Disney TRANSPORT

PROPOSAL

OVERVIEW

This proposal has been put together to explore the possibility and implementation of a new type of transportation system for the Walt Disney World Resort. This system is to replace the current Disney Transport Bus Fleet for transporting guests from the on property Disney Resorts to the various Resort Parks and amenities.

The goal of this transportation system is to first to keep Disney World at the forefront in the minds of the guest as cutting-edge and future focused. Creating an experience no matter where the guest is on property. Second is lower the cost of transporting guests across property by reducing fuel and personnel costs. Third is to regain lost revenue by non-resort guests using the transportation system to go from non-paying parking areas to parks without paying the proper parking fees.

Finally as a point, this proposal was put together as a fun project and brought to this scope as a challenge. It is for entertainment purposes only and all products, logos, slogans, etc are the copyright of their holders. Enjoy!

Disney TRANSPORTATION

This is a brief overview of the current Disney Transportation system. The transportation system consists of hundreds of vessels and vehicles connecting all Disney World Resorts, Parks, Shopping and Entertainment venues. The systems includes the monorail system consisting of twelve trains all full capacity servicing the Magic Kingdom, Magic Kingdom Resorts, and Epcot with non resort guests at the Ticket and Transportation Center. The system also uses boat transportation at a number of parks and resorts. The system also utilizes railroads, horse carriage, and street cars inside of the parks. From parking lots to the main entrances, Disney uses Trams to transport guests. Finally, Disney uses a fleet of buses to transport guests all around property. The fleet of buses is somewhere around 250 and 300 buses of various makes.

The average wait time is 20 minutes for a bus, but the wait time varies on time of day and season. Usually after nighttime spectacles the wait can easily be from 30 minutes up to an hour. The bus system can transport around 40 - 60 people when fully loaded with passengers standing up.

One of the reasons buses can be delayed is for people with disabilities. Disney does an incredible job at accommodating guests with special needs. Many of the buses have to park and deploy special ramps and lifts to get wheelchairs into the buses. Also parents of small children are required to fold strollers up when onboard creating sometimes slow boarding and exit times.

The goal of this new transportation will not only maintain Disney's leadership in transportation and save money, but will allow easy boarding and exiting of guests in wheelchairs, electric scooters, and strollers.

PROPOSED SYSTEM

The new transportation system would connect all Disney Resort Hotels and the Four Disney Parks along with Downtown Disney, and both Water Parks. The system would utilizes the ULTra transportation system. *"ULTra (Urban Light Transport) is an innovative form of Personal Rapid Transit (PRT) which emerged from a fundamental reappraisal of the transport needs of a city. The ULTra system consists of small, lightweight, computer-driven electric vehicles running on slender, special-purpose guideways."*

The system would mainly run along one side of the roads around the resort as well as at times run along the monorail route. At certain points the vehicles would go on their own direction towards the resorts and parks. The guideway is more slender than traditional roads making it less of an eye sore.

The system is designed so that if a vehicle breaks down on the guideway, the system can automatically divert traffic. The system can send a towing vehicle to tow the vehicl back to the shop or a vehicle can be dispatched and picked up right off the track from a special vehicle. The system is designed for effectiency so breakdowns are expected to be a rare occurance. The system is designed so the parent's with strollers and guests in wheelchairs can go straight onto the vehicles.

The system utilizes RFID technology embeded within Resort guest's Key to the Kingdom cards. Each station's portal has a screen and all a guest needs to do is get the card near the panel. Once the panel detects the card, the guest can select where they would like to go. This prevents non resort guests from utilizing the system.

PROPOSED VEHICLE

The vehicles are the basic ULTra vehicles except for a couple of features. The speed of the vehicles would be increased to 40mph instead of the standard 25mph. This is to accomodate some of the long transit times to the various parks. Other minor feature changes would be in the control systems and guests interactions. Finally the overall astetics of the vehicles would reflect the Disney look.
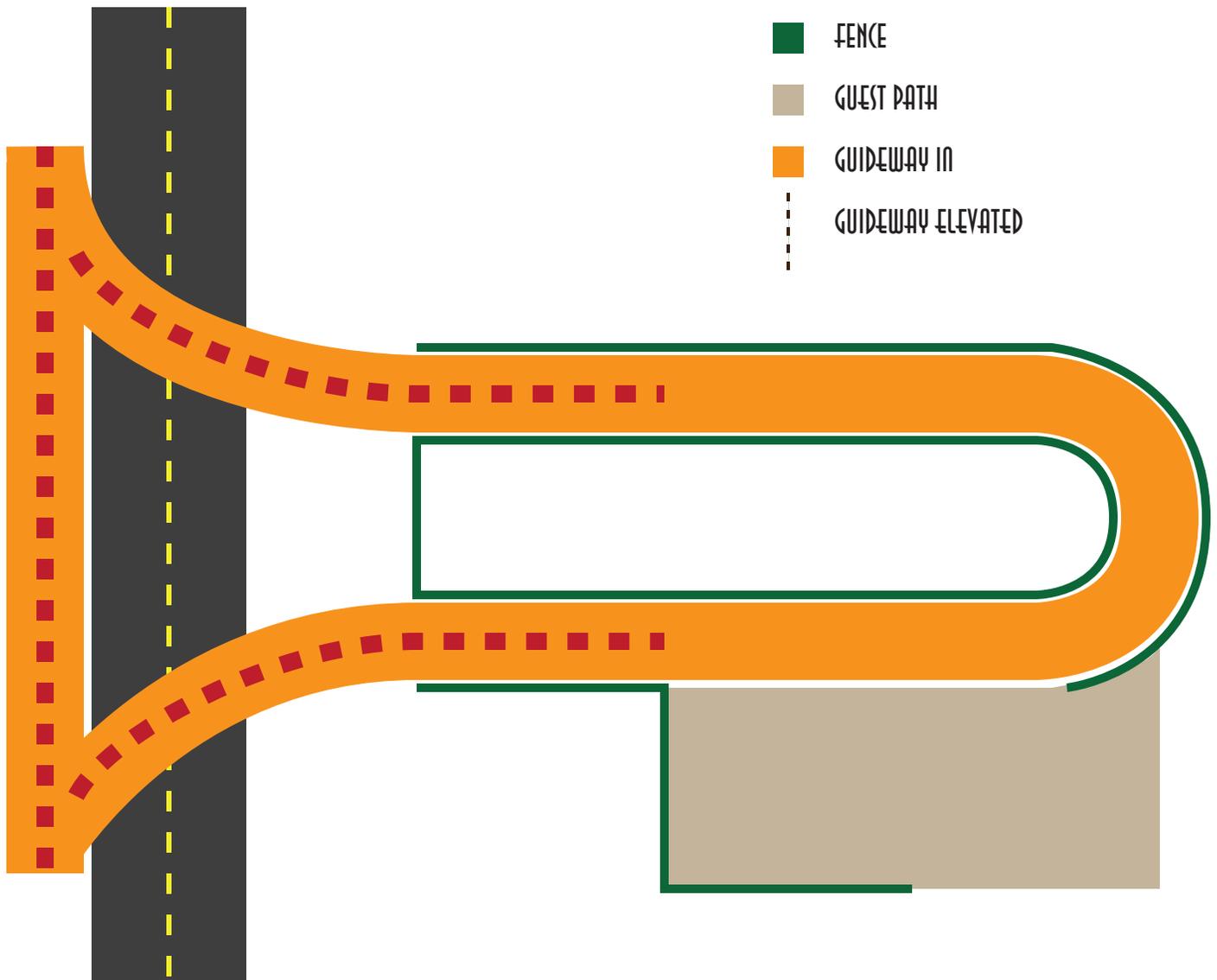
PROPOSED RESORT STATION

The resort stations are in similar size to the current bus stations that are around the resorts. Each station can accomodate up to three vehicles at a time. There is also a guideway just outside so that vehicles can continue without interruption. Each station is solar-powered making this system even more eco-friendly.

PROPOSED RESORT STATION

|	
■	FENCE
■	GUEST PATH
■	GUIDEWAY IN
┊	GUIDEWAY ELEVATED

PROPOSED PARK STATION

The park stations are a little more complex than the resort stations. Upon entering the vehicles split into different directions for the many lanes at the station. Unlike the traditional ULTra stations, these station have the vehicles stack up behind each other creating a train loading station look. This is so that the unloading and especially loading after nighttime spectacles. The station is designed to accomodate 48 vehicles at one time. The goal at peak is to unload, load, and have vehicles depart every 30 seconds. The following are calculations for capacity.

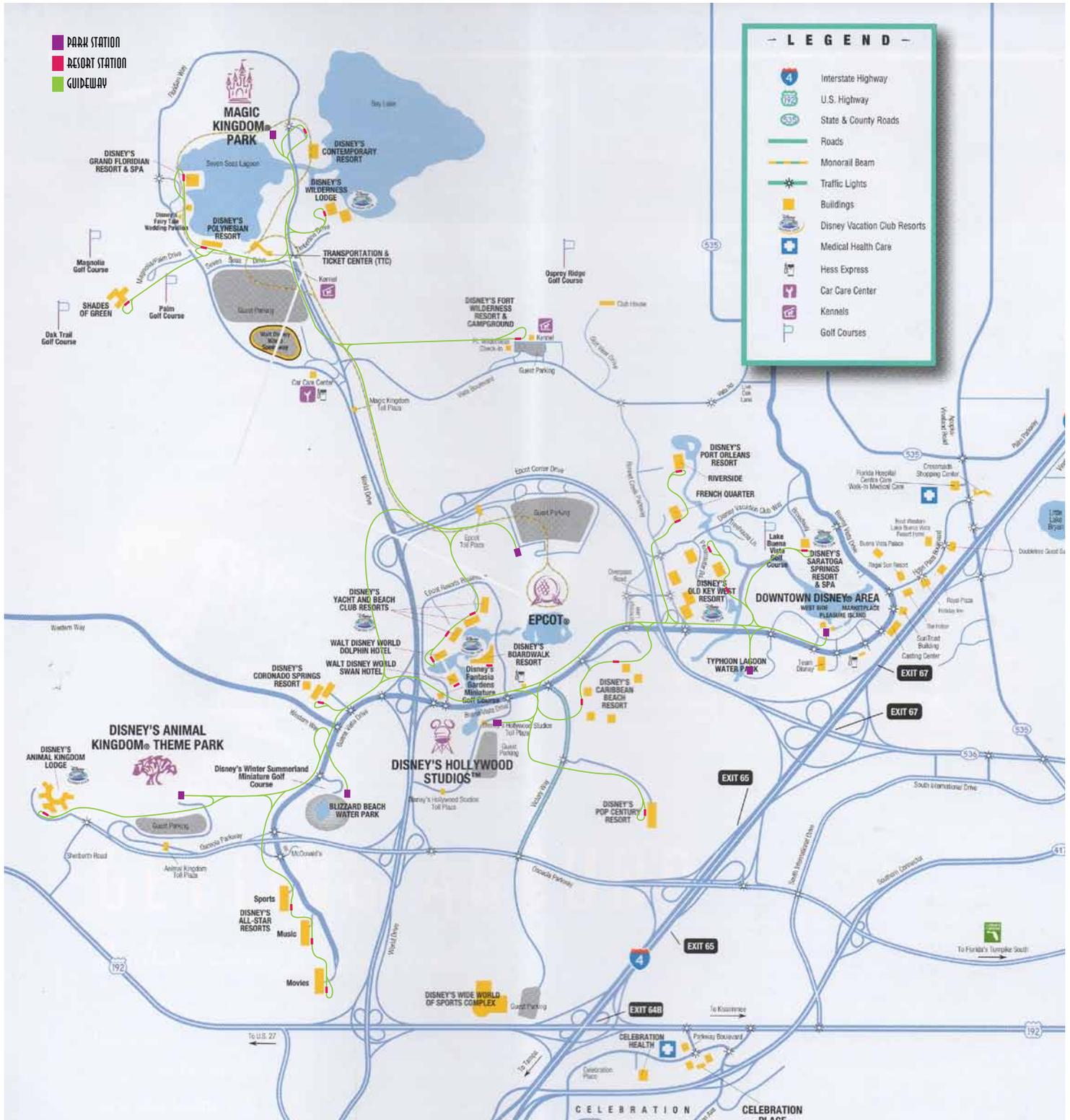48 Vehicles x 4 passengers per car x 30 minutes x 2 vehicles a minute = 11,520
48 Vehicles x 6 passengers per car x 30 minutes x 2 vehicles a minute = 17,280
48 Vehicles x 8 passengers per car x 30 minutes x 2 vehicles a minute = 23,040

PROPOSED PARK STATION

FENCE
GUEST PATH
GUEST QUE
GUIDEWAY IN
GUIDEWAY OUT
GUIDEWAY ELEVATED
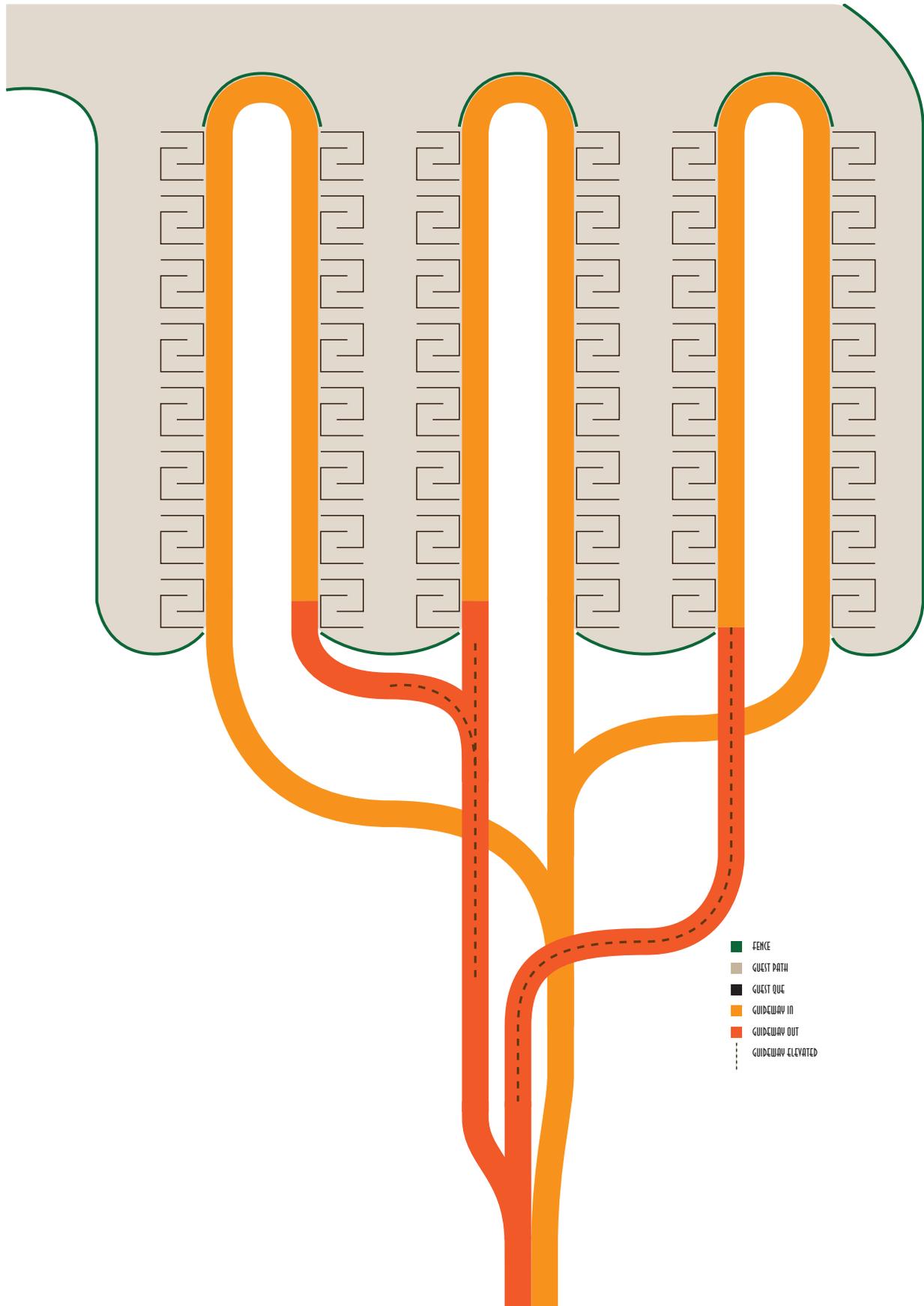
GUIDEWAY OVERVIEW

DOWN TO THE GREEN

In the end, you can look past the eco benefits, the great PR, and the flexibility this system can offer. What many will care about is the cost of the system and its financial feasibility as a transportation system.

The estimated cost of the system is between 7 and 14 million dollars per mile which includes the cost of the vehicles, stations, and guideway. It is an estimated 28 miles of guideway needed to connect all stations. Disney has a lot of experience with construction and the scope of the project allows Disney to purchase in bulk. Due to these factors we believe the cost would be around 11.4 million dollars a mile which includes stations, vehicles, and guideways.

The current bus system is aging and will need to be replaced in the next decade at an estimated cost of $350,000 a bus. If Disney replaced 225 of their buses that is an estimated 78.8 million dollars.

Maintance & Personnel Cost are also large factors. We did not change the Maintance cost and their staff. The new system will undoubtably require a Maintance staff just like the bus system so we keep that even. As far as the bus personnel, they would be phased out and that could save Disney quite a bit. On the low end a bus driver would make with included cost of benefits 40k and OT. Multiply that with 500 drivers and that is 20 million dollars worth of personnel cost a year.

The fuel that the buses use are not only bad for the environment but also are much more expensive that the ULTra vehicles that are electric. Disney buses travel around 9 million miles a year. The average bus get 5 miles to the gallon of fuel. In total, Disney buses use 4.5 million dollars worth a fuel a year.

Estimated total cost of new system: 319 million dollars
Estimated cost of new buses: 78.8 million dollars
Personnel and fuel cost per year: 25 million dollars
Estimated that the system will pay for itself within 9 years or less in cost savings alone.*

*Does not include estimated savings by other factors (ie: parking)