NORTHERN INDIANA PASSENGER RAIL CORRIDOR

PRE-NEPA STUDIES: SUMMARY

Chicago, IL to Ft. Wayne, IN and Lima, OH

Prepared for NIPRA

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HNTB

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1 INTRODUCTION

This document summarizes the initial activities undertaken by the Northern Indiana Passenger Rail Association (NIPRA) to advance future passenger rail service between Chicago and Fort Wayne, IN with an extension of service to Lima, OH (the Project).

This current study phase completed early planning activities that defined the Project purpose and need, analyzed route and service alternatives, identified infrastructure needs and completed conceptual engineering and capital cost estimates. Decisions from these early planning activities will position the Project to complete an environmental review required under the National Environmental Policy Act (NEPA) for a potential future federally funded action. NIPRA anticipates requesting federal funds to complete NEPA requirements and support future Project implementation. The Pre-NEPA outcomes completed during this study will be further refined during detailed service planning, environmental review and preliminary engineering activities during the NEPA phase of the Project.

This document summarizes and builds on the following detailed reports completed by NIPRA and available at http://niprarail.org/pre-nepa/ :

- Project Purpose and Need Report
- Route Alternatives Analysis Report
- Service Alternatives Analysis Report

This summary documents the additional conceptual engineering and capital cost estimates of infrastructure improvements associated with the range of reasonable service alternatives selected during the Service Alternatives Screening Analysis process.

2 PURPOSE AND NEED

As part of the initial activities undertaken, NIPRA developed a detailed Project Purpose and Need statement that informed subsequent route and service alternatives analysis.

The purpose of the Project is to:

- Support economic competitiveness with reliable transportation alternatives.
- Provide convenient travel access in station city centers.
- Provide attractive travel times competitive with autos.
- Maintain cost-effectiveness by maximizing use of existing rail infrastructure.

The need for the Project includes:

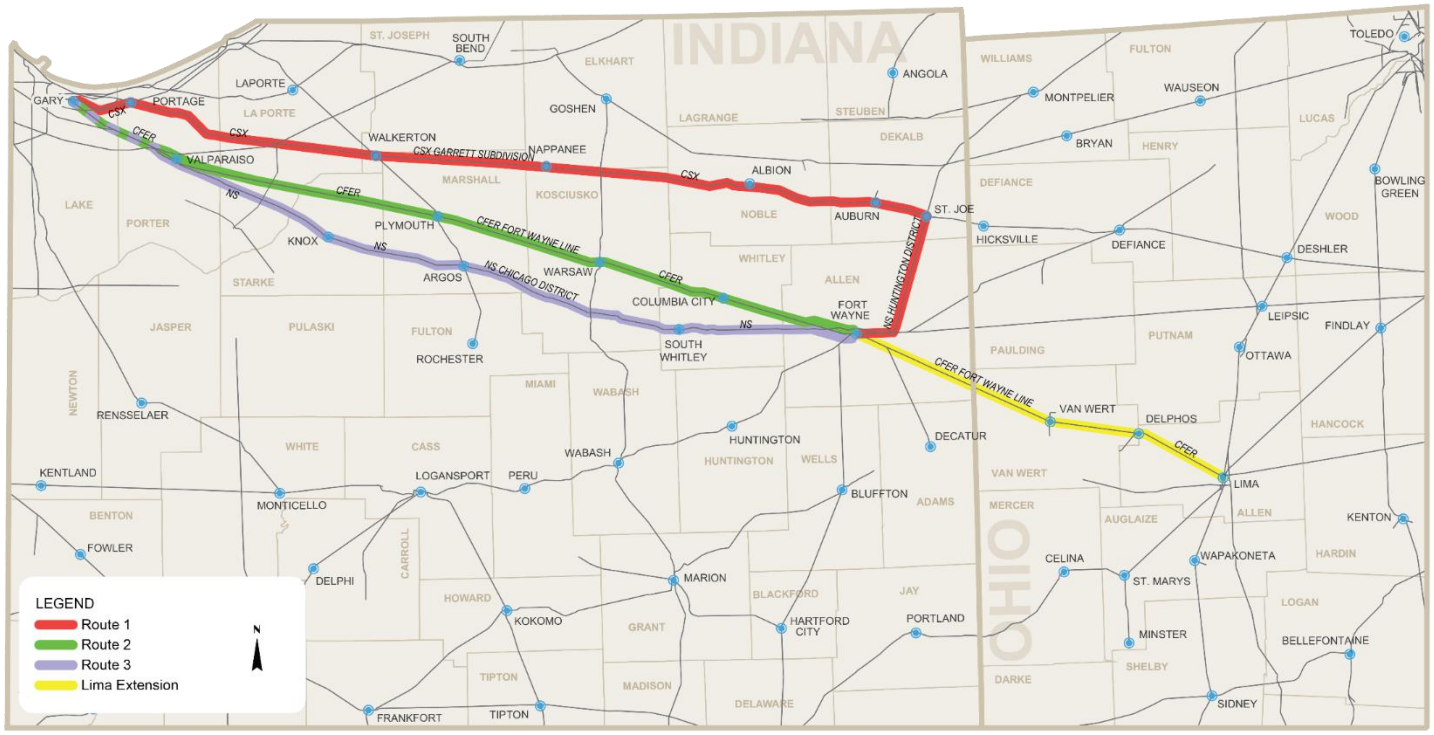
- **Alternatives do not meet corridor travel needs**: Communities in the project corridor have limited transportation options, which means most business and personal travelers rely on autos.
- **Population and employment growth will increase travel demand and place greater pressure on existing transportation modes:** Continued reliance on auto travel will contribute to unreliable travel times.
- **Highway system congestion and reliability concerns:** Highway congestion into Chicago, lack of direct freeway access in the project corridor, and inclement weather cause unreliable travel times.
- **More transportation choices are needed to support the region's economic competitiveness and facilitate its economic development goals:** The corridor is home to significant industries and higher

education facilities. Current travel challenges impact economic competitiveness and the ability to attract and keep people and workers in the region.

3 Route Alternatives Analysis

Three routes, as illustrated in Figure 1 were identified as routes that could potentially provide passenger rail service to the communities identified in the purpose and need. The three routes were evaluated based on three criteria: communities served, route length and existing freight and track capacity limitations.

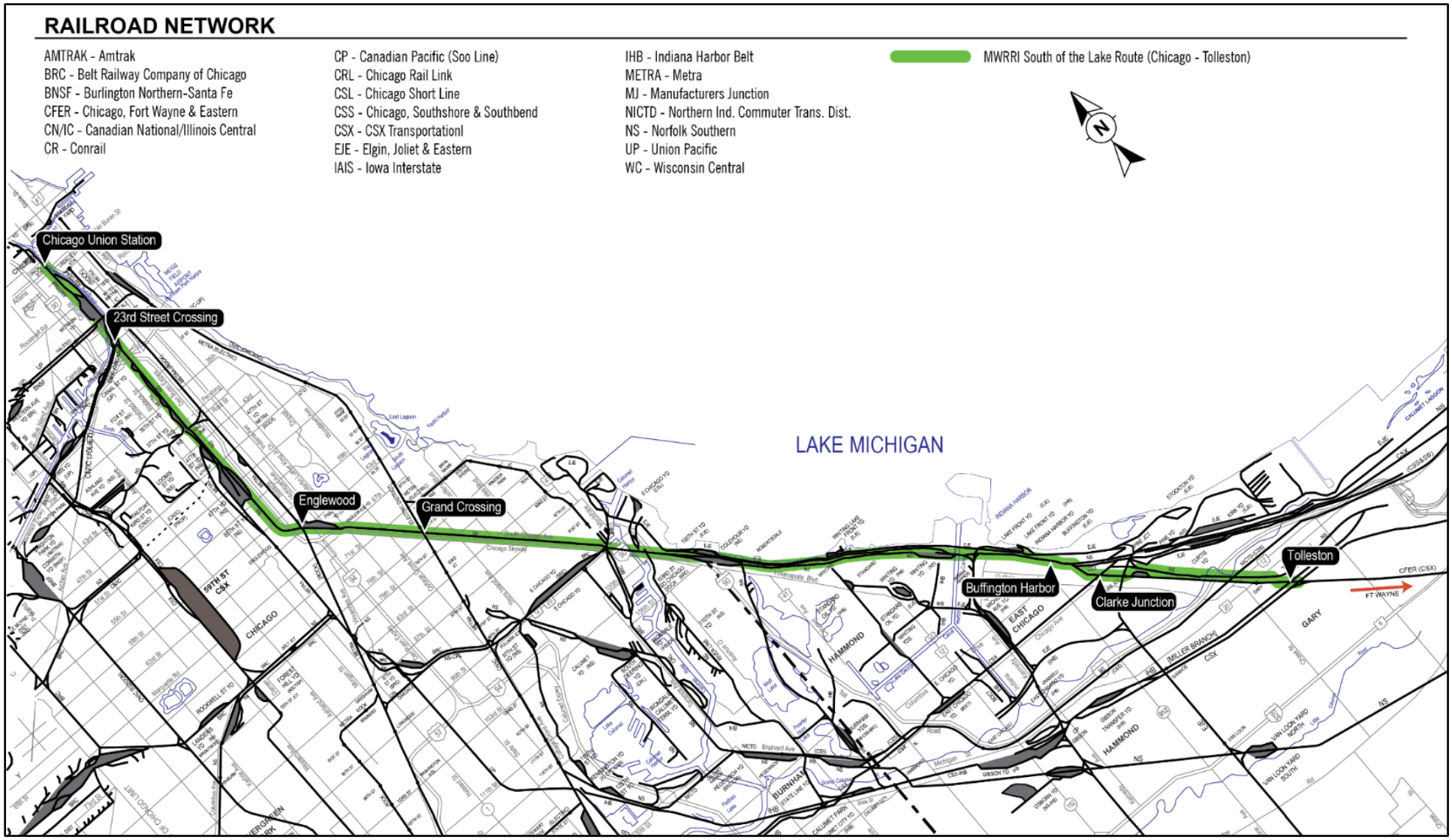
Figure 1: Route Alternatives



Based on the above criteria, the route alternatives analysis[1] for the Project concluded that implementing new passenger rail service on the Chicago, Fort Wayne & Eastern (CFER) Fort Wayne Line between Tolleston (Gary, IN) and Lima, OH best met the Project's purpose and need (Route 2 in Figure 1). In particular, Route 2 had the least amount of competing freight railroad traffic and congestion and was the shortest in length while serving key major cities along the way. Between Chicago Union Station and Tolleston, the service would utilize the route proposed by the Midwest Regional Rail Initiative to take advantage of passenger rail planning already completed in the "South of the Lake" area, which includes the segment between Chicago Union Station and Tolleston (see Figure 2).[2] This identified route into Chicago is one of four routes evaluated in the *Chicago-Detroit/Pontiac Passenger Rail Corridor Program Tier 1 Draft EIS* published in September 2014. The *Chicago-Detroit/Pontiac Passenger Rail Corridor Program* was commissioned by the Michigan Department of Transportation to identify a preferred route for passenger rail in the South of the Lake.[3]

[1] City of Fort Wayne, IN. *Northern Indiana Passenger Rail Corridor: Route Alternatives Analysis Report*. August 2017.
[2] The "South of the Lake" describes the extensive railroad network that is located south of Lake Michigan between Chicago and Porter, IN and includes the section between Chicago Union Station and Tolleston.
[3] FRA rescinded the Notice of Intent to prepare a Tier 1 Draft EIS on November 30, 2018. However, the associated alternatives analysis and service development plan may be used for further environmental reviews.

Figure 2: Identified Reasonable Route Alternative for the Northern Indiana Passenger Rail Corridor (Chicago Union Station - Tolleston)



4 SERVICE ALTERNATIVES ANALYSIS

Following the selection of the preferred route, NIPRA completed a service alternatives analysis to evaluate five proposed service alternatives as identified in Table 1. These five service alternatives were selected for analysis because they represent logical speeds and frequencies for a new service while also considering opportunities to provide a more robust and faster service.

Table 1: Service Alternatives

Frequency (Daily Roundtrips)	79 MPH	110 MPH
2	X	
4	X	X
6	X	X

4.1 Analysis Methodology

Each service alternative was analyzed based on the following screening criteria:

- Ridership
- Frequency
- Travel Time
- Equipment Needs
- Equipment Utilization
- Passenger Ticket Revenue
- Operating and Maintenance Costs
- Operating Ratio and Surplus/Deficit
- Infrastructure Capital Needs

The selected screening criteria provide insight into the expected performance of each service alternative. The results of the screening analysis were used to compare the service alternatives among each other and identify a reasonable range of alternatives to be further evaluated and refined in a future NEPA document.

4.2 Identification of Reasonable Range of Service Alternatives

Based on the results of service alternatives analysis documented in Figure 3 below, NIPRA determined that the alternatives with six daily roundtrips (DRT) at 79 and 110 mph should not be considered in future planning for passenger rail in the Corridor. The incremental increase in frequency beyond four DRT is not a cost-effective solution. This conclusion is supported by the comparatively high capital investment and annual operating deficit, coupled with diminishing incremental increases in ridership and revenue, compared to the ridership increases at the four DRT service level. Ridership and revenue each increase approximately 19 percent when frequency is increased from four to six DRT, which is about half of the return seen when increasing from two to four DRT. Additionally, the six DRT service alternatives result in the two largest annual operating deficits – ranging from 2 to 4.5 times the other alternatives - making it more difficult to sustain the system after implementation. Under current federal law these deficits would be the responsibility of the state and local governments served by the corridor.

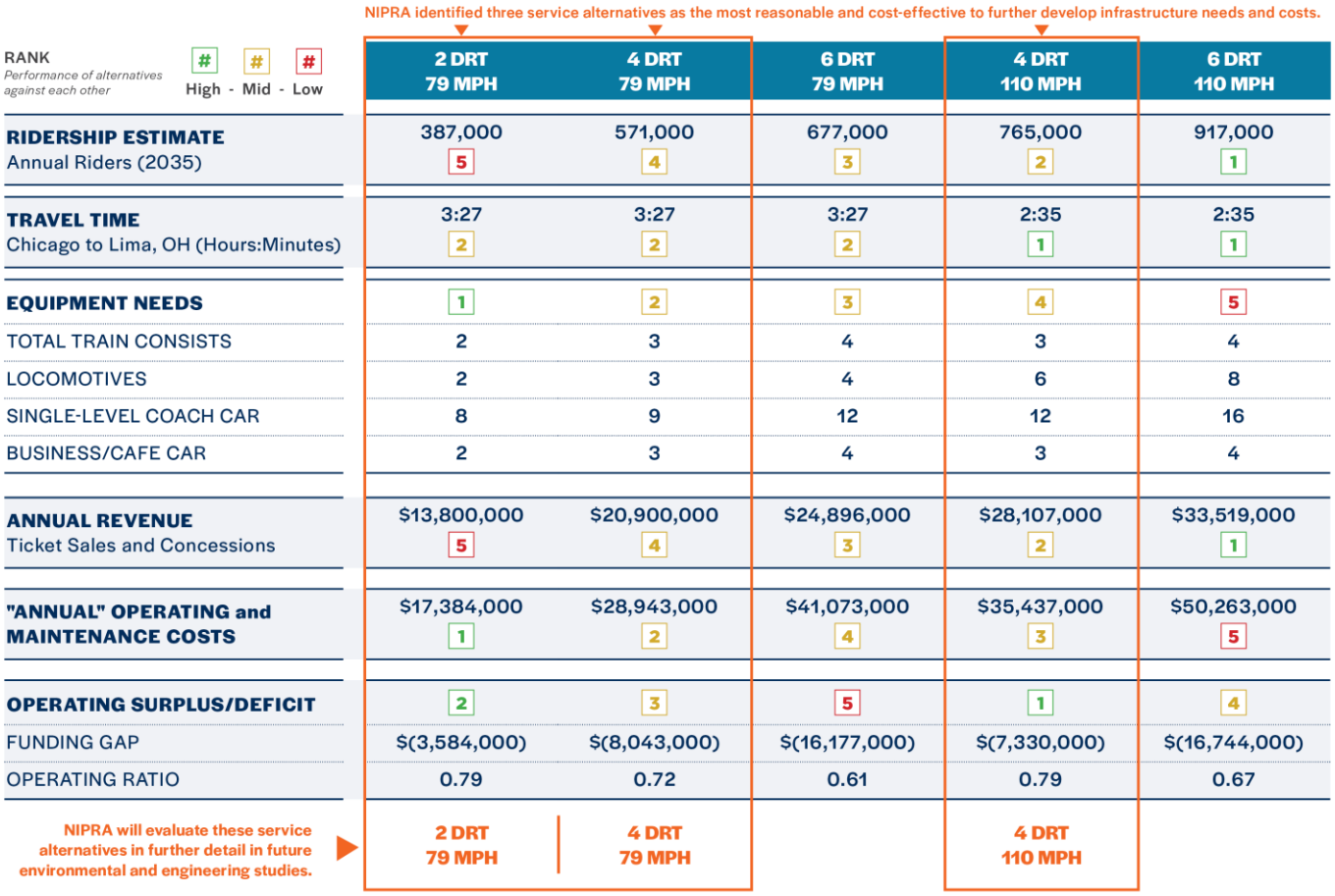
The two and four DRT at 79 mph and four DRT at 110 mph service alternatives are recommended to be carried forward as the range of reasonable alternatives for further analysis in a future environmental document as required by NEPA (See Figure 3). The three service alternatives serve all aspects of the Project's purpose and need. Each service alternative establishes direct and reliable passenger rail service to the communities who have invested in the planning of the Northern Indiana Passenger Rail Corridor and are cost-effective solutions that balance ridership and revenue with the cost of providing the service.

The three reasonable service alternatives provide logical incremental steps to gradually improving service, while maintaining cost-effectiveness and long-term sustainability. It is anticipated that the implementation of this service could be phased over time to start service as quickly as possible while spreading the cost of construction over a series of years. To save on up-front capital costs the Project could be initiated with two or four DRT at 79 mph, providing a lower-risk alternative to initiating service at 110 mph. However, there is a trade-off between lower capital costs and ridership. While the two DRT at 79 mph and the four DRT at 110 mph alternatives have almost identical operating ratios (0.79), the four DRT at 110 mph serves 98 percent more riders than under the two DRT at 79 mph alternative.

The 98 percent increase in ridership can be realized incrementally by increasing frequency and speed in separate phases, or all at once if all required funding is available. If the service is phased, forecasted ridership and revenue increases 48 percent and 51 percent, respectively as frequency is increased from two to four DRT. Ridership and revenue increase another 34 percent each as speed is increased from 79 to 110 mph.

The four DRT at 110 mph service alternative also provides a sustainable operating scenario that balances ridership, revenue, and annual operating costs. The four DRT at 110 mph alternative carries an operating ratio of 0.79 and has the second lowest required operating subsidy, suggesting a relatively high level of efficiency and cost-effectiveness. Therefore, it should be a long-term goal to identify and obtain funding that can be invested in the Corridor's rail infrastructure so that it can be operated at four DRT at 110 mph to ease the annual operating cost burden. Additionally, the implementation of the four DRT at 110 mph service could also fully leverage the proposed investment between Gary, IN (near Tolleston) and Chicago as identified in the Chicago-Detroit/Pontiac Passenger Rail Corridor Program Tier 1 Draft EIS, if project sponsors pursued the proposed 2035 implementation schedule.

Figure 3: Service Alternatives Summary



4.2.1 Travel Time

The travel time of the three screened service alternatives ranges from 3 hours, 27 minutes for 79 mph service to 2 hours, 35 minutes for the 110 mph service. Both 79 mph and 110 mph travel times are competitive with auto travel times in this congested corridor which can range from 3:50 to 5:20 depending on time of day. Example travel schedules are summarized in Table 2.

Table 2: Trip Time Schedules*

2 DRT at 79 mph	4 at DRT 79 mph	4 at DRT 110 mph
Trainset #1	**Trainset #1**	**Trainset #1**
Depart Lima 4:20AM, Arrive Chicago 7:47AM	Depart Lima 4:20AM, Arrive Chicago 7:47AM	Depart Lima 5:40AM, Arrive Chicago 8:15AM
Depart Chicago 4:30PM, Arrive Lima 7:57PM	Depart Chicago 8:27AM, Arrive Lima 11:54 AM	Depart Chicago 9:15AM, Arrive Lima 11:50 AM
Trainset #2	Depart Lima 1:03PM, Arrive Chicago 4:30PM	Depart Lima 1:25PM, Arrive Chicago 4:00PM
Depart Lima 8:00AM, Arrive Chicago 11:27AM	Depart Chicago 6:41PM, Arrive Lima 10:08PM	Depart Chicago 6:34PM, Arrive Lima 9:09pm
Depart Chicago 5:40PM, Arrive Lima 9:07PM	**Trainset #2**	**Trainset #2**
	Depart Lima 8:00AM, Arrive Chicago 11:27AM	Depart Lima 9:00AM, Arrive Chicago 11:35AM
	Depart Chicago 4:35PM, Arrive Lima 8:02PM	Depart Chicago 4:35PM, Arrive Lima 7:10PM
	Trainset #3	**Trainset #3**
	Depart Chicago 1:30PM, Arrive Lima 4:57PM	Depart Chicago 1:40PM, Arrive Lima 4:15PM
	Depart Lima 6:14PM, Arrive Chicago 9:41PM	Depart Lima 7:51PM, Arrive Chicago 10:26PM

*Times reported in Central Standard Time

4.2.2 Ridership

The analysis of ridership is based on a forecasted ridership for the year 2035 that was developed by Transportation Economics & Management Systems, Inc (TEMS) with the use of the COMPASS™ Travel Market Forecast Model. The model generates annual ridership (and revenue) forecasts for the proposed rail service by analyzing total travel demand in the Corridor and preference to transportation modes that are available in the Corridor. Forecasted changes in travel demand and mode preference within the Corridor consider socioeconomic variables, such as population, employment, and income as well as travel time, frequency, and cost of available transportation modes.

For the purposes of the Service Alternatives Analysis Report, a Reference Case was chosen to compare all service alternatives using the same parameters. The Reference Case assumes the passenger rail service operates as a "stand alone" corridor without Chicago Hub Connectivity from other routes terminating in Chicago. The scenario was chosen because it reflects a conservative estimate as a standalone service while still utilizing reasonably expected forecasts for fuel costs and socioeconomic growth. The ridership and revenues of the Reference Case are presented in Figure 3.

More details regarding the performance of the various service alternatives utilizing the Reference Case estimates can be found in the Service Alternatives Analysis Report.

4.2.3 Subsidy Required

The operating surplus/deficit shown in Figure 3 compares the annual operating and maintenance costs to the annual operating revenue, which includes passenger ticket revenue and food and beverage revenue. The data Figure 3 shows that all service alternatives present a funding gap during the initial years of operation. See Section 6 for estimates of 20-year cash flow for each of the reasonable service alternatives. The operating

deficit is the annual total that the funding partners would be required to pay to operate the service after the operating revenue is considered.

4.2.4 Equipment Needed

The amount of equipment needed can have a significant impact on the capital cost of a given level of service if coaches and locomotives are purchased. One full trainset can cost between $25 million and $35 million when purchased new. Equipment can also have a significant impact on operating cost if equipment is provided by Amtrak and an annual capital equipment charge is included in Amtrak's bill to the service operator. This capital charge can be in the range of 10 percent of overall annual operating costs.

Equipment needs are based on the number of locomotives needed to haul a train at a desired speed, the number of coach cars needed to haul forecasted ridership, and the number of train consists required to cover the proposed schedules. Based on current Amtrak locomotive equipment, it is expected that 79 mph service alternatives will require one locomotive per train consist, while 110 mph service alternatives will require two locomotives to fully maximize higher allowable speeds. Coach car needs are based on the seating capacity needed to accommodate forecasted average daily ridership per train for each service alternative (See Figure 3).

4.3 Stations

Each station community (Valparaiso, Plymouth, Warsaw, Ft. Wayne, IN and Lima, OH) would be responsible for station site development. Some communities, such as Lima and Ft. Wayne are seeking to reuse or renovate existing stations, while other communities are considering new station sites. The future NEPA phase of the Project would include a formal station alternatives analysis to select preferred station sites with input from each station community.

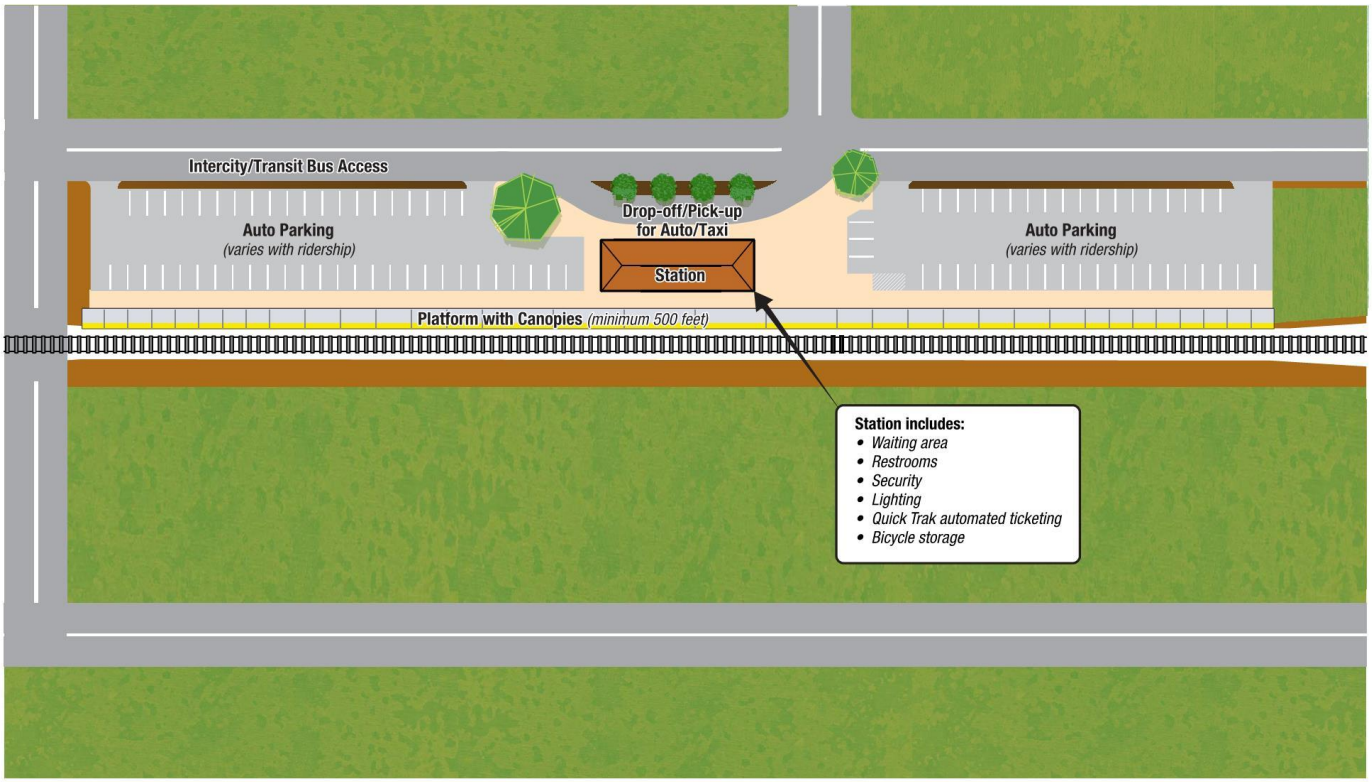
A conceptual station layout/schematic is presented in Figure 4. This layout represents an illustrative example of what intermediate (non-Chicago) stations could look like in station communities. The layout includes parking spaces, a passenger waiting area, a passenger drop-off area and a platform. The platform length should be a minimum of 500 feet based on the equipment. The need for double track or single track at stations will depend on the ultimate service alternative selected. The potential need for special track infrastructure and passenger walkways at double track locations will be assessed in future project phases.

Given ridership estimates, most intermediate stations on this service would likely fall into Amtrak's "Medium Station" planning category, which accommodate between 100,000 to 400,000 annual riders. The typical medium stations on this route would include a waiting area, Quick Trak automated ticketing and restrooms. Given technology changes for ticketing and reduced need for baggage checking on this short route, it is assumed that none of the intermediate stations would be manned.

During an initial start-up phase the passenger rail service could operate without a full buildout of the stations. To accommodate initial operations, stations would minimally require platforms, a canopy, parking, lighting and security to allow for passenger service.

Potential station locations in each station community are described in the Service Alternatives Analysis.

Figure 4: Conceptual Station Layout



5 INFRASTRUCTURE CAPITAL INVESTMENT

Conceptual infrastructure cost estimates were developed for each of the three reasonable service alternatives. These infrastructure cost estimates are required to support both passenger and freight operations between Tolleston (Gary, IN) and Lima, OH and were developed using existing publicly available freight railroad frequency data and operating speed assumptions along with proposed passenger train schedules[4]. Conceptual schematics of proposed infrastructure improvements were completed for each of the three reasonable service alternatives and are provided in Appendix A. Infrastructure improvements specified include track and bridge improvements, new and improved turnouts/switches and diamond crossings, improved grade crossing approaches and warning devices[5], and improved signalization and communications equipment. The schematics were utilized in development and documentation of infrastructure capital costs. Estimated infrastructure costs are summarized in Table 3. Full capital cost details are provided in Appendix B. Infrastructure needs and capital cost estimates will be further refined during future host railroad coordination, service planning and preliminary engineering efforts to support the NEPA document.

[4] Infrastructure needs and between Gary and Chicago are included in studies prepared for the Chicago-Detroit Tier 1 Draft Environmental Impact Statement. The cost to construct infrastructure west of Gary, into Chicago Union Station are assumed in the build out of the Chicago-Detroit service described in the Tier 1 Draft Environmental Impact Statement. These infrastructure costs are assumed to be shared by the states of Michigan, Indiana and Illinois as a part of a separate project (or projects).

[5] Turnouts/switches are equipment and special tracks that change the direction of a train and move it onto a different track. A diamond crossing is a railroad junction of special track work allowing two tracks to cross each other at-grade. Grade crossings are where roadways or trails cross the track.

Table 3: Infrastructure capital Cost Estimates

CRITERIA	2 DRT 79 MPH	4 DRT 79 MPH	4 DRT 110 MPH
Capital Cost Estimate (2018 $)	$898,081,041	$978,449,391	$1,228,416,895

6 OPERATIONS AND MAINTENANCE CASH FLOW

Operations and maintenance costs and revenues have been estimated to create a 20-year cash flow for each of the three reasonable service alternatives. In accordance with a potential phasing strategy discussed in Section 4.2, the 79 mph alternatives have a start date of 2030 while the four DRT at 110 mph alternative has a start date of 2035, consistent with the start date for 110 mph assumed in the Chicago-Detroit Tier 1 Draft Environmental Impact Statement. Full cash flow data and assumptions are shown in Appendix C. The cash flow estimates are conceptual and will be further refined in future project phases.

Table 4 summarizes the cash flow under the two DRT at 79 mph alternative. Under this alternative the service would require a subsidy of around $5 million when service is initiated in 2030, however by 2050 the revenue estimates outpace the expenses for a net gain of $3.5 million.

Table 4: 20-Year Cash Flow – Two DRT at 79 mph

Year	Total Revenue	Total Expenses	Estimated Operating Payment*	Estimated Equipment Capital Cost	Total Estimated Payment *
2030	$11,951,000	$15,258,000	$3,307,000	$1,775,000	$5,082,000
2031	$12,320,800	$15,328,200	$3,007,400	$1,775,000	$4,782,400
2032	$12,690,600	$15,398,400	$2,707,800	$1,775,000	$4,482,800
2033	$13,060,400	$15,468,600	$2,408,200	$1,775,000	$4,183,200
2034	$13,430,200	$15,538,800	$2,108,600	$1,775,000	$3,883,600
2035	$13,800,000	$15,609,000	$1,809,000	$1,775,000	$3,584,000
2036	$14,302,600	$15,688,900	$1,386,300	$1,775,000	$3,161,300
2037	$14,805,200	$15,768,800	$963,600	$1,775,000	$2,738,600
2038	$15,307,800	$15,848,700	$540,900	$1,775,000	$2,315,900
2039	$15,810,400	$15,928,600	$118,200	$1,775,000	$1,893,200
2040	$16,313,000	$16,008,500	-$304,500	$1,775,000	$1,470,500
2041	$16,815,600	$16,088,400	-$727,200	$1,775,000	$1,047,800
2042	$17,318,200	$16,168,300	-$1,149,900	$1,775,000	$625,100
2043	$17,820,800	$16,248,200	-$1,572,600	$1,775,000	$202,400
2044	$18,323,400	$16,328,100	-$1,995,300	$1,775,000	-$220,300
2045	$18,826,000	$16,408,000	-$2,418,000	$1,775,000	-$643,000
2046	$19,528,500	$16,525,800	-$3,002,700	$1,775,000	-$1,227,700
2047	$20,231,000	$16,643,600	-$3,587,400	$1,775,000	-$1,812,400
2048	$20,933,500	$16,761,400	-$4,172,100	$1,775,000	-$2,397,100
2049	$21,636,000	$16,879,200	-$4,756,800	$1,775,000	-$2,981,800
2050	$22,338,500	$16,997,000	-$5,341,500	$1,775,000	-$3,566,500

*Negative payment amount indicates years when the service is expected to generate higher revenues than costs.

Table 5 summarizes the cash flow under the four DRT at 79 mph alternative. Under this alternative the service would require a subsidy of around $10.3 million when service is initiated in 2030, however by 2050 the revenue estimates outpace the expenses for a net gain of $2.7 million.

Table 5: 20-Year Cash Flow – Four DRT at 79 mph

Year	Total Revenue	Total Expenses	Estimated Operating Payment*	Estimated Equipment Capital Cost	Total Estimated Payment *
2030	$18,095,385	$26,192,903	$8,097,518	$2,265,327	$10,362,845
2031	$18,656,308	$26,289,923	$7,633,615	$2,265,327	$9,898,942
2032	$19,217,231	$26,386,942	$7,169,711	$2,265,327	$9,435,038
2033	$19,778,154	$26,483,961	$6,705,807	$2,265,327	$8,971,134
2034	$20,339,077	$26,580,981	$6,241,904	$2,265,327	$8,507,231
2035	$20,900,000	$26,678,000	$5,778,000	$2,265,000	$8,043,000
2036	$21,666,400	$26,808,600	$5,142,200	$2,265,000	$7,407,200
2037	$22,432,800	$26,939,200	$4,506,400	$2,265,000	$6,771,400
2038	$23,199,200	$27,069,800	$3,870,600	$2,265,000	$6,135,600
2039	$23,965,600	$27,200,400	$3,234,800	$2,265,000	$5,499,800
2040	$24,732,000	$27,331,000	$2,599,000	$2,265,000	$4,864,000
2041	$25,498,400	$27,461,600	$1,963,200	$2,265,000	$4,228,200
2042	$26,264,800	$27,592,200	$1,327,400	$2,265,000	$3,592,400
2043	$27,031,200	$27,722,800	$691,600	$2,265,000	$2,956,600
2044	$27,797,600	$27,853,400	$55,800	$2,265,000	$2,320,800
2045	$28,564,000	$27,984,000	-$580,000	$2,265,000	$1,685,000
2046	$29,613,700	$28,160,800	-$1,452,900	$2,265,000	$812,100
2047	$30,663,400	$28,337,600	-$2,325,800	$2,265,000	-$60,800
2048	$31,713,100	$28,514,400	-$3,198,700	$2,265,000	-$933,700
2049	$32,762,800	$28,691,200	-$4,071,600	$2,265,000	-$1,806,600
2050	$33,812,500	$28,868,000	-$4,944,500	$2,265,000	-$2,679,500

*Negative payment amount indicates years when the service is expected to generate higher revenues than costs.

Table 6 summarizes the cash flow under the four DRT at 110 mph alternative. Under this alternative the service would require a subsidy of just over $7.3 million when service is initiated in 2035, however by 2055 the revenue estimates outpace the expenses for a net gain of $6.9 million.

Table 6: 20-Year Cash Flow – Four DRT at 110 mph

Year	Total Revenue	Total Expenses	Estimated Operating Payment*	Estimated Equipment Capital Cost	Total Estimated Payment *
2035	$28,107,000	$32,096,000	$3,989,000	$3,341,000	$7,330,000
2036	$29,137,900	$32,270,600	$3,132,700	$3,341,000	$6,473,700
2037	$30,168,800	$32,445,200	$2,276,400	$3,341,000	$5,617,400
2038	$31,199,700	$32,619,800	$1,420,100	$3,341,000	$4,761,100
2039	$32,230,600	$32,794,400	$563,800	$3,341,000	$3,904,800
2040	$33,261,500	$32,969,000	-$292,500	$3,341,000	$3,048,500
2041	$34,292,400	$33,143,600	-$1,148,800	$3,341,000	$2,192,200
2042	$35,323,300	$33,318,200	-$2,005,100	$3,341,000	$1,335,900
2043	$36,354,200	$33,492,800	-$2,861,400	$3,341,000	$479,600
2044	$37,385,100	$33,667,400	-$3,717,700	$3,341,000	-$376,700
2045	$38,416,000	$33,842,000	-$4,574,000	$3,341,000	-$1,233,000
2046	$39,782,500	$34,080,400	-$5,702,100	$3,341,000	-$2,361,100
2047	$41,149,000	$34,318,800	-$6,830,200	$3,341,000	-$3,489,200
2048	$42,515,500	$34,557,200	-$7,958,300	$3,341,000	-$4,617,300
2049	$43,882,000	$34,795,600	-$9,086,400	$3,341,000	-$5,745,400
2050	$45,248,500	$35,034,000	-$10,214,500	$3,341,000	-$6,873,500
2051	$46,615,000	$35,272,400	-$11,342,600	$3,341,000	-$8,001,600
2052	$47,981,500	$35,510,800	-$12,470,700	$3,341,000	-$9,129,700
2053	$49,348,000	$35,749,200	-$13,598,800	$3,341,000	-$10,257,800
2054	$50,714,500	$35,987,600	-$14,726,900	$3,341,000	-$11,385,900
2055	$52,081,000	$36,226,000	-$15,855,000	$3,341,000	-$12,514,000

*Negative payment amount indicates years when the service is expected to generate higher revenues than costs.

7 PUBLIC OUTREACH

As part of Pre-NEPA studies, NIPRA hosted four public meetings to present the study findings. NIPRA advertised the meetings through press releases and local governments announcement. Locations and attendance are summarized in Table 7. NIPRA representatives presented a summary of the study findings and answered questions in an open forum format. Display boards of key findings were also available for public review and further discussion with Project staff.

Table 7: Summary of Public Meetings

Date/Time	Location	Attendees
October 23, 2018 5:30 p.m.- 7:30 p.m.	Lima Municipal Center, Lima, OH	28 attendees
October 24, 2018 11:30 a.m. to 1:30 p.m.	Allen County Public Library, Ft. Wayne, IN	88 attendees[6]
October 24, 2018 5 p.m. – 7 p.m.	Warsaw City Hall, Warsaw, IN	26 attendees
October 25, 2018 11:30 a.m. to 1:30 p.m.	Valparaiso Chamber of Commerce, Valparaiso, IN	15 attendees

Overall comments received at the public meeting supported the Project. Nine written comments were received as summarized in Table 8.

Table 8: Summary of Public Meeting Comments

Comment theme	Number of Comments
General support to implement passenger rail service	5
Suggest an alternative Lima, OH station near Lima Mall *(response: A formal station site alternatives analysis would be conducted during a future NEPA study for the Project)*	1
What is the possibility of restoring public transit to Amtrak station in Waterloo, IN from Ft. Wayne *(response: Additional public transit considerations are outside the scope of this study)*	1
Has consideration been given to walking/bike paths on any new bridges, especially leading to trails. (*response: Consideration of paths are outside the scope of this study. Railroad bridges are within a privately-owned freight corridor and adding paths would conflict with active freight operations.)*	1
Comment on meeting: Helpful presentation; direct questions to boards vs open forum	1

8 CONCEPTUAL IMPLEMENTATION SCHEDULE

A preliminary implementation schedule has been developed, assuming congressional action on implementation funding in 2021.

- Complete current corridor alternatives analysis work: December 2018
- Obtain Federal, State and/or Local funding for NEPA/30 percent design: December 2019
- Complete NEPA/30 percent design: December 2021
- Obtain Federal, State, Local funding for final design & construction: December 2023

[6] Several more attendees did not sign attendance sheets and a visual count identified at least 100 attendees in the audience during the formal presentation.

- Complete final design and railroad agreements: December 2025
- Complete construction: December 2029
- Complete equipment acquisition and pre-revenue testing: December 2030

A very aggressive funding scenario could see service start as early as 2026, but funding would depend on the legislative climate to support funding and an accelerated schedule,

9 Next Steps

Following completion of this pre-NEPA project phase, the NIPRA will advance the Project into formal environmental review and engineering, pending funding availability. The next phase of the Project would include environmental documentation, a service development plan (to further refine and support selecting a preferred alternative) and preliminary engineering plans. Those tasks will lay the foundation for advancement of final design engineering and construction.

APPENDIX A: CONCEPTUAL SCHEMATICS

Conceptual schematics are based on publicly available sources. Further refinement of capital improvements and capital costs will occur during future host railroad coordination, service planning and preliminary engineering efforts.

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)
PASSENGER RAIL SERVICE

CONCEPT PLAN FOR TRACK SCHEMATICS FOR EXISTING CONDITIONS, PROPOSED 79MPH AT 2 ROUND TRIP ALTERNATIVE



LEGEND

CFE MILEPOST — 415 | 414 | 414

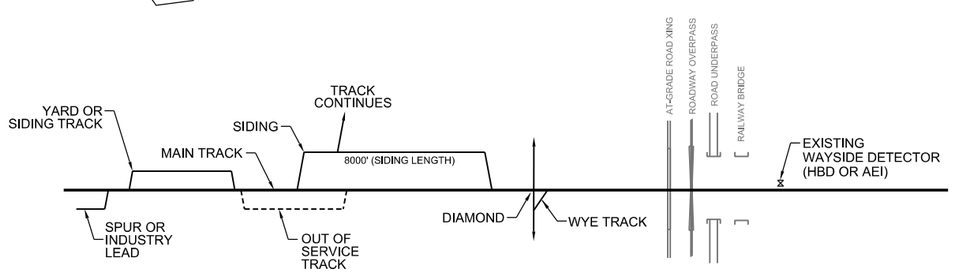
ACTUAL MILEAGE FROM CHICAGO UNION STATION — 85 | 86 | 87

STATION — Hanna

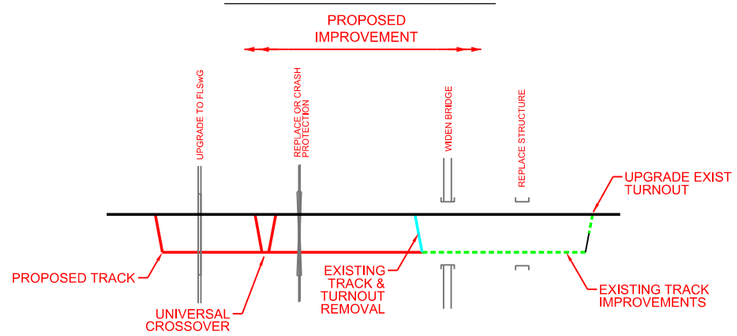
SUBDIVISION BOUNDARY — CFE FORT WAYNE SUBDIVISION | CFE LIMA SUBDIVISION

PROPOSED PASSENGER STATION

EXIST SCHEMATIC



PROPOSED SCHEMATIC



PLAN REVISIONS		
DATE	SHEET NO.	APPROVER

HNTB

11414 West Park Place, Suite 300
Milwaukee, WI 53224
(414) 359-2300

10 West Mifflin Street, Suite 300
Madison, WI 53703
(608) 294-5000

CONCEPTUAL DESIGN
NOT FOR CONSTRUCTION

DRAFT
DATE: 09/26/2018

ABBREVIATIONS

GENERAL ABBREVIATIONS

CFE	CHICAGO , FORT WAYNE & EASTERN RAILROAD
NS	NORFOLK SOUTHERN RAILWAY
CSX	CSX TRANSPORTATION
CN	CANADIAN NATIONAL RAILWAY
SUB	RAILWAY SUBDIVISION
TRK	TRACK
EB	EAST BOUND
WB	WEST BOUND
MOW	MAINTENANCE OF WAY
XO	CROSSOVER
UXO	UNIVERSAL CROSSOVER
POXO	POWER OPERATED CROSSOVER
HTTO	HAND THROW TURNOUT
ELTO	ELECTRIC LOCK TURNOUT
POTO	POWER OPERATED TURNOUT
O.W.L.S	ONE-WAY LOW SPEED DIAMOND

CROSSING ABBREVIATIONS

XB	CROSS BUCKS
XBwS	CROSS BUCKS WITH STOP SIGNS
FLS	FLASHING LIGHT SIGNALS
CFLS	CANTILEVERED FLASHING LIGHT SIGNALS
wG	WITH GATES

BRIDGE TYPE ABBREVIATIONS

BD	BALLAST DECK
OD	OPEN DECK
AMG	DECK PLATE GIRDER (MULTIPLE)
TG	THRU GIRDER
CB	CONCRETE BRIDGE
IB	I-BEAM
SWB	SWING BRIDGE
SB	STEEL BRIDGE
TPG	THRU-PLATE GIRDER
TDG	TWIN DECK GIRDER
C3	THRU PLATE GIRDER (4 STRINGERS)
C4	THRU PLATE GIRDER (2 STRINGERS)
PT	PILE TRESTLE
DG	DECK GIRDER
DPG	DECK PLATE GIRDER
IBG	I-BEAM GIRDER (ROLLED)
DT	DECK TRUSS
TPB	TIMBER PILE BRIDGE
EG	"E" GIRDER
LSB	LIFT SPAN BRIDGE

CURVATURE — 0°00' RT CURVE / 0°00' LT CURVE

FREIGHT RAIL SPEED — 40F

PASSENGER RAIL SPEED — 60P

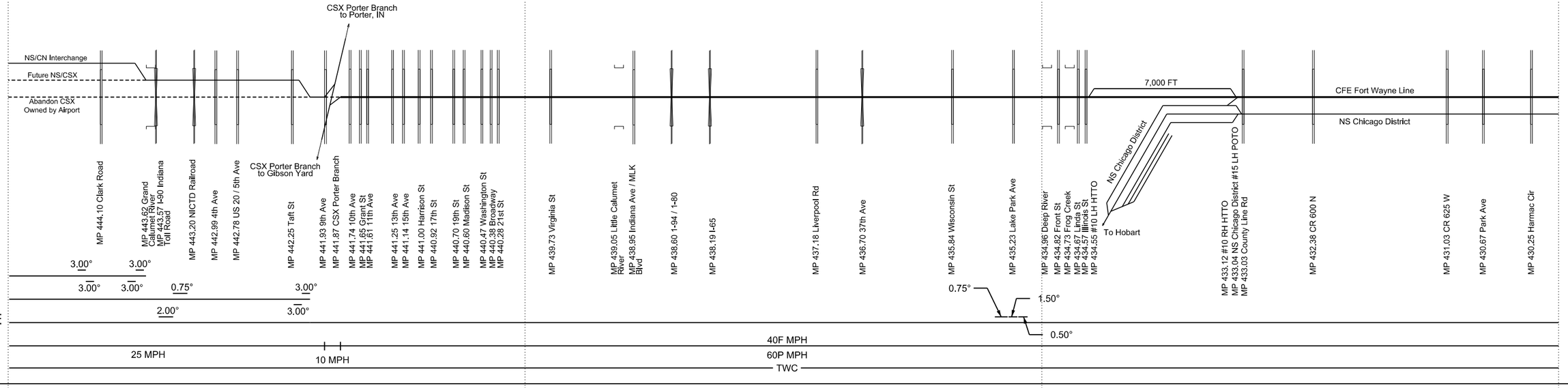
SIGNAL SYSTEM — PTC

CUS MP 23.65 25 30 35

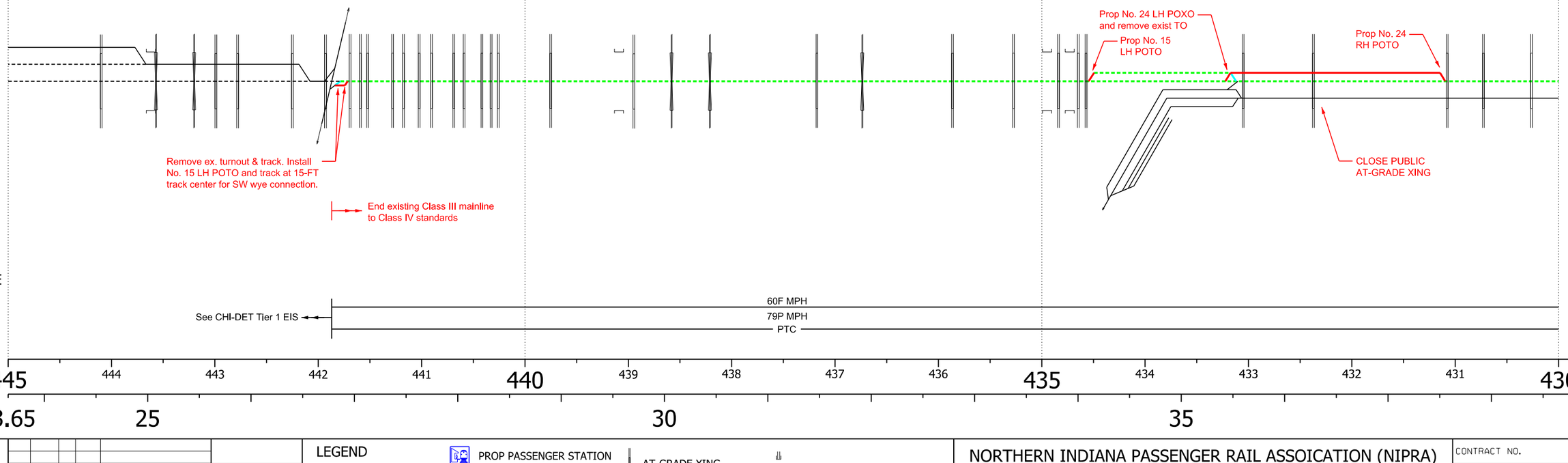
CFE MP 445 444 443 442 441 440 439 438 437 436 435 434 433 432 431 430

Tolleston Gary Liverpool Hobart Wheeler

EXISTING



PROPOSED



CFE MP 445 444 443 442 441 440 439 438 437 436 435 434 433 432 431 430

CUS MP 23.65 25 30 35

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

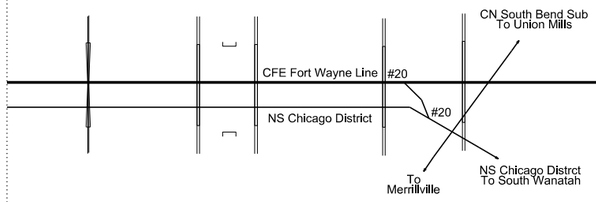
SHEET NO. 2 of 14

CUS MP 40 45 50

CFE MP 430 429 428 427 426 425 424 423 422 421 420 419 418 417 416 415

Valparaiso Wanatah

EXISTING



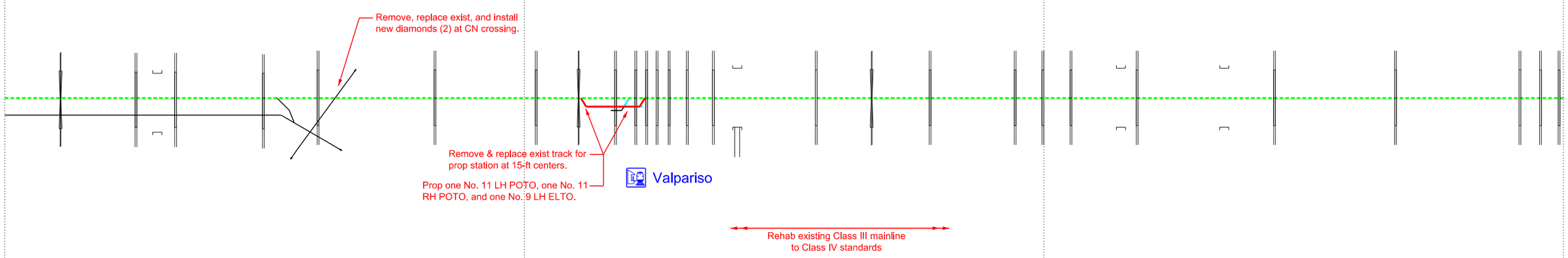
MP 429.43 CR 475 W
MP 428.68 CR 450 N
MP 428.51 Salt Creek
MP 428.32 CR 375 W
MP 427.50 CR 400 N
MP 427.38 NS Chicago District #15 RH POTO
MP 426.93 Tower Rd
MP 426.81 CN South Bend Subdivision
MP 425.81 Froberg Rd
MP 424.81 Clifford Rd
MP 424.45 Lincoln Hwy
MP 424.41 #10 RH HTTO
MP 424.10 Private
MP 423.99 #10 LH HTTO
MP 423.89 Napoleon St
MP 423.81 Lafayette St
MP 423.71 Washington St
MP 423.60 Franklin St
MP 423.42 Axe Ave
MP 423.17 Greenwich St
MP 422.99 USH 30
MP 422.20 Sturdy Rd
MP 421.68 SR 49
MP 421.09 Industrial Dr
MP 420.27 Montdale Rd
MP 420.00 Private
MP 419.70 CR 400 E
MP 419.23 Cain Ditch
MP 419.08 CR 450 E
MP 418.22 Crooked Creek
MP 417.78 CR 575 E
MP 416.56 County Line Rd
MP 415.46 CR 1100 W
MP 415.19 S Lincoln St
MP 415.05 S Washington St

CURVATURE 0.50° 0.50° 0.50° 0.50° 1.00° 1.00° 0.50° 1.00° 1.00° 0.07°

SPEED 40F MPH 60P MPH

SIGNALS TWC

PROPOSED



CURVATURE

SPEED 60F MPH 79P MPH

SIGNALS PTC

CFE MP 430 429 428 427 426 425 424 423 422 421 420 419 418 417 416 415

CUS MP 40 45 50

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

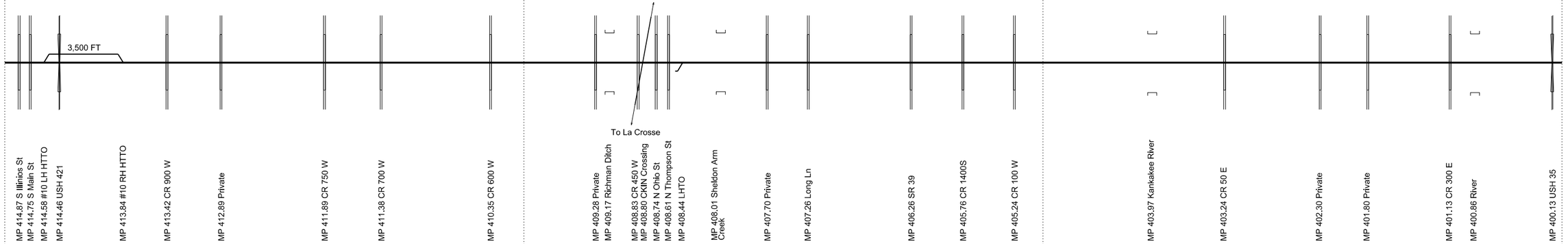
SHEET NO. 3 of 14

CUS MP 55 60 65

CFE MP 415 414 413 412 411 410 409 408 407 406 405 404 403 402 401 400

Hanna

EXISTING

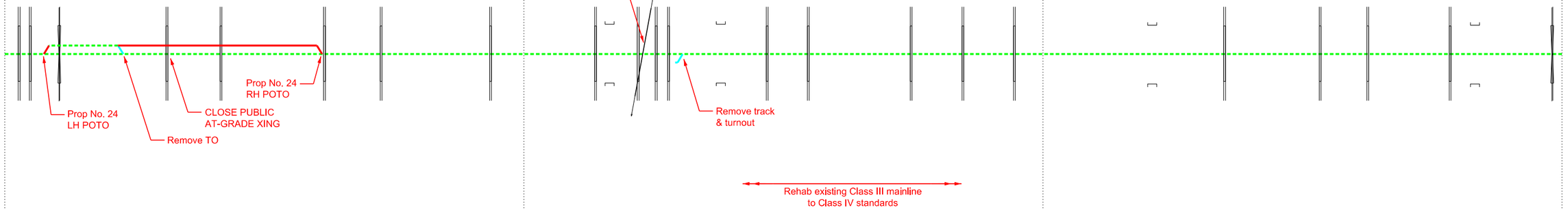


CURVATURE

SPEED — 40F MPH / 60P MPH

SIGNALS — TWC

PROPOSED



CURVATURE

SPEED — 60F MPH / 79P MPH

SIGNALS — PTC

CFE MP 415 414 413 412 411 410 409 408 407 406 405 404 403 402 401 400

CUS MP 55 60 65

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 4 of 14

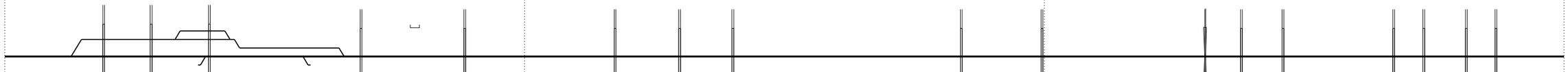
CUS MP 70 75 80

CFE MP 400 399 398 397 396 395 394 393 392 391 390 389 388 387 386 385

Hamlet

Donaldson

EXISTING



MP 399.43 #10 LH HTTO
MP 399.11 CR 500 E
MP 398.59 N Jefferson St
MP 398.12 #10 LH HTTO
MP 398.09 N Starke St
MP 397.00 #10 RH HTTO
MP 396.61 #10 RH HTTO
MP 396.54 CR 750 E
MP 396.07 Jain Ditch
MP 395.54 CR 500 N
MP 394.19 SR 23
MP 393.50 Private
MP 392.99 CR 1100 E
MP 390.81 N Union Rd
MP 390.00 Tulip Rd
MP 388.46 W Rose Rd
MP 388.14 Private
MP 387.70 Redwood Rd
MP 386.69 Quince Rd
MP 386.34 9th Rd
MP 385.90 Private
MP 385.68 Pioneer Dr

CURVATURE 0.17° 0.33°

SPEED 40F MPH / 60P MPH

SIGNALS TWC

PROPOSED



CURVATURE

SPEED 60F MPH / 79P MPH

SIGNALS PTC

CFE MP 400 399 398 397 396 395 394 393 392 391 390 389 388 387 386 385

CUS MP 70 75 80

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

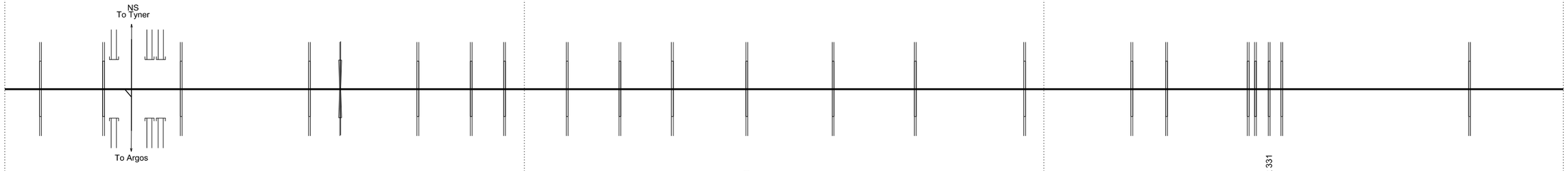
SHEET NO. 5 of 14

CUS MP 85 90 95

CFE MP 385 384 383 382 381 380 379 378 377 376 375 374 373 372 371 370

Plymouth | Inwood | Bourbon

EXISTING



CURVATURE 0.67°

SPEED 40F MPH / 60P MPH

SIGNALS TWC

Plymouth

Remove and replace exist diamond at NS crossing. Upgrade exist No. 10 RH HTTO to ELTO.

Prop 10,000 foot siding at 15 foot track centers w/ No. 24 POTO

Close public at-grade crossing

Rehab existing Class III mainline to Class IV standards

PROPOSED

CURVATURE

SPEED 60F MPH / 79P MPH

SIGNALS PTC

CFE MP 385 384 383 382 381 380 379 378 377 376 375 374 373 372 371 370

CUS MP 85 90 95

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- PROP PASSENGER STATION
- EXIST TRACK
- UPGRADE EXISTING
- PROP TRACK
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

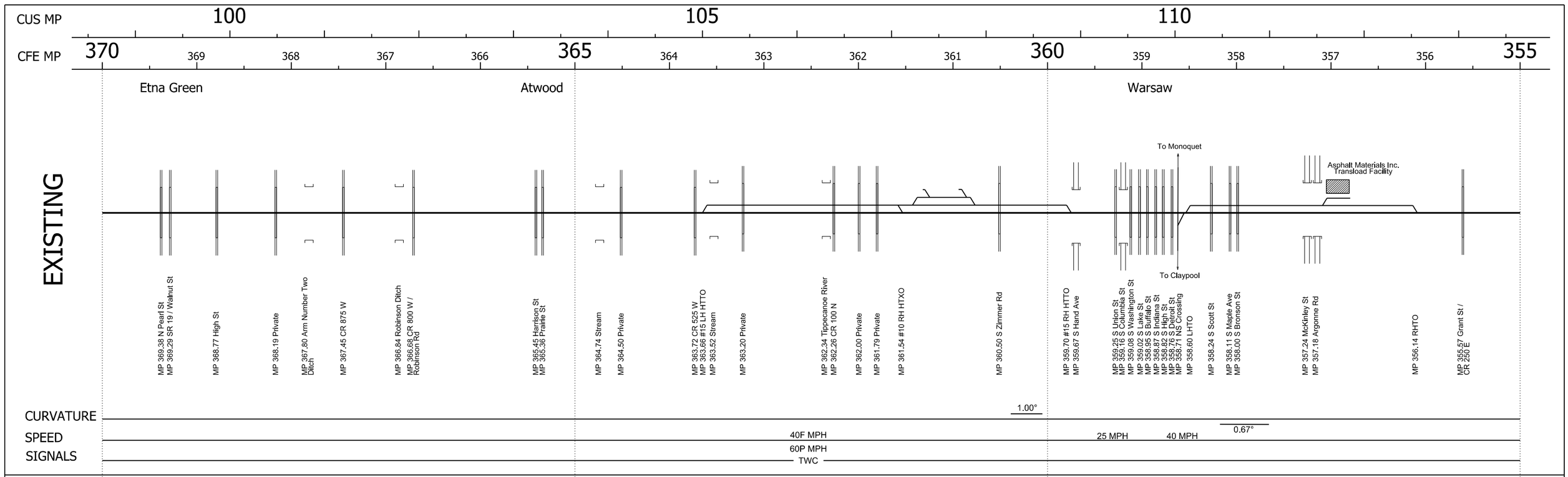
YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 6 of 14



HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	7 of 14

CUS MP 115 120 125

CFE MP 355 354 353 352 351 350 349 348 347 346 345 344 343 342 341 340

Wooster Pierceton Larwill

EXISTING

MP 354.78 CR 325 E
MP 352.50 Van Ness Rd
MP 351.66 Stream
MP 350.75 N 3rd St
MP 350.69 N 2nd St
MP 350.61 Main St
MP 350.38 N Rail St
MP 349.80 Private
MP 349.30 Private
MP 348.81 CR 900 E
MP 347.30 Binkley Rd
MP 346.37 Depot St
MP 346.28 Center St / SR 5
MP 346.13 King St
MP 343.80 Private
MP 343.09 CR 400 W
MP 342.08 CR 300 W
MP 341.30 Wolf Rd

CURVATURE 1.57° 0.67° 0.83°

SPEED 40F MPH 60P MPH

SIGNALS TWC

Prop 10-mile double track at 15 foot track centers w/ No. 24 POTO

PROPOSED

Prop No. 24 UXO

Rehab existing Class III mainline to Class IV standards

CURVATURE

SPEED 60F MPH 79P MPH

SIGNALS PTC

CFE MP 355 354 353 352 351 350 349 348 347 346 345 344 343 342 341 340

CUS MP 115 120 125

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

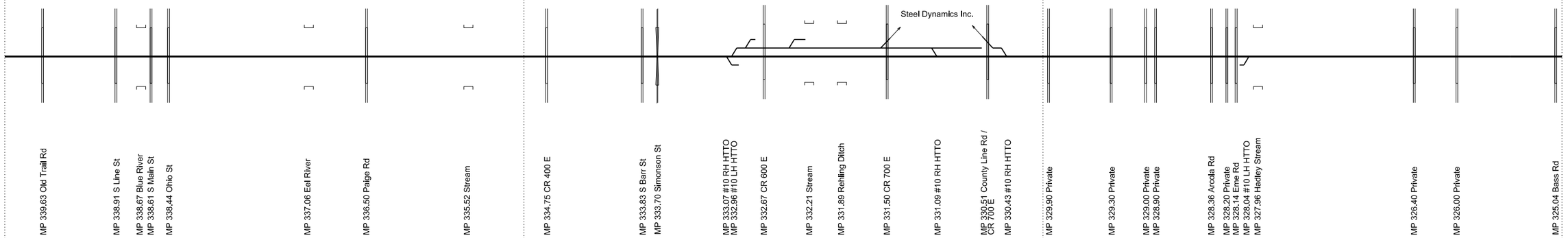
SHEET NO. 8 of 14

CUS MP 130 135 140

CFE MP 340 339 338 337 336 335 334 333 332 331 330 329 328 327 326 325

Columbia City | Coesse | Arcola

EXISTING

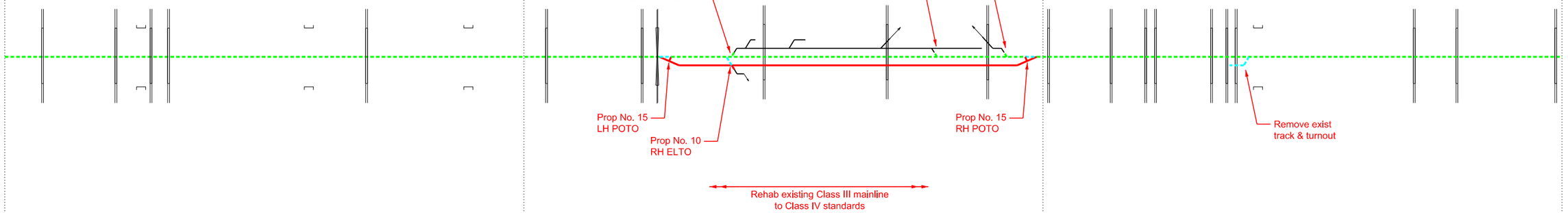


CURVATURE

SPEED — 40F MPH / 60P MPH

SIGNALS — TWC

PROPOSED



CURVATURE — Match exist curvature; 0° 30' / 0° 30'; 0° 30' / 0° 30'; Match exist curvature

SPEED — 60F MPH / 79P MPH

SIGNALS — PTC

CFE MP 340 339 338 337 336 335 334 333 332 331 330 329 328 327 326 325

CUS MP 130 135 140

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

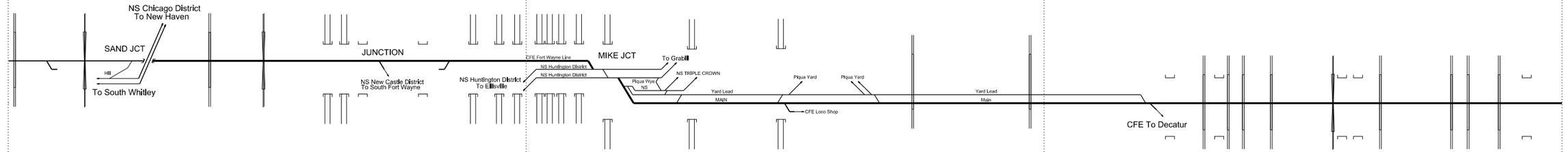
SHEET NO. 9 of 14

CUS MP 145 150 155

CFE MP 325 324 323 322 321 320 319 318 317 316 315 314 313 312 311 310

Fort Wayne | Fort Wayne | Adams

EXISTING



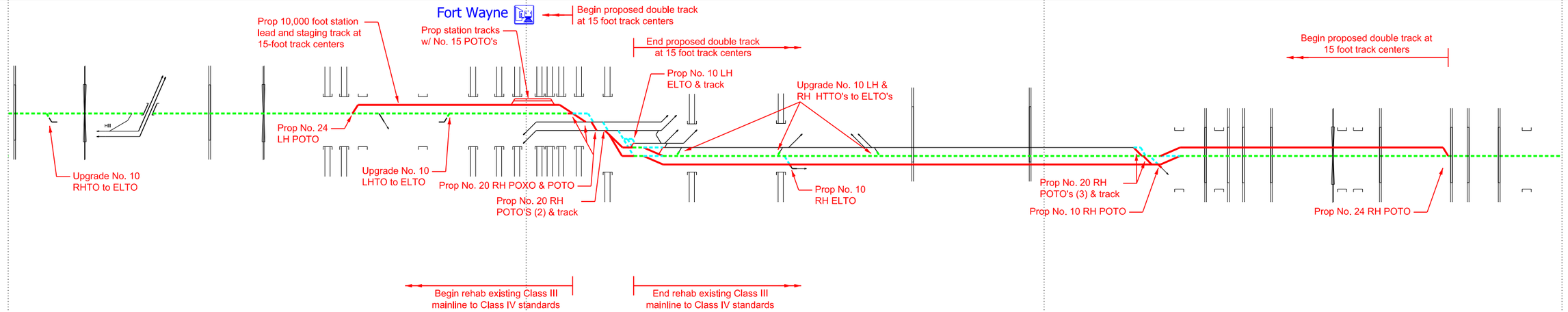
MP 324.92 N Hadley Rd
MP 324.62 #10 RH HTTO
MP 324.27 I-69
MP 323.83 #20 LH POTO (Hadley Cutoff)
MP 323.53 NS Chicago District
MP 323.04 Thomas Rd
MP 322.53 Hillegas Rd
MP 321.88 Lindenwood Ave
MP 321.71 W Jefferson Blvd
MP 321.53 Stream
MP 321.30 #15 POTO NS New Castle District
MP 320.94 St Marys River
MP 320.61 #10 LH HTTO
MP 320.48 College St
MP 320.22 Broadway St
MP 320.04 Fairfield Ave
MP 319.76 Harrison St
MP 319.70 Calhoun St
MP 319.62 Clinton St / USH 27 SB
MP 319.44 Lafayette St / USH 27 NB
MP 319.22 #10 RH POTO
MP 319.19 Hanna St
MP 319.15 #10 RH POTO NS Huntington District
MP 319.05 #9 LH POTO
MP 318.51 #9 LH HTXO
MP 318.37 Anthony Blvd
MP 317.57 #9 LH HTXO
MP 317.54 Pioneer St
MP 317.49 #10 RH HTTO
MP 316.56 #9 RH HTXO
MP 316.28 Meyer Rd
MP 315.12 Adams Center Rd
MP 314.01 #20 RH HTTO
MP 313.98 #10 RH HTTO
CFE Decatur Line
MP 313.75 Jack Adams Ditch
MP 313.44 Hartzell Rd
MP 313.27 Stream
MP 313.21 Paulding Rd
MP 313.07 Private
MP 312.80 Private
MP 312.20 I-469
MP 312.09 Stream
MP 311.91 Ritters Creek
MP 311.75 Minnich Rd
MP 311.07 Tillman Rd
MP 310.90 Private
MP 310.60 Private
MP 310.30 Bass Ditch

CURVATURE: 4.25° | 4.40° | 3.47° | 3.47° | 2.00° 1.63° | 0.00

SPEED: 40F MPH / 60P MPH | 20F MPH / 25P MPH | 40F MPH / 60P MPH

SIGNALS: TWC | CTC | DCS

PROPOSED



CURVATURE: 0° 30' | 0° 30' | 0° 30' | 0° 30' Match exist curvature

SPEED: 60F MPH / 79P MPH | 40F MPH / 40P MPH | 60F MPH / 79P MPH

SIGNALS: PTC

CFE MP 325 324 323 322 321 320 319 318 317 316 315 314 313 312 311 310

CUS MP 145 150 155

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 10 of 14

CUS MP 160 165 170

CFE MP 310 309 308 307 306 305 304 303 302 301 300 299 298 297 296 295

Maples Monroeville Dixon

EXISTING

MP 309.94 Franke Rd
MP 309.71 Washington St
MP 309.37 Houx Rd
MP 308.88 Flat Rock Creek
MP 308.81 Gerardot Rd
MP 308.30 Fackler Rd
MP 307.71 Wilson Rd
MP 307.53 Ellison Ditch
MP 307.13 Grotrian Rd
MP 306.83Hoffman Rd
MP 306.50 Snyder Rd
MP 305.51 Wormcastle Creek
MP 304.32 Washington St
MP 304.08 #10 LH HTTO
MP 304.05 Main St
MP 303.96 Ohio St
MP 303.81 Shaffer Creek
MP 302.65 Steirheim Ditch
MP 302.59 Lorlie Rd
MP 302.27 Flat Rock Creek
MP 302.19 Private
MP 301.80 Private
MP 301.50 Morgan Rd
MP 300.28 Market St
MP 299.45 Dixon Cavett Rd
MP 299.35 Stream
MP 298.88 Sponseller Rd
MP 298.06 Mentzer Church Rd
MP 297.99 Stream
MP 297.60 Private
MP 297.22 Blue Creek
MP 297.16 Mentzer Rd
MP 296.94 Lare Rd
MP 296.38 Shaner Rd
MP 295.82 Payne Rd
MP 295.40 Private

CURVATURE 0.07° 0.33°
SPEED 40F MPH
SIGNALS 60P MPH, DCS

Prop 10,000' Siding at 15 foot track centers w/ No. 24 POTO

PROPOSED

Upgrade No. 10 LH HTTO to ELTO

Rehab existing Class III mainline to Class IV standards

CURVATURE
SPEED 60F MPH
SIGNALS 79P MPH, PTC

CFE MP 310 309 308 307 306 305 304 303 302 301 300 299 298 297 296 295

CUS MP 160 165 170

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

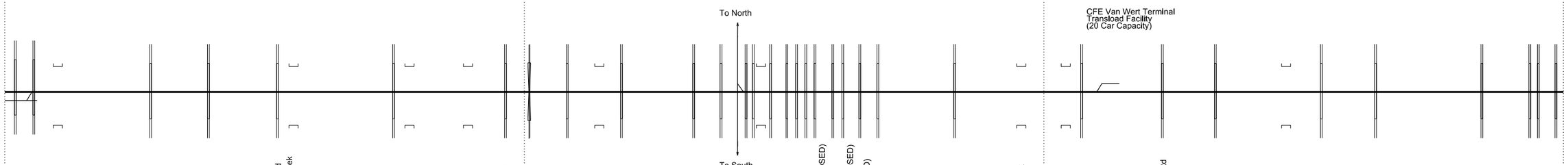
CONTRACT NO.
DRAWING NO.
SCALE: Not to Scale
SHEET NO. 11 of 14

CUS MP 175 180 185

CFE MP 295 294 293 292 291 290 289 288 287 286 285 284 283 282 281 280

Convoy — Van Wert — Middle Point

EXISTING



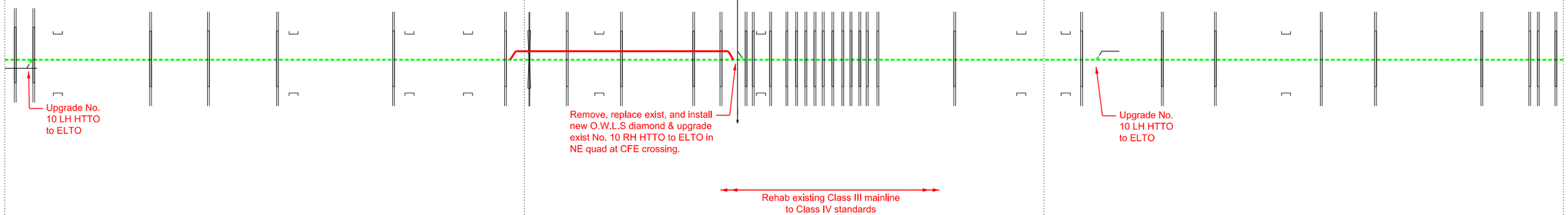
CURVATURE — 2.00° — 1.00°

SPEED — 40F MPH — 60P MPH

SIGNALS — DCS

Prop 10,000' Siding at 15 foot track centers w/ No. 24 POTO

PROPOSED



CURVATURE

SPEED — 60F MPH — 79P MPH

SIGNALS — PTC

CFE MP 295 294 293 292 291 290 289 288 287 286 285 284 283 282 281 280

CUS MP 175 180 185

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	12 of 14

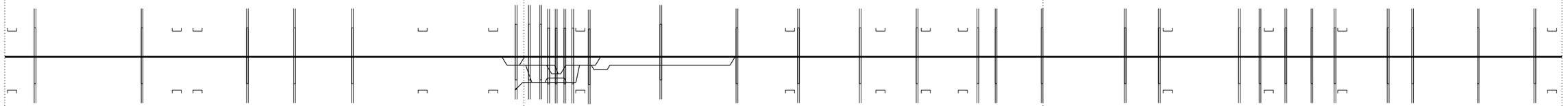
CUS MP 190 195 200

CFE MP 280 279 278 277 276 275 274 273 272 271 270 268 268 267 266 265

Delphos

Elida

EXISTING



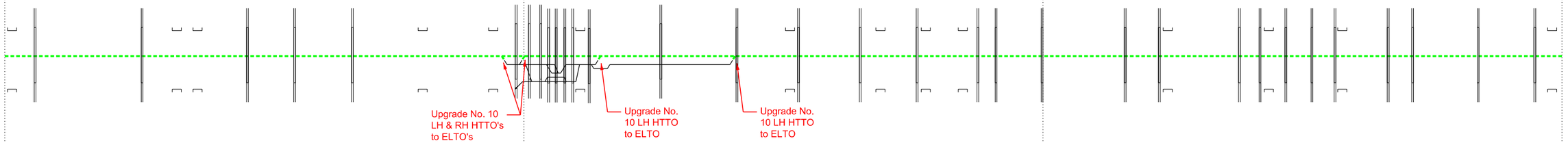
MP 279.98 Little Auglaize River
MP 279.71 Middle Point Wetzel Rd
MP 278.68 Converse Roselm Rd
MP 278.31 Long Ditch
MP 278.11 White Ditch
MP 277.68 Bockey Rd
MP 277.20 Private
MP 276.65 John Brickner Rd
MP 275.93 W Jennings Ditch
MP 275.26 Jennings Creek
MP 275.22 #10 RH HTTO
MP 275.08 Stolle St
MP 274.99 #9 LH HTXO
MP 274.93 Bredeick St
MP 274.78 Clay St
MP 274.71 Jefferson St
MP 274.65 Canal St
MP 274.58 Main St
MP 274.44 Franklin St
MP 274.40 Flat Fork Creek
MP 274.37 Pierce St
MP 274.27 #10 LH HTTO
MP 273.69 Private
MP 272.96 #10 LH HTTO
MP 272.93 Lehman Rd
MP 272.40 W Jenning Creek
MP 272.35 Peltier
MP 271.77 Baugh Rd
MP 271.51 Stream
MP 271.18 Defiance Tr
MP 271.09 Auglaize Ditch
MP 270.72 Auglaize River
MP 270.61 Old Delphos Rd
MP 270.43 State Rd
MP 270.01 Redd Rd
MP 269.20 Private
MP 268.83 Grubb Rd
MP 268.76 Stream
MP 268.10 Private
MP 267.90 Private
MP 267.78 Honey Run Creek
MP 267.65 Kemp Rd
MP 267.40 Private
MP 267.16 Wapakoneta Rd
MP 267.13 Ottawa River
MP 266.67 W Main St
MP 266.41 S Greenlawn Rd
MP 265.80 Private
MP 265.25 Baty Rd
MP 265.07 Stream

CURVATURE 1.00° 1.00° 1.00° 2.50°

SPEED 40F MPH 60P MPH

SIGNALS DCS

PROPOSED



CURVATURE

SPEED 60F MPH 79P MPH

SIGNALS PTC

CFE MP 280 279 278 277 276 275 274 273 272 271 270 268 268 267 266 265

CUS MP 190 195 200

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

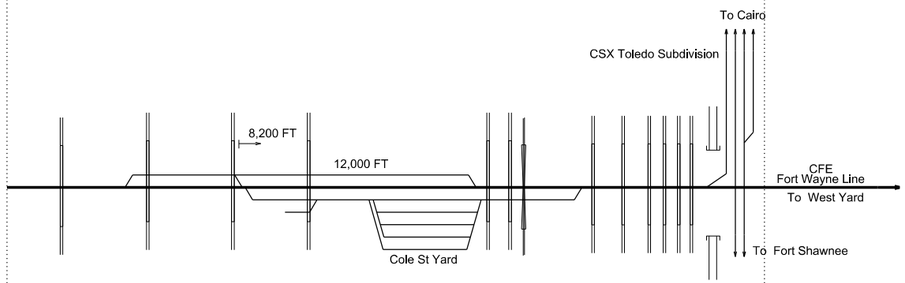
SHEET NO. 13 of 14

CUS MP 205 210 215 218.65

CFE MP 265 264 263 262 261 260 259 258 257 256 255 254 253 252 251 250

Cole Lima

EXISTING



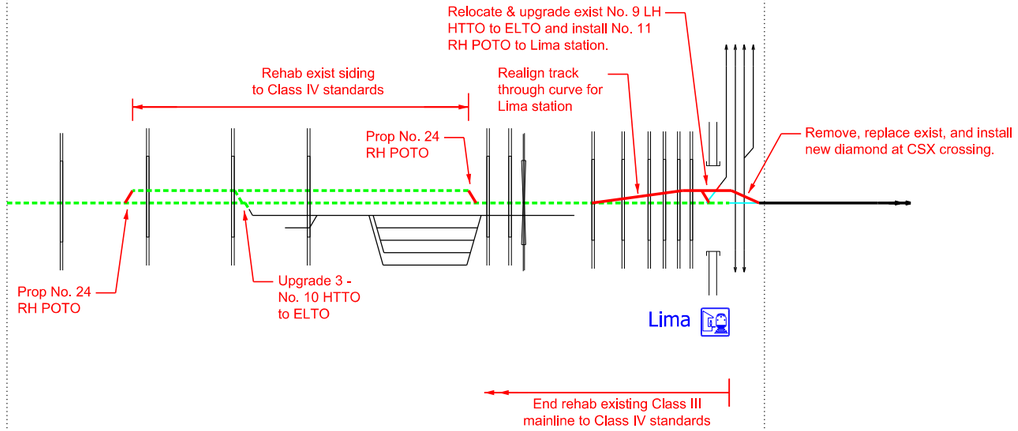
MP 264.63 East Rd
MP 264.21 #15 LHTO
MP 264.07 Eastown Rd
MP 263.51 Hartzler Rd
MP 263.49 #10 RHXO
MP 263.44 #10 RHTO
MP 262.99 Cable Rd
MP 261.86 #10 RHTO
MP 261.81 Cole St
MP 261.68 Center St
MP 261.59 Jameson Ave
MP 261.20 #10 LHTO
MP 261.12 N Baxter St
MP 260.92 N Metcalf St
MP 260.76 N Mc Donel St
MP 260.66 N West St
MP 260.56 N Elizabeth St
MP 260.46 N Main St
MP 260.40 #9 LH HTTO
To CSX Toledo Sub
MP 260.36 Union St
MP 260.25 CSX Toledo Subdivision

CURVATURE 2.25° 1.25° 1.00° 1.50°

SPEED 40F MPH / 60P MPH | 0.20 | 20F MPH | 0.30 | 35F MPH / 35P MPH | 0.60 | 40F MPH / 60P MPH

SIGNALS DCS

PROPOSED



CURVATURE

SPEED 60F MPH / 79P MPH | 40F MPH / 60P MPH | 35F MPH / 35P MPH | 40F MPH / 60P MPH

SIGNALS PTC | DCS

CFE MP 265 264 263 262 261 260 259 258 257 256 255 254 253 252 251 250

CUS MP 205 210 215 218.65

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 2 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 14 of 14

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)
PASSENGER RAIL SERVICE

CONCEPT PLAN FOR TRACK SCHEMATICS FOR EXISTING CONDITIONS, PROPOSED 79MPH AT 4 ROUND TRIP ALTERNATIVE



LEGEND

CFE MILEPOST — 415 | 414 | 414

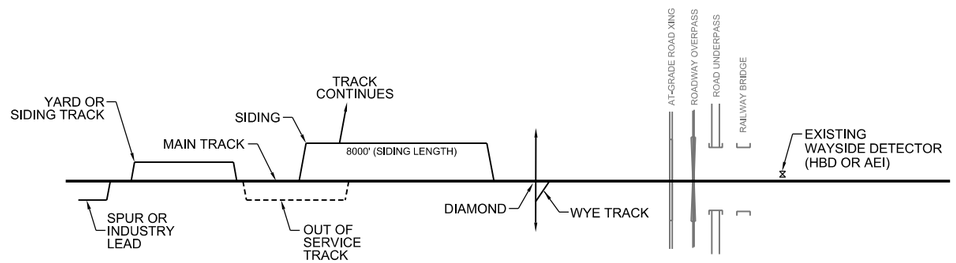
ACTUAL MILEAGE FROM CHICAGO UNION STATION — 85 | 86 | 87

STATION — Hanna

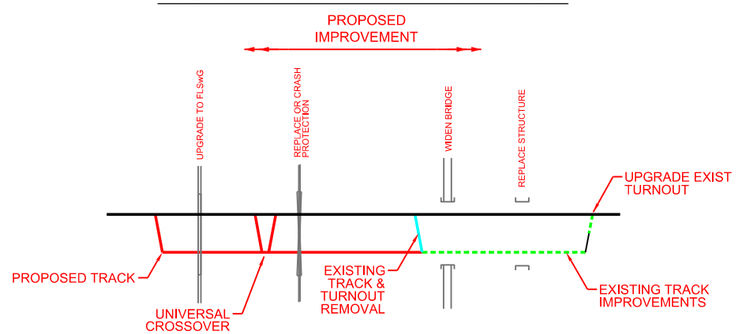
SUBDIVISION BOUNDARY — CFE FORT WAYNE SUBDIVISION | CFE LIMA SUBDIVISION

PROPOSED PASSENGER STATION

EXIST SCHEMATIC CONDITION



PROPOSED SCHEMATIC CONDITION



PLAN REVISIONS		
DATE	SHEET NO.	APPROVER

HNTB

11414 West Park Place, Suite 300
Milwaukee, WI 53224
(414) 359-2300

10 West Mifflin Street, Suite 300
Madison, WI 53703
(608) 294-5000

CONCEPTUAL DESIGN
NOT FOR CONSTRUCTION

DRAFT
DATE: 09/26/2018

ABBREVIATIONS

GENERAL ABBREVIATIONS

CFE	CHICAGO , FORT WAYNE & EASTERN RAILROAD
NS	NORFOLK SOUTHERN RAILWAY
CSX	CSX TRANSPORTATION
CN	CANADIAN NATIONAL RAILWAY
SUB	RAILWAY SUBDIVISION
TRK	TRACK
EB	EAST BOUND
WB	WEST BOUND
MOW	MAINTENANCE OF WAY
XO	CROSSOVER
UXO	UNIVERSAL CROSSOVER
POXO	POWER OPERATED CROSSOVER
HTTO	HAND THROW TURNOUT
ELTO	ELECTRIC LOCK TURNOUT
POTO	POWER OPERATED TURNOUT
O.W.L.S	ONE-WAY LOW SPEED DIAMOND

CROSSING ABBREVIATIONS

XB	CROSS BUCKS
XBwS	CROSS BUCKS WITH STOP SIGNS
FLS	FLASHING LIGHT SIGNALS
CFLS	CANTILEVERED FLASHING LIGHT SIGNALS
wG	WITH GATES

BRIDGE TYPE ABBREVIATIONS

BD	BALLAST DECK
OD	OPEN DECK
AMG	DECK PLATE GIRDER (MULTIPLE)
TG	THRU GIRDER
CB	CONCRETE BRIDGE
IB	I-BEAM
SWB	SWING BRIDGE
SB	STEEL BRIDGE
TPG	THRU-PLATE GIRDER
TDG	TWIN DECK GIRDER
C3	THRU PLATE GIRDER (4 STRINGERS)
C4	THRU PLATE GIRDER (2 STRINGERS)
PT	PILE TRESTLE
DG	DECK GIRDER
DPG	DECK PLATE GIRDER
IBG	I-BEAM GIRDER (ROLLED)
DT	DECK TRUSS
TPB	TIMBER PILE BRIDGE
EG	"E" GIRDER
LSB	LIFT SPAN BRIDGE

CURVATURE — 0°00' RT CURVE / 0°00' LT CURVE

FREIGHT RAIL SPEED — 40F

PASSENGER RAIL SPEED — 60P

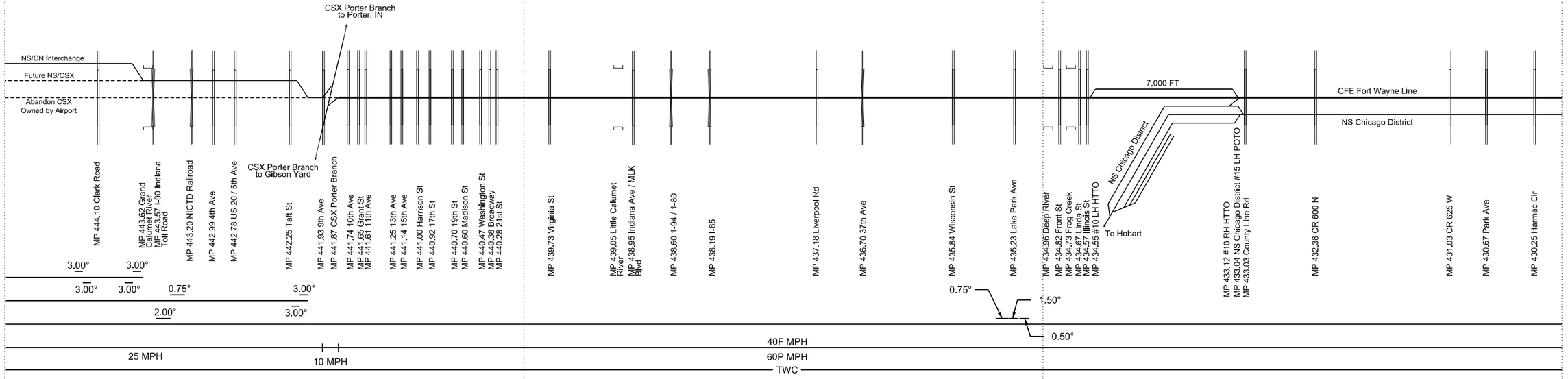
SIGNAL SYSTEM — PTC

CUS MP 23.65 25 30 35

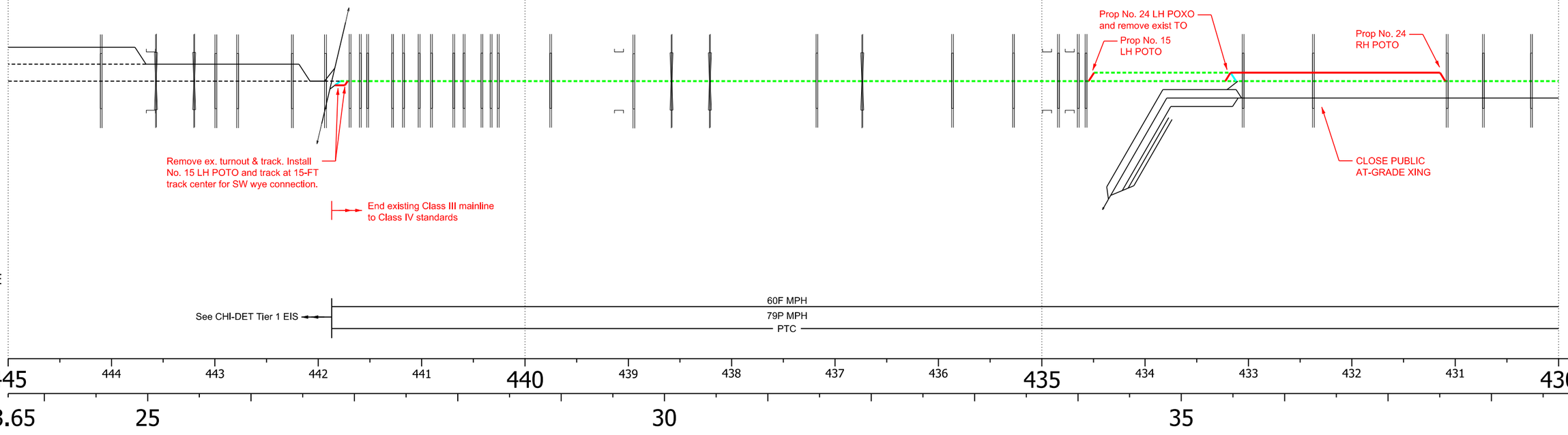
CFE MP 445 444 443 442 441 440 439 438 437 436 435 434 433 432 431 430

Tolleston Gary Liverpool Hobart Wheeler

EXISTING



PROPOSED



CFE MP 445 444 443 442 441 440 439 438 437 436 435 434 433 432 431 430

CUS MP 23.65 25 30 35

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 2 of 14

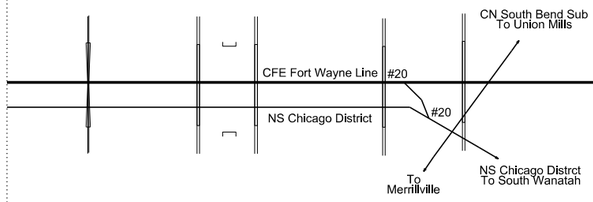
CUS MP 40 45 50

CFE MP 430 429 428 427 426 425 424 423 422 421 420 419 418 417 416 415

Valparaiso

Wanatah

EXISTING



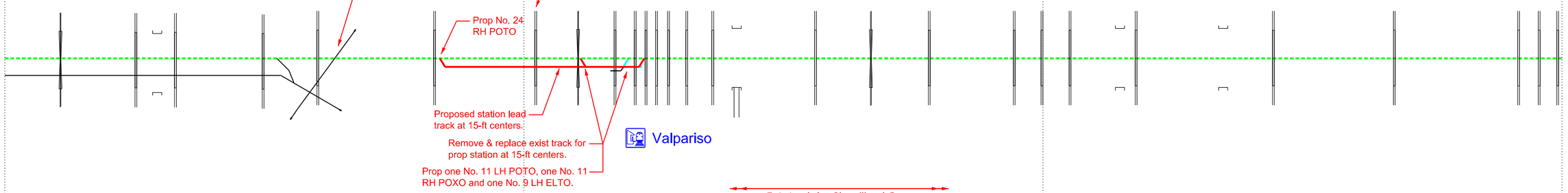
MP 429.43 CR 475 W
MP 428.68 CR 450 N
MP 428.51 Salt Creek
MP 428.32 CR 375 W
MP 427.50 CR 400 N
MP 427.38 NS Chicago District #15 RH POTO
MP 426.93 Tower Rd
MP 426.81 CN South Bend Subdivision
MP 425.81 Froberg Rd
MP 424.81 Clifford Rd
MP 424.45 Lincoln Hwy
MP 424.41 #10 RH HTTO
MP 424.10 Private
MP 423.99 #10 LH HTTO
MP 423.89 Napoleon St
MP 423.81 Lafayette St
MP 423.71 Washington St
MP 423.60 Franklin St
MP 423.42 Axe Ave
MP 423.17 Greenwich St
MP 422.99 USH 30
MP 422.20 Sturdy Rd
MP 421.68 SR 49
MP 421.09 Industrial Dr
MP 420.27 Montdale Rd
MP 420.00 Private
MP 419.70 CR 400 E
MP 419.23 Cain Ditch
MP 419.08 CR 450 E
MP 418.22 Crooked Creek
MP 417.78 CR 575 E
MP 416.56 County Line Rd
MP 415.46 CR 1100 W
MP 415.19 S Lincoln St
MP 415.05 S Washington St

CURVATURE 0.50° 0.50° 0.50° 0.50° 1.00° 1.00° 0.50° 1.00° 1.00° 0.07°

SPEED 40F MPH

SIGNALS 60P MPH TWC

PROPOSED



CURVATURE

SPEED 60F MPH

SIGNALS 79P MPH PTC

CFE MP 430 429 428 427 426 425 424 423 422 421 420 419 418 417 416 415

CUS MP 40 45 50

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- PROP PASSENGER STATION
- EXIST TRACK
- UPGRADE EXISTING
- PROP TRACK
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 3 of 14

CUS MP 55 60 65

CFE MP 415 414 413 412 411 410 409 408 407 406 405 404 403 402 401 400

EXISTING

Hanna

Chesapeake & Indiana Railroad
To Wellsboro

3,500 FT

To La Crosse

MP 414.87 S Illinios St
MP 414.75 S Main St
MP 414.58 #10 LH HTTO
MP 414.46 USH 421
MP 413.84 #10 RH HTTO
MP 413.42 CR 900 W
MP 412.89 Private
MP 411.89 CR 750 W
MP 411.38 CR 700 W
MP 410.35 CR 600 W
MP 409.28 Private
MP 409.17 Richman Ditch
MP 408.83 CR 450 W
MP 408.80 CKIN Crossing
MP 408.74 N Ohio St
MP 408.61 N Thompson St
MP 408.44 LHTO
MP 408.01 Sheldon Arm Creek
MP 407.70 Private
MP 407.26 Long Ln
MP 406.26 SR 39
MP 405.76 CR 1400S
MP 405.24 CR 100 W
MP 403.97 Kankakee River
MP 403.24 CR 50 E
MP 402.30 Private
MP 401.80 Private
MP 401.13 CR 300 E
MP 400.86 River
MP 400.13 USH 35

CURVATURE
SPEED — 40F MPH / 60P MPH
SIGNALS — TWC

PROPOSED

Rehab existing siding
to Class IV standards

Extend exist siding 10,000 feet
at 15 foot track centers

Remove and install new O.W.L.S
diamond at CKIN crossing.

Prop No. 24
RH POTO

Prop No. 24
LH POTO

CLOSE PUBLIC
AT-GRADE XING

Remove TO

Prop No. 24
RH POTO

Remove track
& turnout

Prop second track to create
10,000 foot siding track at
15-ft centers

Rehab existing Class III mainline
to Class IV standards

CURVATURE
SPEED — 60F MPH / 79P MPH
SIGNALS — PTC

CFE MP 415 414 413 412 411 410 409 408 407 406 405 404 403 402 401 400

CUS MP 55 60 65

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.
DRAWING NO.
SCALE: Not to Scale
SHEET NO. 4 of 14

CUS MP 70 75 80

CFE MP 400 399 398 397 396 395 394 393 392 391 390 389 388 387 386 385

Hamlet

Donaldson

EXISTING

MP 399.43 #10 LH HTTO
MP 399.11 CR 500 E
MP 398.59 N Jefferson St
MP 398.12 #10 LH HTTO
MP 398.09 N Starke St
MP 397.00 #10 RH HTTO
MP 396.61 #10 RH HTTO
MP 396.54 CR 750 E
MP 396.07 Jain Ditch
MP 395.54 CR 500 N
MP 394.19 SR 23
MP 393.50 Private
MP 392.99 CR 1100 E
MP 390.81 N Union Rd
MP 390.00 Tulip Rd
MP 388.46 W Rose Rd
MP 388.14 Private
MP 387.70 Redwood Rd
MP 386.69 Quince Rd
MP 386.34 9th Rd
MP 385.90 Private
MP 385.68 Pioneer Dr

CURVATURE 0.17° 0.33°

SPEED 40F MPH / 60P MPH

SIGNALS TWC

PROPOSED

Remove turnouts & install new No. 10 ELTO w/ derails

Rehab exist siding to Class IV standards

Close public at-grade crossing

Prop No. 24 RH POTO

Prop second track between mainline and industry track to create 10,000 foot siding at 15-ft centers

No. 24 UXO

Upgrade exist No. 10 RH HTTO to ELTO

Upgrade exist No. 10 RH HTTO to ELTO

Upgrade exist No. 10 RH HTXO to ELXO

Prop 10,000 foot siding at 15 foot track centers w/ No. 24 POTO

Rehab existing Class III mainline to Class IV standards

CURVATURE

SPEED 60F MPH / 79P MPH

SIGNALS PTC

CFE MP 400 399 398 397 396 395 394 393 392 391 390 389 388 387 386 385

CUS MP 70 75 80

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

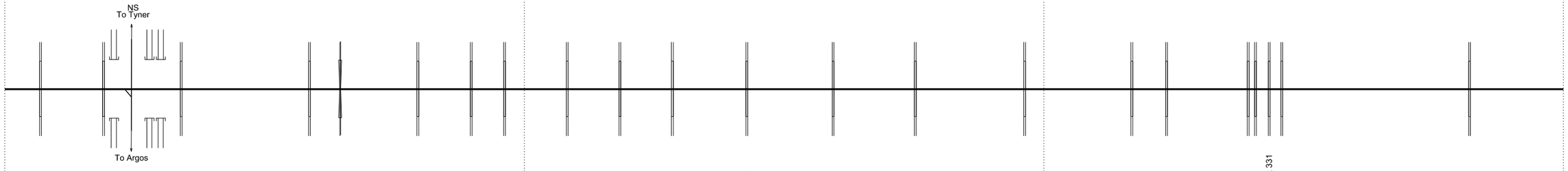
SHEET NO. 5 of 14

CUS MP 85 90 95

CFE MP 385 384 383 382 381 380 379 378 377 376 375 374 373 372 371 370

Plymouth | Inwood | Bourbon

EXISTING

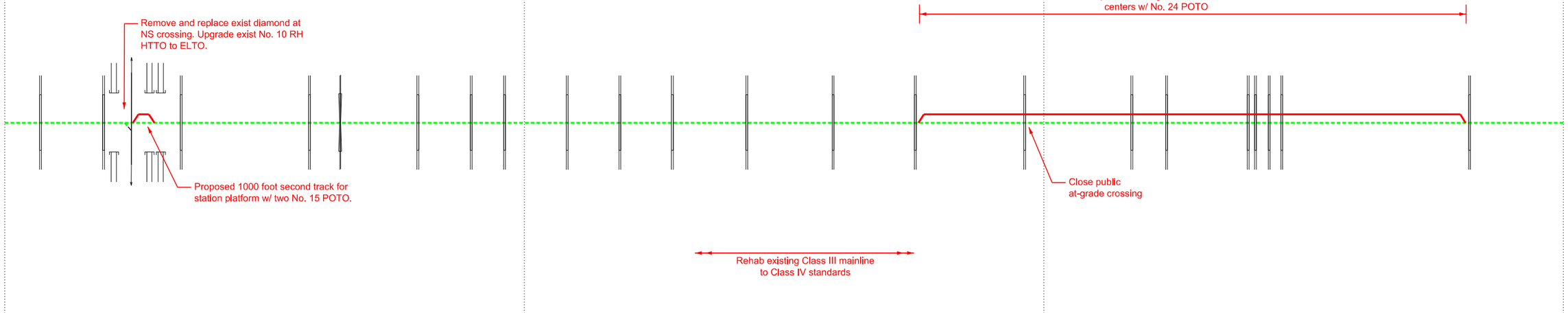


CURVATURE — 0.67°

SPEED — 40F MPH / 60P MPH

SIGNALS — TWC

PROPOSED



CURVATURE

SPEED — 60F MPH / 79P MPH

SIGNALS — PTC

CFE MP 385 384 383 382 381 380 379 378 377 376 375 374 373 372 371 370

CUS MP 85 90 95

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

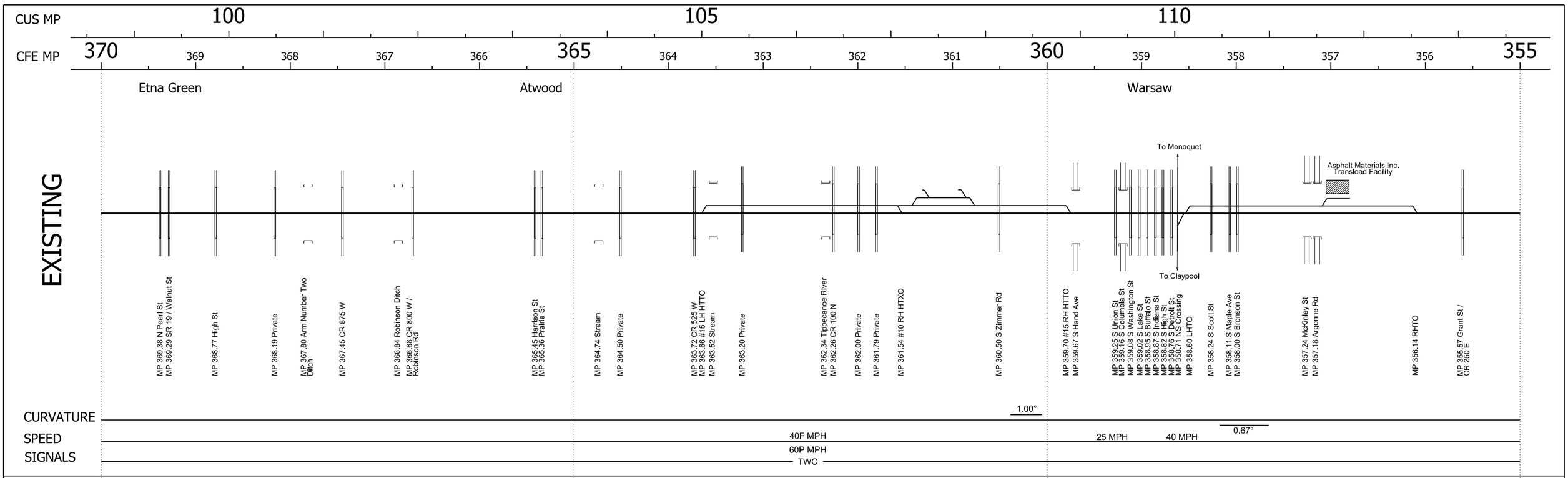
YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 6 of 14



HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	7 of 14

CUS MP 115 120 125

CFE MP 355 354 353 352 351 350 349 348 347 346 345 344 343 342 341 340

Wooster Pierceton Larwill

EXISTING

MP 354.78 CR 325 E
MP 352.50 Van Ness Rd
MP 351.66 Stream
MP 350.75 N 3rd St
MP 350.69 N 2nd St
MP 350.61 Main St
MP 350.38 N Rail St
MP 349.80 Private
MP 349.30 Private
MP 348.81 CR 900 E
MP 347.30 Binkley Rd
MP 346.37 Depot St
MP 346.28 Center St / SR 5
MP 346.13 King St
MP 343.80 Private
MP 343.09 CR 400 W
MP 342.08 CR 300 W
MP 341.30 Wolf Rd

CURVATURE 1.57° 0.67° 0.83°

SPEED 40F MPH / 60P MPH

SIGNALS TWC

Prop 10-mile double track at 15 foot track centers w/ No. 24 POTO

PROPOSED

Prop No. 24 UXO

Rehab existing Class III mainline to Class IV standards

CURVATURE

SPEED 60F MPH / 79P MPH

SIGNALS PTC

CFE MP 355 354 353 352 351 350 349 348 347 346 345 344 343 342 341 340

CUS MP 115 120 125

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

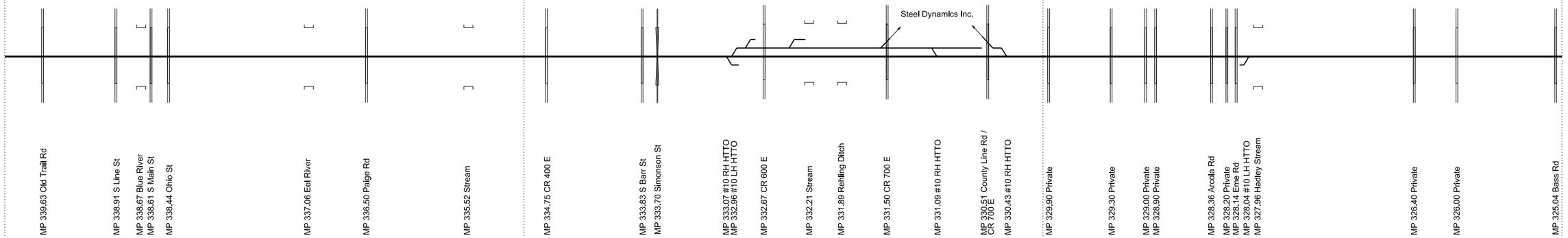
SHEET NO. 8 of 14

CUS MP 130 135 140

CFE MP 340 339 338 337 336 335 334 333 332 331 330 329 328 327 326 325

Columbia City | Coesse | Arcola

EXISTING

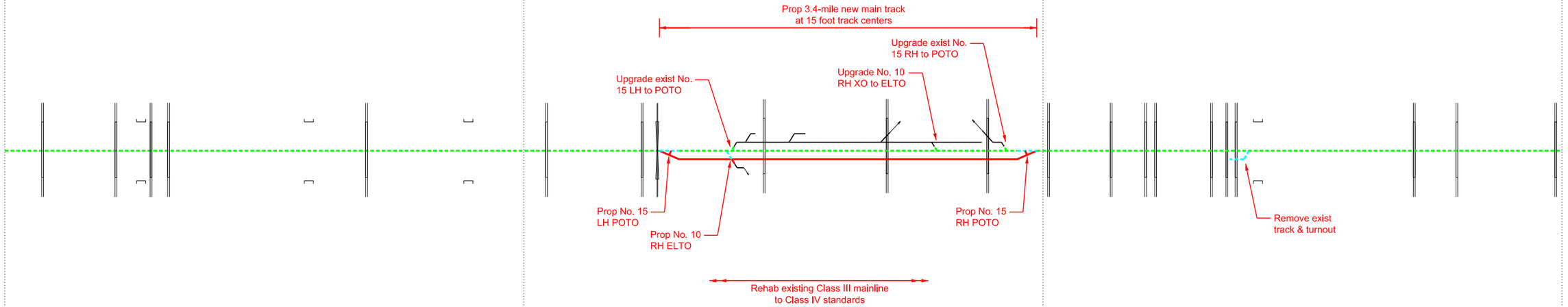


CURVATURE

SPEED — 40F MPH / 60P MPH

SIGNALS — TWC

PROPOSED



CURVATURE

SPEED — 60F MPH / 79P MPH

SIGNALS — PTC

CFE MP 340 339 338 337 336 335 334 333 332 331 330 329 328 327 326 325

CUS MP 130 135 140

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

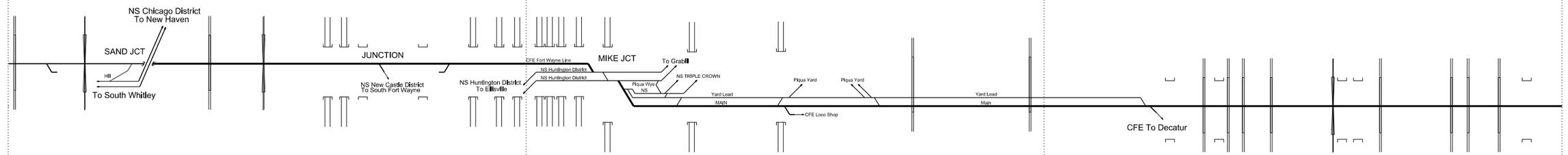
SHEET NO. 9 of 14

CUS MP 145 150 155

CFE MP 325 324 323 322 321 320 319 318 317 316 315 314 313 312 311 310

Fort Wayne | Fort Wayne | Adams

EXISTING



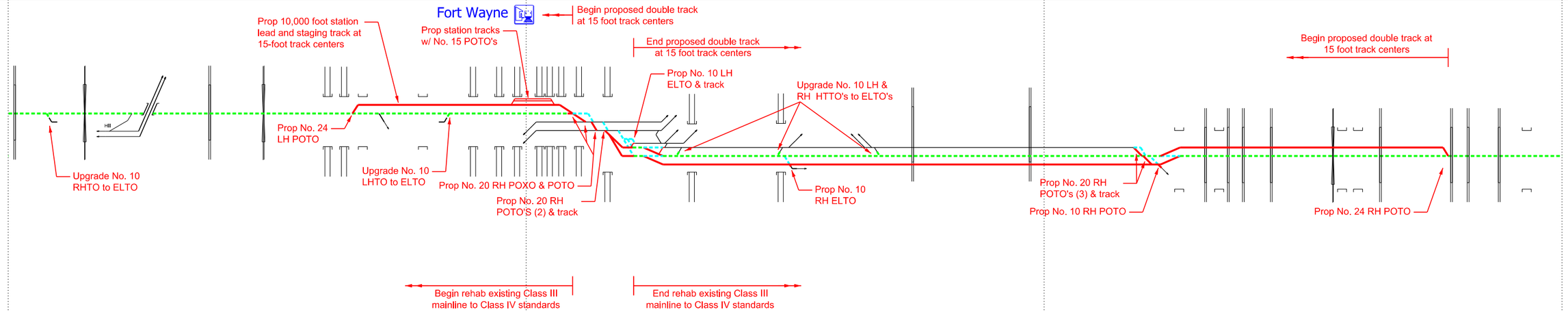
MP 324.92 N Hadley Rd
MP 324.62 #10 RH HTTO
MP 324.27 I-69
MP 323.83 #20 LH POTO (Hadley Cutoff)
MP 323.53 NS Chicago District
MP 323.04 Thomas Rd
MP 322.53 Hillegas Rd
MP 321.88 Lindenwood Ave
MP 321.71 W Jefferson Blvd
MP 321.53 Stream
MP 321.30 #15 POTO NS New Castle District
MP 320.94 St Marys River
MP 320.61 #10 LH HTTO
MP 320.48 College St
MP 320.22 Broadway St
MP 320.04 Fairfield Ave
MP 319.76 Harrison St
MP 319.70 Calhoun St
MP 319.62 Clinton St / USH 27 SB
MP 319.44 Lafayette St / USH 27 NB
MP 319.22 #10 RH POTO
MP 319.19 Hanna St
MP 319.15 #10 RH POTO NS Huntington District
MP 319.05 #9 LH POTO
MP 318.51 #9 LH HTXO
MP 318.37 Anthony Blvd
MP 317.57 #9 LH HTXO
MP 317.54 Pioneer St
MP 317.49 #10 RH HTTO
MP 316.56 #9 RH HTXO
MP 316.28 Meyer Rd
MP 315.12 Adams Center Rd
MP 314.01 #20 RH HTTO
MP 313.98 #10 RH HTTO
CFE Decatur Line
MP 313.75 Jack Adams Ditch
MP 313.44 Hartzell Rd
MP 313.27 Stream
MP 313.21 Paulding Rd
MP 313.07 Private
MP 312.80 Private
MP 312.20 I-469
MP 312.09 Stream
MP 311.91 Ritters Creek
MP 311.75 Minnich Rd
MP 311.07 Tillman Rd
MP 310.90 Private
MP 310.60 Private
MP 310.30 Bass Ditch

CURVATURE: 4.25° | 4.40° | 3.47° | 3.47° | 2.00° 1.63° | 0.00

SPEED: 40F MPH / 60P MPH | 20F MPH / 25P MPH | 40F MPH / 60P MPH

SIGNALS: TWC | CTC | DCS

PROPOSED



CURVATURE: 0° 30' | 0° 30' | 0° 30' | 0° 30' | Match exist curvature

SPEED: 60F MPH / 79P MPH | 40F MPH / 40P MPH | 60F MPH / 79P MPH

SIGNALS: PTC

CFE MP 325 324 323 322 321 320 319 318 317 316 315 314 313 312 311 310

CUS MP 145 150 155

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	10 of 14

CUS MP 160 165 170

CFE MP 310 309 308 307 306 305 304 303 302 301 300 299 298 297 296 295

Maples Monroeville Dixon

EXISTING

MP 309.94 Franke Rd
MP 309.71 Washington St
MP 309.37 Houx Rd
MP 308.88 Flat Rock Creek
MP 308.81 Gerardot Rd
MP 308.30 Fackler Rd
MP 307.71 Wilson Rd
MP 307.53 Ellison Ditch
MP 307.13 Grotrian Rd
MP 306.83Hoffman Rd
MP 306.50 Snyder Rd
MP 305.51 Wormcastle Creek
MP 304.32 Washington St
MP 304.08 #10 LH HTTO
MP 304.05 Main St
MP 303.96 Ohio St
MP 303.81 Shaffer Creek
MP 302.65 Steirheim Ditch
MP 302.59 Lorlie Rd
MP 302.27 Flat Rock Creek
MP 302.19 Private
MP 301.80 Private
MP 301.50 Morgan Rd
MP 300.28 Market St
MP 299.45 Dixon Cavett Rd
MP 299.35 Stream
MP 298.88 Sponseller Rd
MP 298.06 Mentzer Church Rd
MP 297.99 Stream
MP 297.60 Private
MP 297.22 Blue Creek
MP 297.16 Mentzer Rd
MP 296.94 Lare Rd
MP 296.38 Shaner Rd
MP 295.82 Payne Rd
MP 295.40 Private

CURVATURE 0.07° 0.33°
SPEED 40F MPH 60P MPH
SIGNALS DCS

Prop 10,000' Siding at 15 foot track centers w/ No. 24 POTO

PROPOSED

Upgrade No. 10 LH HTTO to ELTO

Rehab existing Class III mainline to Class IV standards

CURVATURE
SPEED 60F MPH 79P MPH
SIGNALS PTC

CFE MP 310 309 308 307 306 305 304 303 302 301 300 299 298 297 296 295

CUS MP 160 165 170

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)
TOLLESTON (GARY, IN) TO LIMA, OH
YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

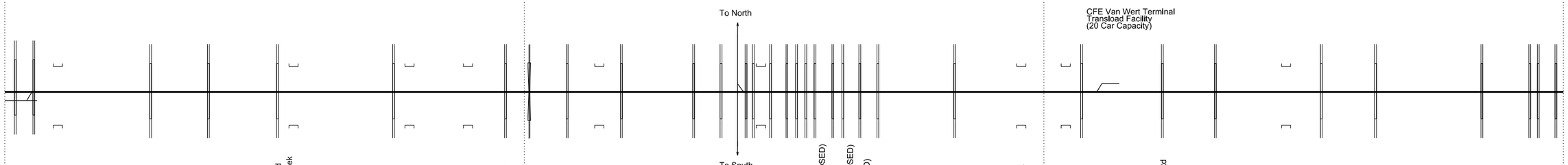
CONTRACT NO.
DRAWING NO.
SCALE: Not to Scale
SHEET NO. 11 of 14

CUS MP 175 180 185

CFE MP 295 294 293 292 291 290 289 288 287 286 285 284 283 282 281 280

Convoy — Van Wert — Middle Point

EXISTING



MP 294.86 W Tully St
MP 294.74 #10 LH HTTO
MP 294.71 S Main St
MP 294.45 North Creek
MP 293.59 Bergner Rd
MP 293.03 Lincoln Hwy
MP 292.38 Dull Robinson Rd
MP 292.19 Monkey Run Creek
MP 291.26 Richey Rd
MP 291.07 Hoaglin Creek
MP 290.50 Hough Ditch
MP 290.18 Liberty Union Rd
MP 289.95 USH 224
MP 289.59 Private
MP 289.23 Maddox Creek
MP 289.06 John Brown Rd
MP 288.37 Fisher Ave
MP 288.07 Burt St
MP 287.80 CFE Diamond
MP 287.80 #10 RH HTTO
MP 287.74 Wall St
MP 287.67 Thamon Creek
MP 287.61 Thamon St
MP 287.55 Jefferson St
MP 287.49 Washington St / USH 127
MP 287.37 Market St
MP 287.30 Walnut St
MP 287.24 Cherry St
MP 287.17 Harrison St (CLOSED)
MP 287.11 Tyler St
MP 287.04 Race St
MP 286.96 Chesnut St (CLOSED)
MP 286.91 Franklin St
MP 286.81 Vine St (CLOSED)
MP 286.76 Wayne St
MP 285.85 Mendon Rd
MP 285.18 Spice Run Creek
MP 284.75 Stream
MP 284.62 Gilliland Rd
MP 284.27 #10 LH HTTO
MP 283.85 Hoaglin Center Rd
MP 283.34 Gamble Rd
MP 282.62 Dog Creek
MP 282.32 Chenowith Rd
MP 281.80 Ringwold Rd
MP 280.78 Dog Creek Rd
MP 280.31 Mason St
MP 280.23 Adams St
MP 280.07 Main St

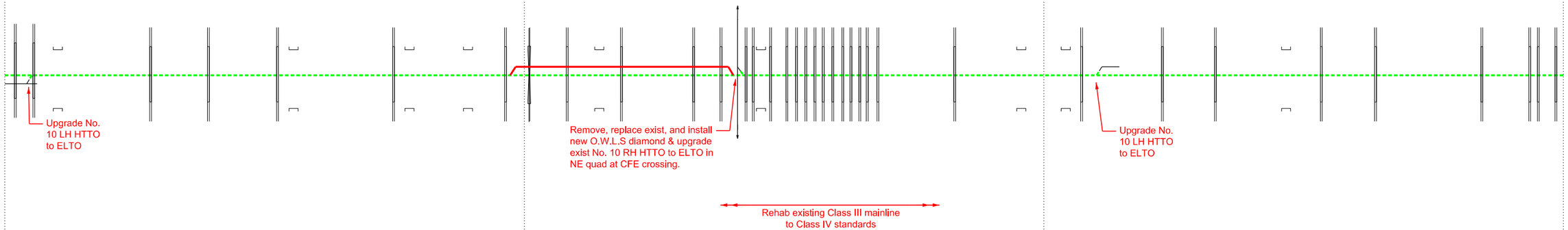
CURVATURE — 2.00° — 1.00°

SPEED — 40F MPH — 60P MPH

SIGNALS — DCS

Prop 10,000' Siding at 15 foot track centers w/ No. 24 POTO

PROPOSED



CURVATURE

SPEED — 60F MPH — 79P MPH

SIGNALS — PTC

CFE MP 295 294 293 292 291 290 289 288 287 286 285 284 283 282 281 280

CUS MP 175 180 185

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

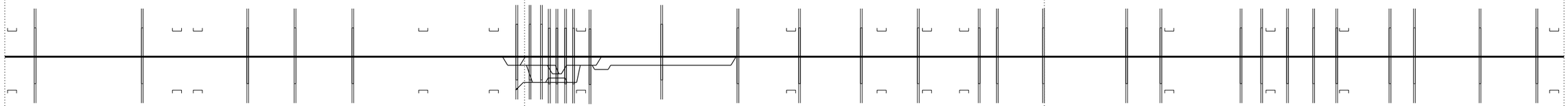
CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	12 of 14

CUS MP 190 195 200

CFE MP 280 279 278 277 276 275 274 273 272 271 270 268 268 267 266 265

Delphos Elida

EXISTING



MP 279.98 Little Auglaize River
MP 279.71 Middle Point Wetzel Rd
MP 278.68 Converse Roseln Rd
MP 278.31 Long Ditch
MP 278.11 White Ditch
MP 277.68 Bockey Rd
MP 277.20 Private
MP 276.65 John Brickner Rd
MP 275.93 W Jennings Ditch
MP 275.26 Jennings Creek
MP 275.22 #10 RH HTTO
MP 275.08 Stolle St
MP 274.99 #9 LH HTXO
MP 274.93 Bredeick St
MP 274.78 Clay St
MP 274.71 Jefferson St
MP 274.65 Canal St
MP 274.58 Main St
MP 274.44 Franklin St
MP 274.40 Flat Fork Creek
MP 274.37 Pierce St
MP 274.27 #10 LH HTTO
MP 273.69 Private
MP 272.96 #10 LH HTTO
MP 272.93 Lehman Rd
MP 272.40 W Jenning Creek
MP 272.35 Peltier
MP 271.77 Baugh Rd
MP 271.51 Stream
MP 271.18 Defiance Tr
MP 271.09 Auglaize Ditch
MP 270.72 Auglaize River
MP 270.61 Old Delphos Rd
MP 270.43 State Rd
MP 270.01 Redd Rd
MP 269.20 Private
MP 268.83 Grubb Rd
MP 268.76 Stream
MP 268.10 Private
MP 267.90 Private
MP 267.78 Honey Run Creek
MP 267.65 Kemp Rd
MP 267.40 Private
MP 267.16 Wapakoneta Rd
MP 267.13 Ottawa River
MP 266.67 W Main St
MP 266.41 S Greenlawn Rd
MP 265.80 Private
MP 265.25 Baty Rd
MP 265.07 Stream

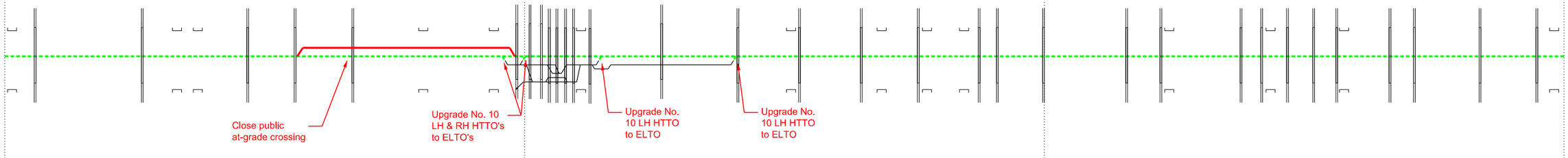
CURVATURE 1.00° 1.00° 1.00° 2.50°

SPEED 40F MPH 60P MPH

SIGNALS DCS

Prop 10,000' Siding at 15 foot track centers w/ No. 24 POTO

PROPOSED



Close public at-grade crossing

Upgrade No. 10 LH & RH HTTO's to ELTO's

Upgrade No. 10 LH HTTO to ELTO

Upgrade No. 10 LH HTTO to ELTO

Rehab existing Class III mainline to Class IV standards

CURVATURE

SPEED 60F MPH 79P MPH

SIGNALS PTC

CFE MP 280 279 278 277 276 275 274 273 272 271 270 268 268 267 266 265

CUS MP 190 195 200

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

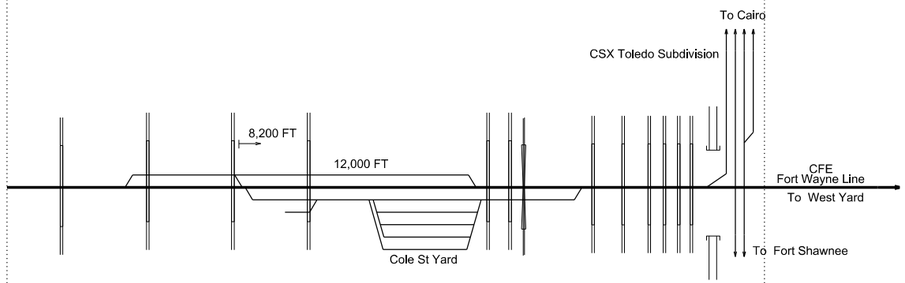
SHEET NO. 13 of 14

CUS MP 205 210 215 218.65

CFE MP 265 264 263 262 261 260 259 258 257 256 255 254 253 252 251 250

Cole Lima

EXISTING



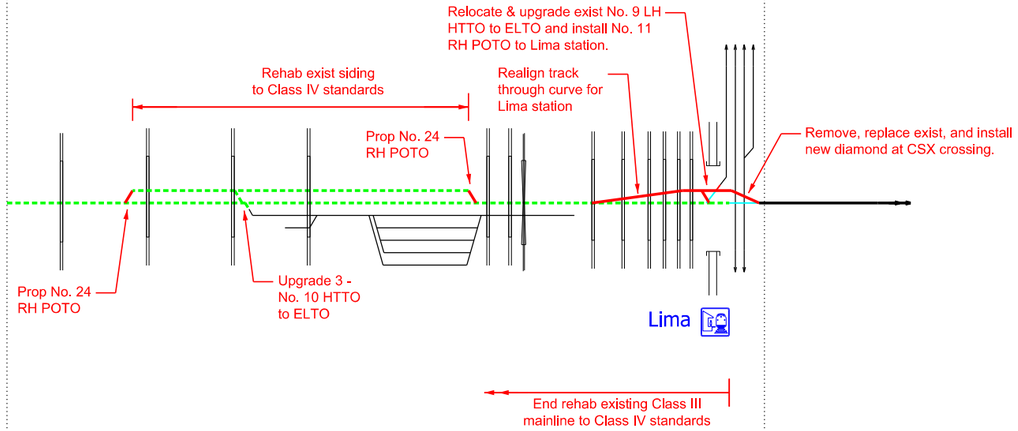
MP 264.63 East Rd
MP 264.21 #15 LHTO
MP 264.07 Eastown Rd
MP 263.51 Hartzler Rd
MP 263.49 #10 RHXO
MP 263.44 #10 RHTO
MP 262.99 Cable Rd
MP 261.86 #10 RHTO
MP 261.81 Cole St
MP 261.68 Center St
MP 261.59 Jameson Ave
MP 261.20 #10 LHTO
MP 261.12 N Baxter St
MP 260.92 N Metcalf St
MP 260.76 N Mc Donel St
MP 260.66 N West St
MP 260.56 N Elizabeth St
MP 260.46 N Main St
MP 260.40 #9 LH HTTO
To CSX Toledo Sub
MP 260.36 Union St
MP 260.25 CSX Toledo Subdivision

CURVATURE 2.25° 1.25° 1.00° 1.50°

SPEED 40F MPH / 60P MPH | 0.20 | 20F MPH | 0.30 | 35F MPH / 35P MPH | 0.60 | 40F MPH / 60P MPH

SIGNALS DCS

PROPOSED



CURVATURE

SPEED 60F MPH / 79P MPH | 40F MPH / 60P MPH | 35F MPH / 35P MPH | 40F MPH / 60P MPH

SIGNALS PTC | DCS

CFE MP 265 264 263 262 261 260 259 258 257 256 255 254 253 252 251 250

CUS MP 205 210 215 218.65

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 79MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 14 of 14

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)
PASSENGER RAIL SERVICE

CONCEPT PLAN FOR TRACK SCHEMATICS FOR EXISTING CONDITIONS, PROPOSED 110MPH AT 4 ROUND TRIP ALTERNATIVE



LEGEND

CFE MILEPOST — 415 | 414 | 414

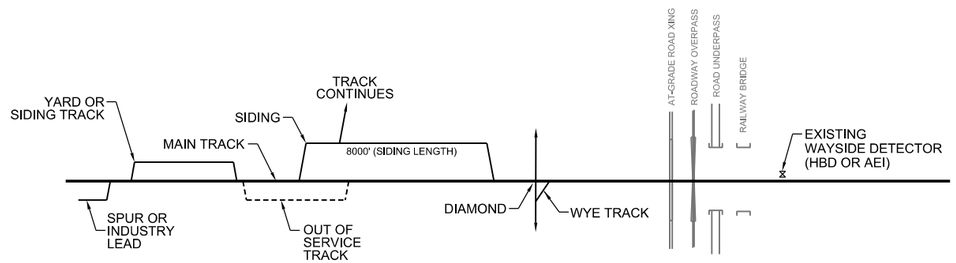
ACTUAL MILEAGE FROM CHICAGO UNION STATION — 85 | 86 | 87

STATION — Hanna

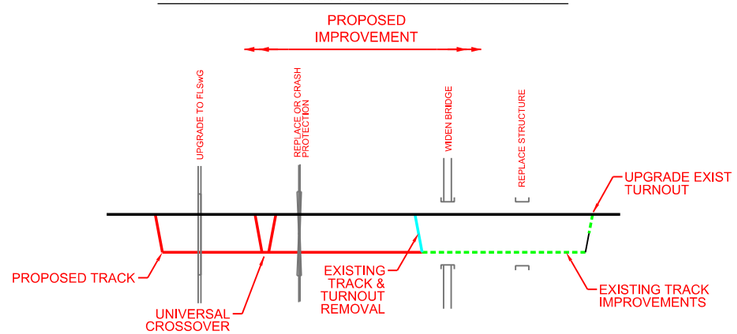
SUBDIVISION BOUNDARY — CFE FORT WAYNE SUBDIVISION | CFE LIMA SUBDIVISION

PROPOSED PASSENGER STATION

EXIST SCHEMATIC CONDITION



PROPOSED SCHEMATIC CONDITION



PLAN REVISIONS		
DATE	SHEET NO.	APPROVER

HNTB

11414 West Park Place, Suite 300
Milwaukee, WI 53224
(414) 359-2300

10 West Mifflin Street, Suite 300
Madison, WI 53703
(608) 294-5000

CONCEPTUAL DESIGN
NOT FOR CONSTRUCTION

DRAFT
DATE: 09/26/2018

ABBREVIATIONS

GENERAL ABBREVIATIONS

CFE	CHICAGO , FORT WAYNE & EASTERN RAILROAD
NS	NORFOLK SOUTHERN RAILWAY
CSX	CSX TRANSPORTATION
CN	CANADIAN NATIONAL RAILWAY
SUB	RAILWAY SUBDIVISION
TRK	TRACK
EB	EAST BOUND
WB	WEST BOUND
MOW	MAINTENANCE OF WAY
XO	CROSSOVER
UXO	UNIVERSAL CROSSOVER
POXO	POWER OPERATED CROSSOVER
HTTO	HAND THROW TURNOUT
ELTO	ELECTRIC LOCK TURNOUT
POTO	POWER OPERATED TURNOUT
O.W.L.S	ONE-WAY LOW SPEED DIAMOND

CROSSING ABBREVIATIONS

XB	CROSS BUCKS
XBwS	CROSS BUCKS WITH STOP SIGNS
FLS	FLASHING LIGHT SIGNALS
CFLS	CANTILEVERED FLASHING LIGHT SIGNALS
wG	WITH GATES

BRIDGE TYPE ABBREVIATIONS

BD	BALLAST DECK
OD	OPEN DECK
AMG	DECK PLATE GIRDER (MULTIPLE)
TG	THRU GIRDER
CB	CONCRETE BRIDGE
IB	I-BEAM
SWB	SWING BRIDGE
SB	STEEL BRIDGE
TPG	THRU-PLATE GIRDER
TDG	TWIN DECK GIRDER
C3	THRU PLATE GIRDER (4 STRINGERS)
C4	THRU PLATE GIRDER (2 STRINGERS)
PT	PILE TRESTLE
DG	DECK GIRDER
DPG	DECK PLATE GIRDER
IBG	I-BEAM GIRDER (ROLLED)
DT	DECK TRUSS
TPB	TIMBER PILE BRIDGE
EG	"E" GIRDER
LSB	LIFT SPAN BRIDGE

CURVATURE — 0°00' RT CURVE / 0°00' LT CURVE

FREIGHT RAIL SPEED — 40F

PASSENGER RAIL SPEED — 60P

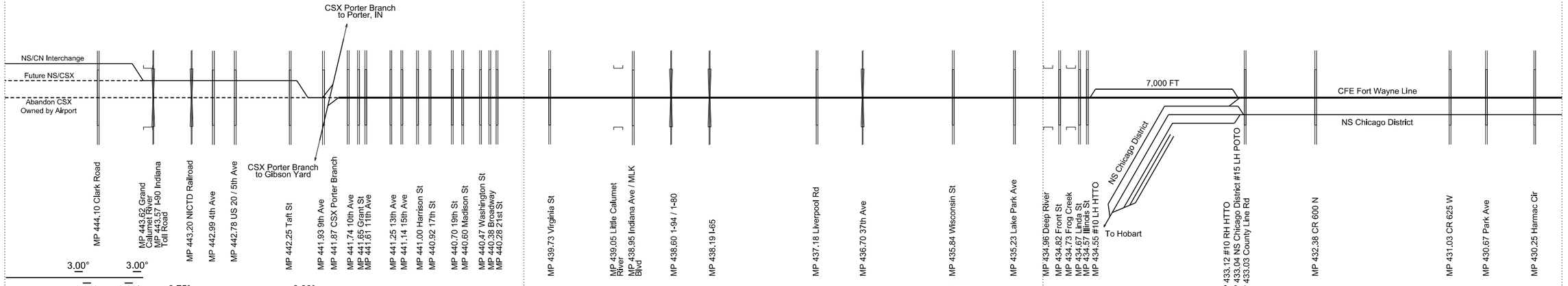
SIGNAL SYSTEM — PTC

CUS MP 23.65 25 30 35

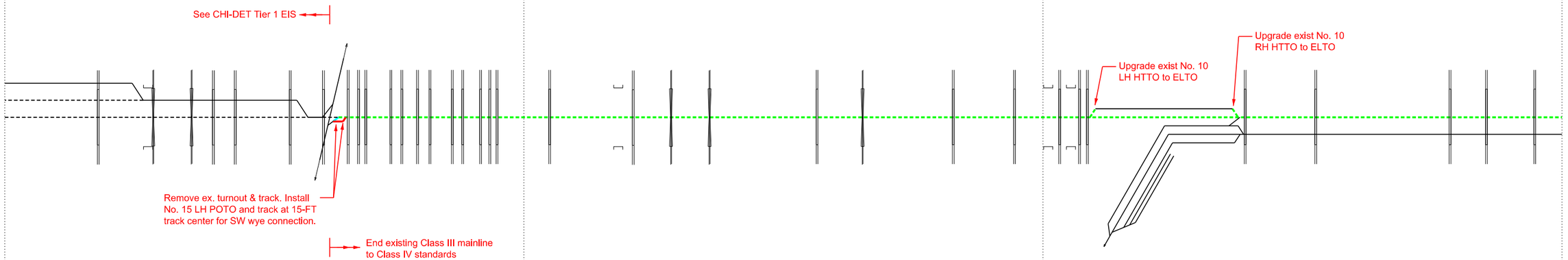
CFE MP 445 444 443 442 441 440 439 438 437 436 435 434 433 432 431 430

Tolleston Gary Liverpool Hobart Wheeler

EXISTING



PROPOSED



CFE MP 445 444 443 442 441 440 439 438 437 436 435 434 433 432 431 430

CUS MP 23.65 25 30 35

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 2 of 14

CUS MP 40 45 50

CFE MP 430 429 428 427 426 425 424 423 422 421 420 419 418 417 416 415

Valparaiso

Wanatah

EXISTING

CFE Fort Wayne Line

NS Chicago District

#20

#20

CN South Bend Sub
To Union Mills

To
Merrillville

NS Chicago Distrct
To South Wanatah

MP 429.43 CR 475 W
MP 428.68 CR 450 N
MP 428.51 Salt Creek
MP 428.32 CR 375 W
MP 427.50 CR 400 N
MP 427.38 NS Chicago District #15 RH POTO
MP 426.93 Tower Rd
MP 426.81 CN South Bend Subdivision
MP 425.81 Froberg Rd
MP 424.81 Clifford Rd
MP 424.45 Lincoln Hwy
MP 424.41 #10 RH HTTO
MP 424.10 Private
MP 423.99 #10 LH HTTO
MP 423.89 Napoleon St
MP 423.81 Lafayette St
MP 423.71 Washington St
MP 423.60 Franklin St
MP 423.42 Axe Ave
MP 423.17 Greenwich St
MP 422.99 USH 30
MP 422.20 Sturdy Rd
MP 421.68 SR 49
MP 421.09 Industrial Dr
MP 420.27 Montdale Rd
MP 420.00 Private
MP 419.70 CR 400 E
MP 419.23 Cain Ditch
MP 419.08 CR 450 E
MP 418.22 Crooked Creek
MP 417.78 CR 575 E
MP 416.56 County Line Rd
MP 415.46 CR 1100 W
MP 415.19 S Lincoln St
MP 415.05 S Washington St

CURVATURE
0.50° 0.50° 0.50° 1.00° 1.00° 0.50° 1.00° 1.00° 0.07°

SPEED
40F MPH
60P MPH

SIGNALS
TWC

End prop dedicated HSR track at 45 foot track center

PROPOSED

Remove, replace exist, and install new diamond at CN crossing.

Remove & replace exist track for prop station at 15-ft centers.

Prop one No. 11 LH POTO, one No. 11 RH POTO and one No. 9 LH ELTO.

Valparaiso

No. 24 POTO

Rehab existing Class III mainline to Class IV standards

CURVATURE

SPEED
110P MPH w/ PTC
60F MPH
79P MPH

SIGNALS
PTC

CFE MP 430 429 428 427 426 425 424 423 422 421 420 419 418 417 416 415

CUS MP 40 45 50

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- PROP PASSENGER STATION
- EXIST TRACK
- UPGRADE EXISTING
- PROP TRACK
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

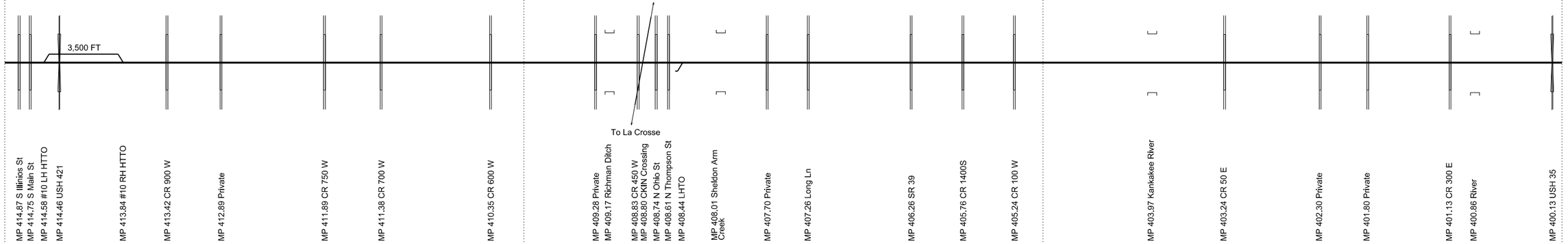
SHEET NO. 3 of 14

CUS MP 55 60 65

CFE MP 415 414 413 412 411 410 409 408 407 406 405 404 403 402 401 400

Hanna

EXISTING

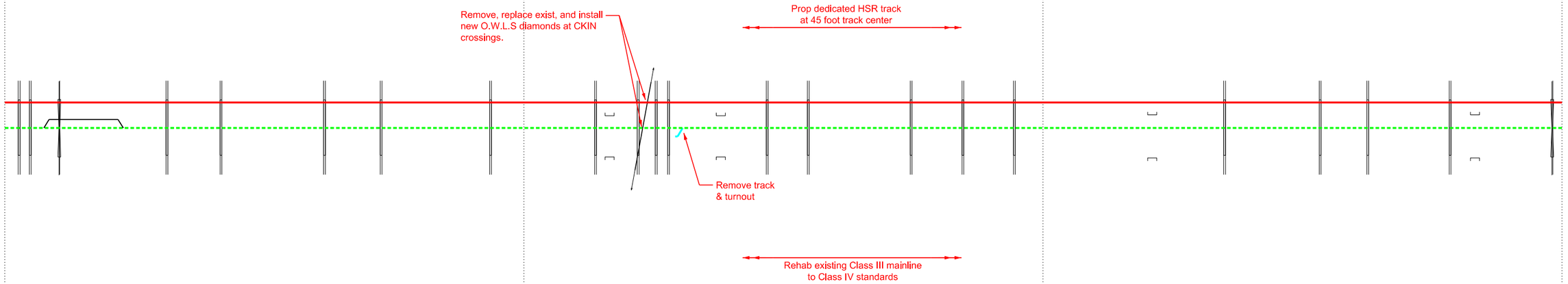


CURVATURE

SPEED — 40F MPH / 60P MPH

SIGNALS — TWC

PROPOSED



CURVATURE

SPEED — 110P MPH w/ PTC / 60F MPH

SIGNALS — 79P MPH / PTC

CFE MP 415 414 413 412 411 410 409 408 407 406 405 404 403 402 401 400

CUS MP 55 60 65

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)
TOLLESTON (GARY, IN) TO LIMA, OH
YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	4 of 14

CUS MP 70 75 80

CFE MP 400 399 398 397 396 395 394 393 392 391 390 389 388 387 386 385

Hamlet

Donaldson

EXISTING

MP 399.43 #10 LH HTTO
MP 399.11 CR 500 E
MP 398.59 N Jefferson St
MP 398.12 #10 LH HTTO
MP 398.09 N Starke St
MP 397.00 #10 RH HTTO
MP 396.61 #10 RH HTTO
MP 396.54 CR 750 E
MP 396.07 Jain Ditch
MP 395.54 CR 500 N
MP 394.19 SR 23
MP 393.50 Private
MP 392.99 CR 1100 E
MP 390.81 N Union Rd
MP 390.00 Tulip Rd
MP 388.46 W Rose Rd
MP 388.14 Private
MP 387.70 Redwood Rd
MP 386.69 Quince Rd
MP 386.34 9th Rd
MP 385.90 Private
MP 385.68 Pioneer Dr

CURVATURE 0.17° 0.33°

SPEED 40F MPH 60P MPH

SIGNALS TWC

PROPOSED

Begin prop dedicated HSR track at 45 foot track center

Remove turnouts & install new No. 10 ELTO w/ derails

Rehab exist siding to Class IV standards

Prop No. 24 RH POTO

Power exist No. 15 RH XO

No. 24 POXO

Upgrade exist No. 10 RH HTTO to ELTO

Upgrade exist No. 10 RH HTTO to ELTO

Prop Class IV second track between mainline and industry track at 15-ft centers

Prop 10,000 foot Class IV siding at 15 foot track centers w/ No. 24 POTO

Rehab existing Class III mainline to Class V standards

Rehab existing Class III mainline to Class V standards

CURVATURE

SPEED 80F MPH 90P MPH

SIGNALS PTC

CFE MP 400 399 398 397 396 395 394 393 392 391 390 389 388 387 386 385

CUS MP 70 75 80

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

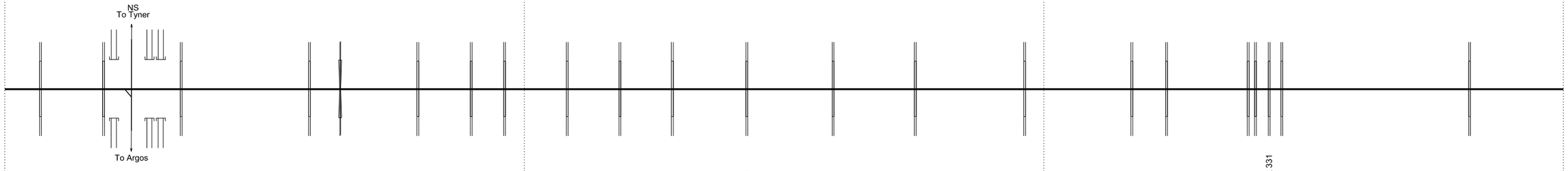
SHEET NO. 5 of 14

CUS MP 85 90 95

CFE MP 385 384 383 382 381 380 379 378 377 376 375 374 373 372 371 370

Plymouth | Inwood | Bourbon

EXISTING



CURVATURE 0.67°

SPEED 40F MPH / 60P MPH

SIGNALS TWC

PROPOSED

Plymouth

Remove and replace exist diamond at NS crossing. Upgrade exist No. 10 RH HTTO to ELTO.

Proposed 1000 foot second track for station platform w/ two No. 15 POTO.

Prop 10,500 foot Class IV siding at 15 foot track centers w/ No. 24 POTO

Rehab existing Class III mainline to Class V standards

CURVATURE

SPEED 80F MPH / 90P MPH

SIGNALS PTC

CFE MP 385 384 383 382 381 380 379 378 377 376 375 374 373 372 371 370

CUS MP 85 90 95

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)
TOLLESTON (GARY, IN) TO LIMA, OH
YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

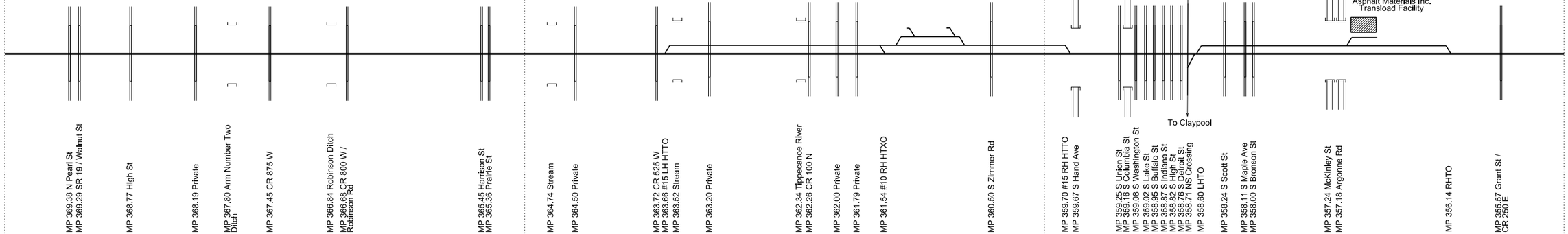
SHEET NO. 6 of 14

CUS MP 100 105 110

CFE MP 370 369 368 367 366 365 364 363 362 361 360 359 358 357 356 355

Etna Green | Atwood | Warsaw

EXISTING

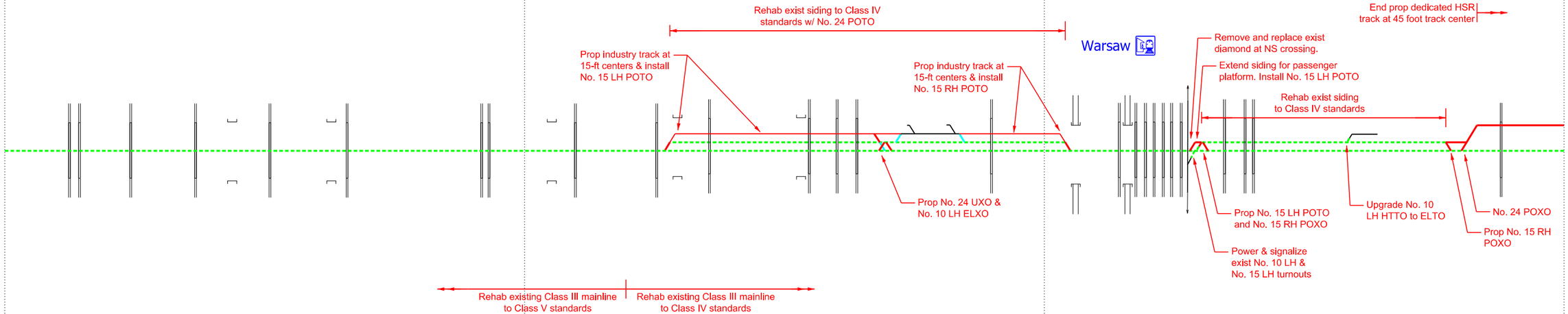


CURVATURE: 1.00° | 0.67°

SPEED: 40F MPH / 60P MPH | 25 MPH | 40 MPH

SIGNALS: TWC

PROPOSED



CURVATURE

SPEED: 80F MPH / 90P MPH | 60F MPH / 79P MPH

SIGNALS: PTC

CFE MP 370 369 368 367 366 365 364 363 362 361 360 359 358 357 356 355

CUS MP 100 105 110

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

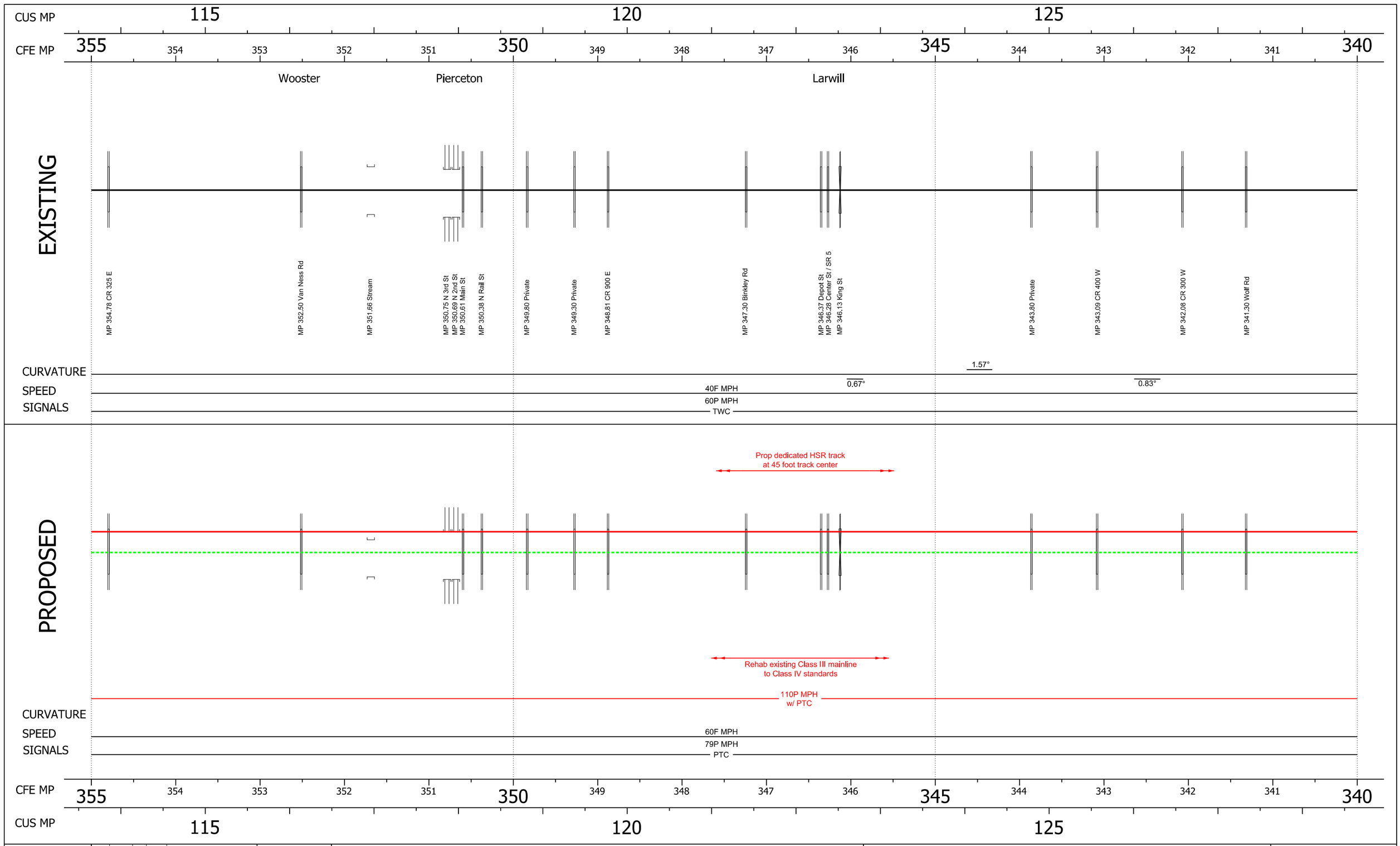
- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	7 of 14



HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)
TOLLESTON (GARY, IN) TO LIMA, OH
YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

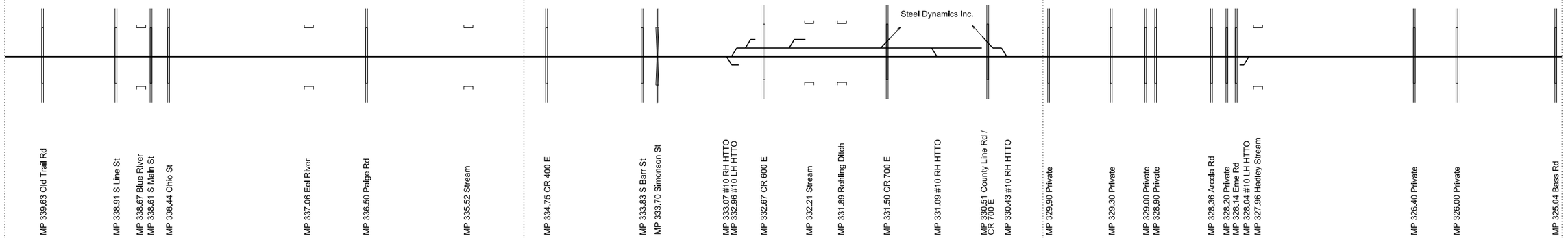
CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	8 of 14

CUS MP 130 135 140

CFE MP 340 339 338 337 336 335 334 333 332 331 330 329 328 327 326 325

Columbia City | Coesse | Arcola

EXISTING

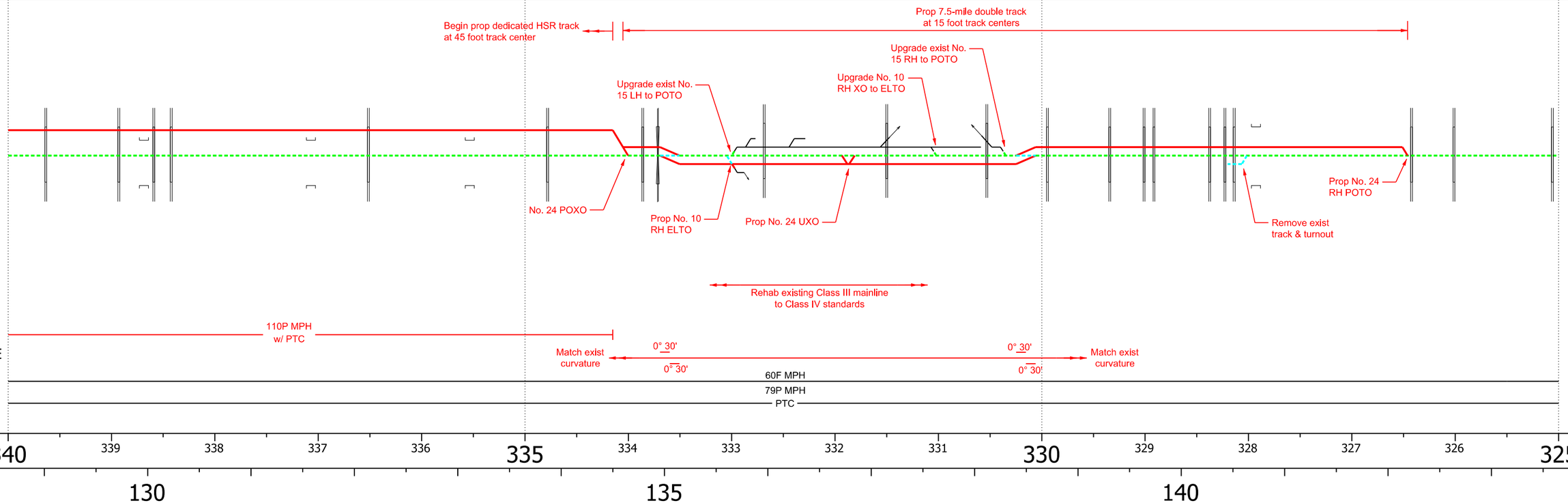


CURVATURE

SPEED — 40F MPH / 60P MPH

SIGNALS — TWC

PROPOSED



CURVATURE

SPEED

SIGNALS

CFE MP 340 339 338 337 336 335 334 333 332 331 330 329 328 327 326 325

CUS MP 130 135 140

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- PROP PASSENGER STATION
- EXIST TRACK
- UPGRADE EXISTING
- PROP TRACK
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

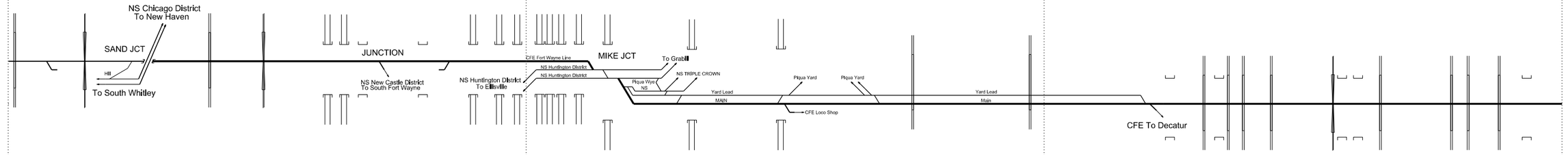
SHEET NO. 9 of 14

CUS MP 145 150 155

CFE MP 325 324 323 322 321 320 319 318 317 316 315 314 313 312 311 310

Fort Wayne | Fort Wayne | Adams

EXISTING



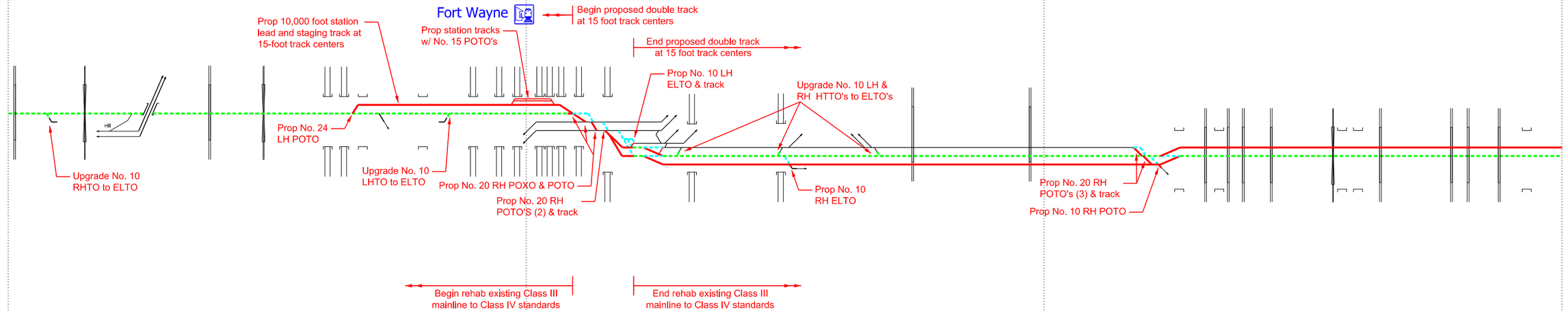
MP 324.92 N Hadley Rd
MP 324.62 #10 RH HTTO
MP 324.27 I-69
MP 323.83 #20 LH POTO (Hadley Cutoff)
MP 323.53 NS Chicago District
MP 323.04 Thomas Rd
MP 322.53 Hillegas Rd
MP 321.88 Lindenwood Ave
MP 321.71 W Jefferson Blvd
MP 321.53 Stream
MP 321.30 #15 POTO NS New Castle District
MP 320.94 St Marys River
MP 320.61 #10 LH HTTO
MP 320.48 College St
MP 320.22 Broadway St
MP 320.04 Fairfield Ave
MP 319.76 Harrison St
MP 319.70 Calhoun St
MP 319.62 Clinton St / USH 27 SB
MP 319.44 Lafayette St / USH 27 NB
MP 319.22 #10 RH POTO
MP 319.19 Hanna St
MP 319.15 #10 RH POTO NS Huntington District
MP 319.05 #9 LH POTO
MP 318.51 #9 LH HTXO
MP 318.37 Anthony Blvd
MP 317.57 #9 LH HTXO
MP 317.54 Pioneer St
MP 317.49 #10 RH HTTO
MP 316.56 #9 RH HTXO
MP 316.28 Meyer Rd
MP 315.12 Adams Center Rd
MP 314.01 #20 RH HTTO
MP 313.98 #10 RH HTTO CFE Decatur Line
MP 313.75 Jack Adams Ditch
MP 313.44 Hartzell Rd
MP 313.27 Stream
MP 313.21 Paulding Rd
MP 313.07 Private
MP 312.80 Private
MP 312.20 I-469
MP 312.09 Stream
MP 311.91 Ritters Creek
MP 311.75 Minnich Rd
MP 311.07 Tillman Rd
MP 310.90 Private
MP 310.60 Private
MP 310.30 Bass Ditch

CURVATURE: 4.25° | 4.40° | 3.47° | 3.47° | 2.00° 1.63° | 0.00

SPEED: 40F MPH / 60P MPH | 20F MPH / 25P MPH | 40F MPH / 60P MPH

SIGNALS: TWC — CTC — DCS

PROPOSED



CURVATURE: 0° 30' | 0° 30' | 0° 30' | 0° 30' | Match exist curvature

SPEED: 60F MPH / 79P MPH | 40F MPH / 40P MPH | 60F MPH / 79P MPH

SIGNALS: PTC

CFE MP 325 324 323 322 321 320 319 318 317 316 315 314 313 312 311 310

CUS MP 145 150 155

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 10 of 14

CUS MP 160 165 170

CFE MP 310 309 308 307 306 305 304 303 302 301 300 299 298 297 296 295

Maples Monroeville Dixon

EXISTING

MP 309.94 Franke Rd
MP 309.71 Washington St
MP 309.37 Houx Rd
MP 308.88 Flat Rock Creek
MP 308.81 Gerardot Rd
MP 308.30 Fackler Rd
MP 307.71 Wilson Rd
MP 307.53 Ellison Ditch
MP 307.13 Grotrian Rd
MP 306.83Hoffman Rd
MP 306.50 Snyder Rd
MP 305.51 Wormcastle Creek
MP 304.32 Washington St
MP 304.08 #10 LH HTTO
MP 304.05 Main St
MP 303.96 Ohio St
MP 303.81 Shaffer Creek
MP 302.65 Steirheim Ditch
MP 302.59 Lorlie Rd
MP 302.27 Flat Rock Creek
MP 302.19 Private
MP 301.80 Private
MP 301.50 Morgan Rd
MP 300.28 Market St
MP 299.45 Dixon Cavett Rd
MP 299.35 Stream
MP 298.88 Sponseller Rd
MP 298.06 Mentzer Church Rd
MP 297.99 Stream
MP 297.60 Private
MP 297.22 Blue Creek
MP 297.16 Mentzer Rd
MP 296.94 Lare Rd
MP 296.38 Shaner Rd
MP 295.82 Payne Rd
MP 295.40 Private

CURVATURE 0.07° 0.33°
SPEED 40F MPH
SIGNALS 60P MPH, DCS

PROPOSED

Prop double track at 15 foot track centers
End prop dedicated HSR track at 45 foot track center
No. 24 POXO
Upgrade No. 10 LH HTTO to ELTO
Rehab existing Class III mainline to Class IV standards
110P MPH w/ PTC

CURVATURE
SPEED 60F MPH, 79P MPH
SIGNALS PTC

CFE MP 310 309 308 307 306 305 304 303 302 301 300 299 298 297 296 295

CUS MP 160 165 170

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

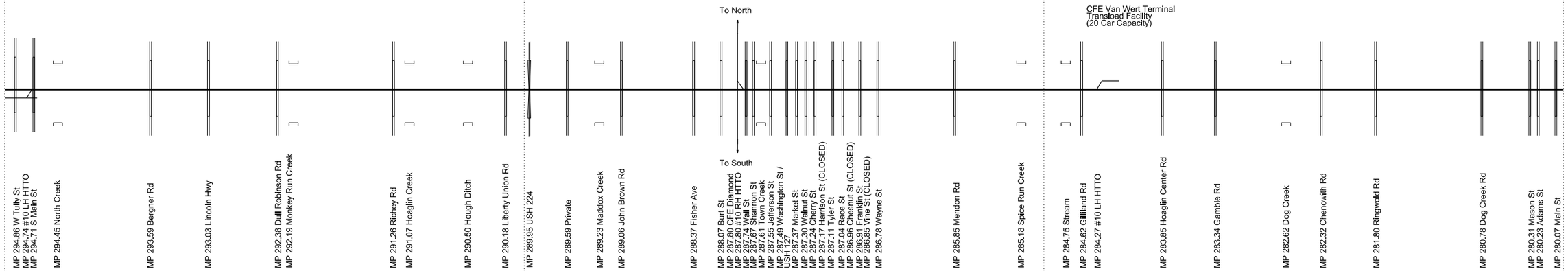
CONTRACT NO.
DRAWING NO.
SCALE: Not to Scale
SHEET NO. 11 of 14

CUS MP 175 180 185

CFE MP 295 294 293 292 291 290 289 288 287 286 285 284 283 282 281 280

Convoy — Van Wert — Middle Point

EXISTING

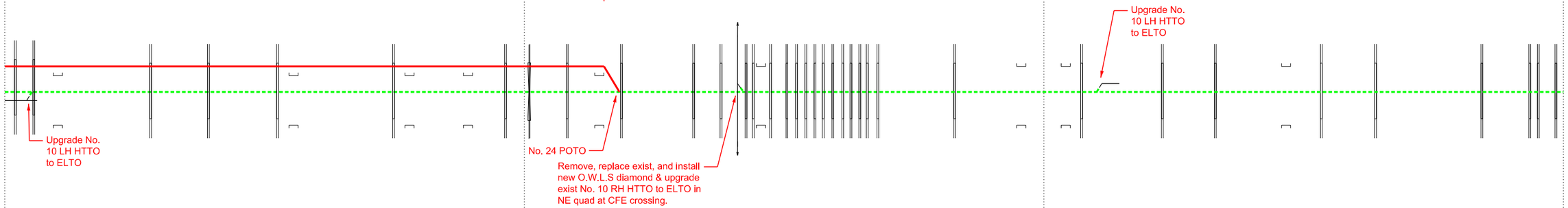


CURVATURE — 2.00° — 1.00°

SPEED — 40F MPH — 60P MPH

SIGNALS — DCS

PROPOSED



CURVATURE

SPEED — 60F MPH / 79P MPH — 80F MPH / 90P MPH

SIGNALS — PTC

CFE MP 295 294 293 292 291 290 289 288 287 286 285 284 283 282 281 280

CUS MP 175 180 185

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

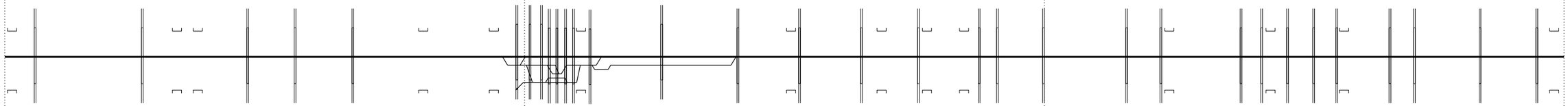
CONTRACT NO.	
DRAWING NO.	
SCALE:	Not to Scale
SHEET NO.	12 of 14

CUS MP 190 195 200

CFE MP 280 279 278 277 276 275 274 273 272 271 270 268 268 267 266 265

Delphos Elida

EXISTING



MP 279.98 Little Auglaize River
MP 279.71 Middle Point Wetzel Rd
MP 278.68 Converse Roseln Rd
MP 278.31 Long Ditch
MP 278.11 White Ditch
MP 277.68 Bockey Rd
MP 277.20 Private
MP 276.65 John Brickner Rd
MP 275.93 W Jennings Ditch
MP 275.26 Jennings Creek
MP 275.22 #10 RH HTTO
MP 275.08 Stolle St
MP 274.99 #9 LH HTXO
MP 274.93 Bredeick St
MP 274.78 Clay St
MP 274.71 Jefferson St
MP 274.65 Canal St
MP 274.58 Main St
MP 274.44 Franklin St
MP 274.40 Flat Fork Creek
MP 274.37 Pierce St
MP 274.27 #10 LH HTTO
MP 273.69 Private
MP 272.96 #10 LH HTTO
MP 272.93 Lehman Rd
MP 272.40 W Jenning Creek
MP 272.35 Peltier
MP 271.77 Baugh Rd
MP 271.51 Stream
MP 271.18 Defiance Tr
MP 271.09 Auglaize Ditch
MP 270.72 Auglaize River
MP 270.61 Old Delphos Rd
MP 270.43 State Rd
MP 270.01 Redd Rd
MP 269.20 Private
MP 268.83 Grubb Rd
MP 268.76 Stream
MP 268.10 Private
MP 267.90 Private
MP 267.78 Honey Run Creek
MP 267.65 Kemp Rd
MP 267.40 Private
MP 267.16 Wapakoneta Rd
MP 267.13 Ottawa River
MP 266.67 W Main St
MP 266.41 S Greenlawn Rd
MP 266.80 Private
MP 265.25 Baty Rd
MP 265.07 Stream

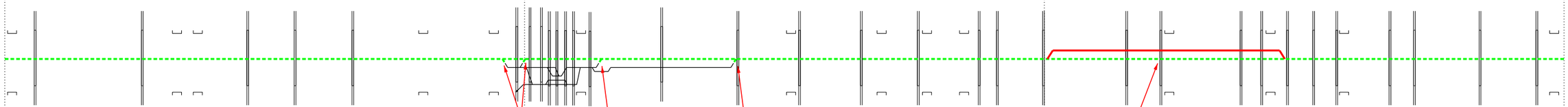
CURVATURE 1.00° 1.00° 1.00° 2.50°

SPEED 40F MPH 60P MPH

SIGNALS DCS

Prop 12,000' Class IV siding at 15 foot track centers w/ No. 24 POTO

PROPOSED



Upgrade No. 10 LH & RH HTTO's to ELTO's

Upgrade No. 10 LH HTTO to ELTO

Upgrade No. 10 LH HTTO to ELTO

Close public at-grade crossing

Rehab existing Class III mainline to Class V standards

CURVATURE

SPEED 80F MPH 90P MPH

SIGNALS PTC

CFE MP 280 279 278 277 276 275 274 273 272 271 270 268 268 267 266 265

CUS MP 190 195 200

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

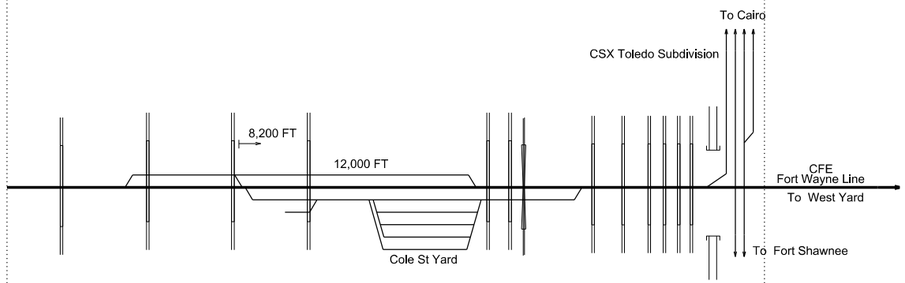
SHEET NO. 13 of 14

CUS MP 205 210 215 218.65

CFE MP 265 264 263 262 261 260 259 258 257 256 255 254 253 252 251 250

Cole Lima

EXISTING



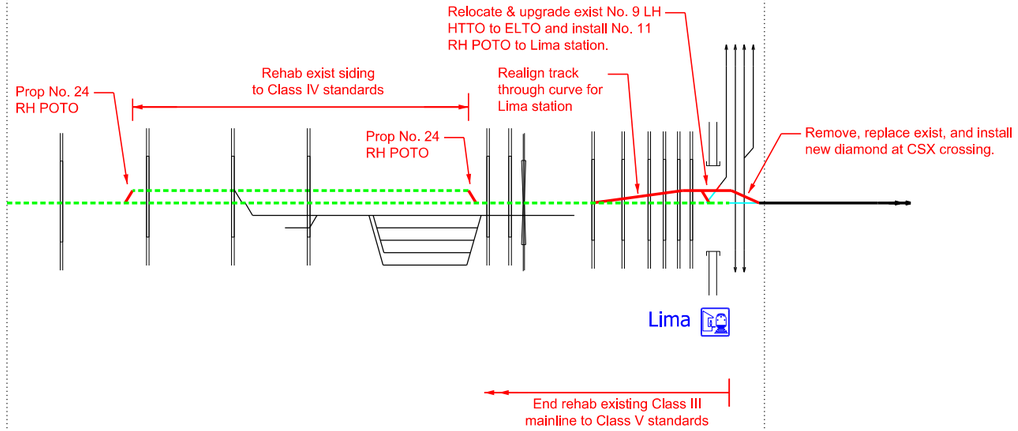
MP 264.63 East Rd
MP 264.21 #15 LHTO
MP 264.07 Eastown Rd
MP 263.51 Hartzler Rd
MP 263.49 #10 RHXO
MP 263.44 #10 RHTO
MP 262.99 Cable Rd
MP 261.86 #10 RHTO
MP 261.81 Cole St
MP 261.68 Center St
MP 261.59 Jameson Ave
MP 261.20 #10 LHTO
MP 261.12 N Baxter St
MP 260.92 N Metcalf St
MP 260.76 N Mc Donel St
MP 260.66 N West St
MP 260.56 N Elizabeth St
MP 260.46 N Main St
MP 260.40 #9 LH HTTO
To CSX Toledo Sub
MP 260.36 Union St
MP 260.25 CSX Toledo Subdivision

CURVATURE 2.25° 1.25° 1.00° 1.50°

SPEED 40F MPH / 60P MPH | 0.20 | 20F MPH | 0.30 | 35F MPH / 35P MPH | 0.60 | 40F MPH / 60P MPH

SIGNALS DCS

PROPOSED



CURVATURE

SPEED 80F MPH / 90P MPH | 40F MPH / 60P MPH | 35F MPH / 35P MPH | 40F MPH / 60P MPH

SIGNALS PTC | DCS

CFE MP 265 264 263 262 261 260 259 258 257 256 255 254 253 252 251 250

CUS MP 205 210 215 218.65

HNTB

REV	DATE	BY	APP.	DESCRIPTION

LEGEND

- EXIST TRACK
- PROP TRACK
- PROP PASSENGER STATION
- UPGRADE EXISTING
- REMOVE EXISTING
- AT-GRADE XING
- ROAD OVERPASS
- ROAD OVERPASS
- RAILWAY STRUCTURE

NORTHERN INDIANA PASSENGER RAIL ASSOICATION (NIPRA)

TOLLESTON (GARY, IN) TO LIMA, OH

YEAR 2035 PROPOSED 110MPH at 4 ROUND TRIPS SCHEMATIC

CONTRACT NO.

DRAWING NO.

SCALE: Not to Scale

SHEET NO. 14 of 14

APPENDIX B: CONCEPTUAL COST ESTIMATES

Conceptual cost estimates are based on conceptual schematics. Further refinement of capital improvements and capital costs will occur during future host railroad coordination, service planning and preliminary engineering efforts.

Cat.	DESCRIPTION	SERVICE ALTERNATIVE		
		79 MPH at 2 RT	79 MPH at 4 RT	110 MPH at 4 RT
10	**TRACK STRUCTURES & TRACK**			
10.01	Track structure: Viaduct	$ -	$ -	$ -
10.02	Track structure: Major/Movable bridge	$ 16,980,000	$ 21,120,000	$ 26,520,000
10.03	Track structure: Undergrade Bridges	$ 29,700,000	$ 30,750,000	$ 44,580,000
10.04	Track structure: Culverts and drainage structures	$ -	$ -	$ -
10.05	Track structure: Cut and Fill (+/- 4' height/depth)	$ 30,354,412	$ 41,678,115	$ 88,582,348
10.06	Track structure: At-grade (grading and subgrade stabilization)	$ -	$ -	$ -
10.07	Track structure: Tunnel	$ -	$ -	$ -
10.08	Track structure: Retaining walls and systems	$ -	$ -	$ -
10.09	Track new construction: Conventional ballasted	$ 48,863,200	$ 66,233,600	$ 129,539,216
10.10	Track new construction: Non-ballasted	$ -	$ -	$ -
10.11	Track rehabilitation: Ballast and surfacing	$ -	$ -	$ -
10.12	Track rehabilitation: Ditching and drainage	$ -	$ -	$ -
10.13	Track rehabilitation: Component replacement (rail, ties, etc)	$ 201,566,601	$ 202,839,901	$ 204,819,400
10.14	Track: Special track work (switches, turnouts, insulated joints)	$ 25,660,000	$ 31,565,000	$ 29,215,000
10.15	Track: Major interlockings	$ -	$ -	$ -
10.16	Track: Switch heaters (with power and control)	$ -	$ -	$ -
10.17	Track: Vibration and noise dampening	$ -	$ -	$ -
10.18	Other linear structures including fencing, sound walls	$ -	$ -	$ -
	Category 10 Contingency (30%)	$ 105,937,264	$ 118,255,985	$ 156,976,789
	Total for Category 10 TRACK STRUCTURES & TRACK	**$ 459,061,477**	**$ 512,442,601**	**$ 680,232,754**
20	**STATIONS & TERMINALS**			
20.01	Station buildings: Intercity passenger rail only	$ -	$ -	$ -
20.02	Station buildings: Joint use (commuter rail, intercity bus)	$ -	$ -	$ -
20.03	Platforms	$ -	$ -	$ -
20.04	Elevators, escalators	$ -	$ -	$ -
20.05	Joint commercial development	$ -	$ -	$ -
20.06	Pedestrian / bike access and accommodation, landscaping, parking lots	$ -	$ -	$ -
20.07	Automobile, bus, van accessways including roads	$ -	$ -	$ -
20.08	Fare collection systems and equipment	$ -	$ -	$ -
20.09	Station security	$ -	$ -	$ -
	Category 20 Contingency (30%)	$ -	$ -	$ -
	Total for Category 20 STATIONS & TERMINALS	**$ -**	**$ -**	**$ -**
30	**SUPPORT FACILITIES**			
30.01	Administration building: Office, sales, storage, revenue counting	$ -	$ -	$ -
30.02	Light maintenance facility	$ 300,000	$ 300,000	$ 300,000
30.03	Heavy maintenance facility	$ -	$ -	$ -
30.04	Storage or maintenance-of-way building/bases	$ -	$ -	$ -
30.05	Yard and Yard Track	$ -	$ -	$ -
	Category 30 Contingency (0%)	$ -	$ -	$ -
	Total for Category 30 SUPPORT FACILITIES	**$ 300,000**	**$ 300,000**	**$ 300,000**
40	**SITEWORK, RIGHT OF WAY, LAND**			
40.01	Demolition, clearing, site preparation	$ 4,535,000	$ 4,535,000	$ 4,535,000
40.02	Site utilities, utility relocation	$ 5,000,000	$ 5,000,000	$ 5,000,000
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments	$ -	$ -	$ -
40.04	Environmental mitigation: wetlands, historic/archeology, parks	$ -	$ -	$ -
40.05	Site structures including retaining walls, sound walls	$ -	$ -	$ -
40.06	Temporary facilities and other indirect costs during construction	$ -	$ -	$ -
40.07	Purchase or lease of real estate	$ -	$ -	$ 3,056,970
40.08	Highway/pedestrian overpass/grade separations	$ 90,000	$ 150,000	$ 180,000
40.09	Relocation of existing households and businesses	$ -	$ -	$ -
	Category 40 Contingency (30%)	$ 2,887,500	$ 2,905,500	$ 3,831,591
	Total for Category 40 SITEWORK, RIGHT OF WAY, LAND	**$ 12,512,500**	**$ 12,590,500**	**$ 16,603,561**
50	**COMMUNICATIONS & SIGNALING**			
50.01	Wayside signaling equipment	$ 55,960,000	$ 65,280,000	$ 66,600,000
50.02	Signal power access and distribution	$ 997,700	$ 997,700	$ 997,700
50.03	On-board signaling equipment	$ -	$ -	$ -
50.04	Traffic control and dispatching systems	$ -	$ -	$ -
50.05	Communications	$ 100,677,000	$ 100,677,000	$ 100,677,000
50.06	Grade crossing protection	$ 48,960,000	$ 49,610,000	$ 75,045,000
50.07	Hazard detectors: dragging equipment, high water, slide, etc.	$ 1,360,500	$ 1,360,500	$ 1,360,500
50.08	Station train approach warning system	$ -	$ -	$ -
	Category 50 Contingency (30%)	$ 62,386,560	$ 65,377,560	$ 73,404,060
	Total for Category 50 COMMUNICATIONS & SIGNALING	**$ 270,341,760**	**$ 283,302,760**	**$ 318,084,260**
	CONSTRUCTION SUBTOTAL (10 - 60)	***$ 742,215,737***	***$ 808,635,861***	***$ 1,015,220,574***
	CORRIDOR COST PER MILE	**$ 4,091,597**	**$ 4,457,750**	**$ 5,596,585**
70	**VEHICLES**			
70.00	Vehicle acquisition: Electric locomotive	$ -	$ -	$ -
70.01	Vehicle acquisition: Non-electric locomotive	$ -	$ -	$ -
70.04	Veh acq: Loco-hauled passenger cars w/ ticketed space	$ -	$ -	$ -
70.05	Veh acq: Loco-hauled passenger cars w/o ticketed space	$ -	$ -	$ -
	Category 70 Contingency (0%)	$ -	$ -	$ -
	Total for Category 70 VEHICLES	**$ -**	**$ -**	**$ -**
80	**PROFESSIONAL SERVICES**			
80.01	Service Development Plan/Service Environmental (1%)	$ 7,422,157	$ 8,086,359	$ 10,152,206
80.02	Preliminary Engineering/Project Environmental (1%)	$ 7,422,157	$ 8,086,359	$ 10,152,206
80.03	Final design (2%)	$ 14,844,315	$ 16,172,717	$ 20,304,411
80.04	Project management for design and construction (2%)	$ 14,844,315	$ 16,172,717	$ 20,304,411
80.05	Construction administration & management (2%)	$ 14,844,315	$ 16,172,717	$ 20,304,411
80.06	Professional liability and other non-construction insurance	$ -	$ -	$ -
80.07	Legal; Permits; Review Fees by other agencies, cities, etc.	$ -	$ -	$ -
80.08	Surveys, testing, investigation (1%)	$ 7,422,157	$ 8,086,359	$ 10,152,206
80.09	Engineering inspection (1%)	$ 7,422,157	$ 8,086,359	$ 10,152,206
80.10	Start up			
	Total for Category 80 PROFESSIONAL SERVICES	**$ 74,221,574**	**$ 80,863,586**	**$ 101,522,057**
	Subtotal (10-80)	**$ 816,437,310**	**$ 889,499,447**	**$ 1,116,742,632**
90	**UNALLOCATED CONTINGENCY (10%)**	**$ 81,643,731**	**$ 88,949,945**	**$ 111,674,263**
	LIMA - TOLLESTON CAPITAL COSTS (10-90)	**$ 898,081,041**	**$ 978,449,391**	**$ 1,228,416,895**

GENERAL NOTES:

1. All costs shown are in 2018 dollars.
2. FRA Standard cost category 60 Electrification is not included and not applicable for this project.
3. Contingency percentage of 30% is applied to standard cost categories 10, 20, 40, and 50. A 10% unallocated contingency is applied to the total of sub categories 10, 20, 30, 40, 50, 70 and 80.
4. SCC 20 costs are not included in the capital cost estimate at this phase. It is assumed that each city will secure funds for proposed stations.
5. Costs associated with SCC 70 are to be evaluated at later phase and are considered to be part of other state sponsered services or provided through operating agreement for future operator.

APPENDIX C: FINANCIAL CASH FLOWS

2 DRT at 79mph 20-Year Cash Flow

Year (2016$)	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Section 209 Line Item																					
Revenue																					
Ticket Revenue	$ 11,614,500	$ 11,973,200	$ 12,331,900	$ 12,690,600	$ 13,049,300	$ 13,408,000	$ 13,897,800	$ 14,387,600	$ 14,877,400	$ 15,367,200	$ 15,857,000	$ 16,346,800	$ 16,836,600	$ 17,326,400	$ 17,816,200	$ 18,306,000	$ 18,989,400	$ 19,672,800	$ 20,356,200	$ 21,039,600	$ 21,723,000
Food & Beverage	$ 336,500	$ 347,600	$ 358,700	$ 369,800	$ 380,900	$ 392,000	$ 404,800	$ 417,600	$ 430,400	$ 443,200	$ 456,000	$ 468,800	$ 481,600	$ 494,400	$ 507,200	$ 520,000	$ 539,100	$ 558,200	$ 577,300	$ 596,400	$ 615,500
Other Revenue																					
Total Revenue	**$ 11,951,000**	**$ 12,320,800**	**$ 12,690,600**	**$ 13,060,400**	**$ 13,430,200**	**$ 13,800,000**	**$ 14,302,600**	**$ 14,805,200**	**$ 15,307,800**	**$ 15,810,400**	**$ 16,313,000**	**$ 16,815,600**	**$ 17,318,200**	**$ 17,820,800**	**$ 18,323,400**	**$ 18,826,000**	**$ 19,528,500**	**$ 20,231,000**	**$ 20,933,500**	**$ 21,636,000**	**$ 22,338,500**
Expenses																					
Third Party Costs																					
Host Railroad	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000	$ 2,123,000
Synthetic Host Railroad Charge																					
Fuel and Power	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000	$ 701,000
Subtotal: Third Party Costs	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**	**$ 2,824,000**
Fixed Route Costs																					
Train & Engine Crew Labor	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000	$ 2,286,000
Car & Locomotive Maintenance and Turnaround	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000	$ 3,460,000
Onboard Passenger Technology	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000	$ 87,000
OBS - Crew	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000	$ 531,000
Commissary Provisions	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000
Route Advertising	$ 126,000	$ 129,800	$ 133,600	$ 137,400	$ 141,200	$ 145,000	$ 149,100	$ 153,200	$ 157,300	$ 161,400	$ 165,500	$ 169,600	$ 173,700	$ 177,800	$ 181,900	$ 186,000	$ 192,100	$ 198,200	$ 204,300	$ 210,400	$ 216,500
Reservations & Call Centers	$ 1,007,500	$ 1,037,600	$ 1,067,700	$ 1,097,800	$ 1,127,900	$ 1,158,000	$ 1,190,600	$ 1,223,200	$ 1,255,800	$ 1,288,400	$ 1,321,000	$ 1,353,600	$ 1,386,200	$ 1,418,800	$ 1,451,400	$ 1,484,000	$ 1,532,700	$ 1,581,400	$ 1,630,100	$ 1,678,800	$ 1,727,500
Stations	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000
Station Technology	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
Commissions	$ 197,500	$ 203,400	$ 209,300	$ 215,200	$ 221,100	$ 227,000	$ 233,400	$ 239,800	$ 246,200	$ 252,600	$ 259,000	$ 265,400	$ 271,800	$ 278,200	$ 284,600	$ 291,000	$ 300,500	$ 310,000	$ 319,500	$ 329,000	$ 338,500
Customer Concession	$ 19,000	$ 19,600	$ 20,200	$ 20,800	$ 21,400	$ 22,000	$ 22,700	$ 23,400	$ 24,100	$ 24,800	$ 25,500	$ 26,200	$ 26,900	$ 27,600	$ 28,300	$ 29,000	$ 30,000	$ 31,000	$ 32,000	$ 33,000	$ 34,000
Connecting Motor Coach																					
Regional/Local Police	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 58,000
Block & Tower Operations																					
Terminal Yard Operations	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000
Terminal M o W	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000
Insurance	$ 394,000	$ 407,000	$ 420,000	$ 433,000	$ 446,000	$ 459,000	$ 474,000	$ 489,000	$ 504,000	$ 519,000	$ 534,000	$ 549,000	$ 564,000	$ 579,000	$ 594,000	$ 609,000	$ 631,300	$ 653,600	$ 675,900	$ 698,200	$ 720,500
Subtotal: Fixed Route Costs	**$ 9,941,000**	**$ 9,994,400**	**$ 10,047,800**	**$ 10,101,200**	**$ 10,154,600**	**$ 10,208,000**	**$ 10,266,800**	**$ 10,325,600**	**$ 10,384,400**	**$ 10,443,200**	**$ 10,502,000**	**$ 10,560,800**	**$ 10,619,600**	**$ 10,678,400**	**$ 10,737,200**	**$ 10,796,000**	**$ 10,883,600**	**$ 10,971,200**	**$ 11,058,800**	**$ 11,146,400**	**$ 11,234,000**
Additives																					
Marketing (2.3% of ticket revenue)	$ 267,000	$ 275,200	$ 283,400	$ 291,600	$ 299,800	$ 308,000	$ 319,300	$ 330,600	$ 341,900	$ 353,200	$ 364,500	$ 375,800	$ 387,100	$ 398,400	$ 409,700	$ 421,000	$ 436,700	$ 452,400	$ 468,100	$ 483,800	$ 499,500
T&E (30.4% of Train & Engine Crew Labor)	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000	$ 695,000
M o E (27.1% of Car & Loco Maintenance/Turnaround)	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000	$ 938,000
OBS (10.0% of OBS - Crew and Provisions)	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000
Police ($0.005 per passenger mile)	$ 206,000	$ 212,800	$ 219,600	$ 226,400	$ 233,200	$ 240,000	$ 247,900	$ 255,800	$ 263,700	$ 271,600	$ 279,500	$ 287,400	$ 295,300	$ 303,200	$ 311,100	$ 319,000	$ 330,700	$ 342,400	$ 354,100	$ 365,800	$ 377,500
Shared Support Services (3.25% of route costs)	$ 323,000	$ 324,800	$ 326,600	$ 328,400	$ 330,200	$ 332,000	$ 333,900	$ 335,800	$ 337,700	$ 339,600	$ 341,500	$ 343,400	$ 345,300	$ 347,200	$ 349,100	$ 351,000	$ 353,800	$ 356,600	$ 359,400	$ 362,200	$ 365,000
Subtotal: Additives	**$ 2,493,000**	**$ 2,509,800**	**$ 2,526,600**	**$ 2,543,400**	**$ 2,560,200**	**$ 2,577,000**	**$ 2,598,100**	**$ 2,619,200**	**$ 2,640,300**	**$ 2,661,400**	**$ 2,682,500**	**$ 2,703,600**	**$ 2,724,700**	**$ 2,745,800**	**$ 2,766,900**	**$ 2,788,000**	**$ 2,818,200**	**$ 2,848,400**	**$ 2,878,600**	**$ 2,908,800**	**$ 2,939,000**
Total Expenses	**$ 15,258,000**	**$ 15,328,200**	**$ 15,398,400**	**$ 15,468,600**	**$ 15,538,800**	**$ 15,609,000**	**$ 15,688,900**	**$ 15,768,800**	**$ 15,848,700**	**$ 15,928,600**	**$ 16,008,500**	**$ 16,088,400**	**$ 16,168,300**	**$ 16,248,200**	**$ 16,328,100**	**$ 16,408,000**	**$ 16,525,800**	**$ 16,643,600**	**$ 16,761,400**	**$ 16,879,200**	**$ 16,997,000**
Estimated Operating Payment	**$ 3,307,000**	**$ 3,007,400**	**$ 2,707,800**	**$ 2,408,200**	**$ 2,108,600**	**$ 1,809,000**	**$ 1,386,300**	**$ 963,600**	**$ 540,900**	**$ 118,200**	**$ (304,500)**	**$ (727,200)**	**$ (1,149,900)**	**$ (1,572,600)**	**$ (1,995,300)**	**$ (2,418,000)**	**$ (3,002,700)**	**$ (3,587,400)**	**$ (4,172,100)**	**$ (4,756,800)**	**$ (5,341,500)**
Estimated Equipment Capital Cost	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**	**$ 1,775,000**
Total Estimated Payment	**$ 5,082,000**	**$ 4,782,400**	**$ 4,482,800**	**$ 4,183,200**	**$ 3,883,600**	**$ 3,584,000**	**$ 3,161,300**	**$ 2,738,600**	**$ 2,315,900**	**$ 1,893,200**	**$ 1,470,500**	**$ 1,047,800**	**$ 625,100**	**$ 202,400**	**$ (220,300)**	**$ (643,000)**	**$ (1,227,700)**	**$ (1,812,400)**	**$ (2,397,100)**	**$ (2,981,800)**	**$ (3,566,500)**
Operating Ratio	**0.70**	**0.72**	**0.74**	**0.76**	**0.78**	**0.79**	**0.82**	**0.84**	**0.87**	**0.89**	**0.92**	**0.94**	**0.97**	**0.99**	**1.01**	**1.04**	**1.07**	**1.10**	**1.13**	**1.16**	**1.19**

4 DRT at 79mph 20-Year Cash Flow

Year (2016$)	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Section 209 Line Item																					
Revenue																					
Ticket Revenue	$ 17,592,500	$ 18,138,000	$ 18,683,500	$ 19,229,000	$ 19,774,500	$ 20,320,000	$ 21,065,500	$ 21,811,000	$ 22,556,500	$ 23,302,000	$ 24,047,500	$ 24,793,000	$ 25,538,500	$ 26,284,000	$ 27,029,500	$ 27,775,000	$ 28,796,200	$ 29,817,400	$ 30,838,600	$ 31,859,800	$ 32,881,000
Food & Beverage	$ 502,885	$ 518,308	$ 533,731	$ 549,154	$ 564,577	$ 580,000	$ 600,900	$ 621,800	$ 642,700	$ 663,600	$ 684,500	$ 705,400	$ 726,300	$ 747,200	$ 768,100	$ 789,000	$ 817,500	$ 846,000	$ 874,500	$ 903,000	$ 931,500
Other Revenue																					
Total Revenue	**$ 18,095,385**	**$ 18,656,308**	**$ 19,217,231**	**$ 19,778,154**	**$ 20,339,077**	**$ 20,900,000**	**$ 21,666,400**	**$ 22,432,800**	**$ 23,199,200**	**$ 23,965,600**	**$ 24,732,000**	**$ 25,498,400**	**$ 26,264,800**	**$ 27,031,200**	**$ 27,797,600**	**$ 28,564,000**	**$ 29,613,700**	**$ 30,663,400**	**$ 31,713,100**	**$ 32,762,800**	**$ 33,812,500**
Expenses																					
Third Party Costs																					
Host Railroad	$ 4,245,229	$ 4,245,183	$ 4,245,137	$ 4,245,091	$ 4,245,046	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000	$ 4,245,000
Synthetic Host Railroad Charge																					
Fuel and Power	$ 1,401,089	$ 1,401,071	$ 1,401,053	$ 1,401,036	$ 1,401,018	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000
Subtotal: Third Party Costs	**$ 5,646,318**	**$ 5,646,254**	**$ 5,646,191**	**$ 5,646,127**	**$ 5,646,064**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**	**$ 5,646,000**
Fixed Route Costs																					
Train & Engine Crew Labor	$ 4,571,158	$ 4,571,126	$ 4,571,095	$ 4,571,063	$ 4,571,032	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000	$ 4,571,000
Car & Locomotive Maintenance and Turnaround	$ 5,765,977	$ 5,765,981	$ 5,765,986	$ 5,765,991	$ 5,765,995	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000	$ 5,766,000
Onboard Passenger Technology	$ 174,865	$ 174,892	$ 174,919	$ 174,946	$ 174,973	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000
OBS - Crew	$ 1,062,774	$ 1,062,819	$ 1,062,864	$ 1,062,910	$ 1,062,955	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000	$ 1,063,000
Commissary Provisions	$ 209,181	$ 209,144	$ 209,108	$ 209,072	$ 209,036	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000	$ 209,000
Route Advertising	$ 182,666	$ 187,733	$ 192,800	$ 197,866	$ 202,933	$ 208,000	$ 214,800	$ 221,600	$ 228,400	$ 235,200	$ 242,000	$ 248,800	$ 255,600	$ 262,400	$ 269,200	$ 276,000	$ 285,200	$ 294,400	$ 303,600	$ 312,800	$ 322,000
Reservations & Call Centers	$ 1,460,820	$ 1,501,656	$ 1,542,492	$ 1,583,328	$ 1,624,164	$ 1,665,000	$ 1,719,200	$ 1,773,400	$ 1,827,600	$ 1,881,800	$ 1,936,000	$ 1,990,200	$ 2,044,400	$ 2,098,600	$ 2,152,800	$ 2,207,000	$ 2,280,200	$ 2,353,400	$ 2,426,600	$ 2,499,800	$ 2,573,000
Stations	$ 1,497,026	$ 1,497,021	$ 1,497,016	$ 1,497,011	$ 1,497,005	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000
Station Technology	$ 4,833	$ 4,867	$ 4,900	$ 4,933	$ 4,967	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
Commissions	$ 286,042	$ 294,033	$ 302,025	$ 310,017	$ 318,008	$ 326,000	$ 336,600	$ 347,200	$ 357,800	$ 368,400	$ 379,000	$ 389,600	$ 400,200	$ 410,800	$ 421,400	$ 432,000	$ 446,400	$ 460,800	$ 475,200	$ 489,600	$ 504,000
Customer Concession	$ 27,783	$ 28,627	$ 29,470	$ 30,313	$ 31,157	$ 32,000	$ 33,200	$ 34,400	$ 35,600	$ 36,800	$ 38,000	$ 39,200	$ 40,400	$ 41,600	$ 42,800	$ 44,000	$ 45,500	$ 47,000	$ 48,500	$ 50,000	$ 51,500
Connecting Motor Coach																	$ -				
Regional/Local Police	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000
Block & Tower Operations																	$ -				
Terminal Yard Operations	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000	$ 92,000
Terminal M o W	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000	$ 188,000
Insurance	$ 588,020	$ 606,016	$ 624,012	$ 642,008	$ 660,004	$ 678,000	$ 702,500	$ 727,000	$ 751,500	$ 776,000	$ 800,500	$ 825,000	$ 849,500	$ 874,000	$ 898,500	$ 923,000	$ 956,300	$ 989,600	$ 1,022,900	$ 1,056,200	$ 1,089,500
Subtotal: Fixed Route Costs	**$ 16,227,145**	**$ 16,299,916**	**$ 16,372,687**	**$ 16,445,458**	**$ 16,518,229**	**$ 16,591,000**	**$ 16,688,300**	**$ 16,785,600**	**$ 16,882,900**	**$ 16,980,200**	**$ 17,077,500**	**$ 17,174,800**	**$ 17,272,100**	**$ 17,369,400**	**$ 17,466,700**	**$ 17,564,000**	**$ 17,695,600**	**$ 17,827,200**	**$ 17,958,800**	**$ 18,090,400**	**$ 18,222,000**
Additives																					
Marketing (2.3% of ticket revenue)	$ 404,448	$ 416,958	$ 429,469	$ 441,979	$ 454,490	$ 467,000	$ 484,200	$ 501,400	$ 518,600	$ 535,800	$ 553,000	$ 570,200	$ 587,400	$ 604,600	$ 621,800	$ 639,000	$ 662,500	$ 686,000	$ 709,500	$ 733,000	$ 756,500
T&E (30.4% of Train & Engine Crew Labor)	$ 1,389,840	$ 1,389,872	$ 1,389,904	$ 1,389,936	$ 1,389,968	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000	$ 1,390,000
M o E (27.1% of Car & Loco Maintenance/Turnaround)	$ 1,562,787	$ 1,562,829	$ 1,562,872	$ 1,562,915	$ 1,562,957	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000	$ 1,563,000
OBS (10.0% of OBS - Crew and Provisions)	$ 127,096	$ 127,076	$ 127,057	$ 127,038	$ 127,019	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000	$ 127,000
Police ($0.005 per passenger mile)	$ 307,993	$ 317,394	$ 326,796	$ 336,197	$ 345,599	$ 355,000	$ 367,900	$ 380,800	$ 393,700	$ 406,600	$ 419,500	$ 432,400	$ 445,300	$ 458,200	$ 471,100	$ 484,000	$ 501,400	$ 518,800	$ 536,200	$ 553,600	$ 571,000
Shared Support Services (3.25% of route costs)	$ 527,279	$ 529,623	$ 531,967	$ 534,311	$ 536,656	$ 539,000	$ 542,200	$ 545,400	$ 548,600	$ 551,800	$ 555,000	$ 558,200	$ 561,400	$ 564,600	$ 567,800	$ 571,000	$ 575,300	$ 579,600	$ 583,900	$ 588,200	$ 592,500
Subtotal: Additives	**$ 4,319,441**	**$ 4,343,752**	**$ 4,368,064**	**$ 4,392,376**	**$ 4,416,688**	**$ 4,441,000**	**$ 4,474,300**	**$ 4,507,600**	**$ 4,540,900**	**$ 4,574,200**	**$ 4,607,500**	**$ 4,640,800**	**$ 4,674,100**	**$ 4,707,400**	**$ 4,740,700**	**$ 4,774,000**	**$ 4,819,200**	**$ 4,864,400**	**$ 4,909,600**	**$ 4,954,800**	**$ 5,000,000**
Total Expenses	**$ 26,192,903**	**$ 26,289,923**	**$ 26,386,942**	**$ 26,483,961**	**$ 26,580,981**	**$ 26,678,000**	**$ 26,808,600**	**$ 26,939,200**	**$ 27,069,800**	**$ 27,200,400**	**$ 27,331,000**	**$ 27,461,600**	**$ 27,592,200**	**$ 27,722,800**	**$ 27,853,400**	**$ 27,984,000**	**$ 28,160,800**	**$ 28,337,600**	**$ 28,514,400**	**$ 28,691,200**	**$ 28,868,000**
Estimated Operating Payment	**$ 8,097,518**	**$ 7,633,615**	**$ 7,169,711**	**$ 6,705,807**	**$ 6,241,904**	**$ 5,778,000**	**$ 5,142,200**	**$ 4,506,400**	**$ 3,870,600**	**$ 3,234,800**	**$ 2,599,000**	**$ 1,963,200**	**$ 1,327,400**	**$ 691,600**	**$ 55,800**	**$ (580,000)**	**$ (1,452,900)**	**$ (2,325,800)**	**$ (3,198,700)**	**$ (4,071,600)**	**$ (4,944,500)**
Estimated Equipment Capital Cost	**$ 2,265,327**	**$ 2,265,327**	**$ 2,265,327**	**$ 2,265,327**	**$ 2,265,327**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**	**$ 2,265,000**
Total Estimated Payment	**$ 10,362,845**	**$ 9,898,942**	**$ 9,435,038**	**$ 8,971,134**	**$ 8,507,231**	**$ 8,043,000**	**$ 7,407,200**	**$ 6,771,400**	**$ 6,135,600**	**$ 5,499,800**	**$ 4,864,000**	**$ 4,228,200**	**$ 3,592,400**	**$ 2,956,600**	**$ 2,320,800**	**$ 1,685,000**	**$ 812,100**	**$ (60,800)**	**$ (933,700)**	**$ (1,806,600)**	**$ (2,679,500)**
						0										**0**					
Operating Ratio	**0.64**	**0.65**	**0.67**	**0.69**	**0.71**	**0.72**	**0.75**	**0.77**	**0.79**	**0.81**	**0.84**	**0.86**	**0.88**	**0.90**	**0.92**	**0.94**	**0.97**	**1.00**	**1.03**	**1.06**	**1.09**

4 DRT at 110mph 20-Year Cash Flow

Year (2016$)	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Section 209 Line Item																					
Revenue																					
Ticket Revenue	$ 23,660,000	$ 24,393,600	$ 25,127,200	$ 25,860,800	$ 26,594,400	$ 27,328,000	$ 28,330,700	$ 29,333,400	$ 30,336,100	$ 31,338,800	$ 32,341,500	$ 33,344,200	$ 34,346,900	$ 35,349,600	$ 36,352,300	$ 37,355,000	$ 38,684,500	$ 40,014,000	$ 41,343,500	$ 42,673,000	$ 44,002,500
Food & Beverage	$ 675,500	$ 696,200	$ 716,900	$ 737,600	$ 758,300	$ 779,000	$ 807,200	$ 835,400	$ 863,600	$ 891,800	$ 920,000	$ 948,200	$ 976,400	$ 1,004,600	$ 1,032,800	$ 1,061,000	$ 1,098,000	$ 1,135,000	$ 1,172,000	$ 1,209,000	$ 1,246,000
Other Revenue																					
Total Revenue	**$ 24,335,500**	**$ 25,089,800**	**$ 25,844,100**	**$ 26,598,400**	**$ 27,352,700**	**$ 28,107,000**	**$ 29,137,900**	**$ 30,168,800**	**$ 31,199,700**	**$ 32,230,600**	**$ 33,261,500**	**$ 34,292,400**	**$ 35,323,300**	**$ 36,354,200**	**$ 37,385,100**	**$ 38,416,000**	**$ 39,782,500**	**$ 41,149,000**	**$ 42,515,500**	**$ 43,882,000**	**$ 45,248,500**
Expenses																					
Third Party Costs																					
Host Railroad	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000	$ 7,174,000
Synthetic Host Railroad Charge																					
Fuel and Power	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000	$ 1,401,000
Subtotal: Third Party Costs	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**	**$ 8,575,000**
Fixed Route Costs																					
Train & Engine Crew Labor	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000	$ 3,423,000
Car & Locomotive Maintenance and Turnaround	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000	$ 8,072,000
Onboard Passenger Technology	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000	$ 131,000
OBS - Crew	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000	$ 796,000
Commissary Provisions	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000	$ 157,000
Route Advertising	$ 245,000	$ 251,800	$ 258,600	$ 265,400	$ 272,200	$ 279,000	$ 288,100	$ 297,200	$ 306,300	$ 315,400	$ 324,500	$ 333,600	$ 342,700	$ 351,800	$ 360,900	$ 370,000	$ 382,700	$ 395,400	$ 408,100	$ 420,800	$ 433,500
Reservations & Call Centers	$ 1,957,500	$ 2,012,000	$ 2,066,500	$ 2,121,000	$ 2,175,500	$ 2,230,000	$ 2,302,400	$ 2,374,800	$ 2,447,200	$ 2,519,600	$ 2,592,000	$ 2,664,400	$ 2,736,800	$ 2,809,200	$ 2,881,600	$ 2,954,000	$ 3,055,400	$ 3,156,800	$ 3,258,200	$ 3,359,600	$ 3,461,000
Stations	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000	$ 1,497,000
Station Technology	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
Commissions	$ 383,500	$ 394,200	$ 404,900	$ 415,600	$ 426,300	$ 437,000	$ 451,100	$ 465,200	$ 479,300	$ 493,400	$ 507,500	$ 521,600	$ 535,700	$ 549,800	$ 563,900	$ 578,000	$ 597,900	$ 617,800	$ 637,700	$ 657,600	$ 677,500
Customer Concession	$ 37,500	$ 38,600	$ 39,700	$ 40,800	$ 41,900	$ 43,000	$ 44,600	$ 46,200	$ 47,800	$ 49,400	$ 51,000	$ 52,600	$ 54,200	$ 55,800	$ 57,400	$ 59,000	$ 61,000	$ 63,000	$ 65,000	$ 67,000	$ 69,000
Connecting Motor Coach																					
Regional/Local Police	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000
Block & Tower Operations																					
Terminal Yard Operations	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000	$ 129,000
Terminal M o W	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000	$ 263,000
Insurance	$ 790,000	$ 814,200	$ 838,400	$ 862,600	$ 886,800	$ 911,000	$ 944,000	$ 977,000	$ 1,010,000	$ 1,043,000	$ 1,076,000	$ 1,109,000	$ 1,142,000	$ 1,175,000	$ 1,208,000	$ 1,241,000	$ 1,284,300	$ 1,327,600	$ 1,370,900	$ 1,414,200	$ 1,457,500
Subtotal: Fixed Route Costs	**$ 18,002,500**	**$ 18,099,800**	**$ 18,197,100**	**$ 18,294,400**	**$ 18,391,700**	**$ 18,489,000**	**$ 18,619,200**	**$ 18,749,400**	**$ 18,879,600**	**$ 19,009,800**	**$ 19,140,000**	**$ 19,270,200**	**$ 19,400,400**	**$ 19,530,600**	**$ 19,660,800**	**$ 19,791,000**	**$ 19,970,300**	**$ 20,149,600**	**$ 20,328,900**	**$ 20,508,200**	**$ 20,687,500**
Additives																					
Marketing (2.3% of ticket revenue)	$ 544,500	$ 561,400	$ 578,300	$ 595,200	$ 612,100	$ 629,000	$ 652,000	$ 675,000	$ 698,000	$ 721,000	$ 744,000	$ 767,000	$ 790,000	$ 813,000	$ 836,000	$ 859,000	$ 889,600	$ 920,200	$ 950,800	$ 981,400	$ 1,012,000
T&E (30.4% of Train & Engine Crew Labor)	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000	$ 1,041,000
M o E (27.1% of Car & Loco Maintenance/Turnaround)	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000	$ 2,188,000
OBS (10.0% of OBS - Crew and Provisions)	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000
Police ($0.005 per passenger mile)	$ 414,500	$ 427,200	$ 439,900	$ 452,600	$ 465,300	$ 478,000	$ 495,200	$ 512,400	$ 529,600	$ 546,800	$ 564,000	$ 581,200	$ 598,400	$ 615,600	$ 632,800	$ 650,000	$ 672,700	$ 695,400	$ 718,100	$ 740,800	$ 763,500
Shared Support Services (3.25% of route costs)	$ 585,000	$ 588,200	$ 591,400	$ 594,600	$ 597,800	$ 601,000	$ 605,200	$ 609,400	$ 613,600	$ 617,800	$ 622,000	$ 626,200	$ 630,400	$ 634,600	$ 638,800	$ 643,000	$ 648,800	$ 654,600	$ 660,400	$ 666,200	$ 672,000
Subtotal: Additives	**$ 4,868,000**	**$ 4,900,800**	**$ 4,933,600**	**$ 4,966,400**	**$ 4,999,200**	**$ 5,032,000**	**$ 5,076,400**	**$ 5,120,800**	**$ 5,165,200**	**$ 5,209,600**	**$ 5,254,000**	**$ 5,298,400**	**$ 5,342,800**	**$ 5,387,200**	**$ 5,431,600**	**$ 5,476,000**	**$ 5,535,100**	**$ 5,594,200**	**$ 5,653,300**	**$ 5,712,400**	**$ 5,771,500**
Total Expenses	**$ 31,445,500**	**$ 31,575,600**	**$ 31,705,700**	**$ 31,835,800**	**$ 31,965,900**	**$ 32,096,000**	**$ 32,270,600**	**$ 32,445,200**	**$ 32,619,800**	**$ 32,794,400**	**$ 32,969,000**	**$ 33,143,600**	**$ 33,318,200**	**$ 33,492,800**	**$ 33,667,400**	**$ 33,842,000**	**$ 34,080,400**	**$ 34,318,800**	**$ 34,557,200**	**$ 34,795,600**	**$ 35,034,000**
Estimated Operating Payment	**$ 7,110,000**	**$ 6,485,800**	**$ 5,861,600**	**$ 5,237,400**	**$ 4,613,200**	**$ 3,989,000**	**$ 3,132,700**	**$ 2,276,400**	**$ 1,420,100**	**$ 563,800**	**$ (292,500)**	**$ (1,148,800)**	**$ (2,005,100)**	**$ (2,861,400)**	**$ (3,717,700)**	**$ (4,574,000)**	**$ (5,702,100)**	**$ (6,830,200)**	**$ (7,958,300)**	**$ (9,086,400)**	**$ (10,214,500)**
Estimated Equipment Capital Cost	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**	**$ 3,341,000**
Total Estimated Payment	**$ 10,451,000**	**$ 9,826,800**	**$ 9,202,600**	**$ 8,578,400**	**$ 7,954,200**	**$ 7,330,000**	**$ 6,473,700**	**$ 5,617,400**	**$ 4,761,100**	**$ 3,904,800**	**$ 3,048,500**	**$ 2,192,200**	**$ 1,335,900**	**$ 479,600**	**$ (376,700)**	**$ (1,233,000)**	**$ (2,361,100)**	**$ (3,489,200)**	**$ (4,617,300)**	**$ (5,745,400)**	**$ (6,873,500)**
Operating Ratio	**0.70**	**0.72**	**0.74**	**0.76**	**0.77**	**0.79**	**0.82**	**0.84**	**0.87**	**0.89**	**0.92**	**0.94**	**0.96**	**0.99**	**1.01**	**1.03**	**1.06**	**1.09**	**1.12**	**1.15**	**1.18**