<u>NOTICE AND AGENDA OF</u> <u>PUBLIC MEETING</u>

#### **NEVADA HIGH-SPEED RAIL AUTHORITY**

#### 4:00 P.M. MAY 31, 2016

#### RTC/RFCD ADMINISTRATION BUILDING 600 S. GRAND CENTRAL PARKWAY, ROOM 296 LAS VEGAS, NV 89106 (702) 676-1500



This agenda with full backup is available at the Regional Transportation Commission Administration Building, 600 S. Grand Central Parkway, Las Vegas, Nevada; the Regional Transportation Commission's website, <u>http://www.rtcsnv.com</u>; the Nevada High-Speed Rail Authority's website, <u>http://nvhsra.com</u>; or by contacting Tammy McMahan at (702) 676-1538.



Items 2 and 3 are items for possible action. Items 1 and 4 are discussion items and no action can be taken. Please be advised that the Nevada High-Speed Rail Authority has the discretion to take items on the agenda out of order, combine two or more agenda items for consideration, remove an item from the agenda or delay discussion relating to an item on the agenda any time.

- 1. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION: No action can be taken on any matter discussed under this item, although the Committee can direct that it be placed on a future agenda.
- 2. APPROVAL OF THE MINUTES: Meeting of November 18, 2015 (FOR POSSIBLE ACTION)
- 3. RECEIVE A PROGRESS REPORT FROM THE FRANCHISEE, XPRESSWEST (FOR POSSIBLE ACTION)
- 4. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION: No action can be taken on any matter discussed under this item, although the Committee can direct that it be placed on a future agenda.

During the initial Citizens Participation, any citizen in the audience may address the Authority on an item featured on the agenda. During the final Citizens Participation, any citizens in the audience may address the Authority on matters within the Authority's jurisdiction, but not necessarily featured on the agenda. No vote can be taken on a matter not listed on the posted agenda; however, the Authority can direct that the matter be placed on a future agenda.

Each citizen must be recognized by the Chair. The citizen is then asked to approach the microphone at the podium, to state his or her name, and to spell the last name for the record. The Chair may limit remarks to three minutes' duration, if such remarks are disruptive to the meeting or not within the Authority's jurisdiction.

The Regional Transportation Commission keeps the official record of all proceedings of the meeting. In order to maintain a complete and accurate record, copies of documents used during presentations should be submitted to the Recording Secretary.

The Regional Transportation Commission appreciates the time citizens devote to be involved in this important process.

The Regional Transportation Commission Meeting Room and Conference Room are accessible to the disabled. Assistive listening devices are available for the hearing impaired. A sign language interpreter for the deaf will be made available with a forty-eight hour advance request to the Regional Transportation Commission offices. Phone: (702) 676-1500 TDD (702) 676-1834

DocuSign Envelope ID: C2754A3D-F755-4D0E-9B68-1451310646C2

Slip Sheet

#### **NEVADA HIGH-SPEED RAIL AUTHORITY**

#### **AGENDA ITEM**

SUBJECT:CITIZENS PARTICIPATIONPETITIONER:BOARD MEMBERS<br/>NEVADA HIGH-SPEED RAIL AUTHORITYRECOMMENDATION BY PETITIONER:THAT THE NEVADA HIGH-SPEED RAIL AUTHORITY CONDUCT A COMMENT PERIOD<br/>FOR CITIZENS PARTICIPATIONGOAL:SUPPORT THE IMPLEMENTATION OF NEVADA HIGH-SPEED RAIL SYSTEM

#### **FISCAL IMPACT:**

None

#### **BACKGROUND:**

In accordance with State of Nevada Open Meeting Law, the Nevada High-Speed Rail Authority (Authority) shall invite interested persons to make comments. For the initial Citizens Participation, the public should address items on the current agenda. For the final Citizens Participation, interested persons may make comments on matters within the Authority's jurisdiction, but not necessarily on the current agenda.

No action can be taken on any matter discussed under this item, although the Authority can direct that it be placed on a future agenda.

NHSRA Item #1 May 31, 2016 Slip Sheet

#### MINUTES NEVADA HIGH-SPEED RAIL AUTHORITY NOVEMBER 18, 2015

These minutes are prepared in compliance with NRS 241.035. Text is in summarized rather than verbatim format. For complete contents, please refer to meeting recordings on file at the Regional Transportation Commission.

#### THIS MEETING WAS PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS ON NOVEMBER 10, 2015

Clark County Government Center 500 S. Grand Central Pkwy. Las Vegas, NV 89155 City of Henderson Office of the City Clerk 240 Water Street Henderson, NV 89015 CC Regional Justice Center 200 Lewis Ave. Las Vegas, NV 89155 RTC 600 S. Grand Central Pkwy. Las Vegas, NV 89106 RTC website www.rtcsnv.com

#### CALL TO ORDER

George Smith, Chair, called the meeting to order at 3:03 p.m. in Meeting Room 108 of the Regional Transportation Commission Administration Building.

MEMBERS PRESENT: George Smith, Chair Fred Dilger Tina Quigley Hualiang Teng Peter Thomas

MEMBERS ABSENT: None

RTC STAFF: Angela Castro, Senior Director of Government Affairs and Media Relations Sue Christiansen, Manager of Government Affairs, Media Relations and Marketing David Clyde, Government Affairs and Legal Supervisor Marin DuBois, Management Analyst

INTERESTED PARTIES: David Brough, DAVE Ben Missler, SkyTram Andrew Mack, XpressWest Ed Uehling R. Pulliam, Tubular Rail Armin Kick, Siemens Anthony Arias, Oasis Stanley Washington, VSI Bob Madewell, Nevada Department of Transportation T. Chef Zhubin Najafi David Howryla, Marnell Consulting Nick Hann, Macquarie Group Jerry Roane, TriTrack

NHSRA Item #2 May 31, 2016 Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 2 of 13

#### Item:

#### 1. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

#### Comments:

Chair George Smith expressed his excitement at the prospect of high-speed rail coming to Southern Nevada and its historical significance. He thanked everyone for the efforts made toward the process. Chair Smith noted a franchisee would be chosen soon and the Nevada High-Speed Rail Authority (Authority) would be a partner and assist the franchisee in any way possible. Additionally, he said the franchisee would be asked to update the Authority every six months. As a quick reminder, Chair Smith provided an overview of Assembly Bill (AB) 457 and its four major components in selecting a franchisee that included: 1) environmental study status, 2) level of private investment or commitment, 3) readiness to engage in construction and 4) permit application status.

Following his comments, Chair Smith called on Mr. Stanley Washington who provided the following public comment:

It's certainly a pleasure to go ahead and see some of the people I haven't seen in quite some time. Primarily you, Chairman Smith. Of course you, Ms. Quigley over there, when she was doing then the understudy work for Jacob Snow, we go way back and RTC and Larry Brown and the Commission. We are still here doing our thing. I want to say for the record, back in 2009, when the, at that point in time it was called Desert Express, was brought forth, the environmental impact study meeting was at the Hampton Inn on Tropicana. FRA and all the agencies came and held that which were a part of the environmental impact study process. I was there then Mr. Chairman, to go ahead and put it on the record, relative to the diversity aspects of things, Mr. Marnell has been working with me since that time, from 2009 to 2012, has committed to having one of the finest diversity plans in the country associated with his brand new train he was bringing and we continue to go ahead and work toward that endeavor. *He had committed one million dollars toward the training pot to be leveraged in against other* contractors to go ahead and make that happen. He recognized this could not be a union only PLA project. The PLA was sitting on his desk, he said Mr. Washington, I know that minorities are not involved in the union like they should. This is going to be a double gate situation and we are going to work to make sure this train has, everyone has an opportunity to build because he knows that everyone is not basically invited into the union. I do know that the union is going to be there expecting to get all the jobs like they normally do, but it is not going to go that way. He said that commitment. Give you a little bit of history going on. Assemblyman Harvey Mumford was there at all meetings with Mr. Marnell. That then brought into play, three high-speed rail diversity summits that my company put into play. Veterans Southwest Industry. Rick Velotta attended all three of them as one of the panelist here reporting. At that particular point in time, we had one in Victorville, one in Palmdale and the last one in Las Vegas. The one in Las Vegas, Tom Skancke and the whole group was there along with Andrew Mack from *XpressWest.* The history is that as this thing comes back online, we are picking right back up there. I am looking forward after November 30, after the award is made, to kick into action. I am hearing September 30 could be a start construction date, which is not the 18 months lead time we basically would have had back in the day. Still need time as we get into that. But certainly the commitment this is to make sure our veterans involved. And this is the big change from 2012 to now. Certainly diversity is in play for all minorities. Our big push now, Mr. Chairman, is to make sure our veterans are first. They are basically downsizing and coming into play. As a matter of fact, we formed a PAC called America's Vets Building America's Trains. That is a national PAC and we will lobby the nation to make sure that our veterans get first call on this particular train.

Chair Smith then called on Mr. Ed Uehling who provided the following public comment:

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 3 of 13

I am trying to turn over a new leaf to not be critical of these public meetings. In this case, I was expecting that, at least, that the background materials would be available to the public. I was told that they won't be until after the decision is made, or after the meeting. And then I asked to see the handouts that were given to everyone and, as I understand that, that's supposed to be made available to the public under the open meeting law, so I don't think this meeting conforms to the open meeting law.

Mr. David Clyde, Government Affairs and Legal Supervisor for the Regional Transportation Commission of Southern Nevada, reminded the Authority that no action may be taken during the Citizens Participation portion of the meeting. Nevertheless, Mr. Clyde explained the Authority could direct that an item be placed on a future agenda. He clarified it was decided to not make the applications available in order to protect the information of the applicants before a decision was made, but additional information could be made available following the selection of a franchisee. Mr. Clyde emphasized that confidential information provided by franchisee applicants would remain protected.

Following Mr. Clyde's comments, Chair Smith called on Mr. David Brough who provided the following comment:

I also, I second what the gentleman just said. I think you people are conducting a rush to judgment and I think you really ought to really serious, seriously reconsider what is going on here. As far as your comment, David, you stated that people are after the fact that the applicants can be made public. You didn't ask any of us who are applying, saying, "Do you mind that these are made public?" I would like to know what is going on with at least one of the applicants. That's my comments.

Motion:

No motion was necessary.

Vote/Summary:

No vote was taken.

#### Item:

2. APPROVAL OF THE MINUTES: Meeting of October 28, 2015 (FOR POSSIBLE ACTION)

#### Comments:

No comments were made.

#### Motion:

Mr. Fred Dilger made a motion to approve the minutes.

#### *Vote/Summary:*

5 Ayes. 0 Nays. The motion carried.

#### Item:

3. RECEIVE PRESENTATIONS AND QUESTION FRANCHISE APPLICANTS REGARDING THEIR SUBMITTED APPLICATIONS

#### Comments:

Chair George Smith announced that four applicants were at the meeting to present their applications to the Nevada High-Speed Rail Authority (Authority) while one applicant declined to present. He explained that each applicant had 20 minutes to present, followed by a question-and-answer period. The order of the presentations, he continued, would be based on the order in which applications were received by the Authority.

#### Dual-Mode Advanced Vehicular Endeavor (DAVE)

Mr. David Brough, DAVE, requested a change in the order of the presentations. He preferred XpressWest be the first to present. Chair Smith responded that the Authority determined the presentation

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 4 of 13

order would be based on the order applications were received. Additionally, Chair Smith explained that if Mr. Brough elected to pass on his turn to present, that was his option, but the Authority would continue in the order the applications were received. Mr. Brough affirmed he did not elect to pass, but wished to change the order the presentations were made. Ms. Tina Quigley, General Manager for the Regional Transportation Commission of Southern Nevada (RTC), confirmed that the Authority would hear the presentations in the announced order.

Mr. Brough then gave a presentation. He began by reading a statement made by Governor Brian Sandoval that stated the Governor was confident that the Nevada High-Speed Rail Authority would lead a thorough and thoughtful discussion and begin a conversation about the possibility of bringing a high-speed rail system to Nevada. Mr. Brough protested the process emphasizing that it had moved too quickly into applications.

Then, Mr. Brough explained that when contemplating a new product or service, it must be determined if a market existed for said product or service. He asked if a party of three had the option to travel in a single-part experience in two-and-a-half hours for approximately \$100.00 versus a multi-part, multi-hour experience, what they would choose. The dual-mode concept had been developed from this inquiry.

Mr. Brough described the dual-mode concept as a regular wheel with a rail flange on it which could roll on a motor vehicle roadway in addition to rail and is compatible with current roadways and rails. He shared several example images of what the concept looked like. Mr. Brough pointed out that it would not be supporting 380 ton trains, but would supporting one-ton automobiles that were adaptable.

Chair Smith inquired if it would conform to the rail standard established in the 1800s or would a new rail standard have to be developed. Mr. Brough replied that the dual-mode would conform to the existing standard as well as future standards.

Chair Smith reminded Mr. Brough that the Authority was compelled to select a franchisee based on meeting the specific requirements of environmental study status, level of private investment or commitment, readiness to engage in construction and permit application status. Moreover, Chair Smith asked if Mr. Brough would be addressing those requirements. Mr. Brough responded that his application did address each of the four requirements and the answer to each was "yes." However, he noted, the only issue would be with the federal rail authority.

Mr. Fred Dilger asked if Mr. Brough had made any progress with the environmental impact statement. Mr. Brough replied that an Environmental Impact Statement (EIS) was not required as it had already been made for XpressWest. Mr. Dilger contended an EIS would be necessary for Mr. Brough's proposal. Mr. Brough reiterated that an EIS was not required and he would request a waiver because of the minimal footprint. Mr. Dilger countered that without an EIS, it would be difficult to receive a finding of "no significant impact," which would be necessary in order to receive the waiver Mr. Brough was interested in.

Mr. Dilger then asked Mr. Brough when construction could start. Mr. Brough anticipated construction could begin in a year as his proposal used existing technology with a minor adaptation.

Chair Smith asked if Mr. Brough had secured funding. Mr. Brough replied affirmatively, adding he had \$100 million secured. Chair Smith inquired for more information regarding the source of funding. Mr. Brough replied that he did not have firm funding commitments. He added that his financing commitment was through the Authority and its ability to loan money or expedite loans. Chair Smith disagreed,

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 5 of 13

explaining that the Authority lacked the ability to finance or secure financing for the high-speed rail. He emphasized the purpose of the Authority was to select a franchisee to build the system.

Ms. Quigley added that the Authority was meeting in order to have a thorough discussion as it related to the four requirements outlined by the AB 457. Mr. Brough countered that the purpose of the Authority was flexible and it was obligated to the people of Nevada to choose a technology and applicant that would meet the future needs of the state. Chair Smith replied that the Authority was expected to follow AB 457 with the intent to select a franchisee to build the high-speed rail based upon the criteria as outlined. Mr. Brough commented that the parameters had been changed previously and could be again. He voiced concern about the notification process of the Notice for Franchisee and the narrowly set criteria.

#### **XpressWest**

Mr. Andrew Mack, Chief Operating Office of XpressWest, introduced Mr. David Howryla, President of Marnell Consulting (Marnell), and Mr. Nick Hann, Executive Director of Macquarie Group (Macquarie), as co-presenters of the XpressWest application. He further explained that Mr. Howryla would discuss the design aspects of the project and Mr. Hann would provide the financial information.

Mr. Mack explained that the need had to be determined in order to establish the framework of the project. Over the past 10 years, several studies indicated a need for alternate transportation between Southern California and Nevada, he said. Mr. Mack contended that on average, 40 percent of the 38 million people who visited Las Vegas annually between 2005 and 2014, came from southern California and 90 percent of those visitors drove. XpressWest hoped to meet the need of this market.

XpressWest, Mr. Mack explained, identified three different implementation phases. The first, he detailed, was to build the initial high-speed rail system between Las Vegas, Nevada and Victorville, California. A second phase, he continued, would extend to Palmdale, California, which would connect to the existing Metrolink and provide rail service to the California counties of San Bernardino, Ventura, Los Angeles, Orange and Riverside. Finally, he said, the third phase would provide one-seat, high-speed rail service between Los Angeles Union Station/Burbank, California and Las Vegas, Nevada. He elaborated that one-seat meant a single ride from Los Angeles, California to Las Vegas, Nevada without a transfer.

Mr. Mack introduced Phase 1, which was a federally approved project spanning 185 miles between the Victorville, California station and Las Vegas, Nevada. He remarked that it would run along the Interstate-15 (I-15) corridor on a new, double track without crossings. The service, he maintained, would be 80 minutes end-to-end, and in the initial operating plan, the service would run every 20 minutes during peak times, which was Friday morning to Monday morning. In order to compete with the driving traffic, he added, it was important to provide that level of service to afford the flexibility for people to leave when they desired. He noted that the average fare would be less than \$100.00.

The trains, Mr. Mack continued, were electric, standard gauge, multiple unit trains where each car had its own propulsion. Additionally, he mentioned that the trains were the same quality and caliber of required by California high-speed rail making the system fully interoperable with California's infrastructure. Mr. Mack said there was a significant amount of movement and progress on the California side in building a high-speed rail network. He provided a brief status of the positive movement of high-speed rail in California. Furthermore, he said, XpressWest and counties in Southern California had agreed to jointly fund an investment grade study to examine the ridership connection between Palmdale and Victorville, California.

Next, Mr. Mack reported on XpressWest's status in relation to the four criteria for selection as franchisee

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 6 of 13

of the Nevada High-Speed Rail System. He said the EIS, permit applications, the level of private investment and readiness to engage in construction were completed. Mr. Mack said the EIS had been completed and XpressWest had records of decision for Phase 1. He detailed the various permits and waivers that had been secured, which included the following: Federal Aviation Administration (FAA) for no hazard to air navigation, the Federal Railroad Administration (FRA) for use of high-speed rolling stock train technology, the United States Fish and Wildlife Service incidental take permit as it relates to the desert tortoise, the Surface Transportation Board and the United States Army Corps of Engineers in cooperation with both states' regional quality water quality control boards.

Mr. Mack said no federal, state or local public funding was used to develop the project. He noted a private sector investment of approximately \$50 million was injected into the project to date and it went through an extensive review process agreeing to form a joint venture with China Railway International (CRI), which is a Nevada-based, United States (U.S.) company. He added that the members had a proven track record in building and financing high-speed rail. The joint venture, Mr. Mack explained, was initially funded with a \$100 million investment.

In summary, Mr. Mack recounted that federal environmental permits, the authority to obtain necessary rights-of-way, and an investment grade ridership study were completed; a federal permit for construction operation was in place; and a joint venture partner was selected for financing. Additionally, he shared that during the previous week the FRA issued a Buy America Act waiver to Amtrak for rolling stock procurement since a manufacturer for high-speed rolling stock did not exist in the U.S.

Next, Mr. Nick Hann provided an overview of Macquarie, one of the largest investors in infrastructure projects globally. He said that Macquarie was well known for its funding of roadways, toll roads and various types of public infrastructure. Mr. Hann said Macquarie had served as a financial advisor for XpressWest for five years. He remarked that public-private partnerships for the delivery of railway infrastructure had become more commonplace on a worldwide scale for approximately 20 years and was growing in the U.S. This, he continued, demonstrated the financial market's willingness to accept the overall design, construction, operations and maintenance. XpressWest was uniquely placed, he said, because of the strength of the market in Las Vegas and the sizeable market traveling by road to the dense area of the Las Vegas Strip.

Economic highlights for the project, Mr. Hann explained, included the scale of the ridership demand andthe capital cost of the project was relatively low as the environment was not particularly challenging between Victorville, Palmdale and Las Vegas. Additionally, he said, the project had a robust investment grade revenue forecast and XpressWest was exploring other financing sources including export credit financing, federal funds, investment grade bond market and the high-yield bond market. Mr. Hann mentioned that there was a large amount of capital flowing into infrastructure and an active leasing market in railroad equipment.

Mr. Howryla said Marnell had developed many large projects in the past. He noted that the process was a key element to project development. He believed that it began with the formation of a brand and the kind of experience XpressWest would deliver from start to finish. The experience, he stated, would encompass parking, luggage handling and arrivals/departures in the terminal in addition to riding on the train. XpressWest believed that the experience would be designed to attract repeat customers, which was essential for business success.

Mr. Howryla continued, the train would be a state of the art from the hardware and materials to riding experience. He displayed images of the train being developed. He stated the train regenerated power

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 7 of 13

through its movement. He noted the train offered different interior settings depending upon the ticket level. He presented a sampling of technical drawings and images of the Phase 1 Southern California station which offered ample room for major parking structures, arrival and departure sequences, and allowed for modifications for topography and site constraints. Mr. Howryla noted that desert conditions such as sun and wind had been taken into account inside and outside the station. He believed that this would be a modern station which would resonate with passengers. He noted the Las Vegas station would be located off of Russell Road and I-15.

Chair Smith asked for a time frame to build Phases 1 and 2. Mr. Mack replied that due to delays in the Las Vegas, Nevada to Victorville, California section, it was anticipated that the phases would be completed almost concurrently on a 60-month schedule. He added California High-Speed Rail had a published EIS completion date of 2017 for the Burbank to Palmdale, California leg so the potential was high for connectivity between the sections. He added that the 60-month schedule included financing the full consortium selection, final design, construction, testing, and commissioning.

Chair Smith inquired about project financing. Mr. Hann answered that the total capitalized costs of construction or development of Phase 1 would be approximately \$8 million. He anticipated that the financing would be a combination of long-term private sector debt over 30 to 35 years, combined with export credit financing and possibly some federal loan programs. He said that the strategic partners would provide the equity in the project supplemented by infrastructure funds.

Mr. Thomas asked if Phase 1 was financially stable. Mr. Nick Hann answered affirmatively.

Chair Smith inquired as to the ridership number. Mr. Mack responded that high-speed rail would capture about 25 percent of the 26 million riders projected in 2020 and this translated to approximately seven million people.

Chair Smith asked for clarification on the reference of being capitalized by \$100 million. In response, Mr. Hann explained that the project had received \$100 million. Of this amount, \$50 million had been spent and the remaining \$50 million was considered sufficient to achieve financial closure. Chair Smith then asked if the remaining \$50 million had been received by XpressWest. Mr. Mack replied that the financing was going through a regulatory approval process on the joint venture transaction causing some elements of the status private, but the commitment had been made.

Mr. Thomas queried as to how the \$8 billion would be balanced between equity and debt. Mr. Hann answered that they anticipated a ratio of 80 percent debt and 20 percent equity with some percentage between 70 to 80 percent debt financing and 20 to 30 percent equity financing.

Mr. Thomas asked if the characteristics of this project were more favorable than other successfully financed projects. Mr. Hann responded that this was one of the strongest projects he had seen due to the unique ridership and cost to construct.

Mr. Thomas asked if XpressWest expected to move 25 percent of the market from Victorville in Phase 1 and what percent of the market would it expect to capture once the system expanded to Los Angeles. Mr. Mack indicated that he was reluctant to answer until the investment grade ridership study was complete.

Chair Smith inquired as to whether any of the permits and studies had expired since some were obtained several years prior. Mr. Mack remarked that some permits had a set horizon date, which would require resubmitting applications. He pointed out that environment-related permits did not have set expiration

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 8 of 13

periods. He explained that that the extent that the character of the project had changed from the time the environmental analysis was completed would influence the usability of certain permits. Mr. Mack asserted that there had not been any changes in Phase 1.

Chair Smith asked if the land for the Las Vegas station was currently owned by XpressWest. Mr. Mack responded that it was not.

Mr. Fred Dilger asked if the land withdrawal from the Bureau of Land Management (BLM) had expired. Mr. Mack replied that the land lease with the BLM would not expire as long as payment continued and there was no expiration on the certificate of public convenience and necessity.

Ms. Quigley asked what the financial commitment from XpressWest was since inception. Mr. Mack responded that it was approximately \$50 million.

Mr. Hualiang Teng asked for the estimated cost of the Victorville to Palmdale leg. Mr. Mack answered that there was no estimate for that phase at this time since an environmental study was in process.

Mr. Teng questioned the schedule of the different phases as it appeared that the section from Palmdale to Los Angeles was broken into two segments, one from Palmdale to Burbank and one from Burbank to Los Angeles. Mr. Mack explained the arrangement was due to the environmental challenges associated with the build. Mr. Teng expressed concern about the schedule of those segments and recommended that the schedule be coordinated to build all the way through to Los Angeles. Mr. Mack commented that the agencies were open to interagency agreements.

Mr. Thomas asked if Mr. Mack was comfortable that the system could be financed without any credit from the state of Nevada. Mr. Mack replied affirmatively.

Mr. Dilger inquired if XpressWest was ready to move to the construction phase. Mr. Mack replied affirmatively, explaining that there was a construction process that should be completed within a year.

\*\* Chair Smith called for a 10-minute break at 4:20 p.m.

\*\* The meeting resumed at 4:30 p.m.

#### SkyTram International (SkyTram)

Mr. Ben Missler, Chief Executive Officer and President of SkyTram International, provided a presentation.

Mr. Missler first explained that his proposed system used recycled fuselages from commercial airplanes. He said the fuselages were relatively inexpensive as airlines could not reuse them. Mr. Missler shared that he had a commitment from the company that recycles the units. The units, he stated, would be powered by battery and electric motors, making them economical and each tram would be independently powered.

\*\*Ms. Sarah (no last name indicated) joined the meeting via web conference to assist with SkyTram's presentation.

Mr. Missler went on to say that the SkyTram's traveling speed would be up to 250 miles per hour. He noted the first leg to be developed would be between Glendale, California and Las Vegas, with stops in

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 9 of 13

Pasadena, California and San Bernardino, California with possible additional stations located at Victorville, California and Primm, Nevada. The tram, Mr. Missler explained, would be situated with the rail system so a transfer station could be built almost anywhere based upon the needs of traffic or growth. He said the first build would use existing rights-of-way such as following parallel to I-15 or traveling over the interstate. Mr. Missler shared that each transfer station would have amenities including shops and restaurants.

Next, Mr. Missler detailed that the track was a rectangular, tubular type track where the tram would be secured at three points to prevent the tram from coming off the track, with all the cables secured inside the tubular rail system. The system, he explained, would be quiet and not use fossil fuels, but solar and wind turbines to generate power. He noted that with technological advancements, the tram could go up to 200 miles without needing a recharge.

Mr. Missler said due to the efficiency of the system, passenger tickets would be less expensive than tickets for Amtrak or buses. He said the projected revenue from Glendale to Las Vegas was considered very good and it was possible to make money on a transit system.

Mr. Missler stated he was working with partners such as Protera for solar panels. He noted that the cost for solar panels and batteries had decreased over time and SkyTram projected that this trend would continue making the endeavor of SkyTram more cost effective.

The cost to build, Mr. Missler explained, was approximately \$3.5 million and could be paid via government bond and private funding. He said this number was low due to the minimal construction work needed on the ground. The towers for the wind turbines, he described, were small with a small footprint. He remarked that one company could install three towers in one day. Mr. Missler noted that the cost for a transfer station would depend on how many parking structures were required.

Security, Mr. Missler mentioned, could be an issue and he was investigating this matter. However, he pointed out that since the system would be 50 to 100 feet above the ground, tampering would be difficult.

Mr. Missler commented that the environmental impact would be minimal as the tram would not disturb the land or wildlife, except for an occasional bird.

Mr. Missler related that the airlines used a hub system which forced many people in small towns to travel to reach an airport. SkyTram, he declared, could include smaller towns that would connect to airports via a tram and reduce airport congestion.

In conclusion, Mr. Missler said that with private partnerships, the system could be built in three or four years.

Mr. Thomas expressed that the government bond portion of the funding concerned him. Mr. Missler replied that most of the funds would be private capital, and if he got the guarantees, he could secure private funding. Mr. Thomas reiterated that it was not within the power of the Authority to provide funding or guarantees. Mr. Missler asked what the governing bill provided. Mr. Thomas explained that the Authority had a very narrow charge from the Nevada Legislature that involved selecting the franchisee, but not the building and financing of the project.

Chair Smith asked about the four criteria for selection and said he wanted to know if Mr. Missler had permits, financing or environmental studies. Mr. Missler replied that he did not. Chair Smith wanted to

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 10 of 13

know if there were any high-speed trams operating in the world. Mr. Missler described a tram in Germany that moved at approximately 60 miles per hour and one in Seattle that moved at slower rate.

Ms. Quigley inquired as to whether there had been any testing of this technology as the federal government required extensive testing on systems that carry passengers. Mr. Missler replied that there had not been testing.

#### <u>TriTrack</u>

Mr. Jerry Roane, TriTrack, provided a presentation. He explained that TriTrack was an electric car that would convert to a monorail. He said that the patent was written before the passage of SB 457. The train was held on the track by gravity and the rail system he used was superior to the rail system used by the FRA, he said. He continued to say that with \$500 million dollars from private investors, he would not need the input from the FRA except for safety reasons.

Mr. Roane appreciated the Authority's quick turnaround time, noting that fast movement was important to private enterprise. He added that the intent of the law was about the larger goals of high-speed rail, such as energy, low pollution and smooth operation with less congestion. In his opinion, TriTrack met these goals better than anyone else since the vehicle was smaller.

For interoperability, Mr. Roane explained the guideway for the rail system would be built on flat rail cars that he could buy for \$18,000.00 each and would allow the car to go on the other rail system. He said that the state of Texas included the TriTrack system in state law. Mr. Roane said the proposed route would begin at SeaWorld in San Diego, California, continue to Disneyland in Anaheim, California, move on to Union Station and then progress onward to Las Vegas. He termed the route as a high-speed interconnect.

Mr. Roane believed that SB 457 required this route from the Los Angeles basin to the Las Vegas basin. He then showed an example of the route in 3-D. TriTrack officials did not think that they would have to uproot miles of desert since the route followed the I-15. He followed by displaying two versions, one going down both sides of the interstate and one going down the middle. The vehicle, he said, could be driven on the road as well.

Mr. Roane went on to explain that the car would be owned by the person, but the battery would be owned by the utility. He said with this guideway system, the finished cost was \$500 million for 367 miles from SeaWorld in San Diego to Las Vegas. He said the extrusion process would be done by a corporation in China, but the company offering the best bid could do it. He said a production of 50 pieces had already started in his facility in Texas.

A safety feature, he noted, was the bogeys maintaining the trajectory and six steel wheels that roll on the metal surface. With this configuration, he noted, the operator could control the tension on the guideway. Also, he explained that vehicle employed an active suspension so if the previous car were to go over a bump, the following car would pick up the wheel and set it down on the other side of the bump. Guideway sway was accounted for by being pre-arched, he said. Mr. Roane continued to say that the car would continue on a straight path, but the guideway would move up to six inches. He said that the brake pads applied to the guideway and would not involve the tires in an emergency situation.

Mr. Roane described the first 1,500 feet of guideway as containing two linear motors built in to enable the 370 horsepower motor to push the car from 70 miles per hour to 180 miles per hour. He explained that the car seats four and was 20-feet long and the shape was critical for how it worked. Additionally, he said that the car had a drag coefficient of .07 with the wheels off, and with the wheels extended it was twice

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 11 of 13

the drag. He shared that the University of Texas at Austin had conducted a wind tunnel test with a 1:11 scale. Mr. Roane said that even at half efficiency, seven-foot wide solar panels could be used and power the whole system. He said the machine that extrudes the track carried out this function on site, thereby making it economical to use.

Mr. Dilger asked if TriTrack had any done any of the environmental studies or had any permits to build. Mr. Roane said he had only received permits to build track in Texas.

Ms. Quigley asked for a definition of headway, noting a reference to two-second headway. Mr. Roane explained this referred to the car from nose to nose.

Chair Smith asked about the quoted cost of \$1 billion if cars were included and a cost of \$500 million without the cost of cars. Mr. Roane explained that the customer could buy or rent the vehicles and provided an estimated cost breakdown and how it would affect the overall costs.

Chair Smith pointed out that they were given different presentations and that there were discrepancies. He wondered how the amount of \$500 million was reached. Mr. Roane said in order to get investors interested, they want to see upside potential. He added that the route between San Diego and Los Angeles, California was very desirable, but the entire proposed route would only include 13 minutes in Nevada. He said investors questioned the ridership from Los Angeles, California to Las Vegas. Mr. Roane commented that he did not anticipate a high ridership number between Southern Nevada and California based on viewing Google Maps. Chair Smith disagreed stating that on a weekend there were thousands of vehicles on the highway between Southern Nevada and California.

Regarding the funding of TriTrack, Chair Smith asked for clarification as to whether it was individual or a company who would be financing Mr. Roane's proposal. Mr. Roane replied that the investor was an individual from Ukraine who had previously invested with Mr. Roane's business partner.

Noting that he had been told that once the car on the guideway the system took control, Mr. Teng asked if the car had to be driven. He believed that with headway of less than 2 seconds, a passenger could not psychologically process it. Mr. Roane replied that passengers would have to adjust to the changes.

\*\* Chair Smith called for a two-minute break at 5:38 p.m.

	1
Motion:	
No motion was necessary.	
Vote/Summary:	
No vote was taken.	

Item:

4.

DELIBERATE REGARDING THE FRANCHISE APPLICATIONS RECEIVED AND POTENTIALLY AWARD THE FRANCHISE TO AN APPLICANT OR MAKE A RECOMMENDATION FOR THE FUTURE SELECTION OF THE FRANCHISEE (FOR POSSIBLE ACTION)

#### Comments:

\*\* The meeting resumed at 5:39 p.m.

Mr. David Clyde, Government Affairs and Legal Supervisor for the Regional Transportation Commission of Southern Nevada (RTC), remarked that Senate Bill (SB) 457 specified the mode of transportation selected would be high-speed rail. He explained that the Nevada High-Speed Rail Authority (Authority)

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 12 of 13

would use four criteria to select a franchisee that included the following: 1) the status of the environmental studies, 2) the level of confirmed private investment or commitment, 3) the readiness of the applicant to begin construction and 4) the status of pending or completed permits.

Chair George Smith inquired as to what applicants who did not meet the high-speed rail aspect of SB 457 would do. Mr. Clyde replied that only one franchise could be awarded, but it did not preclude the other applicants from moving forward with funding, the permit process or completing the environmental studies. He explained SB 457 limited the franchise award to a particular system that met particular criteria. Additionally, Mr. Clyde mentioned applicants could go to the Nevada Legislature and request an expansion to the bill's scope to include other modes of transportation or create its own authority for another mode of transportation.

Ms. Tina Quigley, RTC, asked if the Nevada Legislature could create an authority to oversee other forms of transportation. Mr. Clyde responded affirmatively.

Ms. Quigley mentioned she struggled with the proposals in terms of meeting the criteria outlined. To which Mr. Peter Thomas agreed and said only one applicant met the criteria. Mr. Fred Dilger and Mr. Hualiang Teng concurred with Ms. Quigley and Mr. Thomas. Mr. Teng added that three of the ideas were primarily conceptual and would require extensive research before moving forward.

Motion:

Mr. Peter Thomas made a motion to select XpressWest as the Franchisee and for XpressWest to report back to the Nevada High-Speed Rail Authority every six months.

#### *Vote/Summary:*

5 Ayes. 0 Nays. The motion carried.

#### Item:

#### 5. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

#### Comments:

Chair George Smith called Mr. Zhubin Najafi, who provided the following comment:

I have been studying XpressWest and high-speed rail from Las Vegas to LA for more than a year. I also heard the presentation today. What I still think something that is missing which is the partnership with academia. I guess, as you may know, the university is the only program, school in the country which offers the high-speed rail courses. I think we have knowledgeable faculty and we have very talented students in the school. I think the public expectation is XpressWest or whoever is going to build this highspeed rail should support UNLV, and support the UNLV for this program that I think UNLV has qualification to be involved in the design, construction, and operation of this project.

Chair Smith thanked Mr. Najafi and asked if any there were any other comments.

Mr. Hualiang Teng commented that he had seen high-speed rail systems around the nation and many universities had been involved in the implementation of high-speed rail projects and it would be beneficial for UNLV to be involved in the development and implementation of this transportation system. Mr. Teng added that the university was going to produce the professional workforce and it should have a role. He noted that the University of Nevada, Reno and other colleges in addition to the University of Nevada Las Vegas could work on this project in some way.

Chair Smith called on Mr. Robert Pulliam, Tubular Rail, who provided the following comment:

Minutes – Nevada High-Speed Rail Authority Meeting of November 18, 2015 Page 13 of 13

In 2009, we were one of the presenters at the University of Nevada's alternative technology program. which looked at this project five years ago. The only comment that I wanted to make about that, we chose not to get involved this time because we obviously didn't meet the criteria. The decision you made today seems perfectly reasonable given the criteria you are working with. There are a couple things you might want to think about as the project moves forward. High-speed rail has never operated in the desert environment. That is one thing that has not been proved. The domestic content issue came up, and my understanding is that is an issue when you're applying for federal funds. I did not understand today whether Western Express will be actually be applying for the federal funds, but if they are, they will have to meet those domestic content. And there are actually American manufacturers, or at least based manufacturers. Siemens has plants in Sacramento that actually makes high-speed cars for the Florida Overland Express. They are under contract there. The other one was an effort by state of Wisconsin to build Pendolino trains in Milwaukee for the Wisconsin high-speed rail project that was in effect, or moving forward, before Scott Walker sent the funds back to Washington. There are at least two that can do it. My understanding that the latest impetus for what is going on is that these gentlemen and they do have an excellent presentation. I have read it. And I have never seen and Environmental Impact Statement be put together so quickly. My understanding is they have Chinese interest or investment which is associated with this. The strategy is China sees this as their entry into the market. This issue will come back up. If it federal funding, somebody, even though Nevada appears to be off the hook, if it is federal funding, I believe it has been rejected one time already. Somebody is going to actually have to take a look at this. My only question is for you is if the federal government rejected it the first time, do you think they are really going to do it a second time when California's project is in the condition it is in? Thank you very much and good luck.

#### Motion:

No motion was necessary. *Vote/Summary:* 

No vote was taken.

#### ADJOURNMENT

The meeting adjourned at 5:55 p.m.

Respectfully submitted,

— DocuSigned by: Marin DuBois — 67F25985C7F8458...

Marin DuBois, Recording Secretary

— DocuSigned by: Cynthia Holman — 627108E1BF4E456...

Cynthia Holman, Transcription Secretary

NHSRAItem #3November 18, 2015Presentation

### This presentation to Nevada High speed Rail Authority

is for

# D.A.V.E.

# Dual-mode Advanced Vehicular Endeavor

by Dave Brough

#### I am confident that (the High-Speed Rail Authority) will lead a thorough and thoughtful discussion...(and) begin a formal conversation about the possibility of bringing a High-Speed Rail System to Nevada." Governor Brian Sandoval (September 10/15 press release announcing creation of Board)

#### **PUBLIC NOTICE:**

#### THIS APPLICATION IS BEING BROUGHT AT THIS TIME UNDER PROTEST

What's the first question you ask when contemplating a new product or service...?

# Right.

# Is there a market for it?

My question:

If you had a choice of travel between southern California and Las Vegas, which would you choose:

A. A multi-part, multi-hour experience consisting of getting (driving or limo) from your home through traffic to a station where you park, walk with luggage to ticketing, stand in line, pay separate fare for each rider, walk to waiting area, wait, stand in line, move to platform, wait until boarding, lug luggage onto train, which departs on its schedule, share seating space with others, ride for an hour and a half, get yourself and luggage off the train, drag luggage to a cab, take cab to destination.

Elapsed time 6 hours.

Total (round trip) cost for party of 3: \$900







**Or** . . .

B. A single-part experience in which you get picked up at your doorstep at exact time you want, travel directly to where you want to go in a private, unshared vehicle for a single price regardless of number in vehicle. Make any number of stops along the way. You could own the vehicle, which you could also rent out.

Elapsed time: 2.5 hours.

Total (round trip) cost for party of 3: \$100.

**Representative photos:** 



Photo credits: Mercedes and Popular Science

Which would you want?

# A....?

## or

# B...?

# What is Dual-Mode?

Dual-mode vehicles will run both on existing streets and on existing or purpose-built rail.

D.A.V.E. adds a rail flange (in white) and a 'bogie' (not shown) to an existing wheel hub. Any conventional car or light truck that meets spec will be used



Inventor Dave Brough with a scale model of his DAVE-wheel that converts ordinary cars into extra-ordinarily safe and fast cars



DAVE (Dual-mode Autonomous Vehicular Endeavor) depicted along 1-15 at Las Vegas Dave Brough/3rd Gen Roadway







Do we get floods in the desert?





Do we get high winds in the desert?

## Train overturned in winds, four killed



### So, what do we want...?



Or...



NHSRA Item #3 November 18, 2015 Presentation

# XPRESSWEST

#### Presentation to the Nevada High Speed Rail Authority

November 18, 2015

Las Vegas, Nevada



### A Robust Market with a True Need

- XPRESSWEST.COM
- Investment grade ridership studies indicate the need for a transportation alternative connecting Las Vegas with Southern California is real and continues to grow.
- On average, 38 million people visited Las Vegas annually between 2005 and 2014.
  - Over 40% of this Las Vegas visitation travelled from Southern California.
  - 90% of the Southern California visitors drove to Las Vegas on the I-15.





## Serving the Need: A Phased Approach

- Phase I: Build the initial system between Las Vegas and Victorville close to the critical mass of SoCal to address the immediate need.
- Phase II: Extend the system to Palmdale to interface with existing commuter rail service
- Phase III: Provide

   one-seat high speed
   rail service between
   Los Angeles / Burbank
   and Las Vegas.



XPRESSWEST COM



## Phase I: An Approved Private Interstate Railroad

XPRESSWEST.COM

PRIMM

- 185 miles between Southern California and Las Vegas
- Primarily within or adjacent to the I-15
- Exclusive new double track
- No at-grade crossings
- Passenger only service
- End-to-end travel time under 80 minutes
- Non-stop service every 20 minutes during peak times
- Average ROUNDTRIP fare of under \$100
- Fully electric, standard gauge, multiple unit trains that would enable interoperability with CHSR



## XW, CHSRA and the Southwest Rail Network

XPRESSWEST.COM

Spring, 2012: The HDC JPA, LAMETRO, and SANDBAG approved including high speed rail in the HDC EIS/EIR. SCAG named XpressWest from Palmdale through Victorville to Las Vegas as a Major Strategic Plan Project and component of the ultimate Vision for a High-Speed Rail System connecting San Diego, Anaheim, Los Angeles, and Las Vegas.



- Spring, 2014: The CHSRA initiates environmental approval process for HSR service between LAUS and Palmdale.
- Fall, 2015: San Bernardino County, LA County, CHSRA and XpressWest agree to jointly fund an investment grade rail ridership and revenue study for the HDC.
   5/18/2016


# **NHSRA Franchisee Selection Criteria**

- Extent to which environmental studies have been completed by or on behalf of XpressWest
- 2. Pending or Completed permit applications
- 3. Level of private investment that has been made or committed for the Nevada High Speed Rail System
- 4. Readiness of XpressWest to engage in construction



# Status of Environmental Studies

- Records of Decision for the environmental documents for Phase I from Victorville to Las Vegas have been executed as follows:
  - Federal Railroad Administration: July 8, 2011
  - Bureau of Land Management: October 31, 2011
  - Federal Highway Administration Nevada and California: November 18, 2011
- A draft EIS for the High Desert Corridor project, including high speed rail from Victorville to Palmdale, has been prepared by Caltrans and was issued in September 2014; a final EIS is expected to be issued in April 2016.



# Pending or Completed Permit Applications

August 2010: FAA issued Determination of No Hazard to Air Navigation

- March 2011: Waiver issued from FRA for compliant rolling stock
- April, 2011: USFWS issued Section 7 Biological Opinion and Incidental Take Permit
- October 2011: Surface Transportation Board (STB) issued Certificate of Public Convenience and Necessity to construct and operate the railroad
- September, 2012: US Army Corps of Engineers, Nevada and California Regional Water Quality Control Boards complete issuance of Nationwide 404 permits and CWA 401 permits.



# Private Investment Committed to the Project

- No federal, state or local public funding has been used to develop the XpressWest project.
- XpressWest has made a private sector investment of \$50 million for start-up, environmental permitting, engineering, right-of-way acquisition, and other development costs.
- Following a multi-year evaluation process, XpressWest and China Railway International USA (CRI) have decided to form a JV to implement HSR between Los Angeles and Las Vegas. With more track miles of operating high speed rail lines than other country in the word, CRI represents a best in class partner for XpressWest and the Nevada High Speed Rail Authority.
- With its Joint Venture Partner, XpressWest will be initially capitalized with \$100 million of private investment necessary to reach financial close and start construction. The Joint Venture has substantial HSR development, construction and operations experience and access to financing resources required to build and implement the project.



# Readiness to Engage in Construction

Project Element	Status
Federal environmental permits	$\checkmark$
Certificate of public convenience and necessity – the Federal authorization for construction and operation	$\checkmark$
Federal authority to obtain necessary right-of-way	$\checkmark$
Investment grade ridership and revenue studies that support a viable plan of finance with or without consideration of a US Federal Loan (RRIF)	$\checkmark$
Selection of a Joint Venture Partner with the requisite experience, financing capacity, and commitment to the success of the XpressWest project	$\checkmark$
FRA issues Buy America waiver to Buy America requirements (Amtrak)	$\checkmark$



# Federal, State and Local Agency Coordination

- Federal: Federal Railroad Administration, Bureau of Land Management, Surface Transportation Board, Federal Highway Administration, National Park Service, US Army Corps of Engineers, Federal Aviation Administration, Environmental Protection Agency.
- State: Nevada High Speed Rail Authority, Caltrans, Nevada Department of Transportation, California High Speed Rail Authority
- Local: Regional Transportation Commission of Southern Nevada, Los Angeles County Metropolitan Transportation Authority, Metrolink, San Bernardino Association of Governments, Los Angeles County, San Bernardino County, Southern California Association of Governments, High Desert Corridor Joint Powers Authority, Victorville, Barstow, Palmdale, Burbank, and Los Angeles.



# Macquarie Corporate Profile

XPRESSWEST.COM

#### Macquarie Group at a Glance

- Global provider of banking, financial advisory, investment and funds management services
- Founded in 1969 as the Australian subsidiary of UK merchant bank Hill Samuel
- Established and growing presence in the US since 1994
  - ~2,400 staff in the US and ~14,000 globally
- Listed on Australian Securities Exchange (ASX:MQG) since 1996
- A2/A credit rating (S&P)

#### Leading Infrastructure Platform

- Macquarie has been a global leader in infrastructure, utilities and renewables advisory for the past 20 years
- Team of infrastructure advisory professionals in North America with broad experience in project development and advisory to both private and government sectors
- Macquarie Infrastructure and Real Assets (MIRA), manages over 50 funds with over US\$100 billion of assets under management
  - Over 18 years of infrastructure management experience

**Financing and Advisory by the Numbers** 

#### Macquarie Group by the Numbers

<b>\$17.0bn+</b> Market Capitalization	<b>\$369bn+</b> in total AUM	<b>13,900+</b> staff across 70+ offices in 28+ countries	\$315bn+ advising on 600+M&A deals since 2009	<b>\$215bn+</b> in debt financing raised since 2009	\$407bn+ of equity raised as bookrunner since 2009



# Select Macquarie Rail Experience

XPRESSWEST.COM



5/18/2016



# **Private Rail Financing Examples**

XPRESSWEST.COM

#### **United States**

#### Purple Line, Light Rail Transit (in progress)

40-year Concession
US\$2.5bn | 16.2 mi | Maryland, WA D.C.

#### Denver FasTracks, Commuter Rail (2010)

35-year Concession
US\$2.0bn | 23.5 mi | Denver, Colorado

#### Canada

Purple

#### **Confederation Line, Light Rail Transit (2013)**

- OTrain 35-year Concession
  - US\$2.0bn | 7.8 mi | Ottawa, Canada

#### Canada Line, Rapid Transit (2006)



35-year ConcessionUS\$2.0bn | 12.1 mi | Vancouver, Canada

#### Europe

#### High Speed One, High-Speed Rail Link (2010)

- •
- 30-year Concession (Brownfield) US\$3.4bn | 68 mi | London, UK

#### Arlanda Express, High-Speed Rail Link (2004)

- Arland
- Arlanda 40-year Concession (Brownfield)
  - US\$82m | 26 mi | Stockholm, Sweden



# **Current Private US Rail Developments**

XPRESSWEST.COM



#### **Dallas to Houston High-Speed Rail**

- 240-mile high-speed passenger rail between Dallas and Houston proposed by Texas Central Railway with agency support from FRA and TxDOT
- Travel time of 90 minutes compared to
   65 minutes by air and 4 hours by car
- FRA currently preparing Environmental Impact Study for public review in 2015/2016
- \$10bn cost expected to be privately funded



#### **All Aboard Florida**

- Passenger rail project connecting Miami to Fort Lauderdale, West Palm Beach and Orlando
- Priced USD 405m high-yield bond in private placement market in June 2014 and have started work on segment
- Currently seeking investors for \$1.75 billion additional tax-exempt bond issuance
  - Project expected to be financed through private debt and equity

۲



# **Funding Requirements & Sources**

XPRESSWEST.COM

#### **Economic Highlights**

- CapEx and OpEx are comparatively low due to open desert terrain
- Project has robust investment grade revenue forecast by SDG

#### **Potential Financing Sources for High Speed Rail**

• Typical public and private financing sources for major infrastructure projects





# **Timing and Implementation Considerations**

XPRESSWEST.COM

#### The current implementation schedule is 60 months from an anticipated start in Fall, 2016



Nov 2015 (Present)

Development Phase Scope	Financing & Build Phase Scope	<b>Operating Phase Scope</b>	
• Permits	• Financing	• Marketing	
• EIS	<ul> <li>Consortium</li> </ul>	• Operations	ł
<ul> <li>Due diligence</li> </ul>	<ul> <li>Final Design</li> </ul>	Maintenance	
<ul> <li>Design</li> </ul>	<ul> <li>Construction</li> </ul>		
<ul> <li>Financing</li> </ul>	<ul> <li>Commissioning</li> </ul>		÷
<ul> <li>Procurement</li> </ul>			

#### 5/18/2016

The Las Vegas Experience Throughout the Journey





# The Experience at the Terminal Stations

XPRESSWEST.COM

# LET YOUR VEGAS EXPERIENCE BEGIN



TRAVEL EXPERIENCE CONCIERGE/ACTIVITIES/TOURS

HOTEL CHECK-IN/SERVICES BUSINESS CENTER/TECHNOLOGIES





STRESSFUL VS. RELAXED

PERSONAL EXPERIENCE - RETAIL BARS/LOUNGES/FOOD GROOMING/RELAXATION/SPA TECHNOLOGIES/INNOVATIONS





"ONE MORE FOR THE ROAD"







CONVENIENCES



ENTICING RETAIL/TRAVEL INNOVATIONS





ON SCHEDULE



IMPACTFUL SPACE



INTUITIVE/ENVIRONMENTAL DESIGN





# The Experience On Board the Train

XPRESSWEST.COM

# LET YOUR VEGAS EXPERIENCE BEGIN



5/18/2016



# Arrival in Las Vegas

XPRESSWEST.COM

# LET YOUR VEGAS EXPERIENCE BEGIN

#### ARRIVAL LUGGAGE TRANSPORTATION HOTEL/CASINO - UNIQUE WELCOME EXPERIENCE - LUGGAGE PROCESSING - LIMO/SHUTTLE/PUBLIC/TAXI - UNIQUE WELCOME EXPERIENCE DIRECTION- PERSONAL WAYFINDING - LUGGAGE PICK-UP - CURBSIDE PICK-UP - AUTOMATIC CHECK-IN/VIP CHECK-IN - DIRECTION- LUGGAGE ROUTING - AUTOMATED-DIRECT TO HOTEL - TICKETS/SPECIAL REQUEST-DELIVERY CONFIRM - CONCIERGE WALKING-SIDEWALKS/BRIDGES - LUGGAGE DELIVERY TO ROOM Bag Claim 🛅 🕹 FIRST IMPRESSION CLEAR & SIMPLE SPECIAL SMARTPHONE CONNECT/ACCESS WELCOME LAS VEGAS A PARTIN ALLE LASE LUGGAGE ROUTING LINK TO PUBLIC TRANSPORTATION AUTO-DELIVERY/CHECK-IN MOUE WELCOME

NEW SYSTEM?

UNIQUE OFFERINGS-"GREEN"

STRESS-FREE

5/18/2016

THE VEGAS EXPERIENCE



# **Train Livery and Interiors**





# Phase I Southern California Station



# XPRESS WEST

# Phase I Southern California Station





# Phase I Southern California Station





# Phase I Southern California Station

XPRESSWEST.COM





B SOUTH PERSPECTIVE - DAY



C SOUTH ELEVATION - NIGHT



A SOUTH PERSPECTIVE - NIGHT



## Las Vegas Station



#### 5/18/2016

200





### Las Vegas Station

0 25 50'



# Las Vegas Station





# **XpressWest Project Benefits**

- Create jobs and stimulate the economy
  - 88,000 direct and indirect jobs during construction
  - 2,109 long-term permanent jobs 7.8 Billion in economic output
- Environmentally Sound
  - Fully electric multiple unit trains are zero emissions vehicles
  - The project is estimated to reduce major pollutants in the Corridor by 40% over the life of the project
  - Ridership forecasts estimate that the project will divert approximately 25% of the annual private autos from I-15
  - Mode shift from cars to trains is estimated to save approximately 440,000 barrels of oil or the equivalent of 8.5 million gallons of gas annually
- Connecting regional economic centers with a safe and efficient transportation alternative.
- Diversification of the Southern Nevada economy



# The NHSRA and XpressWest

- Nevada has a long history of supporting an alternative mode of transportation connecting to Southern California.
- XpressWest is encouraged by the State's leadership in establishing the NHSRA.
- If selected, we envision a constructive partnership with the Authority working together with us as facilitator, ambassador and advocate to achieve safe, reliable, and long overdue high speed rail service between Los Angeles and Las Vegas.

# XPRESSWEST

NHSRAItem #3November 18, 2015Presentation

"





# Highway in the Sky

I don't think we should be planning for 1956. We need to be planning for 2045. - Anthony Foxx, U.S. Secretary of Transportation

"



SkyTram International is proud to submit a Prospectus to the Nevada High Speed Rail Authority, NHSRA, as part of the RFQ established by Nevada SB457, to develop, build and manage a high speed rail system between Las Vegas, Nevada and the Los Angeles area of Southern California.



**SkyTram International** is a Portland, Oregon OEM building a proven, raised platform, very high speed monorail propulsion train, which travels at speeds of up to 250 MPH, and employs green energy, solar, wind and battery power to drive its systems.





**Hub Platform** 

SkyTram is an elevated, monorail-based sky way.





Maiden Voyage: Las Vegas, Nevada to Glendale, California Approximately 264 miles each way



# Why Las Vegas to Glendale?

This route meets the requirements of SB457 Section 8.2:

Provides economic benefits to both regions

Reduces reliance on gasoline and diesel-fuel engines

Encourages the use of alternative energy sources

Reduces congestion on I-15

*Exemplifies future high-speed rail services* 

Provides quick & convenient transportation services





Las Vegas, Nevada, resident population of 603,488.; Las Vegas Metro Area, 2,027,828. <u>28.6 million tourist visits annually.</u> Median income, \$61,000.

Glendale, California, resident population of 200,167; Greater Los Angeles Metropolitan Area, 12,800,000. <u>41.5 million tourist visits annually</u>. Glendale median income, \$55,000; LA, \$61,000.





SkyTram employs green energy technologies to save money and resources by combining proven, off-the-shelf advanced technologies in wind and solar energy, propulsion, batteries, composites & aerodynamic design.

Solar and wind energy stored in excess of the power required by SkyTram can be <u>sold through grid-tie-net metering</u> to local utilities along any of its routes.



Solar Panels





Constructed quickly using current freeways & rail right-of-ways along I-15 and I-210, at an estimated cost of \$15 Million (+/- per mile).

- Construction funded by private equity, partner investment & government bonds. When in operation, revenue generated by passenger, freight, energy & retail income streams.
- Massive job creator, providing as many as 25,000 construction jobs and thousands of full time operations jobs.






Raised sky ways, hubs, and transit stations **soar** over established buildings, roadways & cities!



**Elevators & Walkways** 





Food Courts / Services







Vegas to Glendale: 264 Miles 1.2 Hrs @ up to 250 MPH!

Lightning

in the

Descrt!





# **10 YEAR ROUTE PLAN**

659

Portland to San Francisco





## **10 YEAR REVENUE PROJECTION**









# REVENUE

- 11.7 Million passengers a year travel from LA to Vegas. SkyTram will transport 2.5 Million+
- 2.5 Million passengers a year at an average ticket price of \$100 each generates \$250 Million in annual revenues
- Freight revenue will generate \$75 Million+/yr.
- Power grid excess energy sales: \$22 Million+/yr.

# Total Annual Revenue, Year 2 of Operation: est. \$347 Million





OEM building raised-platform, monorail-based propulsion systems, infrastructure and services for very high speed green energy train travel.



### **STRATEGIC PARTNERS**

#### **Current Partners**

Protera – propulsion systems and motors
Sabre Engineering – control systems and integration
Martin Marietta – tram car refurbishment & fabrication
Solar World – solar panels
Columbia Machine Inc. – fabrication & assembly
Emmert International – transportation rigging



#### **Target Partners**

Boeing--aircraft manufacturer Tesla—battery technology General Electric—train engines/systems Vesta—wind turbine technology Vulcan Ventures—venture investment Kawasaki Heavy Industries—monorail technology





### COMPETITION

### SkyTram Competitive Benefits:

- Raised monorail versus ground-based railroad beds
- Soars over existing buildings, roadways and cities
- Uses solar and wind power instead of diesel
- Less costly to build its infrastructure and operate
- Not prone to severe weather conditions on the ground
- Protects the natural desert flora and fauna
- Less air pollution and significantly quieter

















# **PROJECT COSTS**

#### **PROJECT CONSTRUCTION COSTS**

	TOTAL	\$3,548,500,000
GENERAL AND ADMINISTRATIVE/PRODUCTION FACILITIES OPERATIONAL RELATED COSTS/OVERHEAD	Sub-Total Sub-Total	\$ 96,000,000 \$152,000,000
Project Construction Costs	Sub-Total	\$3,300,500,000
Contingency		\$ 155,000,000
Debt Service per year, interest only first 5 years		\$148,000,000
Testing/Certification		\$ 50,000,000
Bonding/insurance		\$ 47,500,000
Legal/financial/environment		\$ 45,000,000
Land acquisition costs		\$125,000,000
Two hubs and two Transfer stations (4)		\$478,000,000
Tramcars (50), components, systems, controls		\$150,000,000
Solar panels, wind turbines, Tesla energy capacitors		\$472,500,000
Concrete/Steel Tower Bases, 1350 units		\$337,500,000
Steel Towers, 1350 units, including cable, guiderail, and installation		\$792,000,000
25,000 construction workers		\$500,000,000

The range of projected costs, based upon a baseline of a \$15,000,000 + cost per construction mile, is \$3,548,500,000 to \$4,356,000,000



# PROJECT FUNDING ALLOCATION

Includes Government, i.e., Federal, State, County and City Allocations by percentage, and the Private Sector Allocation and Investment.

Constructed quickly using current freeways & rail right-of-ways along I-15 and I-210, at an estimated cost of \$15 Million (+/- per mile).

Construction funded by private equity, partner investment & government bonds. When in operation, revenue generated by passenger, freight, energy & retail income streams.



**SkyTram** is about the future of travel taking us for an exhilarating ride in the sky that makes us feel more like we are on an airplane rather than a speeding railroad track. SkyTram provides the quiet and comfort that comes with flying but at a fraction of the time and money!





# **CONTACT INFORMATION**

Ben Missler, President & CEO <u>benmissler@yahoo.com</u>

www.skytramamerica.com

#### Proposed Route for guideway to Las Vegas

(376 miles)

Submitted 11/3/2015 to the High Speed Transportation Board of Nevada

Roane Inventions Incorporated

30100 Spyglass Circle

Georgetown, Texas 78628



Proposed extended route:

Starting at **Sea World** in San Diego traveling up the Interstate 5 right of way through San Clemente, San Juan Capistrano, Mission Viejo Irvine, Santa Ana

Tustin, Orange, **Disney Land**, Anaheim, Buena Park, Santa Fe Springs to Interstate 710 north to Interstate 10 EL Monte, West Covina, Pomona, Ontario then east to Interstate 15 north through Cajon Junction, Victorville, Bell Mountain, Barstow, Nevada State Line to **Las Vegas** Resort Area.

Staying on the Interstate right of way using the underutilized asset for the public good provides the most value to the public. We would ask of California and Nevada the use (40 year \$1.00 lease) of the avigation rights above these sections of Interstate highway and ground rights down both sides 17 inches wide near the access roads and a 17 inch section down the middle of the center stripe. These three thin ribbons of land would allow us to build a high speed transportation mode that is unlike anything on the market thus far and provide the fast connection between these tourist destinations. The travel time between Sea World in San Diego and Disney Land would be 31 minutes. (91.7 miles) Travel time from the Bellagio Fountain on the strip to Sea World would be 2 hours or from the Bellagio 1 hour 30 minutes to downtown Los Angeles. Four in cabin entertainment systems with video slots would be provided in the 13 minutes of travel inside the Nevada state lines.

Rough order of magnitude cost per guideway mile is \$880.000 for guideway and the same \$880.000 for a full fleet of rolling stock to fill the guideway. The route of 376 miles then has 752 miles of guideway and cars. 1 billion dollars for this expanded project from the competing Victorville starting city that draws bad comments for the project on the Internet. By going from San Diego through much of Los Angeles and Disney Land we pick up many more potential riders and some car parking capacity. If we leave the ownership of the cars to private rental companies then the project cost to the franchise is half as much or \$500,000,000. Also by expanding outside the box we pick up travel from San Diego to Los Angeles which can be substantial. As with any network the network effect takes over with increasing network area coverage. By extending the route we have far greater potential for success. Starting only in Palmdale would have limited appeal to busy urbanites to have a quick trip to Las Vegas. As we were researching the path from LA to Palmdale Maps.Google lit up with car crashes, road work, slowdowns and road closures. Los Angeles highways are in disrepair being stripped of the top layer asphalt but not yet covered with renewed smooth pavement before the shovel ready money ran out. Truck speed limits being much slower than normal traffic contributes to the number

of crashes and road hassles. This requires constantly passing slower trucks or the occasional truck passing another truck at these slower speeds in California. This is especially true on steep grades through the mountainous areas going to Palmdale or Victorville from LA.



Elevated guideway built above it all will allow travel at a sustained 180 mph staying on the highway property proper. To smooth the path the guideway may wonder side to side within the highway ROW and depending on any one situation may purchase land inside a highway arc that is too tight for uninterrupted high speed travel. The guideway is superior to the 1800s railroad as there are wheels on all sides of the guideway not just on the top plane. The cars cannot leave the guideway by tipping over like they can without the Z axis constraint. Our patents teach the method for pitch yaw and roll control of these human-scale vehicles to go very fast, many times safer than cars, trains or airplanes. We would like to be considered for the franchise because we bring a better value to the customer and meet the broader goals of high speed travel in the new law. Our patented shape and configuration allows four passengers and luggage to ride at 180 mph using 82 horsepower in the initial configuration with the second generation cars using only 36 horsepower with retractable front wheels like landing gear. That is 9 horsepower per passenger in a full version two car at high speed.

Capacity based on two second headway and 2 passengers per car average with 20 hours per day two directions use that yields 144,000 passengers per day per guideway pair. If passenger fares are 85 cents per mile (energy included) payback is in thirty years if our electricity is purchased at 9 cents per kilowatt-hour or converted on site with photovoltaic solar panels in the intense sunshine of the region. Because our energy level is very low photovoltaic solar is cost effective.



Simply using solar farm power for running a train requires too large of a solar farm to be cost effective.

Return on Investment will be attractive to current investor expectations.

Demonstration guideway-- Step one 1000 feet of extrusion and a test segment of linear motor and one test vehicle. There is no switching in our patented approach so there is no need to test switching. Our test land is already purchased and permits in place for the demonstration.

Parking revenue: The eventual plan for TriTrack is to have enough private car owners that the guideway capacity is mostly full of those individual users. In the shorter term the cars will be available as either Uber or Lyft service or as an instant rental with a prequalify program for driving them like car-2-go. As with air travel a big profit center is the parking franchise near airports or on the airport grounds. To support lower prices for travel to Las Vegas parking fees will offset travel costs.

Permits to build on Interstate property will require legislation to eliminate the anti-highway legislation of the 1960s era. The cost to obtain EPA approvals to amend the Interstate environmental study to include TriTrack as a "multi-mode" of travel built into the initial studies is required by us of the state. Our preferred method rather than litigating the multi-mode part of the past EPA study is to obtain a "categorical exclusion". Once a categorical exclusion of the existing highway land is granted construction can go very quickly.

We realize that a representative republic requires that boards be able to use their reasoning to interpret law to the current technologies while written for existing older technology. We understand that the law was written to exclude competition to old-school rail trying to run faster than old-school can safely operate as there is no physical constraint to stay on top of the iron rails. The Siemens high speed maglev overhangs a non-standard track so it cannot come up and off the track at speed. Even in the fatal tragedy of the Siemens maglev demo crashing into the track inspection vehicle the mangled train stayed on the track where it was physically captive. Legislating that this route be served at 150+ mph without allowing the rails to break the slow speed standard specification is unwise and would result in litigation against the state and the board members after a fatal derailment. Although looking at trains from a statics viewpoint trains should never derail, they derail all the time so much so that it takes a large staff to go retrieve the data recorders after each train leaving the tracks as much slower speeds than 150 mph. Freight trains running in 8 mph zones still manage to derail in some rail lines poorly maintained or in terrain that is too much in geological flux.

TriTrack has six steel wheels running on near perfect metal surfaces (+/-.003") to maintain trajectory no matter the side wind loading or terrain following. Four wheels are above the triangular extrusion and two wheels are below the guideway so it cannot lift off at high speed or in tornado range side winds. In addition to the six precision wheels maintaining path there is one traction wheel for forward motion. This wheel has its tension to the rolling surface controlled so there is neither too much or too little tractive force from the drive motor/wheel. Motor/wheels have been built into street vehicles but in that configuration they risk totaling the vehicle if they hit a 4x4 post in the roadway. On a triangular guideway with the point up no such obstacle can stay in place to run over to destroy the wheel/motor.



#### Picture of New Battery Mule Showing Actual Size

Our price is far lower than the Chinese competitor plus any jobs and any profits we get stay in the US. Some of our parts are fabricated in other nations just like the Chinese competitor but the bulk of the effort benefits America and it is not clear that that is accounted for to the American tax payers.

Thank you for your consideration for this franchise. We feel we exceed the major goals of this program especially lowering air pollution yo zero and using far less energy. Our wind tunnel testing shows a Cd of .07 which is significantly better than any train layout can achieve. (.2 in wind tunnel at VT)



Our other opportunity in this dry region is to bring water from east Texas to Lake Mead. That project is called WaterBeads and it uses a variant of TriTrack called ZoomHydro to move significant amounts of water hundreds of miles at an affordable price from where it rains more. Even if this law excludes us for the definition of "standard" the need for water as the population grows will overcome that tersely described detail of the law word choice. We feel confident that our more advanced guideway would be the new 150 mph standard if allowed by the board.

### товариство з обмеженою **"УКРАЇНА – ЕКСПРЕС"** ВІДПОВІДАЛЬНІСТЮ ФІРМА

#### УКРАЇНА, м.Харків, Полтавський Шлях 57/59, Тел.факс (38057) 7-123-126 E-mail: ukraineexpress@gmail.com

November 1<sup>st</sup>, 2015

Jerry Roane Roane Inventions Incorporated 30100 Spyglass Circle Georgetown, TX 78628, USA

Re: High Speed Transportation Board of Nevada - Proposed guideway from San Diego to Las Vegas

Dear Jerry

Following our numerous conversations and initial due diligence process we are pleased to confirm that our company will provide funding in the amount of up to \$500,000,000 for the proposed TriTrack guideway from San Diego to Las Vegas. This investment is subject to your company being selected as a franchisee for the construction and operation of a Nevada High-Speed Rail System. We are excited about an opportunity to be part of the team implementing Nevada High-Speed Rail System connecting San Diego with Las Vegas. Please confirm when the Nevada High-Speed Rail Authority will complete the selection process and next steps required to proceed. We are looking forward to hear from



# Criteria for Selection and Submissions

Submission	Desert Xpress	DualMode Advanced Vehicular Endeavor	Nevada Intercity Passenger Railway Company	SkyTram	TriTrack
Criteria for Selection	Wesr				
1. Completion of environmental studies					
2.Level of private investment					
3. Readiness to engage in construction					
4. Pending or completed permit applications					

Red Slip Sheet

### **NEVADA HIGH-SPEED RAIL AUTHORITY**

### AGENDA ITEM

SUBJECT: FRANCHISEE REPORTPETITIONER:BOARD MEMBERS<br/>NEVADA HIGH-SPEED RAIL AUTHORITYRECOMMENDATION BY PETITIONER:THAT THE NEVADA HIGH-SPEED RAIL AUTHORITY RECEIVE A PROGRESS REPORT<br/>FROM THE FRANCHISEE, XPRESSWEST (FOR POSSIBLE ACTION)GOAL:SUPPORT THE IMPLEMENTATION OF NEVADA HIGH-SPEED RAIL SYSTEM

#### **FISCAL IMPACT:**

None

#### **BACKGROUND:**

Section 8.7 of Senate Bill 475, passed during the State of Nevada's 78th legislative session, states that the Nevada High-Speed Rail Authority (NHSRA or Authority) is responsible for selecting "a franchisee for the construction and operation of a high-speed rail system, to be commonly known as the Nevada High-Speed Rail System." At the NHSRA November 18, 2015 meeting, the Authority selected XPressWest as the franchisee and directed XPressWest to provide progress reports every six months.

An XPressWest representative will provide a progress report to the Authority.

NHSRA Item #3 May 31, 2016

Non-Consent

Slip Sheet

### **NEVADA HIGH-SPEED RAIL AUTHORITY**

### **AGENDA ITEM**

SUBJECT: CITIZENS PARTICIPATIONPETITIONER: BOARD MEMBERS<br/>NEVADA HIGH-SPEED RAIL AUTHORITYRECOMMENDATION BY PETITIONER:<br/>THAT THE NEVADA HIGH-SPEED RAIL AUTHORITY CONDUCT A COMMENT PERIOD<br/>FOR CITIZENS PARTICIPATIONGOAL: SUPPORT THE IMPLEMENTATION OF NEVADA HIGH-SPEED RAIL SYSTEM

#### **FISCAL IMPACT:**

None

#### **BACKGROUND:**

In accordance with State of Nevada Open Meeting Law, the Nevada High-Speed Rail Authority (Authority) shall invite interested persons to make comments. For the initial Citizens Participation, the public should address items on the current agenda. For the final Citizens Participation, interested persons may make comments on matters within the Authority's jurisdiction, but not necessarily on the current agenda.

No action can be taken on any matter discussed under this item, although the Authority can direct that it be placed on a future agenda.

NHSRA Item #4 May 31, 2016 Slip Sheet