

2022

**Center for Buildings,
Infrastructure
and Public Space**

**Columbia University
Equity in Infrastructure
Colloquium Meeting Notes**

**Faculty House
October 18, 2022**



COLUMBIA | ENGINEERING

The Fu Foundation School of Engineering and Applied Science

Center for Buildings, Infrastructure and Public Space

Columbia Equity in Infrastructure Colloquium Agenda

7:30 AM – 1:30 PM October 18, 2022

Faculty House, Columbia University

7:30 – 8:00 AM | Continental Breakfast and Networking

8:00 – 8:30 AM | Welcome and Introductory Remarks

- Feniosky Peña-Mora | Executive Director, Center for Buildings, Infrastructure and Public Space
Edwin Howard Armstrong Professor of Civil Engineering
- Shih-Fu Chang | Dean, The Fu Foundation School of Engineering and Applied Science
Morris A. and Alma Schapiro Professor of Engineering
- Richard Anderson | Co-Chair, CBIPS Board of Advisors; Former President, New York Building Congress
- Marcos Díaz González | Co-Chair, CBIPS Board of Advisors; Executive VP, STV Group

8:30 – 10:30 AM | Equity in Infrastructure – NYC and Federal Perspectives

NYC Perspective:

- Ydanis Rodriguez | Commissioner, NYC Department of Transportation
- Jamie Torres-Springer | President, MTA Construction and Development

Federal Perspective:

- John D. Porcari | Co-Founder, Equity in Infrastructure; Former Deputy Secretary, US DOT
- Shaun Donovan | Senior Fellow, Ford Foundation; Former Secretary, US HUD
- Maurice Henderson II | Senior Advisor, Office of the Secretary, US DOT

10:30 – 11:00 AM | Break and Poster Session of Current Research by CBIPS Fellows

11:00 AM – 12:15 PM | Equity in Infrastructure – National Perspective

Moderator, Marilisa Stigliano, VP Project Support, Corporate Operations at STV Group; Member CBIPS Board of Advisors

- Gia Biagi | Commissioner, Chicago Department of Transportation
- Roger Millar | Secretary, Washington State Department of Transportation
- Mark Pestrella | Director, Los Angeles County Department of Public Works
- Seleta Reynolds | Chief Innovation Officer, LA Metro

12:15 – 12:30 PM | Closing Remarks | Feniosky Peña-Mora | Executive Director, CBIPS

12:30 – 1:30 PM | Informal Discussion over Lunch at Faculty House



Columbia Equity in Infrastructure Colloquium Meeting Notes

Welcome and Introductory Remarks

- **Feniosky Peña-Mora | Executive Director, Center for Buildings, Infrastructure and Public Space
Edwin Howard Armstrong Professor of Civil Engineering**

The question of equity will be a central point. I would like to introduce an amazing leader who has been central to what we have been doing at the school, our Dean, Shih-Fu Chang.

- **Shih-Fu Chang | Dean, The Fu Foundation School of Engineering and Applied Science
Morris A. and Alma Schapiro Professor of Engineering**

Good morning. I know this is early. There's so much energy here. I've seen so much development at Columbia Engineering. It's just fantastic. Today's theme, Equity in Infrastructure, is so relevant to what we are doing. When Hurricane Sandy hit us in 2012, Columbia University came in as engineering consultant along with an engineering group from Cornell University to deal with the L train tunnel. Many did not want to see it shut down for 18 months. Engineers came up with the best solution. Instead of replacing the platform we were able to use fiberoptic sensors. More recently, Professor Andrew Smith in Civil Engineering received a \$52M grant for Smart Cities to address recent innovations in mobility. There is so much potential in the streetscape. The focus is not only on cutting edge technology, but on streetscape improvements that have the best interests of the community at heart. During the pandemic we worked closely with Columbia's Mailman School of Public Health to address how we can help the City prepare for emergencies in the future, for things like COVID. There was a \$20M investment by New York City in Columbia in partnership with CUNY to consider how do we use technology for social good. There are a lot of examples we can cite on how Columbia Engineering has participated during its long history of innovation since 1854. The Engineering School was previously called the School of Mines. One of our alumni designed the first NYC subway line.

- **Richard Anderson | Co-Chair, CBIPS Board of Advisors; Former President, New York Building Congress**

My job is to be co-cheerleader for this meeting with Marcos. Sixty years ago, I worked on the World's Fair as a carpenter's assistant. My father was the foreman for the Christian Science Pavilion designed by Edward Durrell Stone. There was an African American carpenter on the job. My father said that we needed a little diversity. It was my first exposure to the issue. There weren't that many African American carpenters back then.

- **Marcos Díaz González | Co-Chair, CBIPS Board of Advisors; Executive VP, STV Group**

It has been almost five years since the Center for Buildings, Infrastructure and Public Space was initiated. It's fantastic to see everyone back on campus. One of the current research topics is Equity in Infrastructure. I think that concept is changing, changing because of what John Porcari is doing at the federal level. One of the issues is bike lanes – bike lanes for whom? First gen immigrants trying to make a living need to get around. Bike lane infrastructure can be critical. It is the same with the infrastructure of public housing. What really matters is micro-mobility which is critical for equity and for economic development. What else can the A/E/C Industry do? The ACE Mentor program, which I now chair in New York City, mentors a thousand students in New York. That's a drop in the bucket. Mentorship is needed. A different kind of recruiting. Why not have a support network that allows those being mentored to build their own companies. I'd like everyone to rethink. I'm eager to hear what you will do next after our discussion here.

- **Feniosky Peña-Mora | Executive Director, CBIPS**

For whom / by whom is the central point of the discussion. Let's do quick introductions around the table and on the Zoom. *[brief introductions were made for all present, including students]* There are three major blocs in the agenda. First, we will talk about the New York City perspective, then that of the Federal Government, then we'll have a national discussion. The first person up is NYC Department of Transportation Commissioner Ydanis Rodriguez.

Equity in Infrastructure – New York City Perspective

- **Ydanis Rodriguez | Commissioner, NYC Department of Transportation**

It is an honor to be here. My role in life is to bring the person who brings a different perspective. All of us come from different places. We all decide that New York City was the place to be. We have to contribute more to the future. This is the city that has a few hundred years of history of people building the city together, people from different places who came here and they made it. And the questions are what is our legacy, what do we leave for the future? I've paid my dues, as a schoolteacher and on the City Council. I'm not an engineer, but what I bring to the Department of Transportation as Commissioner is that I am the first Commissioner who is working class. I am the first DOT Commissioner who is not having English as a first language. Equity is an issue not because of the color of their skin. IT is because of their social class. We are investing in those working-class neighborhoods because we can do better, to raise working class to middle class. That's a perspective that I want to share. I passed 35 laws that relate to what we're doing at DOT. How do we work with the public and private sectors, making sure smaller firms get paid on time. For over 35% of New Yorkers, those who live where the intersections are dangerous, they could benefit from trying scooters in the South Bronx for local mobility. This can be successful. We can do better. COVID brought the demand to expand Citibike uptown to Washington Heights and Inwood. I don't look at it from a perspective of ethnicity. I look at it from the perspective of social class. Mayor Adams has left the poetry part for the campaign and now has to deal with the realities of implementation. Donkeys, horses and bikes were the ways we got around where I was born. Bicycles aren't only for the middle class. Many immigrants grew up using bicycles to

get around. We recently put together a networking event attended by 300 women and minorities about doing business with DOT. We have made a lot of improvements, but we can do more. We need to make connections to the banks. We have made a commitment to increase the diversity of staff and senior staff at DOT. I brought Ryan Lynch in as Chief of Staff. He had worked with Mayor Adams previously in Brooklyn. I kept Margaret Forgione on in her role. And I brought in Paula Shaw. More than 65% of new hires are people of color, including Assistant Commissioners. We have to create the pipeline, building diversity at every level of government.

- **Feniosky Peña-Mora | Executive Director, CBIPS**

Thank you, Commissioner. I would now like to introduce Jamie Torres-Springer, the President of MTA Construction and Development.

- **Jamie Torres-Springer | President, MTA Construction and Development**

MTA Construction and Development was created as a consolidated agency to achieve economies of scale and economies of geography. We are currently doing a 20-year needs assessment. We package five-year capital programs. We need to move faster. We were able to award \$8B last year with projects taken up by our Strategic Development Group, which focuses on thinking strategically, like the Front End Planning (FEP) unit that Feniosky created at DDC. Investing in our transit system is the equity game in town. People of color use our system much more than people who are not of color. We are currently at 70% of pre-COVID ridership. Those who have come back are predominantly people of color, people who have no other choice, people whose income is less than half that of those who use cars. Some 80% of our capital program is keeping the system in a state of good repair to make sure that trains are running in a reliable way. It is also our commitment to increase accessibility, to have accessible platforms at 95% of our 472 stations by 2055. We are at 27% of our stations now. It is immensely complex, but \$5.2B has been allocated to start. We've completed accessibility work at 22 stations in the last two years. Thirteen more stations are scheduled for this year. We are also moving forward on signal modernization. This increases reliability and generates huge benefits. It has been pivoted to assist lines that go to the outer boroughs. I could also talk about Penn Station access, and providing access to Penn Station from the East Bronx. This benefits a ridership consisting of 87% people of color. The Second Avenue Subway, which serves East Harlem, benefits a ridership of 88% people of color. There are 600,000 daily users of Penn Station. We're moving ahead. I would also like to talk about the Interborough Express, a new circumferential line that benefits a ridership of 67% people of color. It intersects with 17 other lines going into Manhattan. That's what we are investing in. We're doing comparative evaluation to look at every project's cost, ridership, equity (including percentage of people of color), resiliency, accessibility and alternatives to transit. How we invest, so as to afford opportunities for M/WBE firms is also significant. Some 30% of NYS M/WBE contracts are produced by the MTA. After the School Construction Authority, we have the longest-standing small business mentorship program. We are creating equity by creating net worth. But we need more contractors. We have up front mobilization payments. Lastly, we are looking at who works on our projects. Cathy Li, who has joined DOT as Deputy Chief of Staff, is spearheading the encouragement of 20% local hiring of local residents for our projects. And we are talking with the trade unions, including conversations with Gary LaBarbara about pre-apprenticeship slots that lead into apprenticeships.

- **Feniosky Peña-Mora | Executive Director, CBIPS**

Thank you, Jamie. It is good to see DOT and MTA working together. Let's open the discussion to questions for our two NYC perspective speakers.

- **Dick Anderson | Co-Chair, CBIPS Board of Advisors**

Can you address the costs involved, for example at the Second Avenue Subway?

- **Jamie Torres-Springer | President, MTA Construction and Development**

Our projects are costly because one driver of cost is the density of New York City. This includes the scale – the numbers of people and the numbers of stations per mile. I won't criticize other transit systems where the costs are lower, but many of them are in lower density situations where there are significantly fewer stations per mile. We also are hampered by a lack of staging areas. But costs do need to be better controlled. The number of separate contracts has to be limited. Multiple separate contracts on a project drives up costs and hurts coordination. We are moving from Design-Bid-Build to Design-Build, and also looking at Public-Private Partnerships. We are becoming better, more aggressive project managers.

- **Ydanis Rodriguez | Commissioner, NYC Department of Transportation**

This is the billion-dollar question. I feel there is a lot of challenge. There is a lot of competition for space underground, lots of utilities, whether at East Side Coastal Resilience on the Lower East Side or at Plaza de las Americas in Washington Heights. A lot has to happen before a groundbreaking. Everything was built a hundred years ago. Inherited infrastructure is one of the issues we face.

- **Ali Chaudhry | SVP and Chief of Development & Government Relations, AECOM Americas East**

Better coordination greatly improves the situation. My question is where does the financing come from? One example we can look at is Transit Oriented Development at Hudson Yards, where anticipated increases in tax revenue offset the cost of extending the #7 line. The opportunity to do something similar was lost in the first phase of work on the Second Avenue Subway. What is the likelihood going forward on new work?

- **Jamie Torres-Springer | President, MTA Construction and Development**

It's the whole ball game. Fully one-third is expected to come from the central district tolling charge. We have to get that done. It's complicated for the Administration. A lot of our projects are in areas that aren't high value such as Hudson Yards. The second stage of the Second Avenue Subway has opportunities to capture value. We run two commuter railroads also. The Long Island Railroad capacity is increasing 40% this year. Our first mile/last mile study addresses micro-mobility.

- **Ydanis Rodriguez | Commissioner, NYC Department of Transportation**

New York City, as we know, is the capital of the nation, capital of the world. We've lost some momentum because of procedural restrictions. The Brooklyn-Queens Expressway is the biggest infrastructure project, and we will spend billions of dollars on it. Do we focus on preservation or plan for the next 75 years? What you get is a lot of pushback from people dealing with congestion, dealing with diversion. You have to be ready for a potential lawsuit. There's a lot of red tape.

Equity in Infrastructure – Federal Perspective

- **Feniosky Peña-Mora | Executive Director, CBIPS**

Thank you, Commissioner. It is now my pleasure to introduce John Porcari to bring to the table a federal perspective.

- **John D. Porcari | Co-Founder, Equity in Infrastructure; Former Deputy Secretary, US DOT**

I'm not so sure that I will be bringing the federal perspective because fundamentally all action is local. But I have worked in the federal sector, and have seen the interaction, and who benefits from government policies and actions. In regard to today's topic, I'd like to start with the questions what do we mean by equity? Who benefits and who has the burden? At the end of the day, infrastructure investment is a means to an end, not an end in itself. Environmental benefits and community benefits are the lenses of equity and climate change. It is ok to have federal level policy, but you operationalize it on the ground. The Equity in Infrastructure project is focusing on generating wealth and on the contracting process, opening the aperture of opportunity to HUBs (Historically Underutilized Businesses). We started nationally with five agencies, including SEPTA, the CTA, Denver Airport, the Port of Long Beach and the Metropolitan Water District of Southern California. HUB is an umbrella term that we use because the local terms vary all over the country. When you've been talking about equity, the logical place to start is on the contracting site. *[For more information about The Equity in Infrastructure Project, see <https://equityininfrastructure.org> or contact info@equityininfrastructure.org]*

- **Feniosky Peña-Mora | Executive Director, CBIPS**

Thank you, John. The next speaker is Shaun Donovan.

- **Shaun Donovan | Senior Fellow, Ford Foundation; Former Secretary, US HUD**

I am a self-described recidivist public servant. These presentations build on each other perfectly. We can talk about Uncle Bill, Uncle Chip and Uncle Ira – which together present a once-in-a-lifetime opportunity that we haven't seen in the US since the New Deal. We need to be very focused on what are the barriers to achieve racial equality and to achieve climate justice. You don't always have alignment between city and state governments. There is political complexity and tensions, the tension of most of the federal monies going to the states rather than the cities directly. These issues are substantial. There is the tension of projects that are needed and meaningful and have the potential of transformational equity impact.

More and more Americans are losing faith in organizations writ large and particularly losing faith in the federal government. IF there is one thing that can bring people together, it is infrastructure. Everyone loves infrastructure. This is complemented by creating matchmaking that supports interaction and by having an investable plan. Capacity building starts with navigating funding opportunities and addresses applications & access, project planning, design, contracting & construction, operations & maintenance, communicating success, and funding & financing. This needs to happen at every level, for communities, cities, states, regions and also at the federal level. We also need programmatic expertise to address gaps in transportation, energy & power, environmental justice, resilience, water, broadband & digital equity, workforce & economic development, and affordable housing & urban planning.

We are partnering with HR&A to ensure access relating to the Bipartisan Infrastructure Law, addressing project location. What is an investable plan? It starts with an idea that is augmented by due diligence. Ideas come from funders, government entities and many other stakeholders. The criteria by which they are evaluated start with equity. Think about all the projects that have historically benefited communities outside the city while negatively impacting communities of color in the city, for example the Cross Bronx Expressway in the South Bronx.

There are going to be some very hard choices requiring huge interagency coordination and a deep and true engagement with the community. This engagement has to happen, and that work is hard.

- **Feniosky Peña-Mora | Executive Director, CBIPS**

Thank you, Shaun. Communities have been disadvantaged for a reason. I would now like to introduce Maurice Henderson II, currently a senior advisor in the US DOT Office of the Secretary.

- **Maurice Henderson II | Senior Advisor, Office of the Secretary, US DOT**

We at the federal level have some tools and resources, but it really is the local partners who make the difference. Climate is top of the line for everyone. I feel that in Central Oregon climate issues are at the fore every day. The Infrastructure Law raises the question of how we equitably distribute resources to communities that were left behind? There are examples from across the nation, including from Illinois, North Carolina and Alabama. There is a huge opportunity to apply resources and prioritize the use of those resources. For example, the National Electric Vehicle Program brings \$7.5B for transit transition, including low emission bus fleets along with electric vehicle charging stations along the nation's highways. There is also significant funding, some \$2.5B, going to community charging stations. Many communities are trying to take part in this initiative of electric vehicle charging station siting and maintenance. We need to assess the critical impact of how we bring equity to these solutions. So how do we find ideas? We collaborate. We steal. We develop partnerships for thought leadership.

- **Feniosky Peña-Mora | Executive Director, CBIPS**

Thank you, Maurice. I'd like to open the floor for questions.

- **Question about Gateway, its benefits and burdens?**
- **Shaun Donovan:** Gateway is the most urgent infrastructure project in America. It addresses a 112-year-old potential single point of failure. The benefits are regional and arguably national. While there are local benefits, there are regional and national benefits as well.
- **John Porcari:** On the New Jersey side, there are very significant impacts of dump trucks during the tunneling process. The sequencing or possible changes in haul routes can reduce that impact. Gateway is unusual because the entire nation benefits. The Northeast Corridor benefits. The region benefits. But the impact is local.
- **Dick Anderson:** How can we assure that there won't be a Chris Christie or Donald Trump in the future blocking necessary infrastructure?
- **John Porcari:** For a major project like Gateway that has to span administrations, Federal, State and local, the Gateway project will never have a stronger supporter than it has now.
- **Shaun Donovan:** The thing I would like to add beyond this is the moment. President Obama used to say: 'I agree with you, now go make me do it.' We should not get complacent. We need to keep reminding people how important this is.
- **Dick Anderson:** What is the risk here of Donald Trump returning in 2024?
- **Shaun Donovan:** There are things that are hard to undo once started.
- **John Porcari:** Absolutely. The imperative is to lock it in and put the shovels in the ground in the next few years. You want to make it an inevitable project and you have two years to do it.
- **Maurice Henderson:** There is bipartisan support.
- **Shaun Donovan:** I have a question for Ydanis and Jamie, a question about climate resilience and the importance of protecting infrastructure.
- **Ydanis Rodriguez:** This is a priority for Mayor Adams.
- **Jamie Torres-Springer:** The tenth anniversary of Sandy this month highlights the importance.

Equity in Infrastructure – National Perspective

- **Feniosky Peña-Mora:** I would now like to introduce Marilisa Stigliano, who will moderate the panel on the national perspective.
- **Moderator, Marilisa Stigliano, VP Project Support, Corporate Operations at STV Group; Member CBIPS Board of Advisors**

I am particularly happy with the role that STV has been playing by providing an Industry Field Study opportunity for many of the students in the CBIPS program. My role today is to introduce our four distinguished speakers, starting with Gia Biagi, Commissioner of the Chicago Department of Transportation. *[brief introduction]*

- **Gia Biagi | Commissioner, Chicago Department of Transportation**

I'll start with some obligatory statistics about Chicago and show a few maps, including one highlighting areas of economic hardship in the south and the west of our city, and another showing mobility hardship. Our goal is to end generational poverty by creating wealth, helping everyone who has been left behind in regard to infrastructure. We need to get transit infrastructure investments to the right place and consider how our infrastructure investments are leveraged to create jobs. We need to make sure we are capable of doing so by creating a framework that focuses on racial justice, economic justice and environmental justice. We do this through a lens of making a more equitable society through transportation infrastructure, inviting communities to tell us what equity looks like on the ground. This all converges on the south and west sides of our city.

The other piece is certainly in the contracting. We are doing projects that are exclusively going to M/WBE contractors, especially in Chicago's school projects. We've done a lot of work with the State of Illinois to unlock limitations on local hiring. With a 15% local hiring rule, that means that 15% of those working on a project must live within a certain distance of that project. We've also taken a closer look at Transit Oriented Development planning which impacts zoning, parking and transportation opportunities.

Lastly, the City of Chicago is signing on the Equity in Infrastructure Pledge, as is the State of Illinois, and we are creating great opportunities, including at the Chicago Transit Authority. We are also honoring the certifications made by other cities so as to simplify the process.

- **Marilisa Stigliano:** Thank you Gia. I would now like to introduce Roger Millar, the Secretary of the Washington State Department of Transportation. *[brief introduction]*

- **Roger Millar | Secretary, Washington State Department of Transportation**

We've made diversity, equity and inclusivity the pillars of our strategic plan. Our agency benefits from an anti-racism executive order issued in 2020. Linking the environment to equity, Washington State passed the Healthier Environment Act in 2021 which asked State agencies to improve the health of all Washington residents. We are required to integrate equity into our projects. We have an Environmental Justice Implementation Plan contained within our strategic plan. There are assessments for any project with a value over \$15M. Federal money makes up 15% of the Washington State DOT budget. 'Move Ahead' is a \$17B fifteen-year State of Washington program that centers on clean transportation projects. It provides more money for active transportation, for clean transportation and also for maintenance. This funding is greater than the funding going for highways. The program also funded our Complete Streets project.

We start by doing a gap analysis and filling the gaps, working with neighborhoods that haven't done transportation planning in the past, and working hard to engage underrepresented

communities in the work. About 18% of our contract dollars are going to M/WBE firms, up from 3% in the years where those opposed to affirmative action held sway. Now we have five cohorts of participants, approximately 80 people working on things like a linked deposit program whereby the State of Washington deposits funds in specific banks that then make funding available to M/WBE firms at 2% interest rates. And our Youth Direct program address the needs of those gaining out of the juvenile detention system by creating apprenticeships. Most recently we did this with the Ironworkers Union. For the apprentices we also help with housing, car repairs, and other things necessary to assure that people can get to the apprenticeship job site.

- **Marilisa Stigliano:** Thank you Roger. And now I would like to introduce Mark Pestrella, the Director of the Los Angeles County Department of Public Works. *[brief introduction]*
- **Mark Pestrella | Director, Los Angeles County Department of Public Works**

Portions of LA County are very urban, others very rural. In LA County some 27 different languages are spoken and there are 88 cities, with a total population of over ten million people. LA County is governed by a board of five supervisors, each of whom represents two million people. Currently all five are women. In the past, Interstate highways were built that cut through predominantly black and brown communities. Similarly, the infrastructure of the water management system impacted neighborhoods inhabited by people of color. There are issues in LA County of differential unemployment rates. Wages have declined since 2000. There are people who need to take three buses just to get fresh vegetables. At the Department of Public Works we operate in the physical environment, with budget constraints. We're looking to make a paradigm shift, focusing on equity and human health. Students need to develop an awareness about the impact of decisions being made and the consequence of design. We are looking to leverage our regional and federal development through a program called Infrastructure LA [see <https://infrastructurela.org>] which seeks to revitalize the Los Angeles region by investing in equitable, sustainable and resilient infrastructure. Infrastructure LA seeks to advance the development of 21st century infrastructure through cross-sector collaboration and coalition-building for the benefit of all.

- **Marilisa Stigliano:** Thank you Mark. I would now like to introduce Seleta Reynolds, the Chief Innovation Officer of LA Metro. *[brief introduction]*
- **Seleta Reynolds | Chief Innovation Officer, LA Metro**

I'll talk about LA being in the international news for all the wrong reasons. I don't think we can talk about institutional racism as if it is something in the past. I've been in the transportation sector for 25 years, and during that period our projects may have caused unintentional consequences. I think it is also important to note that as a white woman, I have benefited from the racism in our society, but as a woman, have been disadvantaged by a misogynistic system.

The K-Line in Los Angeles is eight miles long, bringing rail into Inglewood and other LA neighborhoods. It has a total cost of \$2.1B, which is about \$100,000M over budget. It has no federal funding. The added costs came in part from it being redesigned to go underground to minimize disruption in a black neighborhood. Six percent of the people building this project were women. Clearly, we have a long way to go.

Most of what we have been discussing today is physical infrastructure. But it is high time that we start talking about community infrastructure and digital infrastructure. These are essential parts of being sure we don't repeat the mistakes of the past.

Destination Crenshaw is a 1.5-mile project, the largest black Public-Private Partnership. It is an unapologetically Black project.

Universal Basic Mobility is also in South Los Angeles. It is not enough to build physical infrastructure. The public sector must invest in people's transportation needs. The project has car sharing, electric vehicles, bike infrastructure, community infrastructure, repairs training vocational skills for electric vehicles and also for bicycles.

Another problem in LA is the digital infrastructure of payments. Two out of three Los Angeles Metro riders make less than \$20K per year and the majority are women. Women have to spend more time in getting around. There is a gender gap in transportation access. We need to ask where does power lie and where do resources lie? Both are clearly within the public sector. We need to mitigate past consequences.

Marilisa Stigliano: Thank you Seleta. We talked about reversing some of the wrongs, advocating for social equity and helping historically underutilized businesses. We talked about the role that the A/E/C Industry can play. What do you all see as the challenges in achieving these goals?

Roger Millar: The single biggest challenge that my agency has is workforce. The baby boom generation is aging out and the next generations are not moving in. You have to have the team to get the work done. This is not just in the public sector, but also in private firms. That workforce challenge creates a huge opportunity. Give them the skills they need to be successful.

Gia Biagi: Unions are a big challenge. We need to get unions to get more people into the pipeline and up the pipeline. Mentorship and new vendor opportunities. So that firms aren't subs for the rest of their lives. Workforce is a challenge. Contracting is a challenge, as is creating more opportunities that are right-sized. Breaking contracts into smaller parts is one way of addressing that. We need to pay people on time. We can crush firms if they are not paid on time. We have to streamline processes and reduce bureaucracy. We can't review every single item on the first payment submittals in excruciating detail.

Mark Pestrella: Public dollars need to be invested in the workforce. Local worker program is now at 30%. The targeted worker program is similar. Apprenticeships need to become permanent jobs. My organization is now at 50/50 split on gender, which is dramatically different from what it was like when I started 35 years ago. And as for the contracts, we are breaking up our contracts into small, medium and large. And we have a partnering program to create opportunities for small and medium-sized firms. We have very large-scale Project Labor Agreements (PLA) to address workforce issues. There is not enough workforce for the major investments we see coming.

Seleta Reynolds: There are a few areas where collaboration is urgently required to get people into these jobs. For example, there is a bus driver shortage here in Los Angeles. How do we

come up with a real career ladder, providing ongoing training and assistance in these areas. There are reasons why women aren't in the construction industry workforce including harassment historically and childcare issues. How can both the public and private sectors start addressing these things to get and keep women in the workforce? Legislation is needed to direct investment. We need to lock arms and go to our State legislatures to demand change.

Craig Dykers: Thank you, Gia, for sharing the economic hardship map. Charles Booth created what he called 'poverty maps' in London at the end of the 19th century. They went street-by-street and house-by-house. You see the rich mosaic that exists. Maps don't end in a straight line but weave into each other. How do you sign up for the Equity in Infrastructure pledge?

Gia Biagi: There is an application. We're going to sign up. Agencies say we need to get together and put a line down. Connect through the Internet.

Mark Pestrella: LA County is a member as of two weeks ago.

Feniosky Peña-Mora: John Porcari is here.

John Porcari: Thank you Gia for bringing it up. We're very interested in other organizations signing up. You can't just sign up though, you have to take the pledge and commit to change based on the baseline of where you are now and where you will be next.

Feniosky Peña-Mora: I didn't speak with Gia about putting that in the slide. At the end of the day, it is human connection. I'd like to give the floor to the new chair of the New York Building Congress, Ralph Esposito, perhaps to talk particularly about collaboration.

Ralph Esposito: The New York Building Congress, representing builders, leaders, designers, provides a shortcut to the Mayor and the Governor, who can make staff available. We are able to do a check-in challenge on the pipeline and other project issues. We've given our thoughts on Design-Build. It is not a panacea for everything. New York is not a Design-Build community. As an industry we cannot have people unable to learn because they can't find paperwork. There are implications for affordable housing. Everyone wants affordable housing, but nobody wants to live with it. We've also met with Chris Calori from Gateway.

Feniosky Peña-Mora: This is about the importance of being at the table. The issue of impact, the ability of the industry to carry out the projects. The conversation has to start.

Nick Dandalos: Part of the participation issue relates to risk sharing. This is an impediment to getting people to participate. Smaller firms should not be perpetual subs. They need to become primes. Help is needed.

Gia Biagi: Targeted program need to be designed to answer engineering needs. That's one way we built it up quickly in Chicago.

Mark Pestrella: Removal of obstacles. Bonding capacity is one. We've been able to get bond assistance from both LA City and LA County. And also, an acknowledgement that completion costs may go up. Introducing small businesses to larger entities, recognizing that there aren't

enough people around including the design and project management core, reaching out and growing the workforce.

Gia Biagi: Subs are the last ones to be paid. Primes get paid, and then they eventually pay the subs. It can take forever. Our prompt payment initiative means the first two requisitions don't get the same level of intense scrutiny so as to accelerate the initial payments. Also, we have our CFO's talking to the banks.

Closing Remarks

- **Feniosky Peña-Mora | Executive Director, CBIPS**

Thanks to all. We'll follow up with a post-colloquium document with speaker notes and information about the Equity in Infrastructure Project Pledge.

The next Board of Advisors meeting will be in April of 2023.

- **Rick Bell | Deputy Director, CBIPS**

These informal notes are based on a handwritten transcription of some of what was said. They are necessarily incomplete and have potentially misconstrued or misquoted those speaking. Please send any additions, corrections or comments to include to me at fmb12@columbia.edu.



M. Díaz González, F. Peña-Mora and Shih-Fu Chang



J. Porcari, S. Donovan and Jamie Torres-Springer



John Porcari and Shaun Donovan



S. Donovan, J. Porcari and Dick Anderson



Marilisa Stigliano



Center for Buildings, Infrastructure and Public Space

Equity in Infrastructure Project Pledge from the Equity in Infrastructure Project website <https://equityininfrastructure.org>

The below is for information purposes. If you are interested in taking the pledge, go to the Equity in Infrastructure Project website and please fill out the form at the bottom of the page and send it back. We will get in touch to explain what's involved and how it works. Thanks for your interest!

Starting from the baseline of their current actions and initiatives, by December 2025, Pledge signers will be required to work to increase the number, size and percentage of Historically Underutilized Businesses (HUBs*) growing to prime contractors, participating in joint ventures or as equity participants.

They will work toward this effort by:

- Increasing the number, size and proportion of contracting opportunities going to HUBs;
- Increasing the number, size and proportion of contracting opportunities going to HUBs as prime contractors;
- Streamlining the administration of contracting with HUBs to centralize certification, improve payment time, and standardize transparent data collection;
- Increasing the amount and type of appropriate financing available to HUBs aiming to meet infrastructure contracts by working with private and public partners; and
- Expanding the number of signatories to this Pledge.

**HUBs, by our definition, can include firms formally designated as DBEs, Minority and Women-Owned Business Enterprises (M/WBE), Small Business Enterprises (SBE), and it can include any other business classification used locally in the United States intended to boost the participation of otherwise underutilized firms, which can vary by state, region, and municipality. We will partner with the Federal government to ensure that funds from the bipartisan Infrastructure Investment and Jobs Act support expanded opportunities to create generational wealth for diverse entrepreneurs and workers, especially in underserved communities across America.*