

Central Wasatch Commission
February 11, 2021 Aerial Mode Education
Meeting Highlights

On February 11, 2021, the Central Wasatch Commission met with experts from the SE Group and Dopplymayer USA to discuss the aerial mode laid out in both UDOT's Little Cottonwood Canyon EIS, and the CWC's Mountain Transportation System Draft Alternatives report. In discussing the capacity, reliability, frequency, accessibility, and impact of the aerial alternative with Chris Cushing with the SE Group and Katerina Schmidt and Shawn Marquaardt from Dopplymayer USA, the following statements were made:

Background information on an aerial system

Shawn Marquaardt: "Monocable system is not the preferred system. The 3s gondola system is continually circulating. Up to 35 passengers per cabin, which means fewer cabins on the line. It's scalable to the need that day up to whatever the infrastructure is built for. These systems operate in sustained winds higher than 60mph. This system would operate in any weather pattern."

"The system is already built for mountainous terrain. It will operate independent of the roadway and provide true secondary egress. No need for roadway widening or snowsheds. Flexible and scalable capacity. Silent operation. Economical and cost effective. Reliable in all weather conditions."

"A connection between La Caille and the park and ride. Between the park and ride and Tanner Flat, just seven towers. Then seven more towers between Tanner Flat and Snowbird. Of those towers, two are in Snowbird. Up and over to Alta with two towers close to Wildcat."

Shawn Marquaardt: "There would be a turn at three intermediate stations. The doors can either open and close at the stations or not. It's my understanding that in UDOT's proposal, the doors would not open at Tanner Flat. In the station, the cabins are decelerated to about a foot per second."

Shawn Marquaardt: "The ropeway is absolutely independent from the roadway and therefore no snowsheds would be required for the ropeway to operate."

Sean Cushing: "In order to improve safety and reliability of the road required going with the snowsheds."

Shawn Marquaardt: "The rail does need the snowsheds. In UDOT's EIS it was more in anticipation of the roadway use that would be required when the transit system is only operating at 1,000 people per hour."

Capacity

Shawn Marquardt: “If we space the cabins to pass every 30 seconds then we achieve a capacity of approximately 4,000 per hour, and it can be scaled down from there. The UDOT study says every two minutes, then the capacity becomes roughly 1,000 per hour.”

“Each cabin can be configured to carry up to 35 passengers. We can generate power in the cabin as the car travels up the cable. It’s designed around the peak times and can be tailored to deliver exactly the number of people we want in these canyons.”

Wait times

Shawn Marquardt: “That continuous circulation eliminates wait times associated with typical mass transit like bus and train, and it provides an even distribution of the passengers as they’re coming and going. Here we’re distributing 30 people every thirty seconds for example. Depending on need if we do that 30 second interval, it’s 130 cabins if we’re doing 4,000 people per hour.”

Cargo

Shawn Marquardt: “We can configure these systems to haul materials. We can move freight and food deliveries and getting some of those delivery trucks off the highway.”

Towers

Shawn Marquardt: “They’re fast to build. We place concrete in one construction year and erect the steel on top of that in the subsequent year. No forest clearing is required. The system will operate completely independent of the road below. We have good access for erecting the system.”

Shawn Marquardt: “The typical tower we have here is in the 80-meter range. Once we’re past Tanner Flat, they blend in with the trees more.”

Sean Cushing: “It would be necessary to avoid avalanche snow flows. Tallest tower to put the cabin path above the slide path is 80-meters for maximum tower height.”

Comfort and Stability

Shawn Marquardt: “Very comfortable and pleasant.”

Operations and Maintenance

Shawn Marquardt: “There will be a technical staff required. All preventative work can be carried out nightly and can be carried out seasonally.”

Emergencies

Shawn Marquardt: “There are redundancies in the drive equipment and factors of safety in the ropes and carriages. All carriages can be brought back to a station safely.”

Sustainability and Watershed Impact

Shawn Marquaardt: “With the ropeway, we will have by far the lowest ground disturbance with only 14 towers between the park and ride and Snowbird. What about grease and drips coming off the towers? With modern technology, that problem is no longer an issue. Wildlife can cross safely. The systems are driven by a central high efficiency grid. No direct emissions. Virtually no noise along the line. Most importantly, improved air quality. Ropeways are the most sustainable option. The gases that the ropeway emits is dependent on the power source.”

Cost

Shawn Marquaardt: “The cost of a ropeway is typically comparable to adding a bus service between two points. It’s generally 55% the cost of a light rail and 15% the cost of a subway system. UDOT’s assessment is inline with typical industry estimates. In our estimation, if we build a system for 1,050 people per hour, the cost will be less than the UOT estimate. If we build out the system for 4,000 people per hour, the cost will be comparable to the UDOT estimate.”

Parking

Shawn Marquaardt: “There are 1,500 stalls available.”

Carl Fisher question: “How does this get you to a vehicle-free canyon when it only serves two resorts?”

Shawn Marquaardt: “When we get the people going to the resorts off the roads, it opens up the road to dispersed users.”

Whistle Stops

“If we wanted more stops would that change the travel time?”

Sean Cushing: “It adds travel time. Do we compromise the experience for one user group in order to meet the needs of another group?”

Sean Cushing: “The point is that for every station that the system goes through it takes about a minute to get through.”

Home Impact

Shawn Marquaardt: There is one house on the north side of the highway by the park and ride, but that is the only one.”

Sean Cushing: “It’s in the order of 300 yards from the gondola alignment to the nearest home. The lift will be well up in the air. There’s an avalanche path that needs to be spanned so that makes the tower at the ridge crossing relatively tall – 42 meters. The cabin probably could be visible because it’s up in the air.”

Catherine Kanter: “What are the number of towers and the heights between La Caille and the base of the canyon?”

Shawn: “Two towers, an 80 meter and a 72 meter tower.”

Travel times

Sean Cushing: “36.45 minutes.”

Greatest challenge of the project

“Planning stage and community buy-in. We’re confident about the system being suitable. Each section is manageable. The prep work is almost harder than doing the project.”

Sean Cushing: “The ability of the public to accept having 80-meter towers. In terms of a solution – enhancing transit up the canyon and getting cars off the road there is no downside.”

Commissioner Knopp question: “Would the cabins be illuminated at night?”

“There’s a lot we can do with lighting.”

Commissioner Houseman: “**What is the resort partnership looking like?**”

Commissioner Mendenhall: “**The freight hauling could be a tremendous benefit to the resorts. What is the resort commitment to this proposal?**”

Dave Fields: “The resorts are committed to finding a long-term solution and helping to pay for it. Right now many more of our employees and pass holders would take transit if there were seating available. We think a solution like this would be heavily used by employees and pass holders. The upcoming holiday weekend we’re supposed to get about four feet of snow and we will probably have between two and three road closures and a snow night. We will spend thousands of hours of vehicles idling waiting to come up and down the canyon. In this scenario, you could close the canyon to cars altogether and you could put people on buses, put them on the gondola. The safety implications of that are staggering. Rather than having thousands of cars stuck on the highway under the most avalanche paths above a highway anywhere in the country.”