

**Synthesis of Cal Poly Senior Projects
Relating to Public Transportation
in San Luis Obispo County**

**In partial fulfillment of CE 424
Professor Eugene Jud**

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Purpose

The purpose of this report is to examine several Cal Poly senior projects written on the topic of public transit in San Luis Obispo County and give a single report which will contain the important ideas of these projects. This report does not propose anything new but merely attempts to present results of previous projects in one place. It is also hoped that by presenting and comparing the results, the discussion of implementing these transportation systems would be renewed and the work of these students will not be forgotten.

Executive Summary

The public transportation systems covered in these senior projects include commuter rail (1 project), light rail (3 projects), and bus rapid transit (1 project). The regions of San Luis Obispo County covered in these reports can be classified into three categories: North County (SLO to Paso Robles), South County (SLO to Santa Maria), and the North Coast (SLO to Hearst Castle). Most projects provide a map of the proposed route, stop locations, and one or more station designs.

From looking at these reports, it can be seen that there are a number of different options available to the County of San Luis Obispo to promote public transportation and help reduce congestion on the roads. Traffic congestion will only increase with the growth of the county and something can be done to provide reliable ways of getting place to place. Simply widening roads cannot be the final answer. The personal car, while beneficial for ease of mobility, simply does not have the capacity that a public transportation system such as commuter rail, light rail or BRT can provide. Only when these systems are put into place and priority is taken away from the car, can we encourage commuters to use public transportation and make a step forward to solve problems of over congestion. The proposals listed in this report are only suggestions on ways to alleviate the problem but it seems apparent that something can be done.

In looking at these reports, there were a number of similarities that need to be highlighted. The first was the need to address the area of US 101 between Atascadero and SLO known as the Cuesta grade. It was a major concern of most of these projects to alleviate congestion on this stretch of highway. With the expansion to six lanes through the Cuesta grade, this need is not as urgent as it once seemed, but the extra lane will not solve the problem forever. Eventually, we will need to find an alternative means of travel between SLO and the North County.

Another general trend was the incorporation of current infrastructure with the new systems. In order to make the implementation of these proposals more feasible, current railroad tracks, right of ways, highways and roads, and stations would be used to reduce costs. It would be unlikely for a project to become a reality if it had to build up an entire network on its own.

Commuter Rail Feasibility Study for Service between the Cities of San Luis Obispo and Paso Robles, Nathan Smith (2005)

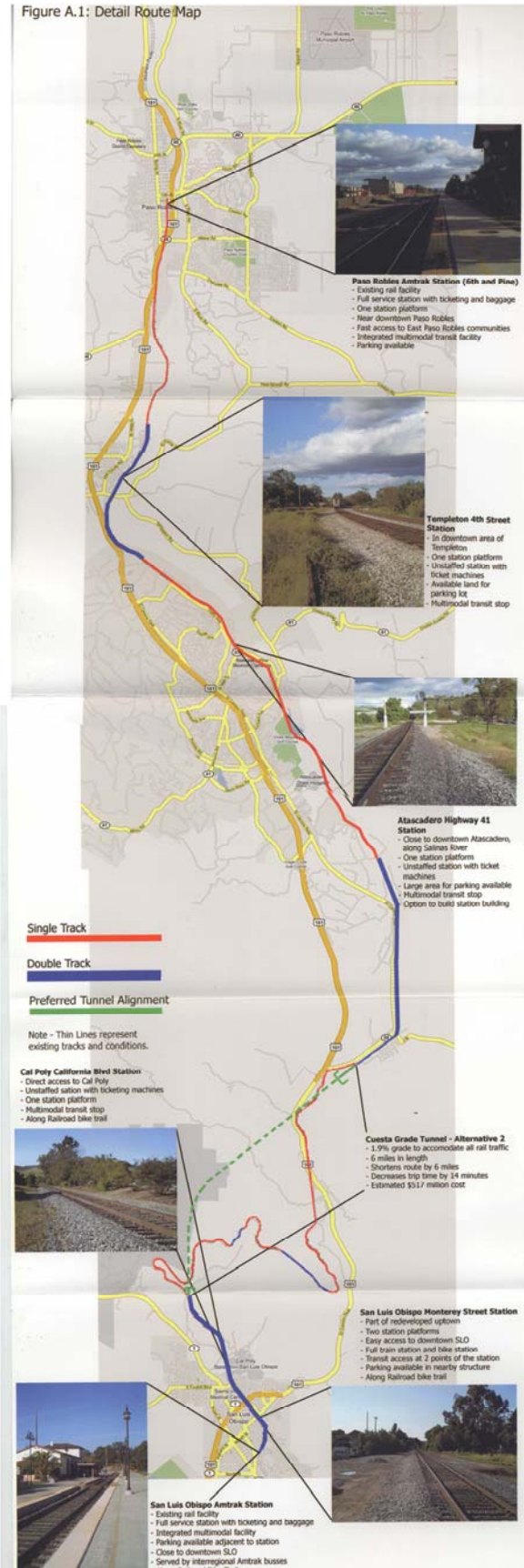
Scope: North County

Proposal

This project looks at the feasibility of creating a commuter rail service from Paso Robles to San Luis Obispo in order to divert traffic away from the Cuesta grade portion of US 101. The route would follow the current Union Pacific rail lines with the addition of a tunnel through Cuesta grade to cut down on travel time. There are four tunnel options presented and one is recommended as the best option. The addition of a tunnel would be an expensive part of the project but recommended in order to compete with the car in travel time. Without the tunnel, a train would take too long to make it over the grade to convince commuters to use the train. Other suggestions include the addition of double tracks from San Luis Obispo to the proposed tunnel to eliminate conflicts between the commuter train and freight using the same tracks. There are six proposed stations: the San Luis Obispo Amtrak station, SLO Monterey St., Cal Poly California Blvd, Atascadero Highway 41, Templeton 4th St., and Paso Robles Amtrak station

Conclusions

The report concluded that at the current time, a commuter rail from SLO to Paso Robles is not yet feasible. There is not yet the demand necessary to require the addition of the train. With future projections on growth within the county, it is suggested that the project may become a possibility in twenty years when the need for a better mode of transportation grows.



San Luis Obispo/ Paso Robles Light Rail Feasibility Study, Daniel Lee and Anthony Lum (2005)

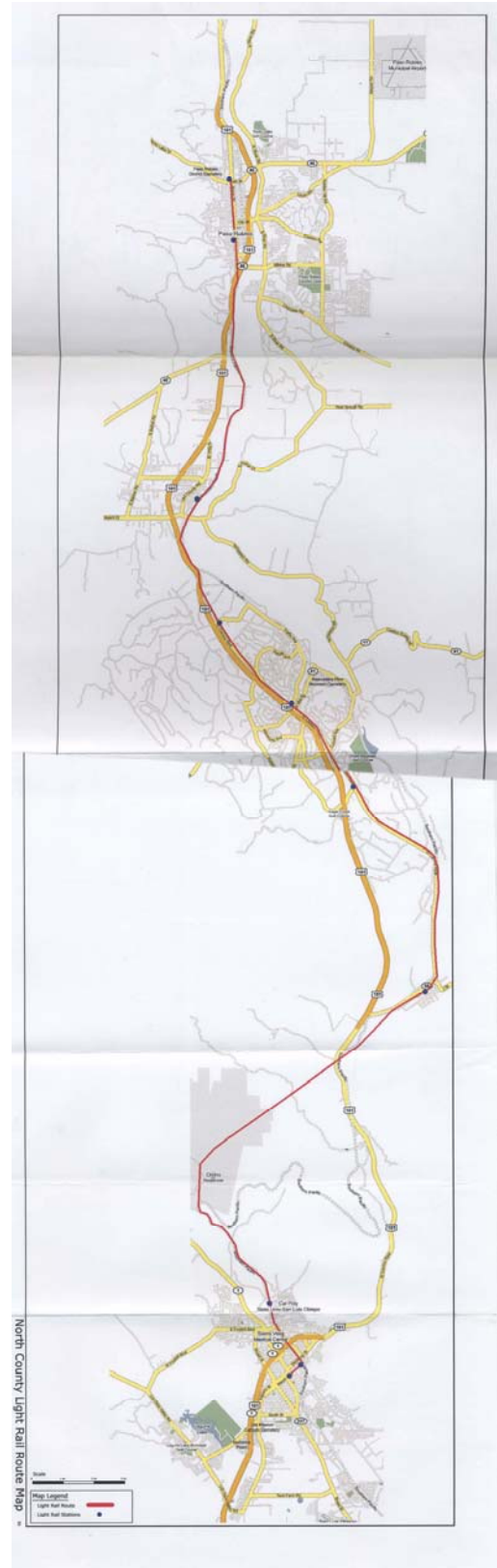
Scope: North County

Proposal

This project looks at the feasibility of creating a light rail service from Paso Robles to San Luis Obispo in order to divert traffic away from the Cuesta grade portion of US 101. The route proposed would follow alongside the existing Union Pacific rail lines on separate tracks with the exception of a tunnel through Cuesta grade and traveling on streets within the cities. The report presents two alternative routes. Route A uses a tunnel through the Cuesta grade and has ten stops along the route. Route B follows the Union Pacific tracks through the grade and stops at seven locations. Both routes are estimated to take about 48 minutes to travel between SLO and Paso Robles.

Conclusions

Even though it would be more expensive to construct a tunnel, Route A was suggested for its ability to serve more stations with a similar travel time. It was estimated that the preferred tunnel alignment would cost a total of \$500 million to \$700 million. No conclusion was made as to the timeline of the project and whether or not a light rail system is necessary for the moment or whether it should be a long term consideration.



Light Rail System for the County of San Luis Obispo, Adolfo Cacho (1997)

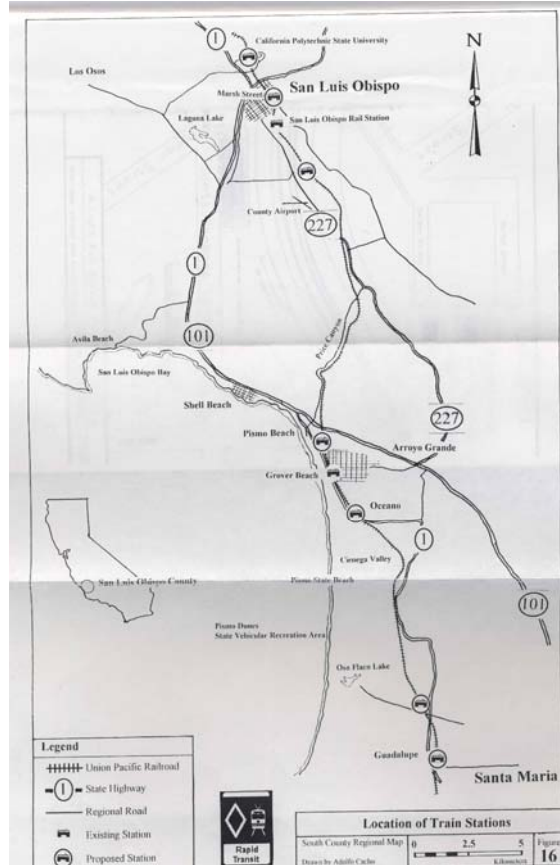
Scope: South County

Proposal

This report looks at the development and design of a light rail system for south San Luis Obispo County. The proposed route would start at Cal Poly and extend southward into the city of Guadalupe with the possibility of extending service to Santa Maria. A light rail system would reduce dependence on automobiles and provide more choice and variety in moving among the south county. The LRT would travel on the current Union Pacific rail lines and stop at nine locations from SLO to Guadalupe.

Conclusions

Implementing an LRT system would be good way of increasing option for travel among the South County and necessary we are to reduce the amount of car traffic along US 101. LRT wouldn't be either too hard to build or too expensive if the current infrastructure of the rail lines and existing stations are used.



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Feasibility Study for North Coast Light Rail, Ryan Hayes and Matthew Holm (2001)

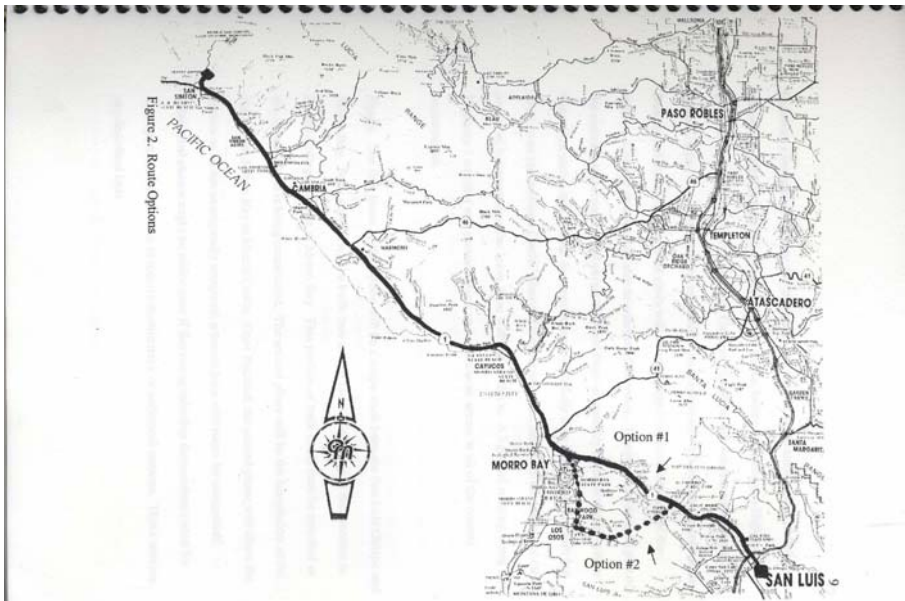
Scope: North Coast

Proposal

This project looks at the possibility of a light rail system from San Luis Obispo to Hearst Castle. There are two routes examined, the first follows Highway 1 the entire length from SLO to Hearst Castle. Option 1 would be completed in two phases. Phase one would be to construct the track from SLO to Morro Bay. Phase two will be built once phase one begins operation. The second option is similar to the first with the addition of a detour into Los Osos, north to Morro Bay and then resumes travel along Highway 1. This would also be constructed in two phases with the first being the track from SLO to Los Osos and the second from Los Osos to Hearst Castle. Option 1 would have seven stop locations. Option two would add one more station located in Los Osos.

Conclusions

It was decided to go with route one based on travel time and right-of-way restrictions related to the second option. Some sort of mass transit system is needed to reduce traffic along Highway 1 and this study concludes that light rail is a feasible option. Even though the population isn't high enough to be in the range of typically accepted numbers for a successful light rail system, a LRT system would attract enough riders to support the system.



Bus Rapid Transit: A Viable Transportation Option for San Luis Obispo, Kristina Skrehot and Josue Vaglienty (2003)

Scope: North Coast, North County, South County

Proposal

This project proposes the implementation of a bus rapid transit system for SLO County. This system would be comprised of two main routes. Route A would start in Paso Robles and follow US 101 southbound to Nipomo with two detours through the CBD's of SLO and Arroyo Grande. Route B would start in Morro Bay and follow Highway 1 to SLO, stops at Cal Poly and the CBD before ending at SLO airport. The BRT would share existing road already in place with the exception of Cuesta grade for route A where an HOV lane is recommended to give preferential treatment to BRT and using existing rail line right of way along California Blvd. for route B. Stations would be equipped with automatic ticket dispensing machines to reduce delay and buses would be given traffic signal priority to increase speeds.



Conclusions

This report concludes that some sort of additional public transportation system is needed and BRT would be a good fit for this county. The reasons for this are that a BRT system fits well with the population numbers of the county, would be less expensive to implement than a light rail, and could be operational within the near future.

Light Rail Transit in San Luis Obispo: A Plan for the Future, Thomas Preece (1985)

Scope: City of San Luis Obispo

Proposal

This project looks at the need for better public transportation in the city of San Luis Obispo and examines the possibility of a light rail system for the city. There are three route options discussed and the option chosen as the best in the report is comprised of three phases. The first phase includes track that runs from Cal Poly, south along the existing tracks, right on Higuera St. which would be converted into a pedestrian mall, Madonna Rd., and stops at Madonna plaza. Phases two and three would add track to Los Osos Valley Rd. and Broad St. out to the airport. It was estimated that phase one would cost \$13 million.

Conclusions

The light rail proposed in this senior project is only intended for the city of San Luis Obispo and the track proposed would spend much of its length in mixed traffic so it is not exactly the type of county-wide rapid transit that this synthesis is trying to address. It does however stress a need for public transportation within the city and provides ideas on routes through the city for a future county-wide system.

For more information pertaining to these senior projects please contact:

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