

2020

Leonard Transportation Center



Inland Empire Regional Mobility Dialogue Series

Results and Summary

Aug 25, 2020

Smart Cities 2.0: Reimagining Transportation

WWW.CSUSB.EDU/LTC



Introduction

Installment four of the Leonard Transportation Center 2020 Regional Mobility Dialogue Series, Smart Cities 2.0-Reimagining Transportation, explored the ongoing and increasingly critical need for the Inland Empire to innovate ways to address or solve congestion issues in the region. This dialogue focused on emerging scholars in the field, who spent time researching this issue and interviewing experts on how the Inland Empire can move forward. We also had two high-level experts working in Inland Empire transportation today, who shared their insights on the scope of the problems facing the region, challenges in addressing these issues, as well as future directions. This is a complex topic and our panelists expanded on the many directions we can take to improve the Inland Empire and combat congestion.

Experts in this dialogue included:

- Joe Lyou, PhD - President and CEO of Coalition for Clean Air, Commissioner at the California Transport Commission
- Ronald Loveridge, PhD - Director, UCR Center for Sustainable Suburban Development, Former Mayor City of Riverside
- Melissa Sagun - 4th year Political Science Major, Minor in Public Policy, UCR
- Natalie Zoma - 4th year Political Science Major, Emphasis in Public Service, UCR
- Ronald Duarte - 4th year Political Science Major, UCR
- Jennifer Valle - 4th year Political Science Major, UCR

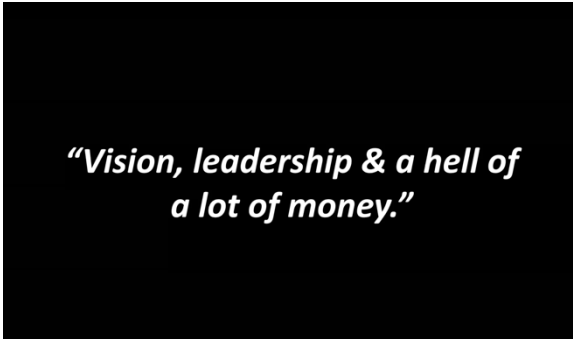
Major takeaways from this conversation included an exploration of transportation challenges in the Inland Empire, current research and ideas for addressing congestion in the region, and some practical limitations that may prevent some level of progress.

The Dialogue began with an introduction from Greg Hulsizer, Vice President of HNTB Corporation, a platinum sponsor of the 2020 Dialogue series. Mr. Hulsizer shared a video with the group regarding a current regional transportation project, SB Express Lanes, which will expedite travel in the Inland Empire by expanding the I-10 freeway from Los Angeles County Line to Redlands with HOV lanes. A number of municipalities in the region expressed their support and excitement for the project and the positive impacts it can have on transportation.

Dr. Lawrence Rose, Dean of Jack H. Brown College of Business and Public Administration at California State University San Bernardino, continued introductions by framing the importance of this Dialogue with the effects that COVID has had on transportation but that the congestion and other transportation issues in the region still exist now that transportation has returned to more of a normal pace. Dr. Rose went on to introduce the Expert Panel and thank the sponsors of the Dialogue series for their support.

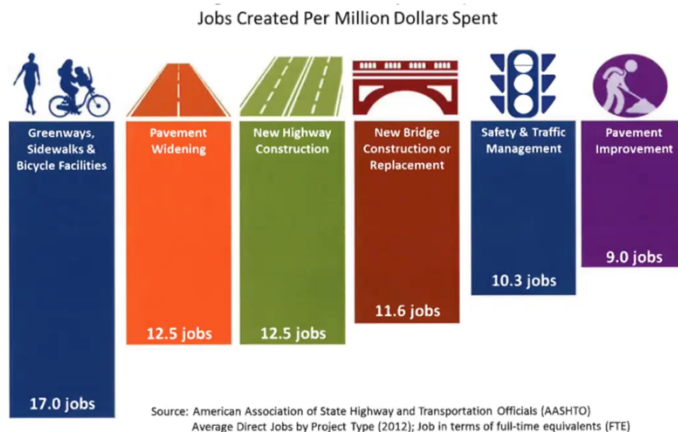
Joe Lyou, PhD - President and CEO of Coalition for Clean Air, Commissioner at the California Transport Commission

Dr. Lyou began the Smart Cities conversation by sharing that a former colleague once told him that “vision, leadership, and a hell of a lot of money” make all the difference when pursuing clean air, which he believes also applies to transportation. He also told the group that “we’re going to need advanced technology and creativity, diligence, and hard work in order to get to our transportation problems solved, but I think a theme for what I’d like to share this morning is that we’re smarter now. We are much more sophisticated in how we approach this problem and that provides some hope that we can address it and we understand the problem of induced



“Vision, leadership & a hell of a lot of money.”

traffic.” Dr. Lyou explained his experience living in San Diego, witnessing the changes in traffic patterns over the years, and the multitude of things our roads are used for in society today. Ultimately, Dr. Lyou spoke to the importance of emerging professionals in the industry, like those presenting in the Dialogue, to help solve the complex problems that affect transportation, like employment and housing. He also spoke to how fortunate the State of California is to have voters who supported SB1 and the funding to address transportation and infrastructure. Dr. Lyou explained that targeted spending in transportation can also stimulate jobs.



Ronald Loveridge, PhD - Director, UCR Center for Sustainable Suburban Development, Former Mayor City of Riverside

Dr. Loveridge shared his professional experience as a professor and former Mayor of Riverside. He explained that his role in leading the group of future leaders presenting at this Dialogue and explained their process. Over a 10-week quarter, students met twice weekly. They completed book reviews, literature reviews, collectively completed 21 interviews with industry leaders, and then developed their own personal

recommendations for transportation in the future based on their research. The team created a website for their final project in which one student, Ronald Duarte, argued that the website was designed as an “opportunity to inform with simplicity” and further added that there is “lasting value” in developing an enduring medium to educate people on these issues beyond just the timeline of the project.

Melissa Sagun - 4th year Political Science Major, Minor in Public Policy, UCR

Melissa Sagun facilitated the student presentations by sharing the website created by the student group and explaining the general information provided there for the attendees to be aware of and explore. She emphasized the amount of work and research that went into the website and encouraged attendees to take time a look at all the information that is unable to be covered in the presentations.

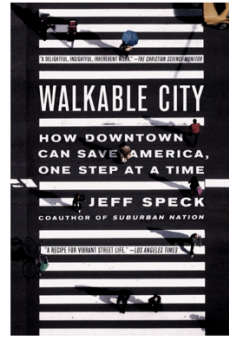
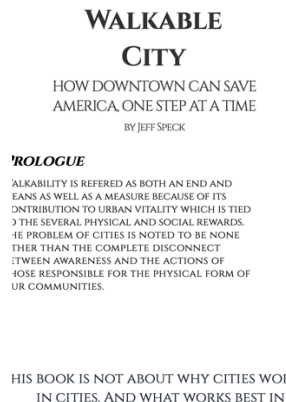
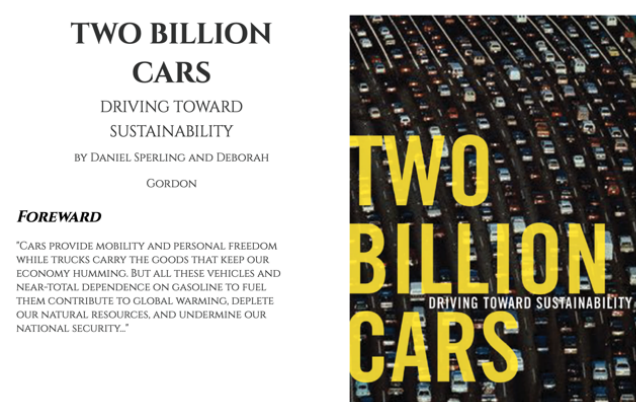
Ronald Duarte - 4th year Political Science Major, UCR

Ronald explained that when he began the project, his “initial thoughts were bullet trains, self-driving cars, and electric bikes everywhere but at the core of it my peers and I knew that reimagining transportation centers around technology and innovations are what can make lives easier.” Ronald also informed attendees that a significant portion of the student project was completing the literature review as well as examining existing policy and other government frameworks.



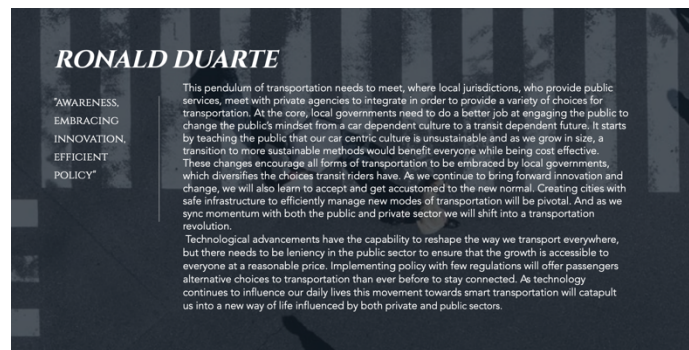
Jennifer Valle - 4th year Political Science Major, UCR

Jennifer presented the group's book reviews and spoke of the "insightful perspective" that the authors provided on transportation issues and other major issues "of the century," such as the environment. Jennifer explained that the group summarized their main takeaways from the books on the website. Attendees were provided time to read the reviews and pose questions to the presenters.



Natalie Zoma - 4th year Political Science Major, Emphasis in Public Service, UCR

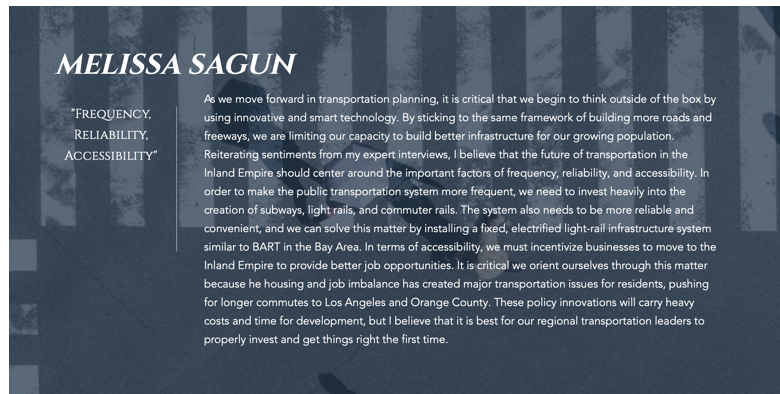
Natalie shared with attendees how the group approached expert interviews. They "had 21 expert interviews and gave every single interviewee the same nine questions because, while they were the same nine questions, all of the interviewees had different backgrounds in transportation, whether it was an elected official, a public servant, private transportation company, or for research and development on transportation and engineering. It was important to see all the multifaceted perspectives of transportation that can come from the same nine questions."



The team then shared their personal recommendations for the future of transportation and Smart Cities based on their collective research and individual takeaways. They each shared key words they used to describe the common themes of their research. Ronald's terms were "awareness, embracing innovation, and efficient policy." He stated that a major issue he sees today is that policymakers are not being given accurate information on the state of things

and policy tends to be out of touch, as a result. He also explained that embracing innovation "will help evolve us into the transportation world that we need to be in" and this may be the key to solving these transportation issues going forward.

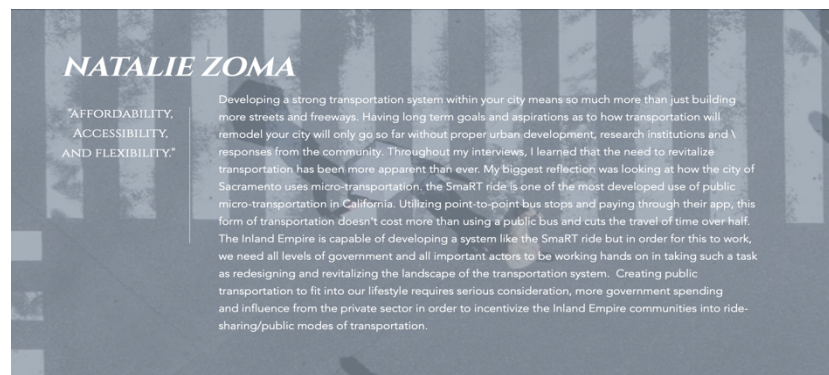
Melissa's key words were "frequency, reliability, and accessibility." She shared her statement from the website, reading, "As we move forward in transportation planning, it is critical that we begin to think outside of the box by using innovative and smart technology. By sticking to the same framework of building more roads and freeways, we are limiting our capacity to build better



infrastructure for our growing population. Reiterating sentiments from my expert interviews, I believe that the future of transportation in the Inland Empire should center around the important factors of frequency, reliability, and accessibility. In order to make the public transportation system more frequent, we need to invest heavily into the creation of subways, light rails, and commuter rails. The system also needs to be more reliable and convenient, and we can solve this matter by installing a fixed, electrified light-rail infrastructure system similar to BART in the Bay Area. In terms of accessibility, we must incentivize businesses to move to the Inland Empire to provide better job opportunities. It is critical we orient ourselves through this matter because the housing and job imbalance has created major transportation issues for residents, pushing for longer commutes to Los Angeles and Orange County. These policy innovations will carry heavy costs and time for development, but I believe that it is best for our regional transportation leaders to properly invest and get things right the first time."

Jennifer's key words were "ambition, envision, believe, and create." She shared that a common theme in her interviews were the many ways that transportation effects lives on a daily basis and told the group that she feels a specific connection to this topic as someone who resides in the Inland Empire and as someone who has experienced the challenges of transportation there.

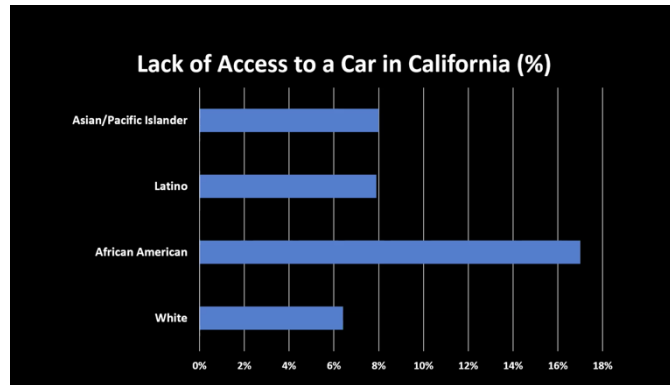
Lastly, Natalie told the group her key words were "affordability, accessibility, and flexibility," due in large part to her belief that transportation is directly connected to social mobility. She also shared that innovation can be difficult to achieve in a politicized environment and there should be incentives to facilitate such change. She also added that utilizing pre-existing infrastructure for new projects can be a key to success.



Dr. Joe Lyou then spoke to the group about some challenges he sees, countering some of the optimism presented by the students, and exploring the possibility that there are limitations on the impacts that can be made. He stated, "there needs to be a healthy dose of pessimism at times when it comes to transportation. And, in fact, there really is a question of whether or not we can ever get our get a leg up on the congestion problems that we face." He told attendees of the major challenges in transportation in the Inland Empire, including extreme congestion, air pollution, and the influx of logistics centers increasing

transportation on local neighborhoods. The urban sprawl of many Southern California Communities makes transportation even more challenging to navigate for many.

Dr. Lyou also explained that, “we all recognize that the history of transportation and inequality is not good, that you know communities of color, especially always seem to come out on the losing end of decisions to widen roads and build freeways and cut public transit services and as this graph shows that that people of color in California, when compared to whites are far more dependent upon public transit because of their lack of access to vehicles. When we talk about inequality and transit, it's important to pay attention to transportation related sources that also disproportionately have an impact on people of color and low-income Californians and to appreciate this disparity, you have to understand the problems with exposure to diesel exhaust.”



He then told the group that “scientists found that in California, exposure to fine diesel particulate matter from heavy duty on road vehicles is 49% higher on average for African Americans when compared with whites. And if you look at income, the same is true. You find the same problem in that this 20% bracket here. The lower income level, you're exposed to 33% more diesel PM 2.5 from on road sources compared to the highest 20% income bracket.” He explained that this exposure is linked to significant negative health outcomes, which are affecting individuals of color at a higher rate due to their exposure.

Dr. Lyou emphasized the magnitude of the issue by saying that transportation in the Inland Empire has a cost and the “State of California has estimated that that those costs are to the tune of 2000 premature deaths each year and an average of \$20 billion dollars of annual economic impact as public health related costs and so those costs are not trivial.” He stressed that the student presentations were accurate in identifying some of the needs moving forward, such as vision, creativity, and affordability. But one question that must also be considered is, “should we face reality that congestion is to some extent inevitable and that we have to be realistic about it and the challenges?” He stressed that technology and innovation can help increase efficiency in the system but other issues in society must also be addressed for transportation innovation to take hold such as working on homelessness. He spoke of policy initiatives, like congestion pricing, which can help combat congestion but may also disproportionately affect lower income individuals or those who must travel longer distances to work.

Health & Economic Costs of Freight Related PM2.5 Emissions in California

TABLE G-2: Statewide Health Effects and Valuation (2013 \$) Associated with Freight Emissions Contributing to PM2.5—Midpoint Projections

PM2.5 and NOx	2012	2030	2050
Mortality	2,200	980	1,100
Hospitalizations*	330	150	160
ER Visits†	950	420	450
Valuation (billions)	\$20	\$9	\$10

* Includes respiratory and cardiovascular hospitalizations.
 † Includes asthma and cardiovascular emergency room visits.

Questions

Attendees were given the opportunity to ask questions to the Expert Panel.

Question One: Dr. Collins asked, “How do we deal with the cultural phenomenon as well the perception that we need to have a car in order to have the good life in Southern California? ”

Natalie answered with an anecdote of growing up using public transportation and stated that this belief is truly a myth. In her experience, there is no need for a personal vehicle. She emphasized the importance of changing the public perception of public transportation in order to reduce stigma and make public transit something more people want to utilize. Melissa also answered that she spent time living in Sacramento, where it was much more convenient and affordable to utilize public transportation but her experience in Southern California was much different. She explained that the system is not as user friendly in the Inland Empire. She suggested utilizing phone apps to help make trip planning easier. Melissa also spoke about the challenges that the region faces due to the sprawl of cities and proposed a light rail system could help mitigate the effects of that. Ronald echoed Melissa's thoughts on the lack of usability of the current bus system in Riverside and also suggested the development of a smartphone app to help plan and track routes. Natalie shared with the group that Riverside actually does have an app that plans and tracks routes but the main issue, exemplified by their answers, is that it is not publicized adequately to those who may need it – which is something that needs to be changed.

Question Two: Dr. Lawrence Rose spoke of the digital divide and asked the group how they would approach the fact that some people cannot or are not interested in having a phone with access to the apps being proposed.

Natalie suggested that, while it is important to expand the use of technology, it is also important to keep paper books that people may be accustomed to using to plan their routes. She stated that there would be no need for getting rid of what is working for people now, especially given that access to apps is not ubiquitous. Ronald shared that he believes that transportation needs to do more to stay current on technological advances and that doing so will make public transit more appealing and easier to navigate for future generations but that needs to be accomplished without completely getting rid of what people know and are comfortable with using now.

Question Three: Lynniece Warren asked if there was anything not specifically technology related that the group researched which would make transportation easier.

Ronald answered that one way would be to encourage different modes of getting around, like walking or using bikes and scooters. He did touch on the fact that a lot of these things are now technologically based, like the development of electric scooters and apps that track them but that more active modes of transportation, in general, can also address the transportation issues identified. Natalie also answered by telling the group about a Sacramento initiative “Green Means Go”, where existing infrastructure is utilized to create “walkable, mini cities” where housing, jobs, and recreation are available within a small area that individuals are able to walk to and reduce traffic, which can be a model used by other areas.

Question Four: Greg Hulsizer asked about the effect that land use policy, jobs and housing imbalance has on transportation.

Melissa answered that this was a topic that came up in all of her interviews. She stated that the way the housing and job markets are, people are forced into long commutes to places like Los Angeles that have higher paying jobs. She reported an answer to this is to provide businesses with incentives to move to the Inland Empire and provide higher paying jobs. She also discussed the development of multiplexes for housing in city centers that are within walking distance of jobs and recreation. She says the key now is to stop expanding and “start building up.”

Question Five: Kary Witt asked Joe Lyou and the students about research on congestion pricing.

Dr. Lyou shared that “economists tell us it will work.” He also pointed out that one of the students mentioned earlier that it was expensive to park in downtown Sacramento, which is why they used transit instead. He also has the same experience working in downtown LA and found that it is cheaper and easier to ride the bus, which supports the fact that congestion pricing is a deterrent for a lot of people. However, he also emphasized that there is a delicate balance between appropriate congestion pricing that acts as a deterrent to increased traffic and not making parking so expensive that people cannot work in the area at all or that impacts low-income drivers disproportionately. He added that variable parking cost, toll roads, and congestion fees for accessing HOV lanes can be used together to get the desired effect. Natalie shared that she studied congestion pricing in terms of freight trucks on freeways. She told the group about the Zero Emission Autopilot Study where zero emission autonomous vehicles are being tested for logistics purposes in ways that can reduce congestion.

Question Six: Dr. Collins asked Professor Loveridge to expand on his experience as the Mayor of Riverside, a city that has embraced walkability in its planning.

Professor Loveridge explained that he believes the key to walkability in cities is the development of downtown areas as “vital community centers” where restaurants, recreation and housing can exist in close proximity. He told the group that, if there is existing downtown infrastructure, the issue then turns to policy that invests in the area to get people to live, work, and visit. During his time as Mayor of Riverside, the government made a commitment to increasing housing in the downtown area, which ultimately can reduce car traffic and increase walkability in the area. Dean Lawrence Rose also shared that there are models throughout the country, such as in New Orleans and Denver, which have excelled in creating walkable spaces that provided access to recreation, transportation, housing and education to residents in a condensed space.

Moving the Dialogue Forward: Ideas from the Participants

After the presentations, the Dialogue attendees discussed the ideas presented and worked together in groups to discuss solutions to move it forward. The top three ideas from each table have been categorized and summarized below.

Accessibility. Several participants discussed the importance of using technology to increase transportation accessibility.

- Using software and applications to make transit easier to navigate
- Breaking down barriers to transit due to urban sprawl and lack of transit routes
- Prioritizing equity in new policy and making sure that policies like congestion pricing do not disproportionately affect low-income drivers or riders
- Encouraging constituents to get involved with California Transportation Commission efforts to promote equity through outreach events

Housing and Job Balance. One group identified the job and housing imbalance in the Inland Empire as a significant barrier to solving transportation issues in the region.

- There is no one solutions that can fix everything so innovation, creativity, and developing alternatives will be critical.
- Focus on infrastructure and building housing that works for everyone, including maintaining some single-family housing as well as building more housing in city centers.

Multi-modal transportation. The groups also discussed the importance of developing reliable modes of transportation that fit the needs of everyone.

- More modes of transportation will reduce congestion and highway traffic.
- Increase safety measures for individuals using active transportation modes, like walking, biking or scooters.
- Use existing infrastructure to change the way transportation works in the community, such as developing door to door bus access rather than fixed stops.

About The Regional Mobility Dialogue Series

The Leonard Transportation Center (LTC) at California State University San Bernardino (CSUSB), presented a bi-monthly dialogue series on topics relevant to the future of transportation in the Inland Empire. The series, which was open to the public, was sponsored by HNTB Corporation and was held every other month starting in February 2018.

Dialogue topics ranged from understanding the current mobility dilemma and its causes to potential solutions like congestion pricing, transit; emerging technologies such as autonomous and connected vehicles and new ways of funding transportation infrastructure. Attendees had the opportunity to hear from transportation experts and engage in vigorous discussion about the transportation challenges facing the Inland Empire.

About Leonard Transportation Center

The Leonard Transportation Center (LTC) at California State University, San Bernardino opened in 2006 with a focus on regional transportation needs. The vision of Bill and Barbara Leonard was to create a center that focuses on the unique transportation opportunities and challenges the Inland Empire faces. Today, the LTC is working to expand its research and student engagement programs. Focal points include transportation management and governance issues, development of new technologies, and transnational studies. Their vision is to work collaboratively to seek solutions to assist residents, businesses, government and nonprofit agencies, and international partners to work together on improving sustainability and quality of life in the Inland Empire. For more information, visit www.csusb.edu/LTC

About HNTB

HNTB Corporation is an employee-owned infrastructure solutions firm serving public and private owners and contractors. HNTB's work in California dates back to its founding in 1914. Today, HNTB continues to grow in size and service offerings to clients in California from seven office locations, currently employing more than 350 full-time professionals. With more than a century of service, HNTB understands the life cycle of infrastructure and addresses clients' most complex technical, financial and operational challenges. Professionals nationwide deliver a full range of infrastructure-related services, including award-winning planning, design, program management and construction management. For more information, visit www.hntb.com

About San Bernardino International Airport

Conveniently located in the heart of the Inland Empire, close to major freeways and just 60 miles from Los Angeles, San Bernardino (SBD) International Airport is strategically positioned to meet growing aviation activity, including cargo, business aviation, general aviation, and commercial airlines by providing competitive rates for aviation companies and local businesses looking to stretch their wings and expand their horizons. With extensive stretches of pristine runway and acres of prime land available for aviation development, SBD International Airport is ready to help our community and region reach new destinations. For more information, visit www.sbdairport.com

About San Bernardino Valley College

San Bernardino Valley College will become the college of choice for students in the Inland Empire and will be regarded as the alma mater of successful, lifelong learners. We will build our reputation on the quality of our programs and services and on the safety, comfort, and beauty of our campus. We will hold both our students and ourselves to high standards of achievement and will expect all members of the college community to function as informed, responsible, and active members of society. For more information, visit www.valleycollege.edu