

Smart Growth on the Edge:
Suburban Planning and Development for the Next 20 Years.
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Panel 1:

THE CHANGING EDGE: A NATIONAL PERSPECTIVE

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Speaker: Peter Calthorpe, Calthorpe Associates

Panelists: Marilee Utter, Citiventure Associates

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DANIEL VAN EPP: Good morning. My name is Dan Van Epp, and I'm pleased to join you this morning. Although, as I was thinking about my opening remarks last night, I noted that it's normal to say, "I'm pleased to join you." And I realized that I'm not sure I'm pleased to join you, because this is a tough subject. What we have in front of us today is one of those subjects that just really, really seems to invite a lot of controversy. It needs a lot of work, and I will echo your introductory speakers and say that it sure is reassuring to see that there are so many people in this room who are focused on actually improving what we do at our edges.

Now, my career has been dedicated to the development of master-planned communities around the country. Particularly this last 10 years, I had the pleasure to be president of the Howard Hughes Corporation in Las Vegas and watch after the development of Summerlin, the 22,500-acre community that I think many of you, or some of you, are probably familiar with if you haven't already visited there. It is a community that was designed in its infancy to house about 180,000 people and 60-some-thousand units. It's about two-thirds of the way finished right now, and has really gone a long way, in my mind, to making a great master-planned community kind of environment. But having said that, within that community, just taking that community as an example, it was the fastest-selling community in America for 10 years running. The ULI named it the best new community in America a couple years ago. We had great everything. We had great planners. We had great academics helping us with the formation of the community. It's some of the best landscaping you'll see. Great entries. We had great walls. We had great gates. And adding all that up together, after having left that environment about six months ago now, and having had that six months to reflect, I don't think we did what we need to do. And as I've taken that six months to reflect and look around America, not only at that community, but others that I've participated with, and the many, many communities, many, many suburban edges that I've visited, what we've done in the last 50 years as an industry -- though in most cases, I think is very well-intentioned -- is really dismal.

Really, it's not working. And I think the best thing that I can say here is that you're hearing more and more of us as a group saying, "We've got to do it differently." And today, I think, is a wonderful opportunity for us to talk about how we might do it differently. How did we get here to this particular panel? Well, you know, about 20 years ago in our country, environmentalists started rising up and challenging developers and saying, "This is not right. We're burning up all of our ground and we're not doing it in a sensitive way." And there followed quite a battle. And certainly, to some degree, that battle goes on. But, about 10 years ago, we had the Smart Growth movement,

which at its base was a lot of different groups coming together. You had environmentalists on the one side, most notably from the EPA. You had the development community on the other side. You had academics. You had pretty much everybody focused on "How can we develop in a better fashion? How can we accommodate growth? How can we admit that there's going to be growth and yet do it in a better way?" And out of that came the Smart Growth movement. And for the next several years, in the mid-nineties, as we all tried to grapple with what that meant, we began to realize that Smart Growth, if nothing else, was the utilization of passed-over sites first and foremost. "Let's infill everywhere we can. Let's use infrastructure that's unused or underused, and let's do it in an environmentally sensitive way. Let's increase density. Let's pay attention to jobs and housing balance." All those sorts of things that you've heard.

While there's not one accepted treatise on the subject, if you read what's been written, you'll see that those are some of the most common elements. Well, about five years ago, a group of us came together, principally the group that were involved in the master-planned community business around the country, and most of us, by the nature of our business, are dealing with pieces of property that are at the edge. They're larger-scale pieces of property. And we said, "Well, so our growth isn't smart, then. So our growth is, in fact, dumb growth. Well, we don't necessarily buy that." And thoughtfully, we sat down and said, "Well, you know, there are things that master-planned communities, for example, do that actually would be smart and fill some of the tenets of smart growth." For instance, we do tend to utilize our infrastructure as it's put in place. The investment is matched with utilization. Some of us even actually spend a lot of time focused on balancing housing and jobs. Take an example, Irvine, in your own backyard here, where houses and jobs are somewhat balanced. Those kinds of things led us to believe that some of what occurs at the edge is Smart Growth.

Then, about three years ago, as sort of an outgrowth of this thinking came some rather scholarly work that said, "Well, you know, gee whiz, it's pretty clear that we can't accommodate all the growth that's going to occur in this country." And by the way, growth is not being created by the people in this room, whether private or public. Nobody in this room is creating it. The growth is going to occur. And, to believe that it's all going to end up on infill sites is incorrect. It simply can't. I mean, there's not enough infill space. So we're back to this notion just a couple of years ago where you saw it sweep across America where everybody said, "(a) there's going to be growth; (b) it all can't go to infill sites; and (c) that means it's going to go to the edge." And then there's that big old (d) that I've already mentioned, which is, "What we are doing at the edges just isn't right."

So it was with a great deal of pleasure a year ago that I took a call from ULI. I was trustee of ULI nationally, and our then-chairman, Harry Frampton, said, "We've got to address this edge subject and take it on as one of our principal goals during my tenure with ULI." He asked me to come to Washington and put together a group of folks from across all walks of our business and spend some time dealing with how we could make growth at the edge smarter. And I thought, with pleasure and enthusiasm, this was going to be great fun.

So we assembled a group of about 20 of us. We had planners, folks on this panel that I will introduce in a moment. We had public sector, we had private sector, developers, everybody. And I thought, "Boy, we are going to put all this brainpower in the room for two days, and

there's just no doubt in my mind that at the conclusion of two days we are going to have the answer." Well, we did that. And in this brochure that you have a copy of -- that I really do encourage you to read at your leisure -- we have "Smart Growth on the Suburban Fringe - Ten Principles."

These were 10 principles that I can tell you were the result of an awful lot of debate, an awful lot of creativity, and an awful lot of contention. It's not like we understand, or have in this, the answer to what should be done on the edge. But I think there are a couple of things that are important to mention. One is that everybody in that group recognized that something has to be done differently. And two is that, in the 10 principles, there are threads of ways we can begin to handle things differently on the edge.

So having said all that, what I want to do on this panel is -- first, I'm going to introduce our panelists in just brief form. Several, as I've mentioned to you, were actually participants in the policy forum, last June at ULI. And I am going to ask them to spend a minute or two giving you their impressions of that forum and thoughts. Then most importantly, I'll be happy to introduce Peter Calthorpe, who has about a 30-minute-long presentation on his thinking on this subject. Following that, we'll spend a couple of minutes with each of our panelists responding or reacting to that presentation. I think that's probably going to conclude our time.

In order to spend just a very quick moment introducing our panelists, I'll start right here with Peter Calthorpe, who, on the one hand, needs no introduction. On the other hand, I've got to tell you, this is one brain. I mean, you all know him here in California. He has done so much for our industry and written so much and has been so creative in his developments. He's now off in Dubai and trying to straighten out that mess or, actually, keep it from getting to be a mess, right? So we look forward to his comments.

Ted Bradshaw. Ted, will you raise your hand. Associate Professor in the Human and Community Development Department, University of California, Davis, and Chairman of the Community Development Graduate Group. Happy to have you, Ted.

Don Brackenbush, principal in the real estate advisory services firm of Goodell, Brackenbush in Pasadena and, also, head of the Ahmanson Ranch development in Ventura County during its period of development.

Frank Martin, developer, owner, as well as president of Martin Community Development, LLC, in Boise, where he is planning a planned community as we speak.

Marilee Utter, president of Citiventure Associates in Denver. Marilee has done quite a variety of things through her career, much of it focused on urban redevelopment and transportation-related issues. I thank you all for being with us today.

And if I could just start -- Frank, how about with you?

FRANK MARTIN: Sure. Thank you very much. Thank you for the invitation and the opportunity to be with you today. I very much enjoyed the two-day session last June. There was contention, but a couple of things came out of that that occur to me.

A regional approach is absolutely necessary to plan for transportation, schools, and other essential public services. Obviously, the scale of development, regional attitudes and politics, development codes, and regulations and market conditions will have a lot to do with what you can accomplish. And, obviously, a plan is only

as good as its execution. Many of these principles are not new. In fact, Peter had, I think, a big share in a Newsweek article published back in May of 1995 called, "Bye-bye, Suburban Dream - 15 Ways to Fix the Suburbs." What is really different, in my mind, today from 10 years ago is that there has been significant buy-in by many organizations and individuals. That buy-in embraces many of the principles published in this new ULI publication, as well as what appeared in Newsweek ten years ago. There's an increasing awareness and demand for better-built environments, which have resulted in more examples on the ground. In addition to the Urban Land Institute, which has taken the lead on the challenges and opportunities on the edge, other prominent organizations include the Conservation Fund, the National Association of Home Builders, the National Association of Realtors, the American Institute of Architects, and the American Planning Association.

Most importantly, more developers, builders, architects, planners, politicians, regulators, and lenders are also buying into these principles. I am optimistic that at least we've turned the ship in the right direction. We've got a long way to go.

Just one anecdote. As a young kid -- and this is more than 50 years ago -- I spent many summers in Radburn, New Jersey, at a relative's home. Even then, I realized that this place was special -- with its walkability, its parks, its village atmosphere. Little did I know several decades later that I would be trying to develop a community as special as Radburn, New Jersey.

DANIEL VAN EPP: Thanks, Frank. Marilee, would you like to add something?

MARILEE UTTER: I am one of those people that was invited last summer and couldn't understand why. I'm a Southern California native. I grew up all over California and, like any self-respecting young rebel, rejected that and ended up living in the historic district in downtown Denver, Colorado, rebuilding the urban fiber and doing all the urban infill stuff. Then my work took me to the tie between land use and transportation. Now I focus a lot on building villages around transit systems. One of the things that I've noticed is transit systems don't just all stay in the inner city. They go into suburban areas.

One of the things I've learned is that what people want everywhere is the same. The desire for community is profound. "Community" meaning feeling safe, knowing your neighbors, being able to go to the store and have them recognize you. It means your children can go to neighborhood schools, that you don't have to drive a long way to go to work. It's a sense that you belong, that you're making a contribution. And that's the same no matter where you live, if it's in the inner city or if it's in the suburbs. What I've also learned is that many people don't want to live in the inner city. They like the suburbs, but they don't like sprawl. So one of the things we were talking about -- and it was kind of a big "ah-ha" for me -- was that when we are looking at the edge, the fundamentals really are the same.

What are the principles that we talk about -- building mixed-use places, putting transit in, being environmentally sound. They are all the same no matter what context you are talking about. What's different about a lot of the suburbs, though, is they think they are going to stay on the edge, and they are not built with the expectation that they are going to become infill. I think that's where we are making a lot of our mistakes. We aren't thinking ahead. We talked about that a lot in our group last June.

I would say the two principles that really struck me were, one, plan for transit. I am going to talk about that later. It seems so impossible in a suburban environment, but it's so critical and can be so powerful if you start early enough. The second one is the mixed-use modes. I worked in government a few times, and one of my jobs was at the Transit Agency. What would happen all the time was that developers would have master-planned communities. In Colorado, we're sprawling like mad because there's lots of land. The developers would be ready to go. And the local jurisdiction would say, "Oh, you know, we ought to have one of those transfer developments or a center or something. Go see Marilee over at the Transit Agency." So they'd show up, not in a very good mood, because they were ready to go with their project and now I am a potential holdup.

And I'd say, "You got a mixed use?"

"Oh, yeah. We got mixed use. This district is the residential. This district is where the office is. This district is where the shopping is."

And all I said was, "Can you walk anywhere? Can you walk from your home to the job to ..."

"Oh, no. No. No. We don't do that. We can't do that," the developers would say.

So, what I found over and over is that there is demand in the community for integrated development. Master-planned communities, suburban, urban, it doesn't matter. The demand from the consumers is there. The reason it doesn't happen is because the developers are specialized and they don't do all aspects. They want to sell off pieces. "This part's for the retail guys. This part's for the residential guys. That part's for the office guys." It's much simpler for them, but it doesn't make the kind of places that people want to live. And that's really a big part of our challenge. We have to overcome that and make the good places in the suburbs.

DANIEL VAN EPP: Thanks, Marilee. Don or Ted, do you want to speak before we go to our speaker?

TED BRADSHAW: Thanks. I am Ted Bradshaw, and I have had the pleasure of working very closely with Ed Blakely on a number of projects in rural California, urban projects, and I am pleased to be here helping think about the suburbs. We're going to be talking a lot about Smart Growth today. And I want to kind of broaden the debate just a little bit. I really think that as we look for sustainable suburbs, as we look for sustainable communities into the future, as we look for communities that have the community development character that is really what we really need to make our communities special, we have to see smart growth as one leg of a three-legged stool.

I think that the other two legs are, first, affordability. If we don't have affordable communities, if we don't have affordable housing, if we don't have places where things run efficiently so it's competitive with the rest of the world, we are going to lose out. It's not going to work. Affordability has got to be on the agenda.

The second thing is energy efficiency and the environment. Smart growth does protect the environment, but it's really amazing to me how little play energy efficiency has in this. I have been doing projects on super energy efficient housing. I just published a book on the energy crisis. What is really interesting to me is that we can build housing in California that stays off the grid at peak for cooling. And it doesn't cost any more. This really efficient housing requires new

ways of behaving about the building process. And we need to set the goals, not just to meet Title 24. We've got to go all the way to say, "Hey, we really need to get all this new development off the grid, because the grid is where the cost is."

So many people tell me, "We pay \$300 a month for our air-conditioning during the summer." You can pay zero for it or nearly zero, and especially keeping it off the grid, because insulation is cheap. It's just air. Insulation is really cheap, but we don't build with these kinds of goals in mind. So I want to kind of throw onto the agenda to think about how can we blend these issues of affordability with energy efficiency? And, obviously, energy efficiency is a key to affordability. When you pay \$50 a month instead of \$300 for your utilities, that is a huge accomplishment. When you don't have to pay for huge amounts of public infrastructure to deliver water so that you throw it down your badly designed landscaping, that is an affordability issue. And I think we really need to embrace these goals. Right now, there is silence. The energy people talk to energy people. The affordability people have their own world. These Smart Growth people don't talk to them either. So I think we really need to see this as a multi-pronged approach. Thank you.

DANIEL VAN EPP: Don?

DON BRACKENBUSH: Yes. Just very quickly. I participated as the Chair of the Urban Land Institute for the L.A. District. And we did a very interesting program, which several folks in the audience were part of; Katherine Perez and Dowell Myers and others. It was called "Reality Check." I think what I would like to emphasize is the need for density.

Reality Check was a game. It was a visioning game where 200 people -- 10 tables, 20 people at a table -- were given a map of the region. They were then given the land use footprint and the chips that represented the 20 years of growth at the current densities that we are presently developing. The game was to do a regional plan; how do you think these chips should be distributed? What the participants realized very early on in the game -- about 15 minutes into the game -- was that the chips won't fit. You cannot physically get the chips on the map. I was the banker and one of the alternatives was you could come to me and trade your chips in for higher density. Every table had to trade in more than half their chips.

This means we have really got to come to grips with the reality of the densities that we're dealing with. Now, I had a chance to read Peter's paper before you all, and he really does deal with that subject. And I think that is the subject that we have to focus on.

DANIEL VAN EPP: Thank you, Don. Peter, it's all yours.

PETER CALTHORPE: Should I try to do a little catch-up in terms of time here? This is a fabulous panel and, actually, I'd rather just get right on to having a discussion with them. But let me put some stuff up on this screen. You know, it's strange for me to actually have an organized talk. And I may be stumbling, because I rarely have organized talks, but I've got a paper there. The structure of the paper is very simple. It says that we need two things. We need better and more powerful regional planning. We're starting to have it, but it really hasn't gotten the teeth that it needs. It's starting to get buy-in. Everybody understands that the regional visioning, regional structures, regional growth strategies, and regional implementation mechanisms are

really key. We're not quite there in terms of the politics and the financing to make that happen. But I think, as I watch things evolve now -- I'm getting older, and I see what happened 10 years ago and what's happening today -- I can see in 10 years we will be there on that matter.

We also need -- and I think this is right at the edge right now -- a new paradigm for how we build new growth areas. And by that, I'm going to get into a very specific set of concepts about circulation systems, because in the end, whether you like it or not, the primary framework for growth is our circulation systems -- not the open space systems. The fundamental set of assumptions about the nature of the roads and the location of the transit -- the hierarchy of the roads -- really sets a pattern that's hard to break with individual communities. So the solution doesn't lie with enlightened developers doing really good community designs. They are going to plug into a larger circulation network. If it isn't reformed, I don't think we're going to make the changes we need to make. And so I have a proposal for a reformation there.

I wanted to cover quickly some of the regional plans and then move on to what I call the urban network -- the strategy for how to rethink the framework of growth at the periphery. We have done regional plans in many cities. Of course, SCAG's Compass project for Southern California is the largest. The growth rates here are astounding. You are talking about adding 13 million people. It's as if you're adding two Chicagos, dropping two Chicagos into Southern California. This is a monumental challenge. And the shape of the region -- it's fascinating to me.

Everybody thinks of Portland (Oregon) as the top-down, cutting-edge regional planning area with its urban growth boundary. L.A. has a firmer urban growth boundary in its natural topography. The reality here is that there's already more infill and redevelopment happening because of this pressure cooker-type configuration than is even planned for Portland. Portland shoots for 40 percent infill and redevelopment, and the L.A. area is already achieving over 40 percent infill and redevelopment. So this is an area that is at the cutting edge whether it likes it or not. It had a very hard time complying with air quality standards, because, as is always assumed, regional planning bodies cannot manipulate land use. That's the political domain, the pride, of local jurisdictions.

That's a huge problem. At the regional level, if there can't be an orchestration of land use and densities and some of the things you guys talked about on the panel, there's really no way to fix the system. Some elements of land use have to migrate up the ladder to a regional visioning scale. And you can see that there are bones that are very clear that allow not just regional planning, but regional design. There's a physical structure to this in terms of the flow of goods through the region. It defines where the major shipping routes are, which, of course, are where the jobs are going to land. And, of course, the relationship between housing and jobs is a critical one from a land use perspective. So there's no question that these things all knit together.

The other thing that emerges is that airports are now becoming the epicenters of regional growth. The airport in Ontario makes the Inland Valley really key to the strategies for growth and the success of growth in this particular region. I talked a little bit about these boundaries, and they're there. They are a very effective urban growth boundary. They are going to cause limitations on growth. And I think

it's a healthy thing in many, many respects. There are some plans to allow growth up into Palmdale, and, of course, there are some opportunities down to the south beyond Palm Springs. But the reality is the pressure for growth is within the limits of the mountain ranges here and it needs to be dealt with here.

In the inner areas, in the basin, the opportunity to basically rebuild the old streetcar suburb is there. Those cities had streetcars until the fifties, when they were ripped out. The conversion of many of the streetcar avenues into boulevards with bus rapid transit, which is a very affordable, very important component of how we see growth happening, is already well underway. Many people are absolutely astounded when I show this slide. You add together all the planned transit networks in the region, and you look at the sheds, the walkable sheds around those areas. Then you do a land use plan that does what Marilee advocated, which is focus development to those transit zones. With this kind of plan, you can get over 43 percent of the new households within those transit sheds. So even though it's the automobile city, the reality is it's going to become actually a model for transit-oriented development at a regional scale. The reality is that a very high percentage of jobs and housing can land within the reach of currently planned transit networks.

Over 20 years, of course, more will, and can, and needs to be put into place. This is the notion of how that happens. And I think it does happen.

You have tremendous quantities of rights-of-way. There used to be streetcars on many of them. Putting transportation back in, or using bus rapid transit, can lead to the densification and urbanization of these areas. What I'm showing here is just a computer fantasy. But, it's also a development reality now in more and more circumstances. The impacts are extraordinary and this is something that people really do need to understand. Under current trends, the VMT, which is the vehicle miles traveled per capita, is really kind of the simplest signature of how a region is operating in terms of connectiveness and transportation efficiencies. The baseline, which is a kind of a compromised version of what the future is, comes down, because the population growth will force more density naturally. And then the growth vision alternative comes in even lower. So the reality is you are adding a huge quantity of population and you're improving transportation performance at the same time. The reality is growth can fix the problems, not exacerbate the problems. And that's the way we've got to see it.

We've got to see growth as a potential for rectifying ills rather than an extension, an expansion and amplification of our problems. The daily transit level is almost double in the scenarios that we have drawn for SCAG. But the point is that these Smart Growth principles really do deliver in terms of the overall traffic performance, air quality and other things.

How does it happen? Well, there's a very unique urban form right here in Southern California. It's the high-density corridor as we can see here in this aerial photo of Wilshire Boulevard in Los Angeles. You can't find this anywhere else in the world. This is a pattern for the infill component that's very important and that we're going to see more of. Maybe not this high, but we are seeing redevelopment and infill projects all throughout the valley now that have this particular character tied to transit. On the medium-density corridors, you're seeing this kind of thing happen all over the country. This is a plan we did in, I think, '94 for University Avenue in Berkeley. This shows

that you don't need 2,000 acres to get it right. You can do it piece by piece. And it's a very important complement to new growth at the edge.

This is the grand entryway to one of the great learning institutions of America, and this is what the street looked like, a lot of it underutilized. A companion to that phenomena was that it was the epicenter of crime in this particular region. The darker the color there means the increased crime rate. Here's University Avenue coming right down to the freeway and up to the university here, and these are all the pockets of crime that were sitting along that street. So as this area redevelops, this is the kind of stuff we have zoned for and is happening and I think happens now quite easily or a lot easier than it used to be. The banks still choke on the idea of the mixed use, but at the scale of these buildings, they are really dominated by residential, and the retail is a secondary factor in how they are underwritten. But this kind of redevelopment along the boulevards happens because of zoning, because of a vision, and because of transit. And it's made the whole place better. It's provided for the issues of affordable housing and transit-oriented housing.

Chicago is an example of a regional plan where you didn't have to look into the future for the transit network. They already had one -- 380 stations. Those 380 stations become the structure for the region. The performance, the travel distance per capita, goes down in the future and the congestion delay goes down in the future as Smart Growth becomes the framework for future development. Then there's the transit and walking. In Chicago, we are looking at over 16 percent of people walking and over 10 percent transit utilization. These are very significant numbers that have real impact on behavior and, perhaps more importantly, give people real choices in how they lead their lives and pay for their choices.

Finally, Salt Lake is an interesting example where we actually started that system of using the chips. It was a big wake-up call when people realized it really doesn't fit if we continue the current paradigm. But it's also important, I think, politically, to give people alternatives, to show them major comprehensive visions of the future and show them the consequences. The problem always is at the local jurisdiction where they are voting up or down on individual projects. They never see the cumulative impact of 10, 20, 300, 5,000 of these projects. When people begin to see the cumulative impact of all these individual down-zonings and NIMBY actions to reduce development potential, they begin to have a different attitude. I have seen this happen politically. Salt Lake was one of the places that you wouldn't say was at the cutting edge of Smart Growth in its predisposition. They had a kind of self-image of very large homes and very large families. But as they began to understand what the consequences of the future were, they really began to change their approach. So this is Scenario A and D. There were two in between. These alternatives kind of bracket what can happen at a regional scale. You go from 420 square miles of development down to 111 square miles. The impact on open space, environmental systems and infrastructure costs are apparent. But everybody says, "You can't do this because it doesn't fit the marketplace." Well, it turns out that Scenario C actually was the closest fit. The building community got very nervous about all this. They were quite threatened. They thought that it was going to push everything away from market-driven development types. So we let them hire a consulting firm to figure out what the future market demand for housing types was going to be. What the market study showed was that even in that Mormon territory, people are becoming empty-nesters. Even

with six kids, they finally all grow and leave home. New families are delaying childbirth because of economic matters. Young singles are in the marketplace. So there was an undersupply, a dramatic undersupply, of multifamily units. and the business-as-usual, Scenario A, only had 11 percent multi-family in the region. What they discovered was the market was demanding a much higher percentage of higher-density housing because of the shift in demographics. So, it turned out that this more conservation-oriented plan also was the one that matched the marketplace, a very important message to analyze and communicate as a framework, as a background, to the whole set of issues.

Infrastructure costs are an issue that caught the attention of the legislators, who were a very conservative group. There was on the order of \$15 billion spread in infrastructure costs between the sprawl and Smart Growth scenario here. Just the idea of infrastructure-efficient development is one that has to gain credence and importance. Then, the transit ridership. Once again, transit ridership proved to be a very powerful component even in a place where people didn't think it was going to be powerful.

Salt Lake adopted the quality growth strategy which has a layer demarcating the open space network, has a layer of transit and nodes that go together. Perhaps more importantly, a map that designates where the new growth areas are and where the infill and redevelopment areas should be. Seeing the whole thing as a balance between open space and redevelopment, adjudicating the balance and setting up standards for that balance are very important acts to begin to move through the political minefield that we all know exists around land use questions.

I'd like to dwell on the redevelopment of the old Stapleton Airport site in Denver for a minute. For me, it's both infill development and growth. Most significantly, it's a huge project. It does sit kind of at the edge, but also surrounded, so I can use it either way I choose. What's important about Stapleton is not only does it preserve about 40 percent of its land to actually recreate the environmental systems and drainageways that ran through it before it became an airport. It also operates at around 10 to 11 units per acre on average over the whole site. That's triple -- easily triple -- maybe even quadruple the normal suburban densities. I think it's important to realize that when people talk about density, they are not talking about high-rise. They are not talking about pushing people into housing patterns that they are not comfortable with. They are talking about something that has a lot of diversity -- the higher-density stuff next to the open space, single-family, cottages, a whole range.

Now, let's talk about a new way to look at the structure of our communities. One of my theses for the urban network is that we have to transform the way we think of our arterial network. It can't be just a conduit for cars. They've got to become the glue that holds communities together rather than the ragged edges that divide communities. Rethinking the arterial network is really the key. It begins to happen right here at Stapleton, not only with the boulevards, but also with the idea of taking high-capacity roads and splitting them into one-way couplets and also creating a grid of streets that allow more connectivity. The higher densities are at the nodes. This is a mixed-use retail with a grocery store area -- the village, the town green, with the condominiums around it. And this, of course, is the arterial, moving off of that town green. And you can see that rather than sound walls and turning our back, or just allowing strip commercial along the arterial, we're beginning to use the arterial as an address of real prestige. It's a grand boulevard.

Quite frankly, it works in the marketplace. All of that investment that we put into our primary circulation system can actually begin to add value to the private sector development that surrounds it rather than become a nuisance, which is the way we see our arterial network today. We see arterials as something that we have to create a buffer around and spend a lot of money landscaping our way out of. This goes to the density issue. We're all seeing around the country, especially in Southern California, the cottage -- the return of the cottage, the return of the bungalow. It used to be the starter home in Southern California and much of America, and it's going to be that again. It plays a very important role. Tragically, there are many communities that won't allow 4,000-square-foot lots. That's one of the battles that we have to confront. The market is there for this kind of housing. It doesn't create slums. It creates really vibrant, healthy neighborhoods. This is fascinating. This is a \$1.3 million home which is sitting one block away from these cottages, which are in the order of \$150,000 units.

The notion that we can't mix product types and densities is now debunked. Overall, I believe the numbers now are that Stapleton is commanding about a 15 percent premium -- isn't that right, Marilee? -- a 15 to 20 percent premium for the same house on a smaller lot than in a standard subdivision. The market is there for this kind of mix. We can mix densities. We can mix income levels and affordability. And I think that's really key. You see these three densities add up, when mixed, to that average of 10. And there are people that need each. These are affordable housing units.

Now I get to the meat of it. This is the problem; our arterial network. These are standards set at the state level for highways. If you think about it, the two biggest barriers I confront on a daily basis are, one, NIMBYs and, two, Public Works Departments. Those are the two entities that are going backward. Ironically, ten years ago, the development community wasn't particularly interested. The homebuilders didn't like this idea. And the marketplace wasn't introduced to it. All that has changed. And many elected officials now are pro-Smart Growth. You've got this array of implementers set up against the bureaucrats, who basically have a rule book about how these roads have to be built. You can't have parallel parking on them. They cannot be places for people to be -- a la what you saw at Stapleton. They have these road standards and they are designed for high speeds in all circumstances. It's rethinking this fundamental structure that I think is our next threshold.

This is what we've got, whether we like it or not. We have a freeway network. We have arterials. Then, we have the collector streets that sit inside them. The destinations, which really are the heart of our communities, are dribbling along these arterials. We all know that pattern. How do you reshape it? One way -- and this goes back to what one of the panelists already said -- cluster and create mixed-use centers. We need a simple network where we maintain a one-mile sectional grid -- no reason to give that up -- but locate the mixed-use centers where the retail wants to be, which is at the intersections. Lord knows I tried to shift the retail away from those points to more pedestrian-accessible locations. And I failed every time. At some point, you learn a lesson, you give up, and you go back to the drawing board, which is what we've done here.

There's a hierarchy of these mixed-use centers. Village centers, grocery-anchored town centers, have major retail, major jobs, higher density housing. We still have freeways, but we hope that these red

lines become boulevards and avenues rather than just arterials. The most important idea is the transit boulevard, the idea that transit is embedded and preconceived as part of a primary circulation system, rather than just added later. The notion is that this transit boulevard, because it's got either light rail or bus transit moving through it, activates major town centers, connects them with village centers, and also allows higher density commercial development to line that particular piece of the hierarchy. Now, the other very important element is what happens when you infill this area with the traditional new urbanist neighborhood, one with a quarter-mile walking radius. It turns out that one walkable neighborhood cannot support retail. As much as people would like to be able to put a beautiful little everything-you-need center at the center of that five-minute walking radius, it just doesn't happen given the nature of retail today. But we can create a network of what we call connector streets, which are more continuous than collectors and more frequent. Therefore, they disperse the traffic over parallel routes and they allow local trips to arrive at local destinations without ever using the arterial network. One of the problems with our current system is that all streets lead to the arterials before you can get to any destination. With this hierarchy, which is just a modification of the old-fashioned grid -- and it doesn't have to be straight streets; it can curve -- a resident can ride a bike or walk or drive along a two-way road and arrive at the village center without ever having to get onto the arterial network. It also places these retail clusters where they want to be, at the intersections. But these intersections also can be accessed by pedestrian, by non-auto or by auto from all quadrants.

One of the problems always is that the shopping center is in one corner of a major intersection. The other three quadrants can't get to it in a pedestrian-friendly manner. This is North Merced. This is my stereotype. But it's not far off what you would get with a standard suburban model. These red dots are your neighborhood retail centers. The darker colors are higher densities. You can see the collector streets in here, cul-de-sacking their way around, but not quite connecting through. So that's where we were. This is a new pattern -- with the same quantity of development, the same typologies, the same market drivers -- into a series of a town center and a series of village centers that happen at the intersections, It has a more fine-grained set of connectivity on the secondary streets, which allows people to literally travel through these areas using multiple routes, dispersing the traffic, and unloading the arterials.

When they see this new pattern, the question that developers and the community out there ask is, "Gee, you do that. Aren't you going to create a tremendous, you know, amount of traffic in these neighborhoods? After all, we created collector roads and the discontinuity therein to protect those neighborhoods from through traffic."

So, we did the analysis, and what happens is, under the suburban model the arterials are up to 50,000 average daily trips. A quarter of the arterials have to be six lanes. And, the four-lane collector roads, over two-thirds of them are over 2,000 cars a day. These are not streets you want to live on. That's where we always get the sound wall and the landscaping. And it's pure overhead. Developers don't like it. It just costs a lot of money and it doesn't deliver much access.

What happens in the alternative? Well, what's fascinating is that there's no arterial that gets over 27,000 trips a day. So the secondary fabric of the street really has unloaded a lot of the local trips from

those arterials and allows the arterials, therefore, to be smaller -- 80 percent four-lane and 20 percent of the network could be two-lane arterials. So there is less cost, with more hospitable environments along those arterials. And what happens when you load it back onto those connector streets? Only 5 percent of them exceed 2,000 trips a day. They're livable streets. They're streets that you can have homes fronting directly onto. I think that's the key element here.

How do you make a real town center? This is another example, by the way, of using the arterial. The major arterial here has parallel parking, live/work units fronting onto it rather than running away from it. This was what we got for the town center: Big commercial area; retail at the corner. Fairly standard. The redesign involved taking the major arterial -- and this was a state road that had 50,000 ADT -- and splitting it into one-way streets which are pedestrian-friendly scale. They also actually function better to move cars because there's never a left turn delay or left turn pocket or no four-phase signals. Once again, I am getting technical, but it allows a permeable environment that you can see is accessible from all sides. And here, Microsoft is building one of its new campuses, 3 million square feet, and a whole network of retail and entertainment. There's a picture of the couplet coming into being, allowing the arterial to change its nature when it comes to the town center.

This is worth looking at also. Here's a village center, a classic arterial connection with the commercial on one side and high-density housing on the other. It's been transformed into this configuration where the village green is literally at the center of the intersection. This is down in San Diego County, San Elijo. That's the center of the intersection, instead of a big turning radius. That's the scale of the arterial as it moves through the town center. And it does not delay traffic one inch. That's an elementary school which is actually sitting right at the sidewalk and sharing its library with the village as a joint-use cultural facility.

Salinas did a plan for their new growth area at the edge. They tried to do good smart growth. They showed these mixed-use village centers, but they were off the major arterial network so they were never going to work. They used the old pattern of major collector roads rather than a fine-grained fabric of connectors. So we were hired to come in and change it. What we did is we added the finer-grained network of connector roads. We shifted the town centers and village centers so that they actually were where the retail needed to be, on the major arterial, but created couplets so that they were permeable and friendly to the pedestrian. Then, of course, the elementary schools became the centers of the neighborhoods surrounding it. That is the kind of restructuring that needs to happen. And we've got to face up to the nitty-gritty issue of -- getting me off the podium.

DANIEL VAN EPP: You know, I love him to death. The guy's got so many great ideas and he hit right at the heart of this whole thing. It's all interconnectivity. How do we make it walkable? We have been talking about this for 20 years. But another very important thing Peter said was, "You know what? We've got the developers now. The developers and builders are all onboard." None of us are challenging this anymore. So it now comes down to, you know, how do you sort of make it all fit together into something that works? And I have experienced the same thing he has. And I'm sure you have too. The last bastion of resistance seems to be Public Works. And it's really -- well, I will call it the last bastion. The other one is the public. The folks that have not yet

lived in this environment don't want it in their backyard still. And that's a great challenge for us. Now, I know our panel is now -- we are over by five minutes. I would like to take another ten unless somebody tells me I need to cut it off here. Okay. We are going to take ten minutes here. And I would like to get reactions from each of our panel members. We'll wrap this up. I wish we had time for questions from the audience. We are not going to have time. But as soon as we do take this ten minutes or so for about a two-minute reaction from each of our panelists, there will be a 15-minute break, which we are going to cut to -- I am going to call it five minutes. We know that's going to be very difficult. But if you will run out, do whatever you need to do, and run back in, and sit back down for our next panel, that will help us gain some time. Don?

DON BRACKENBUSH: Just very quickly. We are working in six communities that are all going to double in scale in the next ten years. This includes Bakersfield and Coachella and other communities. And when Peter said, "I don't want to get into the details," I think getting into the details really is the answer. This is what's got to be shown to Public Works and to city managers. In all of these communities, the planning department is overwhelmed, and it really needs this sort of thing as a guide.

DANIEL VAN EPP: Thank you, Don. Frank?

FRANK MARTIN: If we think of individuals falling into three categories, makers, minders, and grinders, Peter is definitely one of our leading makers. Although there's been a fundamental disconnect in many parts of the country between land use and transportation policies, I think there is some progress. The developers are on board. There are proven markets that this works in the marketplace. And in Boise, Idaho, believe it or not, we are going through this process right now, which is encouraging, much like what Peter did in Chicago with Metropolis 2020. All I can say is keep challenging us to plan our future in more intelligent and collaborative ways. And I think we can head in the right direction.

DANIEL VAN EPP: Thank you, Frank. Ted?

TED BRADSHAW: Thanks. I am challenged by the thought that what Peter has just presented to us is really an incredible rethinking of the fabric of community, and really trying to put the physical in with the community structure. And as usual, the practitioners are way ahead of the academics. But, Peter, thank you for helping us to really understand what we need to be working on from an academic point of view.

DANIEL VAN EPP: Marilee?

MARILEE UTTER: Well, I agree with a lot of it. I would push back just to make it interesting and say that as a developer -- I am wearing my developer hat. How are we going to pay for all those roads? I mean, who pays for it? How do we pay for it? There's a lot of the surface area of this road. The answer, I think, is that the land values that come from creating those spaces are so much greater that it helps pay for that. And how do you allocate it? Does the public sector pay for it? Or do you say to the developer, "You have to pay for all those extra streets and all the extra things"?

PETER CALTHORPE: I want to answer that. What's fascinating is that developers are used to paying for the arterial fabric, even though it's just a negative to them. Also, collector streets are a big negative because they're not loaded. You know, in fact, everybody complains about New Urbanist plans that have single-loaded streets. We like to front onto the open space rather than back onto open space. Well, developers have been building zero-loaded streets, collectors, all the time. And so simply by eliminating all the collector streets, you actually have lower costs, because you utilize all the circulation areas. In other words, all those streets aren't extra.

MARILEE UTTER: You get it recaptured in value.

PETER CALTHORPE: They are basically no more than local streets that can be used for local trips now.

MARILEE UTTER: Well, that seems to be a great research topic, actually, for the Center to think about, is to look at that, to make that argument, because practitioners are going to be worried about it.

PETER CALTHORPE: In fact, there was one analysis done which was totally misguided which is that they equated the connector street to the collector street and said, "Well, look, you have just created so much more of this -- this street type," but the difference, of course, is that the connector street is also a local street. It's also a street people live on.

MARILEE UTTER: And it's open space.

PETER CALTHORPE: So you have already paid for it, you know. If you are building houses that have 50-foot frontages, you know, there's X lineal feet of street capacity that you've got that you didn't throw away on a collector. So it's a more efficient network from a construction standpoint.

MARILEE UTTER: I guess the other point I'd make is I'd think about how you change the edge. And the role of the public sector is so, so important in this. Developers will respond to whatever the infrastructure is, the regulatory infrastructure, the physical infrastructure, and financial infrastructure. But the role of the public sector is critical. And you've got two jobs, as I see it. One is, how do we go back and retrofit what we've got now? You saw some of the transformations Peter showed you. The other job is what do we do right now for the new ground, for the greenfields areas where we really have a chance to start from scratch? Remember, nobody ever thought you could recapture the cities either. Now we look at inner cities and say, "Gosh. They've got all the amenities." In the suburban communities, there's a lot to work with. But even though you guys are educated, your population is not. And you have to be the visionaries and you have to hold the line with the developers. You have to be educated with the arguments that you can respond with, and you need to do a big education effort with the communities. You are at this critical cusp time. And if the public sector doesn't take the leadership in creating the long-term vision, it's not going to get done, because developers are so short-term in their thinking.

DANIEL VAN EPP: Panelists, thank you. That was excellent. In concluding, I am reminded of a couple of things. One was we've heard that we're sitting in the midst of the largest suburban edge in the country. No doubt. Probably more growth is going to happen right here on this edge in the next 20 years than anyplace else. So you're right in the epicenter of where this stuff needs to be thought about, figured out, and applied. We heard this morning about the growth in the world population. It seems that we don't know how to control that population. It's going to grow by billions over the next decade. But last night at a speakers dinner, we had wonderful conversation amongst some very erudite individuals on this whole subject. Take the density that's in China now, take the density that's in South America where you're seeing tremendous growth. Those people come to us for the development solutions. Their patterns, as we speak today, are developed around what we're already doing. So what you do here, as the largest concentration of edge in the country, is going to have impacts around the world. So I encourage you to do exactly what you're doing here. Let's get out there, debate these issues, figure it out, and come up with a better way of doing it. Thank you very much.

JAMES LENTS: This concludes our morning panel. As you know, we are a little bit behind, so we are going to push hard to shorten our break a little. And we'll invite the next panel to get set.