



**TEXAS TECH UNIVERSITY
CENTER FOR MULTIDISCIPLINARY RESEARCH IN TRANSPORTATION**

Project Summary Report 0-2108-S

Project 0-2108

Authors: Richard Zartman, John Borrelli,
Cynthia McKenney and Ron Sosebee

December 2003

Integrated Roadside Management Manual

TxDOT, as well as other public and private agencies, needs to occasionally update its printed materials to make them current. The need to update the Roadside Vegetation Management Manual, a publication of the Texas Department of Transportation (TxDOT), can be

attributed to a better understanding of the roadside environment. This document is a total revision of TxDOT Manual Notice 96-1 (March 1, 1996), which itself was an update of the November 1993 edition. The 1996 document was a modified version of the 1993 publication with various pages and

chapters removed, recycled and replaced with changes.

This Roadside Vegetation Management Manual is divided into two components. These are functional components and aesthetic components. As in all TxDOT decisions, safety is the



Figure 1. Woody plants encroaching on line of sight

PROJECT SUMMARY REPORT



primary concern. When no safety concerns are present, the functional components of the roadside management system are high priority. When the functional components of the roadside management system are satisfied, the aesthetic components are considered. The users of Texas highways want safe, functional and pleasing highway rights-of-way. This document aids TxDOT professionals and others in maintaining roadside vegetation.

What We Did...

Four topic-specific literature reviews were written early in this study. The literature reviews were on the following topics: seeding and sodding, erosion/sedimentation, mowing, and herbicides. While these literature reviews were original efforts drawing on the resources

of numerous journals and other departments of transportation, they relied greatly on the work and experience of TxDOT personnel and TxDOT published guidelines. These reviews and the previous Roadside Vegetation Management Manual were the basis for this complete rewrite of the previous manual.

What We Found...

The results of our literature review indicate that TxDOT has kept current on the management of the highway rights-of-way. There are several factors that influence the management of highways in Texas.

The first and foremost is the concern for safety to the traveling public. TxDOT has safety as the number one priority. If there are view obstructions or other potential problems, TxDOT

responds and corrects these problems as rapidly as possible.

Some people wish the highway rights-of-way to be intensively maintained. Other people wish to pay minimal taxes to maintain the highway rights-of-way. TxDOT must find a balance between these two views. As part of our work, we have heightened TxDOT's awareness of these concerns. TxDOT strongly recommends the coordination of the herbicide applications and mowing operations. Mowing immediately after a herbicide application would make the herbicide application useless. TxDOT recommends a mowing height that will be low enough, to prevent view obstructions, but high enough to maintain the vegetation cover and minimize erosion.



Figure 2. Honey Mesquite has the potential to cause a flat tire

Additionally, TxDOT is keenly aware of the public's reception to wildflowers. TxDOT recommends the delaying of mowing to foster the growth and development of wildflowers along the highway rights-of-way. They also realize that weeds such as sunflowers and Johnson grass require different management techniques. Sunflowers must be mowed before they go to seed to lessen future problems. Johnson

grass, however, cannot be controlled by mowing, and must be controlled by herbicide application.

Manual Notice 96-1), we recommend continued coordination between the personnel charged with maintaining the highway rights-of-way.

The Researchers Recommend...

After reviewing the previous TxDOT manual "Roadside Vegetation Management Manual" (TxDOT

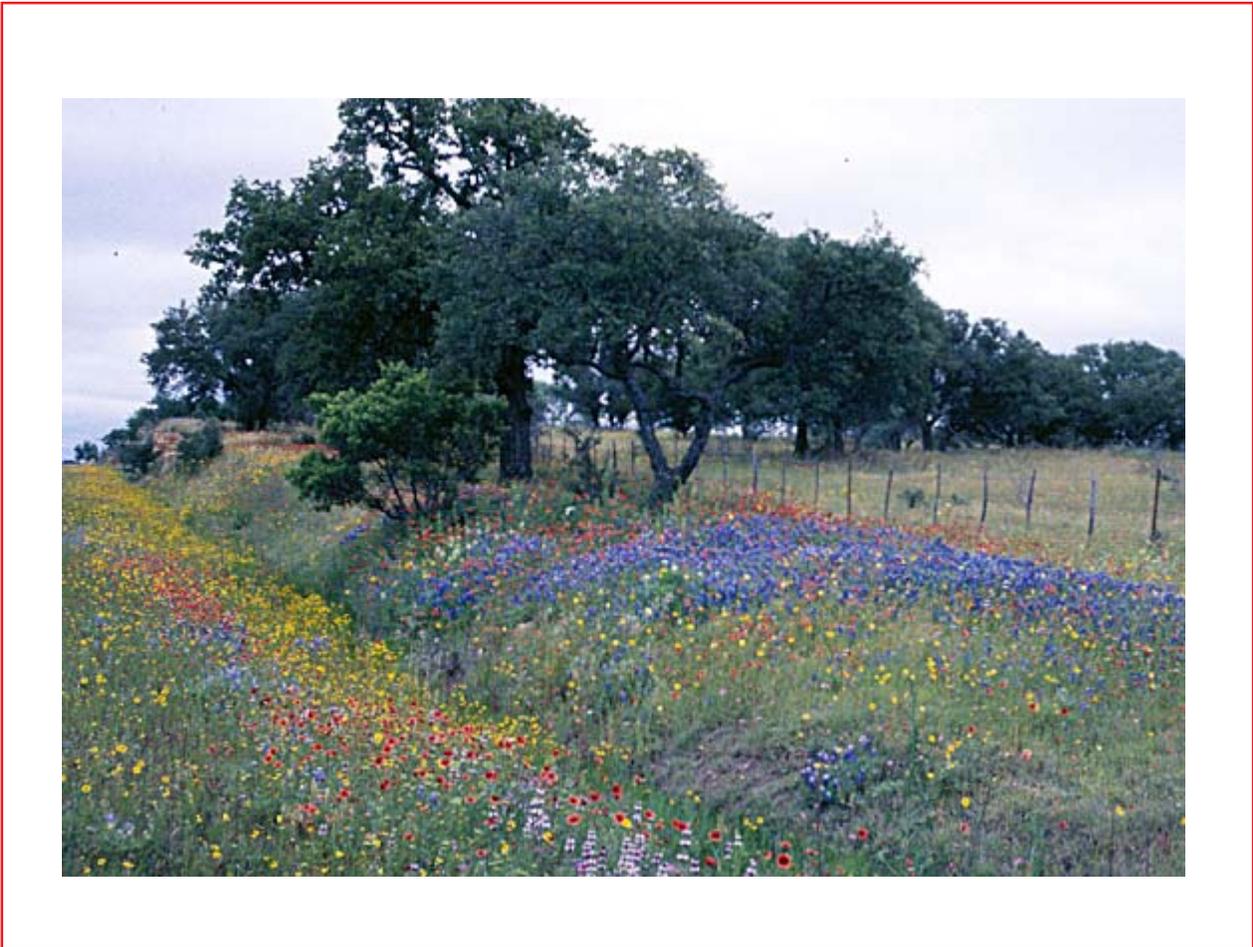


Figure 3. Wildflowers increase tourism



For More Details...

The research is documented in the following report:

Report No. 0-2108 - Integrated Roadside Management Manual

Research Supervisor: Richard Zartman, Ph.D., Texas Tech University

Project Director: Steve Prather, Vegetation Management Section

To obtain copies of the reports, contact the Center for Transportation Research Library at (512) 232-3126.

TXDOT IMPLEMENTATION STATUS December 2003...

This research was pursued as a total revision of the TxDOT Roadside Vegetation Management Manual. The resulting manual is divided into two components: functional and aesthetic. The functional component addresses safety issues and when the safety issues are satisfied the aesthetic components are considered. The users of Texas highways want safe, functional, and visually pleasing highway rights-of-way. This document will be used statewide to maintain roadside vegetation for Texas highway users.

For more information, contact; William E. Knowles, P.E., RTI Research Engineer, at (512) 465-7403 or e-mail wknowle@dot.state.tx.us.

Your Involvement Is Welcome...

Disclaimer

This research was performed in cooperation with the Texas Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration. The content of this report reflects the views of the authors, who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the FHWA or TxDOT. This report does not constitute a standard, specification, or regulation, nor is it intended for construction, bidding, or permit purposes. Trade names were used solely for information and not for product endorsement.

The University of Texas at Austin
Center for Transportation Research Library
3208 Red River #115
Austin, TX 78705-2650