

Annual PTC  
Progress  
Report

2015

*NORTHERN INDIANA COMMUTER  
TRANSPORTATION DISTRICT (NICTD)*

FRA-2010-0043

Name of Railroad or Entity Subject to 49 U.S.C. § 20157(a): Northern Indiana Commuter Transportation District

Railroad Code: NICD

Annual PTC Implementation Progress Report for: 2015

PTCIP Version Number of File with FRA (basis for goals stated): PTCIP 4.2

Submission Date: 3/31/2016

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## 1. Summary

Please provide a narrative summary of overall PTC implementation progress during the preceding calendar year (January 1 to December 31):

Consistent with the requirements prescribed in Subpart I, NICTD has developed and provided its intended sequencing for implementing Positive Train Control in an efficient and logical manner. The sequencing of activities was developed in consideration of design, installation, validation and testing, commissioning and training in an order that effectively dovetails with FRA reviews, available resources, long lead procurements / activities and critical schedule paths. NICTD intends to equip its entire operating territory (with the exception of the designated MTEA) as a single project in advance of the December 2018 mandate. In November of 2015, NICTD's System Integration contractor initiated its efforts to mature and achieve early milestones associated with the plan outlined in our PTCIP 4.2.

Category	Quantity Installed During Calendar Year	PTCIP Year End Goal (If Applicable)	Cumulative Quantity Installed at End of Calendar Year	Total Quantity Required for PTC Implementation
Locomotives Fully Equipped	0	0	0	73
Installation/Track Segments Completed	0	0	0	1
Radio Towers Fully Installed and Equipped	0	0	0	0
Employees Trained	0	0	0	259
Route Miles In Testing or Revenue Service Demonstration	0	0	0	72
Route Miles in PTC Operation	0	0	0	72

## 2. Update on Spectrum Acquisition

Required content:

- The amount of spectrum acquired and available for use during the applicable calendar year and the cumulative amount acquired and available for use at the end of the applicable calendar year, as compared to the amount the railroad stated would be acquired and available for use by the end of that calendar year and in total for PTC implementation, in the applicable revised PTCIP, as amended
- The basis for how the railroad is determining that the acquired spectrum is available for use by PTC radios (e.g., ensuring non-interference with other radios)

Spectrum Area or Location (E.g., county)	Spectrum Acquired and Available for Use (Owned/Leased) During Calendar Year	Cumulative Amount of Spectrum Acquired and Available for Use (Owned/Leased) at End of Calendar Year	PTCIP Year End Goal for Spectrum Acquired and Available for Use	Total Spectrum Required for PTC Implementation, as Reported in PTCIP
Spectrum Coverage Area or Location†: Chicago Dense Urban Study Area	0	0	0	<b>SPECTRUM TO BE PROVIDED BY OTHERS</b>

Please provide any additional narrative for Spectrum Acquisition below:

Due to the complex network of rail operations in the Chicago area, and in consideration of plausible conflicts with spectrum utilization, TTCI is developing a regional spectrum approach. NICTD is awaiting outcome of TTCI/PTC 220LLC Chicago Dense Urban Area Study findings due April, 2016. NICTD has communications sites, including existing VHF radio facilities which have been offered to TTCI for inclusion in the Chicago Dense Urban Area Design. At this time, TTCI has not deemed these sites necessary in support of the current design. Further, it appears that the plan does not propose any Base Stations on NICTD. NICTD will continue to participate in the regional communications planning and will modify its approach as necessary based on the TTCI plan.

### 3. Quantity Update on Hardware Installation

#### 3.1. Locomotive Status

Category / Installation Feature	Quantity Installed During Calendar Year	PTCIP Year End Goal	Cumulative Quantity Installed at End of Calendar Year	Total Required for PTC Implementation, as Reported in PTCIP
<b>Locomotive (Apparatus)<sup>1</sup></b>				
On-board Computers (e.g., Train Management Computer)	0	0	0	73
Software For Train Management and other applications	0	0	0	73
PTC Displays	0	0	0	121 *
Event Recorders	0	0	38	73
Onboard Antennas and/or Transponder Readers	0	0	0	73
GPS Receivers	0	0	0	73
Locomotive Radios – Primary Communications (e.g., 220 MHz radios)	0	0	0	73
Secondary Communications (e.g., cell or Wi-Fi communications) Equipment	0	0	0	73

The on board equipment is being designed and procured consistent with the schedule of activities and significant milestones outlined in the NICTD PTCIP. Installation is expected to be completed in alignment with the schedule outlined in the NICTD PTC Implementation Plan.

\* The 48 single-level, dual-cab EMUs will have 2 PTC displays in each vehicle for a total of 121 total PTC Display Units in 73 Vehicles.

<sup>1</sup> Railroads may elect to add categories or subcategories if more detail is desired.

3.2. Infrastructure/Back Office Status

Category / Installation Feature	Completed During Calendar Year	PTCIP Year End Goal	Cumulative Quantity Complete at End of Calendar Year	Total Required for PTC Implementation, as Reported in PTCIP
<b>Infrastructure (Back Office)</b>				
<b>Dispatching Locations (installations complete)</b>	0	0	0	1
<b>Physical Back Office System Equipment (installations complete)</b>	0	0	0	1

Are the Back Office Location(s) fully operable?	No
Are the Dispatching Location(s) fully operable?	No

Please provide any additional narrative for Infrastructure/Back Office Status below:

The installation of the Back Office Equipment is being designed and procured consistent with the schedule of activities and significant milestones outlined in the NICTD PTCIP. Installation is expected to be in alignment with the schedule outlined in the NICTD PTC Implementation Plan.

3.3. Installation/Territory Status

Category / Installation Feature	Quantity Installed During Calendar Year	PTCIP Year End Goal	Cumulative Quantity Installed at End of Calendar Year	Total Required for PTC Implementation, as Reported in PTCIP
<b>Infrastructure – Wayside Installations by Territory (i.e., Subdivision, District, Track Segment, Etc.)<sup>2</sup> NICTD Intends to install, test, and commission it’s PTC System as a single segment.</b>				
<b>Identification of the Territory (i.e., Subdivision, District, Track Segment, Etc.)†: SEGMENT 1 of 1</b>				
<b>Wayside Interface Units†</b>	0	0	7	51
<b>Communication Towers or Poles†</b>	0	0	0	0
<b>Switch Position Monitors†</b>	0	0	0	0
<b>Wayside Radios†</b>	0	0	0	0
<b>Base Station Radios†</b>	0	0	0	0
<b>Are all necessary communication backbone utilities for this track segment (including fiber, copper, ground wiring etc.) installed and ready for operation?† No</b>				

NICTD intends to install, test and commission its PTC System as a single segment. The Wayside Infrastructure is being designed, procured and installed in alignment with the schedule and milestones identified in the PTCIP.

<sup>2</sup> Each railroad should report information in a manner consistent with its PTCIP. That is, if a railroad monitors implementation of track segments by territory or subdivision, it should report that way.

#### 4. Quantity Update on Employees Trained

Required content:

- Separated by each employee category identified below, the number of employees trained during the applicable calendar year and the cumulative number of employees trained at the end of the applicable calendar year, as compared to the number the railroad stated would be trained by the end of that calendar year and in total, in the applicable revised PTCIP, as amended

Employee Category <sup>3</sup>	Number of Employees Trained During Calendar Year	PTCIP Year End Goal	Cumulative Number of Employees Trained at End of Calendar Year	Total Reported in PTCIP
Employees who Install, Maintain, Repair, Modify, Inspect, and Test the PTC System	0	0	0	109
Employees who Dispatch Train Operations	0	0	0	6
Train and Engine (Operations) Employees	0	0	0	98
Roadway Worker Employees	0	0	0	30
Direct Supervisors of the Above Employees	0	0	0	16

Please provide any additional narrative for Employee Training below:

In this new Annual Reporting template, the FRA categories do not reconcile with the template categories required for the IP update, nor do the new categories directly comport to a single identity. For example, many of the employees who will install, repair, modify, inspect and test the PTC System are also Roadway Workers. We have allocated employees based on prioritization of PTC responsibility, with an alignment to the numbers identified in our PTCIP. Note, there will be some variation in final training numbers as the work force and its headcount is dynamic with expected changes during the PTC implementation period. We anticipate approximately 260 persons to be trained.

<sup>3</sup> See 49 C.F.R. § 236.1041(a).



## 5. Progress on Implementation Schedule/Milestones

The NICTD PTC System Integration project is progressing in alignment with the PTCIP and established milestones therein.

## 6. Summary Update of Challenges/Risks

NICTD is heavily dependent upon the actions of parties outside of their control with respect to spectrum acquisition and base station deployment.

NICTD must be interoperable with IETMS users METRA and CSS. Therefore NICTD is compelled to use 220MHz spectrum controlled by PTC 220LLC. However, NICTD is currently reliant on the outcome of the Chicago Dense Urban Area Study's resultant installation recommendations and final implementation by participating independent operators. NICTD's communication segment is unavoidably dependent upon using radio spectrum, towers and facilities belonging to other railroads and industry cooperative associations. These conditions render NICTD PTC design, construction, scheduling, implementation and testing decisions fully dependent and subordinate to the design and construction schedules of third parties. Furthermore, the quality of NICTD operations will be directly influenced by reliability and availability of radio infrastructure belonging to independent parties.

NICTD plans to mitigate some of the aforementioned dependencies by using cellular technology. However, some areas of the NICTD right-of-way may lack sufficient cellular coverage. NICTD intends on using a WLAN system, independent of PTC 220LLC facilities and will utilize this sub-system at various fixed locations to communicate with the Wayside Status Relay Service (WSRS) for local messaging of Wayside Interface Unit(s) (WIU) when adjacent or required for the initialization of train movements. Likewise, the WLAN will provide communications transport of various Office Segment data and data communications to and from Federated Links and the train set. The WLAN will provide wireless communications between ground-based communications sub-systems and the PTC equipped vehicles in both the NICTD and the Chicago South Shore fleets. This subsystem is included in the current PTC System design and implementation plan. The WLAN will augment the 220 MHz Radio system and Cellular Radio Modems for communications between the Ground, Wayside and Office Segments of the PTC system and the fleet vehicles.

## 7. Progress on Revenue Service Demonstration (RSD) or Implementation

Required content:

- The total number of route miles on which PTC has been initiated for revenue service demonstration or implemented, as compared to the total number of route miles required to have a PTC system (see Section 1 Summary Table)
- Estimated start date (month and year) for RSD

Segment Identification <sup>4</sup>	Number of Route Miles in Segment	Status at End of Calendar Year <i>Current status of installation/track segment. <b>Choose one:</b></i>	Estimated Start Date for Revenue Service Demonstration (if not already completed)
Segment : 1	72	<input checked="" type="radio"/> Not Started <input type="radio"/> Installing <input type="radio"/> Testing <input type="radio"/> Operational/Complete	10/2018

Please provide any additional narrative for Revenue Service Demonstration or Implementation below:

The Revenue Service Demonstration is anticipated to commence in October of 2018 in alignment with the schedule and milestones outlined in the NICTD PTCIP. All support activities to enable RSD application have been identified and are progressing.

<sup>4</sup> Segment identification should be consistent with segments listed in Section 3.3.

8. Update for Intercity or Commuter Rail Passenger Transportation (if applicable)

If this section is not applicable to your railroad, please mark N/A.

Required content (if applicable):

- For each entity providing regularly scheduled intercity or commuter rail passenger transportation, a description of the resources identified and allocated to implement PTC

Please provide Update for Intercity or Commuter Rail Passenger Transportation below, if applicable:

N/A

9. Update on Interoperability Progress and Other Formal Agreements

Required content:

- For host railroads: provide updates to any agreements and key milestones for all tenant operations
- For tenant railroads: provide updates to any agreements and key milestones for all operations over tracks hosted by another railroad

**Host and Tenant Railroads:** Please provide a general update on interoperability in the textbox below.

As a Tenant Railroad to NICTD, Chicago South Shore and South Bend Railroad is reporting progress in preparing for interoperability on NICTD’s PTC territory. NICTD as a tenant to Metra will coordinate interoperability with Metra when Metra’s Electrified subdivision is in RSD.

**Host Railroads Only:** For each tenant, please provide additional tenant information below.

Tenant Identification <i>(Please add rows for additional tenants as necessary)</i>	Estimated Tenant Locomotive Fleet <i>(if the tenant does not have a separate PTCIP on file)</i>	Current Tenant Implementation Status <i>Choose one:</i>
Chicago South Shore and South Bend Railroad (CSS)	12	<input checked="" type="radio"/> Not Started <input type="radio"/> Installing <input type="radio"/> Testing <input type="radio"/> Operational/Complete

10. Estimated PTC Safety Plan (PTCSP) Submission Date (if not already submitted)

If this section is not applicable to your railroad, please mark N/A.

PTCSP Submission Date
9/2018

Please provide any additional narrative for PTCSP Submission below:

Consistent with the schedule of activities and significant milestones outline in the NICTD PTCIP, the PTCSP is anticipated to be completed and submitted in the third quarter of 2018. A PTC SP has been developed and a working draft is being built upon.

11. Testing and Integration Efforts (if applicable, laboratory, integration, and revenue service demonstration)

Please provide Update on Testing and Integration efforts below:

Consistent with the schedule of activities outlined in our PTCIP, no testing has taken place during calendar year 2015.

## 12. Updated Information That FRA Can Use to Maintain Its Geographic Information System (GIS) Database – Segments Complete and Operable

*In its annual progress reports, a subject railroad or entity may submit a geographic information system (GIS) shapefile to indicate where various rail segments that must have PTC are located, as long as it includes the following fields: (1) a PTC attribute field (coded with “Y” if line segment is to have PTC installed, otherwise left blank); (2) a SUBDIV attribute field (populated with subdivision name); (3) a MONTH attribute field (populated with the month in which PTC is to be installed); and (4) a YEAR attribute field (populated with the year in which PTC is to be installed). A railroad may submit this information by means other than shapefile format.*

Please provide any additional narrative for GIS Information below:

GIS Mapping (shape file) is not available at this time.

Public reporting burden for this information collection is estimated to average 38.41 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is **2130-0553**. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection, including suggestions for reducing this burden to OMB’s Office of Information and Regulatory Affairs, Attn: FRA OMB Desk Officer.