

# BNSF 2026 Outlook

NRC – January 10, 2026

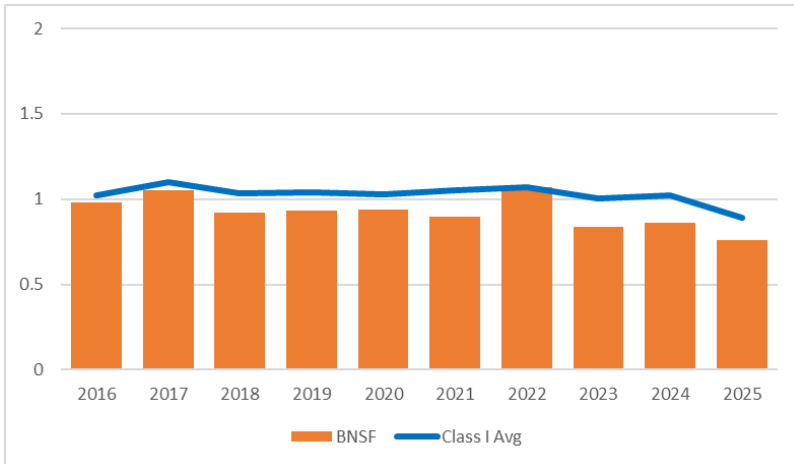
Craig N. Rasmussen, P.E.



# BNSF's Strong Safety Record

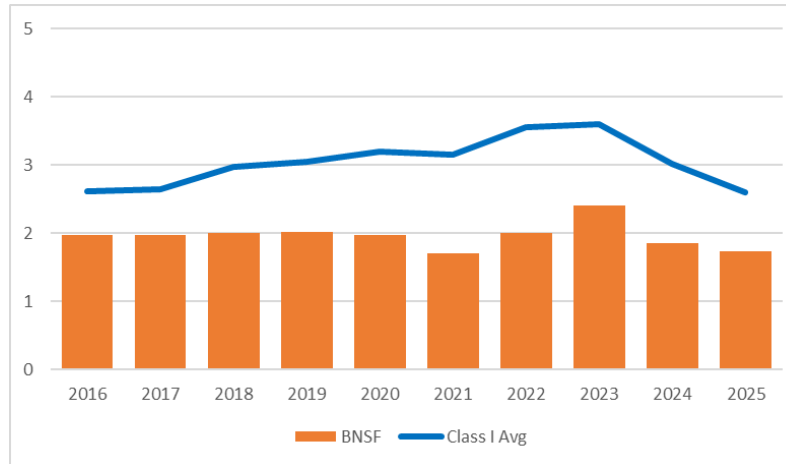
## Employee IFR

Reportable injuries per 200,000 hours worked



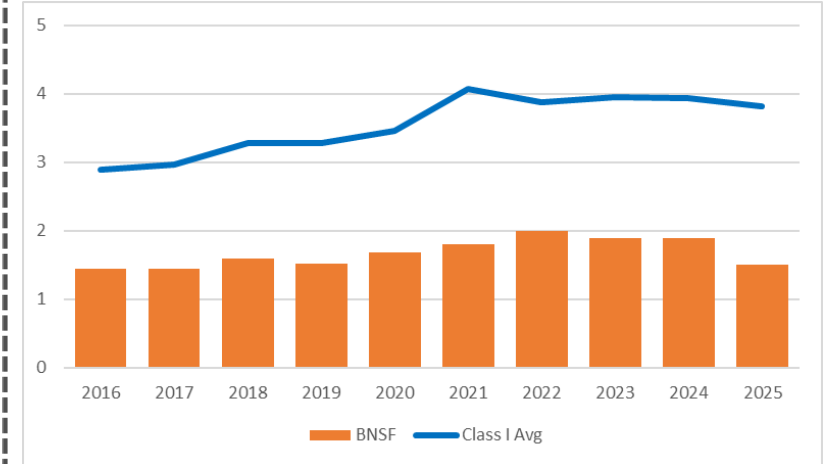
## Rail Equip Incidents

Reportable REI's per million train miles

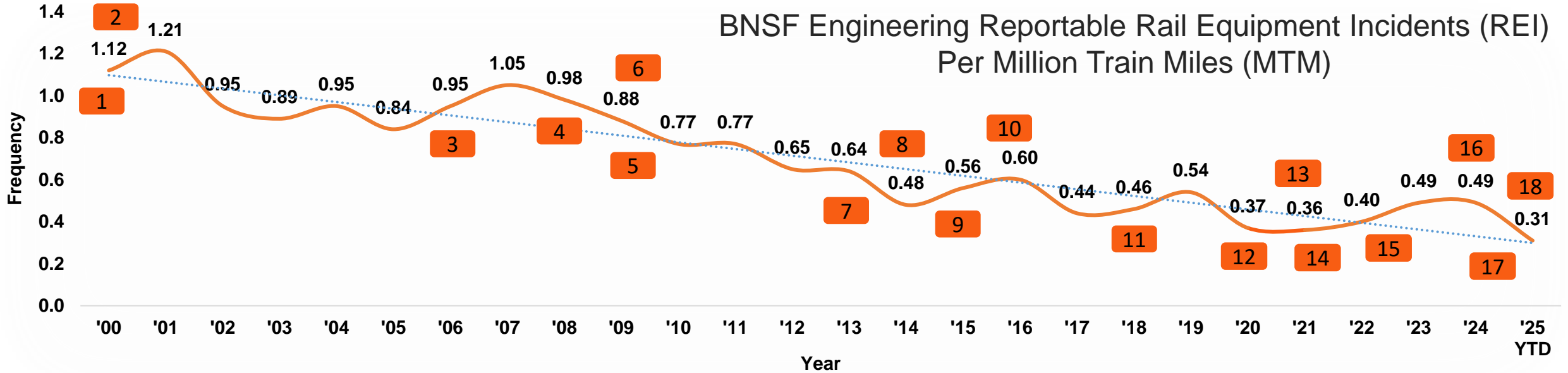


## Grade Xing Incidents

HGX incidents per million train miles



# Engineering Reportable REIs



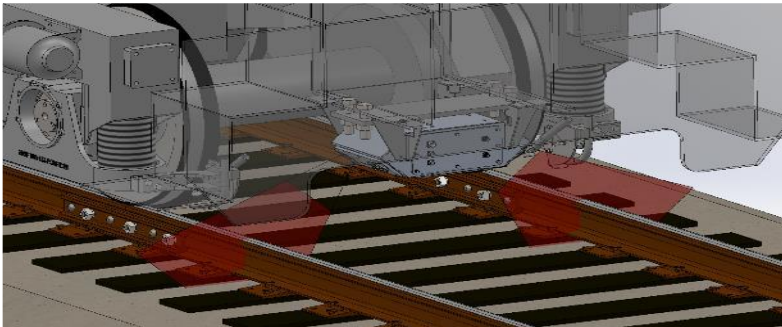
## Technology & Process Improvements

1	Rail Clean Steel Manufacturing	10	Continuous (Non-Stop) Rail Detection
2	Rail Maintenance Preventive Grinding	11	Predictive Geometry Tags & Track Surfacing Algorithm
3	VTI-Equipped Locomotive Initiative	12	ATI Pilot Approved (Powder River)
4	Sub-Shell Rail Defect Detection Technology	13	THOR (Machine Vision)
5	Friction Modification Initiative	14	ATI Waiver Approved (Powder River & Southern Transcon)
6	Implementation of GPR Technology	15	Advanced Data Analytics
7	Tier III Track Inspector Training	16	ATI Waiver Approved (Northern Transcon & Orin Subdivision)
8	Full Implementation of Wood Tie Scanning w/ X-Ray	17	Remote THOR (Machine Vision)
9	Unattended Geometry Car Testing & Desk	18	ODIN (Locomotive-Based Geometry Testing)

# Track Measurement Advancements

## ODIN

- Onboard **D**efect **I**dentification & **N**otification
- BNSF designed, built & maintained
- Revenue service locomotive-based track geometry test system
- 23 units in revenue service



## THOR

- Track **H**ealth **O**ptical **R**ecognition
- BNSF designed, built & maintained
- Machine vision optical system
- 1 attended system on geometry car
- 2 remote systems on unattended cars



## Geometry Desk

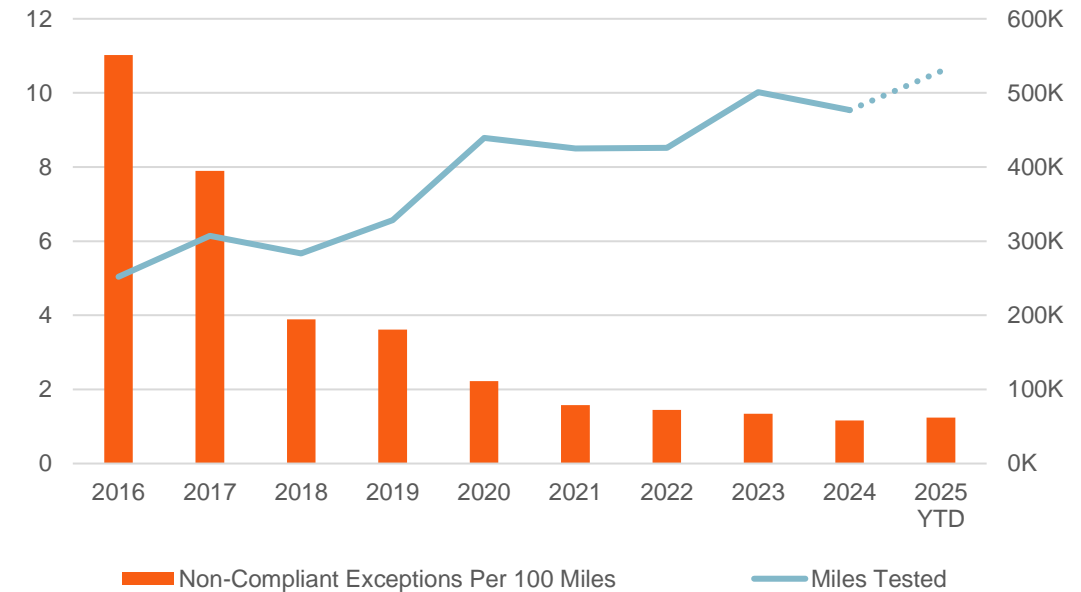
- 24/7 staffed geometry desk in BNSF NOC
- Monitors operation of geo cars, ODIN & THOR
- Reviews and validates defects before distributing to field teams
- Issues slow orders to immediately protect multi-class drops



# Automated Track Inspection

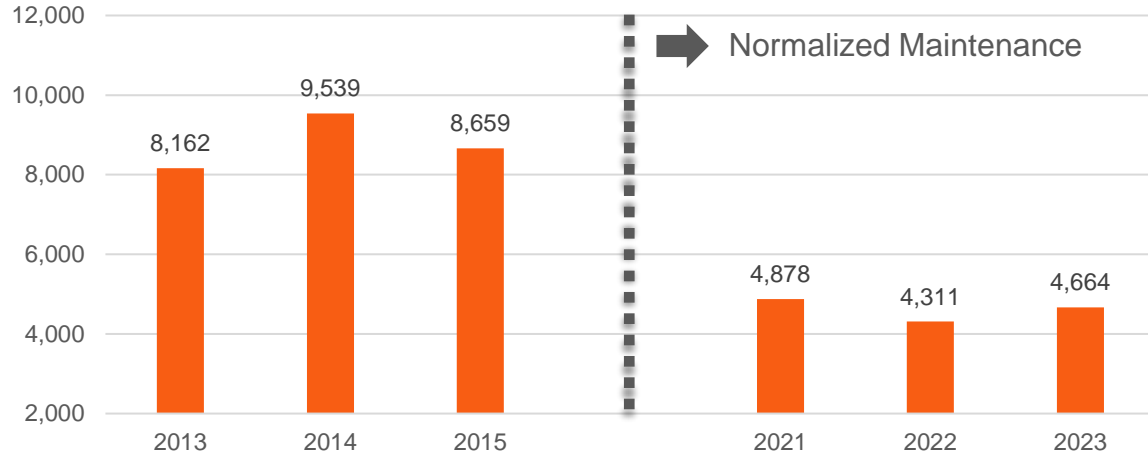
- Unattended geometry cars to inspect track under load, generating a vast amount of data
- Reduces time track is occupied for inspection purposes and reduces service interruptions
- 500,000+ miles inspected annually
- FRA ATI waiver includes BNSF Powder River Coal Loop, South Transcon & North Transcon
- FRA rule on ATI – largely mirror's BNSF current practices

Non-Compliant Exception Rate vs Miles Tested

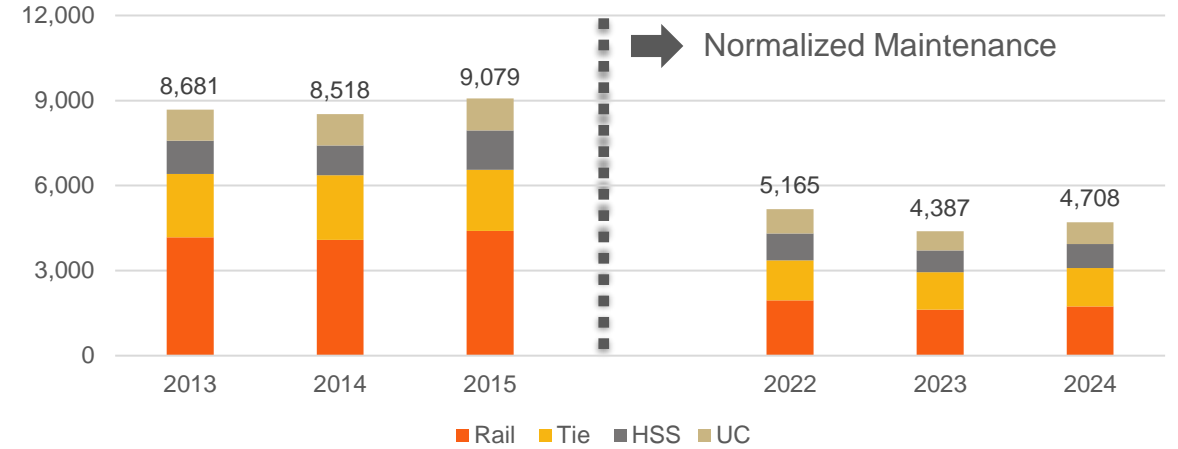


# Impact of Maintenance Footprint

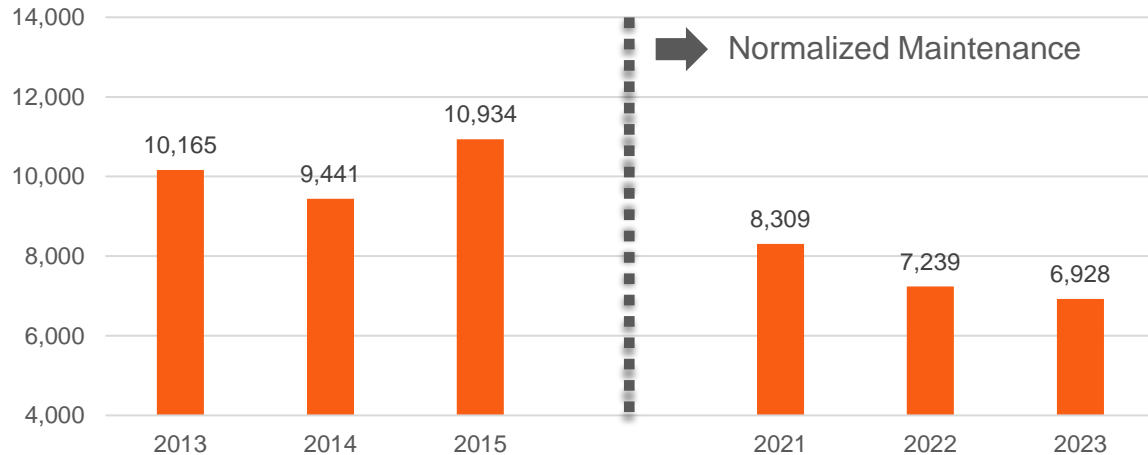
Average Daily Slow Order Minutes per Week



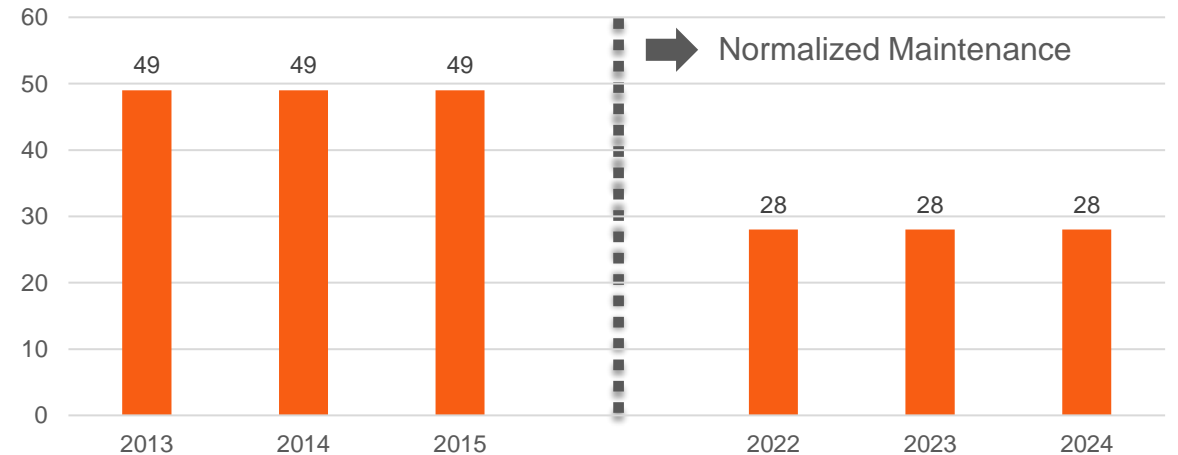
Number of Gang Windows



Capital Maintenance Miles



Number of Capital Gangs



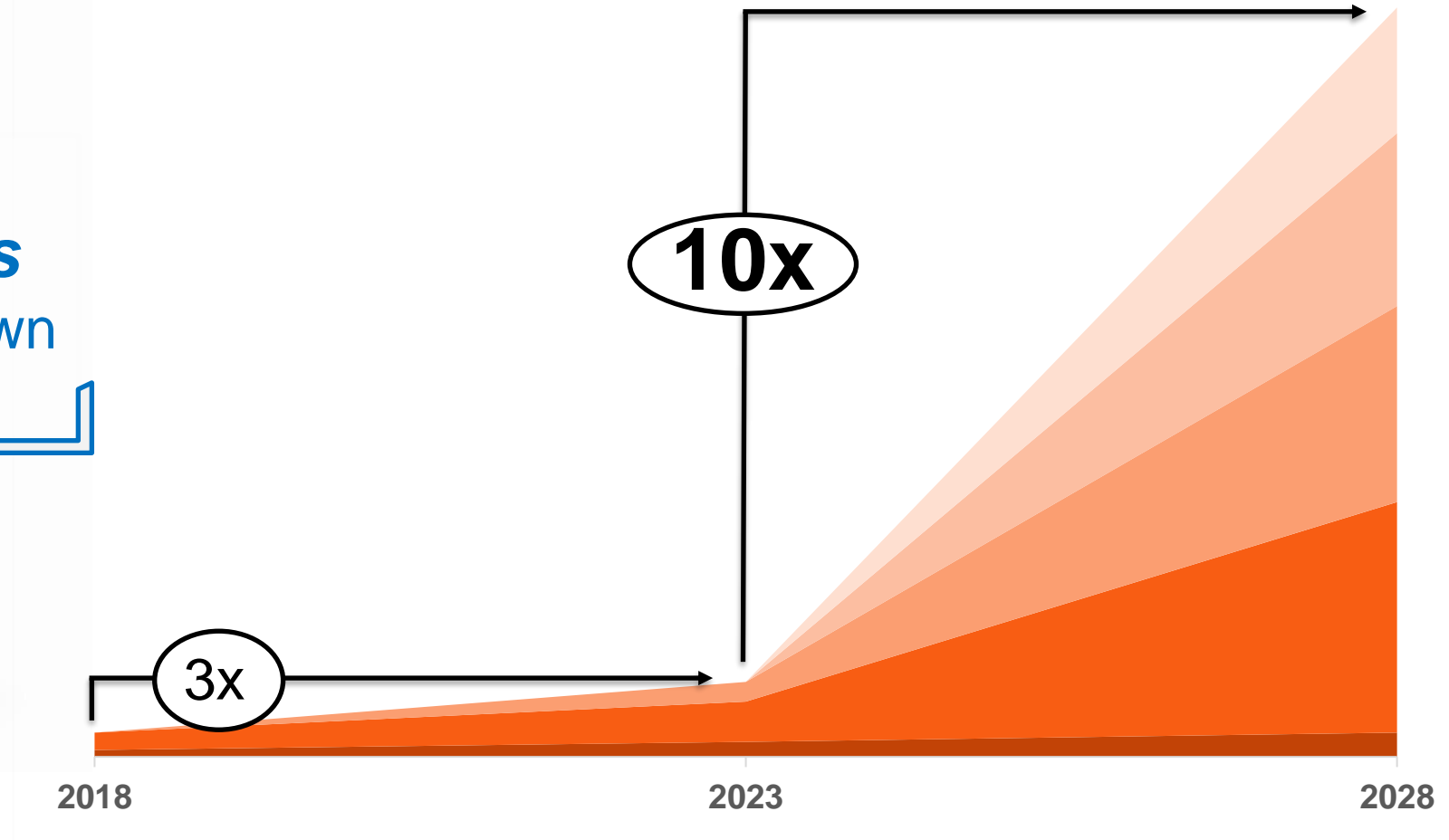
Data around us is increasing exponentially



Globally, we create more information **every two days** than was created from the dawn of civilization until 2003

Source: Dataversity.net

## BNSF Operational Data



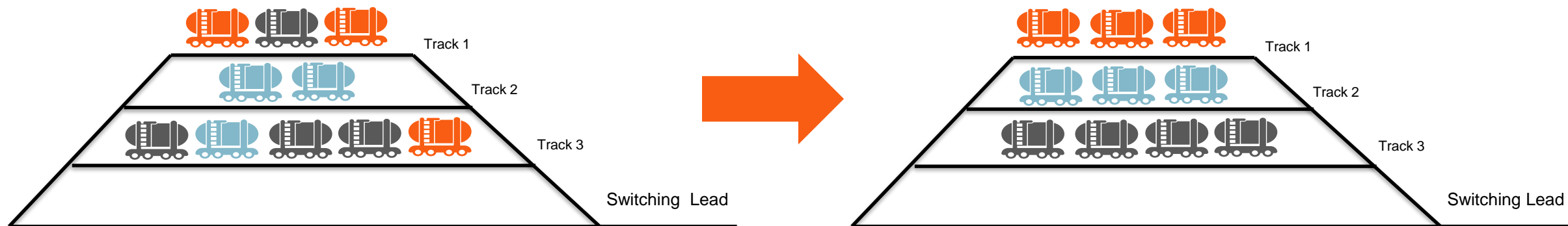


**Artificial  
Intelligence &  
machine learning  
implemented in  
BNSF Operations in  
recent years**

Hump Yard Track Assignments  
Train Line-ups & ETA's  
Track Inspections  
Intermodal Load Planning  
**Mechanical Inspections**  
**Movement Planner**  
Operation Desert Knight  
Intermodal Dwell Optimization  
Intermodal Yard Check  
Flat Yard Car Switching Optimization

# Decision Assisted Switching for Yard Operations

Illustrative Example:



Scenario:

- 10 Cars
- 4 Tracks
- 3 Classifications by Destination (orange, blue, gray)

Desired State:

- Switched by destination classification (color)

*How many possible solutions are there to perform these **five** switch moves?*

# Decision Assisted Switching for Yard Operations

Illustrative Example:

**5,210,673**

***(and there is an optimal one)***

Scenario:

- 10 Cars
- 4 Tracks
- 3 Classifications by Destination (orange, yellow, gray)

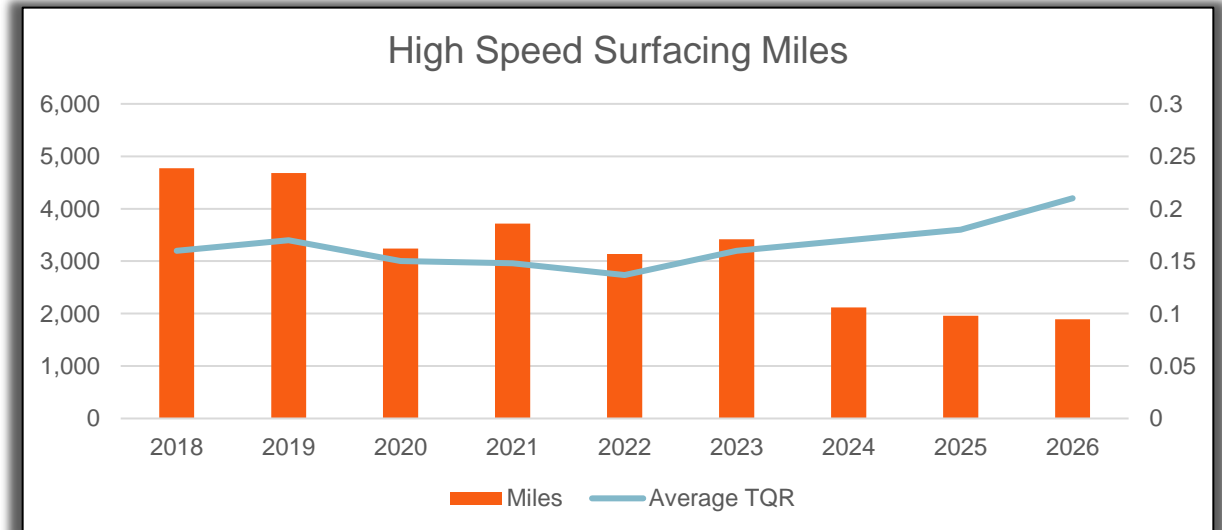
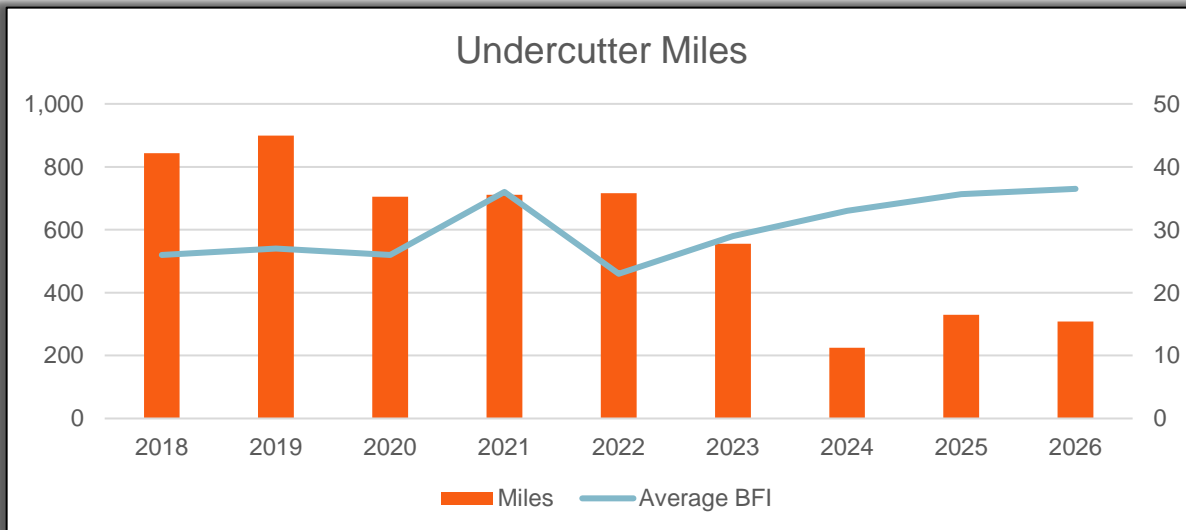
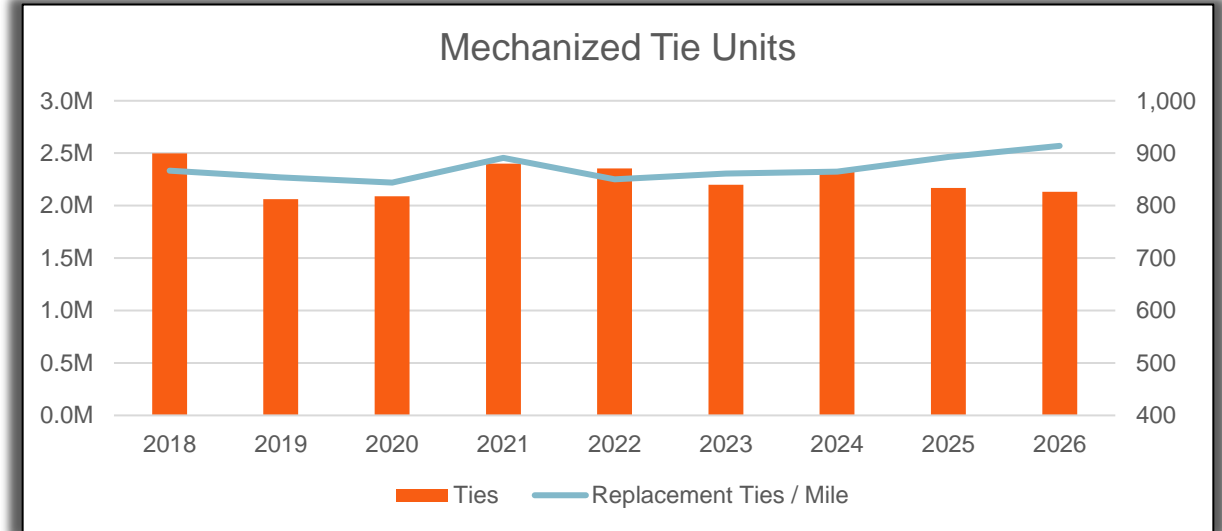
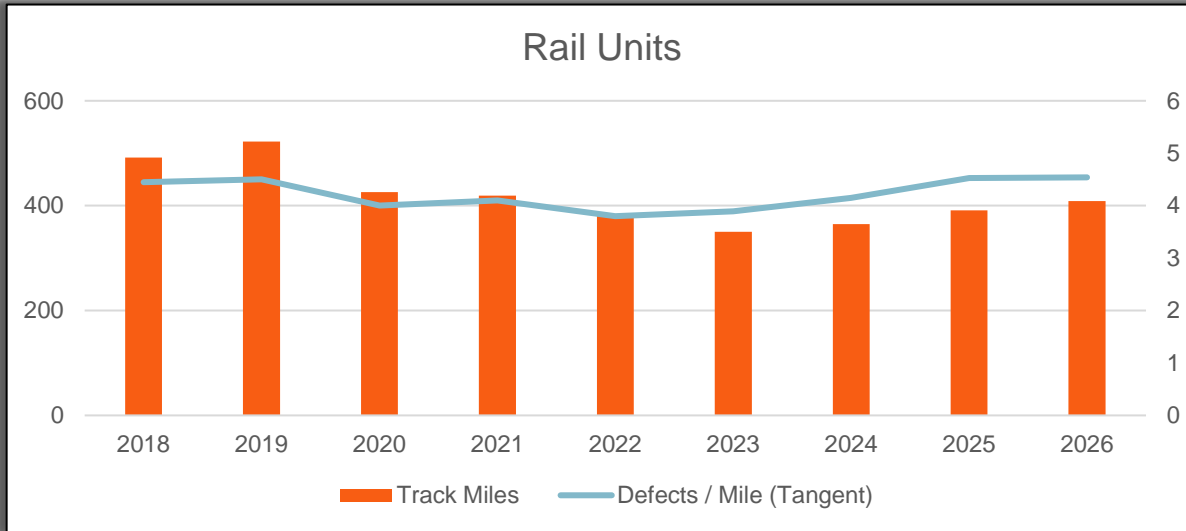
*How many possible solutions are there  
to perform these five switch moves?*

# BNSF Technology Transformation

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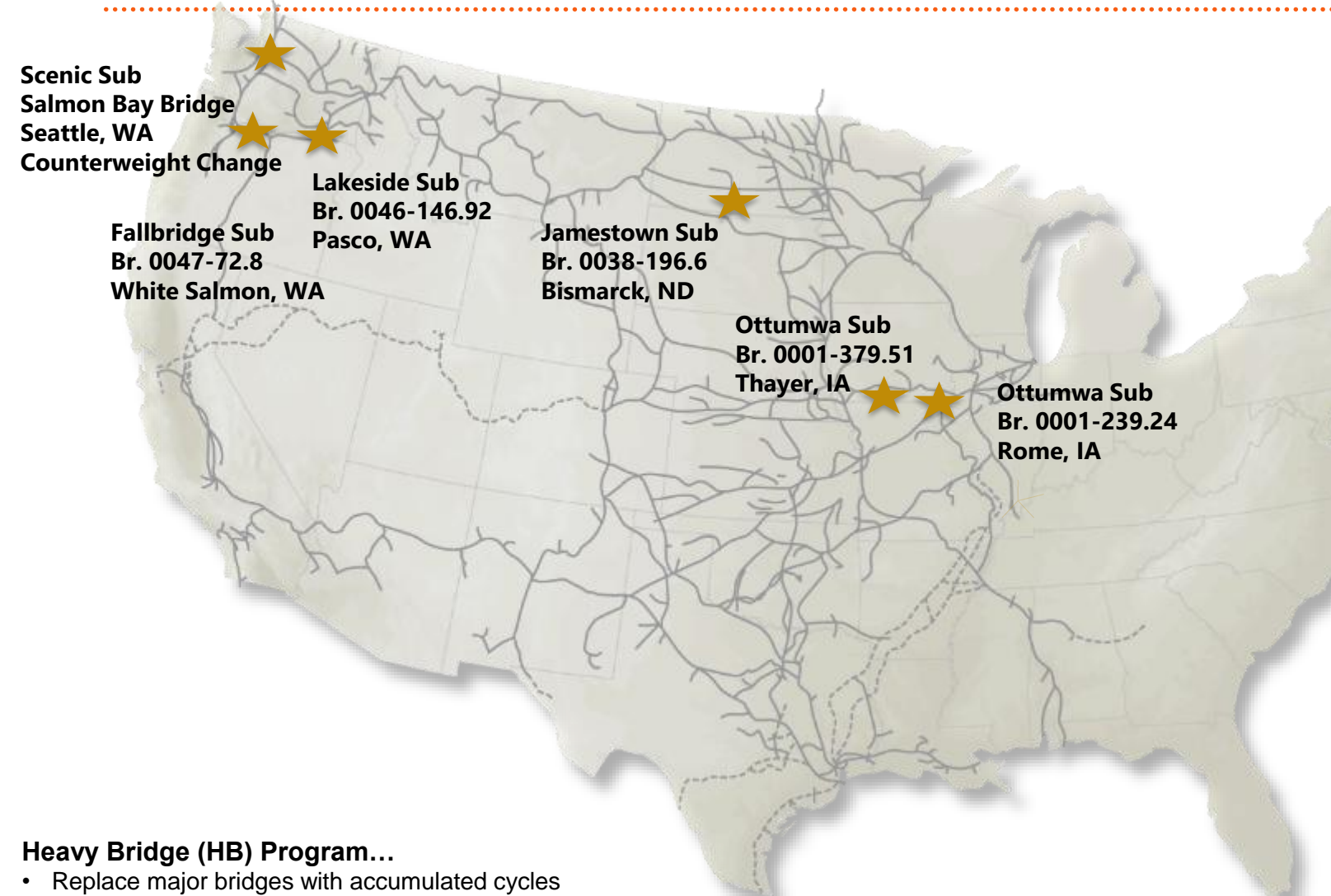
- From buyers to builders
- AI-enabled operational excellence
- Customer-centric innovation
- Agile delivery and collaborative culture
- Transformational industry leadership

# Track (MOW) Units Summary

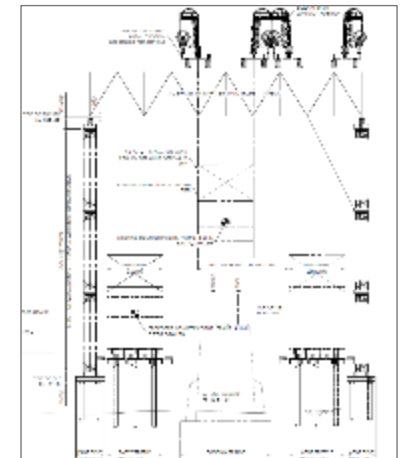


Note: Units prior to 2025 do not include MRL

# Heavy Bridge Projects – 2026 Plan



Ongoing work: Bridge 0038-196.6 Jamestown Sub Bismarck, ND

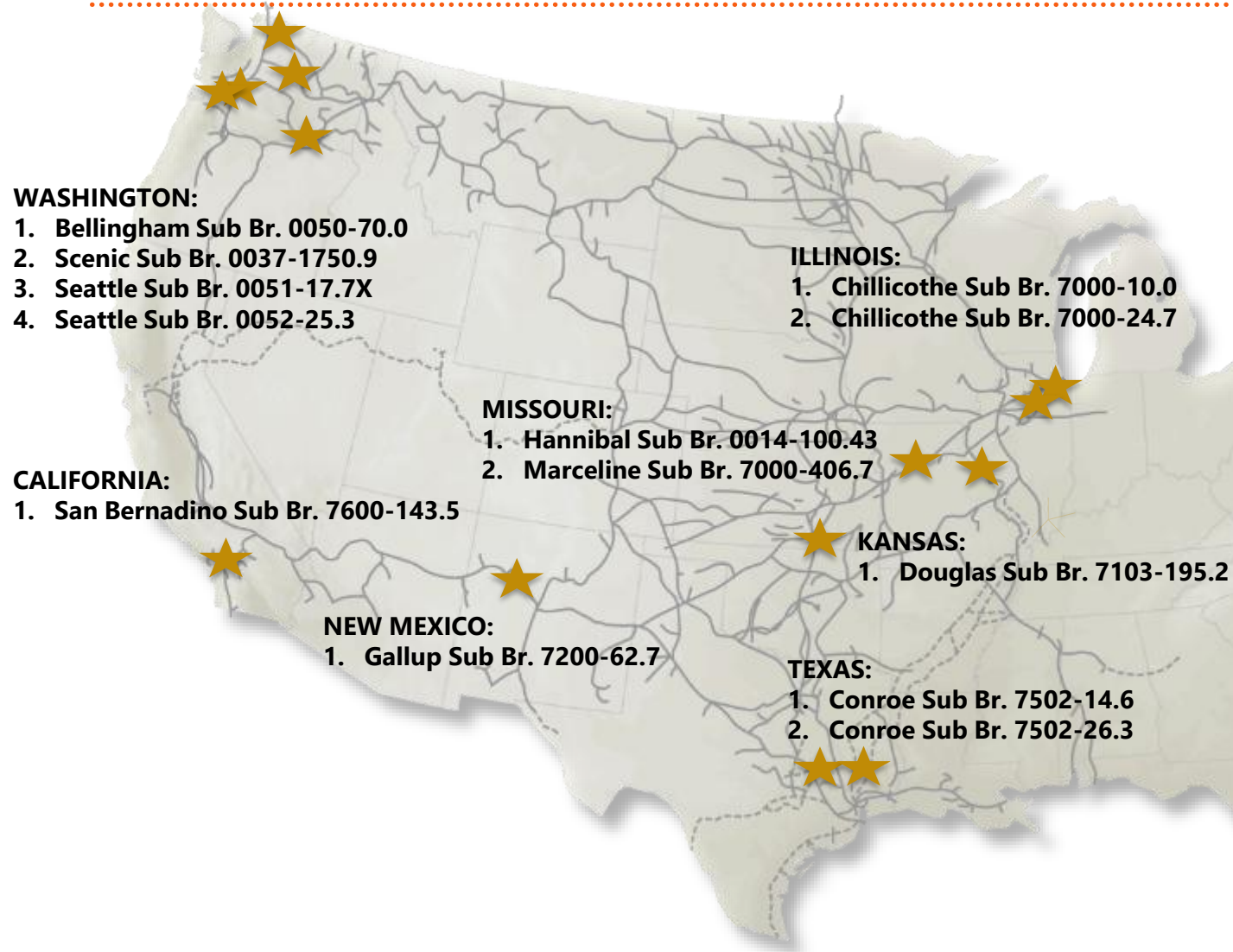


Prepping for Counterweight changeout in Seattle

## Heavy Bridge (HB) Program...

- Replace major bridges with accumulated cycles
- Since 2015, the HB program has replaced **4.6 miles** of bridges.

# Heavy Bridge Outlook: Projects in Development



(Above) Bridge 7000-406.7  
Marceline Sub, Hardin, MO

(Below) Bridge 0050-70.0  
Bellingham Sub, Burlington, WA



# Barstow International Gateway (BIG) is rolling strong into 2026



**Property Acquisition:** Key parcels were secured for the Logistics Park and IMF, enabling core site control.



**Environmental Permits:** Draft EIR and supporting studies submitted, advancing environmental approvals.



**Regulatory:** Corps permit application submitted; PJD issued by ACOE, progressing federal permitting.



**Commercial Strategy:** Commercial plan, partner modeling, and IMF/LP operating plan completed.



**Customer Engagement:** Rate proposals submitted to potential customers.



**Procurement:** Solar developer and RTG supplier contracted; electrical gear and RMG PO secured; loop permit completed.

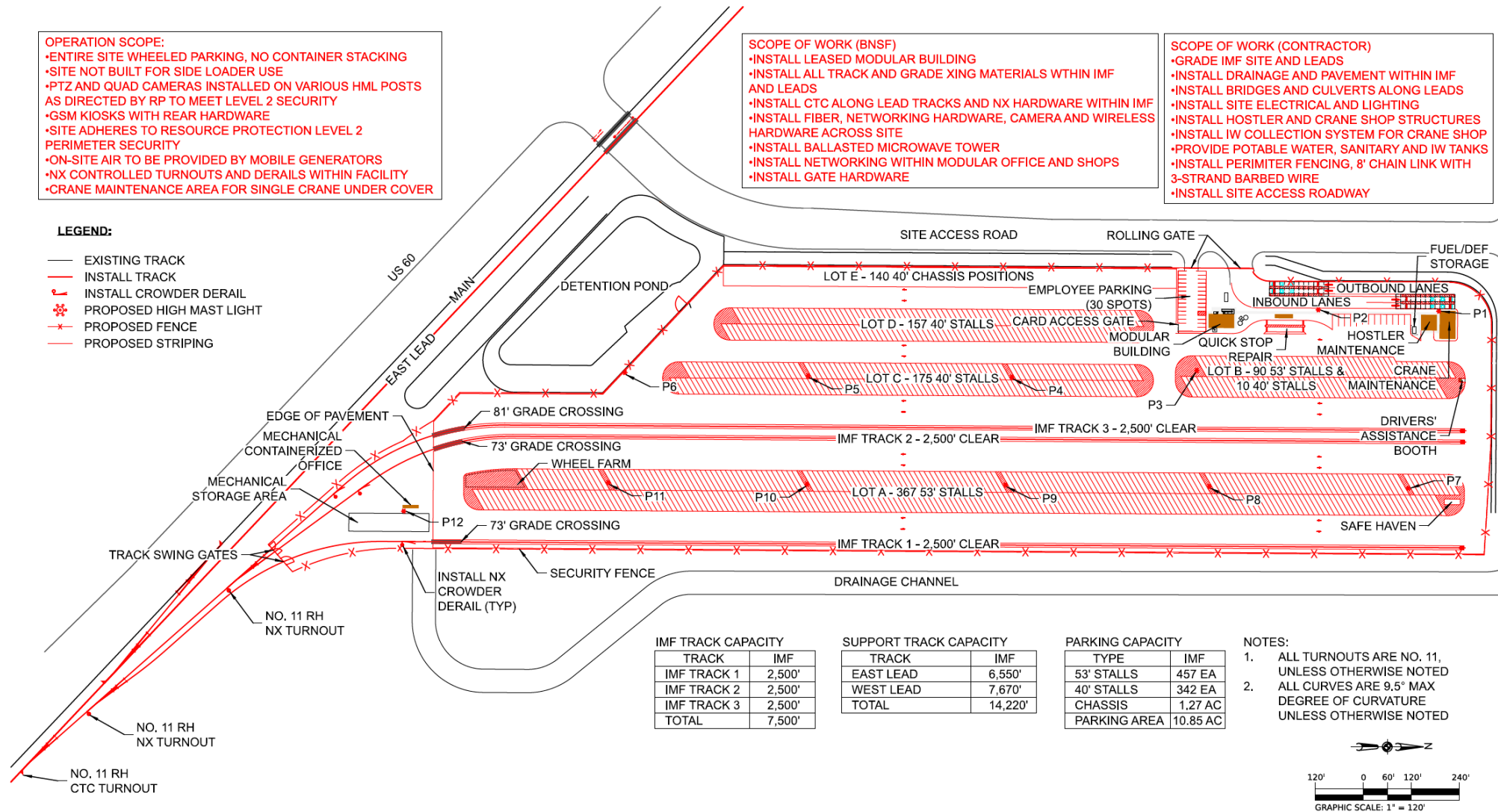


**Engineering Design:** Site design & major OPCC milestones (60% / 90%) completed.



**Power Design:** 60% 33kV OPCC completed, and SCE work order strategy finalized.

# Logistics Park Phoenix (LPP): Phase 1 Plan for 2026



# 2026 Cornerstones of Success

## Technology Transformation

- Improving safety, service, reliability & efficiency
- Controlling inflationary pressure
- Easier customer & user experience

## Normalized Maintenance Strategy

- Aimed at lowest TCO through support of technology
- Integrate with customer service needs & volume
- Avoid costly swings

## Targeted Expansion Investment

- Focus on immediate ROI with improved efficiency
- Continued drive on long-term major growth drivers

## Industry Leadership

- Continuous improvement in safety
- Drive for competitive landscape



Thank you!

