants and public projects. We We all understand the benefits of native plants. And

242

00:45:50.930 --> 00:46:05.180

Amber Hasselbring: uh, an earlier plant list that nature in the city had this nectar focused, and it didn't include all native plants. So we're really trying to focus on as many needed plants as possible. That that we know will um have success on these canopies.

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00:46:05.250 --> 00:46:09.350

Amber Hasselbring: Uh, but we'll we'll see. I mean, I think, that

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00:46:09.490 --> 00:46:16.749

Amber Hasselbring: the other concern I can anticipate is budget, and and you know why I start spending this money on something like this,

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00:46:16.760 --> 00:46:45.430

Amber Hasselbring: but that's part of the mitigation processes that the trees needed to be removed, and the public needed to see that part was willing to do something to to make up for that tree loss to the city. So I think we'll have some some arguments in favor in our pockets there as well, but we really uh hope that you can all help us be advocates, for why this project should to carry on amber. The one other thing I would add to that in the

246

00:46:45.440 --> 00:47:03.090

Steve Line - VIA - Perkins Eastman: in terms of anticipation. It's not all green roofs. Um! All healthy green roofs are green, and so there are certain um expectations that some of the plantings might go brown, or just as part of the native in their natural um progression. So

247

00:47:03.120 --> 00:47:13.369

Steve Line - VIA - Perkins Eastman: not everybody understands that. So we we anticipate either getting ahead of that or just getting input from the public on how big of an issue Is that?

248

00:47:13.900 --> 00:47:27.620

Kirstin Weeks - Bio Studio: Right? Yeah, We hope hope to have good understanding that this is a natural system, and you know these plants have cycles of growth and seed, and you know, inescence, and that's normal that it won't. Look,

249

00:47:27.630 --> 00:47:36.309

Kirstin Weeks - Bio Studio: it won't. Just look springery and all year round, and at the same time we're planning to irrigate, because we know that you know it's it's not really going to work out for

250

00:47:36.430 --> 00:47:47.060

Kirstin Weeks - Bio Studio: all the plants to be totally dry in the in the dry season. Um, Lizzy Hirsch asks a makes a comment as the question. That is, I think, relevant to this discussion, which is,

251

00:47:47.070 --> 00:48:06.549

Kirstin Weeks - Bio Studio: uh excited about adding more places for habitat. How was the plant palette developed? Did you consult with the California Native Plant Society. You're going to Chapter. We at public Works are developing a one acre, market main and deal that will be planting for habitat. So, interestingly enough, we really haven't heard, you know, any uh

252

00:48:06.560 --> 00:48:13.110

Kirstin Weeks - Bio Studio: opposition particularly so far uh the closest thing to it has act was actually

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00:48:13.120 --> 00:48:29.469

Kirstin Weeks - Bio Studio: from some members of um of the Native Plant Society kind of saw some earlier uh, some early. I like an earlier plant list that was not a recommended plant list, but was a plant sort of a record of where tiger, small tail butterflies had been seen.

254

00:48:29.480 --> 00:48:46.679

Kirstin Weeks - Bio Studio: Um in the past, and many it it has been seen on many plant nectar on many plants that are not native plants, and they went Wait, we're not planting. We're not going to plant those right. Uh and um it. It worked out very nicely because they were able to give us some recommendations uh

255

00:48:46.740 --> 00:48:59.389

Kirstin Weeks - Bio Studio: for some additional native plants that that would likely do well in this kind of urban setting with with shallow soil needing shallow roots. So, um, we're actually going to be updating our plant list

256

00:48:59.400 --> 00:49:09.450

Kirstin Weeks - Bio Studio: uh, based on some of those recommendations soon. Um! But other than that I mean it's the the plant list so far has been a combination of um,

257

00:49:09.460 --> 00:49:28.570

Kirstin Weeks - Bio Studio: mostly nature in the city, and by a studio, and Rona's experience related to what, what will the butterflies be able to use? What will do? Well on green roofs. Um kind of you know what will Ha! What will, what will be have um good sort of aesthetics and and

258

00:49:28.590 --> 00:49:34.419

Kirstin Weeks - Bio Studio: um activity in each season uh what won't Use too much water. Those kinds of criteria.

259

00:49:35.610 --> 00:49:41.819

Kirstin Weeks - Bio Studio: Uh: okay. Let's see what else we have. Lots of good questions. Um.

260

00:49:43.960 --> 00:50:01.580

Steve Line - VIA - Perkins Eastman: Oh, you're waiting to. I'm going to pick one Christian just to if I can, and that's um nice for the public to actually see the green roofs. So not necessarily part of the pilots yet, and Cam can talk about this, but the concept always was to possibly have cameras up here.

261

00:50:01.590 --> 00:50:08.639

Steve Line - VIA - Perkins Eastman: Um, and then be able to, as part of our public private partnerships be able to,

262

00:50:08.650 --> 00:50:25.380

Steve Line - VIA - Perkins Eastman: um, you know, Have a website or something of that um help to be able to um look up there once in a while. So that's that's been part of the concept. The infrastructure, again, is been put in place to support that in the future. So that's something that we can

263

00:50:25.480 --> 00:50:26.629

Steve Line - VIA - Perkins Eastman: um

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00:50:27.530 --> 00:50:28.569

Steve Line - VIA - Perkins Eastman: talk about.

265

00:50:31.510 --> 00:50:40.319

Kirstin Weeks - Bio Studio: All right, Susan. Uh carousel from native Plant Society is putting some really helpful comments in the uh

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00:50:40.370 --> 00:50:42.599

Kirstin Weeks - Bio Studio: in the chat here.

267

00:50:43.070 --> 00:50:53.959

Kirstin Weeks - Bio Studio: That, and one of them, I think, is helping answer the previous question from Alameda to about emphasizing the need for understory plants for trees to be drought, tolerant and climate resilient.

268

00:50:54.150 --> 00:50:59.819

Kirstin Weeks - Bio Studio: Um, as well as as well as using local natives in all publicly funded projects.

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00:51:00.130 --> 00:51:05.970

Kirstin Weeks - Bio Studio: Um and she's got put it. She posted some those resources from Sfi that I mentioned to thank you, Susan.

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00:51:05.990 --> 00:51:10.529

Kirstin Weeks - Bio Studio: Uh, let's see what else Laura has chimed in here, I think.

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00:51:11.180 --> 00:51:30.850

Kirstin Weeks - Bio Studio: Is there a consideration of how shading will be different on each side of the street. Uh, yes, so another refinement to we're aware that there'll be more shading on the north side than sorry on the south side than the north, because of the tall buildings adjacent. And so, um I

272

00:51:30.860 --> 00:51:44.649

Kirstin Weeks - Bio Studio: I am familiar with, with, uh, with assessing sunlight, sun hours for buildings and for surfaces like this. So one of the additional measures in that's planned for the next stage of design is to

273

00:51:44.750 --> 00:51:54.209

Kirstin Weeks - Bio Studio: calculate the sun hours, and then tune our plant lists uh to be more appropriate to greater shade on one side and greater sun on the other.

274

00:51:56.170 --> 00:51:58.790

Kirstin Weeks - Bio Studio: What else

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00:51:58.980 --> 00:52:07.230

Kirstin Weeks - Bio Studio: mentioning to Bart. Please budget to to and maintain for trash and recycling things like they do in Europe. That's more of a station

276

00:52:07.270 --> 00:52:16.590

Kirstin Weeks - Bio Studio: note um pre-ground maps in cocoa core. I think in this case we're not going to do that. Rather, we're thinking of the C to Matt approach

277

00:52:16.950 --> 00:52:18.620

Kirstin Weeks - Bio Studio: um

278

00:52:20.650 --> 00:52:50.639

Amber Hasselbring: do. I can take the one about how did we all get into our career pad? But I think that we we've all taken different routes. There's ways to study this, and and in my case I volunteered for organizations that really inspired me, and then sort of find a found a way to work for them. So, showing up and and looking. Does anyone else? Maybe? K: you want to take how how you got into

279

00:52:50.650 --> 00:52:53.020

Amber Hasselbring: to planning and environmentalism?

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00:52:54.330 --> 00:53:11.379

Kay Cheng: Um, sure. Um, yeah. I studied Urban planning for undergrad and graduate school um focused on transportation and urban design and spend a lot of years at s of planning and by

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00:53:11.450 --> 00:53:19.660

Kay Cheng: um, you know, just in the nature of finding it. There's so many different fastes from housing to transportation to

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00:53:19.670 --> 00:53:47.209

Kay Cheng: public space design to. They'll need all this kind of different things, but there is a lot of overlap, so I feel like that has allowed me to explore different avenues. And then, like today, when they're over, they you often find they're overlapping Right? It's not like. Oh, I only study planning, and I only think about trains. Why, I I started because I like trains. But how do you get your trains? You have to enter a station. Well, then, that also very green group things. So there's a lot of

283

00:53:47.310 --> 00:53:55.379

Kay Cheng: um, I think if you study something that you're passionate about, there's like you'll see over the years. There's a lot of overlap um for the different things.

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00:53:55.450 --> 00:54:05.200

Kay Cheng: Um, But I think, working at for me. It's been helpful to kind of cross train, So we got a private company, Private Mobility Company.

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00:54:05.220 --> 00:54:15.110

Kay Cheng: I was on transit writer board, working with the nonprofit understanding advocacy side understanding the city side. So um,

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00:54:15.460 --> 00:54:18.839

Kay Cheng: I think you know, if you're interested in a topic

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00:54:19.380 --> 00:54:43.920

Kay Cheng: like like the seemingly simple. A green group can be out of board structure. There's so many different people that touch it. And so I think there's just different avenues to figure out. Well, what are the rules that allow this thing to be there? Who are the people who push for those rules to be there who design the thing, and who's going to maintain it and everything in between. So

288

00:54:44.240 --> 00:54:47.960

Kay Cheng: yeah, I don't know if they answer the question, but at least that's um.

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00:54:47.990 --> 00:55:01.670

Kay Cheng: That's how I find that found myself here, and then you meet cool people like Kristen along the way and work on things at Sp, and they just keep coming back to you, and then you get to meet more and more cool people. So yeah,

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00:55:02.920 --> 00:55:04.579

does anybody else want to

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00:55:05.450 --> 00:55:09.150

Kirstin Weeks - Bio Studio: make a comment on how they got into doing this,

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00:55:09.240 --> 00:55:21.530

Steve Line - VIA - Perkins Eastman: so i'll just mention that very early my career, I mean as early as I can say. I started an architecture, and I

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00:55:21.990 --> 00:55:41.839

Steve Line - VIA - Perkins Eastman: well over thirty years ago what two of my very first projects we had. But in those days we called sod roofs, so on residential projects. And so we were doing green roofs um as part of our housing work way back in the day, and just to stay passionate ever since. And it's so exciting to see

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00:55:41.850 --> 00:55:57.089

Steve Line - VIA - Perkins Eastman: that you know that you know through the generations it's still, you know, highly valued, and I think there's a lot of lessons learned. But, um! So it's exciting as this is, It's been something that I've been passionate about my whole career.

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00:55:57.140 --> 00:56:03.140

Steve Line - VIA - Perkins Eastman: And so architecture isn't always associated with green roofs. But in my case it has been

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00:56:06.760 --> 00:56:19.630

Cameron Bauer: okay. I I could say that I I actually knew that I wanted to work for part before I knew what I wanted to study in school. Um, you know, I was really big on air, quality and energy, independence.

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00:56:19.640 --> 00:56:27.089

Cameron Bauer: He used that kind of stuff, and so that I just chose a Major, which I thought gave me the highest probability. Get a job apart. So that's what I did.

298

00:56:29.950 --> 00:56:49.019

Kirstin Weeks - Bio Studio: Yes, and I My background is eclectic. I've been a sustainability consultant mainly with some specialty and green roofs and living systems. My whole career and I got there. But I, my undergrad, is in environmental studies. I have a masters in building science, and then I mostly learned by doing just so. My advice is, find Find the

299

00:56:49.210 --> 00:57:07.160

Kirstin Weeks - Bio Studio: figure out what you are interested in, and find a place you want to work and just call them uh and uh, you know, Chase chase the experience you want in that way. Um! And this is a good segue. Also there was a second part of the question which was about: How can people get involved

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00:57:07.170 --> 00:57:23.129

Kirstin Weeks - Bio Studio: uh in this kind of work? So I think this would actually be a good moment for uh, perhaps Amber, to mention ways that individuals can get involved with these

types of projects with nature in the city potentially, and other organizations as well as with this particular project.

301

00:57:23.610 --> 00:57:38.400

Amber Hasselbring: Thank you. Thank you. Uh. The best way to become involved in this project is to become a member of nature in the city at Jessica, so generously put our link to membership in the chat, so you can use that link there

302

00:57:38.410 --> 00:57:50.280

Amber Hasselbring: mit Ctl. And we are also launching a corporate sponsorship campaign in this, in the early part of two thousand and twenty-three, to help us install and maintain these rules. So if you know of great people, one hundred and twenty

303

00:57:50.290 --> 00:58:03.089

Amber Hasselbring: at you know, a corporate foundations or marketing departments who are looking to make an impact on the city of San Francisco. We are all ears so you can email us and find us. We are at nature in the city dot org.

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00:58:03.100 --> 00:58:22.419

Amber Hasselbring: So check out our website and get in touch with us if you have some feedback, and then the other way is advocate, you know. Keep talking up the importance of this kind of project. And um, when when people bring up criticism and counter it with some of these great arguments you heard today. Uh, and just uh thank you for all being here today.

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00:58:23.120 --> 00:58:41.099

Kirstin Weeks - Bio Studio: Yes, uh, and so I think we're. You know we we just have a minute left. Uh, we're. We're a good time to maybe close. So I just want to kind of acknowledge the you know. This is this is one project with, you know, and the pilots are, are, you know,

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00:58:41.110 --> 00:58:57.289

Kirstin Weeks - Bio Studio: not a huge area. But uh, this is one step participating in the right direction, and a a really big picture of how um how we deal with big issues like climate change and equity

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00:58:57.300 --> 00:59:18.150

Kirstin Weeks - Bio Studio: and um human health and well being and wildlife habitat in the city, right. That transit is a huge piece of the puzzle. Good good quality transit is huge piece of the solving. The climate puzzle, which also helps uh helps nature. Um Nature in the city is a huge part of Pete of health and well being um,

308

00:59:18.160 --> 00:59:34.640

Kirstin Weeks - Bio Studio: and you know this is a part of the city that um really needs benefits and all those areas. So uh, we're really proud to be a part of um, you know, doing good on all those different levels, and uh hope that all of you uh

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00:59:34.690 --> 00:59:50.740

Kirstin Weeks - Bio Studio: our uh, I know that I know that lots of you are are really working hard on making a positive difference in the same areas. So thank you for the work that you're doing. Stay in touch and um, We thank you very much for attending today.