



NORTH COUNTY  
TRANSIT DISTRICT

# North County Transit District PTC Implementation

**APTA Rail Conference – June 3<sup>rd</sup>, 2013**



WE MOVE PEOPLE

COASTER

BREEZE

SPRINTER 1

# NCTD is a Multimodal Operator



WE MOVE PEOPLE

COASTER

BREEZE

SPRINTER

North County Transit District

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(760) 967-2828 • [www.GoNCTD.com](http://www.GoNCTD.com)

# NCTD's Business Model

- **NCTD is primarily a contract management agency, with the following items contracted:**
  - Heavy rail operations, mechanical maintenance, MOW, S&C, and dispatch
  - Light rail operations, mechanical maintenance, MOW, S&C, and dispatch
  - Bus operations and mechanical maintenance
  - PTC maintenance will be contracted
- **PTC Design and Integration Contracted**
  - Herzog Technologies Inc.



# NCTD's Railroad requiring PTC

## San Diego Subdivision:

- **Orange County Line to Santa Fe Depot**
- **60 miles**
  - 50% Double Track
  - 90 MPH Max Speed
  - Includes Heavy Mountain Grade (2.2%)
- **28 Control Point**
- **18 Intermediate Signals**
- **Tenant Railroads**
  - Amtrak
  - Metrolink
  - BNSF
  - Pacific Sun



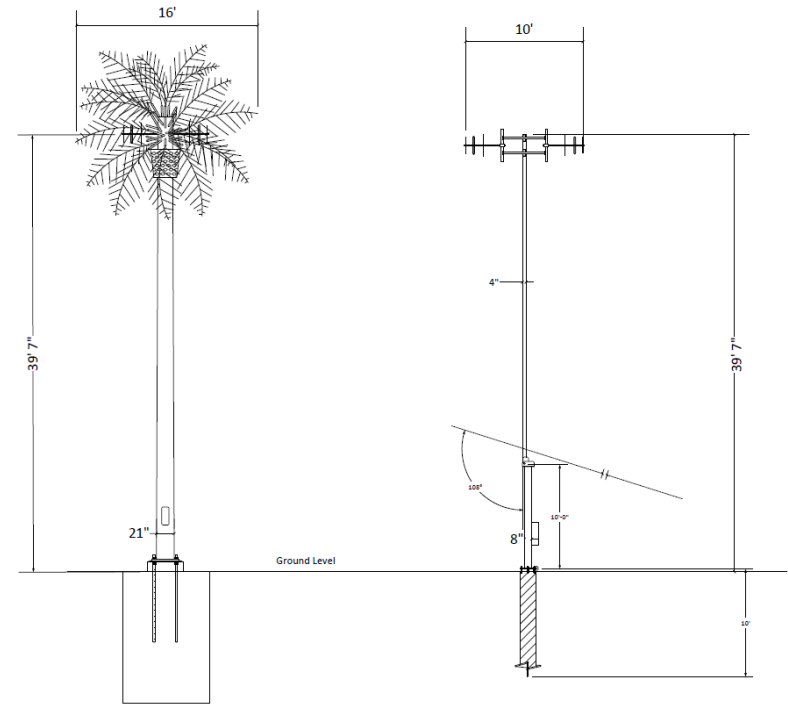
# PTC System Elements – Wayside

- **Fiber to all Wayside Locations**
- **Base Stations**
  - Meteorcomm Radios
  - Frequencies from PTC220
- **Radio antenna towers**
  - 17 new locations
  - 2 existing locations
  - 3 Wi-Fi sites for initialization



# Community Outreach

## Trebuchet vs. Palm



# PTC System Elements – Wayside

- **Survey of San Diego Sub Complete**
- **SubDiv File Creation Complete**
- **Test Vehicle Received**



# PTC System Elements – On Board

- **NCTD Equipment**
  - 5 – F40 Locomotive
  - 2 – F59 Locomotive
  - 10 – Bombardier Cab Cars
- **Surveys of equipment complete**
  - Installation Documents created
- **Pilot installations scheduled to begin in June**



# PTC System Elements – Office

- **Digicon Dispatch Systems Replaced**
  - TMDS from Wabtec Installed
- **Back Office Server**
  - Wabtec System being Utilized
  - System Design
  - Bill of Material Created

# PTC System Elements – TTF

- **Test and training facility (TTF) will permit end-to-end testing of all PTC elements**
  - TMDs workstation and servers
  - BOS servers
  - Onboard systems and display
  - Wayside equipment



# FRA Required Submittals

- **PTC Development Plan** Submitted to and approved by FRA.
- **PTC Implementation Plan** Submitted to and approved by FRA.
- **PTC Vendor List** In progress. Updated monthly through testing completed Sept. 2015
- **PTC Safety Plan** Rail Sciences Corporation (RSC) is preparing. RSC is working closely with FRA to keep all PTCSPs in the same format so FRA only focuses on minor differences. In progress.
- **PTC Safety Certification** Granted by FRA upon approval of the PTC Safety Plans and prior to PTC use in Revenue Service

# Moving Forward

- **Base Station Radio Tower Installation**
- **Locomotive/Cab Car Installations**
- **Wayside Interface Unit Installation**
- **Verification of Critical Elements – Hy-Rail**

# Questions?

