

Section 305 Technical Subcommittee Progress Report



Mario Bergeron – Chairman

Dale Engelhardt – Vice-Chairman

Washington, DC

February 24, 2017



The NGEC will provide national leadership in standardization, acquisition, financing and management of passenger rail equipment.

Presentation Summary

Purpose and Highlights Since Last Annual Meeting on 2/19/16

- PRIIA 305
- Technical Subcommittee Overview
- Vehicle Specification Timeline
- Specification Creation
- Specification Revision
- Technical Subcommittee Presentations



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PRIIA 305

Next Generation Corridor Equipment Pool Committee

- Amtrak was required to establish the Next Generation Corridor Equipment Pool Committee, comprised of representatives of Amtrak, the Federal Railroad Administration, host freight railroad companies, passenger railroad equipment manufacturers, interested States and other passenger railroad operators.
- The Committee was formed to Design, develop specifications for, and procure standardized next-generation corridor equipment.



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PRIIA 305 Technical SubCommittee

- Main purpose is to develop specifications as requested by the Executive Board.
- Comprised of representatives from Amtrak, FRA, States, and rail equipment manufacturers and suppliers.
 - 15 states involved; California, Connecticut, Illinois, Iowa, Maine, Michigan, Missouri, New York, North Carolina, Oklahoma, Oregon, Texas, Vermont, Washington and Wisconsin.
 - Over 264 industry volunteer members. Open to anyone from companies/consultants involved in rail.
- Each Specification has a Leader to coordinate the creation process.
- Majority of spec writing done by members of the 6 permanent working groups on a volunteer basis with support from a technical writer.



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Technical Subcommittee Overview

- Meetings

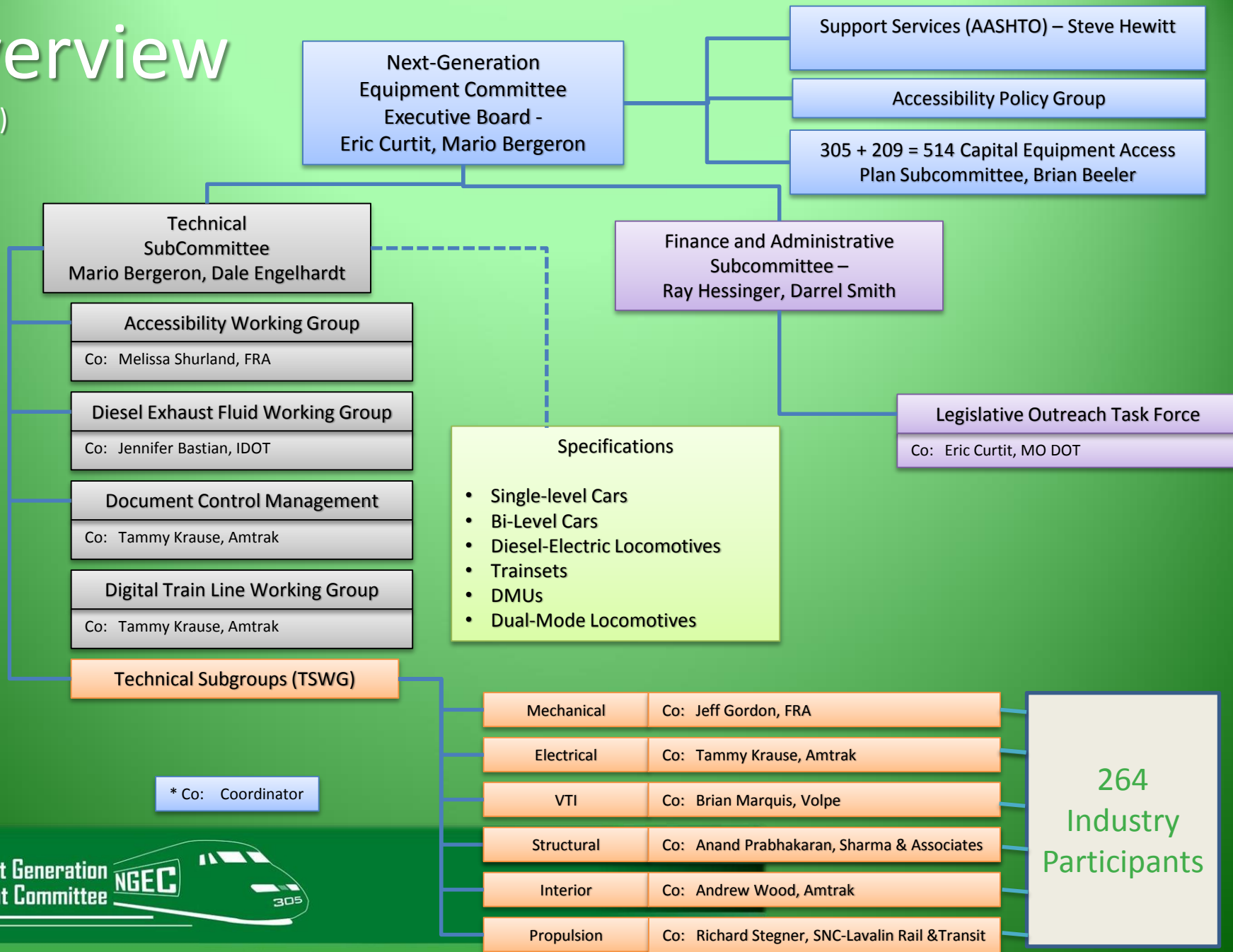
- Subcommittee; Alternate Thursdays @ 3:00pm ET
- Technical Working Groups; As Needed

Vehicle Track Interaction (VTI)	Brian Marquis
Structural	Anand Prabhakaran
Electrical	Tammy Krause
Mechanical	Jeff Gordon
Interiors	Andrew Wood
Propulsion	Richard Stegner
Diesel Exhaust Fluid (DEF)	Jennifer Bastian
Digital Train Line (DTL)	Tammy Krause
Accessibility	Melissa Shurland



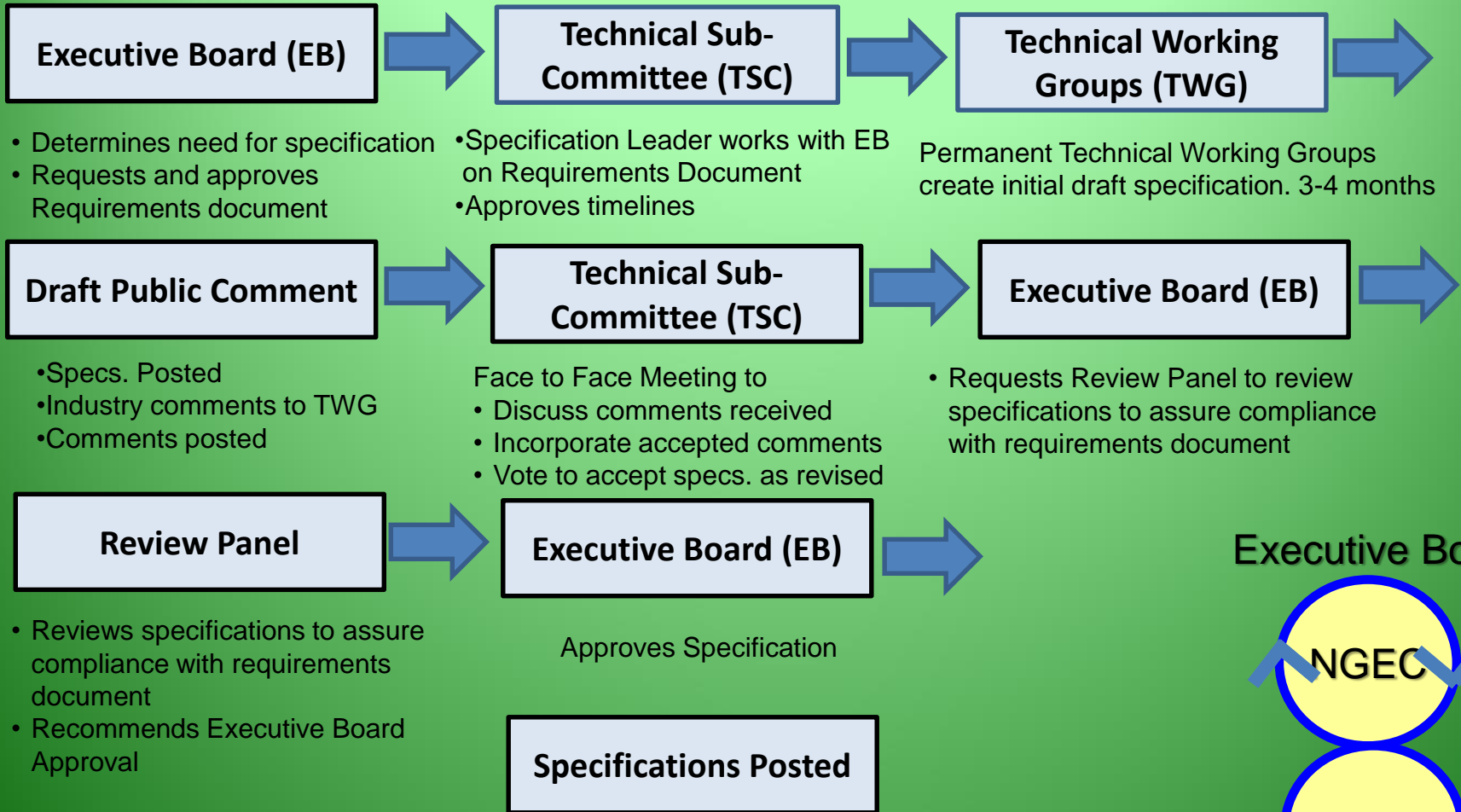
Overview

(Cont'd)

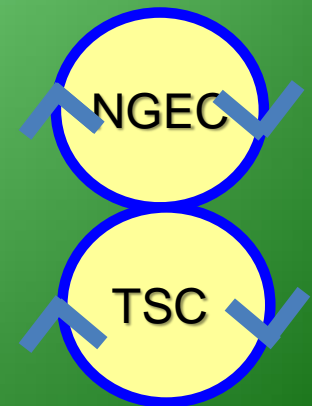


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Specification Creation Process



Executive Board



Tech. Working Groups



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Vehicle Specs: Timeline

- Bi-Level:
 - IR - 8/31/10
 - Rev C4 – 8/2/16
- Locomotive:
 - IR – 3/16/11
 - Rev A.1 – 12/9/14
- Single Level:
 - IR – 2/15/11
 - Rev A – 11/13/12
- Trainset:
 - IR – 8/2/11
 - Rev A – 12/10/13
- DMU:
 - IR – 9/4/12
- Dual Mode Locomotive
 - IR – 2/2/16



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Current Status of Revisions

- The Bi-level specification is currently on revision C4 and the TWGs processed a total of 243 DCRs to date.
- The Locomotive specification is on revision A1 and so far the TWGs have processed 56 DCRs. At present an additional 14 are being addressed and the specification will be updated to version A2.
- The TSC just began the undertaking of evaluating the 243 changes made to the bi-level specification to determine which of these changes will apply to the single level, MU and trainset specs. A DCR will be created for every proposed change and for each specification.



Locomotive Specification Structure

The Locomotive chapters are the same as the cars where they can be.

1. **Specification Summary**
2. **References and Glossary**
3. **Project Management**
4. **Locomotive Carbody**
5. **Running Gear**
6. **Couplers and Draft Gear**
7. **Brakes**
8. Engineers Cab
9. Locomotive Propulsion System
10. AC Power Dist., Comm and MU
11. **Lighting System**
12. **Locomotive to Train Communication**
13. Head End Power System
14. Battery System
15. Sanding System
16. **Engineers Cab Controls**
17. Fuel System
18. **Materials and Workmanship**
19. **Test Requirements**
20. **Tools, Consumables and Spare Parts**
21. **Shipping Preparations**
22. **Training and Documentation**
23. **Customer Variables**
24. Safety Accessories
25. Environmental Characteristics

Items in Bold are similar between car and locomotives.



Car Specification Structure

All of the chapters for the car specifications have the same titles and where possible the actual chapters are the same.

1. **Specification Summary**
2. **References and Glossary**
3. **Project Management**
4. **Carbody**
5. **Trucks**
6. **Couplers and Draft Gear**
7. **Brakes**
8. Door Systems
9. Interior
10. HVAC System
11. **Lighting System**
12. **Communications System**
13. Electrical System
14. Food Service
15. Water and Waste System
16. **Cab and Train Controls**
17. Emergency Equipment
18. **Materials and Workmanship**
19. **Test Requirements**
20. **Tools, Consumables and Spare Parts**
21. **Shipping Preparations**
22. **Training and Documentation**
23. **Customer Variables**

Items in Bold are similar between equipment types.



Specification Revision (Cont'd)

- Review Panel evaluates proposed change to verify compliance with requirements document.
- Executive Board approves.

This process can take months because typically the DCRs are processed and a specification is revised after several DCRs have been received.

There is an Urgent DCR process to address issues that may come up during a procurement. This pushes a DCR through the system in less than two weeks.

Sometimes a DCR requires that the Requirements Document be updated before approval.



Technical SubCommittee Presentations

Update on NGENC Accessibility

Working Group

- Melissa Shurland – FRA

Passenger ECP Brake Equipment

- Paul Jamieson, PE

Update on the AAR Committee

- Jeff Gordon - FRA

Electronic Systems for Trains of
the Future

- Dale Engelhardt - Amtrak



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Thank You

Next-Generation
Equipment Committee
Executive Board -
Eric Curtit

Support Services (AASHTO) – Steve Hewitt
Technical Writer – Camren Cordell

Technical
Subcommittee
C: Mario Bergeron
VC: Dale Engelhardt

Technical Subgroups (TSWG)

Accessibility Working Group

Co: Melissa Shurland, FRA

Diesel Exhaust Fluid Working Group

Co: Jennifer Bastian, IDOT

Document Control Management

Co: Tammy Krause, Amtrak

Digital Train Line Working Group

Co: Tammy Krause, Amtrak

Mechanical

Co: Jeff Gordon, FRA

Electrical

Co: Tammy Krause, Amtrak

VTI

Co: Brian Marquis, Volpe

Structural

Co: Anand Prabhakaran, Sharma & Associates

Interior

Co: Andrew Wood, Amtrak

Propulsion

Co: Richard Stegner, SNC-Lavalin Rail & Transit

Next Generation
Equipment Committee



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