

APPENDICES

Draft

EXISTING CONDITIONS REPORT

New Haven – Hartford – Springfield
Commuter Rail Implementation Study



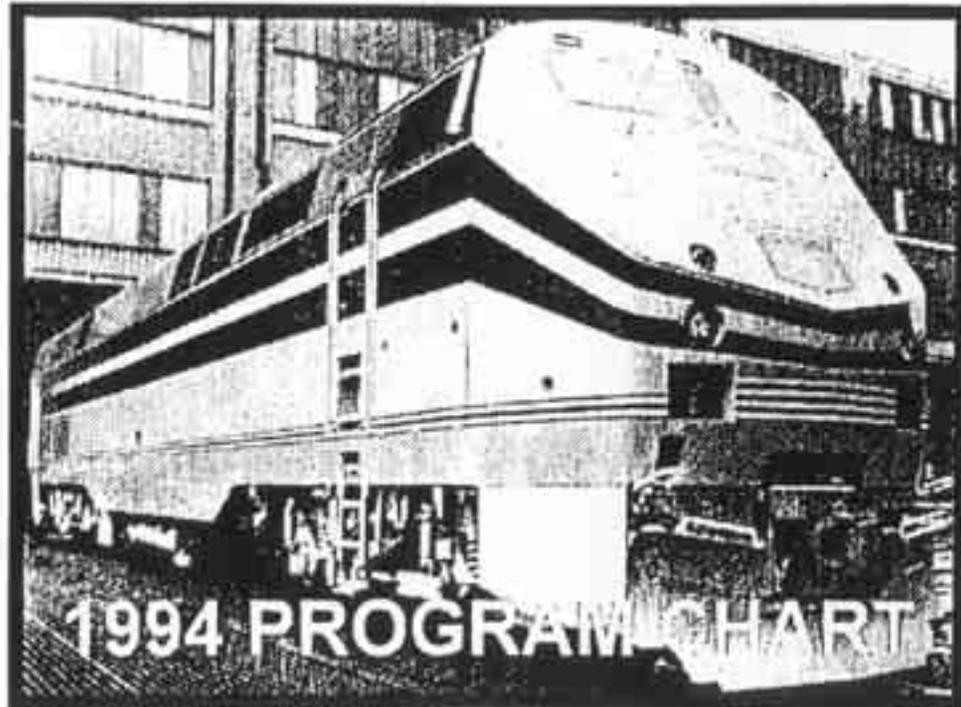
March, 2003



Appendix **A**

Amtrak Track Charts

On following pages.



AMD-103

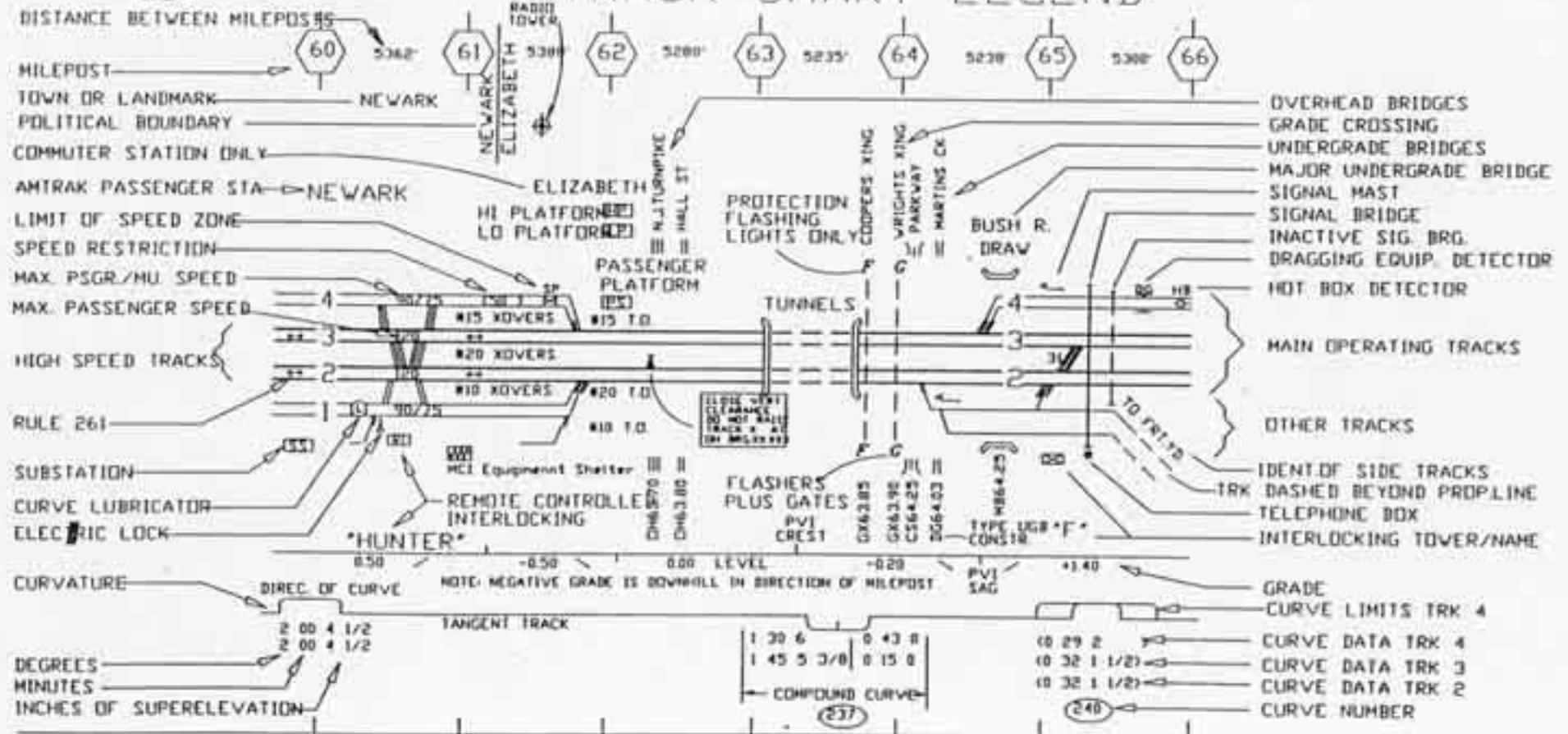
BOSTON DIVISION

SPRINGFIELD LINE

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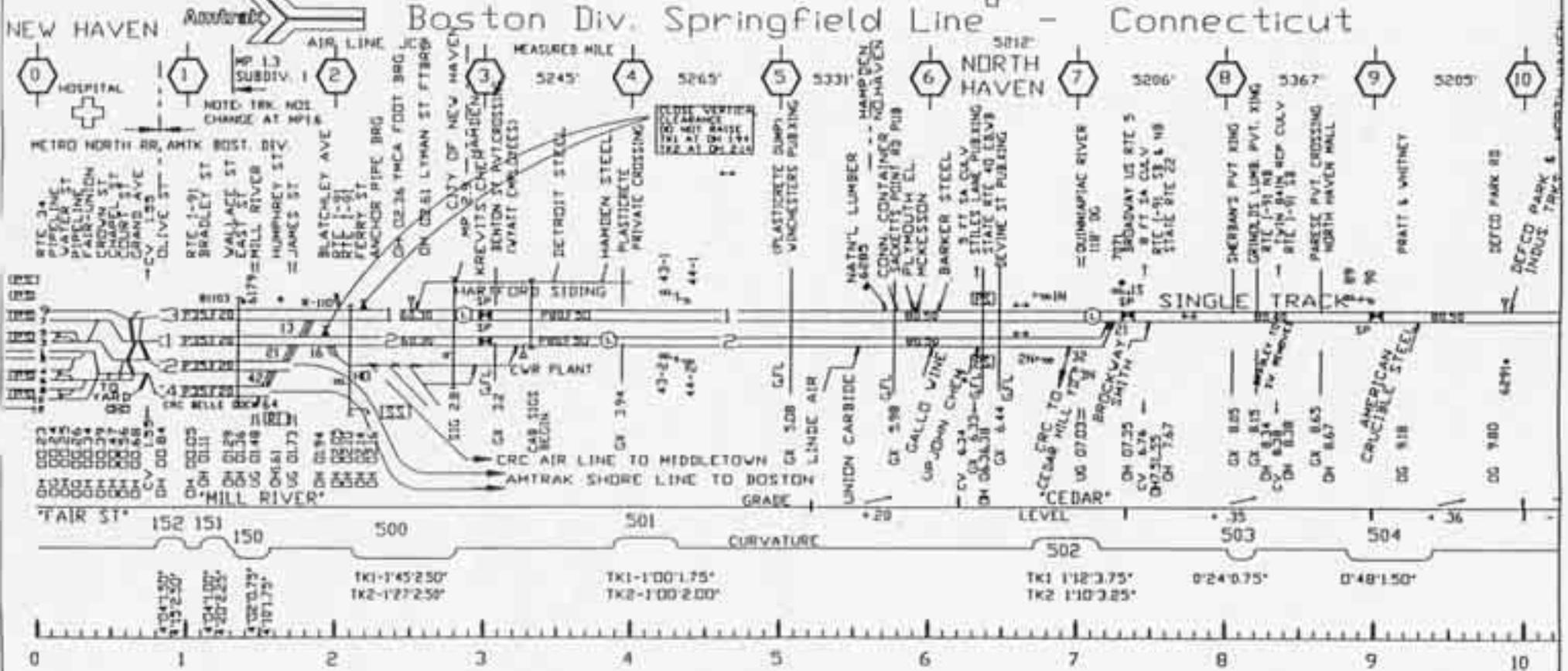
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TRACK CHART LEGEND



METRO NORTH HED. FACIL. UNION STA 3FL EAST M-F 8AM-2PM 203 706 2854
 HOSP. OF ST. RAFAEL 1450 CHAPEL ST 203 789 3469
 TEMPLE URGENT CARE CTR. 40 TEMPLE ST M-F 8AM SAT 9AM-5PM SUN 10-6 203 773 1131

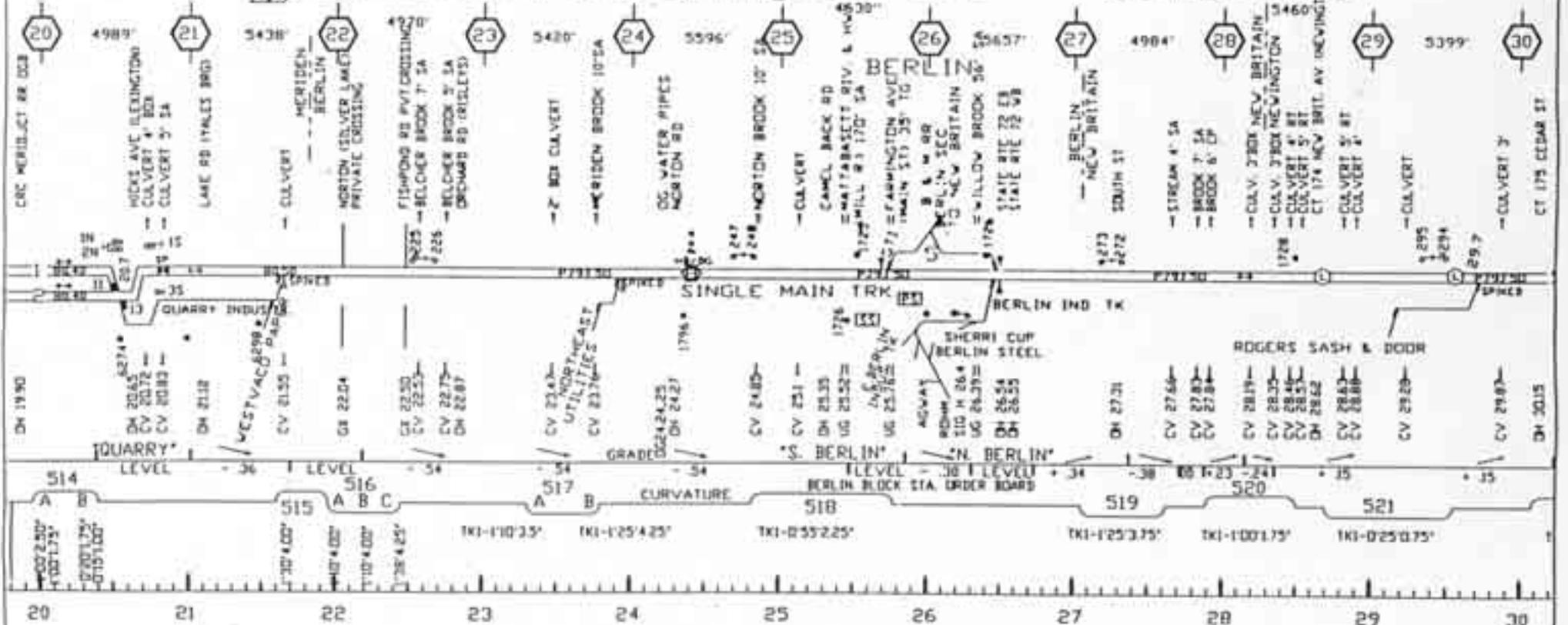
NORTH HAVEN MED. CTR. 100 BROADWAY M-F 7AM-7PM S&S 8AM-4PM 203 239 0054

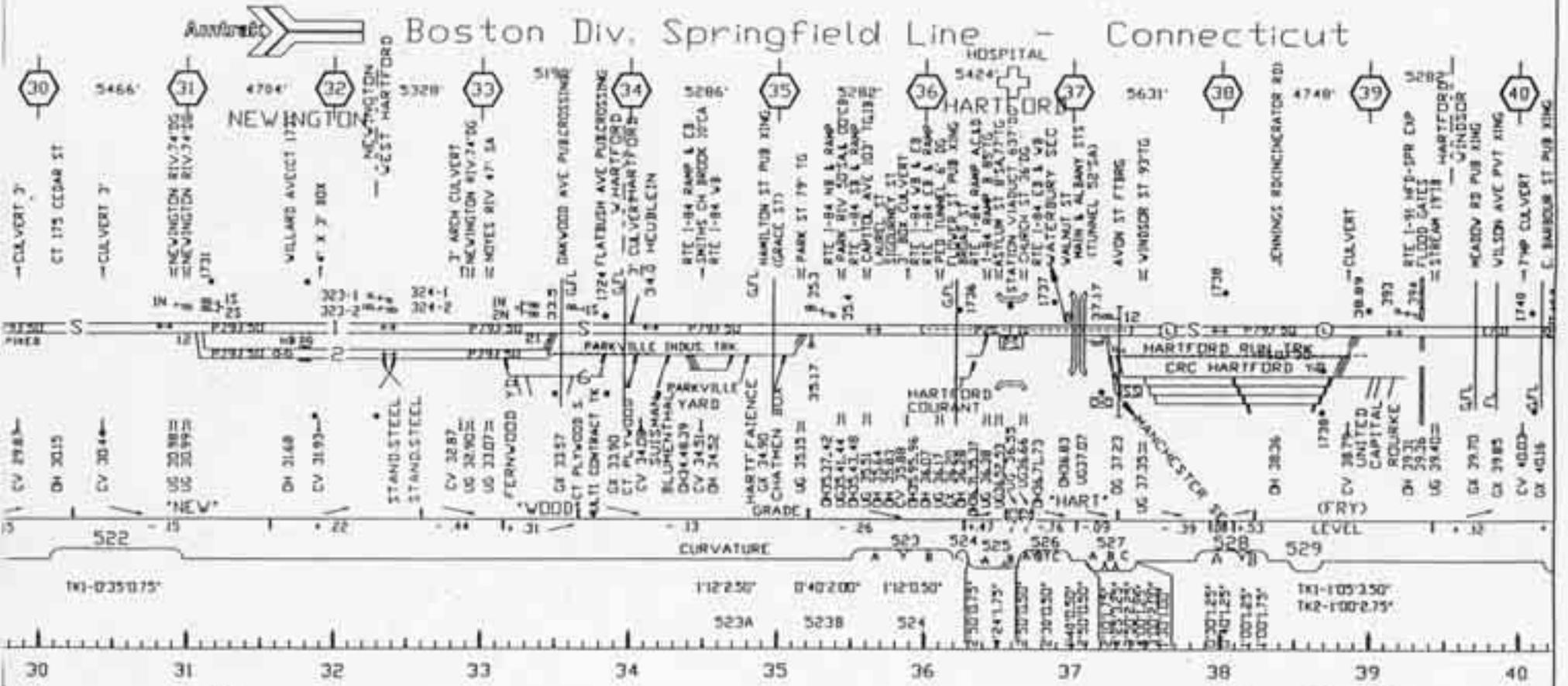


1994

Page SPG 5

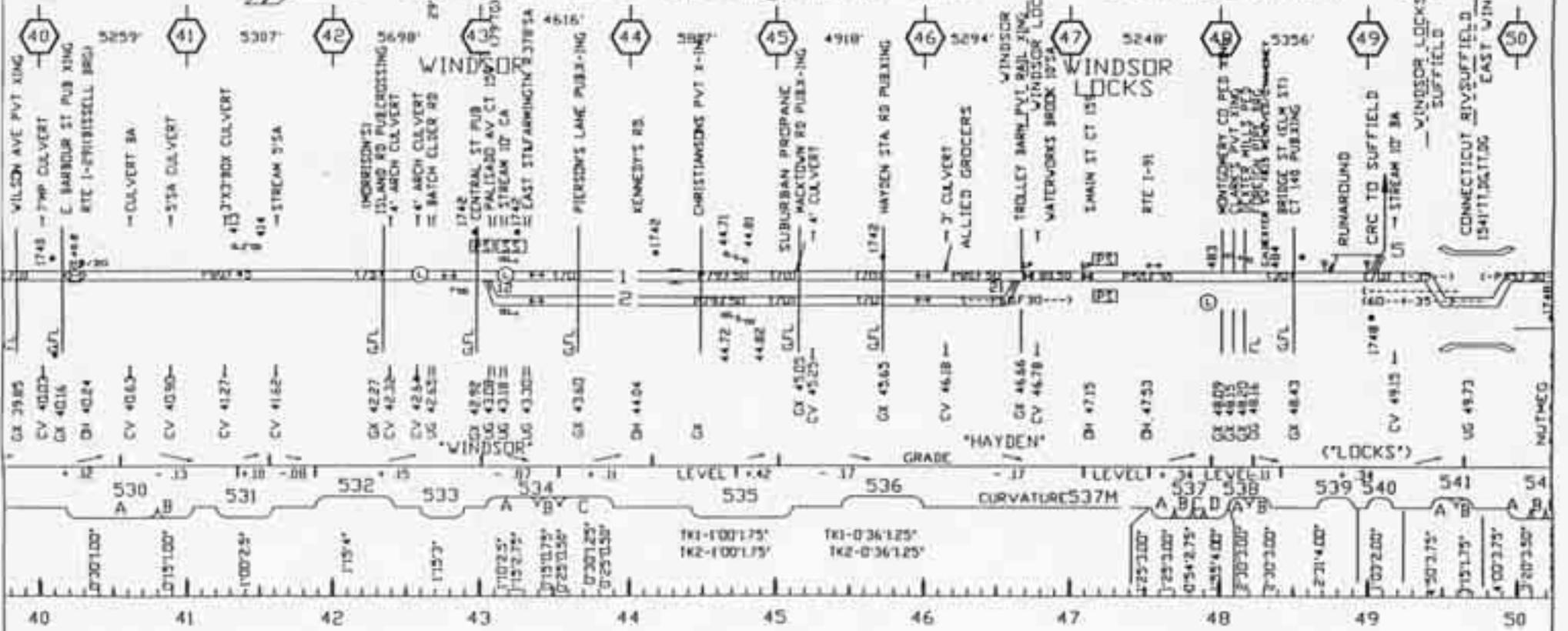
Boston Div. Springfield Line - Connecticut







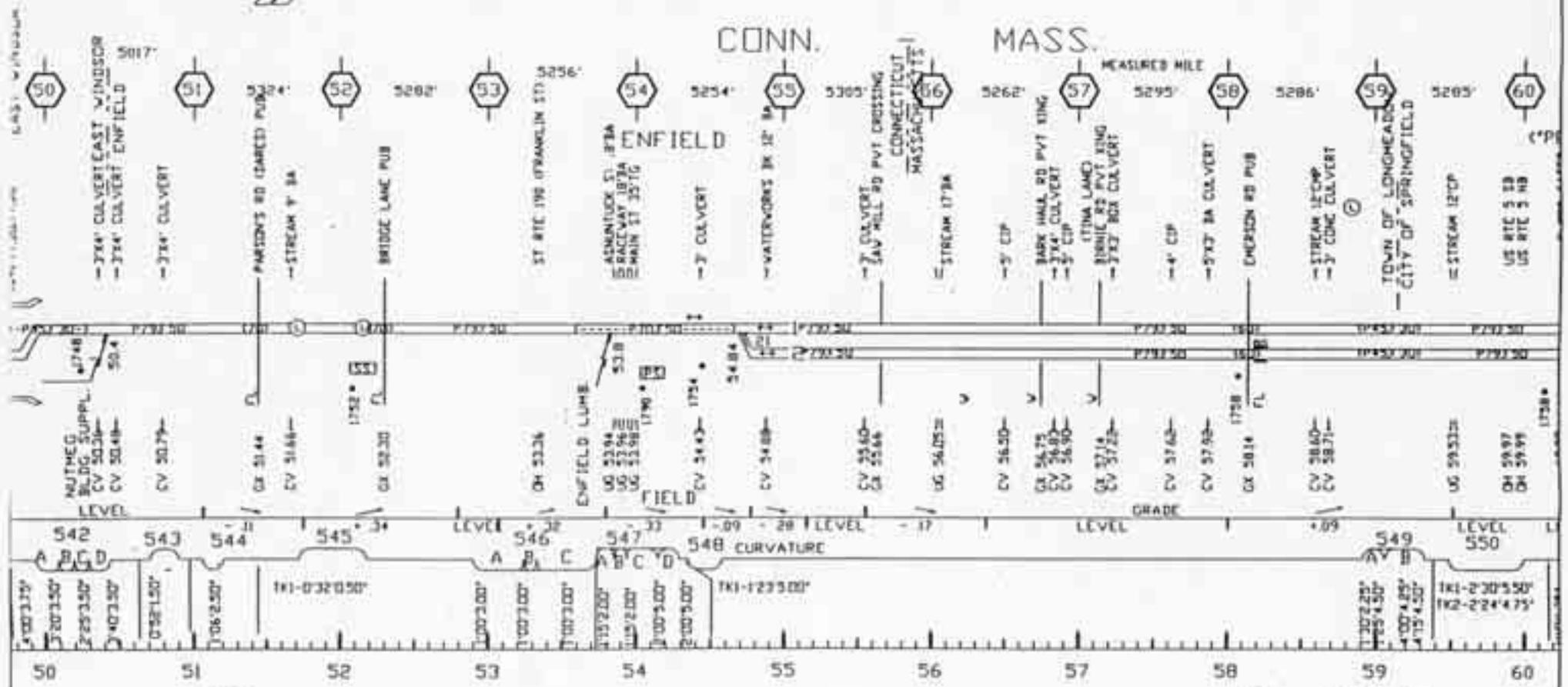
Boston Div. Springfield Line Connecticut



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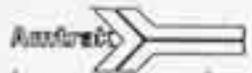


Boston Div. Springfield Line



1994

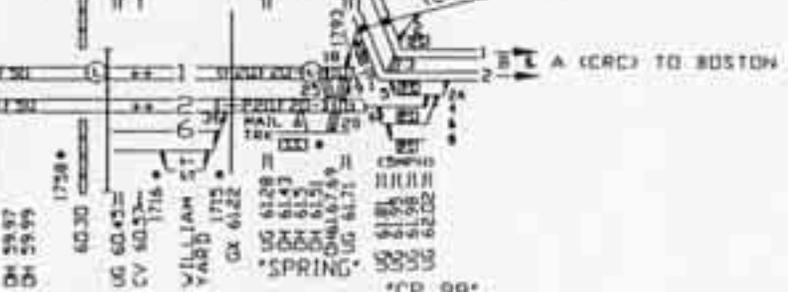
Boston Div. Springfield Line - MASSACHUSETTS



60 5280 61 62

(*PECOVSIIC*)
 US RTE 2 SB
 US RTE 5 NB
 FLOOD GATES
 MILL RIVER BA
 SEWER TOP
 STATE ST
 HELM ST 237B
 MEMORIAL BLDG OVERLOOK ST
 SWINNEY BUILDING
 WASHINGTON AVENUE
 WASHINGTON AVENUE TO
 ALBANY
 ALBANY ST
 STATION CURVE
 WASHINGTON ST
 WASHINGTON ST
 WASHINGTON ST

MERCY HOSPITAL, 271 CAREW ST. H-F 9-5 413 781 9100
 W. WILLIAM BYRNES, M.D. 300 STRATFORD ST 413 788 9039
 LIFE LABORATORIES 299 CAREW ST LOWER LEVEL 413 747 0820, 781 9100



60 61 62

1994



Appendix **B**

Bridge Inspection Reports

On following pages.

Memorandum

Date: December 2, 2002

To: Timothy P. Sorenson, P.E.
Wilbur Smith Associates

From: Richard Whitehead

Subject: **State Project No. 170-2296**
New Haven, Hartford, Springfield Commuter Rail Feasibility Study
Task 6 – Evaluation of Existing Bridges – 33 Largest Total Length

This Memorandum presents the findings of the Data Collection and Existing Condition Assessment of 33 Amtrak railroad bridges for the New Haven, Hartford, Springfield Commuter Rail Feasibility Study.

The Amtrak, Boston Division, Springfield Line begins at Milepost 00.00 in New Haven, Connecticut and traverses approximately 62 miles to its terminus at Milepost 62.08 in Springfield, Massachusetts.

1.0 DATA COLLECTION

Under our Scope of Work (*Task 4 – Data Collection, Subtask 4D – Additional Consultant Data Collection*) we obtained the following:

- Amtrak 1994 Program Chart (Track Charts), Boston Division, Springfield Line
- Amtrak Bridge List, Boston Division, Springfield Line
- 2002 Bridge Inspection Reports Springfield Line MP 0.76 – MP 62.08¹
- 2002 Culvert Reports Springfield Line MP 2.9 – MP 60.19²

2.0 BRIDGE EVALUATIONS

Our work entailed the evaluation of the existing condition of each bridge based solely on the contents of Amtrak bridge inspection reports. No site visits, inspections, or other field activities were performed. Based on advisement by Amtrak officials, available bridge load rating reports for structures located on the Springfield Line were deemed outdated and to have inconsequential information for the evaluation of each bridge. Therefore, load rating reports were not used in this Existing Condition Assessment.

Pursuant to *Task 6 – Existing Conditions Assessment, Subtask 6b – Evaluate Existing Bridges*, we reviewed the bridge and culvert inspection reports for the Springfield Line MP 0.76 – MP 62.08^{1,2}. Following review, we selected the 33 railroad bridges having the largest total length and summarized the bridge inspection report information as presented in Exhibit 2.

In assembling our final selections, we reviewed all inspection reports obtained under *Task 4*. The furnished bridge inspection reports included:

- 14 culverts with span lengths from 5 ft to 6 ft
- 5 overhead signal bridges

¹ Amtrak, *2002 Bridge Reports Springfield Line MP .76 – MP 62.08* (Philadelphia: National Railroad Passenger Corporation, 2002).

² Amtrak, *2002 Culvert Reports Springfield Line MP 2.9 – MP 60.19* (Philadelphia: National Railroad Passenger Corporation, 2002).

- 10 overhead utility bridges
- 4 overhead pedestrian/foot bridges
- 2 undergrade pedestrian bridges
- 69 overhead bridges (highway or foreign railroad)
- 60 undergrade bridges (railroad) with total lengths from 7 ft to 1516 ft

The furnished culvert inspection reports included:

- 174 culverts with span lengths from 1 ft to 5 ft

During review of all available data, the following bridge types were omitted:

- Overhead signal bridges
- Overhead utility bridges
- Pedestrian/foot bridges
- All overhead structures (Amtrak crossing under structure)
- Bridges not currently in use
- Culverts (span length less than 6 ft)

The 33 railroad bridges with the largest total length were then selected for inclusion in the report. These 33 railroad bridges vary from single spans up to 25 spans and have total lengths ranging from 28 feet to 1541 feet.

The 33 railroad bridges consisted of the following types:

- Concrete Arch
- Concrete Encased Through Girder
- Deck Girder
- Concrete Box Beam
- Stone Arch
- I-Beam
- Through Girder
- Concrete Encased I-Beam
- Concrete Box
- Through Truss

Bridge inspection reports contain the results of annual field review of each bridge by Amtrak staff. A sample bridge inspection report is provided as Exhibit 1. The reports contain subjective ratings of substructure and superstructure components based on the following rating scale:

<u>Numerical Rating</u>	<u>Condition Description</u>
1	Excellent
2	Good
3	Fair
4	Poor
5	Serious
6	Failed

The 33 bridges were grouped by their overall structural condition. These conditions were based on a comprehensive look at all pertinent (substructure and superstructure) structural items on the Amtrak bridge inspection reports.

There were no bridges in **excellent** condition.

Approximately 43% (14 of 33 bridges) of the railroad bridges studied had computed ratings of **good** condition. These bridges were:

<u>Bridge No.</u>	<u>Type of Bridge</u>
1. 15.26	Concrete Box Beam
2. 16.78	I-Beam
3. 18.01	Through Girder
4. 25.52	Stone Arch
5. 30.99	Encased I-Beam
6. 32.90	Through Girder
7. 33.07	Concrete/Stone Arch
8. 35.51	I-Beam/Through Girder
9. 36.38	Through Girder
10. 36.53	Through Girder
11. 42.65	Deck Girder
12. 43.30	Stone Arch
13. 53.98	Encased I-Beam
14. 61.81	Stone Arch

Approximately 39% (13 of 33 bridges) of the railroad bridges studied had computed ratings of **fair** condition, these bridges were:

<u>Bridge No.</u>	<u>Type of Bridge</u>
1. 1.73	Through Deck Girder
2. 7.03	Deck Girder
3. 18.48	Deck Girder
4. 25.76	Through Girder
5. 35.15	Through Girder
6. 35.41	Concrete/Stone Arch
7. 36.55	Deck Girder
8. 37.35	Concrete Arch/Encased I-Beam
9. 43.08	Through Girder
10. 49.73	Deck Girder/Through Truss
11. 60.45	Concrete Arch
12. 61.95	I-Beam
13. 62.08	Through Girder

Approximately 12% (4 of 33 bridges) of the railroad bridges had computed ratings of **poor** condition, these bridges were:

<u>Bridge No.</u>	<u>Type of Bridge</u>
1. 1.61	Encased Through Girder
2. 26.39	Stone Arch
3. 61.71	Through Girder
4. 61.98	Through Girder

And, approximately 6% (2 of 33 bridges) of the railroad bridges had computed ratings of **serious** condition, these bridges were:

<u>Bridge No.</u>	<u>Type of Bridge</u>
1. 1.48	Concrete Arch
2. 36.66	Deck Girder

There were no bridges in a **failed** condition.

The structural condition of bridges rated “Fair”, “Poor” or “Serious” can be attributed mainly to:

- The type of structure built – certain types of structures are more susceptible to deterioration due to exposure of critical structural members to weather.
- The age of the structure – there are many structures which have outlived their useful design life.
- The level of maintenance performed on the structure to date.
- The presence of highway salt spray.

Presently, 6 of the 33 bridges studied are now in the category of “Poor” or “Serious”. Of the remaining bridges, 13 are currently rated “Fair”. In general, all bridges will continue to deteriorate. Rates of deterioration will depend on current condition and future maintenance activities.

It should be noted that this evaluation was limited to the 33 longest bridges on the Springfield Line. Due to contract limitations, 27 of the smaller bridges were not included in this evaluation.

3.0 NEXT STEPS

Under Task 10 – Operating/Capital Plan, Subtask 10G – Structure Evaluation, we will evaluate the 33 bridges and identify corrective measures to be implemented, which will generally include rehabilitation or replacement, and their associated costs.



NEW HAVEN - HARTFORD - SPRINGFIELD COMMUTER RAIL FEASIBILITY STUDY

EXHIBIT 2
BRIDGE CONDITION SUMMARY

BRIDGE INFORMATION - 33 LARGEST TOTAL LENGTH						GENERAL			MASONRY										GIRDER / BEAM / TRUSS														
AMTRAK BRIDGE NUMBER	TOWN	LOCATION	BRIDGE TYPE	TOTAL LENGTH (feet)	LATEST AMTRAK INSPECTION	PAINT	APPROACH TRACK	TRACK ON BRIDGE	ABUTMENT (N/E)	ABUTMENT (S/W)	BACKWALLS	WINGWALLS	PIERS	PEDESTALS	ARCHES	PARAPET WALLS	POINTING	TOP FLANGE OR CHORD	BOT FLANGE OR CHORD	BEARING STIFFENERS	WEB OR DIAGONALS	HANGERS	COUNTERS	BOLTS OR RIVETS	PINS	COLUMNS OR BENTS	SOLE PLATES	MASONRY PLATES	SHOES / NEOPRENE	ROLLERS / ROCKERS	SHIMS	ANCHOR BOLTS	
1.48	New Haven	Mill River	Concrete Arch	116.00	03/19/02		2	2	5	5	3	2	5		5		5	4	4	4	4					4							
1.61	New Haven	Humphrey St.	Encased Through Girder	154.00	03/19/02	6	2	2	3	3		2					5	4	4	4	4					4							
1.73	New Haven	James St.	Deck-Through Girder	79.00	03/28/02	3	3	3	2	2	2	2					2	2	3	3	1			5		5	3	3					3
7.03	North Haven	Quinnipiac River	Deck Girder	152.00	04/03/02	6	4	2	3	3	2	2	3				4	2	4	3	2			4			3	2				4	3
15.26	Yalesville	Falls Brook	Conc. Box Beam	58.00	03/21/02		2	2	2	2	2	2	3		2		2	2	2	2													
16.78	Meriden	Gypsy Lane	I-Beam	28.00	03/21/02	3	3	2	2	2	2	2					2	2	2	2	2			2					2			5	3
18.01	Meriden	S. Colony St.	Through Girder	44.00	04/05/02	3	4	3	2	2	3	2					2	2	2	4	2			3		3						5	5
18.48	Meriden	Harbor Brook	Deck Girder	51.00	03/25/02	6	3	2	3	3	3	2					3	2	5	4	2			4			4					5	5
25.52	Berlin	Mill River	Stone Arch	170.00	04/10/02		2	2	2	2	4	2			2		4																
25.76	Berlin	Farmington Ave.	Through Girder	35.00	04/25/02	4	3	2	2	3	2	2					2	2	4	2	3			2				2			5	4	
26.39	Berlin	Willow Brook	Stone Arch	56.00	04/01/02		2	2	3	3	2	2	3		4		4												2				
30.99	Newington	Newington River	Encased I-Beam	74.00	04/10/02	3	2	2	2	2	2	2	2			2	2	2	2	2	2												
32.90	Newington	New Britain Ave.	Through Girder	78.00	04/11/02	5	2	2	2	2	2	2					2	2	2	2	2			2						2			2
33.07	Newington	Noyes River	Conc/Stone Arch	47.00	04/11/02		2	2	2	2	3	3			2		3																
35.15	Hartford	Park Ave.	Through Girder	79.00	04/11/02	4	2	2	3	2	3	3					2	2	2	2	3			2				2					3
35.41	Hartford	Park River	Conc/Stone Arch	50.00	04/11/02		2	2	3	3	3	3			2	3	3																
35.51	Hartford	Capitol Ave.	Through Girder	103.00	04/25/02	5	3	2	2	2	2	3					3	2	2	2	2			2		4		3			5	4	
36.38	Hartford	Roadway B	Through Girder	85.00	04/15/02	5	2	2	2	2	2	2		2				2	2	2	2			2			2	2		2			2
36.53	Hartford	Asylum St.	Through Girder	77.00	05/16/02	5	3	3	2	2	2	2					2	2	2	2	2			2			3	3			6	3	
36.55	Hartford	Station Viaduct	Deck Girder	637.00	05/22/02	4		2									2	3	3	3	3			3		3	3	3					3
36.66	Hartford	Church Street	Deck Girder	36.00	05/16/02	4	3	2	2	2	2	2					3	4	6	4	6			3		4	3	3					3
37.35	Hartford	Windsor St.	Conc. Arch / Enc. I-Bm	93.00	04/16/02	5	2	2	3	3	2	2			2	4	4	2	2	2	2			2		2							
42.65	Windsor	Batchelder Rd.	Deck Girder	29.00	04/18/02	4	3	2	2	2	2	3					2	2	2	2	2			3			2		2				2
43.08	Windsor	Palisado Ave.	Through Girder	79.00	04/25/02	4	3	2	2	3	3	3					3	2	2	5	2			3			4	4	2		5	5	
43.30	Windsor	Farmington River	Stone Arch	378.00	04/18/02		2	2	2	2	2	2			2		2																
49.73	Windsor Locks	Connecticut River	Through Truss / Deck Girder	1541.00	05/10/02	6	2	2		3	2	2	3				3	3	4	4	3	2	3	4	4		3	3		5		6	
53.98	Thompsonville	Main St.	Encased I-Beam	35.00	04/23/02	2	2	2	2	2	2	2					2	2	2	2	2												
60.45	Springfield	Mill River	Conc. Arch	84.00	05/06/02		2	2	2	2	3	3	3				3																
61.71	Springfield	E. Columbus Ave.	Through Girder	64.00	05/06/02	6	3	2	3	4	3	4					5	2	4	3	4			2		3	3	3					3
61.81	Springfield	Main St.	Stone Arch	69.00	05/06/02		2	2	2	2	2	3			2	3	3																
61.95	Springfield	Station Subway	I-Beam	30.00	05/06/02	5	2	2										3	3	3													
61.98	Springfield	Dwight St.	Through Girder	65.00	05/06/02	5	2	2	4	4	3	3					5	2	2	2	2												
62.08	Springfield	Chestnut St.	Through Girder	69.00	05/06/02	4	2	2	3	3	3	2					3	2	3	2	2			2			3	3					3

Inspection Ranking Key (Based on Amtrak Inspection Data):

- 1 - Excellent Condition
- 2 - Good Condition
- 3 - Fair Condition
- 4 - Poor Condition
- 5 - Serious Condition
- 6 - Failed Condition

Notes: Blank cells indicate that feature is not present on structure, or that feature was not reviewed during Amtrak inspection.

□ indicates structural items used in determining bridge's overall condition.

STATE PROJECT NO. 170-2296
WEDNESDAY, NOVEMBER 27, 2002
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URS PROJECT NO. 36912933.00000



NEW HAVEN - HARTFORD - SPRINGFIELD COMMUTER RAIL FEASIBILITY STUDY

EXHIBIT 2 (CONT.)
BRIDGE CONDITION SUMMARY

BRIDGE INFORMATION - 33 LARGEST TOTAL LENGTH						STEEL BRACING										FLOOR SYSTEM															
AMTRAK BRIDGE NUMBER	TOWN	LOCATION	BRIDGE TYPE	TOTAL LENGTH (feet)	LATEST AMTRAK INSPECTION	TOP LATERALS	TOP LATERAL PLATES	BOTTOM LATERAL	BOTTOM LATERAL PLATES	SWAY FRAMES / DIAPHRAGMS	FLOOR BEAM WEB	FLOOR BEAM TOP FLANGE	FLOOR BEAM BOTTOM FLANGE	FLOOR BEAM CONNECTIONS	STRINGER WEB	STRINGER TOP FLANGE	STRINGER BOTTOM FLANGE	STRINGER CONNECTIONS	STEEL FLOOR	CONCRETE FLOOR	WATERPROOFING	TIES	TIE SPACER	SPACING BLOCKS	HOOK BOLTS	GUARD RAILS	DECK HARDWARE	FOOTWALKS	HANDRAILS / BARRICADES	DRAINAGE	
1.48	New Haven	Mill River	Concrete Arch	116.00	03/19/02																	2									
1.61	New Haven	Humphrey St.	Encased Through Girder	154.00	03/19/02										4	4	4	4				2	2								
1.73	New Haven	James St.	Deck-Through Girder	79.00	03/28/02			3	4		1	1	1	1	1	3	4	1				2	2	2	2				3	2	
7.03	North Haven	Quinnipiac River	Deck Girder	152.00	04/03/02	2	5	2	4													4	4	2	2	2	2		3	3	
15.26	Yalesville	Falls Brook	Conc. Box Beam	58.00	03/21/02																2		2								
16.78	Meriden	Gypsy Lane	I-Beam	28.00	03/21/02					2												4	2	2	2						
18.01	Meriden	S. Colony St.	Through Girder	44.00	04/05/02			2	2	4	2	2	3	2	2	3	5	2				4	2	2	2						
18.48	Meriden	Harbor Brook	Deck Girder	51.00	03/25/02	2	3	3	3	3												2	2	2	2				2	2	
25.52	Berlin	Mill River	Stone Arch	170.00	04/10/02																	3									
25.76	Berlin	Farmington Ave.	Through Girder	35.00	04/25/02			6	4		2	2	4	2	2	2	4	2				5	4		2	3		2	2		
26.39	Berlin	Willow Brook	Stone Arch	56.00	04/01/02																	3									
30.99	Newington	Newington River	Encased I-Beam	74.00	04/10/02															2	2		2						2	2	
32.90	Newington	New Britain Ave.	Through Girder	78.00	04/11/02					2										2			2								
33.07	Newington	Noyes River	Conc/Stone Arch	47.00	04/11/02																		2								
35.15	Hartford	Park Ave.	Through Girder	79.00	04/11/02						2	2	3	2							2		2								
35.41	Hartford	Park River	Conc/Stone Arch	50.00	04/11/02																	2									
35.51	Hartford	Capitol Ave.	Through Girder	103.00	04/25/02			2	2		2	2	2	2	2	2	2	2				2	2	2	2				6	6	
36.38	Hartford	Roadway B	Through Girder	85.00	04/15/02					2	2	2	2	2						2		2							2	2	
36.53	Hartford	Asylum St.	Through Girder	77.00	05/16/02						2	2	2	2	2	2		2				3	2		2				6		
36.55	Hartford	Station Viaduct	Deck Girder	637.00	05/22/02	4	4				3	3	2	2	3	5	3	5				2	2	2	2				3	2	3
36.66	Hartford	Church Street	Deck Girder	36.00	05/16/02	2	2	5			5	3	2	3	3	3	3	3				2	2	2	2				5		
37.35	Hartford	Windsor St.	Conc. Arch / Enc. I-Bm	93.00	04/16/02															2	3		2								
42.65	Windsor	Batchelder Rd.	Deck Girder	29.00	04/18/02	2	2			2												3	2	2	2					2	
43.08	Windsor	Palisado Ave.	Through Girder	79.00	04/25/02			4	3		2	2	3	2	2	4	5	2				5	2	2	2	2					
43.30	Windsor	Farmington River	Stone Arch	378.00	04/18/02																	2									
49.73	Windsor Locks	Connecticut River	Through Truss / Deck Girder	1541.00	05/10/02	3	3	3	3	4	2	2	3	2	2	4	5	4					2	2	2	2	2		5	5	
53.98	Thompsonville	Main St.	Encased I-Beam	35.00	04/23/02															2	2		2						2	2	
60.45	Springfield	Mill River	Conc. Arch	84.00	05/06/02																		2								
61.71	Springfield	E. Columbus Ave.	Through Girder	64.00	05/06/02					2					2	2	3				3		2								
61.81	Springfield	Main St.	Stone Arch	69.00	05/06/02																		2								
61.95	Springfield	Station Subway	I-Beam	30.00	05/06/02					3													5	2							
61.98	Springfield	Dwight St.	Through Girder	65.00	05/06/02					2					2	3	3						2						3	3	
62.08	Springfield	Chestnut St.	Through Girder	69.00	05/06/02						2	2	3	2							2		2						5	5	

Inspection Ranking Key (Based on Amtrak Inspection Data):

- 1 - Excellent Condition
- 2 - Good Condition
- 3 - Fair Condition
- 4 - Poor Condition
- 5 - Serious Condition
- 6 - Failed Condition

Notes: Blank cells indicate that feature is not present on structure, or that feature was not reviewed during Amtrak inspection.

□ indicates structural items used in determining bridge's overall condition.

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WEDNESDAY, NOVEMBER 27, 2002
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URS PROJECT NO. 36912933.00000



Appendix **C**

At-Grade Crossing Evaluation

On following pages.



Washington

Infrastructure Services, Inc.

30 Christian Lane
Newington, CT 06111
(860) 6667-7622
(860) 667-7002 FAX

**NEW HAVEN, HARTFORD, SPRINGFIELD
COMMUTER RAIL FEASIBILITY STUDY
Draft Report of Existing Conditions
January 9, 2003**

Overview - Communications & Signal Systems

The National Railroad Passenger Corporation (Amtrak) owns and operates the 62-mile New Haven to Springfield rail line. Commonly referred to as the “Springfield Line,” it operationally begins in New Haven at Mill River Interlocking, railroad Mile Post 1.5, and continues north to Springfield, MA, to milepost 61.7. Mill River Interlocking is a key communications and signal control point location that comprises the physical junction of the Springfield Line which operates North / South and the Amtrak-owned Shore Line portion of the Northeast Corridor that operates East / West from New Haven to Boston, MA. At Mill River Interlocking, trains leaving New Haven bound for points on the Springfield Line are diverted north and trains bound for points on the Shore Line are diverted east. The operational end of the Springfield Line is at the north limits of “Spring” Interlocking, Mile Post 61.7, where it then connects to the CSX-owned Boston and Albany Main Line at Springfield Station.

Unlike the Northeast Corridor from New Haven to Boston and from New Haven to Washington, D.C., the Springfield Line is not electrified through an overhead catenary system. Originally a 2-track “main line,” the Springfield Line is now a single-track line with remote controlled passing sidings that allow trains to safely pass each other in different directions, or for one train to pass another traveling in the same direction.

Primary Springfield Line Communications & Signal system elements include:

- Cab Signal System (CSS) and Automatic Block Signal (ABS) train control system with 10 controlled passing sidings; bi-directional or “261” signaling to accommodate train movements in either direction; Springfield Line train dispatchers are located in Amtrak’s Centralized Traffic and Electrification Control (CETC) facility in South Station, Boston, MA.
- 36 Grade Crossings equipped with active warning devices
- 10 Grade Crossings without active warning devices
- 6 radio repeater sites for train dispatching, maintenance-of-way, and Amtrak Police use; local passenger station services radio use

- 2 local telephone system exchanges (New Haven and Hartford); leased telephone lines for remote supervision of primary signal control points
- Fiber-optic cable is installed in some sections of the Springfield Line but it is owned and maintained by communications service providers (AT&T, MCI, Sprint) and not by Amtrak

Amtrak maintains primary 480-volt AC and 2200-volt AC power distribution systems that provide lower voltage service feeds to all communications & signal facilities, including grade crossings.

Highway Grade Crossing Survey Results

January 10, 2003

Overview:

The largest task within the Signals & Communications review consisted of a detailed condition survey of existing highway grade crossing warning devices. Photographs of each grade crossing were taken and appear as Exhibit A below.

The overall survey results were tabulated and appear as Exhibit B. (elsewhere on CD)

**COMMUTER RAIL FEASIBILITY STUDY
NEW HAVEN to SPRINGFIELD LINE
HIGHWAY GRADE CROSSING SURVEY**

**Exhibit A
Grade Crossing Photos**

Hamden

Crossing Name: Benton Street, Milepost 3.1

Summary: 3 tracks; 2 highway gates, 8 flashing lights, 1 electronic bell.
AAR/DOT Number 500619A



View-West



View-East

Hamden

Crossing Name: Winchesters, Milepost 5.0

Summary: 2 tracks; 2 highway gates, 8 flashing lights, 2 mechanical bells.
AAR/DOT Number 500621B



View-West



View-East

North Haven

Crossing Name: Sackett Point Road, Milepost 5.9

Summary: 2 tracks; 2 highway gates, 14 flashing lights and 2 mechanical bells,
1 cantilever
AAR/DOT Number 500622H



View-West



View-East

North Haven

Crossing Name: Stiles Lane, Milepost 6.3

Summary: 2 tracks; 2 highway gates, 8 flashing lights, 1 mechanical bell.
AAR/DOT Number 500623P



View-West



View-East

North Haven

Crossing Name: Devine Street, Milepost 6.4

Summary: 2 tracks; 2 highway gates, 10 flashing lights, 1 mechanical bell.
AAR/DOT Number 500625D



View-West



View-East

North Haven

Crossing Name: Sherbans (Ferro Lane), Milepost 8.2 (Closed)

Summary: 1 track; No warning devices
AAR/DOT Number 500630A



View-West

North Haven

Crossing Name: Grinolds Lumber, Milepost 8.3 (Closed)

Summary: 1 track; No warning devices
AAR/DOT Number 500631G



View-West

North Haven

Crossing Name: Parese, Milepost 8.6 (Closed)

Summary: 1 track; No warning devices
AAR/DOT Number 500632N



View-West

North Haven

Crossing Name: Toelles Road, Milepost 10.5

Summary: 1 track; 2 highway gates, 14 flashing lights, 1 mechanical bell
AAR/DOT Number 500637X



View-West



View-East

Wallingford

Crossing Name: Ward Street, Milepost 12.3

Summary: 1 track; 2 highway gates, 2 pedestrian gates, 12 flashing lights, 1 mechanical bell, 1 cantilever
AAR/DOT Number 500640F



View-West



View-East

Wallingford

Crossing Name: Quinnipiac Street, Milepost 12.6

Summary: 1 track; 2 highway gates, 2 pedestrian gates, 8 flashing lights, 2 mechanical bells
AAR/DOT Number 500641M



View-West



View-East

Wallingford

Crossing Name: Hall Avenue, Milepost 12.65

Summary: 1 track, two highway gates, 2 pedestrian gates, 8 flashing lights, two mechanical bells
AAR/DOT Number 500642U



View – West (one-way traffic)



View-East (one-way traffic)

Wallingford

Crossing Name: Parker Street, Milepost 13.0

Summary: 1 track, two highway gates, 8 flashing lights, two mechanical bells.
AAR/DOT Number 500643B



View - West



View-East

Wallingford

Crossing Name: North Plains Road, Milepost 13.6

Summary: 1 track, two highway gates, 10 flashing lights, two mechanical bells.
AAR/DOT Number 500645P



View - West



View-East

Wallingford

Crossing Name: Pent Highway, Milepost 14.4

Summary: 1 track, two highway gates, 8 flashing lights, two mechanical bells.
AAR/DOT Number 500646W



View - West



View-East

Meriden

Crossing Name: Cooper Street, Milepost 18.2

Summary: 2 tracks, two highway gates, 8 flashing lights, two mechanical bells.
AAR/DOT Number 500653G



View - West



View-East

Meriden

Crossing Name: South Colony Street, Milepost 18.5

Summary: 2 tracks, 2 highway gates, 2 pedestrian gates, 6 flashing lights, 2 mechanical bells
AAR/DOT Number 500655V



View-East (one-way traffic)



View-East

Meriden

Crossing Name: East Main Street, Milepost 18.6

Summary: 2 tracks, 2 highway gates, 2 pedestrian gates, 8 flashing lights, one mechanical bell
AAR/DOT Number 500656C



View- West (one-way traffic)



View- West (one-way traffic)

Meriden

Crossing Name: Brook Street, Milepost 18.7

Summary: 2 tracks, two highway gates, 8 flashing lights, two mechanical bells.
AAR/DOT Number 500657J



View- West



View-East

Meriden

Crossing Name: Cross Street, Milepost 18.8

Summary: 2 tracks, one highway gate, 8 flashing lights, one mechanical bell.
AAR/DOT Number 500658R



View- West (one-way traffic)



View-East (one-way traffic)

Meriden

Crossing Name: Britannia Street, Milepost 19.4

Summary: 2 tracks, two highway gates, 14 flashing lights, one mechanical bell, two pedestrian gates
AAR/DOT Number 500661Y.



View- West



View-East

Meriden

Crossing Name: North Colony Street, Milepost 19.5

Summary: 2 tracks, two highway gates, 14 flashing lights, one mechanical bell.
AAR/DOT Number 500656B



View-West



View East

Meriden

Crossing Name: Silver Lake (Norton), Milepost 22.0

Summary: 1 track, Stop Sign only.
AAR/DOT Number 500685M



View-West

Meriden

Crossing Name: Fish Pond, Milepost 22.6

Summary: 1 track, No warning devices; Crossing closed.
AAR/DOT Number Not on FRA List



View-West

West Hartford

Crossing Name: Oakwood Avenue, Milepost 33.5

Summary: 2 tracks, 2 highway gates, 16 flashing lights, 1 mechanical bell, 2 cantilevers.
AAR/DOT Number 500697G.



View-West



View-East

West Hartford

Crossing Name: Flatbush Avenue, Milepost 33.9

Summary: 2 tracks, 2 highway gates, 2 pedestrian gates, 16 flashing lights, 1 mechanical bell,
2 cantilevers
AAR/DOT Number 500698N



View-West



View-East

Hartford

Crossing Name: Hamilton Street, Milepost 34.9

Summary: 2 tracks, 2 highway gates, 2 pedestrian gates, 16 flashing lights, 2 mechanical bells, 2 cantilevers
AAR/DOT Number 500700M



View-West



View-East

Hartford

Crossing Name: Flower Street, Milepost 36.2

Summary: 1 track, 2 highway gates, 2 pedestrian gates, 2 mechanical bells,
1 cantilever
AAR/DOT Number 500710T



View-West



View-East

Windsor

Crossing Name: Meadow Road, Milepost 39.7

Summary: 1 track, 2 highway gates, 8 flashing lights, 1 mechanical bell.
AAR/DOT Number 500725H



View-West



View East

Windsor

Crossing Name: Wilson Avenue, Milepost 39.8

Summary: 1 track, 8 flashing lights, 1 mechanical bell.
AAR/DOT Number 500726P



View-West



View-East

Windsor

Crossing Name: East Barber Street, Milepost 40.1

Summary: 1 track, 2 highway gates, 12 flashing lights, 1 mechanical bell, 1 cantilever
AAR/DOT Number 500727W



View-West



View-East

Windsor

Crossing Name: Island Road, Milepost 42.2

Summary: 1 track, 2 highway gates, 8 flashing lights, 1 mechanical bell.
AAR/DOT Number 500729K



View-West



View-East

Windsor

Crossing Name: Central Street, Milepost 42.9

Summary: 1 track, 2 highway gates, 2 pedestrian gates, 10 flashing lights, 1 mechanical bell
AAR/DOT Number 500731L



View-West



View-East

Windsor

Crossing Name: Pierson Lane, Milepost 43.6

Summary: 2 tracks, 2 highway gates, 16 flashing lights, 1 mechanical bell, 2 cantilevers.
AAR/DOT Number 500734G



View-West



View-East

Windsor

Crossing Name: Christiansons, Milepost 44.5

Summary: 2 tracks, No warning devices (Crossing closed).
AAR/DOT Number - No Number assigned, not on FRA list



View-West

Windsor

Crossing Name: Macktown Road, Milepost 45.0

Summary: 2 tracks, 2 highway gates, 16 flashing lights, 1 mechanical bell, 2 cantilevers.
AAR/DOT Number 500739R



View-West



View-East

Windsor

Crossing Name: Hayden Station Road, Milepost 45.6

Summary: 2 tracks, 2 highway gates, 1 pedestrian gate, 12 flashing lights, 1 mechanical bell, 1 cantilever
AAR/DOT Number 500741S



View-West



View-East

Windsor Locks

Crossing Name: Trolley Barn Crossing, Milepost 46.8

Summary: Crossing removed

Crossing Name: Clarks Crossing, Milepost 48.1

Summary: Crossing removed

Windsor Locks

Crossing Name: Dexter Mills, Milepost 48.1

Summary: 1 track, 10 flashing lights, 1 mechanical bell.
AAR/DOT Number 500746T



View-West



View- east

Windsor Locks

Crossing Name: Montgomery Co., (private pedestrian crossing) Milepost 48.2

Summary: 1 track, no warning devices.
AAR/DOT Number - No number assigned, not on FRA List



View-East

Windsor Locks

Crossing Name: Bridge Street, Milepost 48.4

Summary: 1 track, 2 highway gates, 1 pedestrian gate, 14 flashing lights, 2 mechanical bells, 1 cantilever
AAR/DOT Number 500747H



View-West



View-East

Enfield

Crossing Name: Parsons Road (Dares), Milepost 51.4

Summary: 1 track, 2 highway gates, 8 flashing lights, 2 mechanical bells.
AAR/DOT Number 500749W



View-West



View-East

Enfield

Crossing Name: Bridge Lane, Milepost 52.3

Summary: 1 track, no gates, 8 flashing lights, 1 mechanical bell
AAR/DOT Number 500749W



View-West



View-East

Enfield

Crossing Name: Saw Mill Road, Milepost 55.6

Summary: 2 tracks, no warning devices, crossing is closed.
AAR/DOT Number 500753L



View-West



View-North

East Longmeadow

Crossing Name: Bark Haul Road, Milepost 56.7

Summary: 2 tracks, no warning devices, crossing is limited access
AAR/DOT Number No number assigned, not on FRA List



View-West



View-East

East Longmeadow

Crossing Name: Birnie Road, Milepost 57.3

Summary: 2 tracks, Stop signs and cross bucks only
AAR/DOT Number - No number assigned, not on FRA List



View-West



View-East

East Longmeadow

Crossing Name: Emerson Road, Milepost 58.1

Summary: 2 tracks, 2 signal masts, no gates, 12 flashing lights, 1 mechanical bell
AAR/DOT Number 501940X



View-West



View-East

Springfield

Crossing Name: State Street, Milepost 61.2

Summary: 2 tracks, no warning devices
AAR/DOT Number No number assigned, not on FRA List



View-West



View-East

New Haven to Springfield Line Highway Grade Crossing Survey

Washington Infrastructure Services, Inc; Fall 2002

Location City / Town	Crossing Name	AAR/DOT Crossing inventory number	Railroad Mile Post	Number of Tracks	Warning Device Type	Pedestrian Gates	Type of track circuit or other train detection equipment	Cantilevers	Pavement markings Condition; adequate, missing, worn	Line of Sight	Condition Assessment	Comments; needs paint, damaged / missing, etc.
Hamden	Benton Street	500619A	3.1	3	Flashers, gates 1 bell 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Clear	Fair	
Hamden	Winchesters	500621B	5.0	2	Flashers, gates 2 bells 8-3/8" lights	None	Constant Warning (AFO)	None	Missing	Clear	Fair	Does not have pavement markings
North Haven	Sackett Point Road	500622H	5.9	2	Flashers, gates 2 bells, 12" LED lights	None	Constant Warning (AFO)	Northeast	Adequate	Clear	Fair	Back to back lights on cantilever
North Haven	Stiles Lane	500623P	6.3	2	Flashers, gates 1 bell 8-3/8" lights	None	Constant Warning (AFO)			Clear	Fair	
North Haven	Devine Street	500625D	6.4	2	Flashers, gates 1 bell 8-3/8" lights	None	(Constant Warning (AFO)	None	Adequate	Clear	Fair	Proposed new station stop
North Haven	Sherbans (Ferro Lane)	500630A	8.2	1	Crossing eliminated				No Markings			Crossing is closed
North Haven	Grinolds Lumber	500631G	8.3	1	Crossing eliminated				No Markings			Crossing is closed
North Haven	Parese	500632N	8.6	1	Crossing eliminated				No Markings			Crossing is closed
North Haven	Toelles Road	500637X	10.5	1	Flashers, gates 1 bell 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Impaired	Fair	
Wallingford	Ward Street	500640F	12.3	1	Flashers, gates 1 bell 8-3/8" lights	Northwest; Southeast	Constant Northbound (AFO) Motion Sensor southbound for gates AFO for traffic light control	Northwest	Adequate	Clear	Fair	Back to back lights on cantilever
Wallingford	Quinnipiac Street	500641M	12.6	1	Flashers, gates 2 bells 8-3/8" lights	Northwest; Southeast	Constant Warning (AFO)	None	Adequate	Clear	Good	

Location City / Town	Crossing Name	AAR/DOT Crossing inventory number	Railroad Mile Post	Number of Tracks	Warning Device Type	Pedestrian Gates	Type of track circuit or other train detection equipment	Cantilevers	Pavement markings Condition; adequate, missing, worn	Line of Sight	Condition Assessment	Comments; needs paint, damaged / missing, etc.
Wallingford	Hall Avenue	500642U	12.65	1	Flashers, Gates 1 bell 8-3/8" lights	Southwest	Constant Warning (AFO)	None	Adequate	Clear	Good	Street is one-way. Both highway gates on east side
Wallingford	Parker Street	500643B	13.0	1	Flashers, Gates 2 bells 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Clear	Fair	
Wallingford	North Plains Road	500645P	13.6	1	Flashers, Gates 2 bells 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Clear	Fair	Additional flasher for traffic making a right turn onto North Plains Road
Wallingford	Pent Highway	500646W	14.4	1	Flashers, Gates 2 bells 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Clear	Good	
Meriden	Cooper Street	500653G	18.2	2	Flashers, Gates 2 bells 12" LED lights	None	Motion Sensor	None	Worn	Clear	Fair	Markings worn
Meriden	South Colony Street	500655V	18.5	2	Flashers, Gates 1 bell 8-3/8" lights	Northeast; Southeast	Motion Sensor	None	Adequate	Clear	Good	Street is one-way going east. Highway gates on west side
Meriden	East Main Street	500656C	18.6	2	Flashers, Gates 1 bell 8-3/8" lights	Northwest; Southwest	Motion Sensor	None	Worn	Clear	Fair	Markings worn; Street is one-way west; Highway gates on east side.
Meriden	Brook Street	500657J	18.7	2	Flashers, Gates 2 bells 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Clear	Fair	
Meriden	Cross Street	500658R	18.8	2	Flashers; 1 Gate, 1 bell; 8-3/8" lights	None	Constant Warning (AFO)	None	Worn	Impaired	Fair	Cross bucks rusty
Meriden	Britannia Street	500661Y	19.4	2	Flashers; Gates 1 bell 8-3/8" lights	Northwest; Southeast	TK 1 Motion Sensor TK 2 Constant (AFO)	None	Worn	Clear	Fair	Switch to Meriden yard Trk-2 South of crossing
Meriden	North Colony Drive	500665B	19.4	2	Flashers; Gates 1 bell 8-3/8" lights	None	TK 1 Motion Sensor TK 2 Constant (AFO)	None	Worn	Clear	Fair	Crossing timbers bad, Additional flasher pole in parking lot northwest side. Markings worn
Meriden	Silver Lake (Norton)	500685M	22.0	1	Stop sign					Clear	Fair	Stop signs only
Meriden	Fish Pond	Not on FRA List	22.6	1	No Warning Devices							Crossing Barricaded

Location City / Town	Crossing Name	AAR/DOT Crossing inventory number	Railroad Mile Post	Number of Tracks	Warning Device Type	Pedestrian Gates	Type of track circuit or other train detection equipment	Cantilevers	Pavement markings Condition; adequate, missing , worn	Line of Sight	Condition Assessment	Comments; needs paint, damaged / missing, etc.
West Hartford	Oakwood Avenue	500697G	33.5	2	Flashers and gates, 1 bell 8-3/8" lights	None	Constant Warning (AFO)	Northeast and southwest sides	Adequate	Clear	Fair	Oak interlocking just south of crossing. Back to back lights on cantilever
Hartford	Flatbush Avenue	500698N	33.9	2	Flashers and gates, 2 bells 8-3/8" lights	Northwest; Southeast	Constant Warning (AFO)	Northeast and southwest sides	Adequate	Clear	Fair	Back to back lights on cantilever
Hartford	Hamilton Street	500700M	34.9	2	Flashers and gates, 2 bells 8-3/8" lights	Northwest; Southwest; Southeast	Constant Warning (AFO)	Northeast side	Worn	Clear	Fair	Back to back lights on cantilever Highway markings worn
Hartford	Flower Street	500710T	36.2	1	Flashers and gates, 2 bells 8-3/8" lights	Northwest; Southeast	Constant Warning (AFO)	Southwest side	Adequate	Clear	Fair	Back to back lights on cantilever
Windsor	Meadow Road	500725H	39.7	1	Flashers and gates, 1 bell 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Partially impaired	Fair	Cross bucks rusty, broken signal pole junction box southwest side
Windsor	Wilson Ave	500726P	39.8	1	Flashers, 1 bell 8-3/8" lights	None	Constant Warning (AFO)	None	Worn	Clear	Fair	Gravel crossing surface
Windsor	East Barber Street	500727W	40.1	1	Flashers and gates, 1 bell 8-3/8" lights	None	Constant Warning (AFO)	South west side of crossing	Adequate	Clear	Fair	Radio repeater station and hot box/dragging equipment Detector location
Windsor	Island Road	500729K	42.2	1	Flashers and gates, 1 bell 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Clear	Fair	
Windsor	Central Street	500731L	42.9	1	Flashers and gates, 1 bell 8-3/8" lights	Northwest; South east	Constant Warning (AFO)	None	Adequate	Clear	Fair	
Windsor	Pierson Lane	500734G	43.6	2	Flashers and gates, 1 bell 8-3/8" lights	None	Constant Warning (AFO)	South west and northeast side of crossing	Adequate	Clear	Fair	Back to back lights on cantilever
Windsor	Christiansons	Not on FRA list	44.5	2	No warning devices					Clear	Fair	
Windsor	Macktown Road	500739R	45.0	2	Flashers, Gates, 1 bell 8-3/8" lights	None	Constant Warning (AFO)	South west and northeast side of crossing	Adequate	Clear	Fair	

Location City / Town	Crossing Name	AAR/DOT Crossing inventory number	Railroad Mile Post	Number of Tracks	Warning Device Type	Pedestrian Gates	Type of track circuit or other train detection equipment	Cantilevers	Pavement markings Condition; adequate, missing, worn	Line of Sight	Condition Assessment	Comments; needs paint, damaged / missing, etc.
Windsor	Hayden Station Road	500741S	45.6	2	Flashers, Gates, 1 bell 8-3/8" lights	Southeast	Constant Warning (AFO)	1 Cantilever northeast side	Worn	Clear	Fair	Back to back lights on cantilever
Windsor	Trolley Barn	Not on FRA list			No warning devices							Crossing Closed
Windsor Locks	Clarks	Not on FRA list			No warning devices							Crossing Closed
Windsor Locks	Dexter Mills (Pedestrian)	500746B	48.1	1	Flashers, 1 Bell 8-3/8" lights	None	Constant Warning (AFO)	None	No markings	Clear	Fair	Dexter Co – pedestrian walkway gates across road; No automobile traffic except in emergency
Windsor Locks	Montgomery Co.	Not on FRA list	48.2	1	No warning devices				No markings	Clear		Foot bridge over canal
Windsor Locks	Bridge Street	500747H	48.4	1	Flashers, 2 Bells 8-3/8" lights	Southeast	Motion Sensor	1 Cantilever southwest side	Adequate	Clear	Fair	Pedestrian walkway markings worn; Back to back lights on cantilever
Enfield	Parsons Road (Dares)	500749W	51.4	1	Flashers, gates, 2 Bells 12"LED lights	None	Constant Warning (AFO)	None	Adequate	Clear	Fair	
Enfield	Bridge Lane	500750R	52.3	1	Flashers, 1 Bell 8-3/8" lights	None	Constant Warning (AFO)	None	Adequate	Clear	Fair	
Enfield	Saw Mill Road	500753L	55.6	2	No warning devices				No markings	Impaired	Fair	Timber surface Crossing closed
East Longmeadow, MA	Bark Haul Road	Not on FRA list	56.7	2	No warning devices				No markings	Impaired	Fair	Timber surface
East Longmeadow, MA	Birnie Road	Not on FRA list	57.3	2	Stop signs and cross bucks				Worn	Impaired	Fair	Timber surface Stop signs and cross bucks
East Longmeadow, MA	Emerson Road	501940X	58.1	2	Flashers, 1 Bell 8-3/8" lights	None	Constant Warning (AFO)	None	Worn	Clear	Fair	Highway markings worn
Springfield, MA	State Street	Not on FRA list	61.2	2	No warning devices				No Markings	Clear	Fair	