Introduction to Metra’s Engineering Department and Overview of 2018 Capital Program

Bruce M. Marcheschi
Chief Engineering Officer
METRA OVERVIEW

- 11 rail lines
- 487 route miles
- 1,155 track miles
- 686 weekday trains
- 433 weekend trains
- Total weekday trains: 1,119
- 290,000 daily riders
- 78.8 million passenger trips a year
• 822 Bridges
• 571 Grade Crossings
• 237 Outlying Stations
• 5 Downtown Stations
• 24 Yard Facilities
• 150 locomotives, 840 railcars and 186 Highliners (EMU)
$12.1 Billion investment needed
Less than one-fourth of that expected
Metra has:
• One of the oldest fleets
• Best on-time record
• Lowest fares
• Most complex system
## PROPOSED 2018 CAPITAL PROGRAM

<table>
<thead>
<tr>
<th>Description</th>
<th>In Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock</td>
<td>$ 71,782,500</td>
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<tr>
<td>Track &amp; Structure</td>
<td>$ 39,615,000</td>
</tr>
<tr>
<td>Signal, Electrical, and Communications</td>
<td>$ 39,702,500</td>
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<tr>
<td>Facilities and Equipment</td>
<td>$ 24,360,000</td>
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<tr>
<td>Stations and Parking</td>
<td>$ 5,500,000</td>
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<tr>
<td>Support Activities</td>
<td>$ 15,909,429</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>$ 196,869,429</strong></td>
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</table>
ENGINEERING DEPARTMENT

- Bridges and Structures
- Electrical and Electrical propulsion
- Track
- Signal
- Telecommunications
- Yard Facilities and Maintenance
- Stations and Parking Lots
- Line Extensions and Expansions
- Positive Train Control
Career Opportunities

- Civil Engineers
- Structural Engineers
- Electrical Engineers
- Construction Engineers
- Mechanical Engineers
- Computer Science
- Architects
- Project/Program Managers
2018 Capital Program

Stations
59th / 60th Street Station

District

- Metra Electric

Project Budget

- $14.3 Million

Project Schedule

- Design - 2Q 2018
- Procurement - 4Q 2018
- Construction - 2019

Project Scope

- 1 year project for complete station replacement of 59th Street entrance
- Re-open 60th Street entrance
- Coordination with City and University concerning Obama Library
Prairie Crossing / Libertyville

District
- Milwaukee North

Project Budget
- $500,000

Project Schedule
- Design - Complete
- Procurement - 1Q 2018
- Construction – 3Q 2018

Project Scope
- Construction of 440 sq foot Warming Shelter
- Removal of Existing Double wide Shelter
District
- Union Pacific West

Project Budget
- $3.0 Million

Project Schedule
- Design - 2Q 2018
- Procurement - 4Q 2018
- Construction - 2019

Project Scope
- 16 Month rehabilitation project including new platforms, stairwells, and restoration of depot
Hubbard Woods Rehab

**District**
- Union Pacific North

**Project Budget**
- $7.0 Million

**Project Schedule**
- Design - 2Q 2018
- Procurement - 4Q 2018
- Construction - 2019

**Project Scope**
- 1 Year construction
- New ADA Compliant Elevator
- New Warming Shelter and Canopy
- Platform replacement
Cary Station

District
• Union Pacific Northwest

Project Budget
• $3.4 Million

Project Schedule
• Design - Complete
• Procurement – Bids Received
• Construction - 3Q 2018

Project Scope
• New Inbound Platform Construction
• New Inbound Depot / Shelter
• Demolition of existing Outbound Depot
Blue Island Vermont Street Station Rehab

District
- Rock Island

Project Budget
- $3.0 Million

Project Schedule
- Design - 2Q 2018
- Procurement - 3Q 2018
- Construction - 2019

Project Scope
- Historical Rebuild of Depot
Van Buren Street Station Rehab

District
• Metra electric

Project Budget
• $40 Million Projected

Project Schedule
• Design - 2017 - 2018
• Procurement - 2Q 2019
• Construction - 4Q 2019

Project Scope
• Multi-year Phase Funded project
• Complete Rebuild of Canopy and Platforms
• Historical restoration of Ticket Office and waiting area
• Total rebuild of Pedestrian Tunnel system
111\textsuperscript{th}/Pullman - MED
2018 Capital Program

Yards and Facilities
49th Street Yard Expansion / Training Facility

District
- Rock Island

Project Budget
- $32.0 Million

Project Schedule
- Design - Complete
- Procurement - Bids Received
- Construction - 2Q 2018

Project Scope
- Phase Funded Project – 2 year Build
- New Training Center Building
- Parking Lot / Retention
- Two Building Additions to existing Structures
- New Storage Barn
California Avenue Train Washer / Sand Tower Replacement

District
• Union Pacific

Project Budget
• $2.0 Million

Project Schedule
• Design - Complete
• Procurement - 2Q 2018
• Construction - 4Q 2018

Project Scope
• Design Study Currently underway.
• Replacement of Train Washer at the California Ave Facility
• Replacement of Sand Tower.
2018 Capital Program

Bridges
Bridges

Original Construction Dates of Bridges Metra Operates Across
District
- District

Project Budget
- $7.0 Million

Project Schedule
- Design - Complete
- Procurement - 2Q 2018
- Construction – 4Q 2018

Project Scope
- Total Replacement
- New Abutments
- Lower Roadway
District
• Milwaukee North

Project Budget
• $12.0 Million

Project Schedule
• Design - 2Q 2018
• Procurement - 3Q 2018
• Construction - 2019

Project Scope
• New Replacement
• New Abutments
• Lower Roadway
Bridge #275 Rehab (96th Ave)

**District**
- Rock Island

**Project Budget**
- $4.0 Million

**Project Schedule**
- Design - 2Q 2018
- Procurement - 3Q 2018
- Construction - 2019

**Project Scope**
- Complete Rebab of steel, Abutments
- Lower Roadway
86th & Vincennes Bridge Rehab

**District**
- Rock Island

**Project Budget**
- $1.6 Million

**Project Schedule**
- Design - Complete
- Procurement – 1Q 2018
- Construction – 3Q 2018

**Project Scope**
- Rehab of Bridge
- Concrete Repair
**UP 3rd MAIN, WEST SEGMENT**

**District**
- Union Pacific

**Project Budget**
- $95.0 Million

**Project Schedule**
- Design - Complete
- Procurement - 3Q 2018
- Construction – 2019 Start

**Project Scope**
- 6.1 Miles Kress to Peck
- New Fox River Bridge
- New Route 31 Bridge
- Parking At Geneva
2018 Capital Program

Electrical
Homewood / 95th Street / Riverdale Substations

District
• Metra Electric

Project Budget
• $21 Million

Project Schedule
• Design - 2Q 2018
• Procurement - 3Q 2018
• Construction – 2018/2019

Project Scope
• Installation of New Substations to accommodate additional Required Power
• Each Site will have Independent Contract
47th Street Yard Power Distribution Upgrade

District
• District

Project Budget
• $2.5 Million

Project Schedule
• Design - 60% Complete
• Procurement - 2Q 2018
• Construction - 4Q 2018

Project Scope
• Upgrade Existing High Voltage Pole-Line
4KV AC Switch Replacement (MED)

District

- District

Project Budget

- $300 K

Project Schedule

- Design - Complete
- Procurement - 2Q 2018
- Construction - 4Q 2018

Project Scope

- Installation of an Automatic Transfer Switch at the KYD Facility
Millennium Depot Emergency Exits

District
- Metra Electric

Project Budget
- $800k

Project Schedule
- Design - 2Q 2018
- Procurement - 3Q 2018
- Construction – 4Q 2018

Project Scope
- Installation of Two (2) Emergency Evacuation Routes for Passengers
- Includes Platforms, Stairways, Lighting
2018 Capital Program

Signal
16th Street Interlocker

District
- Rock Island

Project Budget
- $9.0 Million

Project Schedule
- Design - Complete
- Procurement - 3Q 2018
- Construction - 2019

Project Scope
- Currently Revising Bid Package to Accommodate Property Development
- Tracks to be Rerouted Through Property
- Complete Interlocker to be Replaced
Rondout Interlocker Replacement

**District**
- Milwaukee North

**Project Budget**
- $14.0 Million

**Project Schedule**
- Design - Complete
- Procurement - 3Q 2018
- Construction - 2019

**Project Scope**
- Upgrade Complete Plant
- Including New Track Layout
- Designed for Future Expansion
2018 Capital Program

Telecommunications
Radio Dispatching System Upgrade

District
• CCF

Project Budget
• $1.3 Million

Project Schedule
• Design - Complete
• Procurement - 2Q 2018
• Construction - 3Q 2018

Project Scope
• Complete replacement of Existing Analog Radio Dispatching System
• New System Shall be VoIP based
POSITIVE TRAIN CONTROL (PTC)

• PTC is a GPS-based operational safety system
• Integrates new technology with existing train control and operating systems to enhance operations and provide an added level of safety
• An unfunded federal mandate that will cost Metra:
  - $350 million to $400 million to install
  - $15 million to $20 million a year to operate
Questions???