RESOLUTION NO. R-60-2000

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAS VEGAS SUPPORTING THE APPLICATION OF THE CALIFORNIA-NEVADA SUPER SPEED TRAIN COMMISSION TO THE U.S. DEPARTMENT OF TRANSPORTATION AND FEDERAL RAILROAD ADMINISTRATION FOR AWARDS OF PRECONSTRUCTION DESIGN/ENGINEERING, AND CONSTRUCTION GRANTS UNDER TEA-21's MAGNETIC LEVITATION TRANSPORTATION TECHNOLOGY DEPLOYMENT PROGRAM ("MAGLEV DEPLOYMENT PROGRAM").

WHEREAS, the United States Government, acting through the Federal Railroad Administration (FRA), Department of Transportation (DOT), has enacted the Maglev Deployment Program (23 U.S.C. Section 322) as a reflection of the Federal Government's commitment to the near-term implementation of a revenue service Maglev project in the United States, which federal program is further outlined, described and defined in the Federal Register at 49 CFR Part 268; and

WHEREAS, the California-Nevada Super Speed Train Commission (Commission) has been awarded a planning grant under Phase I of the Maglev Deployment Program, and, to obtain additional federal funding, the Commission must submit to the FRA, by no later than June 30, 2000, a "Project Description" detailing the Commission's Phase I engineering, environmental, ridership, and revenue findings, as well as evidence of public support for its project; and

WHEREAS, the initial segment of the Maglev project being planned by the Commission is "The First Forty Miles" between Las Vegas, Nevada and the California-Nevada State line at Primm ("Project"), and the 275 mile completed Maglev corridor between Las Vegas, Nevada and Anaheim, California shall include station locations within California in the cities of Barstow, Victorville, Ontario and Anaheim ("Corridor"); and

WHEREAS, the FRA will evaluate the "Project Description" submitted by the Commission to determine, by September 30, 2000, whether the Commission's project shall be one of the projects that is down-selected to receive additional federal funding during Phase II of the Maglev Deployment Program, during which second phase the Project shall be further evaluated and an Environmental Impact Statement (EIS) prepared prior to the commencement of actual construction; and

WHEREAS, one of the "Project Selection Criteria" under the Maglev Deployment Program is whether a public/private partnership is in place that is ready, willing and able to finance, construct, operate and maintain the Project; and

WHEREAS, one of the elements of the public/private partnership pertinent to the Commission's Project is the demonstration of a commitment by all the cities located on the route alignment of the Corridor; and

WHEREAS, the City of Las Vegas is supportive of the application of the Commission for Phase II funding under the Maglev Deployment Program, and intends to work together with the Commission to support and realize a Maglev station location within the City of Las Vegas;

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Las Vegas does hereby support the "Project Description" to be submitted by the California-Nevada Super Speed Train Commission to the FRA on or before June 30, 2000; and

FURTHER, BE IT RESOLVED, that the City Council of the City of Las Vegas supports the selection of the Commission's project as one of the recipients of Phase II federal funding under the Maglev Deployment Program; and

FURTHER, BE IT RESOLVED, that the City Council of the City of Las Vegas does hereby support the location of a Maglev station within the City of Las Vegas, in accordance with the route alignment map submitted to the FRA by the Commission, which route alignment map includes stations in Las Vegas and Primm, Nevada, and Barstow, Victorville, Ontario and Anaheim, California;

FURTHER, BE IT RESOLVED, that the City Council of the City of Las Vegas does hereby recognize that the transportation needs of its citizens, as well as all citizens of Southern Nevada, requires the implementation of a high speed ground transportation network incorporated into a larger intermodal transportation network, which will facilitate the moving of people in a safe and environmentally friendly manner, within the City, surrounding region and states. The Project being planned by the Commission is a demonstration of the type of high-speed inter-city transportation system needed as we move into the 21st Century.

THE FOREGOING RESOLUTION is approved and adopted by the City Council of the City of Las Vegas this day of 6/21, 2000.

MAYOR CITY OF LAS VEGAS

ATTEST:

CITY CLERK OF THE CITY OF LAS VEGAS

Approved as to form:

6-5-2000
Date

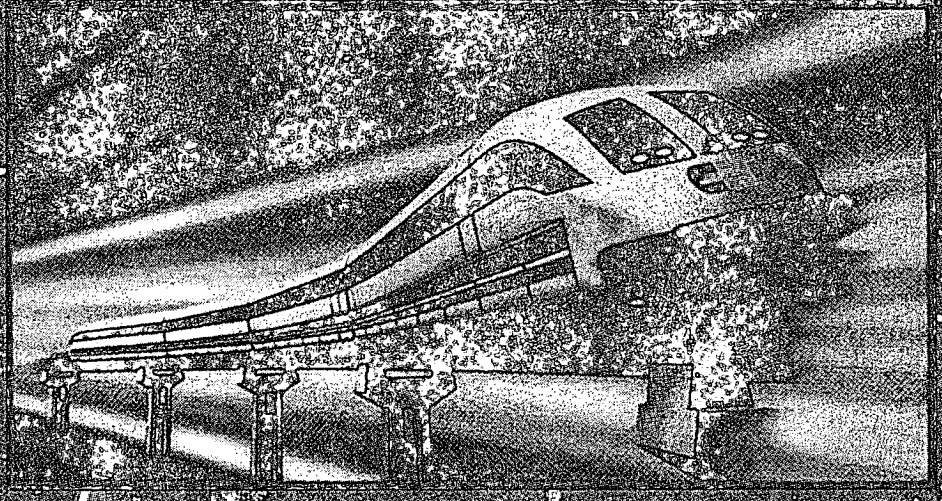
California - Nevada Interstate Maglev Project

Las Vegas to Primm Segment

EXECUTIVE SUMMARIES

Project Description

Environmental Assessment



Anaheim • Ontario • Victorville • California-Nevada Super Speed Train Commission • Barstow • Primm • Las Vegas

California-Nevada
Super Speed Train
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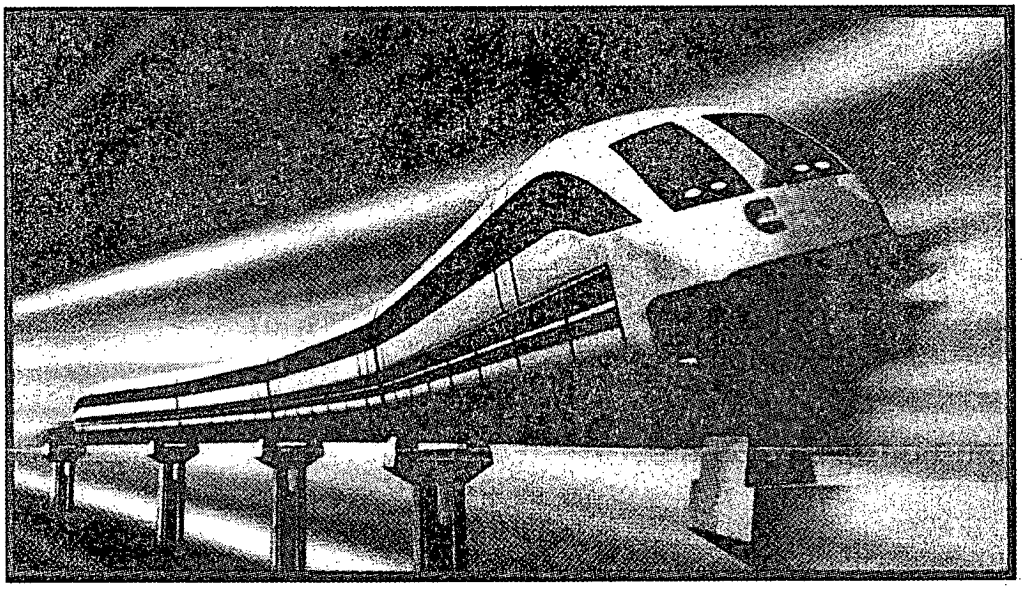
Project Description

Executive Summary

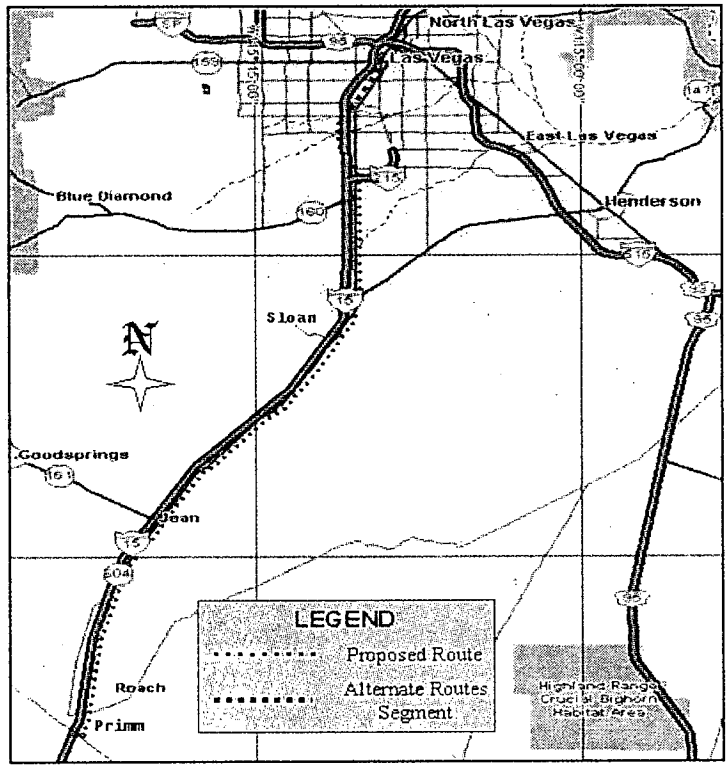


EXECUTIVE SUMMARY

THE PERFECT DEMONSTRATION CORRIDOR

"The First Forty Miles" from Las Vegas to Primm is the perfect demonstration corridor for the 310-mph magnetic levitation (maglev) technology. The first step in the construction of maglev service between Las Vegas, Nevada, and Southern California, "The First Forty Miles" between Las Vegas and Primm, would have a combination of advantages unequaled by any other corridor in the United States. These advantages include the following:

- Ideal physical conditions across the desert within the I-15 right-of-way, allowing sustained speeds of 310 mph (500 km/h), low construction costs per mile, and minimal environmental impacts.
- High ridership demand, beginning at 12 million trips per year, from a combination of commuters, visitor trips to Primm, and attraction riders per an "investment grade" forecast by URS.
- Exposure of the technology to a broad cross section of the 35 million visitors per year to Las Vegas from across the U.S. and around the world, resulting in over five million visitors per year riding the maglev.
- A Public/Private Partnership in place and ready to break ground on January 1, 2002, and to begin revenue service by May 1, 2005.



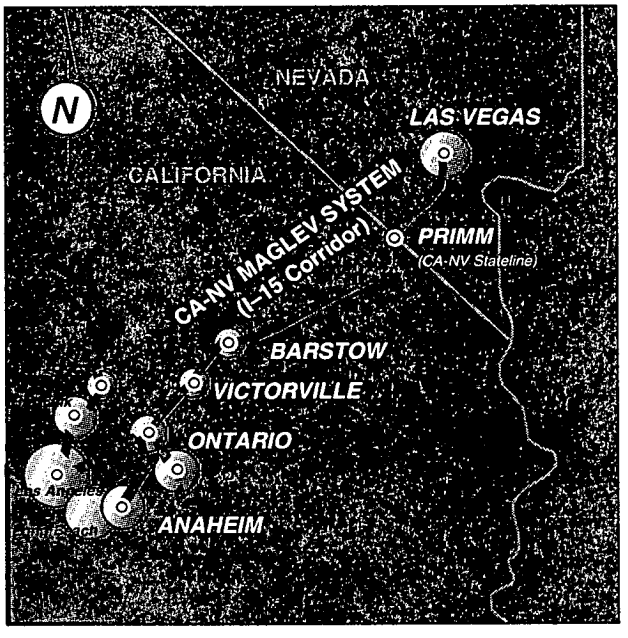
- Unanimous community support, including environmental groups.
- Future service between the planned Ivanpah Valley Airport and Las Vegas, facilitating the development and operation of the new airport for the Las Vegas region.
- Reduction of traffic congestion and accidents on I-15 from the diversion of commuters and visitors to the maglev.
- Partnership potential with over $600 million in net revenues (net present value at seven percent) and a ratio of total benefits to total costs of 1.3.

"The First Forty Miles" is the essential first step in the 270-mile corridor to Anaheim, California. Future extensions to Primm into Southern California will be vital for reducing highway and air congestion and for supporting the economic lifeline between Las Vegas and Southern California.

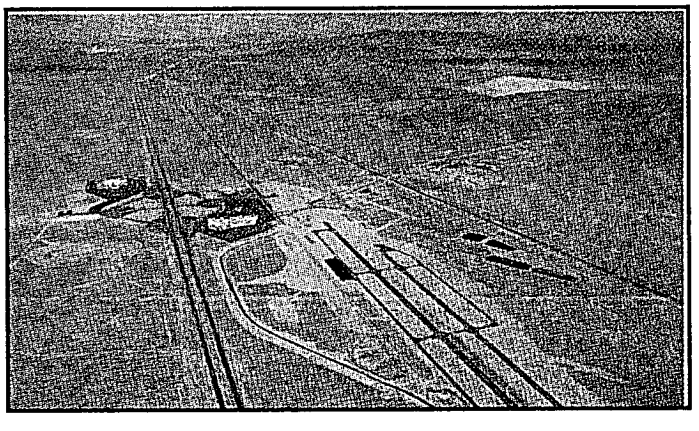
systems, such as the California north-south HSGT or the Los Angeles maglev, which would increase the total transportation and economic benefits of all systems.

AN IDEAL MAGLEV ALIGNMENT

The I-15 right-of-way is one of the features that makes the Primm Segment a perfect demonstration segment. This right-of-way also provides an ideal maglev alignment for the extended project. This alignment minimizes the need for property acquisition and provides the least complicated construction scenario possible. Traversing a region of predominantly gentle topography and sparse development, the system will make the most of the technology's super speed potential. Operational analysis shows that revenue service speeds of 310 mph can be comfortably reached even on the initial segment. With few, if any impediments to project completion, the initial segment will be an especially favorable and economical national demonstration of maglev technology.



The complete system between Las Vegas and Anaheim will use the technology to full advantage, enabling long stretches of uninterrupted operation between dense population centers at either end. With stations at Ontario and Anaheim, the system will serve both intercity and expanding regional commute markets. Barstow will be a convenient system midpoint for location of maintenance and operating facilities.



Between Las Vegas and Barstow, the I-15 corridor traverses open country with minimal curvature and relief, and very few right-of-way crossings. Low population and development densities over the majority of the route simplify construction and operation of this intermediate system.

The preliminary alignment is consistent with current regional plans and development and with Transrapid system design criteria. The environmental assessment of the initial segment indicates that that mitigation of all impacts is economically feasible. The extended alignment has been the subject of numerous environmental assessments, including that for an earlier maglev system proposed in the late 1980s. Both the Nevada and California departments of transportation have recently completed studies to characterize the corridor environment. The alignment between Primm and Barstow paralells the northeastern

Local and National Benefits

Reduction in delay on I-15 from diversion of trips to maglev will be both a local and national benefit. Because of the planned widening of I-15 to six lanes between Las Vegas and the California border, delay savings to the remaining highway users are initially low, on the order of four to ten minutes per person in between 2010 and 2025. Analyses project, however, that growing congestion from increased intercity and local traffic will cause the savings from maglev diversion to increase significantly, totaling 14 percent of the present value of total benefits of $2.7 billion dollars over the study period from 2005 to 2045 (2000$, 7 percent discount rate).

Job creation will be an important local benefit of the initial maglev investment. The study estimates that 11,000 construction-related jobs will be created as a result of the design and construction of the guideway and other fixed facilities. The operation of the maglev would create an additional 600 jobs in the region.

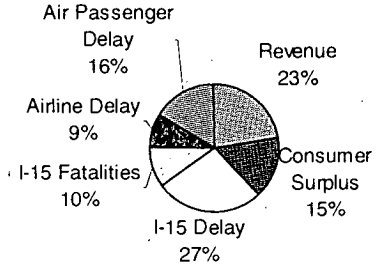
Surveys of Las Vegas visitors indicate that the maglev would draw over two million additional visitor trips to the area each year. Based on average visitor spending per trip and the additional spending caused by the visitor dollars, the maglev would create additional annual benefits of five billion dollars in the Las Vegas economy.

BENEFITS—CORRIDOR

Las Vegas—Barstow

An intermediate segment between Las Vegas and Barstow will serve intercity travelers transferring between from auto to maglev until the system is completed to Anaheim. At peak service, two six-car trains per hour will complete the trip in less than one hour, at sustained speeds of over 300 mph. At an average fare of about 28 dollars, the preliminary [CRA] ridership estimate forecasts four million annual trips in 2015.[1] Combined with Primm ridership,

Benefit Distribution for Barstow Maglev System



Total annual revenues for Barstow and Primm systems, including estimated ancillary revenues, would range from 200 million dollars in 2010, growing to 219 million dollars in 2015 and to 257 million dollars in 2045 (2000 $).

The Las Vegas—Barstow maglev system would generate addition user and public benefits. In addition to increased highway delay and fatality on I-15 savings, diversion

[1] URS "near investment grade" forecasts should be available this week to update the Barstow segment. Preliminary runs indicate that the forecasts will be about 50% higher than the CRA forecasts. Anaheim forecasts will also be updated, though only to a preliminary level.

to maglev would create benefits from reduction of air congestion in the corridor. The present value of benefits over the study period would be $11.4 billion in 2000 dollars at a seven percent discount rate.

The study estimates that 77,000 construction-related jobs will be created as a result of the design and construction of the guideway and other fixed facilities. The operation of the maglev would create an additional 2,000 jobs in the region.

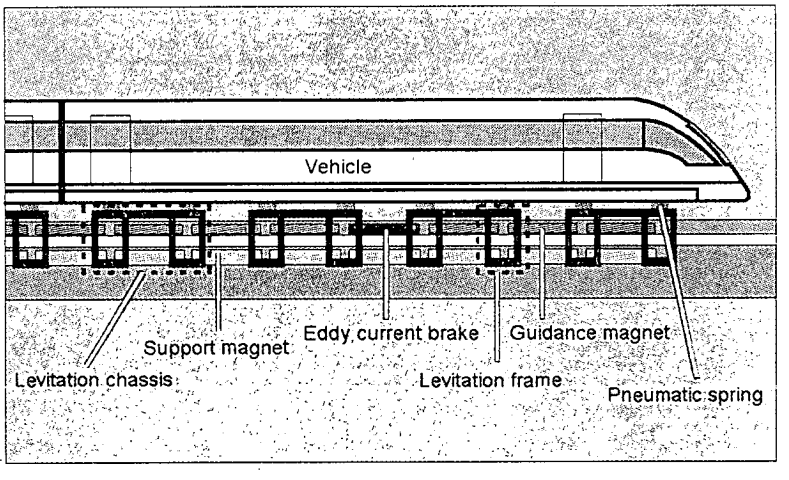
Las Vegas—Anaheim

For a complete system between Las Vegas and Anaheim, peak period service will be provided by two eight-car trains per hour. System capacity for this base scenario is equivalent to three 747 aircraft arrivals each hour at each end of the system, a volume that may be multiplied by adding more trains. Express trains stopping once at Ontario will complete the 275-mile trip in less than 90 minutes. At a one-way fare of about 42 dollars, 75 percent of the average air fare, preliminary estimates forecast about eight million trips in 2015, including transfers to and from and California high-speed system. Total revenues for the Anaheim and Primm systems, including estimated ancillary revenues, would be 430 million dollars in 2015 (2000$).

ESTIMATED COSTS

The Maglev system is comprised of three classes of elements, each of which required a different level of effort to develop costs for the initial segment. The three classes of elements are new technology, elements requiring new fabrication or installation techniques, and existing technology. The first two classes were estimated with assistance from Transrapid, adapting their costs from the test facility in Emsland to the local environment. The last class, including civil structures and stations, was estimated from local cost databases.

For the entire corridor, a unit cost per length was derived for each cost element associated with the guideway infrastructure utilizing the costs developed for the initial segment. The more discrete elements, such as vehicles and stations, were estimated on an individual basis. The cost of each element was escalated or deflated according to the multipliers developed for costs factors, such as seismic requirements and type of terrain.

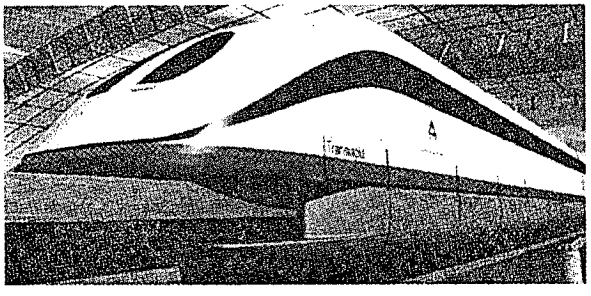


Principal capital costs are those associated with the guideway, stations, and operations and maintenance facilities. Other capital costs include operating systems and vehicles. Capital costs are driven by station locations, route characteristics such as length, topography, and surrounding land use, and projected operating parameters such as ridership and schedule.

In cooperation with three other corridors, an operating cost model was developed to estimate operating costs. The model included experience from the Commercial Feasibility Study as well as current reviews by Transrapid. Operating costs are primarily driven by the types of services and their schedules. They are minimized by a high degree of automated operating and control, and low maintenance requirement enabled by few moving parts and no contact between the guideway and vehicle.

Las Vegas—Primm

The estimated investment cost for the 35-mile (56-kilometer) initial segment between the South Resort Corridor Station and Primm is $1.28 billion (2000$), an average cost of about $37 million per route mile. There are approximately 45 miles (72 kilometers) of single guideway planned for the system, including guideway in maintenance facilities. Of these costs, $1.04 billion are "eligible" costs per FRA guidelines. The remaining costs are for stations, vehicles, and maintenance vehicles.



The operating and maintenance costs for the initial segment are about $35 million per year. Continuing investment costs add on the order of eight to nine percent to the total recurring costs. The present value of investment and recurring costs is about $2.07 billion at a seven percent discount rate (2000$).

Las Vegas—Barstow

The estimated investment cost for the 163-mile (262-kilometer) intermediate system between downtown Las Vegas and Barstow, including the initial segment, is $9.34 billion (2000$), an average cost of $57 million per route mile. Operating and maintenance costs for this system, including the initial segment, are about $166 million per year. Continuing investment costs add about six percent more to the annual recurring costs. The present value of investment and recurring costs is about $10.5 billion at a seven percent discount rate (2000$).

Las Vegas—Anaheim

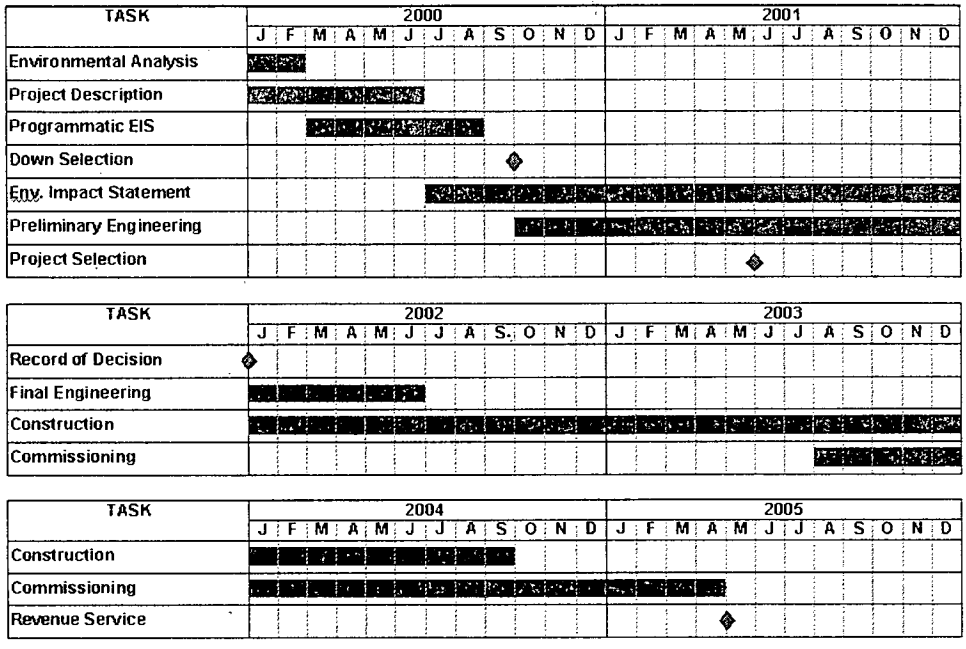
The estimated investment cost for the 275-mile (443-kilometer) complete system between downtown Las Vegas and Anaheim, including the earlier segments, is $19.2 billion (2000$), an average cost of $70 million per route mile. Recurring annual costs have not been estimated.

PUBLIC-PRIVATE PARTNERSHIP

The California-Nevada Super Speed Train Commission and the American Magline Group (AMG) are partners under a formal agreement to jointly develop a business case for a maglev system, to secure public and private funding, and to plan, design, and construct a system. Designated specifically by statue of the State of Nevada to develop high-speed ground transportation in this corridor, the Commission is empowered to execute the analysis, planning, finance, contracting, and engineering to make the system a reality. Their partnership with the

SCHEDULE

The Public/Private Partnership is already in place and prepared to break ground on January 1, 2002, and begin revenue service by May 1, 2005.



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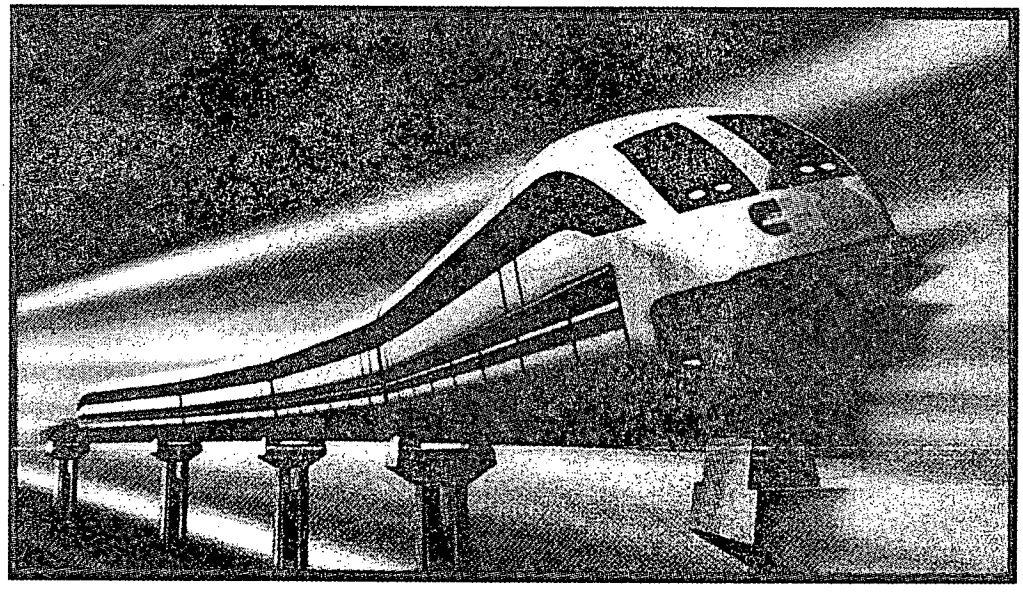
Environmental Assessment

Executive Summary



EXECUTIVE SUMMARY

1. PURPOSE AND NEED

Las Vegas is the fastest-growing metropolitan area in the US. Driven by the growth of the area's visitor-based economy its population has tripled in the past 20 years and is expected to double again in the next 20 years. As an international destination, Las Vegas' has seen steady increases in the annual numbers of recreational and convention visitors. The burgeoning resident and visitor populations cause increased congestion at airports and along the highways serving the area, particularly in the corridor linking Las Vegas with Southern California. Corridor travel congestion and delay are becoming increasingly commonplace, adversely impacting the economy, air quality, energy consumption, and traffic safety.

The California-Nevada Interstate Maglev Project, with the initial operating segment proposed to be built in the Interstate 15 (I-15) right-of-way for 67 kilometers (42 miles) from Las Vegas to Primm, provides an opportunity to overcome the travel constraints and adverse impacts inherent in airport and highway corridor congestion. Maglev would also help improve the quality of life for the corridor communities by shifting a large segment of the traveling public to a corridor transit system and by providing a catalyst for clustering urban growth around the Maglev stations. This growth would be fed by ancillary people-movers and bus service, resulting in less reliance on auto travel, more efficient use of the land, and less encroachment on the natural environment.

As an initial deployment, the Las Vegas to Primm segment provides an ideal showcase for Maglev technology. It can clearly demonstrate Maglev technological advantages, including its maximum speed and quiet operation. It can be readily constructed, because of its minimal right-of-way requirements and ease of permitting. Finally, the Las Vegas to Primm Segment provides exposure to over 30 million visitors a year from around the world.

2. ALTERNATIVES CONSIDERED

An initial operating segment of the California-Nevada Interstate Maglev Project is proposed paralleling I-15 between Las Vegas and Primm, a distance of 67 kilometers (42 miles). The project would utilize German Maglev technology to operate fully automated (computer controlled, no driver) passenger trains along a grade-separated guideway at speeds of up to 500 km/h (310 mph) in rural areas and up to 250 km/h (155 mph) within the urban area. The trains would be electrically powered, utilizing magnetic fields to lift the vehicle approximately 0.15 meter (6 inches) off the surface of the guideway and to propel the train along the guideway. Estimated trip time from Las Vegas to Primm would be 16 minutes.

Guideway Design. The Las Vegas to Primm segment would be constructed on either a double track or a combination double and single track guideway within a right-of-way

that is 12 meters (40 feet) wide. In rural areas the guideway would be almost entirely at-grade with top of guideway approximately 3 meters (10 feet) above ground level. In the urban area the guideway surface would be elevated 6-18 meters (20-60 feet) above ground in order to clear cross-streets.

Train Operations. Trains, comprised of three cars each, are proposed to operate at 20-minute intervals during peak periods and 30-minute intervals off peak. Ridership is expected to reach 13,000 daily in 2005 and 20,000 to 23,000 daily in 2020.

Station Options. Candidate station locations on the Las Vegas to Primm Segment include: (1) Downtown Las Vegas at Fremont Street; (2) South Resort Corridor at Las Vegas Boulevard and Sunset Road; and (3) adjacent to Buffalo Bill's Casino in Primm. Each of these station locations has potential for becoming a focal point of high density land use, multi-modal transfers, and joint development. Other station locations considered, but withdrawn from further consideration, include an Ivanpah Valley Airport station, because the airport development is projected to be six to 15 years in the future, and a mid-Strip station, because consensus could not be reached on a suitable site. Further, it was determined that an increase in the number of stations could defeat the advantages of the technology.

Alignment Options. The preferred alignment parallels and lies approximately 30 meters (100 feet) east of I-15 from Interstate 215 (I-215) in Las Vegas to Primm. This alignment lies almost entirely within Nevada Department of Transportation (NDOT) right-of-way. North of I-215, the Maglev alignment would cross over I-15 to abut the west side of the highway, still within I-15 right-of-way. At the I-15 crossing of Flamingo Road, the Maglev alignment would shift to the west side of the Union Pacific Railroad (UPRR) right-of-way or, alternately, Industrial Avenue north to the Downtown Station. These alignment alternatives are referred to as the UPRR Alignment Alternative and the Industrial Road Alignment Alternative. Other alignments considered but withdrawn include the west side of I-15 south of I-215, because it borders more sensitive habitat and residential areas; the east side of I-15 north of I-215, because it encroaches on hotel properties and blocks views; and along the UPRR south of Flamingo, because the available right-of-way is less compatible, there is a greater encroachment on habitat and urban development, and greater coordination with railroad operations is needed.

Ancillary Facilities. A 5 hectare (13 acre) maintenance building and yard is proposed near Primm at the south end of the Initial Operating Segment. And two electrical substations of 0.4 hectares (one acre) each are proposed to provide power for the Maglev system: one 13 kilometers south of the South Resort Corridor Station; the other 6 kilometers north of the Primm Station.

Schedule. Assuming FRA approval of funding in September of 2001, the California-Nevada Super Speed Train Commission anticipates the next phase by the end of 2001, completion of construction by mid-year 2004, and certification for revenue service by the end of 2005.

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Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.1 Air Quality	Increase in emissions of sulfur dioxide (SO_2).	Although the production of power using fossil fuels would result in more SO_2 emissions than would be removed from vehicular exhaust, it is not anticipated that these additional emissions would result in a violation of the National Ambient Air Quality Standards for SO_2.	The increases in SO_2 emissions represents an insignificant increase (0.1%) when compared to the existing (SO_2) emission inventory for Clark County.
	Increase in emission of oxides of nitrogen (NOx) in the later years.	Increase is such a small proportion of the total in the region that migitation is not required.	No expected to cause exceedance of standard
	Increase in emission of greenhouse gases (CO_2)	There are no federal or local requirements concerning greenhouse gases. Mitigation voluntary.	N/A
	Project would result in reductions of all other criteria pollutants.	N/A. Beneficial effect.	N/A
5.2 Water Quality	Pile driving may encounter surface aquifer in some areas.	If ground water is encountered, dewatering will be included in construction.	Any loss of or contamination to water supply would be minimal.
	Disturbance due to construction may increase erosion and sedimentation in washes and drainages.	A Storm Water Pollution Prevention Plan will be prepared and implemented.	Increase of erosion and sedimentation would be minimal.
5.3 Noise and Vibration	Gold Strike Hotel and Gambling Hall near Jean Airport: Severe noise impact, Startling impact in the parking lot	Noise barrier wall – approx. 800 feet long.	None
	Sun Harbor Budget Suites north of Desert Inn Road and east of I-15: Noise Impact	Industrial Alt. – noise barrier wall – approx. 850 feet long UPRR Alt. – none.	None
	Circus-Circus Hotel's Motor Hotel and RV park: Noise Impact	Industrial Alt. – noise barrier wall approx. 2,100 feet long. UPRR Alt. – none.	None

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.3 Noise and Vibration (continued)	Short-term noise and vibration impacts during some activities	Select construction processes and techniques that create the lowest noise levels. Use equipment with effective mufflers. Minimize construction activities during evening, nighttime, weekend, and holiday periods. Permits would be required in Clark County before construction can be performed in noise sensitive areas between 9:00 p.m. and 7:00 a.m. Restrict some activities near sensitive sites to weekdays daytime hours. Limit or prohibit use of construction techniques that create high vibration levels, such as impact pile driving at distances less than 15 meters (50 feet) from residences. Perform noise and vibration monitoring to demonstrate compliance with the noise limits.	Not significant
5.4 Solid Waste	Potential debris and litter remains from construction. During operations, solid waste would be generated at stations; all stations would be located in service areas of solid waste disposal companies.	Include proper disposal of construction debris, waste materials, and litter as a specification in the construction contract.	Not significant
5.5 Ecological Systems	Loss of 65 ha (161 acres) of undisturbed Mojave Desert habitat	Restrict off-road driving to the construction area. Minimize disturbance of pristine desert when possible	Mitigation would reduce impact, but loss of habitat cannot be completely eliminated.
	Alignment may contribute to habitat fragmentation caused by Interstate 15. The guideway would pose a limited barrier, but the possible security fencing may limit movement of some species. Current plans call for fencing similar to that in place along the I-15 corridor.	If constructed, security fencing would be constructed to allow small animals to cross beneath it. If deemed significant by NDOW, fencing will be designed to funnel large animals to large unfenced culverts or washes to allow the animals to cross.	Potential effects of fragmentation would be reduced but not eliminated.

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.5 Ecological Systems (continued)	Death or injury of small number of common plants and animals. Significance of impact would be minimal to the system.	Biologists conducting preconstruction surveys may be able to observe and remove some common species.	Minimal impact.
5.6 Wetlands	No wetlands are found within or adjacent to the proposed project areas.	No mitigation required.	N/A
	The alignment and some proposed facilities may cross ephemeral washes that may qualify as jurisdictional waters of the US.	Delineation of the waters and consultation with the Army Corps of Engineers (ACOE). Permits will be obtained for actions within waters of the US, and prescribed mitigation will be implemented.	With mitigation required by ACOE, impact would be minimal.
5.7 Threatened and Endangered Species and Other Wildlife	A small but unknown number of desert tortoises (Federally threatened, Nevada threatened) may be killed or injured during construction activities. Due to effects of I-15, tortoise abundance is expected to be low.	Preconstruction Surveys will be conducted; construction crews will be educated. Tortoises within the project area will be relocated to areas outside the project area following US Fish and Wildlife Service procedures.	Desert tortoises encountered in the project area would be affected by being relocated. Mitigation would reduce but not eliminate loss or injury of tortoises or tortoise eggs.
	Approximately 65 ha (161 acres) of desert tortoise habitat would be disturbed.	When possible, ground disturbance will be restricted to the proposed guideway and access roads. An impact mitigation fee may be paid to the Clark County tortoise conservation fund.	The area disturbed would likely not be reduced significantly, but the funds contributed would support conservation activities.
	Banded gila monsters (State protected), Las Vegas bearpoppy (State Critically Endangered), twotone beardtongue (BLM Special Status), desert banded geckos (Clark County HCP covered), desert iguanas (Clark County HCP covered), and others may occur in the project area. Members of these species may be injured or killed, and potential habitat lost.	Protected species will be noted if seen during preconstruction surveys. Banded gila monsters will be relocated if found in the construction area. Additional mitigation may be needed if Las Vegas bearpoppy population found in the area.	Loss of habitat and some individuals of protected species would be reduced but not eliminated.
	Minimal game habitat would be disturbed by this activity. If fenced, the alignment may prevent the movement of big game animals (deer, etc.) from crossing between mountain ranges.	In coordination with NDOW, fences would be designed to funnel big game animals to large, unfenced culverts or washes to allow these animals to cross safely, similar to the existing I-15 fencing.	Potential effects of fragmentation would be reduced but not eliminated.

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.8 Floodplains	4,676 meters (15,342 feet) of project alignment would pass through areas of 100 year floodplain. Potential obstruction to the flow of floodwaters during a 100-year event	Elevate guideway above flood levels and locate guideway columns outside of the 100-year floodplain, consistent with government requirements, neighboring facilities, and adopted floodplain management plans.	Not significant.
5.9 Coastal Zone Management	N/A	N/A	N/A
5.10 Energy (Consumption for Long-Term Operations)	Energy consumed for operations (2020) would represent approximately 0.8% of Nevada Power Company's energy sales in 1998. Although provision of Maglev service would induce a mode shift from less energy efficient roadway motor vehicles to train travel in I-15 corridor, a net increase in direct energy consumption is projected due to the high frequency of train operations. The net change in total direct energy consumed is on the order of 297.5 million megaJoules annually.	No mitigation warranted other than system design and operating plan should incorporate energy saving measures wherever practicable. Future energy supply and distribution systems are not anticipated to be adversely affected by Maglev service. The annual consumption of electricity by Maglev trains is a small percentage of existing total annual electricity use in the study area. The deregulation of the electrical utility market allows energy consumers, such as Maglev service, to purchase power from many suppliers.	None
5.11 Natural Resources	**Farmlands.** No farmlands, timber, mineral or water resources would be consumed	N/A	N/A
5.12 Visual Resources	**Jean.** Guideway would block views from I-15 of hotel and casino along east side of freeway, as well as views of monument signs. Soundwall would aggravate these impacts.	Possible soundwall strategies include transparent or translucent materials. Reconstruction of monument signs (including raising height) may be necessary. Although costly, additional strategy is to route alignment around rear (south side) of Jean properties away from freeway.	Some views of the hotel and casino would remain blocked, however monument signs would be fully visible.

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.12 Visual Resources (continued)	**West of I-15 at Tropicana and Sahara Interchanges.** Elevated guideway along west margin of I-15 would interfere with motorist views of commercial uses. Possible soundwalls would increase impacts.	Hotel owners may opt not to construct soundwalls blocking views. See above for soundwall strategies.	Some views of commercial uses would remain blocked.
	Between Lake Mead Drive and Blue Diamond Interchanges. Scale and shadow impacts of elevated guideway may affect seven land uses along project alignment.	Mitigation strategies include light-colored painted concrete surfaces, contrasting color accent bands, imprinted surface patterns, buffering ground landscaping.	Visual impact of elevated guideway would be softened.
	Resort Properties Adjacent Industrial Alignment. Elevated guideway runs along back of Resort properties.	UPRR Alignment avoids this impact.	None
	Downtown Terminus. Visual impacts are deemed minimal on current conditions but could be constraint on future development scenarios for yard site and Downtown urban design connections.	Barrier-free urban design linking UPRR yard redevelopment site and Downtown effectively buries Maglev and railway corridors below a new, artificial development plane, mitigating potential visual impacts on future development and linkages.	None
	Power Substations. Electrical substations of 0.4 hectares (one acre) have heavy industrial character with switches, transformers, and overhead powerlines. Not compatible with people-oriented spaces.	Principal mitigation is appropriate exterior architectural detailing related to each building's immediate context (rural, urban, industrial, etc.). Other strategies include siting to hide or screen building from critical views and buffering landscaping.	While buildings would be visible, they would blend with surrounding context.
5.13 Transportation and Traffic	Maglev service is projected to carry 20,000 to 23,000 passengers daily in 2020. A significant share of these riders would be diverted from other modes, including private autos and buses traveling I-15 between Primm and Las Vegas, resulting in a reduction of approximately 1,500 daily vehicle trips representing 89,000 vehicle kilometers of travel (32.3 million annual VKmT) on I-15 in 2020.	N/A. Beneficial effect.	N/A

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.13 Transportation and Traffic (continued)	Increases in local traffic for Maglev station access are projected in both Primm and Las Vegas. In Primm, these impacts are expected to be minor. In Las Vegas, access traffic would contribute to congestion at major intersections in the vicinity of both stations (the South Resort Corridor Station at Las Vegas Boulevard and Sunset Road, and the Downtown Station at Fremont and Main Street and at Ogden and Main Street). Intersection level of service would potentially deteriorate.	Access roadways and intersections affected by increased traffic to Maglev stations will be improved, either by operational or geometric improvements, to operate without a significant deterioration in level of service compared to the No-Build condition. Measures that promote and enhance high-occupancy vehicle access to Maglev stations (e.g., via bus, shuttle, van, peoplemover) will be implemented as part of the service operating plan. Maglev system design will, wherever practicable, facilitate intermodal transfers.	It is anticipated that intersection improvements and intermodal connections would fully mitigate impacts.
	Congestion relief may occur on local streets due to a mode shift from auto to Maglev on trips between these two major activity centers. The project would increase opportunities for intermodal trips on transit and enhance travel connections to and travel on existing and planned local transit systems.	N/A. Beneficial effect.	N/A
5.14 Barriers to Aged and Handicapped	Elderly and handicapped passengers may experience difficulty using facilities, and following emergency evacuation procedures.	Include curb cuts, elevators, accessible restrooms, and other amenities in accordance with the Americans with Disabilities Act.	Emergency evacuation (likely by inflatable chute) would remain difficult for aged and handicapped passengers, but not inconsistent with that encountered in other transportation modes (air, rail, transit)

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.15 Land Use	A 135-unit casino-owned mobile home park at Primm would be relocated to another site within the park as part of the project.	Impacted units within the mobile home park at Primm will be moved.	Not significant
	Guideway could obstruct circulation patterns to/from and within abutting developed properties.	Elevate guideway in developed areas, work with property owners to properly locate guideway columns.	Not significant
	Guideway would restrict ability of abutting properties to (re)develop within the guideway envelope, particularly for Industrial Road Alignment Alternative.	Designate UPRR Alignment Alternative as Preferred Alternative. Compensate property owners for loss of development rights.	Not significant
	Nuisance claims on lands open to mineral exploration and development.	Complete minerals potential studies on any right-of-way outside of the right-of-way of I-15 or outside of the Las Vegas Valley withdrawal area. Determine ability of claimant to diligently and properly pursue exploration; negotiate abandonment of claims. Work with BLM to withdraw Maglev right-of-way prior to issuance of right-of-way permit.	Not significant
	Multiple use of I-15 corridor	N/A. Beneficial impact	N/A
5.16 Socioeconomics	Increased demand for hospitality and entertainment at Primm	N/A. Beneficial impact consistent with Primm Planned Unit Development	N/A
	Increase demand for office and convenience commercial uses near the South Resort Corridor Station	N/A. Beneficial impact consistent with Enterprise plan	N/A
5.17 Environmental Justice	Relocation of selected dwelling units at Primm	Property owner/employer will relocate mobile homes and their residents in a reconfiguration of the existing mobile home park.	Not significant

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.18 Public Health (including EMF)	Increased exposure to static and time-varying magnetic fields by passengers and the general public due to operation of the trains and supporting equipment.	The incremental impacts are expected to be minimal considering both the magnitude of the impact and its exposure duration. Thus, no additional mitigation is necessary.	Minimal exposure
5.19 Public Safety (including Hazardous Materials)	Potential exposure to unremediated hazardous contaminants and contaminated media. Investigative studies are being conducted, or remedial operations are currently in progress.	Monitor status of remedial activities in the event they may impact construction operation of the alignment. Develop appropriate site-specific health and safety, and emergency response plans. Continue monitoring sites in the event that existing conditions change or additional sites of concern are encountered.	Minimal to no exposure
	Construction would constitute an attractive nuisance.	Use fencing and security measures as appropriate; limit access to authorized personnel	Not significant
	Fault zones that could affect the project are present in the surrounding area, but do not cross the alignment.	Current seismic design standards will be incorporated to withstand seismic ground shaking that would result from a maximum credible earthquake.	Not significant
	Unlawful access could be hazardous	Existing I-15 fencing and appropriate signage will discourage entry by notifying the public of the hazards present.	Not significant

Table S-1
Summary Of Probable Impacts
The California-Nevada Interstate Maglev Project, Las Vegas-Primm Segment

Environmental Category	Probable Impact	Potential Mitigation Strategies	Residual Impacts After Mitigation
5.20 Recreational Opportunities	No adverse impact. The project would enhance connectivity with existing and planned trails, golf courses, and entertainment facilities.	N/A	N/A
5.21 Historic, Archaeological and Architectural Resources	19 archaeological sites would be located with 100 approximately meters (300 feet) of the alignment. Prehistoric resources potentially encountered may include workshop/chipping stations, lithic scatters, quarries, rockshelters, isolated chipped stone and ground stone artifacts. Historic resources potentially found in the area include scatters of glass and other historic artifacts related to mining and railroad activities.	Mitigation measures for resources found within the proposed project area may include documentation and description of any sites that are found, salvage of resources found at any site, or avoidance of the sites entirely.	Not significant
	Potential impact to Native American culture	Formal consultation with the tribes	Not significant
5.22 4(f) Parklands	No parklands would be affected by the project. The only Section 4(f) lands that could be affected are possible archaeological sites, identified above.	If Section 4(f) impacts occur, it will be demonstrated that avoidance is not feasible and prudent.	N/A
5.23 Construction	**Street Closures.** Temporary closure of arterial streets crossing under guideway to facilitate erection of guideway	Require construction traffic management plan. Limit closures to nighttime/early morning hours. Provide notice of closures/ detours to the motoring public.	Short-term inconvenience would be reduced but not eliminated.
	Water Line Relocation. None	N/A	N/A
	Gas Line Relocation. None	N/A	N/A
	Power Line Relocation. 5 high voltage transmission lines would cross elevated guideway between Lake Mead Drive and I-215, near Sahara.	Raise elevation of towers/lines crossing over proposed guideway.	None
	Waste Disposal. None	N/A	N/A
	UPRR Crossing. Short term impacts on rail service	Coordinate with UPRR.	Minimal.
5.24 EMF Compatibility	No impact	N/A	N/A

Train project catches eye of German parliament

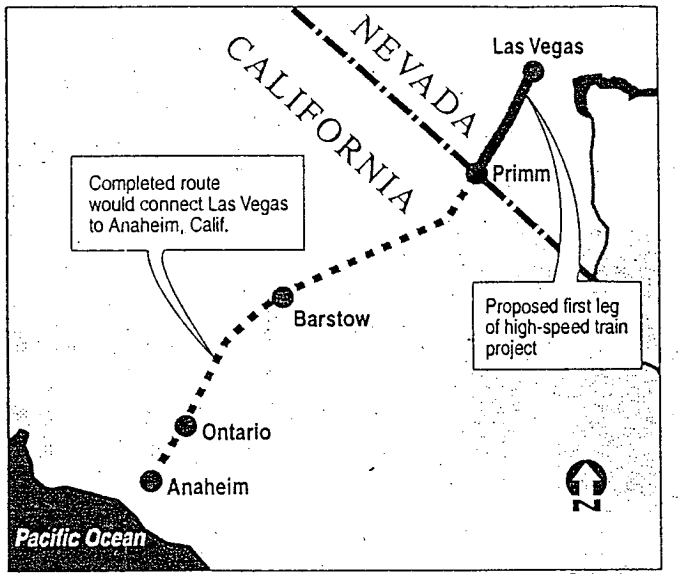
Officials to visit Las Vegas to analyze route

By Joelle Babula
Review-Journal

The Las Vegas-to-California high-speed train project has piqued the interest of the German parliament, possibly opening the door to an international partnership to get the project zooming as quickly as possible.

Members of the German parliament will be in Las Vegas next week to analyze the train route from Las Vegas to Primm and possibly invest in the project. The Las Vegas-to-Primm segment is the first leg of a 275-mile route to Anaheim, Calif.

"It's a good sign that maybe they're willing to invest," said Sen. Harry Reid, D-Nev. "It's a good sign that they're confident the California-Nevada group is far down the road with this project."



Source: California-Nevada Super Speed Train Commission — Review-Journal

The Nevada route is currently in competition with six other states for $950 million in federal funding to construct a high-speed train demonstration project. The money has been authorized for the winning project, but it has yet to be appropriated by Congress. Officials with the train commission are confident the money will be available once a project is proven viable.

The Primm route nudged out four other proposals in the first round of cuts, but the crux of the second round in September is based on project readiness and the availability of $475 million in matching funds.

The Nevada project is ready for construction, but a lack of money could poison its chances.

"We're ready to build. We can break ground on Jan. 1, 2002, and have the train in revenue service by May of 2005," said Neil Cummings, general counsel for the American Magline Group, part of a joint venture with the California-Nevada Super Speed Train Commission to get the project off the ground. The bistate commission was formed in 1988 to study the possibility of a high-speed train from Las Vegas to California.

"They (the Germans) are looking to invest right now," Cummings said. "We still need the federal dollars (to proceed with the project), but if we could match the federal dollars with a German investment, we could take that to the feds and say, 'Hey, we've got the match, now give us the project.' "

Germany is the birthplace of the Transrapid Maglev system, the type of technology used for the high-speed train. Maglev stands for magnetic levitation, a technology that allows the train to hover above the tracks and travel at speeds of up to 300 mph.

There is currently a maglev test track in Germany, but their original flagship project recently was canceled, leaving the German government with an untapped high-speed train industry.

"There is a real interest in the aftermath of the canceled Berlin project to see whether it makes more sense to do a project in the U.S.," said Chris Brady, president of Transrapid International-USA Inc., a subsidiary of the parent Transrapid company in Germany. "This is the first time they're coming over here to investigate U.S. projects. ... I think they are going to be very impressed."

According to Brady, the flagship project from Hamburg to Berlin was a political casualty following the fall of the Berlin Wall and the union of East and West Germany.

The German Parliament is still pursuing a maglev project in Germany, but it will be at least five more years before they're ready to break ground, and they're looking to employ the technology sooner, Cummings said.

"We developed the transrapid system and we can provide the expertise," said Manfred Wackers, the marketing director of Transrapid International in Germany. "We want to supply the technology to a certain project. We want to learn what the U.S. needs and make a decision as to what kind of cooperation can take place."

Representatives from Pittsburgh, Port Canaveral, Fla., Atlanta, New Orleans, Baltimore and Riverside, Calif., will present their high-speed train proposals to the Germans in Los Angeles.

Germans interested in Las Vegas train route

By Joelle Babula
Review-Journal

With seven possible U.S. high-speed train projects to invest in, members of the German parliament are leaning toward a Las Vegas route.

"I think the Nevada project is one of the projects that can be the best and the easiest to implement," German parliament member Gerhard Rubenkonig said through his interpreter. "I'm deeply impressed with the presentation you've given us this morning."

Rubenkonig, along with five other members of the German government, gathered Tuesday morning at the MGM Grand to learn about the proposed Las Vegas-to-Primm high-speed train route — the first leg of a planned 275-mile route to Anaheim, Calif.

The Germans arrived in Las Vegas on Monday after a quick trip to Los Angeles to hear presentations from representatives of Pittsburgh, Port Canaveral, Fla., Atlanta, New Orleans, Baltimore and Riverside, Calif. — the six other U.S. high-speed train proposals.

"During the past two days, we've heard presentations on all (seven) projects," Rubenkonig said. "The project here has an important advantage: It will have the ridership and can be implemented quickly. It also has the political backing."

> *"We've asked for help and we've asked for an investment (from the Germans). It's very critical for us because if we win (the federal competition), then we've got a matching fund problem."*
>
> **Jack Libby**
> *Chairman, California-Nevada Superspeed Train Commission*

During the presentation, Las Vegas Mayor Oscar Goodman roused a chuckle from the German group with a story on why he was late — he drove over an abandoned tire and ruined his own car's wheel — and ultimately proved to the visitors that the Las Vegas high-speed train route has the political support necessary to succeed.

"It (the local support) became apparent after listening to Mayor Goodman this morning," Rubenkonig said. "The presence of the mayor of Ontario (Calif., Gary Ovitt) here today also shows us how important this project is to you." The planned route to Anaheim would stop in Ontario.

Goodman touted crowded freeways, hordes of visitors from California and a tourist-dependent economy as reasons for a high-speed train system in Las Vegas.

"Guests come up here and have a marvelous time and then on their way back to California forget they even had a good time because of the traffic," Goodman said. "The only way this is going to be cured is with this speed train."

The Las Vegas-to-Primm route currently is in competition with six other projects for $950 million in federal funding to construct a high-speed train demonstration project. The Primm route nudged out four other proposals in the first round of cuts, but the crux of the second round in September is based on project readiness and the availability of $475 million in matching funds.

The project in Nevada will be ready to start construction Jan. 1, 2002, with completion in May 2005, but without matching funds, the chance for federal dollars diminishes, said Jack Libby, chairman of the California-Nevada Superspeed Train Commission.

"We've asked for help and we've asked for an investment (from the Germans)," Libby said following the train presentation. "It's very critical for us because if we win (the federal competition), then we've got a matching fund problem."

According to Goodman, without an investment from the German parliament, the high-speed train project will come to a halt.

"It's crucial," he said. "Without an investment, the project won't get done. At least not in this stage of the game."

Germany is the birthplace of the Transrapid Maglev system, the type of technology used for the high-speed train. Maglev stands for magnetic levitation, a technology that allows the train to hover above the tracks and travel at speeds up to 300 mph.

There is currently a maglev test track in Germany, but their flagship project recently was canceled, leaving the German government with an untapped high-speed train industry and an interest to invest elsewhere to deploy their state-of-the-art technology.

According to Rubenkonig, the original route in Germany, from Hamburg to Berlin, was canceled because the government feared a lack of ridership would force it to subsidize the train.

Independent studies indicate that after the initial investment of $1.3 billion, the route to Primm would be supported solely through ticket revenues. Ridership is estimated at 11.8 million passengers per year, said James Caviola, project manager for the high-speed train.

The German parliament is still pursuing a more rider-friendly route in Germany, but in the meantime, they are interested in deploying their technology as soon as possible. Although the government cannot invest in an American project with German tax dollars, there are options.

"We can't say yet what type of support, but we can imagine loan guarantees, joint technology programs or private investments," Rubenkonig said. "As soon as the project has federal approval, talks will take place at a very high level as to what kind of cooperation is possible."

The German government will meet in the fall with the U.S. secretary of transportation to discuss the train project and perhaps a partnership with the United States.

Meanwhile, officials with the high-speed train commission will continue to prepare for the next federal competition submission on June 30. The commission must submit a financial feasibility study including ridership studies and revenue projections.

Commission members then will wait to see whether the Primm route survives the next round of federal cuts in September. By March 31, 2001, one project is expected to be selected for federal funding.