



Primadonna Shuttle System Retrofit

Primm, Nevada



USING AN INNOVATIVE AND COST-EFFECTIVE RETROFIT CONCEPT, SDI NEARLY DOUBLED THE PASSENGER TRANSPORT CAPACITY OF A BUSY RESORT PEOPLE MOVER, SAVING THE OWNER A MAJOR INVESTMENT IN THE COSTS OF ADDING CARS OR BULDING AN ALL-NEW SYSTEM. THE PROJECT ALSO GREATLY IMPROVED THE SYSTEM'S RIDE QUALITY, RELIABILITY AND OPERATIONAL EFFICIENCY.

PRIMADONNA RESORT SHUTTLE SYSTEM RETROFIT PROJECT



IN 1996, DUE TO THE EXPLOSIVE GROWTH OF THE Primadonna Resort south of Las Vegas, the cable-propelled shuttle linking two hotel/casino facilities over a busy interstate highway could no longer keep up with passenger demand. The original design capacity of the single-vehicle people mover was 650 passengers per hour per direction, but due to a number of new attractions on the property, an increase to 1,200 pphpd was required. Accordingly, the owner requested design and construction proposals from a number of transit refurbishment firms while leaving the strategy for achieving the increased capacity to the responders. The owner received several bids proposing schemes for coupling a second vehicle to the existing shuttle, or decommissioning the original shuttle and installing a larger all-new vehicle. Those proposals were based on increasing the passenger loading capacity per trip to achieve the additional hourly transport requirements. However, those solutions were excessively priced, because in addition to the new vehicle costs they required lengthening the boarding stations and installing larger drive motors to handle the heavier vehicles and passenger loads.



SDI's simple yet innovative solution was bid at 25% of the nearest competing proposal and saved the owner more than a million dollars. Approaching the problem with the owner's interests in mind, SDI determined that simply adding a set of passenger doors on the opposite, door-less side of the vehicle would achieve the majority of the additional capacity. The second set of bi-parting doors allowed passengers to simultaneously exit and board the shuttle, rather than requiring all passengers to disembark before the queued passengers could board. This reduced the station dwell time from 120 seconds to 60 seconds. Shortening the dwell time and increasing the shuttle's cruising speed to 15 mph achieved the required passenger transport capacity. These simple modifications required only minor upgrades to the shuttle's suspension and cable propulsion systems.

Since SDI performed the retrofits and returned the system to service, the shuttle has performed as promised with the increased capacity and also operates with improved efficiency and passenger comfort.



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