

**POLICY DIRECTIVE**

Matthew J. Amorello  
COMMISSIONER

**MassHighway Requirements for Blasting Adjacent to State Highways****General Requirements**

The use of explosive materials (blasting) in Massachusetts is governed by the State Fire Marshal's office under the provisions of 527 CMR 13.09. Therefore, all blasting within or adjacent to state highway layouts or state highway facilities must be performed in accordance with these provisions.

In addition, any proponent wishing to use explosive materials within 250 feet of a state highway must coordinate their efforts with the appropriate MassHighway District Office and the MassHighway Geotechnical Section prior to performing the blast(s). The District Permits Engineer shall be the primary MassHighway contact person for all blasting activities.

**Geotechnical Section Requirements**

If blasting is proposed within 250 feet of a state highway, a Blasting Plan must be submitted to the MassHighway Geotechnical Section in Boston for review and approval. The District Permits Engineer shall be responsible for forwarding all documents between the proponent and the Geotechnical Section. The Blasting Plan must contain the following:

- A site plan showing the proposed area(s) of blasting and the locations of any MassHighway roadways/structures within 250 feet.
- Sequence and schedule of blasting rounds, including the general method of developing an excavation.
- Detailed blast design information, including hole spacing and delay pattern, diameter and depth of each hole, type and amount of stemming in each hole, and loading information.
- The proposed location of the seismograph(s). A minimum of one seismograph must be used during all blasts.

In addition to the Blasting Plan requirements, the Geotechnical Section requires the following for all blasts proposed within 250 feet of a state highway:

- Blast areas must be fully covered with blasting mats, soil berms or other physical means to eliminate flyrock during blasting.

- The Geotechnical Engineer must be notified at least 48 hours prior to the start of blasting so that the Geotechnical Section may perform on-site monitoring of the initial blast, at a minimum. The proponent is responsible for notifying the District Permits Engineer, who shall then notify the Geotechnical Engineer.
- A pre-blast survey must be completed on any MassHighway structure within 250 feet of the blast area.

#### District Office and Traffic Management Plan Requirements

If blasting is proposed within 250 feet of a state highway, MassHighway, the State Police or the local Fire Chief may require traffic to be stopped. In these cases, a Traffic Management Plan (TMP) must be submitted to the District Permits Engineer for review and approval by the District Traffic Engineer. A copy of the approved TMP should also be forwarded to the State Police, who have primary jurisdiction for ensuring safety on state highways.

If the roadway needs to be closed during blasting:

- State Police, local Police, local Fire Chief, proponent, proponent's engineer, MHD District Permits Engineer, MHD District Traffic Engineer and MHD Geotechnical Engineer should participate in a site meeting to review the proposed blasting and safety requirements.
- The TMP shall be in accordance with MUTCD Part VI, Figure TA-2, with additions as deemed necessary by MassHighway.
- Blast times may be restricted according to traffic counts and other factors impacting nearby businesses, residences, schools, etc. The proponent's engineer shall submit calculations estimating the stopped queue length and average delay times.
- Advance notice should be given via Changeable Message Signs (CMS) on each side of the roadway for one week in advance of the blasting. The messages should be revised during the blasting period. The CMS shall be located at a point in advance of the longest calculated queue for the traffic stoppage. The number of CMS will be determined on a case-by-case basis.

#### One Week Advance (sample)

BLASTING  
BEGINS  
(9/4/98)

(10AM-2PM)  
EXPECT  
DELAYS

#### During Blasting Period (sample)

BLASTING  
AHEAD  
(10AM-2PM)

BE  
PREPARED  
TO STOP

- Ten minutes prior to each blast a rolling stop barricade will be prepared under the direction of the State Police. There should be one detail cruiser per lane in each direction and one officer in charge. Once traffic is stopped, cones supplied by the proponent may be positioned across the roadway at the discretion of the State Police. At least one detail cruiser will remain in each direction to maintain the blockage. Any remaining details may be used to assist with intermediate driveways or at the rear of queues. A minimum of 3 detail officers will be required for a 2-lane roadway, 5 for a 4-lane roadway, 7 for a 6-lane roadway, etc.
- Traffic should remain stopped for about three minutes while blasting takes place. Traffic will resume when the road is safe for traffic to pass.
- The proponent shall provide for road cleaning equipment and crews to be stationed as necessary for immediate emergency clean up.
- The proponent must notify the District Permits Engineer at least 48 hours prior to the initial blasting. Upon receiving such notice, the District Permits Engineer shall notify Smart Routes, the MassHighway Geotechnical Engineer and other MassHighway personnel involved in monitoring the blasting operations.
- The proponent must provide advance notice to all businesses, residences and other occupied facilities within 250 feet of any proposed blast, and should provide additional advance notice to all affected facilities within 1,000 feet of such blasts. Notices should be published in local newspapers and flyers should be distributed to each affected facility and posted in highly visible locations.
- The State Police officer in charge shall coordinate with the blaster in charge and shall give final blast approval.
- The State Police will be the contact agency for all police details. They will notify local police details.
- The State Police and MassHighway shall monitor the initial blast. Revisions to the Traffic Management Plan, Changeable Message Signs, etc. may be required as deemed necessary.