

Technical Circular T-05/03  
File: 195-20/TECH  
Date: April 23, 2003

To: *All HQ Directors, Highways, Transportation Planning & Policy, Partnerships*  
*All Regional Directors*  
*All District Managers Transportation*  
*All Regional Managers, Engineering*  
*All Regional Geotechnical and Materials Engineers*  
*All Regional Bridge Engineers*  
*All Bridge Area Managers*  
*Engineering Branch, Chief Bridge Engineer*  
*Engineering Branch, Senior Bridge Construction Engineer*  
*Engineering Branch, Chief Geotechnical, Materials, & Pavement Engineer*  
*Engineering Branch, Manager, Geotechnical Engineering*

**SUBJECT: Responsibility for Identification, Structure Number Assignment, Inspection, Maintenance, Rehabilitation, and Setting of Standards for Retaining Wall Structures**

**PURPOSE:**

To clarify policy and procedure with respect to the responsibility for identification, structure number assignment, inspection, maintenance, rehabilitation, and setting of standards for retaining wall structures

**BACKGROUND:**

In the year 2000, the Ministry identified that virtually all retaining wall structures under MoT jurisdiction had neither been inventoried nor had any condition data collected on them. No formal inspection process outside of the Maintenance Contract existed.

The lack of consistent inventory and condition data made it impossible to allocate adequate funding for rehabilitation, prioritize retaining walls on a province wide basis for rehabilitation or replacement, and estimate future funding needs.

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In 2000, the problem was raised with presentations to the MoT Bridge Management System Committee and the Ministry Executive. Since that time, the following work has been completed in a Retaining Wall Initiation Project:

- Retaining wall definitions have been formulated;
- Inventory and inspection forms and guidelines modeled on current bridge forms and manuals have been created;
- Bridge Staff have received training for the new inventory and inspection procedures;
- The Bridge Management and Information System (BMIS) has been expanded to include retaining wall structures;
- A major data gathering project was undertaken to locate and identify retaining walls, gather inventory data, assess their condition, and to enter the data into BMIS; and
- Maintenance Specifications 6-660 have been written for 2003-2004 Highway maintenance contracts

## **NEW POLICY**

Retaining walls having a maximum wall height greater than 2.0 meters and a wall face slope greater than 45 degrees are classified as structures for the purposes of inspection and inclusion in the BMIS database. Each will be assigned a unique structure number at time of design or preliminary inventory.

For all retaining walls included in the definition above, responsibilities are as follows:

### **Bridge Area Managers will:**

- Inspect each wall on a regular basis (frequency yet to be decided)
- Enter inventory and condition data into the BMIS
- Report retaining wall condition and stability concerns to the Regional Bridge Engineer or Regional Geotechnical Engineer as appropriate.
- Work with the maintenance contractor to define and schedule maintenance work
- Report Retaining wall rehabilitation needs to the Regional Bridge Engineer and to the appropriate district DMT or Operations Manger.
- Obtain photographic records for the Structure Image Database.

### **Regional Bridge Rehabilitation Engineers will:**

- Review inspection and inventory data for retaining walls and suggest changes as required
- Provide technical support to Area Bridge Managers regarding maintenance, repair, and rehabilitation of retaining walls.
- Prioritize and report to the Regional Management team, retaining wall rehabilitation funding needs relative to other retaining walls and to other structures.
- Work with other Regional and HQ bridge staff to determine retaining wall funding needs, and suggest funding percentage allocations between regions and or districts.

**Regional Geotechnical Engineers** will:

- Provide technical support to Area Bridge Managers regarding maintenance, repair, and rehabilitation of retaining walls with particular emphasis on wall and slope stability.

**Infrastructure Management Engineer, Construction and Maintenance Branch** with input from other staff as required will:

- Audit retaining wall inspection and inventory for consistency accuracy and completeness (under review).
- Project and estimate long term retaining wall funding needs.

**Highway Engineering, Bridge Section** will:

- Coordinate development of retaining wall standards with input from the Manager, Geotechnical Engineering (Headquarters), the Regional Geotechnical and Materials Engineers, and Regional Bridge Engineers
- Assign New Structure Numbers ( This function may be transferred to Infrastructure Management Engineer)

**Project Managers** will:

- Obtain structure numbers for new retaining walls from the Bridge Management System Administrator, and identify records and drawings with that number.
- Prior to project close out establish project files complete with as built drawings and wall construction records, and notify contract area bridge managers of file retrieval information for future reference.

**CONTACTS**

Retaining Wall Standards/Procedures: Gary Farnden, Sr Bridge Rehab. Standards. Engineer  
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