

Reforestation of State Highway Interchanges to Reduce Landscape Problems

Starting date: 10/1/97

Duration: 36 months

Completion date: 10/1/2000

Funding: State

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Problem

Large interchanges on the Louisiana highway system must be maintained at the expense of the Louisiana Department of Transportation and Development (DOTD). Conventional methods are expensive and sometimes cause maintenance to be more difficult than necessary.

This project will use native trees and tree seedlings, ground cover plants, and wood-waste mulch to form a cover in interchange areas that will be self-maintaining and meet the requirements of the

Roadside Maintenance Manual. Thus, this alternative to traditional maintenance will be low in necessary upkeep, help control erosion, and enhance aesthetic appeal.

The tree planting project will plant a total of 535 trees and require 1,000 cubic yards of mulch for ground cover. All areas will be treated with a contact herbicide prior to planting. Tree planting locations will be chosen and marked by the Louisiana Department of Agriculture and Forestry (LDAF). At a later date the



Large interchanges on the highway and interstate systems pose costly maintenance problems for DOTD. The reforestation project will investigate the benefits of replanting some of those areas with native plants.



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LDAF will plant the tree seedlings in the pre-chosen and treated areas.

Tree maintenance includes varying levels of mulching and herbicide treatments. Areas housing tree seedlings will be protected from mowing and allowed to grow naturally.

Objectives

A tree planting plan for major highway interchanges will be developed using native tree species. The first three sites are US 61/LA 964, Jefferson Highway/Airline Highway, and LA 1/US 190. These will undergo preparation and monitoring in 1997, 1998, and 1999, respectively.

A cost comparison will also be made between the conventional maintenance program and the new alternative one. Costs to be considered include herbicide treatment (initial and spot treatments as needed), transported mulch, and donated trees and labor.

Description

The sites will be monitored to determine the effectiveness of using woodwaste mulch to control weed and grass growth. The decomposition rate of the mulch, its effect on the soil, and the aesthetic value of tree selections will also be noted.

To achieve the objectives of this project, the following preparations were conducted for US 61/LA 964: the entire site was treated with herbicide in October 1997, covered with six inches of donated mulch, and planted in January 1998, when monitoring began.

The two remaining sites will be prepared and monitored in a similar fashion. Reports will be provided after each of the first two seasons, and a final report will be prepared following the completion of all three intersections.

Implementation Potential

The tree planting plan could potentially alleviate some of the financial burden of traditional maintenance on DOTD, but it will also support Louisiana's natural flora, enhancing the natural beauty of the state's roadway system.