

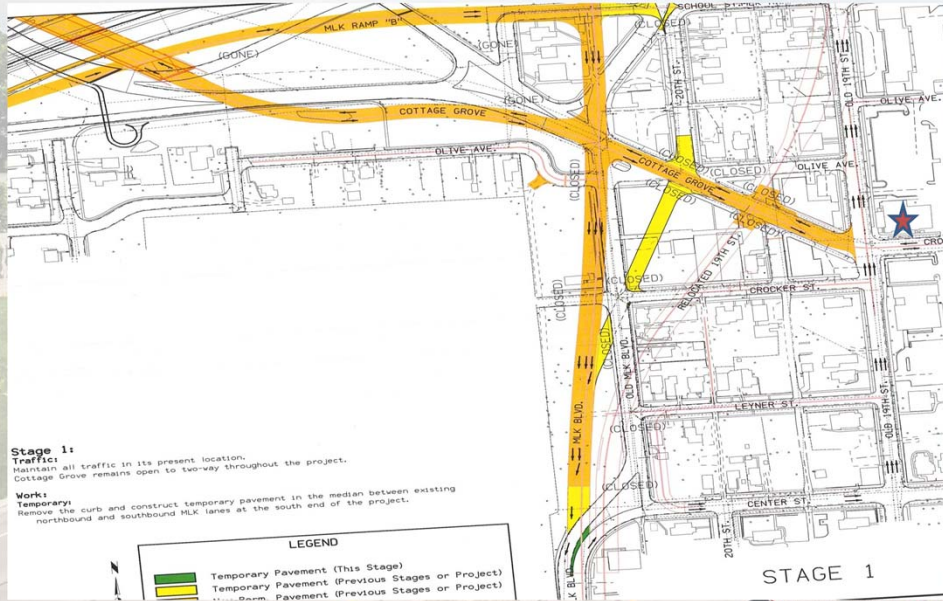
**CONCEPTION of IOWA DOT's
VIBRATION PROGRAM**

**Jim Rost – Director of Iowa DOT
Office of Location and Environment**





I-235 at Cottage Grove







Vibration Program Needs?

- **Develop an Approach to Dealing with Vibration - White Paper Completed 10/11/05**
- **Vibration Special Provision for Protection of Historic Structures - Bid Specifications**
- **Communication Between Offices – Construction Manual on Dealing with Vibration**
- **Consultants that Specialize in Vibration Monitoring**
 - **Vibration On-Call**
 - **Prequalification List – 359 Specialized Geophysical Studies Vibration**

<http://www.prof-tech-consultant.dot.state.ia.us/default.asp>



White Paper – Describes a consistent approach to completing highway projects that have vibration sensitivity outside the ROW.

Vibration SP - Approach to Risk Management

Vibration Services Prequalification List – Bid Category that allows contractors to select a pre-approved consultant specializing in vibration monitoring.



Approach to Risk Management

- Historic or an Environmentally Sensitive Natural Resource - Office of Location and Environment
- Non-Historic or Not Environmentally Sensitive – District Office

IOWA DOT

The Iowa DOT wished to take a proactive approach in avoiding both actual and perceived negative effects due to highway construction related ground borne vibration.

SPECIAL PROVISIONS
FOR
VIBRATION MONITORING TO PROTECT HISTORIC STRUCTURES

{Site Location}
{Project Number}

Effective Date
yyyy xx, 20xx

THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

092007.01 DESCRIPTION

This specification identifies the Contractor's responsibilities for protecting the property listed below. The Contractor shall develop a work plan which minimizes the potential for possible vibration damage due to construction and demolition activities near the identified structures. The Contractor will also be asked to monitor vibrations and crack behavior at the identified structures in order to protect them from any vibration induced damage.

The following properties shall be protected per the requirements in this special provision.

Address	Property Owner	National Register Status
{property address}	{legal property owner name}	{ "listed" or "eligible" }

All structures are located approximately {list number of feet} feet from {highway name} in {list location of project}.

092007.02 PRECONSTRUCTION SURVEY

I. No information is available concerning the condition of the any of these properties.

II. The Contractor shall perform a pre-construction condition survey at all {list number of addresses with structures to be protected} addresses listed above (see table), and provide a copy of survey report(s) to the Engineer no later than 30 calendar days prior to starting work. The Contractor shall have a Professional Engineer licensed in the State of Iowa and experienced in evaluating structural vulnerabilities and vibration monitoring perform the survey.