Addressing the Challenge:
Formulating a Definition of SGR for a Federal Program

Aaron C. James, Sr.
Director, Office of Engineering
July 22, 2010
One of the many challenges of the SGR initiative is how to define “state of good repair.”

Transit systems abroad have struggled with this issue as well.

What is the most feasible approach – given multiple perspectives:

- Mode type
- System age
- System size
- Job function
Formulating a Definition of SGR: The Approach

- FTA has collaborated with the industry through the SGR Industry Work Group
- Staff has compiled definitions from research performed by others
- Reached out to other Federal offices and FTA staff
## Formulating a Definition of SGR: Findings

<table>
<thead>
<tr>
<th>Forum/Context Discussed</th>
<th>STATE OF GOOD REPAIR MEASURES</th>
<th>System Performance</th>
<th>Backlog</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SGR: Beginning the Dialog</strong></td>
<td><strong>Asset Condition</strong></td>
<td><strong>No capital asset exceeds its useful life</strong></td>
<td><strong>No backlog of capital needs exists</strong> &lt;br&gt;<strong>All asset life cycle investment needs have been addressed</strong></td>
</tr>
<tr>
<td><strong>Rail Modernization Study</strong></td>
<td><strong>Asset estimated physical condition is greater than or equal to 2.5</strong> &lt;br&gt;<strong>All system assets have a physical condition rating of 2.5 or greater</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Formulating a Definition of SGR: Findings

<table>
<thead>
<tr>
<th>Forum/Context Discussed</th>
<th>STATE OF GOOD REPAIR MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Asset Condition</td>
</tr>
<tr>
<td><strong>SGR Industry Work Group</strong></td>
<td>• Asset in good physical condition</td>
</tr>
<tr>
<td></td>
<td>• Asset condition meets sufficient criteria as determined through field inspections</td>
</tr>
</tbody>
</table>

*Weighted score based on 4 attributes above.
*A different measure would be used for obsolescent assets.
## Forum/Context Discussed

<table>
<thead>
<tr>
<th>Asset Condition</th>
<th>System Performance</th>
<th>Backlog</th>
</tr>
</thead>
</table>
| Other Agencies  | • Rail lines free of slow zones and have reliable signals  
                   • All capital assets are functioning at their ideal capacity within their design life without limitation | • When established standard for rehabilitation and replacement of assets are met  
                   • When components reach useful life targets  
                   • No component is beyond its useful life |
Formulating a Definition of SGR: Framework for a Federal Program

- Definition should be applied at the transit system level (LRT, HRT, Bus, etc.)
- Formulate a definition of SGR for the purpose of the FTA Federal initiative
- Agency definitions should be more specific and consistent with the Federal definition
A transit system is in a state of good repair when the following criteria is met:

- Possesses and maintains a comprehensive list of its capital assets and rolling stock
- Possesses an asset management plan which is integrated into the management processes and practices of the agency
- ___% of its assets are within their articulated useful life and remaining assets are performing at their designed for function
A transit system is in a state of good repair when system components are properly maintained or replaced, in accordance with:

a) the owner’s approved O&M procedures and schedules, or
b) the OEM’s recommended criteria when owner’s procedures do not exist, or

c) industry standards when (a) or (b) are not available, and

Satisfactorily performs intended design function
A transit system is considered to be in a state of good repair if it exhibits the following characteristics:

a) **Safety**: Transit infrastructure and vehicles are well-maintained and replaced before their condition deteriorates to the point of presenting a safety risk

b) **Quality Transit**: Infrastructure and vehicles meet customer expectations for comfort and reliability
Formulating a Definition of SGR: Questions

1. How do we measure SGR at the Federal level?
2. How do we ensure consistency at local level?
3. How should assets be categorized?
4. Others …