

INDUSTRY DAY



Summary of MARTA's Upcoming Rail Car Programs

July 12, 2016



INTRODUCTIONS & OPENING REMARKS

MARTA'S KEY PERSONNEL

- Keith T. Parker, AICP, General Manager/CEO
- Richard Krisak, Chief Operating Officer
- Gordon Hutchinson, Chief Financial Officer
- David Springstead, Assistant General Manager, Capital Programs and Development
- Joseph Erves, Senior Director, Operations
- Kevin Hurley, Senior Director, Capital Programs and Treasury
- Douglas Miller, Director, Rail Car Maintenance
- Lisa DeGrace, Chief Contracts Officer
- Antoine Smith, Manager, Economic Opportunity
- Nicholas Waters, Contract Specialist II
- Ray Carini, LTK

AGENDA

- Welcome Richard Krisak
- Introductions Richard Krisak
- Finance – State of MARTA Gordon Hutchinson
- Financing Rail Cars Gordon Hutchinson
- Rail Car Program Raymond Carini
- Contracts and Procurement Nicholas Waters
- D&I Requirements Antoine Smith
- Questions & Answers
- Armour Yard Site Visit Douglas Miller

IF YOU HAVE QUESTIONS

- Please ask them today.
- If you have follow-up questions, please direct them to Nicholas Waters (NWaters@itsmarta.com) 404-848-4119.

SUMMARY OF THE TWO PROGRAMS

- New Rail Car Procurement
 - Buy 250 new rail cars
 - Will replace the entire existing fleet
 - Rescue and crashworthiness compatibility with existing fleet
 - Procurement Type: RFP
 - Expected NTP: 2018
- Rail Car Life Extension Work
 - Contract out work on 2/3 of MARTA's fleet
 - Prescriptive overhaul of components
 - Expected bid award: 2017



PROCUREMENT APPROACH

NEW RAIL CAR PROCUREMENT

- RFP – Request for Proposals
- Award is based on best value to the Authority which includes price and other determining factors
- Anticipated RFP release date: Dec 2016

RFP PROCESS

- Issue RFP
- Pre-Proposal Conference
- Inquiry Period (Q&A)
- Submittal of Proposals
- Evaluation of Proposals
- Determination of a Competitive Range
- Invitation for Oral Presentations to firms within the Competitive Range
- Request for Best and Final Offer (BAFO)
- Negotiations
- Selection of a firm
- Award

LIFE EXTENSION PROGRAM -- IFB

- IFB – Invitation for Bids
- Award is based on the lowest responsive and responsible bidder
- To include defined Technical Specifications

RFI

- Request For Information
- Provide feedback on several technical and commercial issues
- Issue: Late July 2016
- Responses Due: August 30, 2016
- An RFI will be issued for both procurements

PROCUREMENT RULES OF ENGAGEMENT

- No discussions with MARTA Board of Directors, Executives or Staff
- Firms can participate in both procurements
- Consultants currently providing services to MARTA are prohibited from partnering with potential firms
- Contact Nicholas Waters, Contract Specialist II, for all matters relating to both procurements

DIVERSITY & INCLUSION

- Life Extension Program: DBE Goal
- New Rail Car Program: TVM FTA Requirements

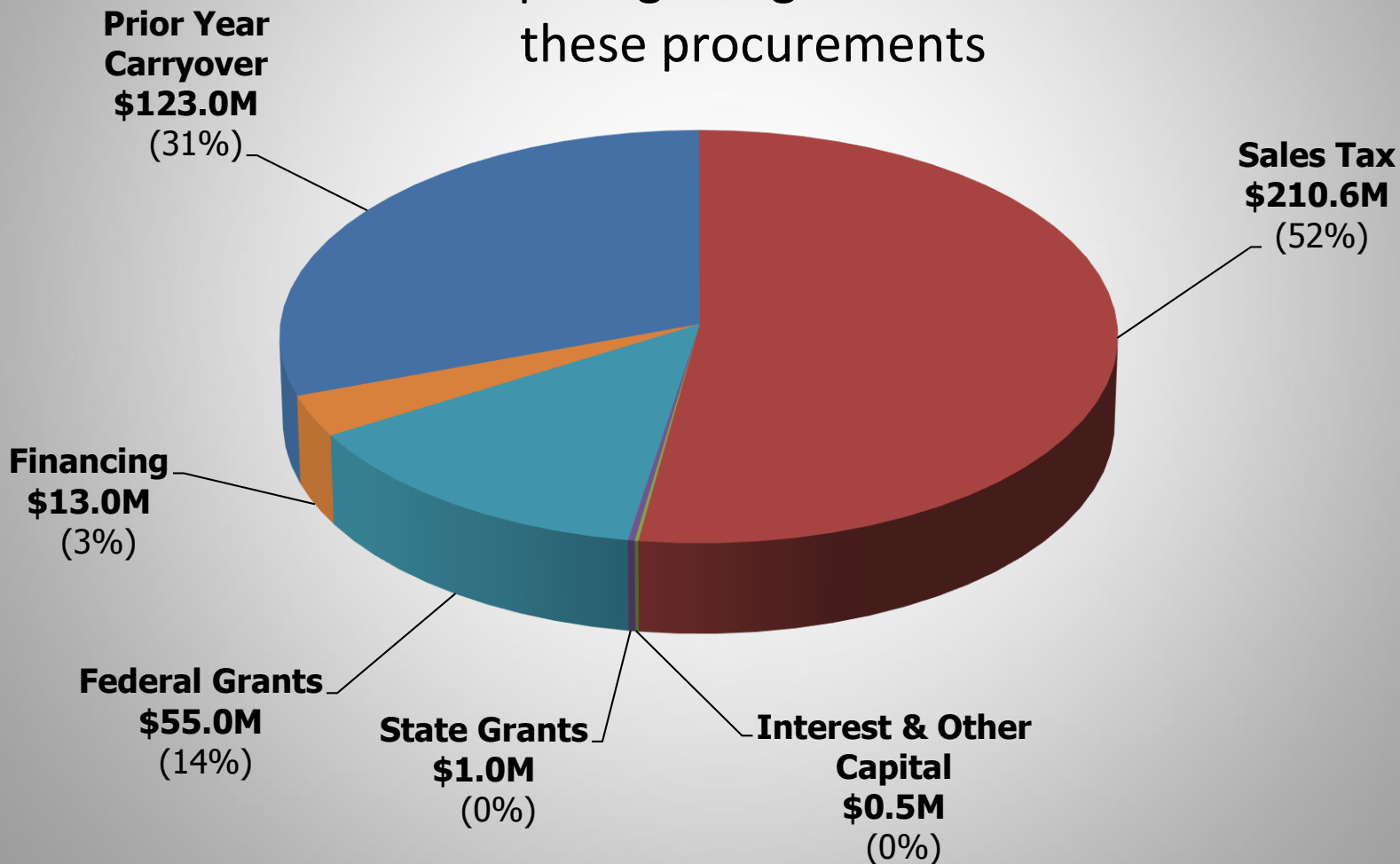
BUY AMERICA

- Seeking input (RFI)
- Preference for easy, efficient access to replacement parts
- Preference for local sourcing; not a requirement

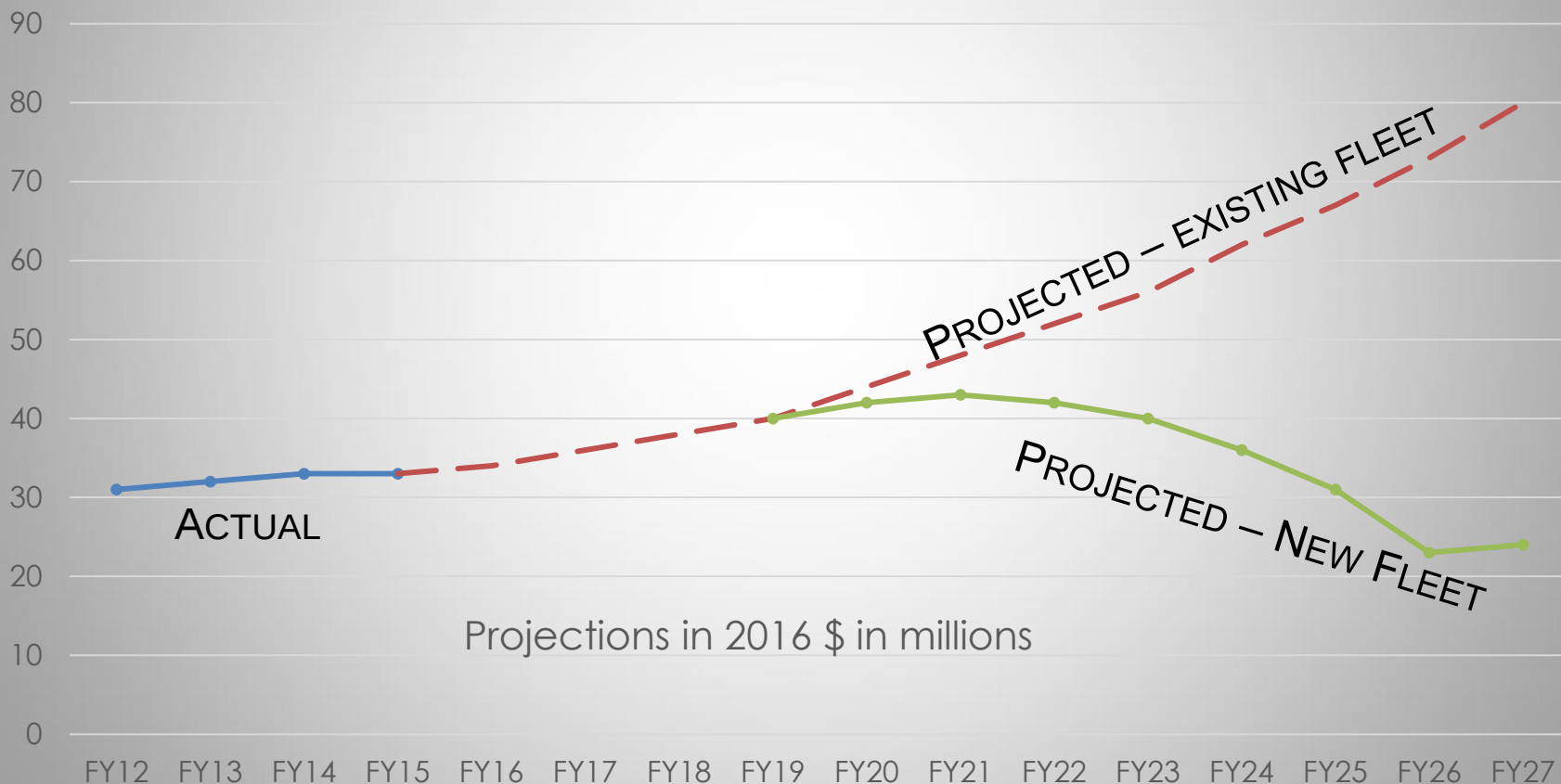


FY17 Capital Revenue (\$403.1M)

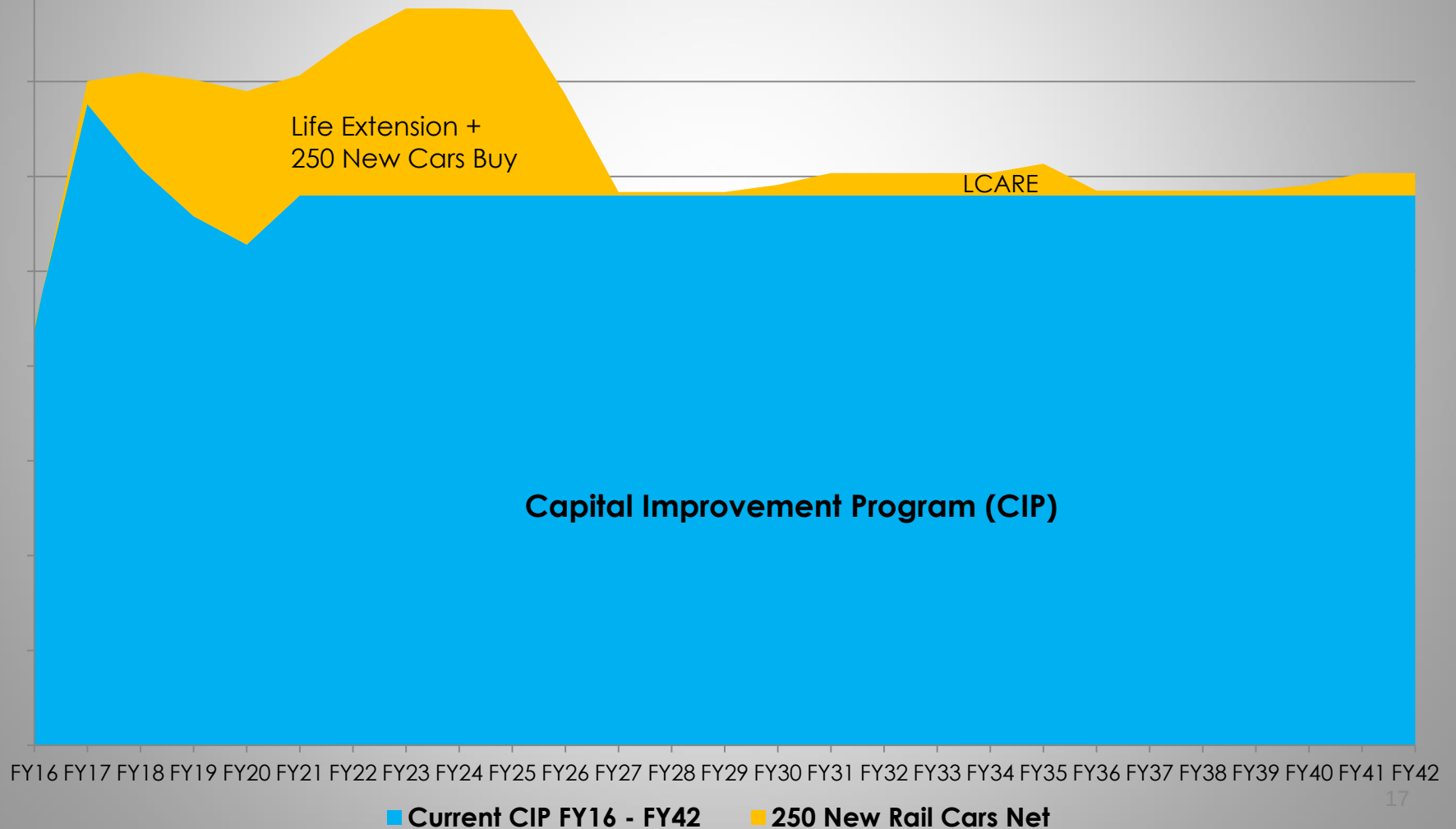
Not anticipating using Federal Funds for these procurements



RAIL CAR REHABILITATION COST AVOIDANCE



MARTA's Capital Program (including the two Rail Car Programs)

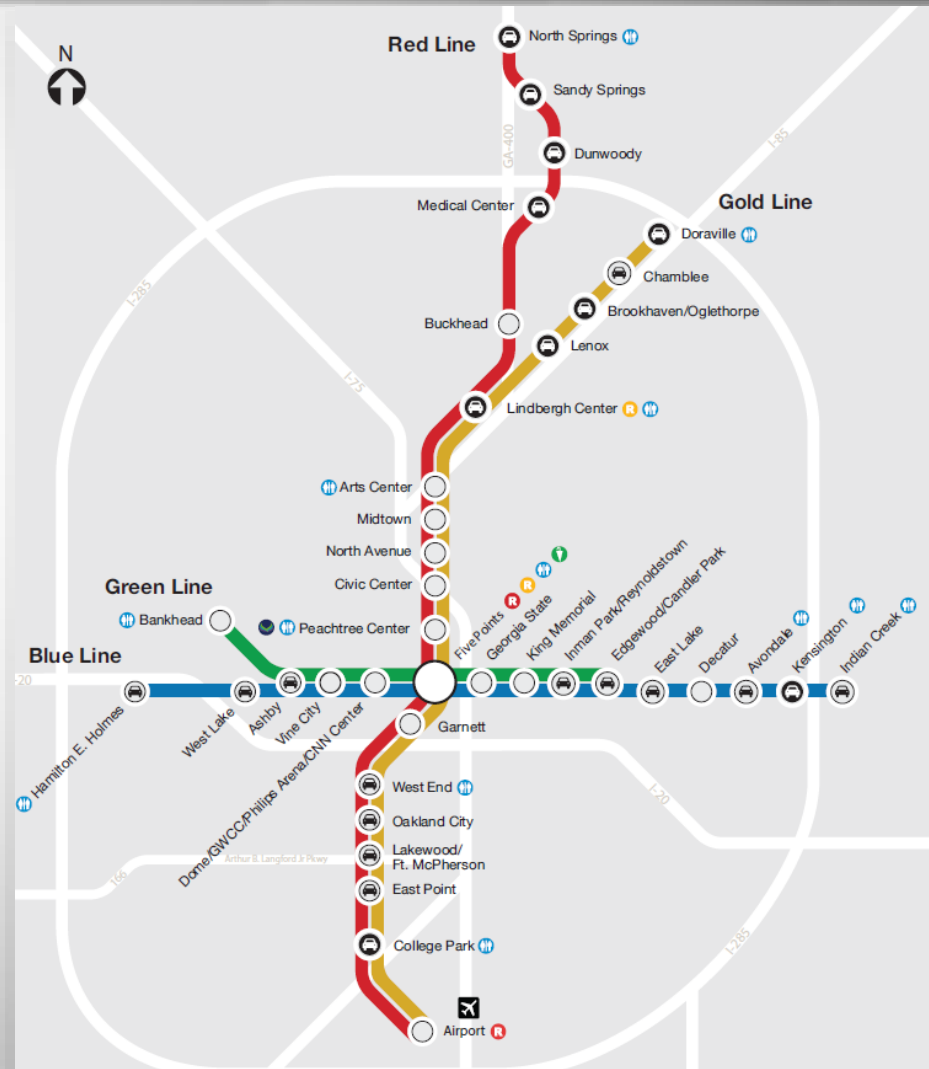




MARTA's RAIL SYSTEM

MARTA's ROUTES

- 48 route miles
- 750 VDC third rail
- Double-track
- 70 mph top speed
- Max grade of 4.5%
- Operates daily:
4:45 am to 1:00 am



MARTA's RAIL STATIONS

- 38 stations
- All with high-level platforms for level boarding
- Fully ADA-compliant
- Cars have load leveling system



MARTA's RAIL SERVICE

- Automatic Train Operation
- Operators control doors
- Direct view of side of train through cab window



DIRECT SERVICE TO WORLD'S BUSIEST AIRPORT

- MARTA has direct service into airport
- This means there's a fair amount of luggage on board



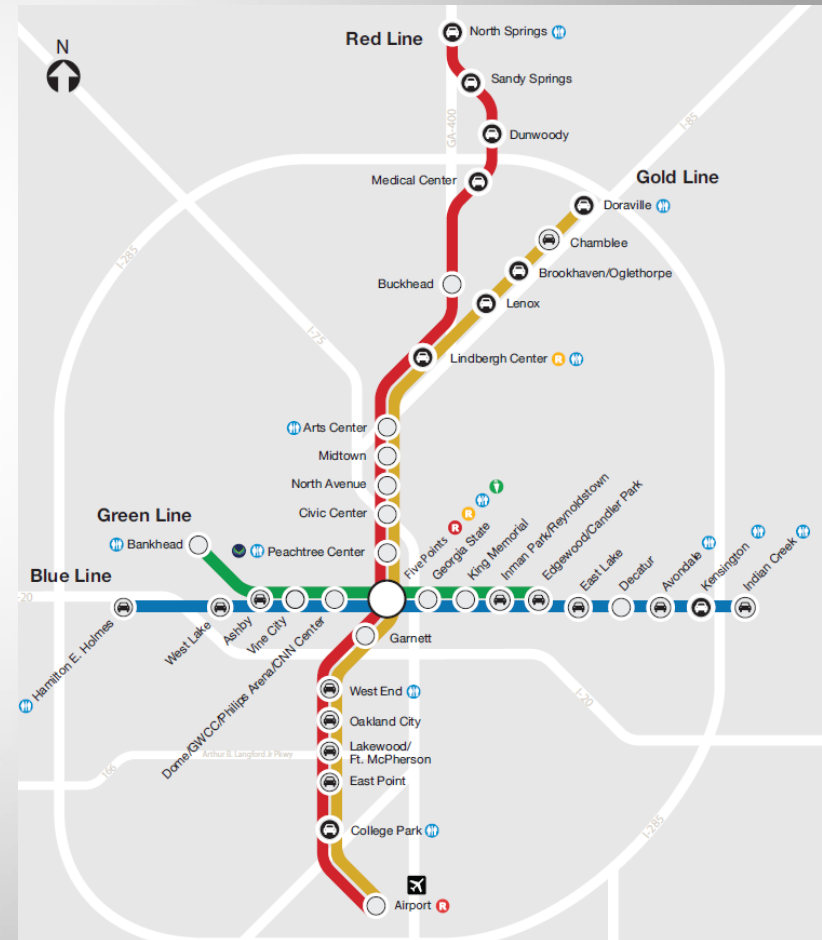
MARTA's RAILS

- **Mainline Track: 104 mi**
 - 46 mi Ballasted
 - 52 mi Concrete/ DF
 - 5 mi Resilient Supported
 - 0.1 mi Embedded
- **Track Miles**
 - 21 miles in tunnel
 - 24 miles on overhead structure
 - 58 miles at grade
- **Rail**
 - 115 lb RE, with 1:40 cant



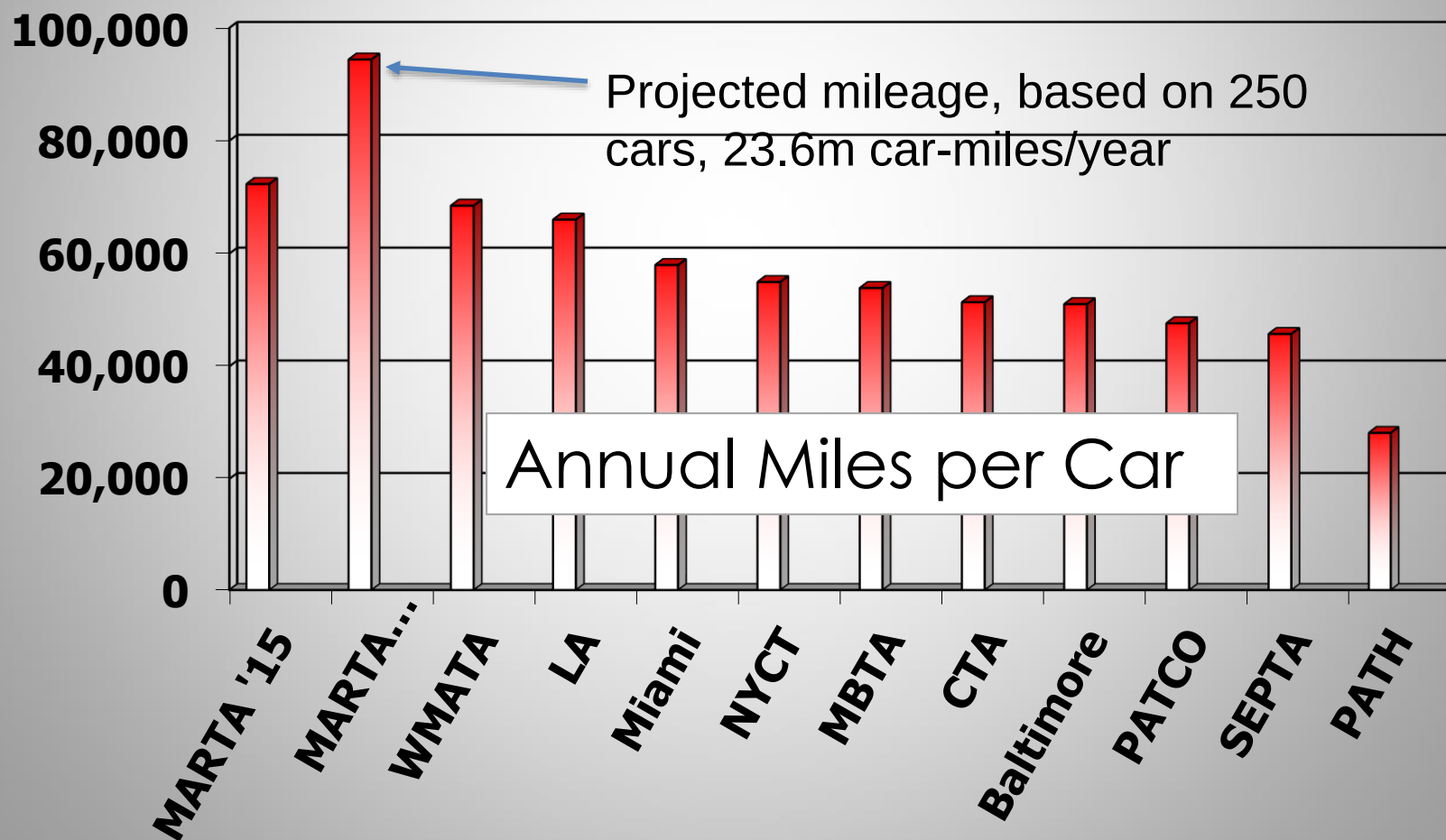
DAILY SERVICE PATTERNS

- North-South: 20 six-car trains
- East-West: 8 six-car trains
- Bankhead Line: 5 two-car trains
- Ready reserve: 5 six-car trains
- Headways:
 - 5 minutes, peak
 - 7.5 minutes, off-peak



WITH 250 CARS, MARTA WILL AVERAGE 90,000+ ANNUAL MILES/CAR

(SOURCE: NATIONAL TRANSIT DATABASE, FY2013)



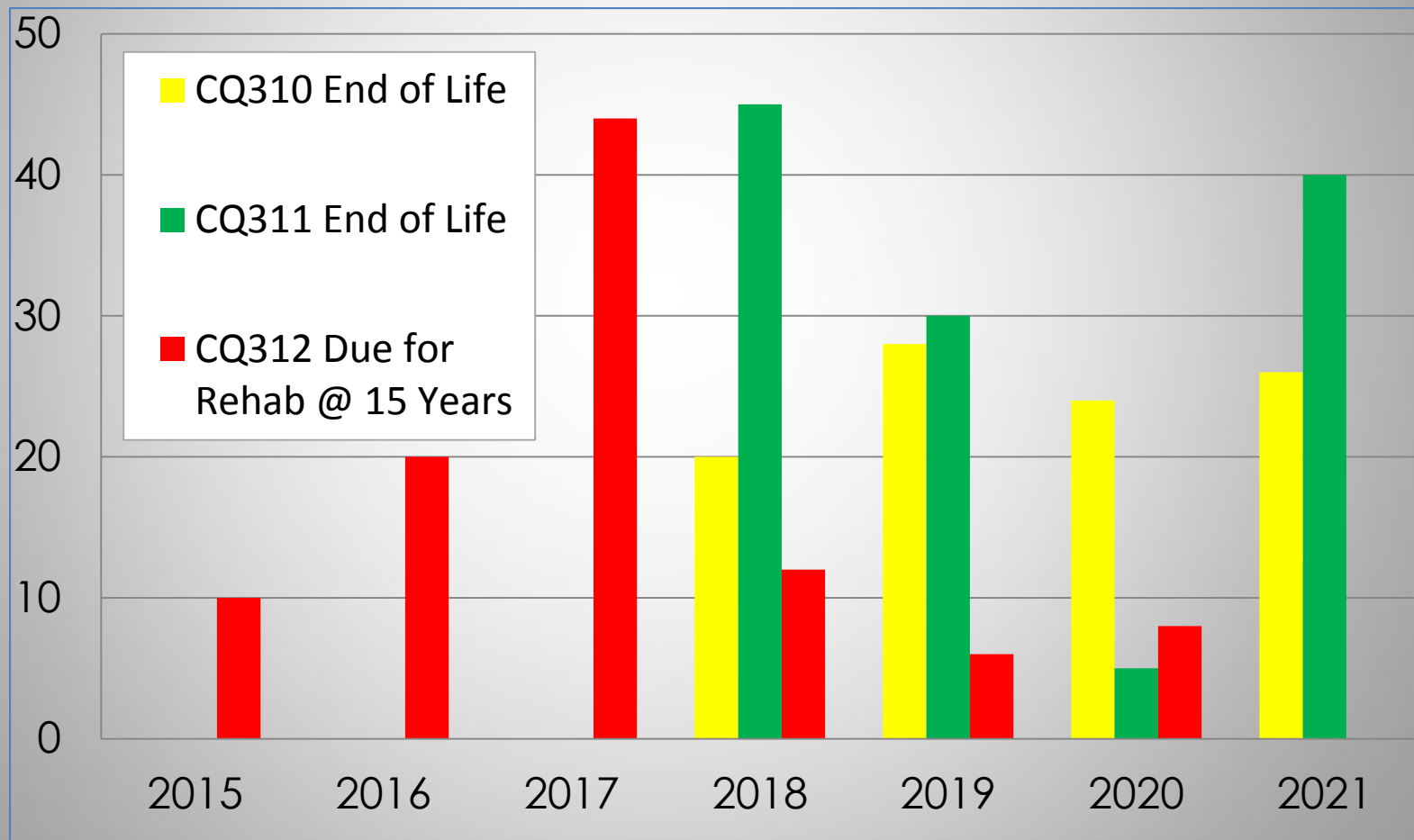
Meet THE Fleet



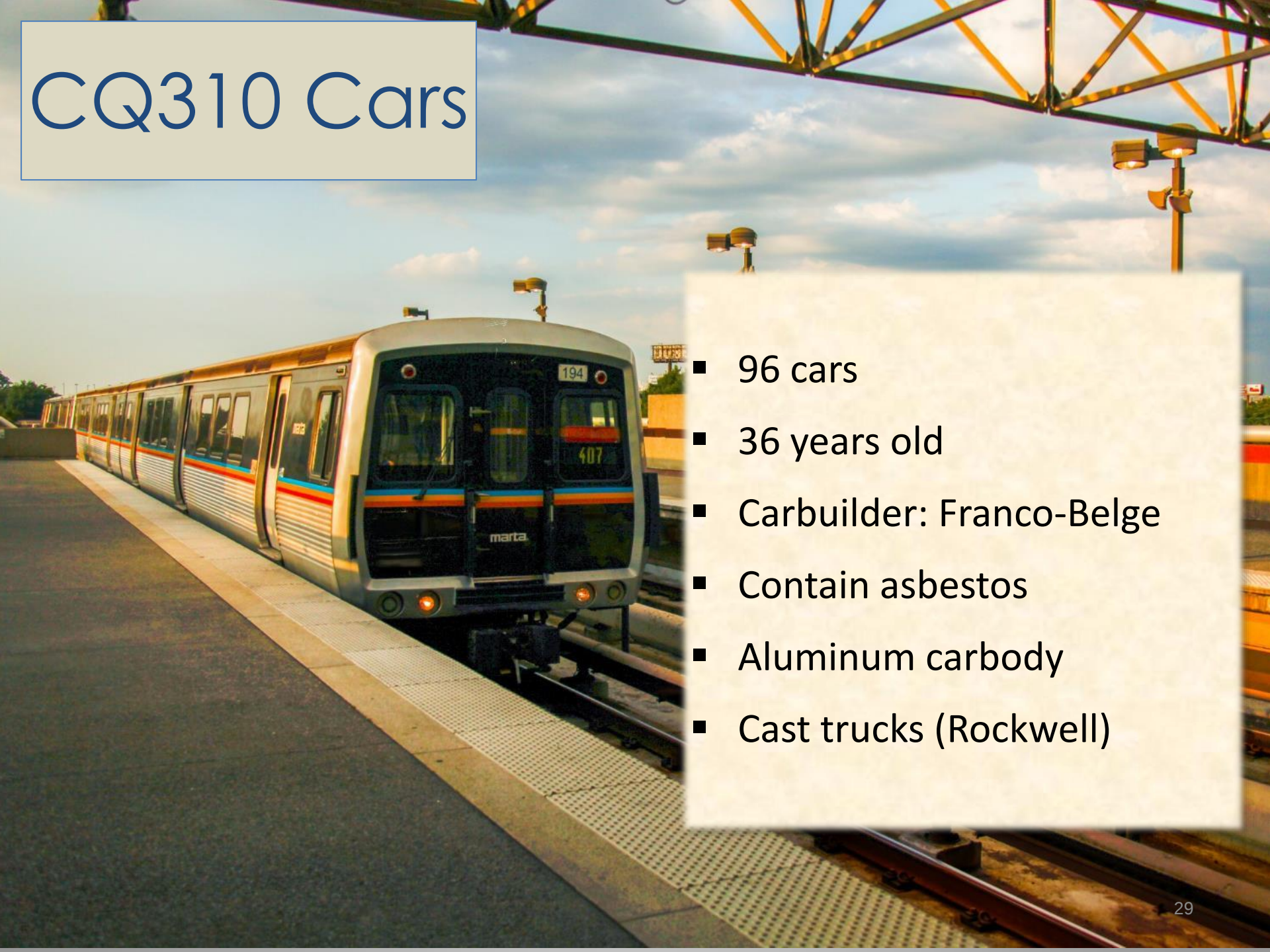
FLEET AGE SUMMARY

Car Series	Carbuilder	Quantity	Year Built	Age	Mid-Life OH
CQ310	Franco-Belge	96	1979-81	34-36 yrs	2006-2008
CQ311	Hitachi	120	1984-88	27-31 yrs	2005-2008
CQ312	Breda	100	2000-05	10-15 yrs	Now due
Total		316			

MARTA'S RAIL CARS ARE REACHING END OF LIFE



CQ310 Cars

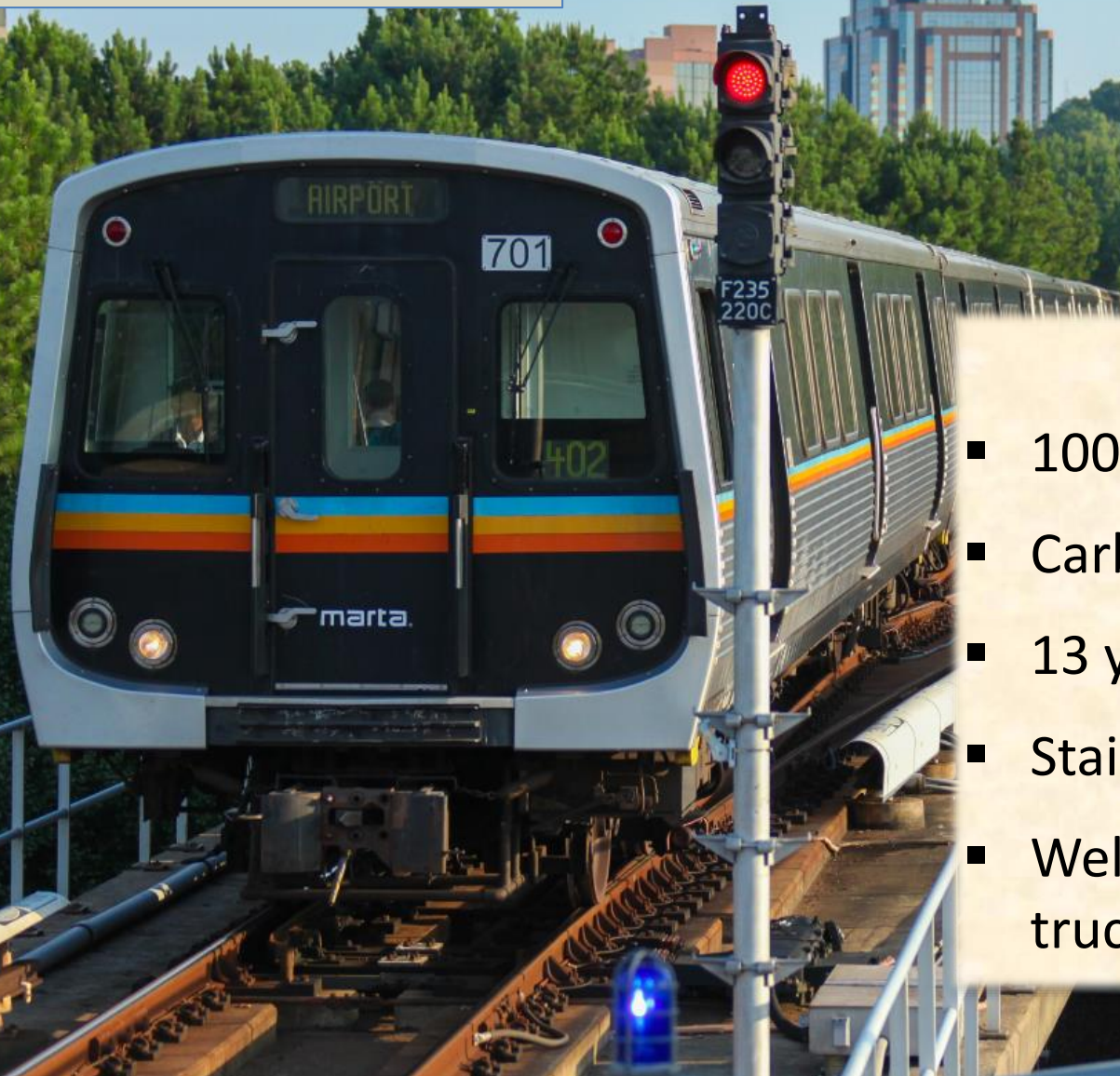
- 
- 96 cars
 - 36 years old
 - Carbuilder: Franco-Belge
 - Contain asbestos
 - Aluminum carbody
 - Cast trucks (Rockwell)

CQ311 CARS

- 120 cars
- Carbuilder: Hitachi
- 31 years old
- Stainless steel carbody
- Weld fabricated Breda trucks



CQ312 Cars



- 100 cars
- Carbuilder: Breda
- 13 years old
- Stainless steel carbody
- Weld fabricated Breda trucks

RAIL CAR CONFIGURATION

- 316 rail cars – all married-pairs
- Drawbar between pairs
- Operator's cab:
 - Two cabs per pair
 - Full-width cab
 - Inactive cabs permit walk-through



RAIL CAR DIMENSIONS

- 75' long
- 10'-6" wide
- Floor height: 44" ATOR
- 34.5" wheels
- 79" door height
- 80" min ceiling height

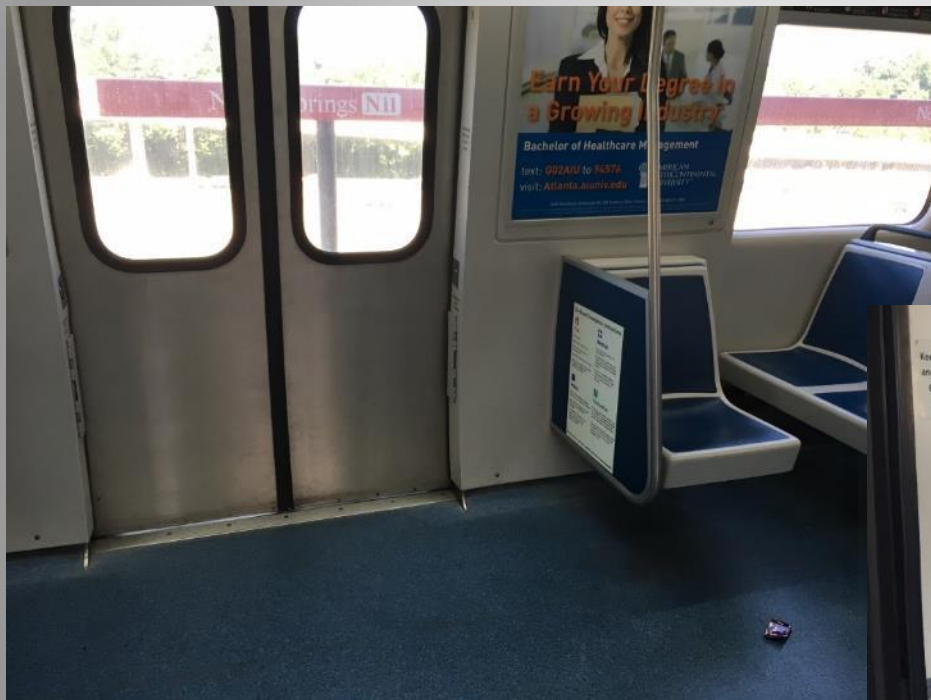


RAIL CAR INTERIOR

- Seats
 - 64 seats per car
 - 1 mobility device berthing areas
 - 4 priority seats
- Baggage storage
- Windscreens
- No floor-to-ceiling poles

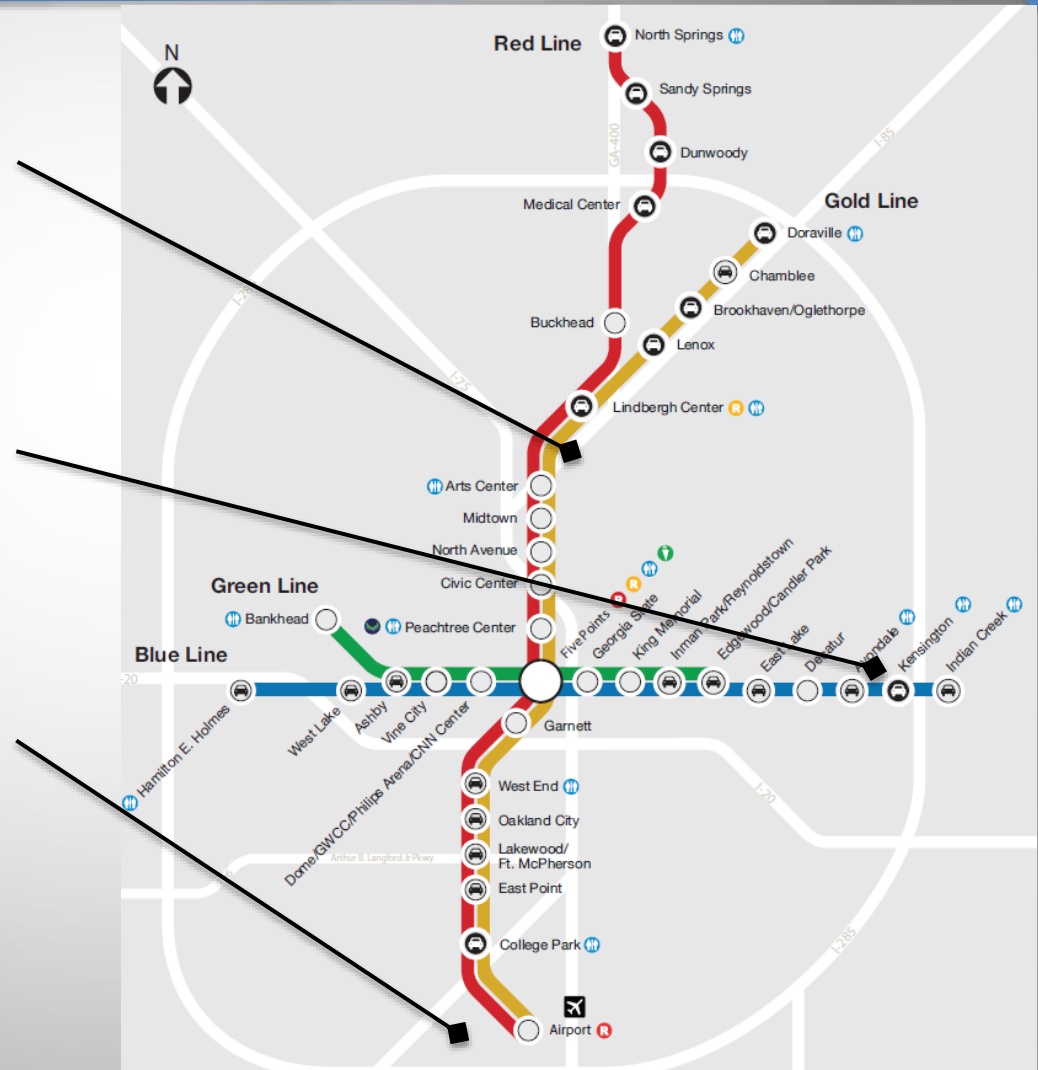


SOME OFFSET WINDSCREENS



MAINTENANCE FACILITIES

- Armour: Inspection, Heavy Maintenance
- Avondale: Running repairs
- South: Campaigns by vendors







LIFE EXTENSION PROGRAM

LIFE EXTENSION PURPOSE

- Keep the fleet in service until it can be replaced
- Prescriptive heavy maintenance, per MARTA procedures or maintenance manuals



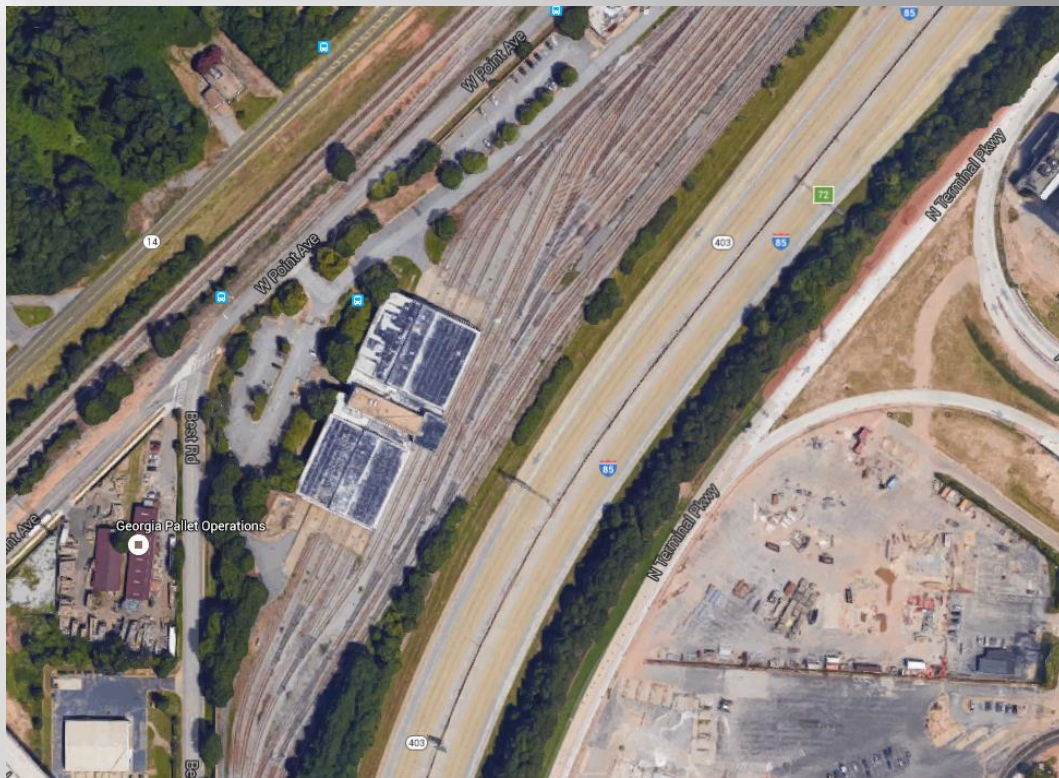
LIFE EXTENSION SCHEDULE

- Invitation to Bid: 2016
- Bids Due: Early 2017
- Award: June 2017
- Work Performed: 2017 to 2020



LIFE EXTENSION CONTRACT CONDITIONS

- Work must be done off-site
- Up to 216 cars
- CQ310s to be done first
- Can bid/propose on both programs



LIFE EXTENSION SCOPE OF WORK

- Couplers/Draft Gear
- Trucks/Suspension
- Auxiliary Electric
- Propulsion
- Friction Brakes
- Cab Signal/ATC
- Comms
- Doors
- HVAC
- Carbody



LIFE EXTENSION SCOPE OF WORK

- Carbody
- Couplers/Draft Gear
- Trucks/Suspension
- **Auxiliary Electric**
- Propulsion
- Friction Brakes
- Cab Signal/ATC
- Comms
- **Doors**
- **HVAC**



SAMPLE WORK ON AUXILIARY ELECTRIC

- **Replace ...**
 - Batteries
 - Capacitors
 - Contactors
 - Surge arrestors
- **Option to replace ...**
 - Rolls Royce APS on CQ311s



SAMPLE WORK ON DOORS

- **Replace ...**
 - Weather seals
 - Sensing switches
- **Rebuild ...**
 - Door operators
 - Crew switches
 - Emergency release assemblies
 - Door Hangers
 - Door check assemblies
 - Actuating pin/bracket
- **Upgrade** HAFCO hangers to Vapor hangers (<30% of fleet)



SAMPLE WORK ON HVAC

- **Replace ...**
 - Weather seals
 - Mounting isolators
 - Pressure switches
- **Rebuild ...**
 - Compressor/condenser
 - Evaporator
 - Control unit





NEW RAIL CAR PROGRAM

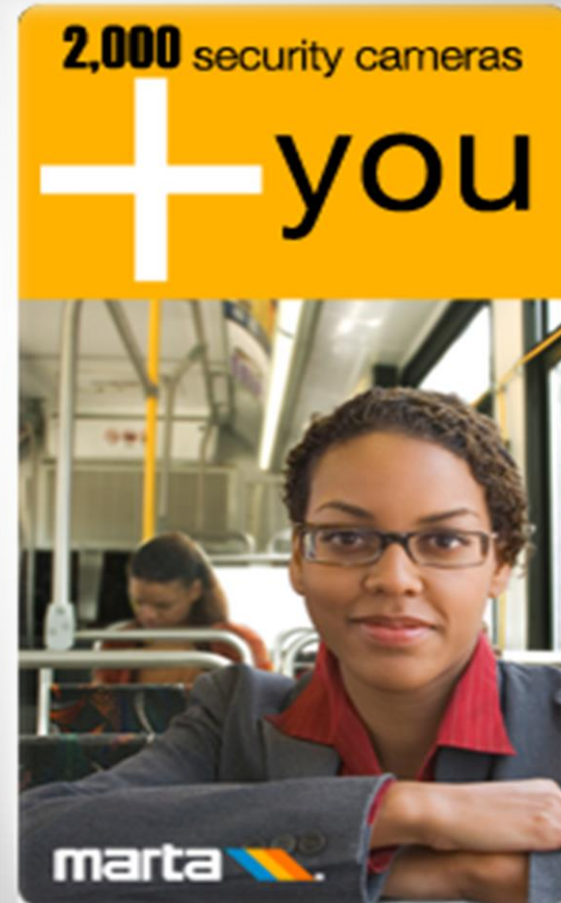
NEW RAIL CAR PROGRAM PURPOSE

- Replace aging fleet
- Improve reliability
- Enhanced customer features
- Serve MARTA's passengers for next 30+ years



TARGET AREAS FOR IMPROVEMENT

- Reliability
- Interior Layout
- Better communication
 - Signage
 - Maps/Information
 - Public Announcements
- Security
- Luggage space



NEW RAIL CAR PROGRAM SPECIAL EMPHASIS

- Key piece of making MARTA a world class system
- Community involvement in design features
- Industrial designer



NEW RAIL CAR PROGRAM SCHEDULE

- Request for Proposals:
Dec 2016
- Proposals Due: ~Apr
2017
- Award: ~Nov 2017
- New Car Deliveries:
2020 to 2026



NEW RAIL CAR CONTRACT TERMS

- Heavy emphasis on:
 - Schedule performance
 - Reliability



NEW RAIL CAR SCOPE OF WORK

- 250 new cars
- Training
- Manuals
- Spare Parts
- STTE
- Reliability Program
- Warranty
- Scrapping existing cars



SOME DESIRED RAIL CAR FEATURES WITH A FOCUS ON THE CUSTOMER

RAIL CAR CONFIGURATION

- Currently: all married-pairs
- MARTA runs 6-car trains
- Shops are generally configured for married-pairs
- Little capability to turn cars
- MARTA interested in hearing about alternative configurations ...
 - Triplets?
 - Open gangways?
 - Other alternatives, and their benefits

TRI-POD STANCHIONS AND GRAB HANDLES

- Newly added features for consideration:
 - Floor-to-ceiling tri-pod stanchions in door vestibules
 - Grab handles



ADA PROVISIONS

- 2 mobility aid berthing spots per car
- Color-coded priority seating
- Induction loop system for hearing impaired
- Consider the proposed new ADA regulations, especially for communication



INTERIOR LAYOUT CONCEPTS

- Full ADA accessibility end-to-end, and car-to-car
- Slightly reduced seat width
- Separate operator cab door
- Gathering area
- Priority seating in the same place, no matter what door entered



SEATING CONCEPTS

- Community focus groups to help with seating design
- Priority seating ...
 - Color-coded?
 - Always on left as you enter?
- Existing seats have worked well, although backs are ‘thick’
- Cantilevered seating
- Easy to maintain
- Eliminate tight knee room



SIGNAGE

- Interior:
 - Ceiling mounted destination
 - Side-mounted destination
 - Large, variable message
 - Speakers
- Exterior
 - Ends of trains
 - Along side of train
 - Color-coded lighting on side of car to indicate route
 - Speakers





REQUESTS FOR INFORMATION

REQUESTS FOR INFORMATION

- Buy America
- Alternate car configuration
 - Open gangway between cars
 - Minimal shop changes
- Unattended train operation
- How many life extension cars needed for float



Thank you for your interest in MARTA.