

## SSIT-1001(e)6 Warning Time

### Purpose

The purpose of these instructions is to describe the tests required to test the warning time at grade crossing warning systems to ensure it meets the minimum warning time of the design.

### Test Intervals

Tests are performed when installed, as required, and at least once every twelve (12) months as prescribed in *SSIT-7 Signal System Inspection and Test Intervals*.

### Rail Safety

Employee shall ensure the site is safe for employees, the public, vehicular traffic and train operations as defined in *SSIT-8 Protecting Train Operations* prior to performing tests and inspections. **Do not make adjustments to motion sensing circuits without first confirming there are no rail-to-rail short circuits.**

### Equipment Manuals

A copy of the crossing predictor device and/or all relevant crossing circuit equipment manufacturer's manuals should be on hand for reference when performing tests.

The maintainer shall refer to the crossing boardplan for crossing details and the design warning time. The maintainer shall refer to the current timetable to check the boardplan and design reflect the current operating speeds and permanent slow orders in affect.

### Procedure

The following tests are to be performed at each crossing warning system location:

Step	Procedure
1. Check Design Speeds	<p>→ Check boardplan to verify design speed and minimum design warning time.</p> <p>→ Check current timetable to verify the zone speed or PSO speed matches the design speed shown on the boardplan.</p> <p><b>If speeds don't match:</b> Contact the ONR S&amp;C Supervisor immediately and request a slow order be placed on crossing. Arrange to protect crossing until confirmation of slow order application.</p>
2. Observe Equipment During Active Train Approach CW/MS (if feasible)	<ul style="list-style-type: none"> <li>• Measure or observe the "distance" voltage (or equivalent) as train passes through crossing approach.</li> <li>• Start stopwatch when voltage starts descending.</li> <li>• Check voltage decreases smoothly through train approach.</li> <li>• Stop stopwatch when "distance" voltage (or equivalent) reaches 0.</li> <li>• Check voltage increases smoothly as train moves away from crossing.</li> <li>• Check timed approach against on recorded time on event recorder to ensure proper operation of event recorder.</li> </ul>

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Step	Procedure
3. Observe Equipment During Active Train Approach DC Track (if feasible)	<ul style="list-style-type: none"> <li>Start stopwatch when approach track circuit drops.</li> <li>Stop stopwatch when island circuit relay drops.</li> <li>→ Check adjacent track circuit drops once train passes island.</li> <li>→ Check track circuits and island picks once train has passed crossing approaches.</li> <li>→ Check timed approach against on recorded time on event recorder to ensure proper operation of event recorder.</li> </ul> <p><b>If short warning time:</b> Report to the ONR S&amp;C Supervisor immediately.</p>
4. Review Past Train Data (if applicable)	<ul style="list-style-type: none"> <li>Review past event time and/or buffer warning time data for last 10 train movements. Review an additional 10 train movements for bidirectional approach data.</li> <li>→ Check for short warning times.</li> </ul> <p><b>If short warning time:</b> Report to the ONR S&amp;C Supervisor immediately.</p>
5. Update Log Book	<ul style="list-style-type: none"> <li>Record “distant” voltage value for future test reference, if available.</li> <li>Add any notes of issues observed, or adjustments made.</li> </ul>
6. Complete Test Form	<ul style="list-style-type: none"> <li>Record the test as completed on Grade Crossing Warning System Test Form.</li> </ul>